Drinking Water Facilities Funding Applications
March 2016

March 30-31, 2016
Item 15

TITLE: Drinking Water Facilities Funding Applications

EXPLANATION: The following applications have been received by DENR for funding consideration at this meeting. The projects are listed in priority point order as shown in the Intended Use plan, and the points are listed in parentheses.

a. Midland (112)
b. Perkins County RWS (81)
c. Conde (42)
d. Colman (39)
e. Wakonda (33)
f. Britton (20)
g. Brookings Deuel RWS (18)
h. Chancellor (13)
i. Canton (11)
j. Dell Rapids (11)
k. Miller (10)
l. Kingbrook RWS (8)

COMPLETE APPLICATIONS: Application cover sheets and WRAP summary sheets with financial analysis have been provided as part of the board packet. Complete applications are available online and can be accessed by typing the following address in your internet browser:

http://denr.sd.gov/bwnrapps/BWNRappsdwf0316.pdf

If you would like hard copies of the applications, please contact Andy Bruels at (605) 773-4805.

WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: Town of Midland

Project Title:	Water Distribution and Storage Improvements Project
Funding Requested:	$715,000
Total Project Cost:	$715,000
Project Description:	The town of Midland has had haloacetic acid (HAA5) violations. Installing a new water storage facility with a new mixing system and looping the watermains will help correct water quality issues. The project consists of a new 53,000-gallon ground storage facility with a new mixing system as well as the construction of 3,220 feet of 6-inch main to loop the system.
Alternatives Evaluated:	"74,000-Gallon Ground Storage Reservoir" alternative proposes to construct a 74,000-gallon ground storage reservoir and mixing system to replace the existing one. This alternative was considered but not recommended due to the size of the tank and the concern that thermal stratification may be affecting HAA5 levels. "53,000-Gallon Ground Storage Reservoir" alternative proposes to construct a 53,000-gallon ground storage reservoir and mixing system to replace the existing one. This alternative was considered and selected as it was the most cost effective and practical. "New Meter Vault and Multiple Control Valves" alternative would remove the reservoir and tie Midland's system directly into the rural water system without the means of storage. This alternative was considered but not selected as it did not leave Midland with the one-day demand should the system be disconnected from the rural water system due to repairs or breaks. "Distribution Improvements" alternative would loop Midland's distribution system, eliminating the dead ends in the system.
Implementation Schedule:	The town of Midland anticipates bidding the project in June 2016 with a project completion date of November 2016

Service Population: 123

Current Domestic Rate: $25.00 per 5,000 gallons

Interest Rate: 2.25% Term: 30 years Security: Project Surcharge

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan Midland would have to establish a surcharge of approximately $30.25. When added to current rate of $25/5,000 gallons residents would be paying $55.15/5,000 gallons. However projected operation and maintenance costs indicate that approximately $33/month is required to cover operation and maintenance costs. Midland needs to increase its water rate approximately $8/month to cover operation and maintenance costs. Total rates will be $63.25/5,000 gallons.

25% Funding Subsidy:	$178,750 subsidy with a loan of $536,250.
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $536,250 Midland would have to establish a surcharge of approximately $22.60 thereby paying a rate $55.60/5,000 gallons.

50% Funding Subsidy:	$375,500 subsidy with a loan of $375,500.
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $375,500 Midland would have to establish a surcharge of approximately $15.85 thereby paying a rate $48.85/5,000 gallons.

75% Funding Subsidy:	$536,250 subsidy with a loan of $178,750.
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $178,750 Midland would have to establish a surcharge of approximately $7.55 thereby paying a rate $40.55/5,000 gallons.

ENGINEERING REVIEW COMPLETED BY: NICK NELSON

FINANCIAL REVIEW COMPLETED BY: DAVE RUHNKE

RECEIVED

DEC 3 1 2015

Division of Financial
& Technical Assistance

SD EForm - 2126LD V4

Drinking Water Facilities Funding Application

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:
Town of Midland

Address:

PO Box 232
Midland, South Dakota 57552-0232

Subapplicant:
N/A

DUNS Number:
784377868

Proposed Funding Package
The Town is applying for a CDBG which may lessen the amount needed from SDDENR.

Requested Funding	$715,000
Local Cash	
Other:	
Other:	
Other:	
TOTAL	$715,000

Project Title: Midland Water Project

Description:

The Town of Midland proposed to undertake water system improvements including storage and distribution. While the town is connected to the West River/Lyman-Jones RWS for its drinking water supply, the community has been in violation for HAA5 a primary drinking water standard. The construction of a new water storage facility with a mixing system and the looping of mains will help correct water quality issues. The town's 75,000 gallon existing water storage facility was constructed in the 1960's and has seen its useful life --the tank has been leaking for over 10 years and has had numerous repairs. In addition, the storage facility does not have a mixing system which contributes to the HAA5 violation. The proposed new storage facility will be a 53,000 gallon ground storage facility with a mixing system, necessary gates, valves, tees, water main tie in and necessary appurtenances. The old tank will then be demolitions. The town also proposes to undertake the looping of the system water system in order to provide better water quality. The distribution improvement include approximately 3,220 feet of 6" main, gates, valves, tees, and necessary appurtenances. Health risks associated with long-term HAA5 include cancer, anemia, dry skin, miscarriages, underdeveloped brain cells among fetuses and babies, etc. Currently, the inside municipal limits monthly water rate is $25/5000 gallons, plus $2.50 for each additional 1,000 gallons; while the outside municipal limit monthly rate is $29.00/5000 gallons, plus $2.50 for each 1,000 gallons. If the entire project is undertaken at once and no grant funds are received, the water rate will increase by $27.62/month/user or $52.62/5000 gallons for inside municipal limit users and $56.62/month/ users for outside municipal limit users. These rates are based on a $715,000 loan at 2.25% for 30 years and there are 109 users.

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Diana Baeza, Town Board President
Name & Title of Authorized Signatory (Typed)

Diana Baeza
Signature

12/28/2015
Date

Professional Consultants

Application Prepared By: Central South Dakota Enhancement District

Contact Person: Marlene Knutson

Mailing Address: PO Box 220

City, State, and Zip: Pierre, SD 57501

Telephone Number: 605-773-2782 Fax: 605-773-2784

Email address: mknutson@csded.org

Consulting Engineering Firm: Banner Associates, Inc.

Contact Person: Joe Munson, PE

Mailing Address: 2307 W 57th St., Suite 102

City, State, and Zip: Sioux Falls, SD 57108

Telephone Number: 605-692-6342 Fax: 605-692-5714

Email address: joem@bannerassociates.com

Legal Counsel's Firm: Riter Rogers Wattier & Northrup LLP or Riter Law Office

Contact Person: Jerry Wattier

Mailing Address: PO Box 280

City, State, and Zip: Ouerrem SD 57501

Telephone Number: 605-224-5825 Fax: 605-224-7102

Email address: j.wattier@ritterlaw.com

Bond Counsel's Firm: Meierhenry Sargent, LLP

Contact Person: Todd Meierhenry

Mailing Address: 315 S Phillips Avenue

City, State, and Zip: Sioux Falls, South Dakota 57104

Telephone Number: 605-336-3075 Fax: 605-336-2593

Email address: todd@meierhenrylaw.com

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel	$14,550					$14,550
D. Other (Publications, audits, admin asst., etc.)	$5,500					$5,500
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$51,450					$51,450
B. Project Inspection Fees	$66,650					$66,650
C. Other						
4. Construction & Improvements	$506,850					$506,850
5. Equipment						
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$645,000					$645,000
10. Contingencies	$70,000					$70,000
11. Total (Lines 9 and 10)	$715,000					$715,000
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)			
Other (Explain) DWSRF		$715,000	April 01, 2016
Other (Explain)			
Other (Explain)			
Total		$715,000	$715,000

Midland will be applying for a CDBG for this project which is not shown above As these funds are uncertain, they have not been included in the budget.

Other Funds to be Borrowed ---- N/A

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other	$0				
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: January, 1

Population Served Current: 123 2010 129 2000 179

Top three employers within 30 miles	Number of Employees	Type of Business
Kadoka Area School District	62 Midland and Kadoka Sites Only	Education
Philip Health Care	171	Health Care
Scotchman Industries	75	Manufacturing-Metal Fabrication

Repayment Information

Interest rate you are applying for: 2.25% Term: 30

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☒ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund. See attached 2013 & 2014 Annual Reports-2015 not completed
2. Current year's budget for the drinking water fund. See attached
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date. See attached
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database. See attached
   (https://www.sam.gov)
4. Facilities Plan. On file with SDDENR
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets. See attached

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

This section is not applicable!
Midland had not drinking water debt!

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$23,944	$25,388	$31,298	$38,000	$38,000	$38,000
Surcharge Fees	0	0		$24,083	$36,125	$36,125
Other (Explain) meter purchases connection fees, etc.	$790	$1,665	$1,935	$1,500	$1,500	$1,000
Operating Expenses						
Personal Services	($9,995)	($11,155)	($10,433)	($10,000)	($11,000)	($11,500)
Chemical, Material & Supplies	($21,453)	($18,718)	($31,054)	($24,320)	($25,000)	($25,000)
Electric & Other Utilities	($1,360)	($1,215)	($661)	($1,200)	($1,215)	($1,230)
Other (Explain) lab fees, mtr refunds membership fees, etc.	($485)	($1,673)	($1,935)	($1,900)	($1,500)	($1,500)
Operating Net Cash	($8,559)	($5,708)	($10,850)	$26,163	$36,910	$35,895
Nonoperating Cash Flow						
Interest Revenue						
Transfers In (Explain) from general fund	$8,752	$5,709	$3,156			
Fixed Asset Purchases						
Transfers Out (Explain)						
Principal Debt Payments					($16,894)	($17,277)
Interest Debt Payments					($15,946)	($15,562)
Other (Explain)			$7,694			
Income for a Boring **Nonoperating Net Cash**	$8,752	$5,709	$10,850		($32,840)	($32,840)
Increase (Decrease) Cash	$193	$1	0	$26,163	$4,070	$3,055
Beginning Cash Balance	($192)	$1	$2	$2	$26,165	$30,235
Ending Cash Balance	$1	$2	$2	$26,165	$30,235	$33,290
Restricted Balance						$6,000
Unrestricted Balance	$1	$2	$2	$26,165	$30,235	$27,290

Explanations

In 2013, 2014, and 2015, Midland operated Potable (drinking water system) and non-potable (heating system) as one under water fund. Information above has been broken out to include only potable drinking water system. The overall reflects a balance of $2 cash in the potable water fund to go forward into 2016. Financial information in 2016 anticipates a surcharge in effect for 8 months. While the loan repayments etc. are based on 2.25% for 30 years with 106 users and no loan or grants are received. If the town could receive loan forgiveness or grant assistance so the loan amount is $300,000 then the surcharge needed would be only $11.92/month/user. The existing rate will need to stay in effect and may need to be raised at the end of 2016 to cover normal operation and maintenance costs.

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: [X] Incorporated Municipality or Sanitary District

or

[ ] Other Community System

Monthly	Current Rate	Proposed ** Rate	# of Accounts Currently	Average use Gallons/Cubic Feet
Domestic	$25.00 $29 Outside	$53.40 57.40 Outside	80	4300
Business	$25.00 $29 Outside	$53.40 $57.40 Outside	20	2200
Other: City Meters	$0.00		6	3000
Other:				

**This is the proposed rate if no grants or loans received based on 106 Users

Are fees based on usage or flat rate? usage

When is proposed fee scheduled to take effect? actual rate will be determined upon funding package completion

When did the current fee take effect? September, 2015

What was the fee prior to the current rate? $22.50/5000 gallons inside and $26.50/5000 gallons outside, plus $2.50 per gallon over 5000 gallons

Four Largest Customers	Type of Business	% of System Revenue
Dallas McKinley	Farm	4.27%
Uptown Lodging	Housing/Motel	3.59%
Midland Food & Fuel	Convience Store ,Rest.,Gas	3.48%
Reuben Vollmer	Farm	2.98%

Property Tax Information THIS SECTION IS NOT APPLICABLE!

(Complete section only if General Obligation bond is pledged to repay your loan.)

Three year valuation trend:

Year	_____	_____	_____
Assessed Valuation	_____	_____	_____

Three year levies and collection trend:

Year	_____	_____	_____
Amount Levied	_____	_____	_____
Collected	_____	_____	_____

Five Largest Taxpayers	Description	Assessed Valuation
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Comments:

General Fund Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Sales Tax Information THIS SECTION IS NOT APPLICABLE!!

(Complete section only if sales tax is pledged to repay your loan.)

Sales tax revenue history for the most current fifteen months:

Month/Year	Amount Collected

Comments:

Sales Tax Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Facilities Plan Checklist

Before submitting the application, please take a few moments to complete the following checklist. Addressing these items prior to submitting the application will expedite the review process.

Drinking Water Facilities Plan document can be found at http://denr.sd.gov/dfta/wwf/dwsrf/dwfunding.aspx

Checklist of SRF Facilities Plan Requirements

Have the following items been addressed?

- Submission of a Facilities Plan to the department that addresses those items found in the Water Facilities Plan document. ☒
- A public hearing held discussing the project and the use of an SRF loan to finance the project. ☐
- Minutes of the public hearing prepared and submitted to the department's engineer for inclusion into the final Facilities Plan. ☐
- The affidavit of publication of the public hearing received and submitted to the department's engineer for inclusion into the final Facilities Plan. ☐
- The four review agencies contacted and responses received for inclusion into the final Facilities Plan. ☒
- The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. Forthcoming! ☐

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$292,000
Treatment	
Storage	$423,000
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$715,000

Diana Baeza, Town Board President

Name & Title of Authorized Representative

Diana Baeza

Signature of Authorized Representative

12/28/2015

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Diana Baeza, Town Board President

Name & Title of Authorized Representative

Diana Baeza

Signature of Authorized Representative

12/28/2015

Date

☐ I am unable to certify to the above statements. Attached is my explanation

RESOLUTION #2015-01

RESOLUTION TO ESTABLISH NEW WATER RATES FOR THE TOWN OF MIDLAND, SD.

WHEREAS, the current water rates are not sufficient in order to qualify for federal grant funding as well as other bills incurred in the water department;

NOW, THEREFORE, BE IT RESOLVED by the Midland Town Board for Midland, South Dakota, that the water rates for all residential and commercial users shall be as follows:

Inside municipal boundaries -- $ 25.00 per month for 5,000 gallons, plus $ 2.50 for each additional 1,000 gallons

Outside municipal boundaries -- $ 29.00 per month for 5,000 gallons, plus $ 2.50 for each additional 1,000 gallons

BE IT FURTHER RESOLVED that these water rates shall go into effect immediately on the September 2015 water bills,

Dated this 8th day of September, 2015

Diana Baeza

Diana Baeza, President

Attest:

Michelle Meinzer

Michelle Meinzer, Finance Officer

USER NAME PASSWORD

LOG IN

Forgot Username? Forgot Password?

Create an Account

Entity Dashboard

Midland, Town Of
DUNS: 784377868 CAGE Code: 73MF7
Status: Active

509 Main St
Midland, SD, 57552,
UNITED STATES

Expiration Date: 03/17/2016
Purpose of Registration: Federal Assistance Awards Only

Entity Overview
Entity Record
Core Data
Assertions
Reps & Certs
POCs
Reports
Service Contract Report
BioPreferred Report
Exclusions
Active Exclusions
Inactive Exclusions
Excluded Family Members
RETURN TO SEARCH

Entity Overview

Entity Information

Name: Midland, Town Of
Business Type: US Local Government
POC Name: Michelle Meinzer
Registration Status: Active
Activation Date: 03/18/2015
Expiration Date: 03/17/2016

Exclusions

Active Exclusion Records? No

SAM | System for Award Management 1.0

IBM v1.P.24.20150116-1831
WWW2

Note to all Users: This is a Federal Government computer system. Use of this system constitutes consent to monitoring at all times.

RESOLUTION NO. 2016-01

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the Town of Midland has determined it is necessary to proceed with improvements to its Water System, including but not limited to the a new water storage facility and water distribution improvements;

WHEREAS, the Town has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the Town and to certify and sign payment requests in the event financial assistance is awarded for the Project.

NOW THEREFORE BE IT RESOLVED by the Town Board as follows:

1. The Town Board hereby approves the submission of an Application for financial assistance in an amount not to exceed $715,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Town Board President and/or Finance Officer is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Town Board President and/or Finance Officer is hereby designated as the authorized representative of the Town to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at the Town of Midland Town Board meeting, Midland South Dakota, this 16th day of December, 2015.

This resolution is effective upon passage.

APPROVED:

Diana Baeza

Diana Baeza, Town Board President
Town of Midland

(Seal)

Attest: Michelle Meinzer

Michelle Meinzer, Finance Officer
Town of Midland

TOWN OF MIDLAND

MEETING MINUTES
January 12, 2016

The Town Board of the Town of Midland met in session on Tuesday, January 12, 2016 at 6:30 PM in the Town Hall with the following members present: Diana Baeza, Jared Fosheim, Rock Gillaspie, Finance Officer Michelle Meinzer and Utilities Operator Lawrence Stroppel.

Also present: Marlene Knutson, Central SD Enhancement Dist.; David LaFrance, Banner Associates; Jerry Nemec, Debb Vollmer, Margie Iwan and Sheriff Koester.

A public hearing for the Midland Water Project. Midland is proposing to undertake water system improvements which include water storage facility and water distribution at an estimated cost of $715,000. Marlene Knutson discussed the requirements for application involving CDBG and DENR funds. The project is being undertaken as the water storage facility is leaking and surpassed its useful life, while the looping of the distribution system will eliminate dead ends and provide for better quality water. The option of doing nothing is not acceptable due to the condition of the infrastructure. Proposed financing for the project includes CDBG funds and SDDENR funding. SDDENR funds if given all as a loan will be at 2.2% for 30 years which would result in a rate of approximately $53.40 user/month for 5,000 gallons/inside city limits. Outside site limit users would be an additional $4. Repayments amount were also discussed if the end result is a $515,000 loan, $300,000 and a $250,000 loan. SDDENR will review application and make offer to the Midland. Any loan repayments will come from water surcharges to the users. Also discussed was the option of going to Rural Development for loan which would be at a 2.5% interest rate up to 40 years.

Midland will be also applying for a CDBG Grant for the project. CDBG program requirements were discussed. The grant is available to benefit low to moderate income individuals. Midland is currently 54.55% low and moderate according to HUD statistics. At this time, the Midland updated their Community Development and Housing Needs Assessment Plan which had been developed in March of 2014. Projects were identified, prioritized by group consensus and ways to implement the projects were discussed. General categories discussed were water improvements, wastewater treatment improvements, streets, housing, sidewalks, recreational and beautification.

Motions were made by Fosheim, second by Gillaspie to pass Resolutions 2016-01, 2016-02 and 2016-03. Motion carried.

RESOLUTION # 2016-01

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the Town of Midland has determined it is necessary to proceed with improvements to its Water System, including but not limited to the a new water storage facility and water distribution improvements;

WHEREAS, the Town has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the Town and to certify and sign payment requests in the event financial assistance is awarded for the Project.

NOW THEREFORE BE IT RESOLVED by the Town Board as follows:

1. The Town Board hereby approves the submission of an Application for financial assistance in an amount not to exceed $715,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Town Board President and/or Finance Officer is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Town Board President and/or Finance Officer is hereby designated as the authorized representative of the Town to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at the Town of Midland Town Board meeting, Midland South Dakota, this 12th day of January, 2016. This resolution is effective upon passage.

APPROVED:
Diana Baeza, Town Board President
Town of Midland

(Seal)
Attest: _____
Michelle Meinzer, Finance Officer
Town of Midland

RESOLUTION # 2016-02

WHEREAS, the Town of Midland has identified the need for water storage and distribution system improvements; and

WHEREAS, the Town of Midland proposes to undertake a water system improvements project; and

WHEREAS, the Town of Midland is eligible for Federal assistance for the proposed project, and

WHEREAS, the Town of Midland has held the required public hearing on Tuesday, January 12, 2016, at 6:30 p.m., and

WHEREAS, with the submission of the CDBG application the Town of Midland assures and certifies that all CDBG program requirements will be fulfilled,

THEREFORE, BE IT RESOLVED that the Town of Midland duly authorizes the Town Board President of Midland to sign and submit the CDBG application requesting up to $515,000 of funds.

This resolution is effective immediately upon passage.

Adopted this 12th day of January, 2016.

_____
Diana Baeza, Town Board President
Town of Midland, South Dakota

ATTEST: _____
Michelle Meinzer, Finance Officer
Town of Midland

RESOLUTION #2016-03

WHEREAS, the Town of Midland expects to be the recipient of a Community Development Block Grant from the US Department of Housing and Urban Development as administered by the State of South Dakota to undertake a water storage and distribution improvements project; and

WHEREAS, the Town of Midland is required to designate a certifying officer for the purpose of signing required documents pertaining to this grant;

NOW, THEREFORE BE IT RESOLVED, that the Town Board President of the Town of Midland, be hereby designated as the town's official for the purpose of signing the CDBG grant agreements, contracts, correspondence, pay requests, and other required documents; and

WHEREAS, the Town of Midland is required to designate an environmental certifying officer for the purpose of signing required environmental documents pertaining to this grant;

NOW, THEREFORE, BE IT RESOLVED, that the Town Board President of the Town of Midland, be hereby designated as the town's environmental certifying officer for the purpose of signing environmental correspondence and other required documents and forms.

This resolution is effective upon passage.

Dated this 12th day of January, 2016.

By: _____
Diana Baeza, Town Board President
Town of Midland

Attest: _____
Michelle Meinzer, Finance Officer
Town of Midland

A motion was made by Gillaspie, second by Fosheim to adopt the Community Development and Housing Needs Assessment Plan which is in order of priority by group consensus. Motion carried. This plan is on file for viewing at the City Finance Office.

Sheriff Koester met with the Board to discuss right of way issues. Koester will be visiting with parties concerning this issue.

Minutes from the December 9, 2015 meetings were approved as published.

Board appointed Stroppel and Meinzer as Utility Operator and Finance Officer, respectively, for the calendar year of 2016. To be made a matter of public record: Lawrence Stroppel is Utility Operator. Wages are $19.06 per hour at 40 hours per week, 75 % of health insurance ($442.15), $150.00 towards personal vehicle use, $50.00 for cell phone use, and 6% into SD Retirement System. Michelle Meinzer is Finance Officer. Wages are $800.00 per month plus $50.00 per month for cell phone use. Diana Baeza, Jared Fosheim and Rock Gillaspie are Trustees. Wages are $50.00 per meeting for President and $25.00 per meeting for Trustees.

Discussion was held to look into vision and dental insurance and discuss findings at a later date. A motion was made by Fosheim, second by Gillaspie to raise Stroppel's wages by 3% and Meinzer's wages by $25.00 per month. Board wages will remain the same as 2015. Motion passed unanimously.

Municipal Election is set for Tuesday, April 12, 2016. Gillaspie's seat for a Three (3) year term of Trustee is open in May.

A motion was made by Fosheim, second by Gillaspie to designate the Pioneer Review as the Official newspaper to publish minutes for the Town of Midland for the 2016 calendar year.

Operating agreements were renewed for Midland Food and Fuel and Loose Ends.
Stroppel gave his operator report: Topics discussed were insulating and organizing the back room, tractor repairs, snow removal, water classes in Pierre as well as equipment needed. Stroppel along with the Board would like to thank Randy Nemec for helping with snow removal as well as West Central Electric employees for their help putting up and taking down the Christmas lights. We appreciate it!!

A special meeting for our water facility plan will be held on December 16 at 6:30 MT.

A motion was made by Gillaspie, second by Fosheim to approve the following claims:

Electronic Federal Tax Payment System	Employee Tax	$ 1222.64
Lawrence Stroppel	Wages	2716.05
Lawrence Stroppel	Vehicle/phone	200.00
Michelle Meinzer	Wages/phone/mileage	728.80
Ernie's	Supplies	598.64
G & A Trenching	Repairs	135.00
Golden West	Phone/Internet	152.05
Health Pool of South Dakota	Employee Insurance	589.53
Heartland Waste	Refuse Service	1368.00
Kadoka Oil LLC	Propane	686.20
M&M Welding	Repairs	365.00
Midland Food & Fuel	Fuel	266.00
Pioneer Review	Publications	75.66
Quill Corporation	Supplies	128.32
Riter, Rogers, Wattier & Northrup, LLP	Legal Fees	210.00
SD Dept. of Revenue	Lab Fees	196.00
SD One Call	Message Fee	4.48
SD Retirement System	Retirement	457.44
SD State Treasurer	Sales Tax	100.32
West Central Electric	Electric Supply	1150.36
WR/LJ Rural Water	Water Supply	973.75

There being no further business to come before the Board, the meeting adjourned.

Michelle Meinzer, Finance Officer

Diana Baeza, President

Published once at the approximate cost of _____.

PUBLISHER'S AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA }

}SS

COUNTY OF HAAKON }

Selma Thorson of said County and State, being duly sworn on oath says: PIONEER REVIEW is a weekly newspaper of general circulation, printed and published in PHILIP, in said County and State and has been such newspaper during the times thereinafter mentioned; that the said PIONEER REVIEW is a legal newspaper and has been in existence for more than one year immediately preceding the first publication herein mentioned; and has more than 200 bonafide subscribers; that I, the undersigned, am Billing Manager of said newspaper, and have personal knowledge of all facts stated in this affidavit; and that the advertisement headed:

Town of Midland

Notice of Public Hearing-Water Project

A printed copy of which is hereto attached, was printed and published in said newspaper for 1 successive issues, the first publication being on the 31st day of December, 2015, and the last publication on the 31st day of December, 2015, that $22.38 the benefit of the publishers of the said newspaper; that no arrangement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

X Selma Thorson

Subscribed and sworn to me before this 31st day of December 2015.

Tamara Lovell

Notary Public, State of South Dakota

My Commission Expires

Jan. 24th, 2020

Notcie of Public Hearing

for the
MIDLAND WATER PROJECT

The Town is Midland is proposing to undertake water system improvements including a new water storage facility and water distribution improvements. The Town of Midland is seeking up to $715,000 of funding from the Board of Water and Natural Resources. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or a loan from the Drinking Water State Revolving Fund (SRF) Program. The expected Drinking Water SRF loan terms are either 2.25 or 3.25 percent for 30 years, and the Board of Water and Natural Resources may forgive all or a portion of the loan principal. The amount and source of funds will be determined by the Board of Water and Natural Resources when the application is presented at a scheduled board meeting.

The Town of Midland also expects to submit an application to the State of South Dakota for a Community Development Block Grant (CDBG) in order to undertake the project. The city expects to apply for approximately $515,000 from the CDBG Community Projects Account to be used for the proposed project which will cost approximately $715,000.

A public hearing will be held at 6:30 p.m. MT on Tuesday, January 12, 2016, in the Municipal Room, Midland Fire Hall Building, Midland, South Dakota. The purpose of the hearing is to receive comments regarding the proposed project, the proposed financing, and the source of repayment for the loan. Public comments will also be taken during this public hearing for the Town of Midland's Community Development and Housing Needs Assessment Plan. The meeting is open to the public and interested persons are encouraged to attend. Disabled individuals wishing assistance should contact the Finance Office at (605) 843-2810 for information and/or special assistance the request should be made 48 hours in advance of the meeting.

[Published December 31, 2015, at the total approximate cost of $22.38]

PUBLISHER'S AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA }

}SS

COUNTY OF HAAKON }

Selma Thorson of said County and State, being duly sworn on oath says: PIONEER REVIEW is a weekly newspaper of general circulation, printed and published in PHILIP, in said County and State and has been such newspaper during the times thereinafter mentioned; that the said PIONEER REVIEW is a legal newspaper and has been in existence for more than one year immediately preceding the first publication herein mentioned; and has more than 200 bonafide subscribers; that I, the undersigned, am Billing Manager of said newspaper, and have personal knowledge of all facts stated in this affidavit; and that the advertisement headed:

Town of Midland

Notice of Hearing-Water Project

A printed copy of which is hereto attached, was printed and published in said newspaper for 1 successive issues, the first publication being on the 3rd day of December, 2015, and the last publication on the 3rd day of December, 2015, that $19.82 the benefit of the publishers of the said newspaper; that no arrangement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

X Selma Thorson

Subscribed and sworn to me before this 31st day of December 2015.

Tamara Lovell

Notary Public, State of South Dakota

My Commission Expires

Jan. 24th, 2020

Notcie of Public Hearing

for the
MIDLAND WATER PROJECT

The Town is Midland is proposing to undertake water system improvements including a new water storage facility and water distribution improvements. The Town of Midland is seeking up to $715,000.00 of funding from the Board of Water and Natural Resources. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or a loan from the Drinking Water State Revolving Fund (SRF) Program. The expected Drinking Water SRF loan terms are either 2.25 or 3.25 percent for 30 years, and the Board of Water and Natural Resources may forgive all or a portion of the loan principal. The amount and source of funds will be determined by the Board of Water and Natural Resources when the application is presented at a scheduled board meeting.

The Town of Midland also expects to submit an application to the State of South Dakota for a Community Development Block Grant (CDBG) in order to undertake the project. The city expects to apply for approximately $515,000.00 from the CDBG Community Projects Account to be used for the proposed project which will cost approximately $715,000.00.

A public hearing will be held at 6:30 p.m. on Wednesday, December 16, 2015, in the Municipal Room, Midland Fire Hall Building, Midland, South Dakota. The purpose of the hearing is to receive comments regarding the proposed project, the proposed financing, and the source of repayment for the loan. Public comments will also be taken during this public hearing for the Town of Midland's Community Development and Housing Needs Assessment Plan. The meeting is open to the public and interested persons are encouraged to attend. Disabled individuals wishing assistance should contact the Finance Office at (605) 843-2810 for information and/or special assistance the request should be made 48 hours in advance of the meeting.

[Published December 3, 2015, at the total approximate cost of $19.82]

This public hearing was cancelled or postponed due to a snow storm

Loan Amortization Calculator

Almost any data field on this form may be calculated. Enter the appropriate numbers in each slot, leaving blank (or zero) the value that you wish to determine, and then click "Calculate" to update the page.

Principal	Payments per Year
715000.00	4
Annual Interest Rate	**Number of Regular Payments**
2.2500	120
Balloon Payment	**Payment Amount**
0.72	8209.92

x 4 = 32,839.68 x 10% 3,283.97

36,123.65 ÷ 12 month. 3,010.30 / month ÷ 106 users 28.40 + 25 existing 53.40

☑ Show Amortization Schedule

Calculate

This loan calculator is written and maintained by Bret Whissel.
See Bret's Blog for help, a spreadsheet, derivations, calculator news, and more information.

Summary

Principal borrowed:	$715,000.00	**Annual Payments:**	4
Regular Payment amount:	$8,209.92	**Total Payments:**	121 (30.25 years)
Final Balloon Payment:	$0.72	**Annual interest rate:**	2.25%
Interest-only payment:	$4,021.88	**Periodic interest rate:**	0.5625%
***Total Repaid:**	$985,191.12	***Total interest paid as a percentage of Principal:**	37.789%
***Total Interest Paid:**	$270,191.12		

**These results are estimates which do not account for accumulated error of payments being rounded to the nearest cent. See the amortization schedule for more accurate values.*

Pmt	Principal	Interest	Cum Prin	Cum Int	Prin Bal
1	4,188.04	4,021.88	4,188.04	4,021.88	710,811.96
2	4,211.60	3,998.32	8,399.64	8,020.20	706,600.36
3	4,235.29	3,974.63	12,634.93	11,994.83	702,365.07
4	4,259.12	3,950.80	16,894.05	15,945.63	698,105.95
5	4,283.07	3,926.85	21,177.12	19,872.48	693,822.88
6	4,307.17	3,902.75	25,484.29	23,775.23	689,515.71
7	4,331.39	3,878.53	29,815.68	27,653.76	685,184.32
8	4,355.76	3,854.16	34,171.44	31,507.92	680,828.56
9	4,380.26	3,829.66	38,551.70	35,337.58	676,448.30
10	4,404.90	3,805.02	42,956.60	39,142.60	672,043.40
11	4,429.68	3,780.24	47,386.28	42,922.84	667,613.72
12	4,454.59	3,755.33	51,840.87	46,678.17	663,159.13
13	4,479.65	3,730.27	56,320.52	50,408.44	658,679.48
14	4,504.85	3,705.07	60,825.37	54,113.51	654,174.63
15	4,530.19	3,679.73	65,355.56	57,793.24	649,644.44
16	4,555.67	3,654.25	69,911.23	61,447.49	645,088.77
17	4,581.30	3,628.62	74,492.53	65,076.11	640,507.47
18	4,607.07	3,602.85	79,099.60	68,678.96	635,900.40
19	4,632.98	3,576.94	83,732.58	72,255.90	631,267.42
20	4,659.04	3,550.88	88,391.62	75,806.78	626,608.38
21	4,685.25	3,524.67	93,076.87	79,331.45	621,923.13
22	4,711.60	3,498.32	97,788.47	82,829.77	617,211.53
23	4,738.11	3,471.81	102,526.58	86,301.58	612,473.42
24	4,764.76	3,445.16	107,291.34	89,746.74	607,708.66
25	4,791.56	3,418.36	112,082.90	93,165.10	602,917.10
26	4,818.51	3,391.41	116,901.41	96,556.51	598,098.59
27	4,845.62	3,364.30	121,747.03	99,920.81	593,252.97
28	4,872.87	3,337.05	126,619.90	103,257.86	588,380.10
29	4,900.28	3,309.64	131,520.18	106,567.50	583,479.82
30	4,927.85	3,282.07	136,448.03	109,849.57	578,551.97
31	4,955.57	3,254.35	141,403.60	113,103.92	573,596.40
32	4,983.44	3,226.48	146,387.04	116,330.40	568,612.96
33	5,011.47	3,198.45	151,398.51	119,528.85	563,601.49
34	5,039.66	3,170.26	156,438.17	122,699.11	558,561.83
35	5,068.01	3,141.91	161,506.18	125,841.02	553,493.82
36	5,096.52	3,113.40	166,602.70	128,954.42	548,397.30
37	5,125.19	3,084.73	171,727.89	132,039.15	543,272.11
38	5,154.01	3,055.91	176,881.90	135,095.06	538,118.10
39	5,183.01	3,026.91	182,064.91	138,121.97	532,935.09
40	5,212.16	2,997.76	187,277.07	141,119.73	527,722.93
41	5,241.48	2,968.44	192,518.55	144,088.17	522,481.45
42	5,270.96	2,938.96	197,789.51	147,027.13	517,210.49
43	5,300.61	2,909.31	203,090.12	149,936.44	511,909.88
44	5,330.43	2,879.49	208,420.55	152,815.93	506,579.45
45	5,360.41	2,849.51	213,780.96	155,665.44	501,219.04
46	5,390.56	2,819.36	219,171.52	158,484.80	495,828.48
47	5,420.88	2,789.04	224,592.40	161,273.84	490,407.60
48	5,451.38	2,758.54	230,043.78	164,032.38	484,956.22

Pmt	Principal	Interest	Cum Prin	Cum Int	Prin Bal
49	5,482.04	2,727.88	235,525.82	166,760.26	479,474.18
50	5,512.88	2,697.04	241,038.70	169,457.30	473,961.30
51	5,543.89	2,666.03	246,582.59	172,123.33	468,417.41
52	5,575.07	2,634.85	252,157.66	174,758.18	462,842.34
53	5,606.43	2,603.49	257,764.09	177,361.67	457,235.91
54	5,637.97	2,571.95	263,402.06	179,933.62	451,597.94
55	5,669.68	2,540.24	269,071.74	182,473.86	445,928.26
56	5,701.57	2,508.35	274,773.31	184,982.21	440,226.69
57	5,733.64	2,476.28	280,506.95	187,458.49	434,493.05
58	5,765.90	2,444.02	286,272.85	189,902.51	428,727.15
59	5,798.33	2,411.59	292,071.18	192,314.10	422,928.82
60	5,830.95	2,378.97	297,902.13	194,693.07	417,097.87
61	5,863.74	2,346.18	303,765.87	197,039.25	411,234.13
62	5,896.73	2,313.19	309,662.60	199,352.44	405,337.40
63	5,929.90	2,280.02	315,592.50	201,632.46	399,407.50
64	5,963.25	2,246.67	321,555.75	203,879.13	393,444.25
65	5,996.80	2,213.12	327,552.55	206,092.25	387,447.45
66	6,030.53	2,179.39	333,583.08	208,271.64	381,416.92
67	6,064.45	2,145.47	339,647.53	210,417.11	375,352.47
68	6,098.56	2,111.36	345,746.09	212,528.47	369,253.91
69	6,132.87	2,077.05	351,878.96	214,605.52	363,121.04
70	6,167.36	2,042.56	358,046.32	216,648.08	356,953.68
71	6,202.06	2,007.86	364,248.38	218,655.94	350,751.62
72	6,236.94	1,972.98	370,485.32	220,628.92	344,514.68
73	6,272.02	1,937.90	376,757.34	222,566.82	338,242.66
74	6,307.31	1,902.61	383,064.65	224,469.43	331,935.35
75	6,342.78	1,867.14	389,407.43	226,336.57	325,592.57
76	6,378.46	1,831.46	395,785.89	228,168.03	319,214.11
77	6,414.34	1,795.58	402,200.23	229,963.61	312,799.77
78	6,450.42	1,759.50	408,650.65	231,723.11	306,349.35
79	6,486.70	1,723.22	415,137.35	233,446.33	299,862.65
80	6,523.19	1,686.73	421,660.54	235,133.06	293,339.46
81	6,559.89	1,650.03	428,220.43	236,783.09	286,779.57
82	6,596.78	1,613.14	434,817.21	238,396.23	280,182.79
83	6,633.89	1,576.03	441,451.10	239,972.26	273,548.90
84	6,671.21	1,538.71	448,122.31	241,510.97	266,877.69
85	6,708.73	1,501.19	454,831.04	243,012.16	260,168.96
86	6,746.47	1,463.45	461,577.51	244,475.61	253,422.49
87	6,784.42	1,425.50	468,361.93	245,901.11	246,638.07
88	6,822.58	1,387.34	475,184.51	247,288.45	239,815.49
89	6,860.96	1,348.96	482,045.47	248,637.41	232,954.53
90	6,899.55	1,310.37	488,945.02	249,947.78	226,054.98
91	6,938.36	1,271.56	495,883.38	251,219.34	219,116.62
92	6,977.39	1,232.53	502,860.77	252,451.87	212,139.23
93	7,016.64	1,193.28	509,877.41	253,645.15	205,122.59
94	7,056.11	1,153.81	516,933.52	254,798.96	198,066.48
95	7,095.80	1,114.12	524,029.32	255,913.08	190,970.68
96	7,135.71	1,074.21	531,165.03	256,987.29	183,834.97

Pmt	Principal	Interest	Cum Prin	Cum Int	Prin Bal
97	7,175.85	1,034.07	538,340.88	258,021.36	176,659.12
98	7,216.21	993.71	545,557.09	259,015.07	169,442.91
99	7,256.80	953.12	552,813.89	259,968.19	162,186.11
100	7,297.62	912.30	560,111.51	260,880.49	154,888.49
101	7,338.67	871.25	567,450.18	261,751.74	147,549.82
102	7,379.95	829.97	574,830.13	262,581.71	140,169.87
103	7,421.46	788.46	582,251.59	263,370.17	132,748.41
104	7,463.21	746.71	589,714.80	264,116.88	125,285.20
105	7,505.19	704.73	597,219.99	264,821.61	117,780.01
106	7,547.41	662.51	604,767.40	265,484.12	110,232.60
107	7,589.86	620.06	612,357.26	266,104.18	102,642.74
108	7,632.55	577.37	619,989.81	266,681.55	95,010.19
109	7,675.49	534.43	627,665.30	267,215.98	87,334.70
110	7,718.66	491.26	635,383.96	267,707.24	79,616.04
111	7,762.08	447.84	643,146.04	268,155.08	71,853.96
112	7,805.74	404.18	650,951.78	268,559.26	64,048.22
113	7,849.65	360.27	658,801.43	268,919.53	56,198.57
114	7,893.80	316.12	666,695.23	269,235.65	48,304.77
115	7,938.21	271.71	674,633.44	269,507.36	40,366.56
116	7,982.86	227.06	682,616.30	269,734.42	32,383.70
117	8,027.76	182.16	690,644.06	269,916.58	24,355.94
118	8,072.92	137.00	698,716.98	270,053.58	16,283.02
119	8,118.33	91.59	706,835.31	270,145.17	8,164.69
120	8,163.99	45.93	714,999.30	270,191.10	0.70
121	*0.70	0.00	715,000.00	270,191.10	0.00

*The final payment has been adjusted to account for payments having been rounded to the nearest cent.

Town of Midland 2014 Budget

	Town of Midland 2014 Budget	General	Garbage	Street	Sewer	Fire Pro	Liquor	Water	Hot Water	Donations	
Revenue Jan 2013	Beginning Balance	27403930	3816270	1015380	5965142	224163	16326570 <	1921166 >	1334390		55873679
	Actual Revenue	9116686	2123234	2674268	1035460	-0-	311670	2950732	165000		18427000
	Projected Revenue										
	Total Balance Revenue										
Expenditures	Actual Expenses	5608097	1988969	3800164	775056	-0-	493163	4276516			16951965
	Projected Expenses										
	Total Expenses										
	Transfer In			2000000		16234		2000000			
	Transfer Out	4000000 16234									
	Balance	26951285	3940535	1889484	6215546	240397	16145027	1981440			57368714
Budget 14	Estimated Revenue	9400000	1900000	2000000	900000	10000	120000	3200000			
	Estimated Expenses	5500000	1800000	2800000	400000	-0-	470000	3100000			
	Estimated Budget	3900000	100000	< 800000 >	500000	-0-	<350000>	100000			
2014	Revenue Beginning Balance	26951285	3940535	1889484	6215546	240397	16145020	1981440			57368714
	Actual Revenue	6226321	921355	1420119	460657	-0-	65000	1130357	(522000 grant?)	300000	10523809
	Projected Revenue	4000000	960000	400000	500000	-0-	60000	53500000			
	Total Balance Revenue	37182606	5761890	3709603	7176203	240397	16270027	56611797		300000	
Expenditures	Actual Expenses	12738448	1017740	1261788	453340	-0-	263938	3997990		-0-	9733242
	Projected Expenses	4000000	1200000	2000000	400000	-0-	300000	62000000		300000	
	Total Expenses	16738448	2217740	3261788	853340	-0-	543936	65997990	(584000 ?)		
	Transfer In					13438					
	Transfer Out	13438									
	Balance	30430720	3544150	447815	6322862	253835	15706691	<-9386193>		-0-	
Budget 2015	Estimated Revenue	11000000	5700000	3700000	900000	10000	120000	5670000		1300000	
	Estimated Expenses	6800000	2200000	3300000	850000	—	900000	66000900		300000	
	Budget	3200000	3500000	400000	50000	—	< 780000 >	< 9300000 >		-0-	

rev.	Town of Midland 2015 Budget	General	Garbage	Street	Sewer	Fire Pro	Liquor	Water	Donations	
Jan'14	Beginning Balance	2695285	3940535	1859484	6215546	240397	1614502	1981940	-0-	5736687
	Actual Revenue	11536973	1969151	2752662	994687	-0-	185000	3735270	300000	21477743
	Projected Revenue									
	Total Balance Revenue									
Exp.	Actual Expenses	6264559	2041292	2710176	1759715	-0-	528294	3461217	-0-	21765253
	Projected Expense									
	Total Expenses									
	Transfer In					20209		3000000		
	Transfer Out	3000000 20209								
	Balance	2920749	3868394	1931970	5450518	260606	1580173	2564493	300000	5107620
Budget 2015	Estimated Revenue	10000000	5700000	3700000	900000	10000	120000	5670000	300000	
	Estimated Expenses	6800000	2200000	3300000	850000	—	900000	6600000	300000	
	Estimated Budget	3200000	3500000	400000	50000	—	(780000)	(930000)	-0-	
Jan'15	Revenue - Beginning	2920749	3868394	1931970	5450518	260606	1580173	2564493	300000	5107620
	Actual Revenue	2803237	1019496	1614728	515554	-0-	180000	6488732	-0-	3785088
	Projected Revenue	500000	1450000	600000	900000	-0-	180000	1000000	-0-	
	Total Balance Revenue	5723864	5437890	4146698	6466072	260606	1617617	7744224	300000	
Expenditures	Actual Expense	3307271	1010891	1620379	298260	-0-	369920	2318628	-0-	3919032
	Projected Expense	600000	1000000	600000	350000	-0-	300000	6000000	-0-	
	Total Expenses	3907271	2010891	2220379	648260	-0-	669920	8318628	-0-	
	Transfer In					12322		4000000		
	Transfer Out	4000000 12322							300000	
	Balance	1416794	3926999	(347381)	5817812	272928	1592313	3825597	-0-	
Budget 2016										
	Estimated Revenue	3300000	21,000000	2300000	1000000	10000	360000	6560000	-0-	
	Estimated Expenses	3910000	2100000	760000	550000	-0-	570000	8200000	-0-	
	Budget	(610000)	100000	(540000)	450000	-0-	(210000)	(1700000)	(-0-)	

Exhibit I

MUNICIPALITY OF MIDLAND
STATEMENT OF FUND CASH BALANCES
ALL FUNDS
31-Dec-14

	General Fund	Liquor Fund	Street Fund	Enterprise Funds: Water Fund	Sewer Fund	Garbage Fund	Fund	Fund	Total
Cash Assets:									
Cash in Checking Accounts	294,680.96	158,017.33	19,319.70	5,554.93	54,505.18	38,683.94			570,762.04
Change and Petty Cash									0.00
Passbook Savings									0.00
Savings Certificates									0.00
									0.00
									0.00
									0.00
									0.00
101 FUND CASH BALANCES (Note 1)	294,680.96	158,017.33	19,319.70	5,554.93	54,505.18	38,683.94	0.00	0.00	570,762.04

Municipal funds are deposited or invested with the following depositories:

FIRST NATIONAL BANK	
MIDLAND BRANCH	
PO BOX 246	
MIDLAND, SD 57552-0246	
	570,762.04

Note 1: These amounts must equal the amounts stated on the bottom line of Exhibit II, page 3.

MUNICIPALITY OF MIDLAND
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014

				Enterprise Funds					
	General Fund	Liquor Fund	Street Fund	Water Fund	Sewer Fund	Garbage Fund	Fund	Fund	Total
Receipts (Source):									
311 Property Taxes	17,323.40								17,323.40
313 Sales Tax	70,846.49								70,846.49
316 911 Telephone Surcharge									0.00
311-319 Other Taxes (319)	93.83								93.83
320 Licenses and Permits		150.00							150.00
331 Federal Grants									0.00
335.1 Bank Franchise Tax	2,828.14								2,828.14
335.2 Motor Vehicle Commercial Prorate			1,487.64						0.00 1,487.64
335.3 Liquor Tax Reversion		1,237.80							1,237.80
335.4 Motor Vehicle Licenses (5%)			6,093.25						6,093.25
335.6 Fire Insurance Premium Reversion									0.00 0.00
335.8 Local Government Highway and Bridge Fund			18,367.51						0.00 18,367.51
338.1 County Road Tax (25%)			444.30						444.30
338.2 County Highway and Bridge Reserve Tax (25%)			37.24						0.00 37.24
338.3 County Wheel Tax			1,096.68						1,096.68
331-339 Other Intergovernmental Revenue (339)									0.00 0.00
341-349 Charges for Goods and Services (341)									0.00 0.00
351-359 Fines and Forfeits (351)									0.00
361 Investment Earnings	2,266.72	521.71							2,788.43
362 Rentals	470.00								470.00
363-369 Other Revenues (369)	830.74	1,700.00		3,000.00					5,530.74

MUNICIPALITY OF MIDLAND
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014
(continued)

				Enterprise Funds					
	General Fund	Liquor Fund	Street Fund	Water Fund	Sewer Fund	Garbage Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
380 Enterprise Operating Revenue				37,352.70	9,946.87	19,691.51			66,991.08
Surcharge as Security for Debt									0.00
380.05 Lottery Revenues									0.00
330 Operating Grants									0.00
Total Receipts	94,659.32	3,609.51	27,526.62	40,352.70	9,946.87	19,691.51	0.00	0.00	195,786.53
Disbursements (Function):									
411-419 General Government (414)	59,102.16	5,282.94	19,643.79						84,028.89
421 Police									0.00
422 Fire									0.00
423-429 Other Public Safety (429)									0.00
431 Highways and Streets (includes snow removal & street lights)			7,457.97						7,457.97
432 Sanitation (includes garbage & rubble sites)									0.00
437 Cemeteries									0.00
433-439 Other Public Works (435)	3,543.43								3,543.43
441-449 Health and Welfare (441)									0.00
451-459 Culture-Recreation (451)									0.00
461-469 Conservation and Development (465)									0.00
470 Debt Service									0.00
480 Intergovernmental Expenditures									0.00
490-492 Miscellaneous (492)									0.00

MUNICIPALITY OF MIDLAND
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014
(continued)

				Enterprise Funds					
	General Fund	Liquor Fund	Street Fund	Water Fund	Sewer Fund	Garbage Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
410 Personal Services									0.00
420 Other Expenses				84612.17	17597.15	20412.92			122,622.24
426 Supplies and Materials									0.00
Total Disbursements	62645.59	5282.94	27101.76	84612.17	17597.15	20412.92	0.00	0.00	217652.53
391.01 Transfers In				30000.00					30,000.00
51100 Transfers Out	30000.00	( )	( )	( )	( )	( )	( )	( )	30,000.00
391.03 Sale of Municipal Property	18940.90								18,940.90
391.04 Compensation for Loss or Damage to Capital Assets									0.00
391.2 Money Received From Borrowing									0.00
391.07 Capital Contributions (Grants)									0.00
									0.00
									0.00
Subtotal of Receipts, Disbursements and Transfers	80954.63	(1673.43)	424.86	(14259.47)	(7650.28)	(721.41)	0.00	0.00	57074.90
Fund Cash Balance, January 1, 2014									0.00
Adjustments:									
									0.00
									0.00
									0.00
Restated Fund Cash Balance, January 1, 2014	271966.82	161450.27	18894.84	19814.40	62155.46	39405.35	0.00	0.00	573687.14
FUND CASH BALANCE, DECEMBER 31, 2014	294680.96	158017.33	19319.70	5554.93	54505.18	38683.94	0.00	0.00	570,762.04

Exhibit III

MUNICIPALITY OF MIDLAND
STATEMENT OF CHANGES IN LONG-TERM DEBT
For the Year Ended December 31, 2014

	General Long-Term Debt			Enterprise	
	General Obligation Bonds	Special Assessment Bonds	Other	Revenue Bonds	Total
Debt Payable, January 1, 20__					0.00
Add New Issues:					
					0.00
					0.00
					0.00
Less Debt Retired					0.00
DEBT PAYABLE, DECEMBER 31, 20__	0.00	0.00	0.00	0.00	0.00
	(23101)	(23103)	(23700)	(23102)	

Note: Amounts reported do not include interest.

Exhibit I

MUNICIPALITY OF MIDLAND
STATEMENT OF FUND CASH BALANCES
ALL FUNDS
31-Dec-13

				Enterprise Funds					
	General Fund	Liiquor Fund	Fund	Water Fund	Sewer Fund	Fund	Fund	Fund	Total
Cash Assets:									
Cash in Checking Accounts	330,267.01	161,450.27		19,814.40	62,155.46				573,687.14
Change and Petty Cash									0.00
Passbook Savings									0.00
Savings Certificates									0.00
									0.00
									0.00
									0.00
									0.00
101 FUND CASH BALANCES (Note 1)	330,267.01	161,450.27	0.00	19,814.40	62,155.46	0.00	0.00	0.00	573,687.14

Municipal funds are deposited or invested with the following depositories:

FIRST NATIONAL BANK	
MIDLAND BRANCH	
PO BOX 246	
MIDLAND, SD 57552	
	573,687.14

Note 1: These amounts must equal the amounts stated on the bottom line of Exhibit II, page 3.

MUNICIPALITY OF MIDLAND
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2013

				Enterprise Funds					
	General Fund	Liquor Fund	Street Fund	Water Fund	Sewer Fund	Fund	Fund	Fund	Total
Receipts (Source):									
311 Property Taxes	16,233.92								16,233.92
313 Sales Tax	70,829.36								70,829.36
316 911 Telephone Surcharge									0.00
311-319 Other Taxes (319)	84.00								84.00
320 Licenses and Permits									0.00
331 Federal Grants									0.00
335.1 Bank Franchise Tax	2,195.16								2,195.16
335.2 Motor Vehicle Commercial Prorate			2,245.21						2,245.21
335.3 Liquor Tax Reversion		898.39							898.39
335.4 Motor Vehicle Licenses (5%)			5,630.83						5,630.83
335.6 Fire Insurance Premium Reversion									0.00
335.7 Liquor License Reversion									0.00
335.8 Local Government Highway and Bridge Fund			15,148.07						15,148.07
338.1 County Road Tax (25%)			444.30						444.30
338.2 County Highway and Bridge Reserve Tax (25%)			41.12						41.12
338.3 County Wheel Tax			1,037.99						1,037.99
331-339 Other Intergovernmental Revenue (339)									0.00
341-349 Charges for Goods and Services (341)									0.00
351-359 Fines and Forfeits (351)									0.00
361 Investment Earnings	2,231.55	600.01							2,831.56
362 Rentals	1,300.00								1,300.00
363-369 Other Revenues (369)	189.20	2,516.63							2,705.83

MUNICIPALITY OF MIDLAND
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2013
(continued)

				Enterprise Funds					
	General Fund	Liquor Fund	Street Fund	Water Fund	Sewer Fund	Garbage Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
380 Enterprise Operating Revenue				31,157.32	10,254.60	21,232.34			62,644.26
Surcharge as Security for Debt									0.00
380.05 Lottery Revenues									0.00
330 Operating Grants									0.00
Total Receipts	93,063.19	4,015.03	24,547.52	31,157.32	10,254.60	21,232.34	0.00	0.00	184,270.00
Disbursements (Function):									
411-419 General Government (414)	51,316.51	4,931.63	30,612.55						86,860.69
421 Police									0.00
422 Fire									0.00
423-429 Other Public Safety (429)									0.00
431 Highways and Streets (includes snow removal & street lights)			7,389.09						7,389.09
432 Sanitation (includes garbage & rubble sites)									0.00
437 Cemeteries									0.00
433-439 Other Public Works (435)	3,264.46								3,264.46
441-449 Health and Welfare (441)	1,500.00								1,500.00
451-459 Culture-Recreation (451)									0.00
461-469 Conservation and Development (465)									0.00
470 Debt Service									0.00
480 Intergovernmental Expenditures									0.00
490-492 Miscellaneous (492)									0.00

MUNICIPALITY OF MIDLAND
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2013
(continued)

				Enterprise Funds					
	General Fund	Liquor Fund	Street Fund	Water Fund	Sewer Fund	Garbage Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
410 Personal Services									0.00
420 Other Expenses				42765.16	7750.56	19989.69			70,505.41
426 Supplies and Materials									0.00
Total Disbursements	56080.97	4931.63	38001.64	42765.16	7750.56	19989.69	0.00	0.00	169519.65
39101 Transfers In			20000.00	20000.00					40,000.00
51100 Transfers Out	(40000.00)	( )	( )	( )	( )	( )	( )	( )	(40,000.00)
391.2 Money Received From Borrowing									0.00
391.07 Capital Contributions (Grants)									0.00
									0.00
									0.00
Subtotal of Receipts, Disbursements and Transfers	(3017.78)	(916.60)	6545.88	8392.16	2504.04	1242.65	0.00	0.00	14750.35
Fund Cash Balance, January 1, 2013									0.00
Adjustments:									
									0.00
									0.00
									0.00
Restated Fund Cash Balance, January 1, 2013	324597.43	163265.70		11422.24	59651.42				558936.79
FUND CASH BALANCE, DECEMBER 31, 2013	330267.01	161450.27		19814.40	62155.46				573,687.14

(19216.6) water not water fund had ~~14493.13~~ 3493.90)

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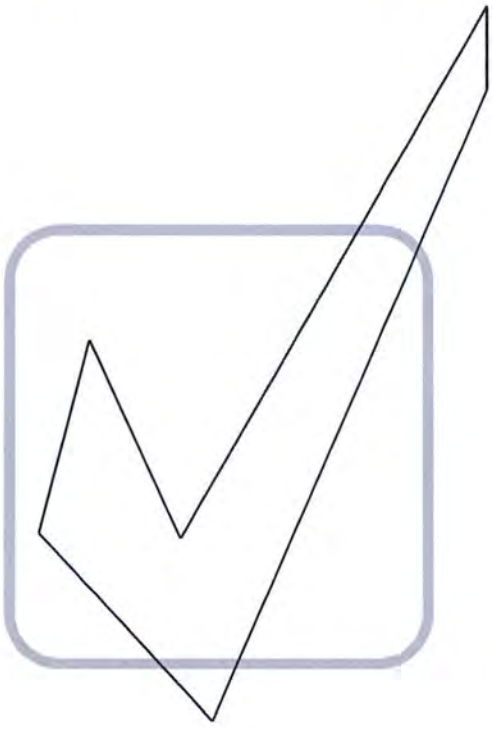
SD EForm - 0427LD V2

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: Town of Midland

Prepared by: Lawrence Stropple

Phone #: 605-843-2810

Date: 12/27/2015

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µ***g/L:*** micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: Yes, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** 16,500 GPD	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 46,000 GPD	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 95,000 GPD by Contract with WRLJRWS	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 51.5% higher	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** _____	☑	☐	☐	☐
Have you been able to provide adequate volumes of water during drought cycles?	☑	☐	☐	☐
Have you had to restrict usage at any time for any reason? ***Please specify:*** _____	☐	☑	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:*** _____	☐	☑	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.***	☐	☑	☐	☐
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☐ ***growing,*** ☐ ***declining, or*** ☑ ***stable.***	☑	☐	☐	☐
Does your source have additional water available for appropriation?	☐	☐	☐	☑
Do you have a water right? ***Water right permit number(s):*** _____	☐	☐	☐	☑
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☐	☐	☐	☑
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☑	☐	☐	☐
Do you have a contract to purchase water? ***If yes, with whom?*** WRLJRWS	☑	☐	☐	☐
Are you currently staying within your contract?	☑	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☐	☑	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☐	☐	☑	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☐	☑	☐	☐
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** _____	☐	☐	☐	☑
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** _____	☐	☐	☐	☑
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☐	☐	☑	☐

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☑ **Yes** ☐ **No**

(If you checked "No", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems Purchase Water from WRLJ RWS

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☑	☐
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☑	☐
Are repair parts available?	☐	☐	☑	☐
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:*** _____	☐	☐	☑	☐
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☑	☐
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☑	☐
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:*** _____	☐	☐	☑	☐
Do you have the capability to add coagulant before the filter?	☐	☐	☑	☐

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☐	☐	☐	☑
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** _____	☐	☐	☐	☑
Is your well(s) constructed according to current South Dakota regulations?	☐	☐	☐	☑
Do you have a source water protection plan?	☐	☐	☐	☑
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☐	☐	☐	☑

Disinfection

Do you disinfect? ☐ **Yes** ☑ **No** ***(If "No", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** _____ ***How often?*** _____ ***Disinfectant used:*** _____	☐	☐	☐	☐
Do you have back-up equipment? ***Type:*** _____	☐	☐	☐	☐
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** _____	☐	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** _____ ***Total Chlorine Residual:*** _____ (if using chloramines)	☐	☐	☐	☐

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☐
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☐

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☐	☐	☐	☐
Are chemicals used for treatment properly stored and secure?	☐	☐	☐	☐
Does the water system track chemical usage? (i.e. a sudden	☐	☐	☐	☐

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping Gravity Feed from Tank

Condition of Pumping Equipment	**Yes**	**No**	**Unknown**	**NA**
Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** _____	☐	☐	☐	☐
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☐	☐	☐	☐
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☐	☐	☐	☐
Standby/Emergency Power Equipment	**Yes**	**No**	**Unknown**	**NA**
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☐	☐	☐	☐
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☐	☐	☐	☐
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☐	☐	☐	☐

Infrastructure - Storage

Storage Capacity	**Yes**	**No**	**Unknown**	**NA**
Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:*** _____	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** _____	☐	☐	☐	☐
Security Measures	**Yes**	**No**	**Unknown**	**NA**
Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☑	☐	☐	☐
Are access hatches locked?	☑	☐	☐	☐
Is the tank and the immediate surrounding area fenced?	☑	☐	☐	☐
Control Systems				
Is there a high and low water level signal system to control the pumps?	☑	☐	☐	☐

Is there a drain valve or hydrant to allow for draining of the tank?	☑	☐	☐	☐
Tank Maintenance	**Yes**	**No**	**Unknown**	**NA**
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☑	☐	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☐	☐	☑	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:***	☑	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☐	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☐	☐	☐	☐
Are all valves exercised and lubricated periodically?	☑	☐	☐	☐
Is the system free of severe "water hammer" problems?	☑	☐	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☐	☐	☐	☐
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month?	☑	☐	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 15 % for the year	☐	☑	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 50 psi	☑	☐	☐	☐
Do you have a routine leak detection and repair program?	☐	☑	☐	☐
Are all sources of supply and customers metered?	☑	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☐	☑	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☐	☐	☑	☐

Are any inspections for cross-connections performed?	☐	☑	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☐	☑	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☑	☐	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** _____	☐	☐	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☐	☐	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☑	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☑	☐	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** _____ ***Most common complaint:*** Class I Water Distribution	☐	☑	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☑	☐	☐	☐

The Management Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** Class I Water Distribution	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** SDARWS	☑	☐	☐	☐

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☑	☐	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☑	☐	☐	☐
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications?	☑	☐	☐	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☑	☐	☐	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☐	☐	☑	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☑	☐	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☑	☐	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☑	☐	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** 5 years	☑	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☑	☐	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☐	☐	☐
Do you know what to do in the event of a violation?	☑	☐	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☐	☑	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☐	☐	☐	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☐	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☐	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** Lawrence Stropple, Utility Manager--one man dept	☐	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☑	☐	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☑	☐	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☑	☐	☐	☐
Do you have written operating procedures for both routine and emergency system operations?	☐	☐	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☐	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☐	☐	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☐	☐	☐	☐

Maintenance	Yes	No	Unknown	NA
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☑	☐	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☑	☐	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☐	☐	☑	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☐	☐	☑	☐

The Financial Portion of your System

Please mark the appropriate box: *Yes, No,* or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☑	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☑	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** _____	☐	☑	☐	☐
Does the system have reserve funds available in the event of an emergency? Utilize General Funds	☑	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☐	☑	☐	☐
Do you have a process for scheduling and committing to capital projects?	☐	☐	☐	☑
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☐	☐	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☐	☐	☐	☑
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** Yearly	☑	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☐	☑	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** $25/5000 gallon, plus $2.50/1000 inside; $29/5000 gallons, plus $2.50/1000 outside (i.e. $22 minimum plus $2.50/1000 gallons)	☐	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: _____	☐	☑	☐	☐
Does the rate structure assure proportionality among users?	☑	☐	☐	☐
Do you have procedures for billing and collection?	☑	☐	☐	☐
Is your billing collection rate greater than 95%?	☑	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☑	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☐	☑	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☐	☑	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☑	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☑ at this time!	☐	☐	☐
Do you employ standardized accounting and tracking systems?	☑	☐	☐	☐
Do you track budget performance?	☑	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☐	☑	☐	☐
Are financial management recordkeeping systems organized?	☑	☐	☐	☐
Are controls exercised over expenditures?	☑	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☐	☐	☐	☑
Are there purchasing procedures?	☑	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☐	☐	☑	☐

Financial Spreadsheet

Applicant: Town of Midland
Completed by: Michelle Meinzer and Marlene Knutson
Date: December, 2015

4 Year Projections	Last Year Actual 2014	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	$1	$2	$2	$26,165	$30,235
2. Cash Receipts:					
a. Unmetered Water Revenue			$24,083	$36,125	$36,125
b. Metered Water Revenue	$25,388	$31,298	$38,000	$38,000	$38,000
c. Other Water Revenue					
d. Total Water Revenues (2a through 2c)	$25,388	$31,298	$62,083	$74,125	$74,125
e. Connection Fees	$1,665	$1,935	$1,500	$1,500	$1,000
f. Interest and Dividend Income					
g. Other Income		$7,694			
h. Total Cash Revenues (2d through 2g)	$27,053	$40,927	$63,583	$75,625	$75,125
i. Transfers in/Additional Rev Needed	$5,709	$3,156			
j. Loans, Grants or other Cash					
Please specify					
SDDENR			$715,000		
3. Total Cash Receipts (2h through 2j)	$32,762	$44,083	$778,583	$75,625	$75,125
4. Total Cash Available (1+3)	$32,763	$44,085	$778,585	$101,790	$105,360
5. Operating Expenses					
a. Salaries and wages	$8,000	$7,465	$7,030	$7,500	$7,800
b. Employee Pensions and Benefits	$3,155	$2,968	$2,970	$3,500	$3,700
c. Purchased Water	$13,699	$14,198	$14,200	$14,500	$14,700
d. Purchased Power	$1,215	$661	$1,200	$1,215	$1,230
e. Fuel for Power Production					
f. Chemicals					
g. Materials and Supplies	$5,019	$16,856	$10,120	$10,500	$10,300
h. Engineering Services					
i. Contractual Services – Other					
j. Equip. Rent/Real Property					
k. Transportation Expenses					
l. Laboratory	$1,498	$915	$1,200	$1,200	$1,200
m. Insurance					
n. Regulatory Commission Expenses					
o. Advertising					
p. Miscellaneous	$175	$1,020	$700	$300	$300
q. Total Cash O&M Expenses (5a through 5p)	$32,761	$44,083	$37,420	$38,715	$39,230
r. Replacement Expenditures			$715,000		
s. Total OM&R Expenditures (5q+5r)	$32,761	$44,083	$752,420	$38,715	$39,230
t. Loan Principal/Capital Lease Payments				$16,894	$17,277
u. Loan Interest Payments				$15,946	$15,562
v. Transfers Out					
w. Capital Purchases (specify):					
x. Other					
6. Total Cash Paid Out (5s through 5x)	$32,761	$44,083	$752,420	$71,555	$72,069
7. Ending Cash Position (4 - 6)	$2	$2	$26,165	$30,235	$33,291

Financial Spreadsheet

Applicant: Town of Midland
Completed by: Michelle Meinzer and Marlene Knutson
Date: December, 2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts	106	106	106	106	106
9. Avg Annual User Charge Account (2d/8)	$240	$295	$586	$699	$699
10. Coverage Ratio (2h-5s)/(5t+5u)	0.0	0.0	0.0	1.1	1.1
11. Operating Ratio (2d/5s)	0.8	0.7	0.1	1.9	1.9
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve	$0				$3,000
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					$3,000
e. Other					
13. Total Reserves (12a through 12e)	$0				$6,000
14. Year End Operating Cash (7 – 13)	$2	$2	$26,165	$30,235	$27,291

In 2013, 2014, and 2015, Midland operated Potable (drinking water system) and non-potable (heating system) as one under water fund. Information above has been broken out to include only potable drinking water system. The overall reflects a balance of $2 cash in the potable water fund to go forward into 2016. Financial information in 2016 anticipates a surcharge in effect for 8 months. While the loan repayments etc. are based on 2.25% for 30 years with 106 users and no loan or grants are received. If the town could receive loan forgiveness or grant assistance so the loan amount is $300,000 then the surcharge needed would be only $11.92/month/user. The existing rate will need to stay in effect and may need to be raised at the end of 2016 to cover normal operation and maintenance costs.

Town of Midland | Water Facility Plan

Midland, SD

September 2015

Submitted by

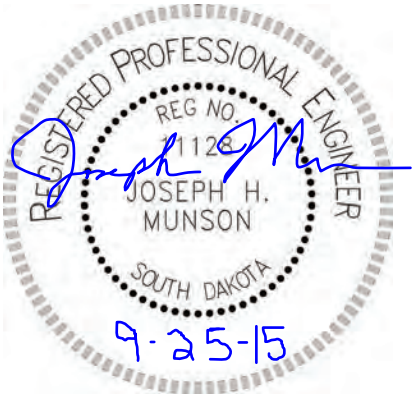
Banner Associates, Inc.
www.bannerassociates.com

BAI 22088.00.00

BANNER
Engineering | Architecture | Surveying

Town of Midland | Water Facility Plan

Midland, SD



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BANNER
Engineering | Architecture | Surveying

SECTION 1: INTRODUCTION, AUTHORIZATION, AND PURPOSE

1.1 INTRODUCTION

The Town of Midland operates a public water system located in Haakon County, South Dakota. The water system is a bulk customer of West River/Lyman-Jones Rural Water System and serves an approximate population of 149 people through 116 active service connections. Recently the Town of Midland has been in violation of the Disinfection By-Product Rule with respect to the maximum contaminant level of haloacetic acids (HAA5). An aging storage tank that is past its design life has contributed to the elevated level of HAA5, and dead end lines in the distribution system have contributed to pour water quality as well. The following report will evaluate and summarize capital improvements that have been identified to help the Town of Midland provide a reliable safe drinking water for their customers.

1.2 AUTHORIZATION

This study was authorized under an engineering services agreement between Banner Associates, Inc. and the Town of Midland on April 1, 2015. Banner Associates, Inc. has conducted an environmental review that is included in this report.

1.3 PURPOSE

The purpose of this report is to:

- Identify alternatives and scope of improvements to be considered,
- Document the need for the identified improvements to the water system,
- Present an estimate of the probable costs for improvements evaluated, and

- Provide an implementation plan for the design and construction of recommended improvements.

1.4 ORGANIZATION OF REPORT

This report is organized into a total of six sections. The topics covered in each of the sections are summarized as follows:

SECTIONS

Section 1 – Introduction, Authorization, and Purpose,
Section 2 – Need for the Project
Section 3 – Environmental Review
Section 4 – Water Quality and Regulatory Requirements
Section 5 – Evaluation of Alternatives
Section 6 – Recommendations

APPENDICES

Appendix A – Maps
Appendix B – Opinion of Probable Costs
Appendix C – Agency Review Letters
Appendix D – Agency Response Letters
Appendix E – Public Hearing Affidavit and Minutes
Appendix F – Town of Midland Billing Records

SECTION 2: NEED FOR THE PROJECT

2.1 PLANNING AREA IDENTIFICATION

The Town of Midland is located in Haakon County, SD, approximately 13 miles north of Interstate 90 along South Dakota Highway 63. Midland is approximately 64 miles southwest of the City of Pierre along United States Highway 14. The Town of Midland is located within Section 6 in Township 1 North-Range 25 East.

2.2 EXISTING SYSTEM

2.2.1 Supply/Source: The Town of Midland currently purchases its water from West River/Lyman-Jones Rural Water System. West River/Lyman-Jones supplies the Town of Midland through two different lines. The majority of the time the system receives water from the north trunk line through a 4" class 250 PVC line, but it also can receive water through a 6" class 250 PVC line that is fed of the south trunk line. The West River/Lyman-Jones' lines connect together and go through a meter pit (see picture below). The meter pit has a water meter and control valve that is used to fill the Town of Midland's existing ground storage tank.

Photo 2.1: Existing Meter Vault

Midland's water treatment plant has been taken out of service due to treatment issues from radium levels in the supply well and due to the availability of rural water. However, the old system still has piping that is connected to the existing distribution system. These connections need to be removed and capped to avoid possible contamination of the existing lines.

Midland's service contract with West River Lyman Jones Rural Water System is up to 95,000 gpd at a maximum delivery rate of 66 gpm at pressure not less than 50 psi. The north service line is fed of a 14" transmission main and consists of 3 miles of 4", 8 miles of 6" and 3 miles of 8" pipe. The south service line is fed of a 24" transmission main and consists of 16 miles of 6" pipe.

2.2.2 Existing Distribution System: The existing distribution system serves the Town of Midland and all of the available customers including customers outside the city limits. The distribution system has 4, 6 and 8 inch PVC water main that was installed in the early 1980's. Currently each water customer is metered. The existing distribution system does have fire hydrants, but some are located on 4 inch lines. A map of the distribution system can be seen in Appendix A. The map was generated using knowledge of the system that was obtained from the Town of Midland's personnel and some older hand drawn maps.

2.2.3 Existing Storage: The existing ground storage tank (see picture 2.2 & 2.3) is located on the hill on the northwest corner of town. It is a steel bolted tank that was used prior to installation in the 1960's. The 75,000 gallon tank has a 24 foot side water depth and a 23 foot diameter. The pipe has a separate inlet and

outlet pipes and does not have a mixing system in the tank. The tank has been leaking for over 10 years and numerous repairs have been made to it.

Photo 2.2: Existing Tank

Photo 2.3: Existing Tank Leaks

2.3 POPULATION TRENDS AND PROJECTIONS

The population of the Town of Midland is declining which is following a state and national trend for smaller rural communities. For the purpose of this report a population of 129 people will be used as the current population for the Town of Midland which was the population estimate from the 2010 census. Below is a population table since 1990 showing the population estimates for the Town of Midland (data obtained from the US Census Bureau).

Table 2.1

Midland Population

Year	Population
1990	233
2000	179
2005	158
2010	129

The Town of Midland currently has 116 active service connections that includes residential in town, commercial/industrial and residential out of town. After discussions with the Town of Midland personnel they are expecting a bird seed facility to move to town and begin operation in the next year. It will be located on in the southeast corner of town on the south side of the railroad tracks. With the addition of a new industry coming town and with an active elevator in town it is assumed that the population of Midland will hold steady for the next 20 years. For the purpose of this report a design population of 149 people will be used assuming 2.5 people per connection in for the rural residential connections.

In addition to the "in town" customers the City of Midland also serves 9 "out of town" or rural customers. Of these 9 connections 8 are residential usage and 1 is for business use. A detailed breakdown of the water connections is listed below:

- 82 in town residential connections
- 8 out of town residential connections
- 19 in town businesses connections
- 1 out of town business connection
- 6 city connections

2.4 WATER USAGE TRENDS AND PROJECTIONS

Monthly usage records were obtained from West River/Lyman-Jones Rural Water System for the past 5 years. The data obtained from the water usage records from were used to determine the Average Gallons Per Day and Average Gallons Per Capita Per Day as shown in Table 2.2.

In addition detailed yearly billed water reports were obtained from the Town of Midland from the Finance Officer for the past 3 and half years. The detailed information can also be seen in Table 2.2.

Table 2.2
Bulk WR/LJ Water Meter
Usage Town of Midland (Gallons)

	2010	2011	2012	2013	2014	2015
January	309,000	397,000	355,000	368,000	376,000	369,000
February	321,000	342,000	237,000	290,000	327,000	348,000
March	383,000	456,000	267,000	266,000	299,000	534,000
April	351,000	265,000	423,000	303,000	330,000	453,000
May	399,000	633,000	601,000	515,000	309,000	674,000
June	868,000	598,000	823,000	549,000	595,000	472,000
July	1,077,000	728,000	1,437,000	975,000	1,241,000	796,000
August	1,146,000	916,000	1,110,000	627,000	1,022,000	844,000
September	897,000	683,000	854,000	771,000	587,000	
October	531,000	299,000	479,000	438,000	487,000	
November	313,000	532,000	274,000	286,000	499,000	
December	398,000	562,000	258,000	327,000	386,000	
Total	6,995,010	6,413,011	7,120,012	5,717,013	6,460,014	4,492,015
GPD	19164	17570	19507	15663	17699	37433
GPCD	150	137	152	122	138	292
W/R LJ Bulk Meter	13,377,174	12,102,581	13,665,519	10,789,676	12,232,713	8,302,448
Total Midland Billed Usage			6,192,000	4,791,100	5,380,000	3,882,000
Water Loss			55%	56%	56%	53%
GPD			16,964	13,126	14,740	15,910
GPCD @ Population 149			114	88	99	107
In Town Residential Usage			4829000	3282100	4240000	2966000
GPD			13,230	8,992	11,616	12,156
GPCD @ Population 129			103	70	90	94

(GPD – Gallons Per Day)
(GPCD – Gallons Per Capita Per Day)

Typically, water usage increases in the summer months due to summer activities and lawn watering and is the lowest during winter months. The highest water usage was in 2012 with 7,120,012 gallons or just under 19,507 gallons per day. The highest water

usage month in the past 5 years was July of 2012 at 1,437,000 gallons or approximately 46,355 gallons a day.

The best available data for water usage was from 2012-2015. Below is summary list of the statistics that are presented in Table 2.2

- Average water produced/purchased per year = 6,432,246 gallons
- Average water billed per year = 5,454,367 gallons
- Average water produced/purchased per day = 17,623 gallons
- Average water billed per day = 14,943 gallons
- Average water produced per capita per day = 118 gpcpd
- Average water billed per capita per day = 100 gpcpd
- Average water billed per capita per day in town = 87 gpcpd
- Average water loss = 15 %

Billing records obtained from the City of Midland can be seen in Appendix F.

2.5 PROJECTIONS OF FUTURE NEEDS

Probable future water demands were evaluated on the basis of population projections and current water demands. The analysis began by evaluating the historical data that was available from the Town of Midland and historical water use data from West River/Lyman-Jones Rural Water System. The town's population has seen a steady decline over the past 20 years, but with a new industry coming to town, in the summer of 2015, in can be concluded that the population and water usage in town will maintained their current levels over the next 20 years. A design population of 149 and an average annual daily flow of 20,000 GPD will be used for the basis of this report.

END OF SECTION 2

SECTION 3: ENVIRONMENTAL INFORMATION DOCUMENT

3.1 PROJECT AREA ENVIRONMENT

3.1.1 General Description of Project Area: The Town of Midland is located in Section 6 of Township 1 North, Range 25 West, in Haakon County, South Dakota. The topography of the Town is fairly steep from the north to the south sloping towards the Bad River which runs along the south side of town.

Midland has a water distribution system that was installed in the 1980's and ground storage tank that was installed in the 1960's. The town currently purchases all of its water from West River/Lyman-Jones Rural Water System. The water enters the system through a meter pit located on the northwest side of town and then flows into the ground storage tank. West River/Lyman-Jones supplies the Town of Midland with a 4" PVC line from the north and 6" line from the south. These lines are feed off of the West River/Lyman-Jones Rural Water System transmission lines.

The project area to be served includes the area within the present development platted boundaries and some customers outside of the city limits. There will be no additional land added to the town as part of these improvements.

3.1.2 Historical, Cultural, and Archeological: The Town of Midland is located in the central region of South Dakota, in the far southeast corner of Haakon County.

Transportation facilities near the town include the intersection of US HWY 14 and SD HWY 63 in town. Interstate 90 is located 13 miles south of Midland and

SD HWY 63 connects Midland to Interstate 90. The Rapid City, Pierre & Eastern Railroad runs along the south side of town.

The development of this project would not adversely affect any sites listed in the register of National Historic Places. Verification of historic sites will be requested from the South Dakota State Office of Cultural Preservation. Currently there are no known National Historic Locations in Haakon County, South Dakota.

The land in the study area has been rich in wild game and fur bearing animals. Prior to settlement, the area was frequented by nomadic Indians and fur trappers and traders. If a literature search shows that no previous archaeological inspections have occurred at the proposed project site, an on-site archaeological inspection will be requested prior to completion of construction plans and specifications for the selected alternative. Proposed improvements are expected to take place in previously disturbed soils along development access roads.

3.1.3 Floodplains, Wetlands, and Aquifers:

3.1.3.1 Floodplains: The Town of Midland is a participant in the National Flood Insurance Program (NFIP). All proposed alternatives for distribution system improvements will be located outside of Zone A areas according to FEMA flood insurance rate maps. Zone A areas are areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. The proposed improvements are located in Zone X according to FEMA flood insurance rate maps. Zone X areas are areas of minimal flood hazard, usually depicted on FIRMs as above 500-year flood level. The FEMA Firmette map for this area is included in Appendix A.

3.1.3.2 Wetlands: It is anticipated that the improvements to the water distribution system will not impact areas considered as natural wetlands, as defined by the National Wetlands Inventory (NWI). Figure 3.1 shows the wetlands in the Town of Midland vicinity.

Figure 3.1 Wetland Map

3.1.3.3 Aquifers: The study area has two different sources for water rights according to the South Dakota Department of Environment and Natural Resources water rights data base. The first being the surface water source of the Bad River and Bad River Basin. The second being deep aquifers like the Madison and the Dakota which are located thousands of

feet below the Town Midland. Two water rights are currently active from these deep aquifers the Stroppel Hotel and the Town of Midland. The Town of Midland no longer uses this water permit for domestic water and their artesian well has been capped.

3.1.4 Agricultural Lands: It is anticipated that the improvements to the water distribution system occur in previously developed land and should not impact areas considered as agricultural lands.

3.1.5 Wild and Scenic Rivers: The only wild and scenic river in South Dakota is sections of the Missouri River. There are no registered Wild and Scenic Rivers in the project area. The Bad River is the nearest river to the Town of Midland and proposed improvements. The construction of improvements in the Town of Midland is not expected to cause any permanent changes to the designated uses of the water resources.

3.1.6 Fish and Wildlife Resources: Both fish and wildlife are directly dependent upon the quantity and quality of their habitat. As in the rest of the United States, the quantity and quality of wildlife habitat is still decreasing in Haakon County.

3.1.6.1 Fish: A total of 21 species of fish were identified in seine collections in 1996 at 20 stations in the Bad River from the mouth to the south fork (C. Milewski, South Dakota State University, Department of Wildlife and Fisheries, personal communication). Black bullhead, common carp, fathead minnow, green sunfish, plains minnow, red shiner, sand shiner, and white sucker were collected throughout the river. Channel catfish, flathead chub, and river carpsucker were collected in the mainstem but

not in the south fork. Emerald shiner and orange-spotted sunfish were collected in the upper part of the watershed, while shorthead redhorse and yellow perch were found below Indian Creek. Goldeye were taken in the reach between Mexican and Burnt Creeks. Several other species collected in the upper Bad River were thought to have originated from farm pond overflow and included bluegill, golden shiner, hybrid sunfish, northern pike, and yellow perch.

3.1.6.2 Wildlife:

3.1.6.2.1 Aquatic and Semiaquatic Species: The Town of Midland and the study area lie within a large flyway region of the north-central United States, which serves as a major migratory route for waterfowl. The proposed construction is not expected to have a negative impact on the migratory patterns of the waterfowl inhabiting the area. Some other common species seen in the wetlands of the study area are gulls, terns, killdeer, sandpipers, blackbirds, and robins.

3.1.6.2.2 Terrestrial Species: Numerous species of wildlife are seen in west-central region of South Dakota with mule deer, white-tailed deer, antelope and turkeys. These are the most common species that are hunted with both guns and bow in the area. Furbearers in the area include the praire dogs, coyotes, mink, striped skunk, beaver, badgers, raccoons, and squirrels, and other wildlife during all seasons.

Many bird species have been recorded by local bird clubs both during migration and also during the nesting season. The

pheasant population within the study region fluctuates but is generally above average. Pheasants are heavily hunted each fall. There is also a population of sharptail grouse and prairie chickens that hunted in the area.

3.1.6.3 Endangered Species: The proposed water distribution system construction will take place in the existing development. No adverse impacts to threatened and endangered species are expected to occur as a result of the construction activities associated with this project. A list of threatened and endangered species in Haakon County, obtained from the U.S. Fish and Wildlife Service, is shown in Table 3.1: Summary of Threatened and Endangered Species in Haakon County, South Dakota.

Table 3.1 Summary of Threatened and Endangered Species in Haakon County, South Dakota.

GROUP	SPECIES	STATUS
Bird	Plover, Piping	Threatened
Bird	Tern, Least	Endangered
Bird	Whooping Crane	Endangered
Bird	Sprague's Pipit	Candidate

Figure 3.1: Threatened and Endangered Species in Haakon County, South Dakota.

Sprague's Pipt

Plover Piping

Whooping Crane

Least Tern

All construction activity associated with the recommended improvements will occur in previously developed areas and will not disturb any habitat for endangered species in the area.

3.1.7 Air Quality: The proposed project area and the Town of Midland in general will have no major air quality problems. Local air quality problems occur due to odors from different sources such as the wastewater treatment facilities, livestock feeding operations, manure pits, sloughs and numerous other sources.

Dust storms also occur on occasion; particularly in dry years when inadequate vegetative cover has been allowed to remain on the land surface.

The proposed project is not expected to have a long-term adverse impact on air quality in the area. There will be short-term impacts during construction due to fugitive dust and heavy equipment operation.

3.2 PROJECT PURPOSE AND NEED

The proposed improvements will upgrade the existing system. The existing system is further described in Section 2 of this report. The alternatives for upgrading the facilities are described in Section 5. Maps of the proposed improvements can be found in Appendix A.

The proposed water storage and distribution system improvements will provide the residents of Midland a reliable water system that has the capability to handle both the present and future water demands, and also help them meet the requirements set by the Safe Drinking Water Act.

3.3 PROJECT IMPACT

3.3.1 Direct and Indirect Impacts on Environment: Previous portions of this section have addressed the impact of the proposed project on water quality, fish and wildlife, historical and archaeological sites and air quality. The remainder of this section addresses other impacts of the proposed project and mitigation measures that may be necessary to limit adverse impacts.

3.3.1.1 Land Resources: Construction of the proposed improvements will require excavation, site grading work at the proposed project site, and

installation of watermain pipe. Potential adverse environmental impacts during construction include short term localized erosion and airborne dust from the construction site through wind action and heavy equipment use. Erosion and sediment control practices include both temporary measures such as temporary fencing, erosion control barriers, and seeding and grading of properly sloped drainage ways.

3.3.1.2 Air Resources: Air quality may be locally degraded by increased particulate levels during excavation and construction work associated with the proposed improvements. Temporary increases in construction equipment emissions are not expected to be significant to the general impacted area. Measures that can be taken during construction to control excessive airborne dust are listed below.

- Watering and/or the use of dust retardants before and during construction,
- Stabilizing temporary and permanent access roads to prevent erosion,
- Proper placement and compaction of stockpiled soil and excavated material to reduce particulates,
- Regarding, resurfacing, and/or reseeding dust-prone areas and disturbed terrain immediately, and
- Limiting construction activities during periods of high winds.

3.3.1.3 Wildlife Resources: The proposed project will result in construction activities in developed land and in roadways. Wildlife will be deterred from occupying the area immediately adjacent to the sites due to

construction activities. No long-term adverse effects on wildlife are expected as a result of this project.

3.3.1.4 Cultural Resources: The construction and operation of the water distribution system is not expected to have any significant adverse short-term or long-term impact on cultural resources of the area. The only apparent potential impact may be the unearthing or covering up of historic or archaeological resources during construction excavation. In the event that archaeological or historic resources are unearthed during construction excavation, the immediate stoppage of work is dictated by a required condition in the contract specifications.

Construction should bring a slight economic boost to the area through the hiring of local labor, retail trade by construction employees, and purchase of miscellaneous building supplies and fuel.

3.3.2 Impact on the Environment with no Improvement Action Taken: If no action is taken to upgrade the existing water system there would be a similar impact to the environment. The existing water system is aging and ground storage tank has surpassed its useful life expectancy. Currently minor construction excavation already takes place during periodic times in Midland with excavation equipment already being used during those time frames. In summary, the water storage and distribution system upgrades should be made to the system.

END OF SECTION 3

SECTION 4: WATER QUALITY AND REGULATORY REQUIREMENTS

4.1 SAFE DRINKING WATER ACT REQUIREMENTS

4.1.1 Stage 2 Disinfection By-product Rule: The use of chemicals that are effective as disinfectants creates the possibility of disinfection byproduct formation. The byproducts are generally formed by reactions between organic compounds and the disinfectant. The most common byproducts are compounds formed between methane and halogens such as chlorine. The general term for these compounds is trihalomethanes (TTHM) and Halo Acidic Acids (HAA5). The current Safe Drinking Water Act includes maximum contaminant levels (MCLs) for the common disinfection byproducts. The parameters regulated as disinfection byproducts are TTHMs and HAA5. The Stage 2 limits on these parameters are in Table 4.1: Stage 2 – Disinfectants and Disinfection Byproducts Rule.

Table 4.1

Stage 2 – Disinfectants and Disinfection Byproducts Rule

DISINFECTION BYPRODUCT	MCL[3] (ug/l)
TTHM[1]	80
HAA5[2]	60
DISINFECTANTS	**MRDL[4] (mg/l)**
Chlorine	4.0 (as Cl_2)
Chloramines	4.0 (as Cl_2)
Chlorine Dioxide	0.8 (as ClO_2)

Note: 1 – Sum of chloroform, dichlorobromomethane, dibromochloromethane, and bromoform.
2 – Sum of trichloroacetic acid, dichloroacetic acid, monochloroacetic acid, monobromoacetic acid, and dibromoacetic acid.
3 – MCL = Maximum Contaminant Level.
4 – MRDL = Maximum Residual Disinfectant Level.

The Stage 2 Disinfectants and Disinfection Byproducts Rule was published at the same time as the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) in January of 2006. The Stage 2 D/DBR sets the MCLs for TTHM and HAA5 limits of 80 µg/l and 60 µg/l respectively, but instead of averaging all of the sampling locations together, the water utility must keep a running annual average for each sampling location. Each sampling location must then meet the Stage 2 D/DBP Rule requirements.

The Town of Midland has been in violation of the for the HAA5 maximum contaminant level for the 4 quarters in the past year. The results of the testing for the past 2 years can be seen below:

Table 4.2

Midland Disinfection Byproduct Sampling Information

Year	Quarter	HAA5	HAA5 (RAA)*	TTHM	TTHM (RAA)*
2013	3	65.9	na	65.4	na
2013	4	51.6	na	69.4	na
2014	1	48.6	na	50.5	na
2014	2	81.6	***61.93***	65.2	62.63
2014	3	63.1	***61.23***	71.1	64.05
2014	4	65.7	***64.75***	88.9	68.93
2015	1	35.9	***61.58***	45	67.55
2015	2	23.6	47.08	43.9	62.23

(HAA5 and TTHM concentrations are shown as ug/L)

* (RAA) Running annual average is the average of the last four quarterly samples of TTHM and HAA5. This is the number that must be reported to the SD DENR for compliance and limits are 60 for HAA5 and 80 for TTHM.

The Town of Midland has been in violation of the HAA5 maximum contaminant level for the 4 of the last 5 quarters. The first and second quarter reduction in

HAA5 concentration was a direct result of 100,000 gallons of water that was flushed this spring during hydrant flushing. In order to conserve treated drinking water, installation of a new storage tank and mixing system with looping of the distribution lines should provide similar results as flushing the lines at high volumes.

4.1.2 Lead and Copper Rule: The lead and copper rule was established in 1991 to optimize corrosion control and, if appropriate, treat source water, deliver public education, and replace lead service lines. The action levels pertaining to this rule are as follows: 15 mg/l for lead and 1.3 mg/l for copper.

Midland performed lead and copper concentration monitoring in 2014. The lead and copper concentrations were measured at five different locations in the subdivision and the highest results were 1.3 mg/L for lead and 0.12 mg/L for copper.

4.2 PRESENT WATER QUALITY

4.2.1 Summary of Water Characteristics: The water supply for the Town of Midland is West River/Lyman-Jones Rural Water System which purchases its water from Mni Wiconi Water Treatment Plant part of the Oglala Sioux Rural Water Supply System. The water is purchased from West River/Lyman Jones and enters the system through a meter pit on the northwest side of town. Water quality characteristics of the Town of Midland water supply is summarized in Table 4.3:

Table 4.3

Midland Water Characteristics (WR/LJ water)

Characteristic	Treated
TDS	582
Conductivity	889
PH	7.66
“M” Alkalinity	150
“P” Alkalinity	0
Sodium	89
Potassium	5.3
Calcium	63.9
Magnesium	28.7
Iron	0.0
Manganese	0.02
Chloride	15.0
Sulfate	289
Hardness	278
Nitrate	0.0
Fluoride	1.31

END OF SECTION 4

SECTION 5: EVALUATION OF ALTERNATIVES

5.1 INTRODUCTION

The purpose of this section of the facility planning document is the evaluation of alternatives for improvements necessary for the Town of Midland's water storage and distribution system. When the existing system was evaluated deficiencies were identified in both the water storage and water distribution system.

The existing ground storage tank is past its design life. The reservoir has had numerous leaks that have had to be fixed over the past few years and continues to deteriorate with new leaks every year. The tank is oversized and contributes to pour water quality issues because of its size and lack of mixing system. The combination of these two items directly effects the HAA5 concentrations in the system in a negative way. A summary of the evaluated alternatives and the costs associated with each are summarized in this section (maps and detailed costs of each alternative can be found in Appendices A & B).

The distribution system is in good shape, but some recommended improvements for looping in areas of town to improve water quality throughout Midland have been identified. They are described in this section further detail. All capital improvements necessary to provide a reliable water storage and distribution system for the Town of Midland is summarized in the section below.

5.2 WATER STORAGE ALTERNATIVES CONSIDERED

Alternative 1: Replace the existing 75,000 gallon ground storage reservoir with a 74,000 gallon ground storage reservoir. The new tank would be

equipped with a mixing system and be built on the same property as the current reservoir.

Alternative 2: Replace the existing 75,000 gallon ground storage reservoir with a 53,000 gallon ground storage reservoir. The new tank would be equipped with a mixing system and be built on the same property as the current reservoir.

Alternative 3: Replace the existing 75,000 gallon ground storage reservoir with a new meter pit, control valves and interior piping. The alternative would also include 3 miles of 6" PVC waterline installation.

These alternatives are evaluated below:

5.2.1 Alternative 1 – 74,000 Gallon Ground Storage Reservoir:

The existing ground storage reservoir would be replaced by a new 74,000 gallon ground storage reservoir. The reservoir would be a glass lined steel bolted tank with a 20 foot diameter and a 33 foot side water depth. The side water depth would be slightly higher than the current tank level, but should not adversely affect the pressure in the distribution system. The tank would be equipped with a mixing system to ensure that the tank does not experience thermal stratification. Thermal stratification in the old tank is more than likely one of the contributing factors for the maximum contaminate level violation for HAA5 that the Town of Midland has been experienced over the past year.

The new ground storage reservoir will be built on the same plot of land as the existing reservoir. The design would call for the new reservoir to be built directly to the south of the existing reservoir and keep the existing

reservoir in operation until the new reservoir is completed. The site piping will need to be modified for this alternative to allow for the reservoir piping to connect to the existing distribution piping and to disconnect all existing lines from the existing reservoir. Also all other lines that were previously connected to the "old" water treatment plant will be disconnected and capped from the distribution system.

The tank will need to be furnished with a mixing system please see below for the different mixing systems that were evaluated:

5.2.1.2 Mixing Alternatives

Four different types of mixing systems were evaluated: Tide flex, Pulsed Hydraulics, Inc., BIF and SolarBee.

Tideflex Mixing System (TMS) is a hydrodynamic mixing system which passively utilizes the energy provided by the inlet water supply and generates a sufficient inlet momentum to achieve a homogeneous blending of the water volume within the reservoir with the inlet supply flow. TMS consists of one bi-directional flow manifold pipe with duckbill inlet nozzles and outlet check valves separated to mitigate short circuiting. The inlet/outlet pipe is braced to the floor of the reservoir and allows for a single wall penetration.

Pulsed Hydraulics, Inc (PHi) provides a "HydroPulse" system that mixes the entire contents of the basin without in-basin moving parts. PHi hydropulses pressurized air through stainless steel forming plates located on the bottom of the reservoir, forming beach ball-size bubbles masses

that rise to the surface of the basin. As the air bubbles rise, they drag tank contents with them. When the bubble-masses break the surface and exit to the atmosphere, the tank contents roll horizontally until they meet a tank wall or meet a wave of contents coming from another bubble-mass. The hydropulse system operates by using a sequencing computer and compressed air.

BIF provides a Universal Fluid Mixer (UFM) which is configured to use the energy of the incoming and outgoing water to mix stored water. UFM uses the pressure difference between the inlet pipe and the atmospheric pressure to mix the water during filling. Mixing results from turbulence created by the introduction of the water into the tank from points throughout the tank. Mixing is created by three-dimensional, dynamic currents that influence each other so that water is mixed throughout the tank. The UFM mixing system also works during the draft cycle. Gravity forces the water back into the UFM system from different regions and elevations throughout the tank, these regions are different from the regions influenced by the fill cycle.

SolarBee mixing system consists of mixing mechanism located inside the ground storage reservoir that will draw water from the bottom of the basin through an intake assembly fastened to the floor of the reservoir and circulating it to the top of the basin. The circulation equipment floats in the basin allowing for a varying water elevation. At depths below five (5) feet, the impeller will be out of the water and the machine will stop circulating water.

The advantages and disadvantages of each of the mixing systems are evaluated in the following table:

Table 5.1
Reservoir Mixing System Alternatives

Mixing Method	Advantages	Disadvantages
Tideflex	• One tank wall penetration • No tank wall bracing • No outside energy source • Low maintenance	• No mixing within reservoir when there is no influent flow
PHi	• One tank wall penetration • No tank wall bracing	• Need a sequencing computer and air compressor • Requires an outside energy source
BIF	• No outside energy source • Low maintenance	• Complex piping network requires multiple support structures
SolarBee	• One tank wall penetration • No tank wall bracing • Low maintenance • Mixes regardless of influent water flow	• No mixing below a water elevation of five (5) feet.

Mixing System Selection

After the initial evaluation of the mixing systems the SolarBee system and the Tideflex system were selected for further evaluation. The PHi system was not selected because it required a sequencing computer, air compressor and an outside energy source. The BIF system was not selected because it involved a complex piping network that required multiple support structures.

The advantages of selecting the Tideflex system over the SolarBee system include:

- The Tideflex provides mixing in the reservoir with no additional operation and maintenance costs or up keep.
- The Tideflex system is installed on the inlet pipe and provides mixing at all tank levels

Mixing System Summary/Recommendations

The Tideflex mixing system is recommended due no maintenance and operational cost to run, no additional power costs, and the ability to mix the tank at all tank levels.

The estimated costs associated with the capital improvements necessary for Alternative 1 are shown in Table 5.2.

Table 5.2

Probable Project Costs for Alternative 1

DESCRIPTION	COST
Probable Construction Cost	$333,100
Engineering, Contingencies and Administration	$118,810
OPINION OF PROBABLE PROJECT COST	**$451,910**

5.2.2 Alternative 2 – 53,000 Gallon Ground Storage Reservoir:

The existing ground storage reservoir would be replaced by a new 53,000 gallon ground storage reservoir. The reservoir would be a glass lined steel bolted tank with a 20 foot diameter and a 24 foot side water depth. The

side water depth would be the same as the existing tank side water depth, so there would be no affect to the pressure in the distribution system. The tank would be equipped with a mixing system to ensure that the tank does not experience thermal stratification (see alternative 1 for mixing system evaluation). Thermal stratification in the old tank is more than likely one of the contributing factors for the maximum contaminate level violation for HAA5 that the Town of Midland has been experienced over the past year.

The new ground storage reservoir will be built on the same plot of land as the existing reservoir. The design would call for the new reservoir to be built directly to the south of the existing reservoir and keep the existing reservoir in operation until the new reservoir is completed. The site piping will need to be modified for this alternative to allow for the reservoir piping to connect to the existing distribution piping and to disconnect all existing lines from the existing reservoir. Also all other lines that were previously connected to the "old" water treatment plant will be disconnected and capped from the distribution system.

The ground storage tank was sized based on the max day design which is 2.0 times the average day demand (based on Reynolds/Richards "Unit Operations and Process in Environmental Engineering 2nd Edition) plus some additional capacity was added for equalization flow during high water demand periods (flushing and watermain breaks). Tank suppliers were contacted and quotes were requested for the most economical tank for an approximate size of 50,000 gallons with a 24 foot side water depth (current operational depth of existing tank). The tank suppliers

recommended the most economical size would be a 53,000 gallon tank with a 20 foot diameter by 24 foot side water depth.

The estimated costs associated with the capital improvements necessary for Alternative 2 are shown in Table 5.3.

Table 5.3

Probable Project Costs for Alternative 2

DESCRIPTION	COST
Probable Construction Cost	$309,100
Engineering, Contingencies and Administration	$110,460
OPINION OF PROBABLE PROJECT COST	**$419,560**

5.2.3 Alternative 3 – New Meter Vault with Multiple Control Valves: A new meter vault would be constructed on the existing reservoir site and after construction the existing reservoir would be demolished and taken off line. The existing site piping would need to be modified to connect the new vault to the existing distribution system. All piping associated with the existing reservoir and "old" water treatment plant would be capped and abandoned to remove any source of contamination to the water distribution system.

The new meter vault would be designed so that water would have a low flow and high flow meter and control valve. The meter structure would be designed so that water goes through a small meter during periods of low/normal flow and normal pressures of 60 psi. A pressure reducing valve set at a pressure of 50 psi would be used to deliver flow during high flow events. At low flows and pressures above 50 psi the control valve will be

closed and all the water will go through the small meter. If a hydrant in town is opened and large flow is needed, the pressure in the system will drop below 50 psi, the control valve will open and route flows through the larger flow meter.

In addition to the improvements that would be needed at the existing tank site. The north service line from West River/Lyman-Jones Rural Water System would need to be upsized to at least a minimum of 6". Currently the line from the south consists of 3 miles of 8", 8 miles of 6" and 3 miles of 4". The head losses associated in the 4 inch line would be too great during a call for water during large demands. A detailed water model would need to be run to determine if additional upsizing beyond upsizing from 4" to 6" that is accounted for in the cost estimate.

In addition to upsizing West River/Lyman-Jones service line a new contract would need to be worked out between the Town of Midland and West River/Lyman-Jones to account for the new demand parameters that would be set by the larger control valve in the new meter vault. The new parameters would need to be determined by the demand in town during hydrant flushing.

The estimated costs associated with the capital improvements necessary for Alternative 3 are shown in Table 5.4:

Table 5.4

Probable Project Costs for Alternative 3

DESCRIPTION	COST
Probable Construction Cost	$714,930
Engineering, Contingencies and Administration	$230,970
OPINION OF PROBABLE PROJECT COST	**$945,900**

5.2.4 No Action Alternative: A no action alternative would leave the Town of Midland with an unreliable water storage reservoir. The existing reservoir has reached its useful life and needs to be replaced before a catastrophic failure leaves the system and its residents without a storage reservoir. The existing tank also is oversized and does not have a mixing system causing the systems water quality to deteriorate with respect to HAA5 values. A no action alternative is not recommended.

5.3 WATER DISTRIBUTION SYSTEM ALTERNATIVES CONSIDERED

In addition to the alternatives evaluated for the water reservoir storage improvements, improvements were identified in the distribution system that could be made to improve water quality in the system. As a whole the distribution system is in good shape being all PVC installed in the 1980's. The design life of the PVC in the ground should extend past the 20 year period this report is looking at. The improvements that were identified were to improve water quality in the system by looping dead end lines in the system. Looping alone will not improve the water quality, so Midland should continue to flush lines twice a year in town as well. These improvements were broken down into separate phases and

ranked in order of importance pertaining to effects of water quality in the system. The phase 1 and phase 2 water distribution improvements are identified below with associated costs:

5.2.5 Phase 1 – Distribution Improvements – Pierre & Stanley Street:

Phase 1 of the distribution improvements includes installation of 6" water main on Pierre Street from Ash Street to Russell Street. 6" water main would also be installed along Stanley Street Elm Street to Ash Street. These two additional lines will provide looping in that area of town which will eliminate two long dead end lines and improve water quality in town.

The estimated costs associated with the capital improvements necessary for Phase 1 are shown in Table 5.5:

Table 5.5

Probable Project Costs for Phase 1

DESCRIPTION	COST
Probable Construction Cost	$73,210
Engineering, Contingencies and Administration	$36,220
OPINION OF PROBABLE PROJECT COST	**$109,430**

5.2.6 Phase 2 Distribution System Improvements – Northwestern Ave: New 6-inch PVC water main would be installed along Northwestern Avenue from the intersection of Elm Street to the intersection of Wakapala Street and connect 4 dead end lines that currently run on the south end of Ash Street, Bridge Street, Russell Avenue and Wakapala Street. In addition, the new line would also provide better water quality in the area.

The estimated costs associated with the capital improvements necessary for Phase 2 are shown in Table 5.6:

Table 5.6

Probable Project Costs for Phase 2

DESCRIPTION	COST
Probable Construction Cost	$124,510
Engineering, Contingencies and Administration	$58,030
OPINION OF PROBABLE PROJECT COST	**$182,540**

5.4 OPERATION AND MAINTENANCE COSTS

The proposed alternatives identified do not affect the operation and maintenance costs associated with the water storage and distribution system.

5.5 SUMMARY AND RECOMMENDATIONS

Each alternative presented in this section would address the current problems the system has which are a ground storage reservoir which is past its design life and high HAA5 concentrations in the distribution system. Alternative 3 has been ruled out due to the high cost associated with that alternative.

Alternative 1 and 2 are very similar and only differ in the size of ground storage reservoir that would be installed to replace the existing storage reservoir. The Town of Midland's water usage fluctuates greatly form winter to summer months. The average day water demand for the year is just less than 20,000 gallons a day. However the average day water demand in the summer months can be as high as 45,000 gallons a day as indicated in July of 2012. The Town of Midland is a very isolated community with long service lines from the main distribution system of West River/Lyman-Jones Rural Water System (14 miles service line from the north and 16 mile service line from the south). Midland also

does not have another source of water, there for it is essential for Midland to have at minimum the storage capacity to meet at least one day demand during summer months. However the current tank size of 75,000 gallons is a little over sized and that is why a tank size of 53,000 gallons is being recommended for the replacement tank. This tank size will more closely represent average day water usage in the summer months and will help reduce stratification of the tank, which in turn will help reduce the HAA5 concentrations in the distribution system. Therefore, the recommended alternative is Alternative 2 – 53,000 gallon ground storage reservoir.

In addition to the capitol improvements identified in Alternative 2, it is recommended that the Town of Midland construct the distribution improvements that were identified in this report. It would be recommended the distribution improvements be phased after construction of the improvements in Alternative 2. The priority list for improvements to the water storage and distribution system is as follows:

1. Alternative 2 – 53,000 gallon ground storage reservoir
2. Phase 1 - Distribution Improvements
3. Phase 2 - Distribution Improvements

Table 5.7

Probable Project Costs for Identified Improvements

DESCRIPTION	COST
Alternative 2 – 53,000 gallon ground storage res.	$419,560
Phase 1 – Distribution Improvements	$109,430
Phase 2 – Distribution Improvements	$182,540
OPINION OF PROBABLE PROJECT COSTS	**$711,530**

The Summary of Probable Project Costs is presented in the Appendix B. Section 6 of this report addresses the financial requirements using 0%, 50% and 75% grant participation and the rate impact for each grant participation.

END OF SECTION 5

SECTION 6: RECOMMENDATIONS AND CAPITAL IMPROVEMENTS PLAN

6.1 DESCRIPTION OF SELECTED IMPROVEMENTS

6.1.1 Alternative 2 – 53,000 Gallon Ground Storage Reservoir:

The existing ground storage reservoir would be replaced by a new 53,000 gallon ground storage reservoir. The reservoir would be a glass lined steel bolted tank with a 20 foot diameter and a 24 foot side water depth. The side water depth would be the same as the existing tank side water depth, so there would be no affect to the pressure in the distribution system. The tank would be equipped with a mixing system to ensure that the tank does not experience thermal stratification (see alternative 1 for mixing system evaluation). Thermal stratification in the old tank is more than likely one of the contributing factors for the maximum contaminate level violation for HAA5 that the Town of Midland has been experienced over the past year.

The new ground storage reservoir will be built on the same plot of land as the existing reservoir. The design would call for the new reservoir to be built directly to the south of the existing reservoir and keep the existing reservoir in operation until the new reservoir is completed. The site piping will need to be modified for this alternative to allow for the reservoir piping to connect to the existing distribution piping and to disconnect all existing lines from the existing reservoir. Also all other lines that were previously connected to the “old” water treatment plant will be disconnected and capped from the distribution system.

6.2 ESTIMATED REVENUE REQUIREMENTS AND UTILITY RATE ADJUSTMENTS

6.2.1 Revenue Requirements and Probable Water Rate Adjustments: It was assumed for purposes of rate calculations that the project will be financed with a combination of grants and loans. The total probable project costs for the water storage and distribution system improvements totals $711,530. Calculation of annual debt service cost has been completed based on a 0%, 25%, 50% and 75% grant and prevailing interest rates for loans. Grant funding will be requested from the State of South Dakota and will be based on the needs of the community and the improvements recommended. It is assumed that the Town of Midland will be eligible for a State Revolving Fund (SRF) loan with a 20-yr term at 3.0% interest. Table 6.1 and 6.2: Equivalent Annual Cost Comparisons using 0%, 25%, 50% and 75% respectively contain a breakdown of costs associated with the proposed project. The average water rate per customer is currently $25.00 a month for 5,000 gallons of water. Tables 6.1 and 6.2 shows the proposed rate increase for each of the 0%, 25%, 50% and 75% grant funding.

Table 6.1:
Equivalent Annual Cost Comparisons and Rate Analysis

Description	0% Grant	25% Grant
Probable Construction Costs & Cont.*	$592,750	$592,750
Engineering (Design, Bid)*	$51,425	$51,425
Resident Engineering & Staking*	$51,425	$51,425
Administration & Final Inspection	$15,930	$15,930
Probable Project Costs*	$711,530	$711,530
Grant Participation - Percent	0%	25%
Grant Participation - Amount	$0	$177,883
Loan Amount	$711,530	$533,648
Debt Service (3.00% and 20-yr term)	$47,826	$35,869
Reserve (10% of Debt Service)	$4,783	$3,587
Debt Service from Loan	$52,609	$39,456
Total Annual Expenses	**$52,609**	**$39,456**
Current Average Monthly Water Rate	$25.00	$25.00
Total Number of Municipal Accounts	110	110
Proposed Monthly Increase in Water Rate/Customer	$39.85	$29.89
Proposed Annual Water Rate/Customer	$778	$659
Proposed Total Annual Income	$52,609	$39,456
Proposed New Average Monthly Water Rate	$64.85	$54.89

Table 6.2:
Equivalent Annual Cost Comparisons and Rate Analysis

Description	50% Grant	75% Grant
Probable Construction Costs & Cont.*	$592,750	$592,750
Engineering (Design, Bid)*	$51,425	$51,425
Resident Engineering & Staking*	$51,425	$51,425
Administration & Final Inspection	$15,930	$15,930
Probable Project Costs*	$711,530	$711,530
Grant Participation - Percent	50%	75%
Grant Participation - Amount	$355,765	$533,648
Loan Amount	$355,765	$177,883
Debt Service (3.00% and 20-yr term)	$23,913	$11,956
Reserve (10% of Debt Service)	$2,391	$1,196
Debt Service from Loan	$26,304	$13,152
Total Annual Expenses	**$26,304**	**$13,152**
Current Average Monthly Water Rate	$25.00	$25.00
Total Number of Municipal Accounts	110	110
Proposed Monthly Increase in Water Rate/Customer	$19.93	$9.96
Proposed Annual Water Rate/Customer	$539	$420
Proposed Total Annual Income	$26,304	$13,152
Proposed New Average Monthly Water Rate	$44.93	$34.96

The Town of Midland may need to prioritize the capitol improvements needed and the replacement of the ground storage reservoir needs to be addressed as soon as possible. Tables 6.3 and 6.42 show the proposed rate increase if just the Alternative 2 was constructed for each of the 0%, 25%, 50% and 75% grant funding.

Table 6.3
Alternative 2:
Equivalent Annual Cost Comparisons and Rate Analysis

Description	0% Grant	25% Grant
Probable Construction Costs & Cont.*	$355,470	$355,470
Engineering (Design, Bid)*	$28,438	$28,440
Resident Engineering & Staking*	$28,438	$28,440
Administration & Final Inspection	$7,210	$7,210
Probable Project Costs*	$419,560	$419,560
Grant Participation - Percent	0%	25%
Grant Participation - Amount	$0	$104,890
Loan Amount	$419,560	$314,670
Debt Service (3.00% and 20-yr term)	$28,201	$21,151
Reserve (10% of Debt Service)	$2,820	$2,115
Debt Service from Loan	$31,021	$23,266
Total Annual Expenses	**$31,021**	**$23,266**
Current Average Monthly Water Rate	$25.00	$25.00
Total Number of Municipal Accounts	110	110
Proposed Monthly Increase in Water Rate/Customer	$23.50	$17.63
Proposed Annual Water Rate/Customer	$552	$482
Proposed Total Annual Income	$31,021	$23,266
Proposed New Average Monthly Water Rate	$48.50	$42.63

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Table 6.4
Alternative 2
Equivalent Annual Cost Comparisons and Rate Analysis

Description	50% Grant	75% Grant
Probable Construction Costs & Cont.*	$355,470	$357,000
Engineering (Design, Bid)*	$28,440	$28,440
Resident Engineering & Staking*	$28,440	$28,440
Administration & Final Inspection	$7,210	$7,210
Probable Project Costs*	$419,560	$419,560
Grant Participation - Percent	50%	75%
Grant Participation - Amount	$209,780	$314,670
Loan Amount	$209,780	$104,890
Debt Service (3.00% and 20-yr term)	$14,101	$7,050
Reserve (10% of Debt Service)	$1,410	$705
Debt Service from Loan	$15,511	$7,755
Total Annual Expenses	**$15,511**	**$7,755**
Current Average Monthly Water Rate	$25.00	$25.00
Total Number of Municipal Accounts	110	110
Proposed Monthly Increase in Water Rate/Customer	$11.75	$5.88
Proposed Annual Water Rate/Customer	$411	$341
Proposed Total Annual Income	$15,511	$7,755
Proposed New Average Monthly Water Rate	$36.75	$30.88

6.2.2 Changes in Operation and Maintenance Costs:

There will be no changes to the operation and maintenance costs associated with the capitol improvements that were recommended as part of this report

6.3 IMPLEMENTATION PLAN AND SCHEDULE

Completion of the improvements recommended in this report will require scheduling and coordination of activities for planning, design and construction of the improvements. The activities necessary in the near future are those associated with the final planning and design activities to qualify the project for State Revolving Loan funds and design of the recommended improvements. Several of the critical tasks and associated target dates are summarized in Table 6.3: Implementation Schedule.

Table 6.3:
Implementation Schedule

TASK	DATE
Presentation and Acceptance of Final Water System Facilities Plan	July, 2015
State Water Plan Application	October 1, 2015
Placement on State Water Plan	October, 2015
Grant Applications Due	October, 2015
DENR Approval for Grant	March, 2016
DENR SRF Loan Application	March, 2016
DENR Approval for SRF Loan	March, 2016
Notice to Proceed on Design of Improvements	March, 2016*
Submittal of Plans and Specifications for Review	May, 2016
Open Bids for Construction of System Improvements	June, 2016
Complete Construction of Improvements	November, 2016
Complete One Year Warranty period	November, 2017

*It is anticipated that funds will not be available from the State until March 2016

6.4 VIEWS OF THE PUBLIC AND CONCERNED INTERST GROUPS

A public hearing will be scheduled in the near future the minutes and roster from that meeting will be added to this report after the public meeting takes place.

END OF SECTION

Appendix

A

Maps

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Toll Free: 1-855-323-6342
www.bannerassociates.com

CONSULTANTS:

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

PROJECT TITLE :

MIDLAND WATER FACILITY PLAN

PROJECT LOCATION :

MIDLAND, SOUTH DAKOTA

REV.	DATE	DESCRIPTION

DRAWN BY: TCS
DESIGNED BY: J.H.M.
CHECKED BY: J.H.M.
JOB NO : 22088-00
DATE : JULY 2015

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SCALE REDUCTION BAR

SHEET TITLE :

WATER DISTRIBUTION OVERALL

SHEET NO. :

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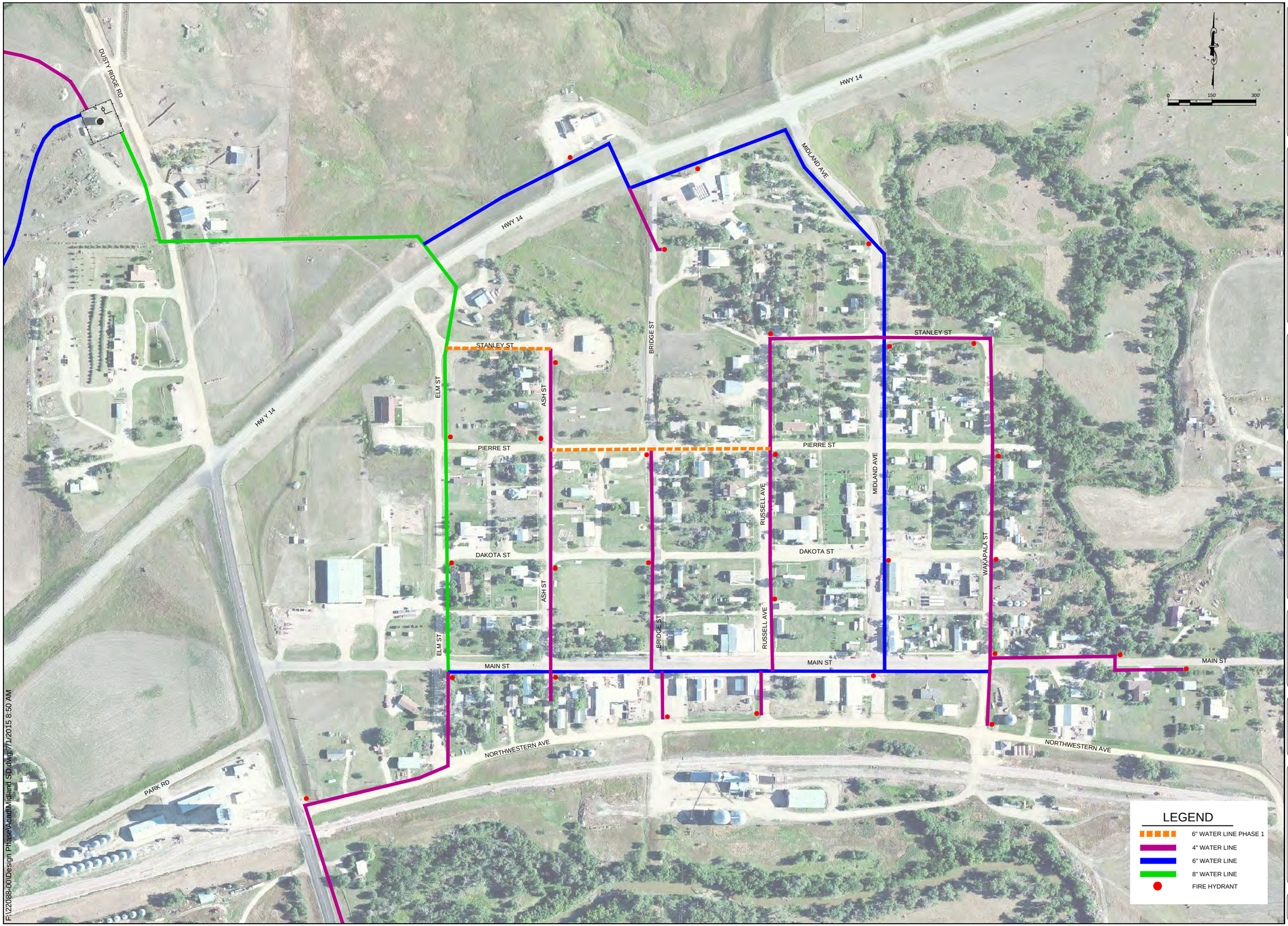

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JOB NO : 22088-00
DATE : JULY 2015

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SCALE REDUCTION BAR

SHEET TITLE :

WATER DISTRIBUTION IMPROVEMENTS PHASE 1

SHEET NO. :

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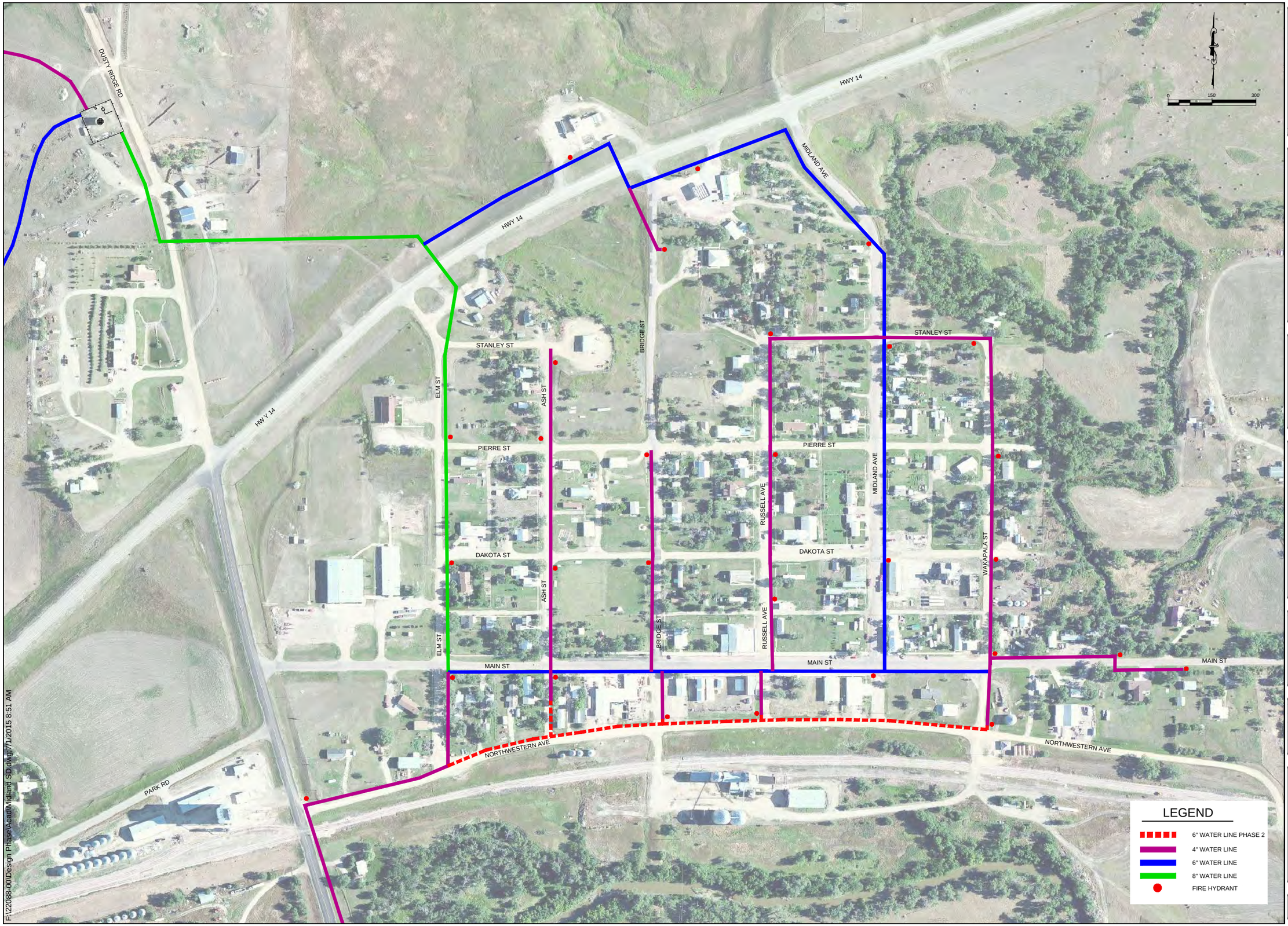

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CHECKED BY:	J.H.M.
JOB NO :	22088-00
DATE :	JULY 2015

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SHEET TITLE :

WATER DISTRIBUTION IMPROVEMENTS PHASE 2

SHEET NO. :

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CHECKED BY: J.H.M.
JOB NO : 22088-00
DATE : JULY 2015

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SHEET TITLE :

EXISTING
TANK
SITE

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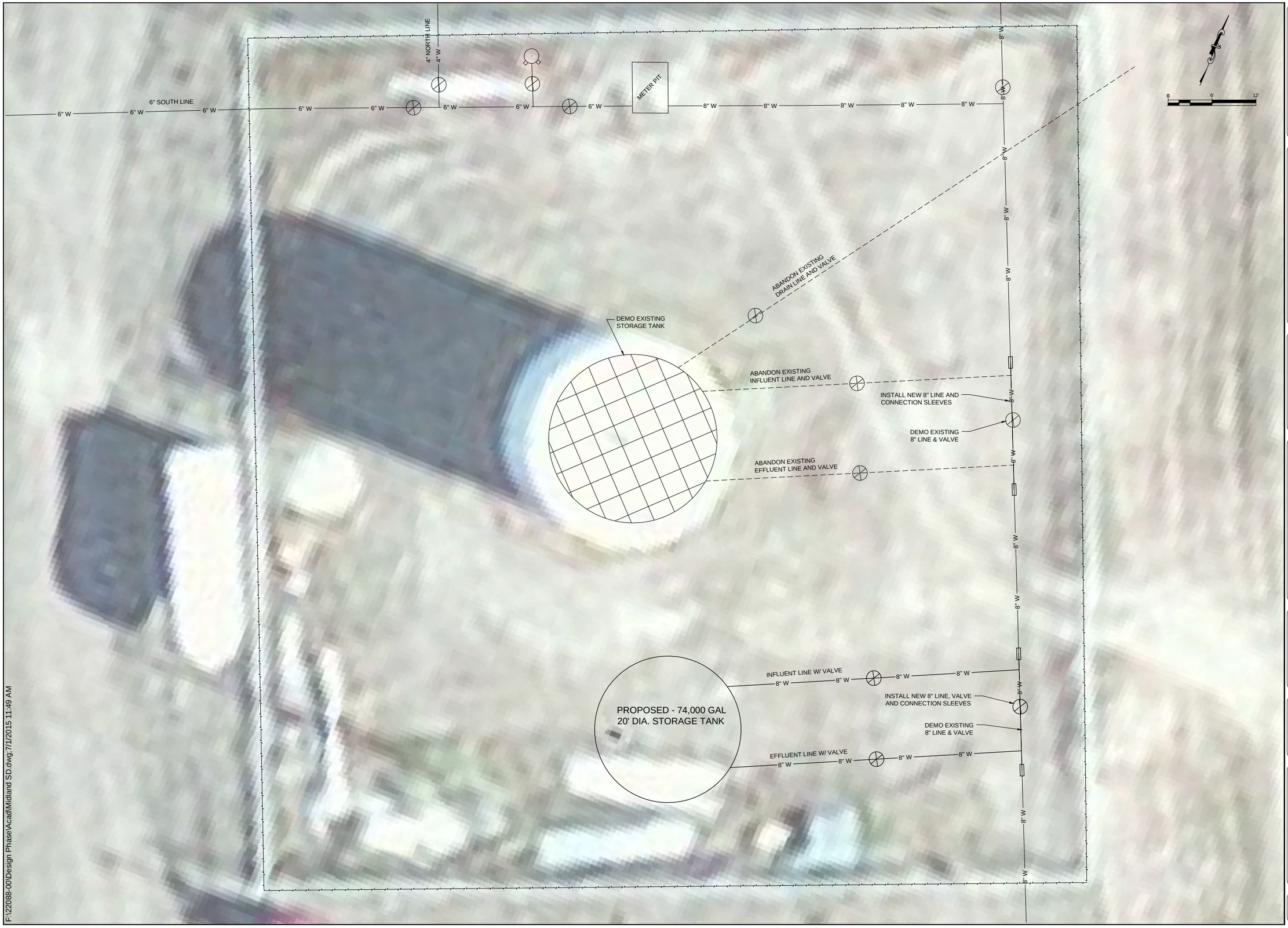

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CHECKED BY: J.H.M.
JOB NO : 22088-00
DATE : JULY 2015

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No. 1

SHEET NO. :

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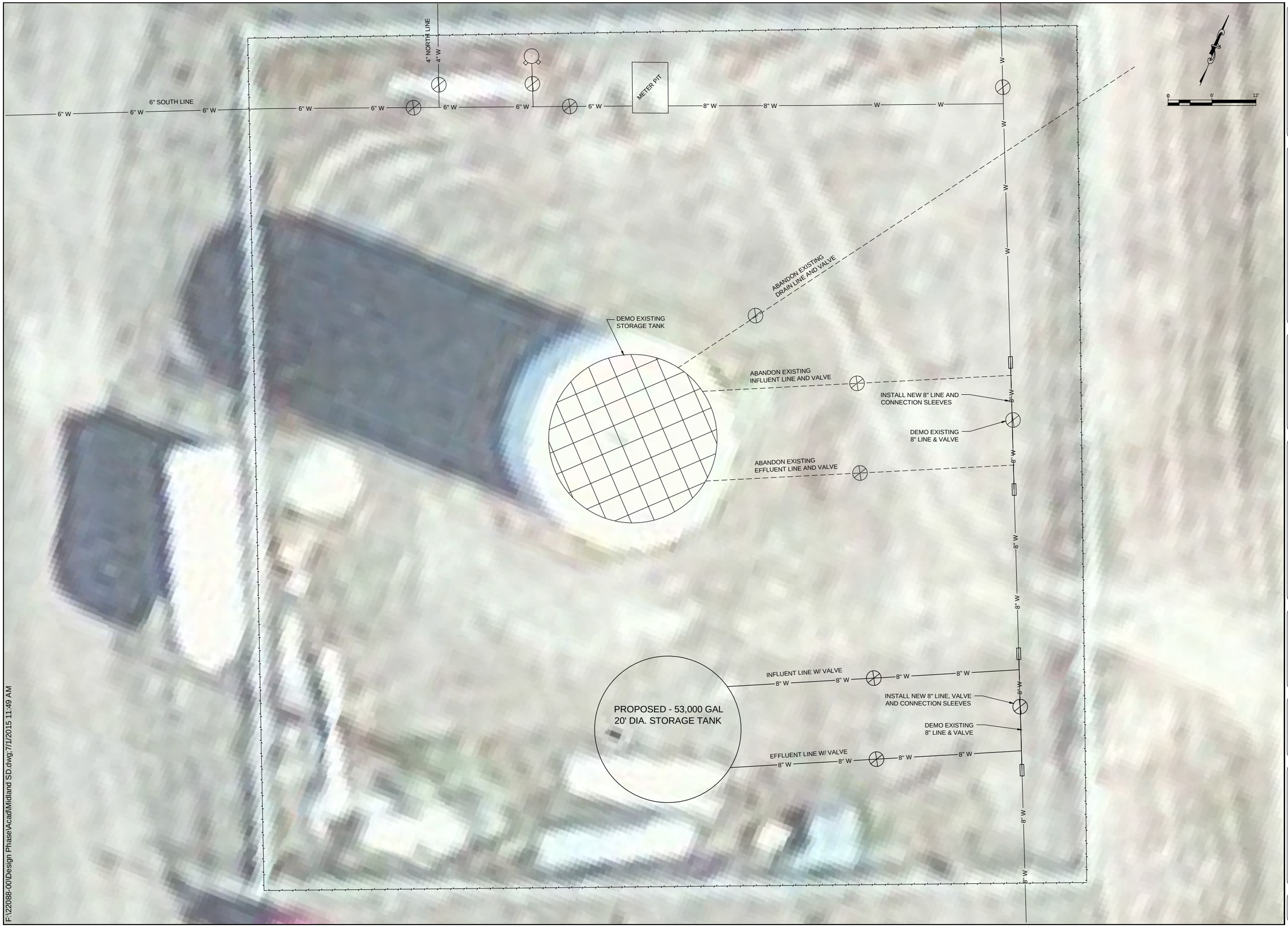

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DESIGNED BY: J.H.M.
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JOB NO : 22088-00
DATE : JULY 2015

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No. 2

SHEET NO. :

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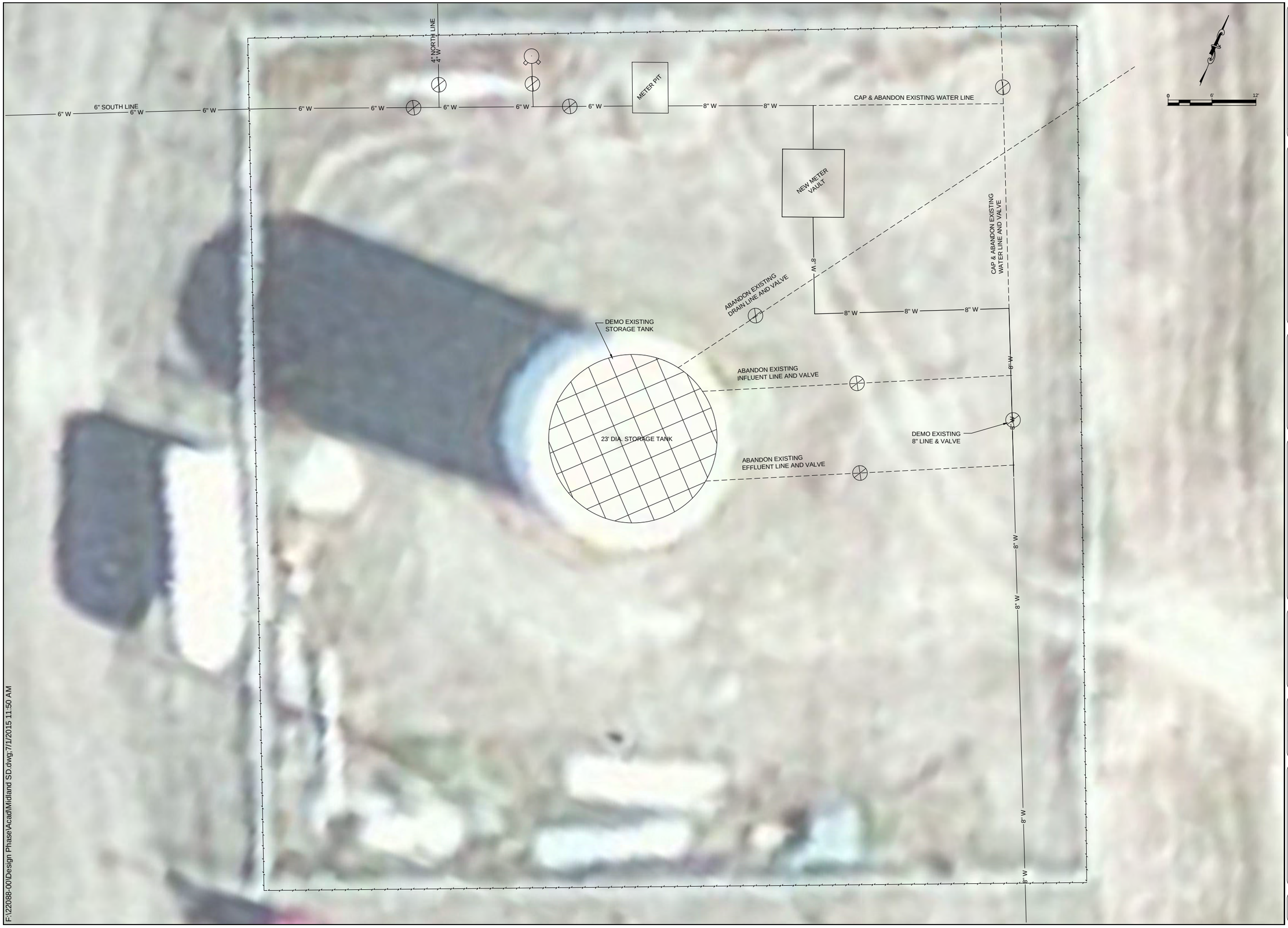

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JOB NO : 22088-00
DATE : JULY 2015

0 1/2" 1"
SCALE REDUCTION BAR

SHEET TITLE :

ALTERNATE
No.3

SHEET NO. :

7

U.S. Fish and Wildlife Service

National Wetlands Inventory

MIDLAND, SD

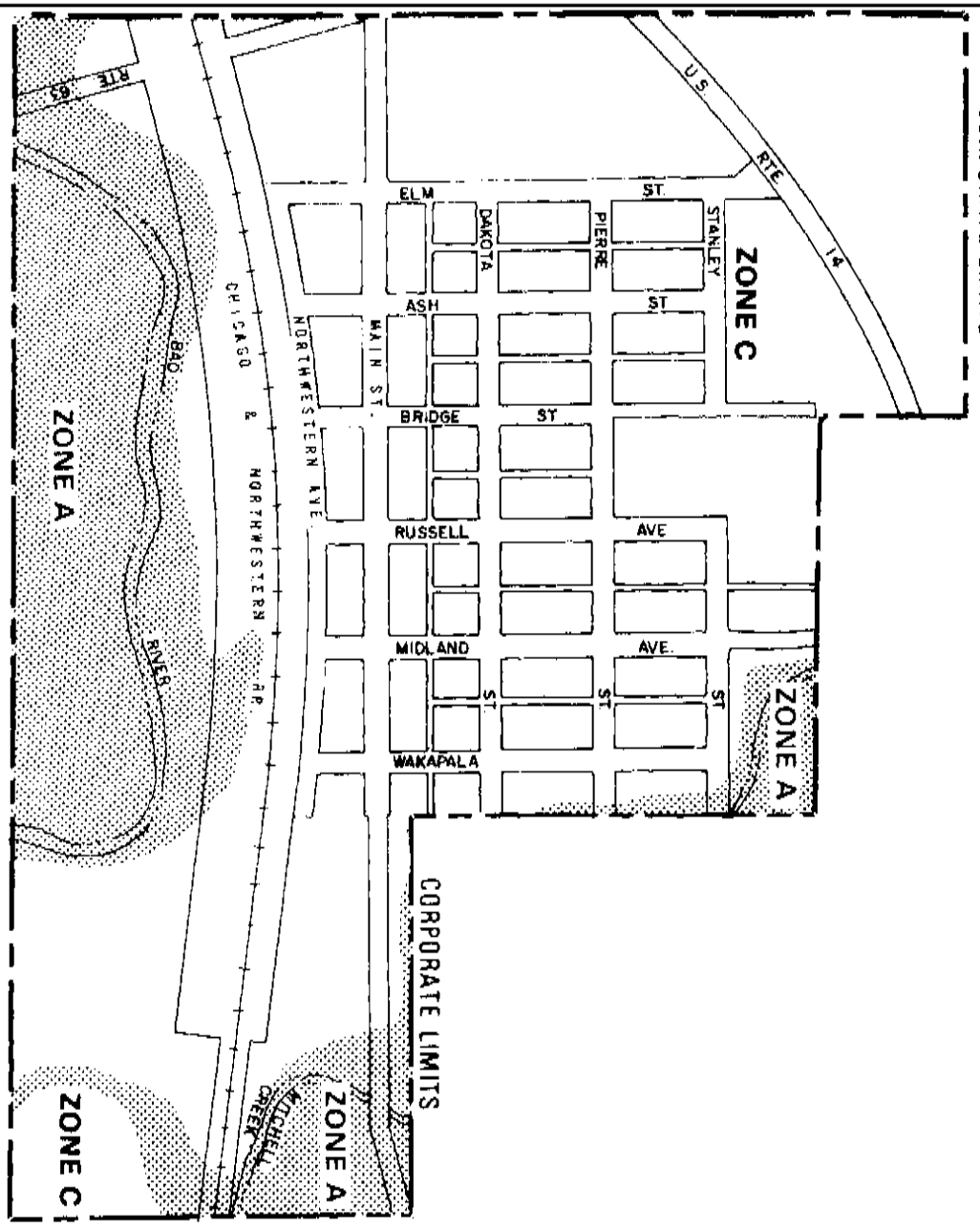
Jul 1, 2015

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:



APPROXIMATE SCALE

500 0 1000 2000 FEET

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF MIDLAND, SD
(HAAKON CO.)

EFFECTIVE DATE:
AUGUST 5, 1986

Appendix

B

Opinion of Probable Costs

Midland Water Facility Plan
Midland, South Dakota
BAI No. 22088.00.00

Alternative 1- 75,000 Steel Bolted Reservoir

SPEC. REF. NO.	DESCRIPTION OF WORK AND MATERIALS	QUAN.	UNIT	UNIT PRICE	TOTAL
Div. 1	GENERAL CONDITIONS	1	LS	$31,000	$31,000
Div. 2	SITE CONSTRUCTION				
	8" C900 DR18 PVC Watermain F&I	120	LF	$35.00	$4,200
	8" D.I. MJ Gate Valves and Box	3	EA	$1,800	$5,400
	8" D.I. MJ Long Body Sleeves	4	EA	$750	$3,000
	Tie-in to Existing Watermain	2	EA	$1,000	$2,000
	74,000 gal Ground Storage Reservoir (20' d. x 33' tall)	1	LS	$160,000	$160,000
	Tank Mixing System	1	LS	$12,500	$12,500
	Tank Foundation and Piping	1	LS	$75,000	$75,000
	Tank Demolition	1	LS	$40,000	$40,000
	PROBABLE CONSTRUCTION COSTS				$333,100
	- Contingencies (15% of Construction Cost)				$49,970
	- Basic Engineering Services - Design, Bidding, and Prelim Report				$30,646
	- Construction Phase Services Admin and final inspection				$7,540
	- Construction Inspection and Staking				$30,646
	Total Engineering and Contingencies				$118,810
	PROBABLE PROJECT COST				**$451,910**

Midland Water Facility Plan
Midland, South Dakota
BAI No. 22088.00.00

Alternative 2- 53,000 Steel Bolted Reservoir

SPEC. REF. NO.	DESCRIPTION OF WORK AND MATERIALS	QUAN.	UNIT	UNIT PRICE	TOTAL
Div. 1	GENERAL CONDITIONS	1	LS	$29,000	$29,000
Div. 2	SITE CONSTRUCTION				
	8" C900 DR18 PVC Watermain F&I	120	LF	$35.00	$4,200
	8" D.I. MJ Gate Valves and Box	3	EA	$1,800	$5,400
	8" D.I. MJ Long Body Sleeves	4	EA	$750	$3,000
	Tie-in to Existing Watermain	2	EA	$1,000	$2,000
	53,000 gal Ground Storage Reservoir (20' d. x 24' tall)	1	LS	$143,000	$143,000
	Tank Mixing System	1	LS	$12,500	$12,500
	Tank Foundation and Piping	1	LS	$70,000	$70,000
	Tank Demolition	1	LS	$40,000	$40,000
	PROBABLE CONSTRUCTION COSTS				$309,100
	- Contingencies (15% of Construction Cost)				$46,370
	- Basic Engineering Services - Design, Bidding, and Prelim Report				$28,438
	- Construction Phase Services - Admin and final inspection				$7,210
	- Construction Inspection and Staking				$28,438
	Total Engineering and Contingencies				$110,460
	PROBABLE PROJECT COST				**$419,560**

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Midland Water Facility Plan
Midland, South Dakota
BAI No. 22088.00.00

Alternative 3 - Meter Vault

SPEC. REF. NO.	DESCRIPTION OF WORK AND MATERIALS	QUAN.	UNIT	UNIT PRICE	TOTAL
Div. 1	GENERAL CONDITIONS	1	LS	$65,000	$65,000
Div. 2	SITE CONSTRUCTION				
	8" C900 DR18 PVC Watermain F&I	100	LF	$35.00	$3,500
	8" D.I. MJ Gate Valves and Box	2	EA	$1,800	$3,600
	8" D.I. MJ Long Body Sleeves	1	EA	$750	$750
	8" D.I. MJ 90 degree bend	3	EA	$1,000	$3,000
	Tie-in to Existing Watermain	2	EA	$1,000	$2,000
	Tank Demolition	1	LS	$40,000	$40,000
	Meter Vault & Interior Piping	1	LS	$125,000	$125,000
	Telemetry System	1	LS	$60,000	$60,000
	Electrical	1	LS	$50,000	$50,000
	Rural Water Service Line				
	6" C900 DR18 PVC Watermain F&I	15,840	LF	$20	$316,800
	6" D.I. MJ Gate Valves and Box	6	EA	$1,500	$9,000
	6" x 6" D.I. MJ Tee	2	EA	$750	$1,500
	6" D.I. MJ Long Body Sleeve	1	EA	$600	$600
	Air Releif Assembly	6	EA	$1,000	$6,000
	Tracer Wire	15,840	LF	$0.15	$2,376
	Surface Restoration - Grass Surface	15,840	LF	$1.25	$19,800
	Tie-in to Existing Watermain	2	EA	$3,000	$6,000
	PROBABLE CONSTRUCTION COSTS				$714,930
	- Contingencies (15% of Construction Cost)				$107,240
	- Basic Engineering Services - Design, Bidding, and Prelim Report				$60,018
	- Construction Phase Services - Admin and final inspection				$11,520
	- Construction Inspection and Staking				$52,190
	Total Engineering and Contingencies				$230,970
	PROBABLE PROJECT COST				**$945,900**

Midland Water Facility Plan
Midland, South Dakota
BAI No. 22088.00.00

Phase 1 - Distribution Improvements

SPEC. REF. NO.	DESCRIPTION OF WORK AND MATERIALS	QUAN.	UNIT	UNIT PRICE	TOTAL
Div. 1	GENERAL CONDITIONS	1	LS	$7,000	$7,000
	Traffic Control	1	LS	$5,000	$5,000
Div. 2	SITE CONSTRUCTION				
	6" C900 DR18 PVC Watermain F&I	1,100	LF	$28.00	$30,800
	6" D.I. MJ Gate Valves and Box	5	EA	$1,500	$7,500
	6" D.I. MJ 90 degree bend	1	EA	$500	$500
	6" x 6" D.I. MJ Tee	1	EA	$500	$500
	6" x 4" D.I. MJ Tee	3	EA	$450	$1,350
	4" D.I. MJ Long Body Sleeve	3	EA	$500	$1,500
	Tie-in to Existing Watermain	5	EA	$1,000	$5,000
	Ganular Embedment	350	Ton	$18	$6,300
	Pipe Foundation Material	30	Ton	$20	$600
	Exploratory Excavation	1	LS	$1,000	$1,000
	Base Course and Gravel Surfacing	440	Ton	$14	$6,160
	PROBABLE CONSTRUCTION COSTS				$73,210
	- Contingencies (20% of Construction Cost)				$14,650
	- Basic Engineering Services - Design, Bidding, and Prelim Report				$8,786
	- Construction Phase Services - Admin and final inspection				$3,990
	- Construction Inspection and Staking				$8,786
	Total Engineering and Contingencies				$36,220
	PROBABLE PROJECT COST				**$109,430**

Midland Water Facility Plan
Midland, South Dakota
BAI No. 22088.00.00

Phase 2 - Distribution Improvements

SPEC. REF. NO.	DESCRIPTION OF WORK AND MATERIALS	QUAN.	UNIT	UNIT PRICE	TOTAL
Div. 1	GENERAL CONDITIONS	1	LS	$11,000	$11,000
	Traffic Control	1	LS	$5,000	$5,000
Div. 2	SITE CONSTRUCTION				
	6" C900 DR18 PVC Watermain F&I	2,120	LF	$28.00	$59,360
	6" D.I. MJ Gate Valves and Box	7	EA	$1,500	$10,500
	6" D.I. MJ 90 degree bend	1	EA	$500	$500
	6" x 6" D.I. MJ Tee	4	EA	$500	$2,000
	6" x 4" D.I. MJ Tee	1	EA	$450	$450
	6" x 4" D.I. MJ Reducer	4	EA	$500	$2,000
	4" D.I. MJ Long Body Sleeve	2	EA	$500	$1,000
	Tie-in to Existing Watermain	6	EA	$1,000	$6,000
	Ganular Embedment	700	Ton	$18	$12,600
	Pipe Foundation Material	60	Ton	$20	$1,200
	Exploratory Excavation	1	LS	$1,000	$1,000
	Base Course and Gravel Surfacing	850	Ton	$14	$11,900
	PROBABLE CONSTRUCTION COSTS				$124,510
	- Contingencies (20% of Construction Cost)				$24,910
	- Basic Engineering Services - Design, Bidding, and Prelim Report				$14,195
	- Construction Phase Services - Admin and final inspection				$4,730
	- Construction Inspection and Staking				$14,195
	Total Engineering and Contingencies				$58,030
	PROBABLE PROJECT COST				**$182,540**

Appendix

C

Agency Review Letters

BANNER
Engineering | Architecture | Surveying
Banner Associates, Inc. | 409 22nd Ave So | PO Box 298
Brookings, South Dakota 57006 | 605.692.6342
www.bannerassociates.com

June 29, 2015

U.S. Army Corps of Engineers, Omaha District
Planning Division
Attention: CENWO-PM-AE
1616 Capitol Avenue
Omaha, NE 68102-1618

Re: Environmental Review for Midland Water Facility Plan
BAI. No. 22088.00.00

Dear Planning Division:

The Town of Midland located in Haakon County, SD has authorized a study that compares alternatives to replace their aging water storage reservoir and evaluate their distribution system. The existing water reservoir was installed in the 1960's. Currently the Town of Midland is served through a bulk meter and service line from West River/Lyman-Jones Rural Water System. The Town of Midland would be responsible for replacing the existing storage tank and any distribution improvements.

Banner Associates Inc, has recommended Alternate 2 and some distribution improvments which includes construction of a new 53,000 gallon ground storage reservoir and installation of approximately 3300 linear feet of water main throughout the Town of Midland. The second attachment shows the known wetlands in the vicinity of the project. The third attachment shows the flood plains located outside of the proposed area of construction.

At this time, alternative 2 and the distribution improvements are submitted for your review to meet the requirements of the State Revolving Fund Loan Application. Please let me know if you have any questions during your review. Please don't hesitate to call me at 1.855.692.6342.

Sincerely,

Joe Munson, PE
Banner Associates, Inc.

Enclosures: – Alternative 2, Distribution System Improvements, Wetlands Map, and FIRM

BANNER
Engineering | Architecture | Surveying
Banner Associates, Inc. | 409 22nd Ave So | PO Box 298
Brookings, South Dakota 57006 | 605.692.6342
www.bannerassociates.com

June 29, 2015

South Dakota Department of Environment and Natural Resources
Water Resources Assistance Program
Attention: Mike Perkovich, Natural Resources Engineering Director
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501-3182

Re: Environmental Review for Midland Water Facility Plan
BAI. No. 22088.00.00

Dear Mr. Perkovich:

Please find enclosed, the Cultural Resources Effects Assessment Summary per the State Revolving Fund requirements. This summary sheet is being submitted to determine the effect the project may have on the cultural resources in the project area. A copy of the historic properties found in Haakon, South Dakota and maps of the project area are also included.

This is submitted for your review and approval as part of requirements for the State Revolving Fund Loan Application. Please let me know if there is any additional information that you may need to expedite your review of this document.

Once review comments are received from the SD Game, Fish and Parks and Wildlife Services, NRCS, and the US Army Corps, the facility plan will be completed and sent to you for final approval from DENR and SHPO. If you have any questions, please don't hesitate to call me at 605.692.6342.

Sincerely,

Joe Munson, PE
Banner Associates, Inc.

Enclosures: 2 copies – Cultural Resources Effects Assessment Summary
2 copies – National Register of Historic Places for Haakon County, SD
2 copies – Alternative 2 – Map
2 copies – Distribution Improvements – Phase 1 & 2

BANNER
Engineering | Architecture | Surveying
Banner Associates, Inc. | 409 22nd Ave So | PO Box 298
Brookings, South Dakota 57006 | 605.692.6342
www.bannerassociates.com

June 29, 2015

United States Department of Interior
Fish and Wildlife Service
Attention: Mr. Donald Gober, Field Supervisor
420 S. Garfield Avenue
Pierre, SD 57501-5408

Re: Environmental Review for Midland Water Facility Plan
BAI. No. 22088.00.00

Dear Mr. Gober:

The Town of Midland located in Haakon County, SD has authorized a study that compares alternatives to replace their aging water storage reservoir and evaluate their distribution system. The existing water reservoir was installed in the 1960's. Currently the Town of Midland is served through a bulk meter and service line from West River/Lyman-Jones Rural Water System. The Town of Midland would be responsible for replacing the existing storage tank and any distribution improvements.

Banner Associates Inc, has recommended Alternate 2 and some distribution improvments which includes construction of a new 53,000 gallon ground storage reservoir and installation of approximately 3300 linear feet of water main throughout the Town of Midland. The second attachment shows the known wetlands in the vicinity of the project. The third attachment shows the flood plains located outside of the proposed area of construction.

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Sincerely,

Joe Munson, PE
Banner Associates, Inc.

Enclosures: – Alternative 2, Distribution System Improvements, Wetlands Map, and FIRM

BANNER
Engineering | Architecture | Surveying
Banner Associates, Inc. | 409 22nd Ave So | PO Box 298
Brookings, South Dakota 57006 | 605.692.6342
www.bannerassociates.com

June 29, 2015

South Dakota Department of Game, Fish and Parks
Division of Wildlife, Foss Building
Attention: Mr. John Kirk, Interagency Coordinator
523 East Capitol Avenue
Pierre, SD 57501-3181

Re: Environmental Review for Midland Water Facility Plan
BAI. No. 22088.00.00

Dear Mr. Kirk:

The Town of Midland located in Haakon County, SD has authorized a study that compares alternatives to replace their aging water storage reservoir and evaluate their distribution system. The existing water reservoir was installed in the 1960's. Currently the Town of Midland is served through a bulk meter and service line from West River/Lyman-Jones Rural Water System. The Town of Midland would be responsible for replacing the existing storage tank and any distribution improvements.

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At this time, alternative 2 and the distribution improvements are submitted for your review to meet the requirements of the State Revolving Fund Loan Application. Please let me know if you have any questions during your review. Please don't hesitate to call me at 1.855.692.6342.

Sincerely,

Joe Munson, PE
Banner Associates, Inc.

Enclosures: – Alternative 2, Distribution System Improvements, Wetlands Map, and FIRM

BANNER
Engineering | Architecture | Surveying
Banner Associates, Inc. | 409 22nd Ave So | PO Box 298
Brookings, South Dakota 57006 | 605.692.6342
www.bannerassociates.com

June 29, 2015

United States Department of Agriculture
Natural Resources Conservation Service
Attention: Ms. Deanna Peterson
200 Fourth Street SW
Huron, SD 57350-2475

Re: Environmental Review for Midland Water Facility Plan
BAI. No. 22088.00.00

Dear Ms. Peterson:

The Town of Midland located in Haakon County, SD has authorized a study that compares alternatives to replace their aging water storage reservoir and evaluate their distribution system. The existing water reservoir was installed in the 1960's. Currently the Town of Midland is served through a bulk meter and service line from West River/Lyman-Jones Rural Water System. The Town of Midland would be responsible for replacing the existing storage tank and any distribution improvements.

Banner Associates Inc, has recommended Alternate 2 and some distribution improvments which includes construction of a new 53,000 gallon ground storage reservoir and installation of approximately 3300 linear feet of water main throughout the Town of Midland. The second attachment shows the known wetlands in the vicinity of the project. The third attachment shows the flood plains located outside of the proposed area of construction.

At this time, alternative 2 and the distribution improvements are submitted for your review to meet the requirements of the State Revolving Fund Loan Application. Please let me know if you have any questions during your review. Please don't hesitate to call me at 1.855.692.6342.

Sincerely,

Joe Munson, PE
Banner Associates, Inc.

Enclosures: – Alternative 2, Distribution System Improvements, Wetlands Map, and FIRM

BANNER
Engineering | Architecture | Surveying
Banner Associates, Inc. | 409 22nd Ave So | PO Box 298
Brookings, South Dakota 57006 | 605.692.6342
www.bannerassociates.com

June 29, 2015

South Dakota, Division of Emergency Management
Attention: Nicole Prince, NFIP Coordinator
118 West Capitol Avenue
Pierre, SD 57501-5070

Re: Environmental Review for Midland Water Facility Plan
BAI. No. 22088.00.00

Dear Ms. Prince:

The Town of Midland located in Haakon County, SD has authorized a study that compares alternatives to replace their aging water storage reservoir and evaluate their distribution system. The existing water reservoir was installed in the 1960's. Currently the Town of Midland is served through a bulk meter and service line from West River/Lyman-Jones Rural Water System. The Town of Midland would be responsible for replacing the existing storage tank and any distribution improvements.

Banner Associates Inc, has recommended Alternate 2 and some distribution improvments which includes construction of a new 53,000 gallon ground storage reservoir and installation of approximately 3300 linear feet of water main throughout the Town of Midland. The second attachment shows the known wetlands in the vicinity of the project. The third attachment shows the flood plains located outside of the proposed area of construction.

At this time, alternative 2 and the distribution improvements are submitted for your review to meet the requirements of the State Revolving Fund Loan Application. Please let me know if you have any questions during your review. Please don't hesitate to call me at 1.855.692.6342.

Sincerely,

Joe Munson, PE
Banner Associates, Inc.

Enclosures: – Alternative 2, Distribution System Improvements, Wetlands Map, and FIRM

Appendix

D

Agency Response Letters

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

REPLY TO
ATTENTION OF

July 22, 2015

Planning, Programs, and Project Management Division

Mr. Joe Munson
Banner Associates, Inc.
2307 West 57th Street, Ste 102
Sioux Falls, South Dakota 57108

Dear Mr. Munson:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated June 29, 2015 (received July 14, 2015) regarding the environmental review of the proposed improvements to the aging water storage reservoir system and evaluation of the corresponding distribution system of the Town of Midland in Haakon County, South Dakota (Project No. 22088.00.00). We offer the following comments for your consideration:

Your plans should be coordinated with the state water quality office that has jurisdiction within the area where the project is located to ensure compliance with federal and state water quality standards and regulations mandated by the Clean Water Act and administered by the U.S. Environmental Protection Agency. Please coordinate with the South Dakota Department of Environment & Natural Resources concerning state water quality programs.

If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks. In addition, the South Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

Since the proposed project does not appear to be located within Corps owned or operated lands, your plans should be submitted to the local floodplain administrator for review and approval prior to construction. It should be ensured that the proposed project is in compliance with the floodplain management criteria of Haakon County and the State of South Dakota. In addition, please coordinate with the following floodplain management office:

South Dakota Division of Emergency Management
Attention: Mr. Marc Macy
118 W. Capitol Avenue
Pierre, South Dakota 57501
Telephone: 605-773-3231
Fax: 605-773-3580
Email: marc.macy@state.sd.us

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (http://www.nwo.usace.army.mil/Missions/RegulatoryProgram.aspx) to determine if this project requires a 404 permit. For a detailed review of the permit requirements, preliminary and final project plans should be sent to:

South Dakota
U.S. Army Corps of Engineers
Pierre Regulatory Office
Attention: Mr. Steve Naylor, CENWO-OD-R-SD
28563 Powerhouse Road, Room 120
Pierre, South Dakota 57501

If you have any questions, please contact Ms. Amanda Ciurej of my staff at (402) 995-2897 or amanda.k.ciurej@usace.army.mil and reference PD# 6696 in the subject line.

Sincerely,

for Eric A. Laux
Chief, Environmental Resources and Missouri River Recovery Program Plan Formulation Section

DEPARTMENT OF GAME, FISH, AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

RECEIVED
JUL 15 2015
BY:

July 13, 2015

Joe Munson, PE
Banner Associates, Inc.
409 22nd Ave S.
PO Box 298
Brookings, SD 57006

RE: Midland Water Facility Plan
BAI No. 22088.00.00

Dear Mr. Munson:

The South Dakota Department of Game, Fish and Parks, Wildlife Division, has reviewed the proposed project involving the construction of a new storage reservoir and installation of water main throughout the town of Midland, South Dakota.

The project as described will have no impacts on fish and wildlife resources. If you have any questions, or if the project design changes, please contact me at 605.773.6208.

Sincerely,

Leslie Murphy
Senior Biologist

RECEIVED
JUL 13 2015
U.S. FISH & WILDLIFE SERVICE

BANNER
Engineering | Architecture | Surveying
Banner Associates, Inc. | 409 22nd Ave So | PO Box 298
Brookings, South Dakota 57006 | 605.692.6342
www.bannerassociates.com

June 29, 2015

This constitutes a report of the Department of the Interior prepared in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). We have reviewed and have NO OBJECTION to this proposed project.

8/3/15 Date — Scott Larson Field Supervisor

United States Department of Interior
Fish and Wildlife Service
Attention: Mr. Donald Gober, Field Supervisor
420 S. Garfield Avenue
Pierre, SD 57501-5408

Re: Environmental Review for Midland Water Facility Plan
BAI. No. 22088.00.00

RECEIVED
AUG 06 2015

Dear Mr. Gober:

The Town of Midland located in Haakon County, SD has authorized a study that compares alternatives to replace their aging water storage reservoir and evaluate their distribution system. The existing water reservoir was installed in the 1960's. Currently the Town of Midland is served through a bulk meter and service line from West River/Lyman-Jones Rural Water System. The Town of Midland would be responsible for replacing the existing storage tank and any distribution improvements.

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At this time, alternative 2 and the distribution improvements are submitted for your review to meet the requirements of the State Revolving Fund Loan Application. Please let me know if you have any questions during your review. Please don't hesitate to call me at 1.855.692.6342.

Sincerely,

Joe Munson, PE
Banner Associates, Inc.

Enclosures: – Alternative 2, Distribution System Improvements, Wetlands Map, and FIRM

USDA

United States Department of Agriculture

August 18, 2015

Joe Munson, PE
Banner Associates Inc.
409 22nd Ave So
PO Box 298
Brookings, SD 57006

AUG 21 2015
BY:

RE: Environmental Review for
Midland Water Facility Plan
BAI. No. 22088.00.00

Dear Mr. Munson:

Thank you for the opportunity to provide Farmland Protection Policy Act (FPPA) review of this project. The project as outlined will have **no effect** on prime or important farmland.

If you have any questions, please contact me at (605) 348-2889 ext. 104.

Sincerely,

TIMOTHY NORDQUIST
NRCS Conservation Agronomist

Natural Resources Conservation Service
414 E Stumer Road, Suite 700
Voice: 605.348.2889 ext 104 Fax: 855.256.2553
An Equal Opportunity Provider and Employer

Appendix

E

Public Hearing Affidavit and Minutes

Appendix

F

Billing Records

MIDLAND

Charge Summary Report

From 1/1/2012 to 12/31/2012

EOY Charges

SERV	SERVICE NAME	USAGE	AMOUNT	CURRENT COUNT	TOTAL TIMES BILLED
1	WATER	4829000	$18,994.09	105	1177
2	WATER	1363000	$4,462.50	10	123
3	SEWER		$7,487.68	99	1070
4	REFUSE		$13,644.44	89	943
1	TAX		$817.69	90	947
		6192000	$45,406.40		4260

Charge Summary Report

From 1/1/2013 to 12/31/2013

EOY Charges

SERV	SERVICE NAME	USAGE	AMOUNT	CURRENT COUNT	TOTAL TIMES BILLED
1	WATER	3828100	$19,082.00	105	1095
2	WATER	903000	$3,639.50	10	120
3	SEWER		$9,920.00	99	1023
4	REFUSE		$19,162.00	89	891
1	TAX		$1,149.72	90	903
		4731100	$52,953.22		4032

Charge Summary Report

From 1/1/2014 to 12/31/2014

EOY Charges

SERV	SERVICE NAME	USAGE	AMOUNT	CURRENT COUNT	TOTAL TIMES BILLED
1	WATER	4240000	$20,477.50	105	1089
2	WATER	1140000	$4,207.00	10	120
3	SEWER		$9,710.00	99	1017
4	REFUSE		$18,656.00	89	892
1	TAX		$1,119.36	90	904
		5380000	$54,169.86		4022

MIDLAND

Charge Summary Report

From 1/1/2015 to 12/31/2015

EOY Charges

SERV	SERVICE NAME	USAGE	AMOUNT	CURRENT COUNT	TOTAL TIMES BILLED
1	WATER	2966000	$14,485.57	105	738
2	WATER	916000	$3,205.50	10	80
3	SEWER		$6,717.16	99	689
4	REFUSE		$12,843.95	89	609
1	TAX		$772.20	90	615
		3882000	$38,024.38		2731

WRAP REVIEW SHEET
DRINKING WATER FACILITIES FUNDING APPLICATION
APPLICANT: PERKINS COUNTRY RURAL WATER SYSTEM, INC.

Project Title:	Water Line Realignment and Booster Station Improvements Project
Funding Requested:	$1,722,000
Total Project Cost:	$1,722,000
Project Description:	Perkins County Rural Water System must change the vertical alignment or insulate existing watermain along Highways 12 and 73 near the city of Lemmon that will lose minimum cover due to grade elevation changes as a result of an upcoming DOT project. Without a minimum cover, watermains are susceptible to freezing or breaking, resulting in a loss of service. Approximately two miles of watermain will be realigned and an additional two miles will be insulated as a result of this project. A SCADA system will also be added to the Highway 20 Booster station.
Alternatives Evaluated:	"Do Nothing" alternative was evaluated but not selected as it would not address the need for this project "Excavate and Insulate Impacted Pipes" alternative will either realign the vertical alignment or insulate existing pipe to meet the minimum cover for future grades. This alternative was evaluated and selected as it was the most practical alternative. "SCADA System" alterative will add a SCADA system to Highway 20 Booster station. This alternative was evaluated and selected as it was the most cost effective alternative.
Implementation Schedule:	Perkins County RWS anticipates bidding the project in March 2016 with a project completion date of October 2016.
Service Population:	2,000
Current Domestic Rate:	$105.02 per 7,000 gallons usage

Interest Rate: 2.25% Term: 30 years Security: System Revenue

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	In 2020, Perkins County RWS has a State Water Resources Management loan that goes from interest only payments to principal and interest payments. This debt service capacity analysis is based on annual rate increases of 3.25%, which results in rates of $122.77/7,000 gallons in 2020. If funding is provided as all loan, Perkins County RWS would have 99% coverage in 2020 based on rates of $122.77/7,000 gallons.

25% Funding Subsidy:	$430,500 subsidy with a loan of $1,291,500.
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $1,291,500, Perkins County RWS would have 102% coverage in 2020 based on rates of $122.77/7,000 gallons.

50% Funding Subsidy:	$861,000 subsidy with a loan of $861,000.
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $861,000, Perkins County RWS would have 110% coverage in 2020 based on rates of $122.77/7,000 gallons.

75% Funding Subsidy:	$1,291,500 subsidy with a loan of $430,500.
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $430,500, Perkins County RWS would have 118% coverage in 2020 based on rates of $122.77/7,000 gallons.

ENGINEERING REVIEW COMPLETED BY: NICK NELSON

FINANCIAL REVIEW COMPLETED BY: JON PESCHONG

BLACK HILLS COUNCIL
OF LOCAL GOVERNMENTS

RECEIVED
DEC 18 2015
Division of Financial
& Technical Assistance

December 17, 2015

Andy Bruels, Engineer Manager
South Dakota Department of Environment and Natural Resources
Water Resources Assistance
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501-3182

Dear Andy,

Enclosed is a Drinking Water Facilities Funding Application for Perkins County Rural Water System, Inc. (PCRWS) for the January 1st application deadline. PCRWS is requesting funding in the amount of $1,722,000 for a project that involves the realignment of waterlines at Highways 12 and 73 and improvements at two booster stations.

Thank you for your consideration of this application. Please contact me if you have any questions, or need additional information.

Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Enclosures

Cc: Brandi Baysinger, PCRWS
Larry Thelen, AE2S

PERKINS COUNTY RURAL WATER SYSTEM, INC.

Highways 12 & 73 Waterline Realignment and Booster Station Improvements Project

TABLE OF CONTENTS

I. Drinking Water Facilities Funding Application

II. Capacity Assessment Worksheets for Public Water Systems

III. Resolution of Authorized Signatory

IV. Water Rates

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VI. By-Laws

VII. Articles of Incorporation

VIII. Certificate of Good Standing

IX. Financial Statements 2013 and 2014 and Auditor's Report

X. 2015 Budget

XI. Amortization Schedules for Existing Debt
   a. Dacotah Bank
   b. DENR

XII. Public Hearing Minutes

XIII. Affidavit of Publication for Public Hearing

XIV. Environmental Letters and Responses

XV. Cultural Resources Effects Assessment Summary

XVI. AE2S Facility Plan

Drinking Water Facilities Funding Application

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:	Proposed Funding Package	
Perkins County Rural Water System, Inc.		
Address: 104 West Main Street Bison, SD 57620	Requested Funding	$1,722,000
	Local Cash	
	Other:	
Subapplicant: N/A	Other:	
DUNS Number: 011012205	Other:	
	TOTAL	$1,722,000

Project Title: Highways 12 & 73 Waterline Realignment & Booster Station Improvements

Description:

Perkins County Rural Water System (PCRWS) is proposing a system improvement project that consists of the relocation of waterlines; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. The waterline realignment is necessary due to a South Dakota Department of Transportation (SDDOT) project that will widen the existing right-of-way at Highway 12 and modify the road elevations at both Highway 12 and Highway 73. The change in road elevation will impact the ground cover over existing waterlines leaving the lines susceptible to freezing. As part of the SDDOT project, PCRWS will be required to relocate existing waterlines located within the right-of-way. PCRWS will also be installing a SCADA system at the Highway 20 booster station in order to monitor and preempt any issues with the station and fencing will be installed at the Highway 75 booster station to provide security.

PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon and Bison. The system supplies water to approximately 2,000 individuals.

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Donald Melling Jr., President
Name & Title of Authorized Signatory (Typed)

Donald Melling — 11-12-15
Signature — Date

Professional Consultants

Application Prepared By: Black Hills Council of Local Governments

Contact Person: Ali DeMersseman

Mailing Address: 730 East Watertown Street, Suite 102

City, State, and Zip: Rapid City, SD 57701

Telephone Number: 605-394-2681 Fax: None

Email address: ademersseman@tie.net

Consulting Engineering Firm: Advanced Engineering and Environmental Services, Inc.

Contact Person: Larry Thelen

Mailing Address: 1815 Schafer Street, Suite 301

City, State, and Zip: Bismarck, ND 58501

Telephone Number: 701-221-0530 Fax: 701-221-0531

Email address: Larry.Thelen@AE2S.com

Legal Counsel's Firm: Bogue & Bogue, LLP

Contact Person: Eric Bogue

Mailing Address: 104 West 1st Street

City, State, and Zip: Faith, SD 57626

Telephone Number: 605-967-2529 Fax: 605-967-2527

Email address: boguelaw@faithsd.com

Bond Counsel's Firm: N/A

Contact Person:

Mailing Address:

City, State, and Zip:

Telephone Number: Fax:

Email address:

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel	$5,000					$5,000
D. Other						
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$108,000					$108,000
B. Project Inspection Fees	$111,820					$111,820
C. Other	$70,036					$70,036
4. Construction & Improvements	$1,094,863					$1,094,863
5. Equipment						
6. Contractual Services						
7. Other Legal						
8. Other Booster Station Im	$46,000					$46,000
9. Subtotal (Lines 1-8)	$1,435,719					$1,435,719
10. Contingencies	$286,281					$286,281
11. Total (Lines 9 and 10)	$1,722,000					$1,722,000
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)			
Other (Explain) DENR		$1,722,000	March 25, 2016
Other (Explain)			
Other (Explain)			
Total		$1,722,000	$1,722,000

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: January 1

Population Served Current: 2,000 2010 2,000 2000 _____

Top three employers within 30 miles	Number of Employees	Type of Business
Grand Electric/WRCTC	44	Electric Cooperative
Perkins County	30	County Government
Bison School	35	School

Repayment Information

Interest rate you are applying for: 2.25% Term: 30

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☐ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan.
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year	2013	2004				
Purpose	Phase 8	Sys. Dev.				
Security Pledged	Water Revenue	Water Revenue				
Amount	$310,500	$5,144,000				
Maturity Date (mmm/yyyy)	03/20/2018	07/01/2054				
Debt Holder	Dacotah Bank	BWNR				
Debt Coverage Requirement		110%				
Avg. Annual Required Payment	$143,031	$154,320				
Outstanding Balance	$150,403	$5,144,000				

Comments:

See attached schedules

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$862,972	$810,433	$884,600	$922,640	$1,007,935	$1,028,358
Surcharge Fees	0	0	0	0	0	0
Other (Explain)	$41,479	$63,895	0	$98,099	$101,129	$104,129
Operating Expenses						
Personal Services	($202,793)	($172,270)	($166,700)	($178,150)	($198,945)	($204,914)
Chemical, Material & Supplies	($26,559)	($38,194)	($35,700)	($36,300)	($59,534)	($61,320)
Electric & Other Utilities	($307,321)	($336,183)	($383,430)	($410,000)	($432,846)	($445,832)
Other (Explain)	($115,840)	($59,773)	($71,071)	($96,352)	($61,649)	($63,496)
Operating Net Cash	$251,938	$267,908	$227,699	$299,937	$356,090	$356,925
Nonoperating Cash Flow						
Interest Revenue	$240	$280	0	0	0	0
Transfers In (Explain)	$149,518	$158,521	0	0	0	0
Fixed Asset Purchases	($34,678)	($252,157)	0	0	0	0
Transfers Out (Explain)	0	0	0	0	0	0
Principal Debt Payments	($63,037)	($67,806)	($64,969)	($66,580)	($88,801)	($41,616)
Interest Debt Payments	($25,758)	($12,194)	($168,000)	($168,000)	($206,408)	($205,484)
Other (Explain)	0	($20,407)	($3,000)	($42,000)	0	0
Nonoperating Net Cash	$26,285	($193,763)	($235,969)	($276,580)	($295,209)	($247,100)
Increase (Decrease) Cash	$278,223	$74,145	($8,270)	$23,357	$60,881	$109,825
Beginning Cash Balance	$89,026	$367,249	$441,395	$433,125	$456,482	$517,363
Ending Cash Balance	$367,249	$441,395	$433,125	$456,482	$517,363	$627,187
Restricted Balance	0	0	0	0	0	0
Unrestricted Balance	0	0	0	0	0	0

Explanations

See attached detailed spreadsheet

Enter Year	Prior Year Actual 2013	Last Year Actual 2014	Current Year Budget 2015	Year 2 Projected 2016	Year 4 Projected 2017	Year 3 Projected 2018
OPERATING REVENUE						
Base Fees	$ 862,972.00	$ 810,433.00	$ 884,600.00	$ 922,640.00	$ 1,007,935.00	$ 1,028,358.00
Surcharge Fees	$ -	$ -	$ -	$ -	$ -	
Other: rent, other, service work, connection fees, debt service charge from bulk users	$ 41,479.00	$ 63,895.00	$ -	$ 98,099.00	$ 101,129.00	$ 104,129.00
	$ 904,451.00	**$ 874,328.00**	**$ 884,600.00**	**$ 1,020,739.00**	**$ 1,109,064.00**	**$ 1,132,487.00**
OPERATING EXPENSES						
Personal Services: wages, directors' fees, employment taxes, benefits, engineering, accounting fees, legal fees, training	$ 202,793.00	$ 172,270.00	$ 166,700.00	$ 178,150.00	$ 198,945.00	$ 204,914.00
Chemical, Material & Supplies: office supplies, o&m supplies, water testing and one call	$ 26,559.00	$ 38,194.00	$ 35,700.00	$ 36,300.00	$ 59,534.00	$ 61,320.00
Electric & Other Utilities: water and power	$ 307,321.00	$ 336,183.00	$ 383,430.00	$ 410,000.00	$ 432,846.00	$ 445,832.00
Other: vehicle maintenance, travel, mileage reimbursement, in surance, advertising, bad debts, bank charge, dues & fees, meals, repairs, meeting/lodging, minor eq., misc., penalty, prop. tax, telephone	$ 115,840.00	$ 59,773.00	$ 71,071.00	$ 96,352.00	$ 61,649.00	$ 63,496.00
	$ 652,513.00	**$ 606,420.00**	**$ 656,901.00**	**$ 720,802.00**	**$ 752,974.00**	**$ 775,562.00**
	$ 251,938.00	**$ 267,908.00**	**$ 227,699.00**	**$ 299,937.00**	**$ 356,090.00**	**$ 356,925.00**
NONOPERATING CASH FLOW						
Interest Revenue	$ 240.00	$ 280.00	$ -	$ -	$ -	$ -
Transfers In: grants	$ 149,518.00	$ 158,521.00	$ -	$ -	$ -	$ -
Fixed Asset Purchases	$ (34,678.00)	$ (252,157.00)	$ -	$ -	$ -	$ -
Transfers Out	$ -	$ -	$ -	$ -	$ -	$ -
Debt Payment (Principal Only)	$ (63,036.86)	$ (67,805.61)	$ (64,969.00)	$ (66,580.00)	$ (88,801.27)	$ (41,615.61)
Debt Payment (Interest Only)	$ (25,758.00)	$ (12,194.00)	$ (168,000.00)	$ (168,000.00)	$ (206,407.77)	$ (205,484.43)
Other Expenses: Reserves	$ -	$ (20,407.00)	$ (3,000.00)	$ (42,000.00)	$ -	$ -
NET CASH FROM NONOPERATING	$ 26,285.14	$ (193,762.61)	$ (235,969.00)	$ (276,580.00)	$ (295,209.04)	$ (247,100.04)
NET INCREASE (DECREASE) IN CASH	$ 278,223.14	$ 74,145.39	$ (8,270.00)	$ 23,357.00	$ 60,880.96	$ 109,824.96
BEGINNING CASH BALANCE	$ 89,026.00	$ 367,249.14	$ 441,394.53	$ 433,124.53	$ 456,481.53	$ 517,362.49
ENDING CASH BALANCE	$ 367,249.14	$ 441,394.53	$ 433,124.53	$ 456,481.53	$ 517,362.49	$ 627,187.45

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: ☐ Incorporated Municipality or Sanitary District

or

☒ Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic	$105.02		267	8370
Business				
Other: Pasture/ Seasonal	$71.44		609	4900
Other:				

Are fees based on usage or flat rate? Usage

When is proposed fee scheduled to take effect? N/A

When did the current fee take effect? July 9, 2015

What was the fee prior to the current rate? $63 + $5.69/1,000 & $315/yr + $5.69/1,000

Four Largest Customers	Type of Business	% of System Revenue
City of Lemmon	Bulk User - Municipality	40%
Town of Bison	Bulk User - Municipality	10%
Archibald Brothers	Commercial Feedlot	1%
Lemmon Livestock	Sale Barn	1%

Property Tax Information

(Complete section only if General Obligation bond is pledged to repay your loan.)

Three year valuation trend:

Year	_____	_____	_____
Assessed Valuation	_____	_____	_____

Three year levies and collection trend:

Year	_____	_____	_____
Amount Levied	_____	_____	_____
Collected	_____	_____	_____

Five Largest Taxpayers	Description	Assessed Valuation
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Comments:

General Fund Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Sales Tax Information

(Complete section only if sales tax is pledged to repay your loan.)

Sales tax revenue history for the most current fifteen months:

Month/Year	Amount Collected

Comments:

Sales Tax Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Facilities Plan Checklist

Before submitting the application, please take a few moments to complete the following checklist. Addressing these items prior to submitting the application will expedite the review process.

Drinking Water Facilities Plan document can be found at http://denr.sd.gov/dfta/wwf/dwsrf/dwfunding.aspx

Checklist of SRF Facilities Plan Requirements

Have the following items been addressed?

- Submission of a Facilities Plan to the department that addresses those items found in the Water Facilities Plan document. [x]
- A public hearing held discussing the project and the use of an SRF loan to finance the project. [x]
- Minutes of the public hearing prepared and submitted to the department's engineer for inclusion into the final Facilities Plan. [x]
- The affidavit of publication of the public hearing received and submitted to the department's engineer for inclusion into the final Facilities Plan. [x]
- The four review agencies contacted and responses received for inclusion into the final Facilities Plan. [x]
- The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. [x]

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$1,722,000
Treatment	
Storage	
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$1,722,000

Donald Melling Jr., President

Name & Title of Authorized Representative

Donald Melling 11-12-15

Signature of Authorized Representative Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Donald Melling Jr., President

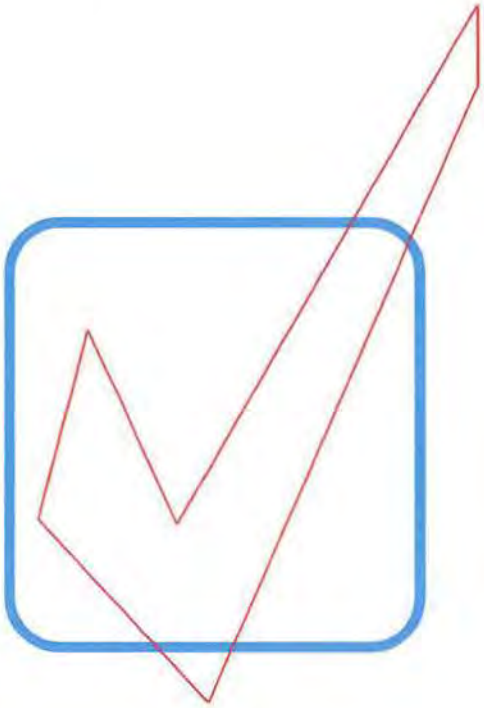
Name & Title of Authorized Representative

Donald Melling 11-12-15

Signature of Authorized Representative Date

☐ I am unable to certify to the above statements. Attached is my explanation

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: Perkins County Rural Water System, Inc.

Prepared by: Brandi Baysinger, Office Manager
Shiloh Baysinger, Operations Supervisor

Phone #: 605-244-5608

Date: 10/23/15

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µg/L: micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: Yes, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** 340,093	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 574,560	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 400 gallons per minute	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:***	☐	☐	☐	☑
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** 4 hours at a time	☑	☐	☐	☐
Have you been able to provide adequate volumes of water during drought cycles?	☑	☐	☐	☐
Have you had to restrict usage at any time for any reason? ***Please specify:*** equipment failure	☑	☐	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:***	☐	☑	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.***	☐	☑	☐	☐
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☐ ***growing,*** ☐ ***declining, or*** ☑ ***stable.***	☑	☐	☐	☐
Does your source have additional water available for appropriation?	☐	☑	☐	☐
Do you have a water right? ***Water right permit number(s):*** 1912-1	☑	☐	☐	☐
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☐	☐	☐	☑
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☑	☐	☐	☐
Do you have a contract to purchase water? ***If yes, with whom?*** Southwest Water Authority	☑	☐	☐	☐
Are you currently staying within your contract?	☑	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☑	☐	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☐	☐	☑	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☐	☐	☑	☐
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** _____	☐	☐	☐	☑
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** _____	☐	☐	☐	☑
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☐	☐	☐	☑

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☑ **Yes** ☐ **No**

(If you checked "No", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☐	☑
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☐	☑
Are repair parts available?	☐	☐	☐	☑
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:*** _____	☐	☐	☐	☑
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☐	☑
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☐	☑
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:*** _____	☐	☐	☐	☑
Do you have the capability to add coagulant before the filter?	☐	☐	☐	☑

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☐	☐	☐	☑
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** _____	☐	☐	☐	☑
Is your well(s) constructed according to current South Dakota regulations?	☐	☐	☐	☑
Do you have a source water protection plan?	☐	☐	☐	☑
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☐	☐	☐	☑

Disinfection

Do you disinfect? ☐ **Yes** ☐ **No** ***(If "No", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** _____ ***How often?*** _____ ***Disinfectant used:*** _____	☐	☐	☐	☑
Do you have back-up equipment? ***Type:*** _____	☐	☐	☐	☑
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** _____	☐	☐	☐	☑
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** _____ ***Total Chlorine Residual:*** _____ (if using chloramines)	☐	☐	☐	☑

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☑
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☑

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☐	☐	☐	☑
Are chemicals used for treatment properly stored and secure?	☐	☐	☐	☑
Does the water system track chemical usage? (i.e. a sudden	☐	☐	☐	☑

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping

Condition of Pumping Equipment	**Yes**	**No**	**Unknown**	**NA**
Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** _____	☑	☐	☐	☐
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☑	☐	☐	☐
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☐	☑	☐	☐
Standby/Emergency Power Equipment	**Yes**	**No**	**Unknown**	**NA**
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☑	☐	☐	☐
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☑	☐	☐	☐
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☑	☐	☐	☐

Infrastructure - Storage

Storage Capacity	**Yes**	**No**	**Unknown**	**NA**
Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:*** _____	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** _____	☐	☐	☑	☐
Security Measures	**Yes**	**No**	**Unknown**	**NA**
Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☑	☐	☐	☐
Are access hatches locked?	☑	☐	☐	☐
Is the tank and the immediate surrounding area fenced?	☑	☐	☐	☐
Control Systems				
Is there a high and low water level signal system to control the pumps?	☑	☐	☐	☐

Is there a drain valve or hydrant to allow for draining of the tank?	☑	☐	☐	☐
Tank Maintenance	**Yes**	**No**	**Unknown**	**NA**
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☑	☐	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☑	☐	☐	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:***	☑	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☑	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☑	☐	☐	☐
Are all valves exercised and lubricated periodically?	☑	☐	☐	☐
Is the system free of severe "water hammer" problems?	☑	☐	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☑	☐	☐	☐
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month?	☑	☐	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 22 %	☐	☑	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 210/150 psi	☐	☑	☐	☐
Do you have a routine leak detection and repair program?	☐	☑	☐	☐
Are all sources of supply and customers metered?	☑	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☐	☑	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☑	☐	☐	☐

Are any inspections for cross-connections performed?	☐	☑	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☐	☑	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☐	☑	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** 50	☑	☐	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☐	☑	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☑	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☑	☐	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** less than 1 ***Most common complaint:*** distribution I and II	☐	☑	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☑	☐	☐	☐

The Management Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** distribution I and II	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** SDARWS and MAP	☑	☐	☐	☐

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☑	☐	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☑	☐	☐	☐
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications?	☐	☐	☑	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☑	☐	☐	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☐	☑	☐	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☑	☐	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☑	☐	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☑	☐	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** 10 years	☑	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☐	☑	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☑	☐	☐
Do you know what to do in the event of a violation?	☑	☐	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☑	☐	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☐	☑	☐	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☑	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☑	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** Operations Supervisor	☑	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☑	☐	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☑	☐	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☐	☐	☐	☑
Do you have written operating procedures for both routine and emergency system operations?	☐	☑	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☑	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☐	☑	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☑	☐	☐	☐

Maintenance	Yes	No	Unknown	NA
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☑	☐	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☑	☐	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☑	☐	☐	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☑	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☑	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☑	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** Debt, OM&R, Capital, Emergency	☑	☐	☐	☐
Does the system have reserve funds available in the event of an emergency?	☑	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☐	☑	☐	☐
Do you have a process for scheduling and committing to capital projects?	☐	☑	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☐	☑	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☐	☑	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** yearly	☑	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☑	☐	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** $64 minimum plus $5.86/1000 gallons (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***:	☐	☑	☐	☐
Does the rate structure assure proportionality among users?	☑	☐	☐	☐
Do you have procedures for billing and collection?	☑	☐	☐	☐
Is your billing collection rate greater than 95%?	☑	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☑	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☑	☐	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☑	☐	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☑	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☐	☑	☐	☐
Do you employ standardized accounting and tracking systems?	☑	☐	☐	☐
Do you track budget performance?	☑	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☑	☐	☐	☐
Are financial management recordkeeping systems organized?	☑	☐	☐	☐
Are controls exercised over expenditures?	☑	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☑	☐	☐	☐
Are there purchasing procedures?	☑	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☐	☑	☐	☐

Financial Spreadsheet

Complete the financial spreadsheet on the following page using the guidance presented on the reverse side of the form.

GUIDELINES:

This cash flow projection form provides a systematic method of estimating cash receipts, disbursements and balances. The entries listed on the form will not necessarily apply to every PWS, and some entries may not be included which would be pertinent to each PWS. It is suggested, therefore, that the form be adapted to each particular PWS, with appropriate changes in the entries as may be required.

Procedure: Most of the entries on the form are self-explanatory; however, the following suggestions are offered to simplify the procedure:

(1) First gather the audited financial statements, internally prepared statements or budgets and other information for the current year and the two prior years. Include the most recent audited financial statement with your self-assessment report.

(2) Complete the columns for the prior two years using actual data from your audited financial statements, if available, or your internally prepared financial statements. Keep in mind, for purposes of this analysis, it is important to use **cash** receipts and disbursements. ***Suggestion: Round amounts to the nearest dollar.***

(3) Complete the current year's column using the most recent budget information. Include all expenditures incurred by the utility.

(4) Complete the form using the suggestions in the partial form below for each entry. Be sure to include any expenditures resulting from planned plant improvement and estimate the impact of inflation on all expenditures.

(5) Item #1 (Beginning Cash on Hand) plus Item #3 (Total Cash Receipts) minus Item #6 (Total Cash Paid Out) should equal Item #7 (Ending Cash Position).

(6) Item #13 (Total Added to Reserves) plus Item #14 (Operating Cash) should equal Item #7 (Ending Cash Position).

(7) Item #1 (Beginning Cash on Hand) should equal Item #14 (Ending Cash Position) from the prior financial period.

(8) Items #8 & 9 are used together to determine the impact of the rate structure on the equivalent residential user. If industrial or business customers contribute a significant portion of the revenues, these amounts should be looked at separately. Consideration should be given to design a rate structure so that each

category of user pays its proportional share of the costs of operating and maintaining the PWS.

(9) Item #10 is used to determine to what extent a PWS's net operating income is able to cover its debt service requirements.

(10) Item #11 is used to determine to what extent a PWS's rate structure produces revenues sufficient to cover operating expenses.

(11) Item #14 is the operating cash balance at year end. The operating cash balance at the end of any financial period should be adequate to meet the cash requirements for a minimum of one month. If there is too little cash, additional cash may have to be injected or expenditures may have to be reduced. If there is excessive cash on hand, the money should be invested or otherwise deposited into interest bearing accounts (e.g., set up reserves for replacement or capital improvements, etc.)

Financial Spreadsheet

Applicant: Perkins County Rural Water System
Completed by: Brandi Baysinger
Date: 11/4/15

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	$367,249	$441,395	$433,125	$456,482	$517,362
2. Cash Receipts:					
a. Unmetered Water Revenue	$0	$0	$0	$0	$0
b. Metered Water Revenue	$810,433	$884,600	$922,640	$1,007,935	$1,028,358
c. Other Water Revenue	$10,518	$0	$91,799	$101,129	$104,129
d. Total Water Revenues (2a through 2c)	$820,951	$884,600	$1,014,439	$1,109,064	$1,132,487
e. Connection Fees	$12,092	$0	$0	$0	$0
f. Interest and Dividend Income	$280	$0	$0	$0	$0
g. Other Income	$41,285	$0	$6,300	$0	$0
h. Total Cash Revenues (2d through 2g)	$874,608	$884,600	$1,020,739	$1,109,064	$1,132,487
i. Transfers in/Additional Rev Needed	$25	$0	$0	$0	$0
j. Loans, Grants or other Cash Please specify	$158,496	$0	$0	$0	$0
3. Total Cash Receipts (2h through 2j)	$1,033,129	$884,600	$1,020,739	$1,109,064	$1,132,487
4. Total Cash Available (1+3)	$1,400,378	$1,325,995	$1,453,864	$1,565,546	$1,649,849
5. Operating Expenses					
a. Salaries and wages	$147,331	$144,200	$155,000	$175,100	$180,354
b. Employee Pensions and Benefits	$7,950	$0	$0	$0	$0
c. Purchased Water	$309,094	$353,430	$375,000	$396,796	$408,700
d. Purchased Power	$27,089	$30,000	$35,000	$36,050	$37,132
e. Fuel for Power Production	$0	$0	$0	$0	$0
f. Chemicals	$0	$0	$0	$0	$0
g. Materials and Supplies	$37,430	$35,000	$35,500	$58,710	$60,471
h. Engineering Services	$312	$0	$0	$0	$0
i. Contractual Services – Other	$16,677	$22,500	$23,150	$23,845	$24,560
j. Equip. Rent/Real Property	$0	$0	$0	$0	$0
k. Transportation Expenses	$18,825	$19,000	$19,000	$15,450	$15,914
l. Laboratory	$764	$700	$800	$824	$849
m. Insurance	$16,589	$17,500	$17,000	$17,510	$18,035
n. Regulatory Commission Expenses	$0	$0	$0	$0	$0
o. Advertising	$1,857	$2,000	$2,060	$2,122	$2,185
p. Miscellaneous	$21,100	$32,571	$58,292	$26,567	$27,362
q. Total Cash O&M Expenses (5a through 5p)	$605,018	$656,901	$720,802	$752,974	$775,562
r. Replacement Expenditures	$1,402	$0	$0	$0	
s. Total OM&R Expenditures (5q+5r)	$606,420	$656,901	$720,802	$752,974	$775,562
t. Loan Principal/Capital Lease Payments	$67,806	$64,969	$66,580	$88,801	$41,616
u. Loan Interest Payments	$12,194	$168,000	$168,000	$206,408	$205,484
v. Transfers Out	$0	$0	$0	$0	$0
w. Capital Purchases (specify):					
pump station	$252,157	$0	$0	$0	$0
x. Other	$0	$0	$0	$0	$0
6. Total Cash Paid Out (5s through 5x)	$938,577	$889,870	$955,382	$1,048,183	$1,022,662
7. Ending Cash Position (4 - 6)	$461,802	$436,125	$498,482	$517,363	$627,187

Financial Spreadsheet

Applicant: Perkins County Rural Water System
Completed by: Brandi Baysinger
Date: 11/4/15

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts	876	876	876	876	876
9. Avg Annual User Charge Account (2d/8)					
10. Coverage Ratio (2h-5s)/(5t+5u)					
11. Operating Ratio (2d/5s)					
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve	$0	$0	$0	$0	$0
b. Bond Retirement Reserve	$0	$0	$0	$0	$0
c. Capital Improvement Reserve	$10,203	$1,000	$40,000	$0	$0
d. Replacement Reserve	$0	$0	$0	$0	$0
e. Other	$10,204	$2,000	$2,000	$0	$0
13. Total Reserves (12a through 12e)					
14. Year End Operating Cash (7 - 13)					

	2013	2014	2015	2016	2017	2018	2019	2020
1. Beginning Cash on Hand	89,026.00	367,249.14	441,394.53	433,124.53	456,481.53	517,362.49	627,187.45	737,012.41
2. Cash Receipts								
a. Unmetered Water Revenue	0.00	0.00	-	-	-	-	-	-
b. Metered Water Revenue (including late charges)	862,972.00	810,433.00	884,600.00	922,640.00	1,007,935.00	1,028,358.00	1,028,358.00	1,028,358.00
c. Other Water Revenue (service work, debt revenue)	26,087.00	10,518.00	-	91,799.00	101,129.00	104,129.00	104,129.00	104,129.00
d. Total Water Revenues (2a thru 2c)	889,059.00	820,951.00	884,600.00	1,014,439.00	1,109,064.00	1,132,487.00	1,132,487.00	1,132,487.00
e. Connection Fees	15,392.00	12,092.00	-	-	-	-	-	-
f. Interest & Dividend Income	240.00	280.00	-	-	-	-	-	-
g. Other Income (ARRA Reimbursement, Other)	0.00	41,285.00	-	6,300.00	-	-	-	-
h. Total Cash Revenues (2d thru 2g)	904,691.00	874,608.00	884,600.00	1,020,739.00	1,109,064.00	1,132,487.00	1,132,487.00	1,132,487.00
I. Transfers In/Additional Rev Needed (Sale of fixed asset)	149,518.00	25.00	-	-	-	-	-	-
j. Loans/Grants or Other Cash (FEMA & SD DENR)	0.00	158,496.00	-	-	-	-	-	-
3. Total Cash Receipts (2h thru 2j)	1,054,209.00	1,033,129.00	884,600.00	1,020,739.00	1,109,064.00	1,132,487.00	1,132,487.00	1,132,487.00
4. Total Cash Available (1 + 3)	1,143,235.00	1,400,378.14	1,325,994.53	1,453,863.53	1,565,545.53	1,649,849.49	1,759,674.45	1,869,499.41
5. Operating Expenses								
a. Salaries & Wages: wages, directors' fees, employment taxes	151,114.00	147,331.00	144,200.00	155,000.00	175,100.00	180,354.00	180,354.00	180,354.00
b. Employee Pensions/Benefits	26,052.00	7,950.00						
c. Purchased Water	278,751.00	309,094.00	353,430.00	375,000.00	396,796.00	408,700.00	408,700.00	408,700.00
d. Purchased Power	28,570.00	27,089.00	30,000.00	35,000.00	36,050.00	37,132.00	37,132.00	37,132.00
e. Fuel for Power Production	0.00	0.00	-	-	-	-	-	-
f. Chemicals	0.00	0.00	-	-	-	-	-	-
g. Materials & Supplies: office supplies, o&m supplies	25,628.00	37,430.00	35,000.00	35,500.00	58,710.00	60,471.00	60,471.00	60,471.00
h. Engineering	325.00	312.00	-	-	-	-	-	-
I. Contractual Services: accounting fees, legal fees, training	25,302.00	16,677.00	22,500.00	23,150.00	23,845.00	24,560.00	24,560.00	24,560.00
j. Equipment Rental	0.00	0.00	-	-	-	-	-	-
k. Transportation: vehicle maintenance, travel, mileage reimbursement	19,224.00	18,825.00	19,000.00	19,000.00	15,450.00	15,914.00	15,914.00	15,914.00
l. Laboratory: water testing and one call	931.00	764.00	700.00	800.00	824.00	849.00	849.00	849.00
m. Insurance	17,249.00	16,589.00	17,500.00	17,000.00	17,510.00	18,035.00	18,035.00	18,035.00
n. Regulatory Commissions Expenses	0.00	0.00	-	-	-	-	-	-
o. Advertising	2,636.00	1,857.00	2,000.00	2,060.00	2,122.00	2,185.00	2,185.00	2,185.00
p. Miscellaneous	35,445.00	21,100.00	32,571.00	58,292.00	26,567.00	27,362.00	27,362.00	27,362.00
q. Total Cash O&M Expenses (5a thru 5p)	611,227.00	605,018.00	656,901.00	720,802.00	752,974.00	775,562.00	775,562.00	775,562.00
r. Replacement Expenditures	41,286.00	1,402.00	-	-	-	-	-	-
s. Total OM & R Expenses (5q+5r)	652,513.00	606,420.00	656,901.00	720,802.00	752,974.00	775,562.00	775,562.00	775,562.00
t. Loan Principal Payments	63,036.86	67,805.61	64,969.00	66,580.00	88,801.27	41,615.61	41,615.61	126,694.00
u. Loan Interest Payments	25,758.00	12,194.00	168,000.00	168,000.00	206,407.77	205,484.43	205,484.43	205,484.43
v. Transfers Out	0.00	0.00	-	-	-	-	-	-
w. Capital Purchases	34,678.00	252,157.00	-	-	-	-	-	-
x. Other	0.00	0.00	-	-	-	-	-	-
6. Total Cash Paid Out (5s thru 5x)	775,985.86	938,576.61	889,870.00	955,382.00	1,048,183.04	1,022,662.04	1,022,662.04	1,107,740.43
7. Ending Cash Position (4 - 6)	367,249.14	461,801.53	436,124.53	498,481.53	517,362.49	627,187.45	737,012.41	761,758.98
8. Number of Customer Accounts	876.00	876.00	876	876	876	876	876	876
9. Avg Annual User Charge (2d/8)	1,014.91	937.16	$1,010	$1,158	$1,266	$1,293	$1,293	$1,293
10. Coverage Ratio (2h-5s)/(5t+5u)	2.84000673	3.352366343	0.977378965	1.27861284	1.206229999	1.444455452	1.444455452	1.074497823
11. Operating Ratio (2d/5s)	1.36	1.35	1.35	1.41	1.47	1.46	1.46	1.46
12. Additions to Reserve Funds for Year								
a. Debt Service Reserve	$0	$0	$0	$0	$0	$0	$0	$0
b. Bond Retirement Reserve	$0	$0	$0	$0	$0	$0	$0	$0
c. Capital Improvement Reserve	$0	$10,203	$1,000	$40,000	$0	$0	$0	$0
d. Replacement Reserve	$0	$0	$0	$0	$0	$0	$0	$0
e. Other (O&M Reserves & Emergency Reserves)	$0	$10,204	$2,000	$2,000	$0	$0	$0	$0
13 Total Reserves (12a thru 12e)	$0	$20,407	$3,000	$42,000	$0	$0	$0	$0
14. Year Ending Operating Cash (7-13)	$367,249	$441,395	$433,125	$456,482	$517,362	$627,187	$737,012	$761,759

RESOLUTION NO. _____

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, Perkins County Rural Water System, Inc., a nonprofit corporation organized and existing under the laws of the State of South Dakota (the "Corporation"), has determined it is necessary to proceed with improvements to its Water System, including but not limited to the realignment of waterlines at Highways 12 and 73 and booster station improvements(the "Project");

WHEREAS, the Corporation has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the Corporation and to certify and sign payment requests in the event financial assistance is awarded for the Project.

NOW THEREFORE BE IT RESOLVED by the Corporation as follows:

1. The District hereby approves the submission of an Application for financial assistance in an amount not to exceed $1,722,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The President is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance

3. The Office Manager is hereby designated as the authorized representative of the Corporation to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at Bison, South Dakota, this 12th day of November 2015.

APPROVED:

Donald Melling

BY: Donald Melling
President (Title)

(Seal)

Attest: Brian Marris
Vice President (Title)

Perkins County Rural Water System, Inc.

Rate and Fee Schedule

Hookup Fee: $1,500.00 and 100% of construction costs

Includes any tap – residential, livestock or seasonal

Water Rates:

Rural Residential: $64.00 per month and $5.86 per 1,000 gallons

Livestock (Pasture) and Seasonal: $365.00 per year and $5.86 per 1,000 gallons

Class I, II and III Special Users: Rates will be determined in the contract

Bulk Water Rates: $15.00 per 1,000 gallons

Fees:

Monthly and Quarterly Meter Readings: $5.00 if not received in our office by the 20th

Late Charge: $10.00 or 2% on balances of $500.00 on any outstanding bill not received in our office by the 15th

Disconnect Fee: $25.00 plus mileage (round trip)

Reconnect Fee: $100.00 plus mileage (round trip)

Returned Check Fee: $30.00

Service Call: $75.00 minimum plus mileage (round trip) then $50.00 every hour after one hour

Meter Reading: equal to Reconnect Fee plus mileage (round trip)

Automatic Meter Reading Fee: $2.50 per meter per month

Equipment Rental:

Backhoe: $160.00 per hour

Skid Steer: $60.00 per hour

Service Truck: $75.00 per hour plus mileage (round-trip)

Dump Truck: $80.00 per hour plus mileage (round-trip)

Vehicle Mileage: $1.00

Amended: July 9, 2015

USER NAME PASSWORD

LOG IN

Forgot Username? Forgot Password?

Create an Account

Entity Dashboard

Entity Summary

Entity Record
Core Data
Assertions
Reps & Certs
POCs
Reports
Service Contract Report
BioPreferred Report
Exclusions
Active Exclusions
Inactive Exclusions
Excluded Family Members

RETURN TO SEARCH

PERKINS COUNTY RURAL WATER SYSTEM, INC.
DUNS: 011012205 CAGE Code: 5HLC3
Status: Active

104 W MAIN ST
BISON, SD, 57620-0000 ,
UNITED STATES

Expiration Date: 07/06/2016
Purpose of Registration: Federal Assistance Awards Only

Entity Overview

Entity Information

Name: PERKINS COUNTY RURAL WATER SYSTEM, INC.
Business Type: Business or Organization
POC Name: Brandi Baysinger
Registration Status: Active
Activation Date: 07/07/2015
Expiration Date: 07/06/2016

Exclusions

Active Exclusion Records? No

SAM | System for Award Management 1.0

IBM v1.P.36.20150930-1631
WWW1

Note to all Users: This is a Federal Government computer system. Use of this system constitutes consent to monitoring at all times.

BY-LAWS

OF

PERKINS COUNTY RURAL WATER SYSTEM, INC.

ARTICLE I.

General Purpose

This association shall be known as the PERKINS COUNTY RURAL WATER SYSTEM, INC., incorporated under the laws of the State of South Dakota.

The purpose for which the Corporation is formed and the powers which it may exercise are set forth in the Articles of Incorporation of the Corporation.

ARTICLE II.

Name and Location

Section 1. The name of the Corporation is the PERKINS COUNTY RURAL WATER SYSTEM, INC.

Section 2. The principal office and place of business of this Corporation shall be located at the Company Headquarters in the Town of Bison, South Dakota, but the Corporation may maintain offices in places of business at other places within or without the State as the Board of Directors may determine from time to time.

ARTICLE III.

Seal of the Corporation

Section 1. The Seal of the Corporation shall have

inscribed thereon the name of the Corporation.

Section 2. The Secretary shall have custody of the Seal.

Section 3. The impression of the Seal shall be made on all papers and documents requiring the signature of an executive officer of the Corporation.

ARTICLE IV.

Fiscal Year

The fiscal year of the Corporation shall begin the 1st day of January of each year and end on the 31st day of December in each year.

ARTICLE V.

Governing Body

This Corporation shall be governed by a Board of Directors consisting of nine (9) persons to be elected by the members of the Corporation from time to time and in such manner as hereinafter provided. Such Board shall meet immediately after the adjournment of the Membership Meeting or as soon thereafter as reasonably practicle and organize by electing a President, Vice-President, Secretary and Treasurer from their own number.

ARTICLE VI.

Membership and Certificates

Section 1. Membership in the Corporation shall consist of those persons, firms, associations, corporations or bodies politic owning, controlling or occupying land situated within the

area to be served by the water system of the Corporation and reasonably accessible thereto, who have made application for membership in the Corporation, and who have agreed to pay such fees as shall be required by the Corporation from time to time, and enter into such Agreements with the Corporation for the purchase of water for domestic use as are required by the Corporation from time to time.

Section 2. A person, firm, association, corporation or body politic may become a member of PERKINS COUNTY RURAL WATER SYSTEM, INC., by:

a. Making a written application for membership therein;

b. Agreeing to purchase from the Corporation water for domestic use;

c. Agreeing to comply with and be bound by the Articles of Incorporation and By-Laws of the Corporation and any rules and regulations adopted by the Board of Directors; and

d. Paying such hookup, connection or other fees as shall be established by the Board of Directors from time to time; provided, however, that no person, firm, association, corporation or body politic shall become a member unless and until he or it has been accepted for membership by the Board of Directors. No member may hold more than one (1) membership in the Corporation, and no membership in the Corporation shall be transferable except as provided in these By-Laws.

ARTICLE VII.

Membership Certificates

Section 1. Membership in the Corporation shall be evidenced by enrolling the name of the member on the membership list maintained by the Corporation at the Corporation Headquarters.

Section 2. Transfers of membership shall be made only upon the books of the Corporation, only to persons eligible to become members and only with the approval of the Board of Directors and only then when the member transferring is free from indebtedness to the Corporation.

Section 3. No member of this Corporation shall be entitled to more than one (1) vote at meetings of the members. Every member, upon becoming a member of this Corporation, agrees to sign such Agreement for the purchase of water from the Corporation as may from time to time be provided and required by the Corporation, and shall pay therefor such rates as shall from time to time be fixed by the Board of Directors; provided, however, that the Board of Directors may limit the amount of water which the Corporation shall be required to furnish any one (1) member. Each member shall pay the Corporation such minimum amount per month, regardless of the amount of water consumed, as shall be fixed by the Board of Directors from time to time. Each member shall also pay all amounts owed by him to the Corporation as and when the same shall become due and payable.

Section 4. In case of the death of a member or if a member ceases to be eligible to hold membership as provided herein, or willfully fails to comply with these By-Laws and other requirements, or willfully obstructs the purposes and proper activities of the Corporation, the Corporation, through the Board of Directors, may elect to terminate his membership. Any member whose membership is so terminated for a cause other than that of ceasing to be eligible, may appeal from the action of the Board of Directors to a vote of the members at the next regular meeting of the members or special meeting of the members called for such purpose.

Section 5. A membership held in the name of a husband or a wife shall entitle either to exercise the voting privilege of said membership, but not both. Said membership would also qualify either the husband or the wife as a member for the purpose of running for the office of Director, but not both. When a membership is held by a partnership, corporation or association, the voting privilege may be exercised by a duly acknowledged voting delegate of said partnership, corporation or association.

ARTICLE VIII.

Meeting of Members

Section 1. Annual Meeting. The annual meeting of the members of the Corporation shall be held during the months of March, April, May or June of each year on the date selected by

the Board of Directors. The date, time and place shall be designated in the Notice of the meeting. It shall be the responsibility of the Board of Directors to make adequate plans and preparations for the annual meeting. Failure to hold the annual meeting at the designated time shall not work a forfeiture or dissolution of the Corporation.

Section 2. Special Meetings. Special meetings of the members may be called by resolution of the Board of Directors or upon a written request signed by any five (5) Directors, by the President, or by ten percent (10%) or more of all of the members and it shall thereupon be the duty of the Secretary to cause Notice of such meeting to be given as hereinafter provided. Special meetings of the members must be held within sixty (60) days from the date of receipt of a special request therefor and shall be held at such time and at such place as shall be determined by the Board of Directors.

Section 3. Notice. Notice of meetings of members of the Corporation shall be given by Notice mailed to each member of record directed to the address shown upon the books of the Corporation at least ten (10) days prior to the meeting. Such Notice shall state the nature, time, place, and purpose of the meeting, but no failure or irregularity of Notice of any annual meeting, regularly held, shall affect any proceedings taken thereat.

Section 4. Quorum. As long as the total number of members

does not exceed one thousand (1,000), ten (10) members, present in person, shall constitute a quorum. In case the total number of members shall exceed one thousand (1,000), twenty-five (25) members, present in person, shall constitute a quorum. If less than a quorum is present at any meeting, a majority of those present in person may adjourn the meeting from time to time without further notice.

Section 5. Vote. Each member shall be entitled to one (1) vote. All questions shall be decided by a vote of a majority of the members voting thereon in person, except as otherwise provided by law, the Articles of Incorporation or these By-Laws. Voting by proxy shall not be permitted.

ARTICLE IX.

Directors

Section 1. General Powers. The business and affairs of the Corporation shall be managed by a Board of nine (9) Directors, which shall exercise all of the powers of the Corporation except such as are by law, the Articles of Incorporation, or these By-Laws conferred upon or reserved to the members.

Section 2. Election and Tenure of Office. The existing Board of Directors shall hold office for their terms or until their successors shall have been elected and shall have qualified. At the first annual meeting of members following the adoption of these By-Laws, three (3) Directors from District 1 and two (2) Directors from each of Districts 2 and 3 shall be

elected by secret ballot by and from the members; a Director from the Municipality of Lemmon and a Director from the Municipality of Bison shall be elected by the members. Immediately following the election, the Directors shall draw lots so that all of the Directors in each District and Municipality within the District, if any, shall be one (1), two (2) or three (3) year terms. For example, all Directors from District 2 and Lemmon could draw the two (2) year term. At each annual meeting thereafter, Directors shall be elected to succeed those Directors whose terms have expired, to serve for a term of three (3) years or until their successors have been elected and shall have qualified. Directors of the Corporation shall be referred to as "District Directors" and "Municipal Directors". A secret written ballot may be dispensed with and voting may be by voice when there are no more nominees than there are Director positions open.

Section 3. Qualifications. No person shall be eligible to become or remain a District Director who is not a member and a bona fide resident of the particular district which he is to represent, provided that a member whose water connection point is within a certain District, may reside in the Municipality of Bison or Lemmon. No person shall be eligible to become or remain a Municipal Director who is not a citizen and bona fide resident of the particular municipality which he is to represent. Upon establishing the fact that a Director is holding office in violation of any of the foregoing provisions, the Board of Directors shall remove such Director from office.

Nothing contained in this Section shall affect, in any manner whatsoever, the validity of the action taken at any meeting of the Board of Directors.

Section 4. Voting Districts. The territory served or to be served by the Corporation shall be divided into three (3) districts in such a way as to give equitable representation to all members. In addition, the Municipalities of Bison and Lemmon shall be entitled to Director representation on the Board of Directors. The three (3) Director districts shall be as follows:

District No. 1 shall be made up of the townships of Horse Creek, Viking, Grand River, Castle Butte, Wilson, Duck Creek, Lodgepole, Barrett, Glendo, Sidney, Fredlund and Pleasant Valley.

District No. 2 shall be made up of the townships of White Butte, Trail, Liberty, Flat Creek, Lincoln, Burdick, Seim, Dewitt, Rock Ford, Anderson and Hudgins.

District No. 3 shall be made up of the townships of White Hill, Vail, Cash, Marsh, Field, Independence, Clarke, Whitney, Plateau, Strool, Scotch Cap, Bison, Rainbow, Meadow, Grand Central, Jones, Maltby, Richland, Vickers, Lone Tree, Chance, Easter, Wells, Antelope, Duell, Hall, Ada, Foster, Wyandotte, Highland, Brushy, Chaudoin, Moreau, Englewood, Sheffeild, Dillon, Beck, Bixby, Martin, Arrow Head, Vrooman, Mildrew, Deep Creek and Flint Rock.

Section 5. Nomination and Election of Directors - District Directors. Nominations for District Directors shall be made at the annual meeting of the membership. Only members and bona

fide residents from within a particular district shall be authorized to nominate a candidate for a District Director from within their district. All of the members of the Corporation shall be entitled to vote on the District Director candidates.

Municipal Directors. The Municipalities of Lemmon and Bison shall nominate their respective Municipal Director candidates, which candidates shall be submitted to the membership for approval at the annual meeting.

Section 6. Vacancies. If the office of District Director or officers shall become vacant for any cause, the remaining Directors may choose a successor, who shall serve to the next regular or special meeting of the members when the vacancy shall be filled. In the event the office of Municipal Director shall become vacant for any cause, the Municipality shall designate a successor, who shall serve to the next regular or special meeting of the members when the vacancy shall be filled.

Section 7. Election. Directors shall be elected by plurality vote of the members voting.

Section 8. Removal of Director by Members. Any member may bring charges against a Director and, by filing with the Secretary such charges in writing together with a Petition signed by at least ten (10%) percent of the members, may request the removal of said Director by reason thereof. Such Director shall be informed in writing of the charges at least ten (10)

days prior to the meeting of the members at which the charges are to be considered and shall have an opportunity at the meeting to be heard in person or by counsel and to present evidence in respect of the charges; and the person or persons bringing the charges against him shall have the same opportunity. The question of the removal of such Director shall be considered and voted upon at the meeting of the members and any vacancy created by such removal may be filled by vote of the members at such meeting.

Section 9. Compensation. Directors shall not receive any salary for their services as Directors, except that by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, may be allowed for attendance at each meeting of the Board of Directors and for attendance at any other meeting on behalf of the Corporation which is authorized by the Board of Directors. No Director shall receive compensation for serving the Corporation in any other capacity, nor shall any close relative of a Director receive compensation for serving the Corporation, unless the payment and amount of compensation shall be specifically authorized by vote of the members of the service by such Director or close relative shall have been certified by the Board of Directors as an emergency measure.

ARTICLE X.

Meetings of Directors

Section 1. A regular meeting of the Board of Directors may

be held without notice immediately after and at the same place as the annual meeting of the members. A regular meeting of the Board of Directors shall also be held monthly at such time and place as the Board of Directors may provide by resolution. Such regular monthly meeting may be held without Notice, other than such resolution fixing the time and place thereof.

Section 2. Special meetings of the Board of Directors may be called by the President or by any five (5) Directors and it shall thereupon be the duty of the Secretary to cause Notice of such meeting to be given as hereinafter provided. The President or the Directors calling the meeting shall fix the time and place for the holding of the meeting.

Section 3. Written Notice of the time, place and purpose of any special meeting of the Board of Directors shall be delivered to each Director not less than five (5) days previous thereto, either personally or by mail, by or at the direction of the Secretary or upon a default in duty by the Secretary, by the President or the Directors calling the meeting. If mailed, such Notice shall be deemed to be delivered when deposited in the United States Mail addressed to the Director, at his address, as it appears on the records of the Corporation, with postage thereon fully prepaid.

Section 4. Five (5) members of the Board shall constitute a quorum for conducting business; provided, however, that if less than five (5) of the Directors are present at such meeting,

a majority of the Directors present may adjourn the meeting from time to time; and provided, further, that the Secretary shall notify any absent Directors of the time and place of such adjourned meeting. The act of the majority of the Directors present at a meeting which a quorum is present shall be the act of the Board of Directors.

ARTICLE XI.

Officers

Section 1. The officers of the Corporation shall be a President, Vice-President, Secretary, Treasurer and such other officers as may be determined by the Board of Directors from time to time. The offices of Secretary and Treasurer may be held by the same person.

Section 2. The officers shall be elected by ballot annually by and from the Board of Directors at the meeting of the Board of Directors held immediately after the annual meeting of the members. If the election of officers shall not be held at such meeting, such election shall be held as soon thereafter as conveniently may be. Each officer shall hold office until the first meeting of the Board of Directors following the next succeeding annual meeting of the members or until his successor shall have been elected and shall have qualified. A vacancy in any office shall be filled by the Board of Directors for the unexpired portion of the term.

Section 3. Any officer or agent elected or appointed by

the Board of Directors may be removed by the Board of Directors whenever in its judgment the best interests of the Corporation will be served thereby.

ARTICLE XII.

Duties of Officers

Section 1. The President shall:

a. Be the principal executive officer of the Corporation and, unless otherwise determined by the members or the Board of Directors, shall preside at all meetings of the members and the Board of Directors.

b. Sign, with the Secretary, Certificates of Membership, the issue of which shall have been authorized by the Board of Directors, and may sign any deeds, mortgages, deeds of trust, notes, bonds, contracts or other instruments authorized by the Board of Directors to be executed, except in cases in which the signing and execution thereof shall be expressly delegated by the Board of Directors or by these By-Laws to some other officer or agent of the Corporation, or shall be required by law to be otherwise signed or executed.

c. In general, perform all duties incident to the office of President and such other duties as may be prescribed by the Board of Directors from time to time.

Section 2. Vice President. In the absence of the

President, or in the event of his inability or refusal to act, the Vice-President shall perform the duties of the President and when so acting shall have all the powers of and be subject to all of the restrictions upon the President. The Vice-President shall also perform such other duties as from time to time may be assigned to him by the Board of Directors.

Section 3. Secretary. The Secretary shall be responsible for:

a. Keeping the minutes of the meetings of the members of the Board of Directors in one (1) or more books provided for that purpose.

b. Arranging for all notices to be given in accordance with the By-Laws or as is required by law.

c. The safekeeping of the corporate records and of the seal of the Corporation and affixing the seal of the Corporation to all documents, the execution of which on behalf of the Corporation under its seal is duly authorized in accordance with the provisions of these By-Laws.

d. Arranging for a complete copy of the Articles of Incorporation and By-Laws of the Corporation containing all amendments thereto to be maintained at the corporation's principal office.

e. Signing with the President, legal documents authorized by the Board of Directors, unless the signing of such documents has been delegated to other of-

ficers, agents or employed personnel.

f. Keeping a register of the names and post office addresses of all members to be kept up to date.

g. Performing such other duties as are assigned to him by the Board of Directors.

Section 4. Treasurer. The Treasurer shall be responsible for:

a. Custody of all funds and securities of the Corporation.

b. The receipt of and issuance of receipts for all monies due and payable to the Corporation, and the deposit of all such monies in the name of the Corporation in such bank, or banks as are selected by the Board of Directors.

c. Reviewing the annual financial audit of the Corporation's financial and accounting records and make any necessary recommendations to the Board of Directors.

d. The general performance of all the duties incident to the office of Treasurer and such other duties as are assigned to him by the Board of Directors.

Section 5. The Treasurer and any other officer or agent of the Corporation charged with the responsibility for the custody of any of its funds or property shall give bond in such sum with such surety as the Board of Directors shall determine. The Board of Directors in its discretion may require any other

such amount and with such surety as it shall determine. The expense of such bond shall be a legal obligation of the Corporation.

ARTICLE XIII.

Board of Directors - Duties

Section 1. The Board of Directors, subject to the restrictions of the law, the Articles of Incorporation, and By-Laws, shall exercise all of the power of the Corporation; and, without prejudice to or limitation upon their general powers, it is hereby expressly provided that the Board of Directors shall have, and are given, full power and authority to perform the duties and functions hereinafter set forth, to-wit:

a. To pass upon the qualifications of members and to cause to be issued appropriate Certificates of Membership.

b. To select and appoint all officers, agents or employees of the Corporation or remove such agents or employees of the Corporation for just cause, prescribe such duties and designate such powers as may be consistent with these By-Laws, fix their compensation and pay for faithful services.

c. To borrow from any source, money, goods or services and to make and issue notes and other negotiable and transferable instruments, mortgages, deeds of trust and trust agreements and

to do every act and thing necessary to effectuate the same.

d. To prescribe, adopt and amend, from time to time, such equitable uniform rules and regulations as they, in their discretion, may deem essential or convenient for the conduct of the business and affairs of the Corporation and the guidance and control of its officers and employees, and to prescribe adequate penalties for the breach thereof.

e. To order, at least once each year, within ninety (90) days after the close of the business year, an audit of the books and accounts of the Corporation by a certified public accountant. The report prepared by such certified public accountant shall be submitted to the members of the Corporation at their annual meeting.

f. To fix the charges to be paid by each member for services rendered by the Corporation to him, the time of payment and the manner of collection.

g. To require all officers, agents and employees charged with responsibility for the custody of any of the funds of the Corporation to give adequate bonds, the cost thereof to be paid by the Corporation, and it shall be mandatory upon the Directors to so require.

h. To select one (1) or more banks to act as depositories of the funds of the Corporation and to determine the manner of receiving, depositing and disbursing the funds of the Corporation and the form of checks and the person or persons signing such checks and the form thereof at will.

ARTICLE XIV.

Non-Profit Operation

Section 1. The Corporation shall at all times be operated on a non-profit basis for the mutual benefit of its members. No interest or dividend shall be paid or payable by the Corporation on any capital furnished by its members.

Section 2. The Corporation will install, maintain, and operate a main distribution water pipeline or lines from the source of the water supply to its qualified members and patrons under such policies, rules and regulations as shall be adopted by the Board of Directors from time to time.

Section 3. The Board of Directors shall from time to time make such rules, regulations, policies and directives as shall be necessary for the efficient operation of a rural water system and shall generally be responsible for the efficient operation of said system.

Section 4. In the event of dissolution, the Board of Directors shall first pay lawful debts and liabilities of the

Corporation. Any remaining assets shall be transferred to any other or several non-profit like organizations or political subdivisions having one (1) or more purposes in common with this Corporation. If no such organization can be reasonably found, the remaining assets shall be distributed to the members and former members in proportion to the business they may have done with the Corporation. The Corporation shall make a reasonable effort to locate former members but shall not be obligated to include in the distribution former members who cannot be located.

ARTICLE XV.

Miscellaneous

Section 1. Membership in other organizations. The Corporation shall not become a member of or purchase stock in any other organization without an affirmative vote of the members at a duly held meeting, the Notice of which shall specify that action is to be taken upon such proposed membership or stock purchased; provided, however, that the Corporation may, upon the authorization of the Board of Directors, purchase stock in or become a member of any Corporation or organization organized on a non-profit basis for the purpose of engaging in or furthering the cause of rural water systems, or of any other organization, when in the opinion of the Board of Directors such membership will promote the interests of the Corporation.

Section 2. Waiver of Notice. Any member or Director may waive in writing any Notice of a meeting required to be given by these By-Laws, either before or after such meeting. The atten-

dance of a member or Director at any meeting shall constitute a Waiver of Notice of such meeting by such member or Director, except in case a member or Director shall attend a meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting was not lawfully called or convened.

Section 3. Policies, rules and regulations. The Board of Directors shall have the power to make and adopt such policies, rules and regulations, not inconsistent with law, the Articles of Incorporation or these By-Laws, as it may deem adviseable for the management of the business and affairs of the Corporation.

Section 4. Unless otherwise provided in these By-Laws, the rules of parliamentary procedure as provided in "Roberts Rules of Order" shall govern the conduct of all meetings of the Board of Directors and meetings of members of the Corporation.

ARTICLE XVI.

Amendments

These By-Laws may be repealed or amended from time to time by a majority vote of the Board of Directors present at any regular or special meeting thereof, provided that Notice of said proposed amendment or repeal is mailed to each Director at least ten (10) days prior to the meeting at which said amendment or repeal is to be considered. The Notice shall designate the general nature, purpose and effect of the proposed amendment or repeal.

Subscribed and sworn to before me this 26th day of February, 1993.

(SEAL)

Notary Public, State of South Dakota

My commission expires: February 16, 2001.

CONSENT TO ACT AS REGISTERED AGENT

DONALD McKINSTRY consents to act as the Registered Agent of PERKINS COUNTY RURAL WATER SYSTEM, INC.

DONALD McKINSTRY

Donald McKinstry

Donald McKinstry
P.O. Box 173
Bison, South Dakota 57620

Filed this 17th day of March, 1993
Joyce Hazeltine
SECRETARY OF STATE

RECEIVED
MAR 17 1993
Secretary of State

ARTICLES OF INCORPORATION
OF
PERKINS COUNTY RURAL WATER SYSTEM, INC.

KNOW ALL MEN BY THESE PRESENTS:

That we, DON McKINSTRY, LAUREN ZIMMERMANN, ALAN GUNTHER and ANTHONY WALLER, residents of the State of South Dakota, over twenty-one (21) years of age, have associated ourselves together for the purpose of forming a non-profit Corporation in accordance with the provisions of Chapter 47-22, South Dakota Codified Laws, and do hereby make, execute and acknowledge in duplicate these Articles of Incorporation in writing.

ARTICLE I.

The name of this Corporation shall be PERKINS COUNTY RURAL WATER SYSTEM, INC.

ARTICLE II.

The period of its duration is perpetual.

ARTICLE III.

The objects and purposes of this Corporation are as follows, to-wit:

1. To acquire, construct, maintain and operate a system for the diversion, supply, storage and distribution of water to the members of this Corporation, its patrons and/or customers,

for domestic or commercial purposes within the area served by the Corporation.

2. To acquire by appropriation or otherwise, and to lease, sell or dispose of water and water rights for domestic or commercial purposes. To provide a source of water from the Southwest Water Authority or any other feasible source to its members, patrons and customers and to construct, build and own plants, facilities and pipelines for the transporting of said water to its members, patrons and customers.

3. To borrow money for the use of said Corporation and to issue securities therefor, and to pledge, mortgage, hypothecate and otherwise dispose of the real, personal and intangible property of the Corporation as security therefor.

4. To establish rates for the delivery of water to its members and to provide for the collection thereof and to exercise any and all other powers incidental and condusive to the aforesaid objects or any of them.

ARTICLE IV.

The principal place of business of the Corporation shall be located at Bison, South Dakota. There is no street address.

ARTICLE V.

The address of the initial registered office shall be Bison, South Dakota, and the name of the initial Registered Agent is DONALD McKINSTRY, whose address is P.O. Box 173, Bison, South Dakota 57620, and said DONALD McKINSTRY does hereby consent to his appointment as Registered Agent by virtue of his signature to

these Articles.

ARTICLE VI.

The affairs of the Corporation are to be managed by a Board of Directors which shall consist of, at the outset, not less than nine (9) Directors. The names and addresses of the initial Board of Directors are as follows, to-wit:

DONALD McKINSTRY
Box 173
Bison, South Dakota 57620

ALAN GUNTHER
HCR 03 Box 23
Lodgepole, South Dakota 57640

PAUL ADCOCK
HCR 69 Box 419
Bison, South Dakota 57620

DON BELD
HCR 04 Box 72
Lodgepole, South Dakota 57640

TERRY HAGGART
Box 93
Bison, South Daota 57620

LAUREN ZIMMERMANN
HCR 4 Box 9
Hettinger, North Dakota 58639

ANTHONY WALLER
203 9th St. West
Lemmon, South Dakota 57638

GARY ERICSSON
709 2nd St. West
Lemmon, South Dakota 57638

LYNN C. FREY
HCR 82 Box 63
Lemmon, South Dakota 57638

At the first Annual Meeting following the expiration of the one-year period for which Directors herein designated will serve, and at each Annual Meeting thereafter, a new Board of Directors will be elected in accordance with the provisions of the By-Laws of the Corporation and the laws of the State of South Dakota, in such cases made and provided. The By-Laws may also provide for a different number of Directors.

ARTICLE VII.

The names and addresses of each incorporator are as follows, to-wit:

DONALD McKINSTRY
Box 173
Bison, South Dakota 57620

LAUREN ZIMMERMANN
HCR 4 Box 9
Hettinger, North Dakota 58639

ALAN GUNTHER
HCR 03 Box 23
Lodgepole, South Dakota 57640

ANTHONY WALLER
203 9th St. West
Lemmon, South Dakota 57638

ARTICLE VIII.

The Board of Directors shall have the authority and power to establish schedules of rates to be used from time to time for the delivery and sale of water; to provide for a minimum hookup service to the water system; and to generally provide for rules and regulations for the operation and maintenance of the rural water system.

ARTICLE IX.

Section 1.

There shall be no capital stock issued by the Corporation and membership in the Corporation shall be limited to persons, corporations or bodies politic owning, controlling or occupying land situated within the area served by the water system of the Corporation and reasonably accessible thereto. Applicants for membership must be approved by the Board of Directors and must pay the membership fee as fixed by the Board of Directors, provided, that no person, corporation or body politic shall be entitled to or be admitted to membership if the capacity of the Corporation's system or sources of water supply is required to meet the needs of existing members.

Section 2.

Membership in this Corporation shall be transferable and

subject to mortgage or pledge only upon the approval of the Board of Directors.

ARTICLE X.

The By-Laws of the Corporation for the management of its affairs shall be adopted by the Board of Directors and said Board of Directors shall be empowered to amend or repeal said By-Laws from time to time by means of a majority vote at any regular or special meeting thereof.

ARTICLE XI.

Neither cumulative nor proxy voting shall be allowed. Each member shall be permitted only one (1) vote.

ARTICLE XII.

This Corporation is not organized for pecuniary profit, nor shall it have any power to issue certificates of stock or declare dividends, and no part of its net earnings shall inure to the benefit of any member, director, trustee or individual. The balance, if any, of all monies received by the Corporation from its operations, after the payment in full of all debts and obligations of the Corporation of whatsoever kind and nature, shall be used and distributed exclusively for carrying out only the purpose or purposes of the Corporation.

ARTICLE XIII.

Distribution of the funds or other property of the Corporation shall not be made until all debts are fully paid and then only upon its final dissolution, nor shall any distribution

be made except by vote of a quorum of the Board of Directors as provided herein. The Board of Directors shall have authority and power upon a majority vote thereof to transfer all of the assets, liabilities, contracts and other obligations of the Corporation to a Water User District as defined in Section 46-16-2 SDCL, provided that said action is also approved by a majority vote of the Water User District Board of Directors.

ARTICLE XIV.

This Corporation may be dissolved upon a majority vote of the Board of Directors. In the event of dissolution, any and all funds remaining in the Corporation shall be transferred to any other or several non-profit organizations or political subdivisions having one (1) or more purposes in common with this Corporation.

ARTICLE XV.

To the fullest extent permitted by South Dakota Codified Laws, as the same exist or may hereafter be amended, a Director of this Corporation shall not be personally liable to the Corporation or its members for monetary damages for breach of fiduciary duty as a Director.

ARTICLE XVI.

No member's individual liability shall extend beyond the consideration paid by each member for his, hers or its membership certificate.

IN WITNESS WHEREOF, we have hereunto set our hands and seals

this 26th day of February, 1993.

DONALD McKINSTRY

Donald McKinstry, Incorporator

LAUREN ZIMMERMANN

Lauren Zimmermann, Incorporator

ALAN GUNTHER

Alan Gunther, Incorporator

ANTHONY WALLER

Anthony Waller, Incorporator

STATE OF SOUTH DAKOTA)
) ss
County of Perkins)

BE IT REMEMBERED that on the 26th day of February, 1993, before the undersigned officer, personally appeared the above named DONALD McKINSTRY, LAUREN ZIMMERMANN, ALAN GUNTHER and ANTHONY WALLER, well and personally known to me to be the same persons described in and who executed the foregoing instrument and duly acknowledged to me that they executed the same for the purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at said County the day and year first above written.

(SEAL)

Notary Public, State of South Dakota

My commission expires: February 16, 2001.

STATE OF SOUTH DAKOTA)
) ss
County of Perkins)

DONALD McKINSTRY, LAUREN ZIMMERMANN, ALAN GUNTHER, and ANTHONY WALLER, being first duly sworn, each for himself, depose and say that they are the persons described in and who signed the foregoing Articles of Incorporation as Incorporators herein; that they have read said Articles of Incorporation and know the contents thereof; that the Incorporators intend in good faith to form a non-profit Corporation for the lawful purposes as set forth in said Articles and not for the purposes of enabling any Corporations or persons to avoid the provisions of SDCL 37-1 and amendments thereto relating to unlawful business practices.

Signed this 25th day of February, 1993.

Donald McKinstry, Incorporator

Lauren Zimmermann, Incorporator

Alan Gunther, Incorporator

Anthony Waller, Incorporator

State of South Dakota

OFFICE OF THE SECRETARY OF STATE

CERTIFICATE OF INCORPORATION

NONPROFIT CORPORATION

I, JOYCE HAZELTINE, Secretary of State of the State of South Dakota, hereby certify that the Articles of Incorporation of PERKINS COUNTY RURAL WATER SYSTEM, INC. duly signed and verified, pursuant to the provisions of the South Dakota Corporation Act, have been received in this office and are found to conform to law.

ACCORDINGLY and by virtue of the authority vested in me by law, I hereby issued this Certificate of Incorporation and attach hereto a duplicate of the Articles of Incorporation of PERKINS COUNTY RURAL WATER SYSTEM, INC.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of South Dakota, at Pierre, the Capital, this March 17, 1993.

Joyce Hazeltine

JOYCE HAZELTINE
Secretary of State

BOOK 340

State of South Dakota

OFFICE OF THE SECRETARY OF STATE

Certificate of Good Standing
Nonprofit Corporation

ORGANIZATIONAL ID# NS009819

I, **Shantel Krebs**, Secretary of State of the State of South Dakota, do hereby certify that PERKINS COUNTY RURAL WATER SYSTEM, INC. was duly incorporated under the laws of this state on March 17, 1993.

I, further certify that said corporation has complied with the laws of this State relative to the formation of corporations of its kind and is now a regularly and properly organized and existing corporation under the laws of this State and is in good standing, as shown by the records of this office.

This certificate is not to be construed as an endorsement, recommendation, or notice of approval of the corporation's financial condition or business activities and practices. Such information is not available from this office.

Validation Number: 1600607130
Use this number to verify the certificate as legitimate via the South Dakota Secretary of State website: **sdsos.gov**

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of South Dakota, at Pierre, the Capital, this October 23, 2015.

Shantel Krebs

Shantel Krebs
Secretary of State

Certificate ID: 17678

PERKINS COUNTY RURAL WATER SYSTEM, INC.
INTRODUCTION
DECEMBER 31, 2014 AND 2013

Background:

Perkins County Rural Water System, Inc. (a nonprofit organization) was established to plan, provide for, and maintain an adequate, dependable, long-term, high quality water supply and service to those who sign up as customers.

Scope of Audits:

Our audits were made in accordance with auditing standards generally accepted in the United States of America and included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. In addition, our audits were performed in accordance with the standards for financial and compliance audits contained in the Government Auditing Standards, issued by the Comptroller General of the United States. The audits covered the periods of January 1, 2014 through December 31, 2014, and January 1, 2013 through December 31, 2013, and the field work was performed during the periods of June 8, 2015 through June 26, 2015, and June 9, 2014 through June 25, 2014.

Mueller & Associates CPA, LLC

106 Main Avenue
Lemmon, SD 57638

Phone: 605-374-3388
Fax: 605-374-3312

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

Board of Directors
Perkins County Rural Water System, Inc.

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States, the financial statements of Perkins County Rural Water System, Inc. (a nonprofit organization), which comprise the statements of financial position as of December 31, 2014 and 2013, and the related statements of activities, functional expenses, and cash flows for the years then ended, and the related notes to the financial statements, and have issued our report thereon dated August 17, 2015.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Perkins County Rural Water System, Inc.'s internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Perkins County Rural Water System, Inc.'s internal control. Accordingly, we do not express an opinion on the effectiveness of Perkins County Rural Water System, Inc.'s internal control.

Our consideration of internal control was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. However, as described in the accompanying Schedule of Current Audit Findings, we identified certain deficiencies in internal control that we consider to be material weaknesses.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the Organization's financial statements will not be prevented, or detected and corrected on a timely basis. We consider the deficiencies described in the accompanying Schedule of Current Audit Findings as items of 2014-01, 2014-02, 2014-03 to be material weaknesses.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Perkins County Rural Water System, Inc.'s financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under Government Auditing Standards.

Perkins County Rural Water System, Inc.'s Responses to Findings

Perkins County Rural Water System, Inc.'s responses to the findings identified in our audit are described in the accompanying Schedule of Current Audit Findings. Perkins County Rural Water System, Inc.'s responses were not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on them.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Organization's internal control or on compliance. This report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Organization's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Mueller + Associates CPA, LLC

Lemmon, South Dakota
August 17, 2015

PERKINS COUNTY RURAL WATER SYSTEM, INC.
SCHEDULE OF PRIOR AUDIT FINDINGS
DECEMBER 31, 2014 AND 2013

Prior Audit Findings:

2013-01

A material weakness was reported for a lack of segregation of duties for bank reconciliations, debt, fixed assets, inventory, net assets, revenues, expenses, and payroll, which could result in errors not being found in a timely matter. This finding is restated as current audit finding 2014-01.

2013-02

The Organization does not have an internal control system designed to provide for the preparation of the annual financial statements including required footnotes and disclosures, in accordance with generally accepted accounting principles, being audited. As auditors, we were requested to draft the financial statements and accompanying notes to the financial statements. This finding is restated as current audit finding 2014-02.

2013-03

We proposed material journal entry audit adjustments that would not have been identified as a result of the Organization's existing internal controls, and therefore could have resulted in a material misstatement of the Organization's financial statements. This finding is restated as current audit finding 2014-03.

PERKINS COUNTY RURAL WATER SYSTEM, INC.
SCHEDULE OF CURRENT AUDIT FINDINGS
DECEMBER 31, 2014 AND 2013

Current Audit Findings:

Internal Control-Related Findings - Material Weaknesses:

2014-01

Condition:

A material weakness was reported for a lack of segregation of duties for bank reconciliations, debt, fixed assets, inventory, net assets, revenues, expenses and payroll, which could result in errors not being found in a timely manner. This finding has always existed and this comment has been issued each year Perkins County Rural Water System, Inc. has been audited.

Criteria:

A good system of internal accounting control contemplates an adequate segregation of duties so that no one individual handles a transaction from its inception to its completion.

Effect:

Perkins County Rural Water System, Inc. has a limited number of employees who prepare all records for bank reconciliations, debt, fixed assets, inventory, net assets, revenues, expenses and payroll. This is undesirable from an internal control viewpoint, and could result in a loss of control over accounting transactions and errors not being found in a timely manner.

Recommendation:

We recommend the board continue to take an active role in their oversight of bank reconciliations, debt, fixed assets, inventory, net assets, revenues, expenses and payroll.

2014-01 (Continued)

Management Response:

Don Melling Jr. is the contact person responsible for the corrective action plan for this comment. This comment is a result of the size of Perkins County Rural Water System, Inc. which precludes staffing at a level sufficient to provide an ideal environment for internal controls. Perkins County Rural Water System, Inc. has determined it is not cost beneficial to employ additional personnel just to be able to adequately segregate duties for bank reconciliations, debt, fixed assets, inventory, net assets, revenues, expenses and payroll. Perkins County Rural Water System, Inc. is aware of this problem and is attempting to provide compensating controls wherever and whenever possible and practical. However, this lack of segregation of duties regarding bank reconciliations, debt, fixed assets, inventory, net assets, revenues, expenses and payroll continues to exist.

2014-02

Condition:

The Organization does not have an internal control system designed to provide for the preparation of the annual financial statements including required footnotes and disclosures, in accordance with generally accepted accounting principles, being audited. As auditors, we were requested to draft the financial statements and accompanying notes to the financial statements.

Criteria:

An Organization's internal control structure should provide for the preparation of financial statements in accordance with generally accepted accounting principles (GAAP).

Effect:

This condition may affect the Organization's ability to record, process, summarize and report financial data consistent with the assertions of management in the financial statements.

2014-02 (Continued)

Recommendation:

This circumstance is not unusual in an Organization of your size. It is the responsibility of management and those charged with governance to make the decision whether to accept the degree of risk associated with this condition because of cost or other considerations.

Management Response:

Don Melling Jr. is the contact person responsible for the corrective action plan for this comment. This comment is a result of the size of Perkins County Rural Water System, Inc. which precludes staffing sufficient to prepare financial statements. Perkins County Rural Water System, Inc. has determined it is not cost beneficial to employ additional personnel for the preparation of financial statements. Management and the Board of Directors review and approve the financial statements.

2014-03

Condition:

During the course of our engagement, we proposed material journal entry audit adjustments that would not have been identified as a result of the Organization's existing internal controls, and therefore could have resulted in a material misstatement of the Organization's financial statements.

Criteria:

An Organization's internal control structure should provide for the recording of all necessary material adjustments in order to ensure that accounting records are in accordance with generally accepted accounting principles.

Effect:

This condition may affect the Organization's ability to record, process, summarize, and report financial data consistent with the assertions of management in the financial statements.

Recommendation:

This circumstance is not unusual in a Organization of your size. It is the responsibility of management and those charged with governance to make the decision whether to accept the degree of risk associated with this condition because of cost or other considerations.

2014-03 (Continued)

Management Response:

Don Melling Jr. is the contact person responsible for the corrective action plan for this comment. This comment is a result of the size of Perkins County Rural Water System, Inc. which precludes staffing at a level sufficient to prepare journal entry adjustments. Perkins County Rural Water System, Inc. has determined it is not cost beneficial to employ additional personnel for the preparation of significant journal entries. Perkins County Rural Water System, Inc. is aware of this problem and is attempting to provide compensating controls wherever and whenever possible and practical. Management has approved all journal entry audit adjustments.

Closing Conference

The contents of this report were discussed with Brandi Baysinger and Art Pederson on July 28, 2015.

Mueller & Associates CPA, LLC

106 Main Avenue
Lemmon, SD 57638

Phone: 605-374-3388
Fax: 605-374-3312

INDEPENDENT AUDITORS' REPORT

Board of Directors
Perkins County Rural Water System, Inc.

Report on the Financial Statements

We have audited the accompanying financial statements of Perkins County Rural Water System, Inc. (a nonprofit organization), which comprise the statements of financial position as of December 31, 2014 and 2013, and the related statements of activities, functional expenses, and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Organization's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Organization's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Perkins County Rural Water System, Inc. as of December 31, 2014 and 2013, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated August 17, 2015, on our consideration of Perkins County Rural Water System, Inc.'s internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering Perkins County Rural Water, Inc.'s internal control over financial reporting and compliance.

Emphasis-of-Matter Regarding Going Concern

The accompanying financial statements have been prepared assuming that the Organization will continue as a going concern. As discussed in Note 2 to the financial statements, the Organization has completed construction as of July 1, 2014. The additional cash required for loan payments along with operational expenses will exceed current cash flows. This deficit in cash flows creates a substantial doubt regarding the Organization's ability to continue as a going concern. Management's plans regarding these matters also are described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our opinion is not modified with respect to this matter.

Mueller + Associates CPA, LLC

Lemmon, South Dakota
August 17, 2015

LIABILITIES AND NET ASSETS

	2014	2013
CURRENT LIABILITIES:		
Current portion of long-term debt	$ 64,969	$ 59,110
Accounts payable	26,077	25,503
Accrued taxes	3,284	3,088
Accrued expenses	7,102	6,737
Accrued interest	78,092	671
Hookup fees	425	1,063
Unearned water revenue	8,752	7,376
Total current liabilities	188,701	103,548
LONG-TERM INDEBTEDNESS, NET OF CURRENT PORTION:		
Consolidated loan - DENR	5,144,000	5,144,000
Note payable - Dacotah Bank	114,689	188,354
Total long-term indebtedness	5,258,689	5,332,354
Total liabilities	5,447,390	5,435,902
NET ASSETS:		
Unrestricted	17,554,574	18,050,968
Total net assets	17,554,574	18,050,968
TOTAL LIABILITIES AND NET ASSETS	$23,001,964	$23,486,870

The accompanying Notes to Financial Statements
are an integral part of these statements.

PERKINS COUNTY RURAL WATER SYSTEM, INC.
STATEMENTS OF FUNCTIONAL EXPENSES
YEARS ENDED DECEMBER 31, 2014 AND 2013

	2014 LOCAL	2013 LOCAL
UNRESTRICTED FUND:		
Accounting fees	$ 12,720	$ 16,960
Advertising	1,857	2,689
Bad debts	430	8,982
Bank service charge	348	340
Engineering fees	312	325
Depreciation	792,379	805,559
Directors' fees	11,500	10,125
Dues and fees	5,280	1,867
Employment taxes	10,531	12,571
Fringe benefits	7,950	26,052
Insurance	16,589	17,249
Interest	89,615	15,878
Legal fees	172	5,162
Meals	1,073	484
Meeting/lodging	1,352	2,288
Mileage reimbursement	810	1,085
Minor equipment	--	3,478
Miscellaneous	1,276	--
Office supplies	6,227	12,743
O & M supplies	31,203	16,058
Penalty	--	549
Property taxes	183	1,331
Repairs	1,402	315
Telephone	5,644	5,342
Training	3,785	3,180
Travel	5,086	4,132
Utilities	27,089	28,570
Vehicle maintenance	12,929	18,549
Wages	125,300	139,004
Water purchases - O & M	309,094	278,751
Water testing and one call	764	1,010
TOTAL UNRESTRICTED FUND	$1,482,900	$1,440,628

The accompanying Notes to Financial Statements
are an integral part of these statements.

PERKINS COUNTY RURAL WATER SYSTEM, INC.
STATEMENTS OF CASH FLOWS
YEARS ENDED DECEMBER 31, 2014 AND 2013

	2014	2013
CASH FLOWS FROM OPERATING ACTIVITIES:		
Rent	$ 3,000	$ 9,140
Hook-up fees	12,092	15,392
Water sales	810,433	862,972
Other	5,738	9,194
Grants received - FEMA	7,496	--
Grants received - SD DENR	151,000	--
Interest received	280	240
Service work	1,780	7,753
Payment of costs and expenses	(606,420)	(611,228)
Interest paid	(12,194)	(25,758)
Net cash provided by operating activities	373,205	267,705
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of property and equipment	(252,157)	(34,678)
Construction in progress	41,285	(41,286)
Proceeds from sale of fixed assets	25	149,518
Net cash (used in) provided by investing activities	(210,847)	73,554
CASH FLOWS FROM FINANCING ACTIVITIES:		
Repayment of short-term borrowing	(67,806)	(63,037)
Net cash used in financing activities	(67,806)	(63,037)
NET INCREASE IN CASH AND CASH EQUIVALENTS	94,552	278,222
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	367,248	89,026
CASH AND CASH EQUIVALENTS, END OF YEAR	$ 461,800	$ 367,248

RECONCILIATION OF DECREASE IN NET ASSETS TO NET CASH PROVIDED BY OPERATING ACTIVITIES

	2014	2013
DECREASE IN NET ASSETS	$(496,394)	$(532,426)
ADJUSTMENTS TO RECONCILE DECREASE IN NET ASSETS TO NET CASH PROVIDED BY OPERATING ACTIVITIES:		
Depreciation	792,379	805,559
Bad debts	430	8,982
Loss on sale of fixed assets	1,536	7,314
Changes in:		
Accounts receivable	(3,719)	(3,329)
Inventory	(7,821)	(1,131)
Prepaid expenses	4	(95)
Other receivable - FEMA	7,496	(7,496)
Accounts payable	574	11,661
Accrued taxes	196	(4,585)
Accrued expenses	365	(2,719)
Accrued interest	77,421	(9,880)
Rent deposit	--	(250)
Hookup fees	(638)	(1,487)
Unearned water revenue	1,376	(2,413)
NET CASH PROVIDED BY OPERATING ACTIVITIES	$ 373,205	$ 267,705

SUPPLEMENTAL SCHEDULE OF NONCASH INVESTING AND FINANCING ACTIVITIES

The Organization was involved in the following noncash investing or financing activities during the years ended December 31, 2014 and 2013.

	2014	2013
Debt refinancing	$ --	$310,500

DISCLOSURE OF ACCOUNTING POLICY

For purposes of the statements of cash flows, the Organization considers all highly liquid debt instruments purchased with a maturity of three months or less to be cash equivalents.

The accompanying Notes to Financial Statements are an integral part of these statements.

PERKINS COUNTY RURAL WATER SYSTEM, INC.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2014 AND 2013

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

This summary of significant accounting policies of Perkins County Rural Water System, Inc. is presented to assist in understanding the Organization's financial statements. The financial statements and notes are representations of the Organization's management, who is responsible for their integrity and objectivity. These accounting policies conform to generally accepted accounting principles and have been consistently applied in the preparation of the financial statements.

Subsequent events - Management has evaluated subsequent events through, August 17, 2015, the date on which the financial statements were available to be issued. Management has determined there are none.

Basis of accounting - The financial statements of Perkins County Rural Water System, Inc. have been prepared on the accrual basis of accounting.

Nature of operations - Perkins County Rural Water System, Inc. was established to plan, provide for, and maintain an adequate, dependable, long-term, high quality water service to its customers. The water will be supplied from Garrison Dam in North Dakota. Perkins County Rural Water System, Inc. will service cities, towns, farmers, and ranchers in northwestern South Dakota and the surrounding area.

Depreciable assets - The Organization capitalizes property and equipment over $2,500. Lesser amounts are expensed. Depreciable assets are stated at cost. Depreciation is provided using the straight-line method over the useful lives of 5 - 39 years. Expenditures for renewals and improvements that significantly add to the productive capacity or extend the useful life of an asset are capitalized. Expenditures for maintenance and repairs are charged to expense currently. When depreciable assets are retired or sold, the cost and related accumulated depreciation are eliminated from the accounts and the resulting gain or loss is reflected in income. Depreciation expense for the years ended December 31, 2014 and 2013, were $792,379 and $805,559, respectively.

Inventories - Inventory is stated at cost.

Use of estimates - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Revenue recognition - Revenue received from federal grant funds is recognized when earned.

Advertising - The Organization expenses advertising costs as they are incurred. Advertising expenses for the years ended December 31, 2014 and 2013, were $1,857 and $2,689, respectively.

OPERATIONS AND MAINTENCE	2013	2014	2015
INCOME			
4101 REFUNDS	$ -	$ -	$ -
4150 WATER SALES	$ 531,309	$ 475,659	$ 526,200
4160 MINIMUMS	$ 318,918	$ 326,469	$ 353,400
4170 LATE CHARGES	$ 15,547	$ 12,919	$ 5,000
Lemmon Debt Reserves		$ -	$ -
Bison Debt Reserves		$ -	$ -
4200 INTEREST INC	$ 221	$ 240	$ -
4250 HOOKUP FEES	$ 12,552	$ 12,092	$ -
4300 RENT INCOME	$ 9,140	$ 3,000	$ -
4400 REIMBURSEMENT	$ 7,580	$ 162,360	$ -
4470 GAIN SALE OF ASSETS	$ 150,000	$ -	$ -
4500 SERVICE CALL	$ 7,341	$ 1,431	$ -
4998 ARRA REIMBURSEMENT	$ -	$ -	$ -
4999 OTHER INCOME	$ 1,488		
TOTAL	**$ 1,054,094**	**$ 994,170**	**$ 884,600**
EXPENSE			
5000 BANK SERVICE CHARGE	$ 338	$ 348	$ 371
5025 WATER PURCHASES	$ 278,751	$ 309,094	$ 353,430
5050 ADVERTISING	$ 2,636	$ 1,935	$ 2,000
5055 MEMBER SERVICES		$ 2,648	$ 2,000
5060 BAD DEBT EXPENSE	$ 8,982		
5101 LEGAL FEES	$ 5,162	$ 172	$ 5,500
5102 ACCOUNTING	$ 16,960	$ 12,720	$ 13,000
5103 WATER TESTING & ONE CALL	$ 931	$ 842	$ 700
5150 INSURANCE	$ 17,035	$ 16,666	$ 17,500
5200 STAFF TRAVEL	$ 3,857	$ 3,235	$ 4,000
5330 INTEREST EXPENSE	$ 25,759		
5400 DUES AND SUBS	$ 5,309	$ 5,289	$ 5,500
5450 OFFICE SUPPLIES	$ 8,076	$ 5,898	$ 5,000
5500 OFFICE REPAIRS	$ 97	$ 5,826	$ 1,000
5600 LEASE HOLD IMPROVEMENTS	$ 218	$ -	$ -
5800 USE TAX	$ -	$ -	$ -
5826 REAL ESTATE TAXES	$ 4,796	$ 172	$ 200
5900 TELEPHONE	$ 5,087	$ 5,898	$ 5,500
5990 MISCELANEOUS	$ 482		
6050 DIRECTORS FEES	$ 10,125	$ 11,500	$ 14,000
6600 DIRECTORS MEETING EXP	$ 4,132	$ 5,086	$ 4,000
6100 PAYROLL	$ 178,983	$ 144,033	$ 144,200
6200 VEHICLE EXPENSE	$ 18,139	$ 13,338	$ 15,000
6300 MINOR EQUIPMENT	$ 423	$ -	$ -
6400 UTILITIES	$ 28,496	$ 27,180	$ 30,000
6500 O&M SUPPLIES	$ 18,531	$ 39,802	$ 30,000
TRAINING	$ 3,180	$ 3,785	$ 4,000
6510 O&M RESERVES	$ 100,000	$ 10,200	$ 1,000
1225 Debt RESERVES	$ 128,500	$ 159,000	$ 227,000
CAPITAL RESERVES	$ 75,000	$ 10,200	$ 1,000
EMERGENCY RESERVES	$ 25,000	$ 10,200	$ 1,000
7000 CONSTRUCTION	$ 75,081	$ 208,005	$ -
Principal Repayment	$ 63,036	$ 67,806	$ 61,146
Interest Repayment	$ 25,759	$ 12,194	$ 164,704

Perkins County Rural Water System
State Water Resources Management System Loan: 2008-102
Loan Amortized at 3.00% for 5 years Interest Only and 3.00% for 35 years P&I

Closed Date: June 25, 2004 **Loan Amount:** $5,144,000.00

First Amendment to loan agreement dated April 4, 2007
Second Amendment to loan agreement dated April 10, 2008
Third Amendment to loan agreement dated April 11, 2013

Schedule A
Amounts Advanced

Date	Advanced	Accrued Interest
09/17/2004	631,802.04	$0.00
10/18/2004	589,191.79	$0.00
11/09/2004	29,006.17	$0.00
06/06/2005	8,558.50	$0.00
06/16/2005	659,153.34	$0.00
07/15/2005	807,582.16	$0.00
08/29/2005	24,706.00	$0.00
05/23/2006	338,262.54	$0.00
06/13/2006	102,445.18	$0.00
07/05/2006	26,306.44	$0.00
07/19/2006	505,058.61	$0.00
08/26/2006	532,062.31	$0.00
09/12/2006	245,864.92	$0.00
04/12/2007	500,000.00	$0.00
07/11/2008	144,000.00	$0.00
	$5,144,000.00	$0.00

Schedule B
Amortization Schedule

Date	Payment Number	Principal Beg. Balance	Payment Amount	Principal	Interest	Principal Ending Balance
07/01/2015	1	$5,144,000.00	$154,320.00	$0.00	$154,320.00	$5,144,000.00
07/01/2016	2	$5,144,000.00	$154,320.00	$0.00	$154,320.00	$5,144,000.00
07/01/2017	3	$5,144,000.00	$154,320.00	$0.00	$154,320.00	$5,144,000.00
07/01/2018	4	$5,144,000.00	$154,320.00	$0.00	$154,320.00	$5,144,000.00
07/01/2019	5	$5,144,000.00	$154,320.00	$0.00	$154,320.00	$5,144,000.00
07/01/2020	6	$5,144,000.00	$239,398.12	$85,078.12	$154,320.00	$5,058,921.88
07/01/2021	7	$5,058,921.88	$239,398.12	$87,630.46	$151,767.66	$4,971,291.42
07/01/2022	8	$4,971,291.42	$239,398.12	$90,259.37	$149,138.75	$4,881,032.05
07/01/2023	9	$4,881,032.05	$239,398.12	$92,967.15	$146,430.97	$4,788,064.90
07/01/2024	10	$4,788,064.90	$239,398.12	$95,756.17	$143,641.95	$4,692,308.73
07/01/2025	11	$4,692,308.73	$239,398.12	$98,628.85	$140,769.27	$4,593,679.88

07/01/2026	12	$4,593,679.88	$239,398.12	$101,587.72	$137,810.40	$4,492,092.16
07/01/2027	13	$4,492,092.16	$239,398.12	$104,635.35	$134,762.77	$4,387,456.81
07/01/2028	14	$4,387,456.81	$239,398.12	$107,774.41	$131,623.71	$4,279,682.40
07/01/2029	15	$4,279,682.40	$239,398.12	$111,007.64	$128,390.48	$4,168,674.76
07/01/2030	16	$4,168,674.76	$239,398.12	$114,337.87	$125,060.25	$4,054,336.89
07/01/2031	17	$4,054,336.89	$239,398.12	$117,768.01	$121,630.11	$3,936,568.88
07/01/2032	18	$3,936,568.88	$239,398.12	$121,301.05	$118,097.07	$3,815,267.83
07/01/2033	19	$3,815,267.83	$239,398.12	$124,940.08	$114,458.04	$3,690,327.75
07/01/2034	20	$3,690,327.75	$239,398.12	$128,688.28	$110,709.84	$3,561,639.47
07/01/2035	21	$3,561,639.47	$239,398.12	$132,548.93	$106,849.19	$3,429,090.54
07/01/2036	22	$3,429,090.54	$239,398.12	$136,525.40	$102,872.72	$3,292,565.14
07/01/2037	23	$3,292,565.14	$239,398.12	$140,621.16	$98,776.96	$3,151,943.98
07/01/2038	24	$3,151,943.98	$239,398.12	$144,839.80	$94,558.32	$3,007,104.18
07/01/2039	25	$3,007,104.18	$239,398.12	$149,184.99	$90,213.13	$2,857,919.19
07/01/2040	26	$2,857,919.19	$239,398.12	$153,660.54	$85,737.58	$2,704,258.65
07/01/2041	27	$2,704,258.65	$239,398.12	$158,270.36	$81,127.76	$2,545,988.29
07/01/2042	28	$2,545,988.29	$239,398.12	$163,018.47	$76,379.65	$2,382,969.82
07/01/2043	29	$2,382,969.82	$239,398.12	$167,909.02	$71,489.10	$2,215,060.80
07/01/2044	30	$2,215,060.80	$239,398.12	$172,946.29	$66,451.83	$2,042,114.51
07/01/2045	31	$2,042,114.51	$239,398.12	$178,134.68	$61,263.44	$1,863,979.83
07/01/2046	32	$1,863,979.83	$239,398.12	$183,478.72	$55,919.40	$1,680,501.11
07/01/2047	33	$1,680,501.11	$239,398.12	$188,983.08	$50,415.04	$1,491,518.03
07/01/2048	34	$1,491,518.03	$239,398.12	$194,652.57	$44,745.55	$1,296,865.46
07/01/2049	35	$1,296,865.46	$239,398.12	$200,492.15	$38,905.97	$1,096,373.31
07/01/2050	36	$1,096,373.31	$239,398.12	$206,506.92	$32,891.20	$889,866.39
07/01/2051	37	$889,866.39	$239,398.12	$212,702.12	$26,696.00	$677,164.27
07/01/2052	38	$677,164.27	$239,398.12	$219,083.19	$20,314.93	$458,081.08
07/01/2053	39	$458,081.08	$239,398.12	$225,655.68	$13,742.44	$232,425.40
07/01/2054	40	$232,425.40	$239,398.17	$232,425.40	$6,972.77	$0.00
	Total		9,150,534.25	5,144,000.00	4,006,534.25	

AMORTIZATION SCHEDULE

Principal	Loan Date	Maturity	Loan No	Call / Coll	Account	Officer	Initials
$310,500.00	03-14-2013	03-20-2018	5396443	020 / 12		BS1	

References in the boxes above are for Lender's use only and do not limit the applicability of this document to any particular loan or item.
Any item above containing "****" has been omitted due to text length limitations.

Borrower: Perkins County Rural Water System, Inc
PO Box 188
Bison, SD 57620

Lender: Dacotah Bank
Bison
101 E Main St
PO Box 99
Bison, SD 57620

Disbursement Date: March 14, 2013
Interest Rate: 5.500

Repayment Schedule: Installment
Calculation Method: 365/365 U.S. Rule

Payment Number	Payment Date	Payment Amount	Interest Paid	Principal Paid	Remaining Balance
1	06-20-2013	17,882.60	4,585.19	13,297.41	297,202.59
2	09-20-2013	17,882.60	4,120.12	13,762.48	283,440.11
3	12-20-2013	17,882.60	3,886.62	13,995.98	269,444.13
2013 TOTALS:		**53,647.80**	**12,591.93**	**41,055.87**	
4	03-20-2014	17,882.60	3,654.11	14,228.49	255,215.64
5	06-20-2014	17,882.60	3,538.06	14,344.54	240,871.10
6	09-20-2014	17,882.60	3,339.20	14,543.40	226,327.70
7	12-20-2014	17,882.60	3,103.48	14,779.12	211,548.58
2014 TOTALS:		**71,530.40**	**13,634.85**	**57,895.55**	
8	03-20-2015	17,882.60	2,868.95	15,013.65	196,534.93
9	06-20-2015	17,882.60	2,724.57	15,158.03	181,376.90
10	09-20-2015	17,882.60	2,514.43	15,368.17	166,008.73
11	12-20-2015	17,882.60	2,276.37	15,606.23	150,402.50
2015 TOTALS:		**71,530.40**	**10,384.32**	**61,146.08**	
12	03-20-2016	17,882.60	2,062.37	15,820.23	134,582.27
13	06-20-2016	17,882.60	1,865.72	16,016.88	118,565.39
14	09-20-2016	17,882.60	1,643.67	16,238.93	102,326.46
15	12-20-2016	17,882.60	1,403.13	16,479.47	85,846.99
2016 TOTALS:		**71,530.40**	**6,974.89**	**64,555.51**	
16	03-20-2017	17,882.60	1,164.23	16,718.37	69,128.62
17	06-20-2017	17,882.60	958.33	16,924.27	52,204.35
18	09-20-2017	17,882.60	723.71	17,158.89	35,045.46
19	12-20-2017	17,882.60	480.55	17,402.05	17,643.41
2017 TOTALS:		**71,530.40**	**3,326.82**	**68,203.58**	
20	03-20-2018	17,882.68	239.27	17,643.41	0.00
2018 TOTALS:		**17,882.68**	**239.27**	**17,643.41**	
TOTALS:		**357,652.08**	**47,152.08**	**310,500.00**	

NOTICE: This is an estimated loan amortization schedule. Actual amounts may vary if payments are made on different dates or in different amounts.

LASER PRO Lending, Ver. 12.4.10.003 Copr. Harland Financial Solutions, Inc. 1997, 2013. All Rights Reserved. - SD I:\CFI\LPL\AMORT.FC TR-255371 PR-5

Perkins County Rural Water System, Inc.
POB 160
Bison, SD 57620
November 12, 2015

The Public Hearing for the HWY 12 and HWY 73 Realignment Project for Perkins County Rural Water System, Inc., was called to order by President Don Melling at 7:00 PM at the PCRWS conference room in Bison, SD. Other directors present were Lynn Frey, Brian Morris, Stanley Brixey, Rodney LeFebre, Holly Waddell, Colin LaMont, Luke Clements and Art Pederson. Also in attendance were Sandy Burwick, Southwest Water Authority, Roxie Seaman, Prairie City, Jerry Martin, Meadow, Lynn Waddell, Shadehill, Eric Bogue, Bogue and Bogue LLP, Larry Thelen and Deon Stockert, Advanced Engineering and Environmental Services, Ali DeMersseman, Black Hills Council of Local Governments, Eric Newman, Shiloh Baysinger and Brandi Baysinger, staff.

Notice of Public Hearing for Realignment Project

Larry Thelen, AE2S, was present to present information on the movement of water line along US HWY 12 and SD HWY 73 in conjunction with the road widening project slated for 2016 and 2017.

Presentation of Proposed Project

AE2S presented the options for the system. If PCRWS does nothing there is danger to system from freezing. The system will strive to protect pipe by insulating certain areas which will help maintain service to users along the area under construction as well as pipe relocation and boring of the wetland area.

Ali DeMerssemam was present to explain the financial and funding aspects of the project which also include booster station improvements of SCADA on the HWY 20 booster and a fence around the HWY 73 booster for a total of $1,722,000. PCRWS is seeking funding through DENR Drinking Water Facilities Funding program and the pledge source of repayment will be water revenues. PCRWS qualifies for disadvantaged rate of 2.25% over 30 years and with the 110% coverage requirement the annual payment of the proposed loan would be $87,000 equaling $8.28 per user per month. However, PCRWS anticipates retiring an existing loan next year and is negotiating debt service charges with Bison and Lemmon, which would cover the loan payments for this project.

Public Comment

All questions raised and answered.

Adoption of Resolution

Motion by Holly Waddell to adopt resolution for realignment project, seconded by Don Melling, motion passed.

PUBLISHER'S AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

)SS

COUNTY OF PERKINS

Arlis Seim, of said County and State, being duly sworn, on oath says: THE BISON COURIER is a weekly newspaper of general circulation, printed and published in Bison, in said County and State and has been such newspaper during the times hereinafter mentioned; that the said BISON COURIER is a legal newspaper and has been in existence for more than one year immediately preceding the first publication herein mentioned; and has more than 200 bonafide subscribers; that I, the undersigned, am Legal Advertising Manager, of said newspaper, and in charge of the advertising department thereof, and have personal knowledge of all facts stated in this affidavit; and that the advertisement headed

Notice of Public Hearing for the Perkins County Rural Water System Highway 12 & Highway 73 Water Line Realignment and Booster Station Improvements Project

a printed copy of which is hereto attached, was printed and published in said newspaper for 1 successive issues, the first publication being on the 29 day of October 2015 and the last publication on the 29 day of October, 2015 that $16.61 being the full amount of the fee for publication of the annexed notice insures solely to the benefit of the publishers of the said newspaper; that no arrangement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

Arlis Seim

Subscribed and sworn to before me this 12th day of November, 2015.

Sylvia Chapman
Notary Public, Perkins County

My commission expires:

SYLVIA CHAPMAN
NOTARY PUBLIC
SOUTH DAKOTA
Commission Expires March 11, 2016

NOTICE OF PUBLIC HEARING for the PERKINS COUNTY RURAL WATER SYSTEM HIGHWAY 12 AND HIGHWAY 73 WATER LINE REALIGNMENT AND BOOSTER STATION IMPROVEMENTS PROJECT

Perkins County Rural Water System is seeking $1,722,000 of funding from the Board of Water and Natural Resources for a project to realign the system's water lines at Highway 12 and Highway 73 to prevent damage, freezing and water loss; to install a SCADA system at the Highway 20 booster station; and, to construct a security fence at the Highway 75 booster station. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or a loan from the Drinking Water State Revolving Fund (SRF) Program. The Drinking Water SRF loan terms are 2.25% for 30 years, and the Board of Water and Natural Resources may forgive all or a portion of loan principal. The amount, source of funds, and terms will be determined by the Board of Water and Natural Resources when the application is presented at a scheduled board meeting. The purpose of the public hearing is to discuss the proposed project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

The public hearing will be held at Perkins County Rural Water Office in Bison on November 12th at 7:00 PM.

[Published October 29, 2015 at a total approximate cost of $16.61.]

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

REPLY TO
ATTENTION OF

November 13, 2015

Planning, Programs, and Project Management Division

Ms. Ali DeMersseman
Black Hills Council of Local Governments
730 East Watertown Street, Suite 102
Rapid City, South Dakota 57701

Dear Ms. DeMersseman:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated October 26, 2015 (received October 30, 2015) regarding the environmental review of the Perkins County Rural Water Highway 12 & 73 Waterline Relocation and Booster Station Improvements Project in Perkins County, South Dakota. We offer the following comments for your consideration:

Your plans should be coordinated with the state water quality office that has jurisdiction within the area where the project is located to ensure compliance with federal and state water quality standards and regulations mandated by the Clean Water Act and administered by the U.S. Environmental Protection Agency. Please coordinate with the South Dakota Department of Environment & Natural Resources concerning state water quality programs.

If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks regarding fish and wildlife resources. In addition, the South Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

If the proposed waterline construction crosses the floodplains of small drainageways and streams, flood-related problems should not occur if the lines are buried far enough below the beds of drainageways and streams to prevent exposure due to streambed erosion during periods of high floodflows. Any aboveground construction subject to flood damage, such as pump houses, should either be placed above, or flood proofed to, a level above the one percent annual chance flood elevation.

Since the proposed project does not appear to be located within Corps owned or operated lands, your plans should be submitted to the local floodplain administrator for review and approval prior to construction. It should be ensured that the proposed project is in compliance with the floodplain management criteria of Perkins County and the State of South Dakota. In addition, please coordinate with the following floodplain management office:

South Dakota Division of Emergency Management
Attention: Mr. Marc Macy
118 W. Capitol Avenue
Pierre, South Dakota 57501
Telephone: 605-773-3231
Fax: 605-773-3580
Email: marc.macy@state.sd.us

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (http://www.nwo.usace.army.mil/Missions/RegulatoryProgram.aspx) to determine if this project requires a 404 permit. For a detailed review of the permit requirements, preliminary and final project plans should be sent to:

U.S. Army Corps of Engineers
Pierre Regulatory Office
Attention: Mr. Steve Naylor, CENWO-OD-R-SD
28563 Powerhouse Road, Room 120
Pierre, South Dakota 57501

If you have any questions, please contact Ms. Amanda Ciurej of my staff at (402) 995-2897 or amanda.k.ciurej@usace.army.mil and reference PD# 6763 in the subject line.

Sincerely,

Eric A. Laux
Chief, Environmental Resources and Missouri River Recovery Program Plan Formulation Section

BLACK HILLS
COUNCIL OF LOCAL GOVERNMENTS

RECEIVED
OCT 29 2015
U.S. FISH & WILDLIFE SERVICE

October 26, 2015

Scott Larson, Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
420 South Garfield Avenue
Pierre, SD 57501

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Mr. Larson,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

PCRWS is located in Perkins County in northwestern South Dakota. The system purchases all its water supply from Southwest Water Authority in Dickinson, ND. The PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon, SD and Bison, SD. The system also supplies water to Prairie City, SD users and the Shadehill Reservoir Recreation Area. There are approximately 2,000 individuals supplied water by PCRWS.

In March 2015, the Board of Directors entered into a professional services agreement with Advanced Engineering and Environmental Services (AE2S) to consult with the Board of Directors, staff of PCRWS, and South Dakota Department of Transportation (SD-DOT) on the realignment/lower of certain water lines prior to reconstruction by the SD-DOT of US Highway 12 (from the North Dakota state line east to Lemmon, SD) and on SD Highway 73 (south of Lemmon, SD for approximately 11 miles). The SD-DOT project is scheduled to be bid in August 2016. This will allow PCRWS to relocate/lower certain water lines during the 2016 construction season and prior to the reconstruction of the highways.

As part of this project, PCRWS will also be installing a SCADA system at the Highway 20 booster station in order to monitor and preempt any issues with the station. In addition, fencing will be installed at the Highway 75 booster station to provide security. The attached maps and plans identify the location of all proposed improvements.

We are respectfully requesting your written response to this letter within 30 days. Even if your agency has no concerns, please send a written response. If you have any questions regarding this letter, or require additional information, please contact me at ademersseman@tie.net or (605) 394-2681.

Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

This constitutes a report of the Department of the Interior prepared in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). We have reviewed and have NO OBJECTION to this proposed project.

11/9/15 Scott Larson
Date Field Supervisor

DEPARTMENT OF GAME, FISH, AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

October 29, 2015

Ms. Ali DeMersseman
Black Hills Council of Local Governments
730 East Watertown St.
Suite 102
Rapid City, SD 57701

RE: Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation & Booster Station
Perkins County, South Dakota

Dear Ms. DeMersseman:

The South Dakota Department of Game, Fish and Parks, Wildlife Division, has reviewed the above project involving the relocation of water lines along Highways 12 & 73, installation of a SCADA system at the Highway 20 booster station, and construction of a security fence at the Highway 75 booster station.

At this time, the project as proposed will have no impacts on fish and wildlife resources. If the project design changes, please submit the revised project for review.

Thank you for the opportunity to provide comments on this project. If you have any questions, please contact me at 605.773.6208.

Sincerely,

Leslie Murphy
Senior Biologist

USDA

United States Department of Agriculture

November 27, 2015

Ali DeMersseman
Black Hills Council of Local Governments
730 E. Watertown Street, Suite 102
Rapid City, SD 57701

RE: Environmental Review for
Perkins Co. Rural Water System, Highways 12 &73 Waterline Relocation and Booster Improvements Project

Dear Ali:

Thank you for the opportunity to provide Farmland Protection Policy Act (FPPA) review of this project. The project area as outlined **does** contain FPPA affected soils. I have included a map illustrating their approximate location relative to the project area. However, because this is a corridor type project to be installed below the soil surface it will have **no effect** on prime or important farmland as long as the soil is replaced in the order it was removed (First soil out of the trench needs to be the last back in).

If you have any questions, please contact me at (605) 348-2889 ext. 104.

Sincerely,

TIMOTHY NORDQUIST
NRCS Conservation Agronomist

Natural Resources Conservation Service
414 E Stumer Road, Suite 700
Voice: 605.348.2889 ext 104 Fax: 855.256.2553
An Equal Opportunity Provider and Employer

BLACK HILLS
COUNCIL OF LOCAL GOVERNMENTS

October 26, 2015

CENWO-PM-AC
United States Army Corps of Engineers, Omaha District
Planning Branch
1616 Capitol Avenue, Ste. 9000
Omaha, NE 68102

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear CENWO-PM-AC,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

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Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

BLACK HILLS
COUNCIL OF LOCAL GOVERNMENTS

October 26, 2015

Deanna Peterson
United States Department of Agriculture
Natural Resources Conservation Services
Federal Building, 200 Fourth Street SW
Huron, SD 57350

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Ms. Peterson,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

PCRWS is located in Perkins County in northwestern South Dakota. The system purchases all its water supply from Southwest Water Authority in Dickinson, ND. The PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon, SD and Bison, SD. The system also supplies water to Prairie City, SD users and the Shadehill Reservoir Recreation Area. There are approximately 2,000 individuals supplied water by PCRWS.

In March 2015, the Board of Directors entered into a professional services agreement with Advanced Engineering and Environmental Services (AE2S) to consult with the Board of Directors, staff of PCRWS, and South Dakota Department of Transportation (SD-DOT) on the realignment/lower of certain water lines prior to reconstruction by the SD-DOT of US Highway 12 (from the North Dakota state line east to Lemmon, SD) and on SD Highway 73 (south of Lemmon, SD for approximately 11 miles). The SD-DOT project is scheduled to be bid in August 2016. This will allow PCRWS to relocate/lower certain water lines during the 2016 construction season and prior to the reconstruction of the highways.

As part of this project, PCRWS will also be installing a SCADA system at the Highway 20 booster station in order to monitor and preempt any issues with the station. In addition, fencing will be installed at the Highway 75 booster station to provide security. The attached maps and plans identify the location of all proposed improvements.

We are respectfully requesting your written response to this letter within 30 days. Even if your agency has no concerns, please send a written response. If you have any questions regarding this letter, or require additional information, please contact me at ademersseman@tie.net or (605) 394-2681.

Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

BLACK HILLS
COUNCIL OF LOCAL GOVERNMENTS

October 26, 2015

Scott Larson, Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
420 South Garfield Avenue
Pierre, SD 57501

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Mr. Larson,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

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Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

BLACK HILLS
COUNCIL OF LOCAL GOVERNMENTS

October 26, 2015

Leslie Murphy, Senior Biologist
Department of Game, Fish & Parks
Division of Wildlife
523 East Capitol Avenue
Pierre, SD 57501

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Ms. Murphy,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

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Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

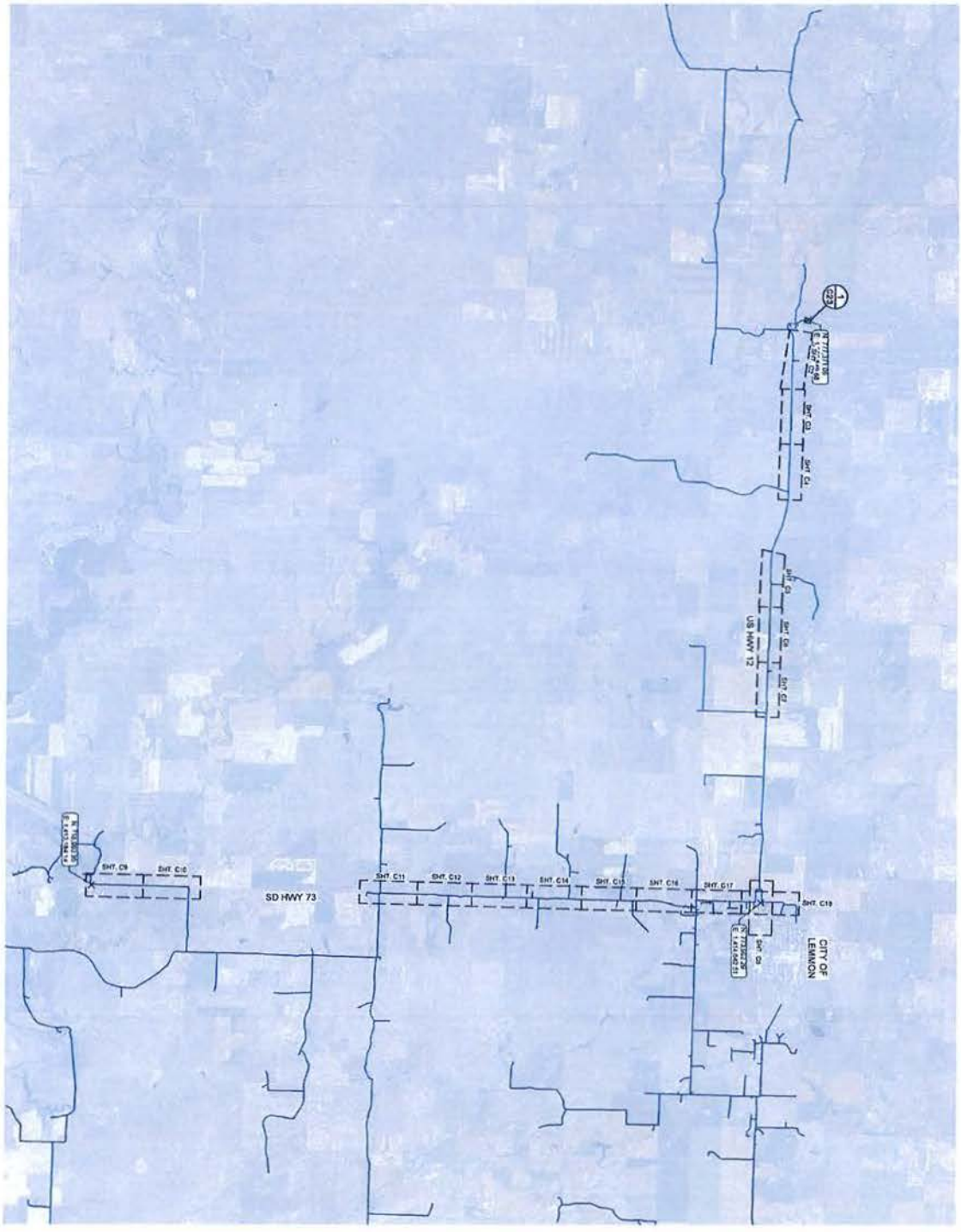
Encl.

www.ae2s.com

Perkins County Rural Water System, Inc.
US Highway 12 and SD Highway 73 Waterline Realignment Project

Map of US Highway 12 and SD Highway 73 (Near Lemmon)

Advanced Engineering and Environmental Services, Inc.
1815 Schafer Street Suite 301 • Bismarck, ND 58501 • (t) 701-221-0530 • (f) 701-221-0531



PRELIMINARY

MILESTONE - 40%

PERKINS COUNTY RURAL WATER SYSTEMS, INC.
PERKINS COUNTY RURAL WATER SYSTEM, INC.
BISON, SOUTH DAKOTA

LOCATION MAP

G4

PRELIMINARY
NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	APPR.

Advanced Engineering and Environmental Services, Inc. • • 1815 Schafer St Ste 301 Bismarck, ND 58501 • • (t) 701-221-0530 (f) 701-221-0531 • • www.ae2s.com

6.12.3 CULTURAL RESOURCES EFFECTS ASSESSMENT SUMMARY

Applicant: Perkins County Rural Water System, Inc. Project Contact: Brandi Baysinger
Address: 104 West Main Street, Bison, SD 57620 Telephone Number: 605-244-5608
Legal Location of Project: US 12 from ND State Line to Lemmon & SD 73 from Dewitt Rd to the W. US 12 Jct
City: N/A County: Perkins County Project No.: Not assigned

Project Description: Perkins County Rural Water System (PCRWS) is proposing a system improvement project that consists of the relocation of waterlines; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. The waterline realignment is necessary due to a South Dakota Department of Transportation (SDDOT) project that will widen the existing right-of-way at Highway 12 and modify the road elevations at both Highway 12 and Highway 73. The change in road elevation will impact the ground cover over existing waterlines leaving the lines susceptible to freezing. As part of the SDDOT project, PCRWS will be required to relocate existing waterlines located within the right-of-way. PCRWS will also be installing a SCADA system at the Highway 20 booster station in order to monitor and preempt any issues with the station and fencing will be installed at the Highway 75 booster station to provide security. PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon and Bison. The system supplies water to approximately 2,000 individuals.

For projects that involve new construction on vacant land please include information as to what previously occupied the site and whether that site has any known historic or archaeological significance.
Please see attached ARC records search report.

Please describe below or attach information supporting the determination of effect.
Please see attached ARC records search report.

A map showing the project location is required. Drawings or photographs may also be helpful.

Please indicate the effect the project will have on cultural resources based on the review performed:

__X__ No Historic Properties Affected: There are no historic properties present or the undertaking will not affect any properties eligible for or listed in the National Register of Historic Preservation.

_____ No Adverse Effect: This property is listed in or eligible for the National Register of Historic Places. This project will have no adverse effect upon the historic significance of the property because the proposed undertaking meets the Secretary of the Interior's Standards for the Treatment of Historic Properties.

_____ Adverse Effect: This property is listed in or eligible for eligible for the National Register of Historic Places. This project will have an adverse effect upon the historic significance of the property. (Attach proposed mitigation measures that may minimize the adverse effect.)

Prepared by: Ali DeMersseman Date: December 9, 2015

DETERMINATION OF EFFECTS

I have reviewed the project description and the information provided concerning historical and cultural effects of this project. Based on that review, the Department of Environment and Natural Resources concurs with the applicant's determination of the effects that the construction of this project will have on historical or cultural resources. Additionally, if historical or cultural resources are discovered during project construction, the contractor is required to cease construction and notify the State Historical Preservation Officer.

Approved by: _____ Date _____
SD Department of Environment and Natural Resources

Department of Transportation
Office of Project Development
Environmental Office
700 E Broadway Avenue
Pierre, South Dakota 57501-2586
605/773-3268 Fax: 605/773-6608

NOV 18 2015
South Dakota SHPO

November 17, 2015

Amy Rubingh, Review & Compliance Archaeologist
State Historic Preservation Office
Cultural Heritage Center
900 Governors Drive
Pierre, SD 57501-2217

PCN 0234

RE: Perkins Co. Rural Water District Water Line Project along SDDOT projects:
NH-PH 0012(168)80 PCN 02QB & P-PH 0073(60)231 PERKINS COUNTY
US12 from the ND State Line to Lemmon & SD73 from Dewitt Rd. to the W. US12 Jct

Dear Ms. Rubingh:

Attached is a copy of an ARC records search report dated November 17, 2015 for water line modifications along the above projects. Three previously recorded sites (39PE0324, 39PE0515 & 39PE0338) may be impacted by the water line project, however, all were previously determined Not Eligible for the NRHP.

The report recommends a Section 106 Finding of No Historic Properties Affected for the water line project. The SDDOT concurs and requests SHPO concurrence in a Section 106 determination of ***No Historic Properties Affected*** for the Perkins County Rural Water District water line project.

Sincerely,

Alice Whitebird

Alice Whitebird
Environmental Scientist III
Office of Project Development
(605) 773-3309
alice.whitebird@state.sd.us

SECTION 106 DETERMINATION
Based upon the information provided to the South Dakota State Historic Preservation Office on 11/18/15 we concur with your agency's determination of "No Historic Properties Affected" for this undertaking.

Gary D. Vogt
State Historic Preservation Officer (SHPO)
By: Amy Rubingh
11/24/15 — 95118001F
Date — SHPO Project #

Attachment

SECTION 106 CONSULTATION
Concurrence of the State Historic Preservation Office does not relieve the federal agency official from consulting with other appropriate parties, as described in 36 CFR Part 800.2(c).

Pursuant to 36 CFR part 800.13, if historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the Section 106 process, the agency official shall avoid, minimize or mitigate the adverse effects to such properties and notify the SHPO/THPO, and Indian tribes that might attach religious and cultural significance to the affected property within 48 hours of the discovery.

Whitebird, Alice

From: Donohue, Jim
Sent: Tuesday, November 17, 2015 9:41 AM
To: Whitebird, Alice
Subject: FW: Perkins County Rural Water District Plans for PCNs 02QB and 023A
Attachments: AE2S Letter for Perkins County Rural Water from Larry Thelen.pdf; Perkins County Rural Water Pipeline Record Search Results.xlsx; Perkins County Water and DOT 023A 5 Aerial.jpg; Perkins County Water and DOT 023A 5 Topo.jpg; Perkins County Water and DOT 02QB 1 Aerial.jpg; Perkins County Water and DOT 02QB 1 Topo.jpg; Perkins County Water and DOT 02QB 2 Aerial.jpg; Perkins County Water and DOT 02QB 2 Topo.jpg; Perkins County Water and DOT 02QB 3 Aerial.jpg; Perkins County Water and DOT 02QB 3 Topo.jpg; Perkins County Water and DOT 02QB 4 Aerial.jpg; Perkins County Water and DOT 02QB 4 Topo.jpg; Perkins County Water and DOT 023A 1 Aerial.jpg; Perkins County Water and DOT 023A 1 Topo.jpg; Perkins County Water and DOT 023A 2 Aerial.jpg; Perkins County Water and DOT 023A 2 Topo.jpg; Perkins County Water and DOT 023A 3 Aerial.jpg; Perkins County Water and DOT 023A 3 Topo.jpg; Perkins County Water and DOT 023A 4 Aerial.jpg; Perkins County Water and DOT 023A 4 Topo.jpg

Hi Alice:

Perkins County Rural Water is going to be moving waterlines due to the proposed road reconstruction of Highway 12, PCN 02QB and Highway 73 for SDDOT Projects PCN023A. Attached please find the maps and files search for the proposed project. Two sites could be impacted by PCN 02QB (Highway 12). These are 39PE0324 and 39PE0515 and both were determined to be Not Eligible by SHPO. One site, 39PE0338, could be impacted by SDDOT Project PCN023A (Highway 73). Site 39PE0338 was also determined to be Not Eligible by SHPO. Consequently, I am recommending a Section 106 Finding of No Historic Properties Affected for this water line project based on the previous surveys, site evaluations, and the results of the attached files search. Please do not hesitate to contact me if you have any questions in regards to this files search.

Best regards

Jim

Perkins County Rural Water Pipeline , Perkins County			
In Regards to SDDOT Projects 02QB (APE-0204) and 032A (APE-0203)			
T. Bruce 11/13/15			
Within Project Area			
Sites			
Site No.	**Description**	**Eligibility**	
39PE0324	native american isolated find	Not Eligible	
39PE0338	school foundation; well/cistern	Not Eligible	
39PE0515	prehistoric artifact scatter	Not Eligible	
Surveys			
Archive No	**Author(s)**	**Year**	**Report Title**
APE-0013	Hovde, David M.	1980	South Dakota Department of Transportation Gravel Pit Survey, Butte, Harding and PERKINS (Pit #6-T17N-R10E, Section 7; Pit #70-T16N, R16E, Section 24; Pit #72-T21N, R16E, Section 17) Counties, South Dakota. CIS No. 26e
APE-0095	Buechler, Jeffrey V.	2002	An Intensive Cultural Resources Inventory Survey of Buried Cable Routes Associated with West River Cooperative Telephone Company's Lemmon Exchange Service Area in the Shadehill Reservoir Vicinity of Perkins County, South Dakota. Project No. 02-60
APE-0120	Buechler, Jeffrey V.	2005	A Class III Cultural Resources Inventory Survey of Phase 2 of the Perkins County Rural Water System, Inc. in Northern Perkins County, South Dakota. Project No. 05-16
APE-0135	Buechler, Jeffrey V.	2006	A Class III Cultural Resources Inventory Survey of Phase III of the Perkins County Rural Water System, Inc. in Adams County, North Dakota & Perkins County, South Dakota. Project No. 06-17
APE-0138	Buechler, Jeffrey V.	2007	A Cultural Resources Inventory Survey of West River Cooperative Telephone Company's Buried Cable Routes in the Bison/Lemmon Vicinity of Adams County, North Dakota and Perkins County, South Dakota. Project No. 07-07

APE-0141	Buechler, Jeffrey V.	2008	A Cultural Resources Inventory Survey of West River Cooperative Telephone Company's Lemmon Exchange Buried Cable Routes in the Lemmon Vicinity of Adams County, North Dakota and Perkins County, South Dakota. Project No. 08-28
APE-0149	Buechler, Jeffrey V.	2008	A Cultural Resources Inventory Survey of Perkins County Rural Water Systems, Inc.'s Phase V Project in Perkins Counties, South Dakota. Project No. 08-35
APE-0195	Buechler, Jeffrey V.	2014	A Short Format Report of a Cultural Resources Inventory Survey of Grand Electric Cooperative's Underground Conversion Projects in Perkins County, South Dakota (Part II). Project No. 14-22
APE-0203	Byrne, Daniel	2015	An Intensive Cultural Resources Survey of SDDOT Project P-PH 0073(60)229, PCN 023A, a Segment of SD 73 from the Grand River Bridge North to the West Junction US Highway 12, Perkins County, South Dakota. CIS No. 2845
APE-0204	Byrne, Daniel	2015	An Intensive Cultural Resources Survey of SDDOT Project NH-PH 0012(68), PCN 02QB, US Highway 12 from the North Dakota State Line East to its Junction with SD Highway 73, Perkins County, South Dakota. CIS No. 2846
APE-0210	Byrne, Daniel	2015	The National Register of Historic Places Evaluation of Site 39PE515 for SDDOT Project NH-PH 0012(168), PCN 02QB and Sites 39PE509, 39PE510 and 39PE511 for SDDOT Project P-PH 0073(60)229, PCN 023A, Perkins County, South Dakota. CIS No. 2876
WSD-0174	Buechler, Jeffrey V.	1997	An Intensive Cultural Resources Inventory Survey of West River Cooperative Telephone Association's 1997 Buried Cable Routes in Butte, Harding, Meade and Perkins Counties, South Dakota. Project No. 97-22
Within a 1 Mile Radius			
Sites			
Site No.	**Description**	**Eligibility**	
39PE0060	native american artifact scatter	Unevaluated	
39PE0222	school foundation	Unevaluated	
39PE0272	farmstead; euroamerican artifact scatter	Unevaluated	
39PE0323	farmstead; euroamerican artifact scatter	Unevaluated	

39PE0344	native american artifact scatter	Unevaluated	
39PE0348	native american isolated find	Recommended Not Eligible; No SHPO Determination	
39PE0380	native american isolated find	Not Eligible	
39PE0381	euroamerican monument	Eligible	
39PE0386	prehistoric isolated find	Not Eligible	
39PE0509	prehistoric artifact scatter	Recommended Not Eligible; No SHPO Determination	
39PE0510	prehistoric artifact scatter	Recommended Not Eligible; No SHPO Determination	
39PE0511	prehistoric artifact scatter	Recommended Not Eligible; No SHPO Determination	
39PE0513	well/cistern	Unevaluated	
39PE0514	prehistoric cairn; prehistoric artifact scatter	Unevaluated	
39PE2007	railroad	Eligible	
Surveys			
Archive No	**Author(s)**	**Year**	**Report Title**
APE-0014	Hovde, David M.	1981	South Dakota Department of Transportation Gravel Pit Survey, District Five: Butte, Harding, Pennington and PERKINS (SDGF&P-T21N, R16E, Section 19) Counties, South Dakota. CIS No. 26n
APE-0019	Haberman, Thomas W.	1984	Cultural Resources Survey of a DOT Materials Pit in Section 26, T23N, R14E, Perkins County, South Dakota. CIS No. 130
APE-0030	Rhodd, Ben	1987	Cultural Resources Survey of a Department of Transportation Materials Pit Located in Section 20, T21N, R16W, Perkins County, South Dakota. SDDOT Project No. F0012(48)99, PCEMS 1268. CIS No. 330
APE-0039	Banks, Kimball M.	1992	Where the Grass Grows Green: A Cultural Resources Inventory of Three Habitat Areas, Shadehill Reservoir, Perkins County, South Dakota. Project No. 92-BF-18
APE-0054	Hanson, Rick	1993	Letter Report on an Intensive Cultural Resources Survey of DOT Project P0073(38)229, PCEMS 3153, Perkins County, South Dakota. CIS No. 854
APE-0064	Toom, Dennis L., and Cythnia Kordecki	1994	Shadehill Reservoir Project Area Cultural Resources Inventory, Perkins County, South Dakota, 1992 Field Season. Contribution No. 290
APE-0071	Byrne, Daniel	1998	A Letter Report on an Intensive Cultural Resources Survey of a Bridge Replacement Project BRF 6339() PCEMS 5723, Perkins County, South Dakota. CIS No. 1298

APE-0089	Hendrickson, Gary	2002	Cultural Resource Inventory of the Larry Lutz Tree Planting Project, T22N, R16E, Section 6, Perkins, South Dakota. NRCS CRM Report No. 02PE005
APE-0099	Armitage, Charles	2003	Cultural Resource Inventory for a Tree Planting Project in the Grand/Moreau Tablelands Study Unit, T23N, R14E, Section 21, Perkins County, South Dakota. NRCS CRM Report No. 03PE002
APE-0143	Symes, Steven A.	1976	Cultural Resources Survey for Northwestern Bell Telephone, T21N, R14E, Sections 11 & 12; T21N, R15E, Section 8; T21N, R15E, Section 13 and T21N, R16E, Section 18, Perkins County, South Dakota
APE-0166	Buechler, Jeffrey V.	2010	A Cultural Resources Inventory Survey of the Merriman Gravel Pit in the Sommerville Vicinity of Perkins County, South Dakota. Project No. 10-40
APE-0170	Buechler, Jeffrey V.	2011	Letter Format Report of a Cultural Resources Inventory Survey of Two Proposed Gravel Quarries in the Sommerville Vicinity of Perkins County, South Dakota. Project No. 11-11
Bridge			
SHPIO ID	**Eligibility**		
PE00000140	Not Eligible		
PE00000141	Not Eligible		
PE00000142	Not Eligible		
PE00000143	Not Eligible		
PE00000144	Not Eligible		
Cemetery			
SHPO ID	**Eligibility**		
PE00000054	Unevaluated		
Structures			
SHPO ID	**Eligibility**		
PE00000001	Unevaluated		
PE00000039	Unevaluated		
PE00000040	Unevaluated		
PE00000043	NR Eligible		
PE00000048	Unevaluated		

PE00000049	Unevaluated		
PE00000050	Unevaluated		
PE00000051	Unevaluated		
PE00000052	Unevaluated		
PE00000055	Not Eligible		
PE00000060	Unevaluated		
PE00000061	Unevaluated		
PE00000062	Unevaluated		
PE00000063	NR Eligible		
PE00000064	Unevaluated		
PE00000065	Unevaluated		
PE00000066	Unevaluated		
PE00000067	Unevaluated		
PE00000125	NR Eligible		
PE00000136	Not Eligible		
PE00000137	Not Eligible		
PE00000138	Not Eligible		

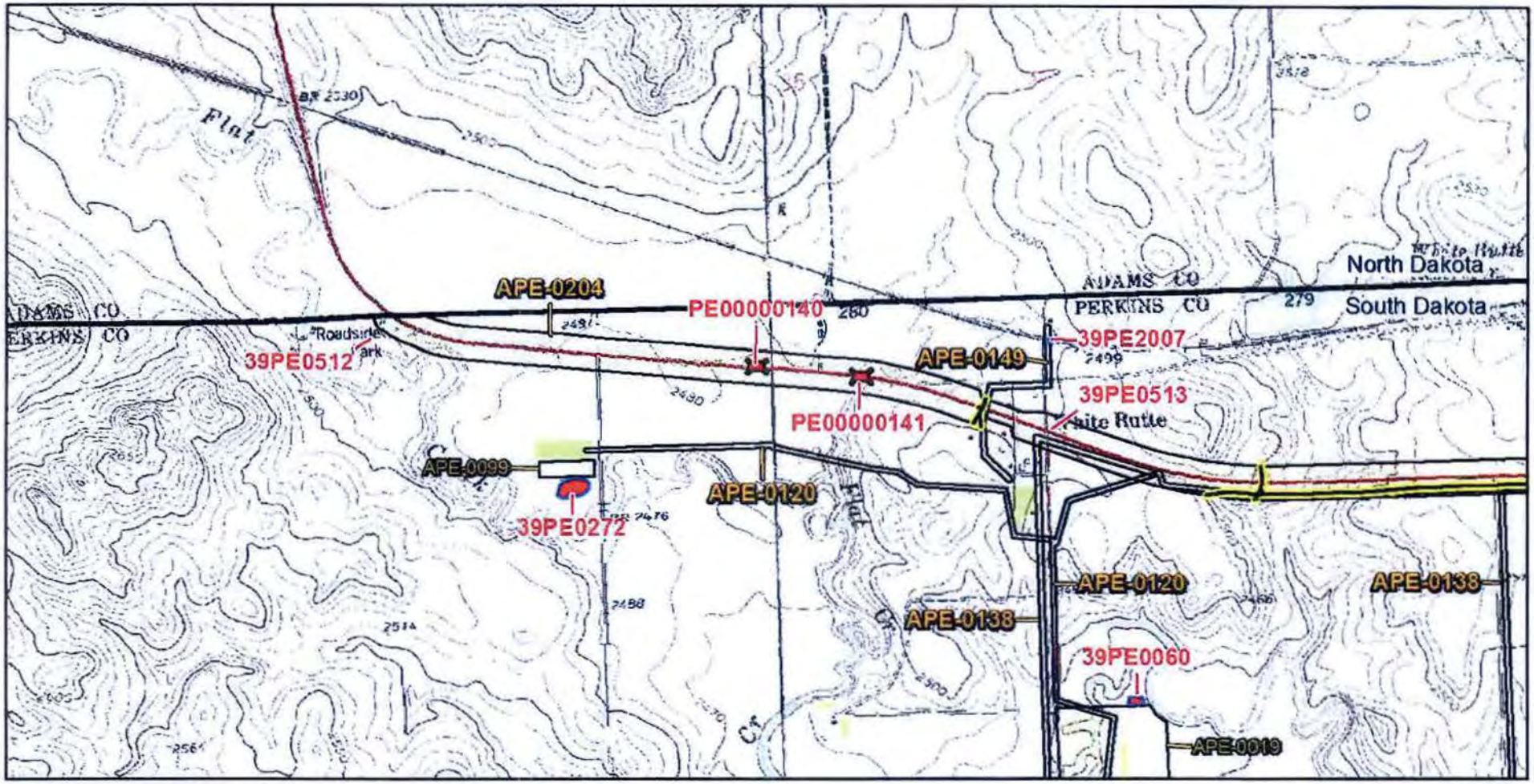
SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 1 of 4

Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 21-23, T23N R14E
USGS 7.5' Haynes & White Butte Quadrangles
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 1 of 4



Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 21-23, T23N R14E
USGS 7.5' Haynes & White Butte Quadrangles
Perkins County, South Dakota

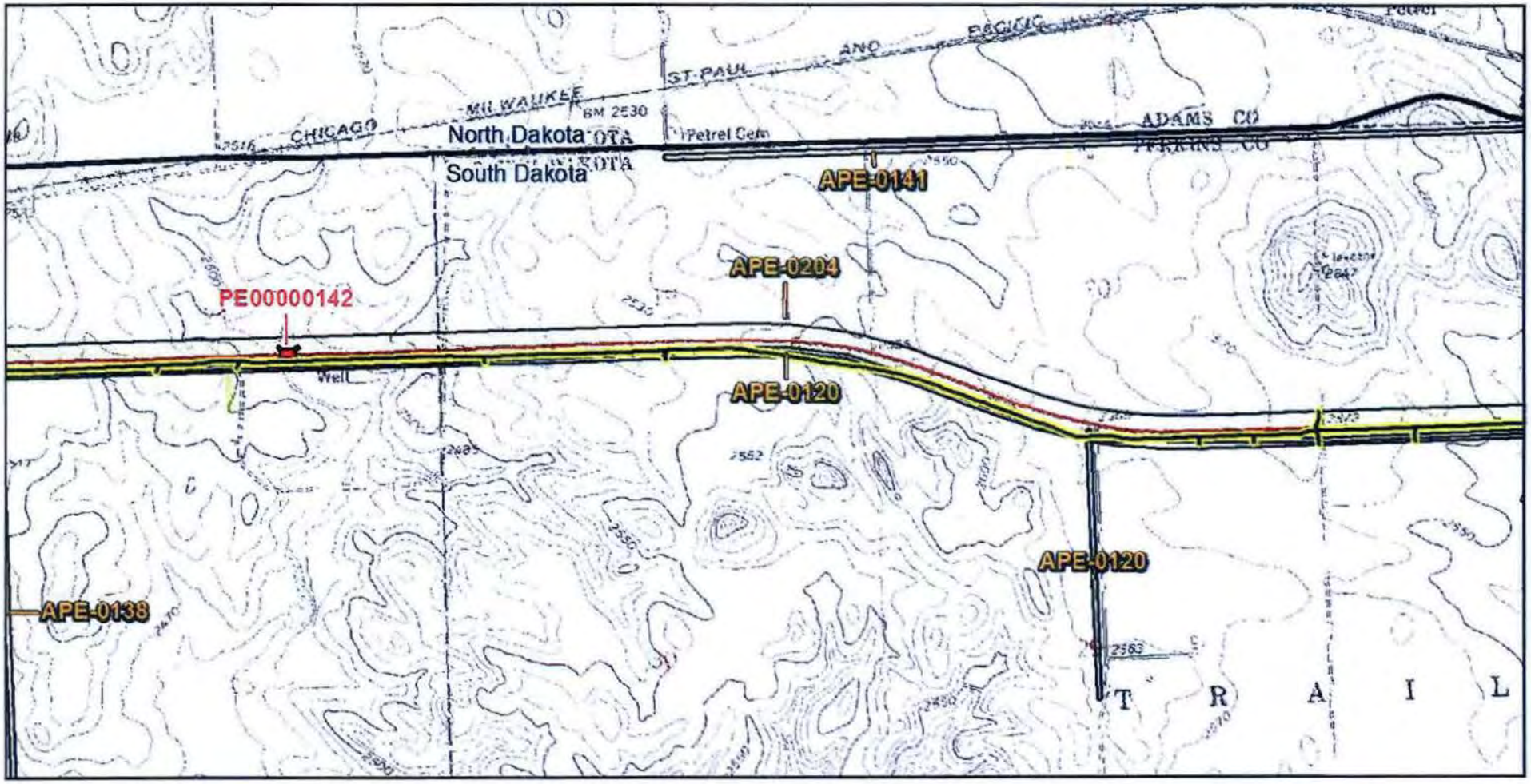
SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 2 of 4

Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 24 & 25, T23N R14E
Sections 19-21, 28 & 29, T23N R15E
USGS 7.5' White Butte Quadrangle
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 2 of 4

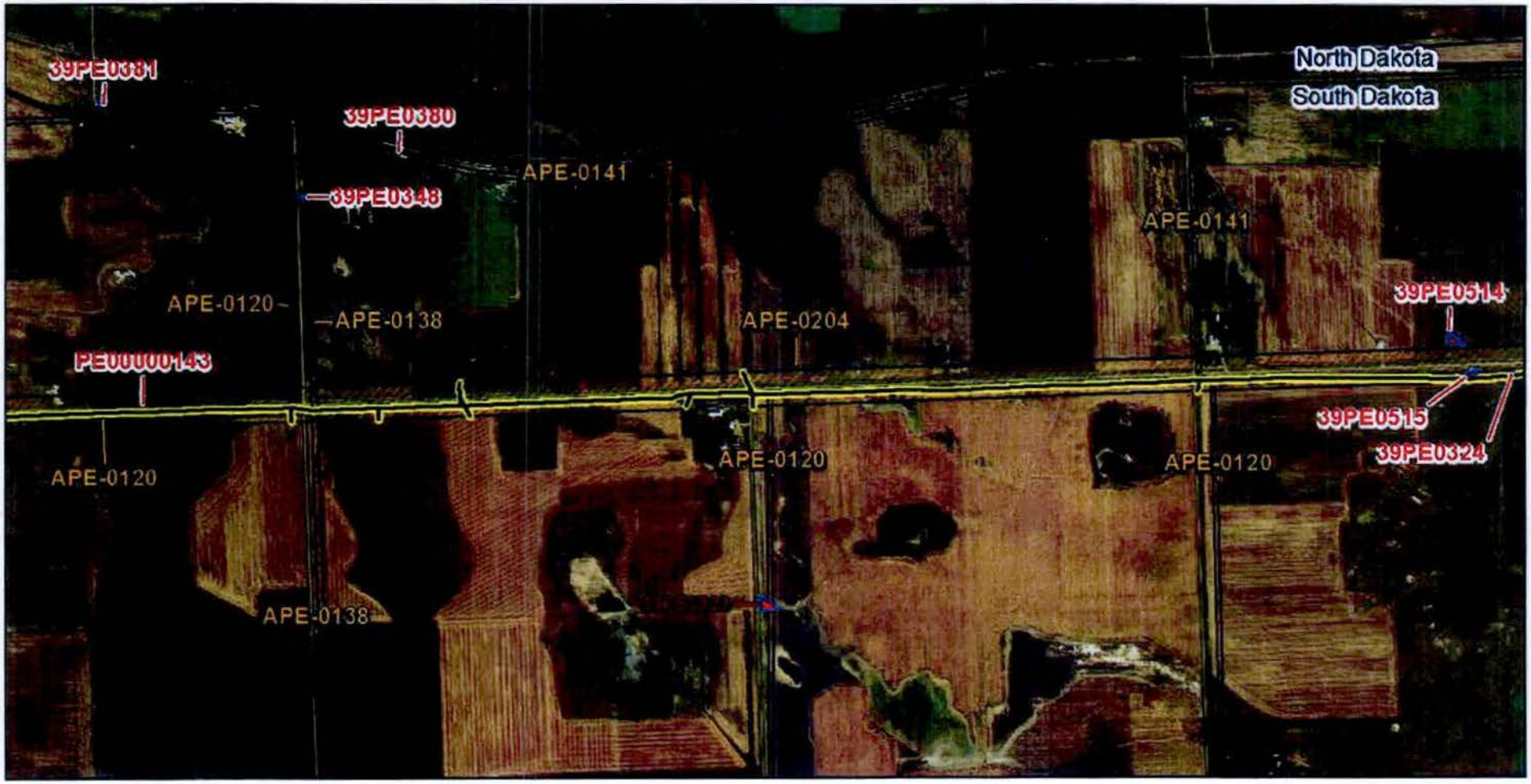


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 24 & 25, T23N R14E
Sections 19-21, 28 & 29, T23N R15E
USGS 7.5' White Butte Quadrangle
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 3 of 4

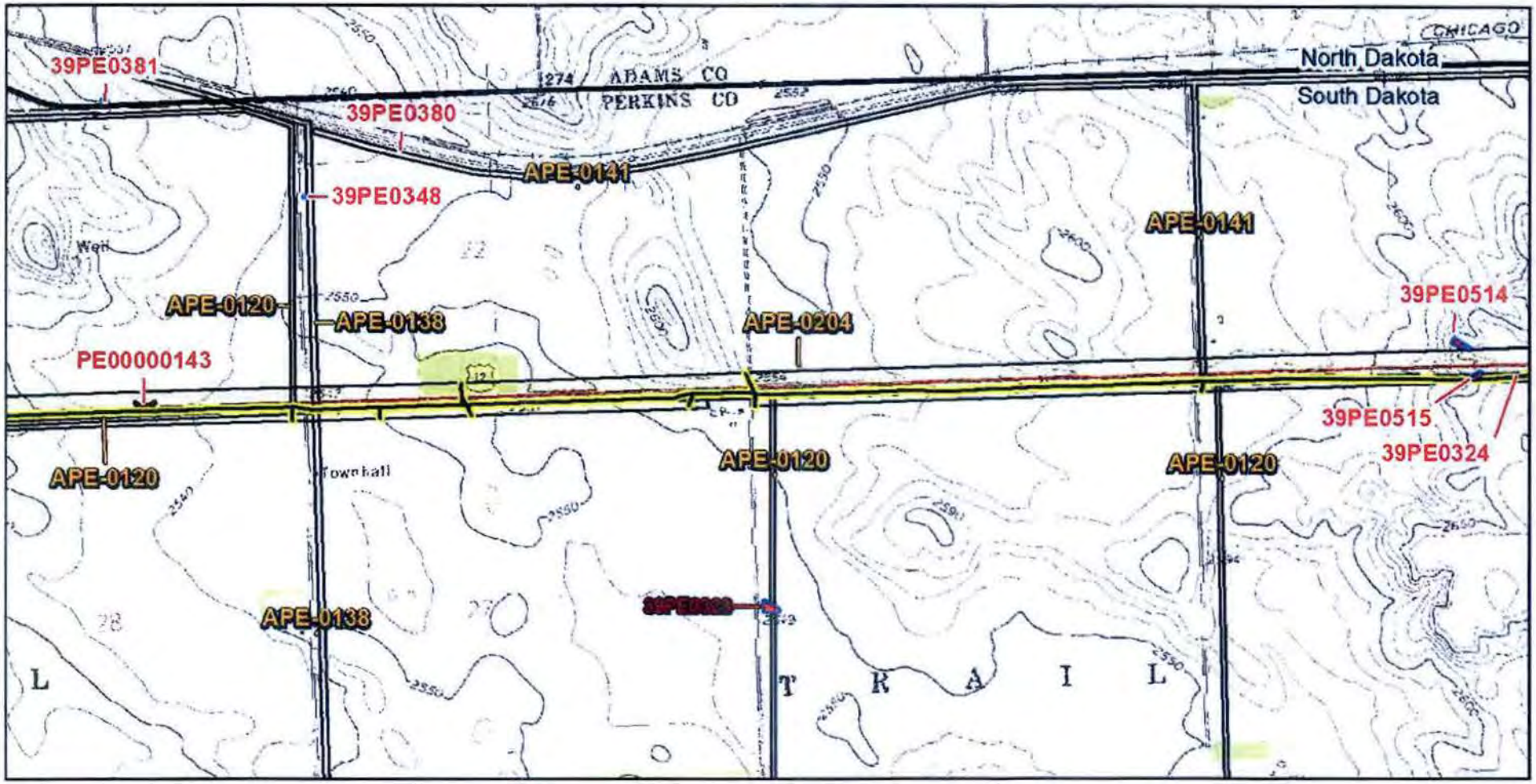


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 21-28, T23N R15E
USGS 7.5' White Butte & Lemmon Quadrangles
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 3 of 4



Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 21-28, T23N R15E
USGS 7.5' White Butte & Lemmon Quadrangles
Perkins County, South Dakota

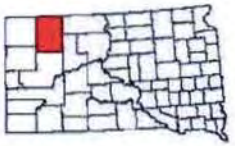
SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 4 of 4

0 0.5 1

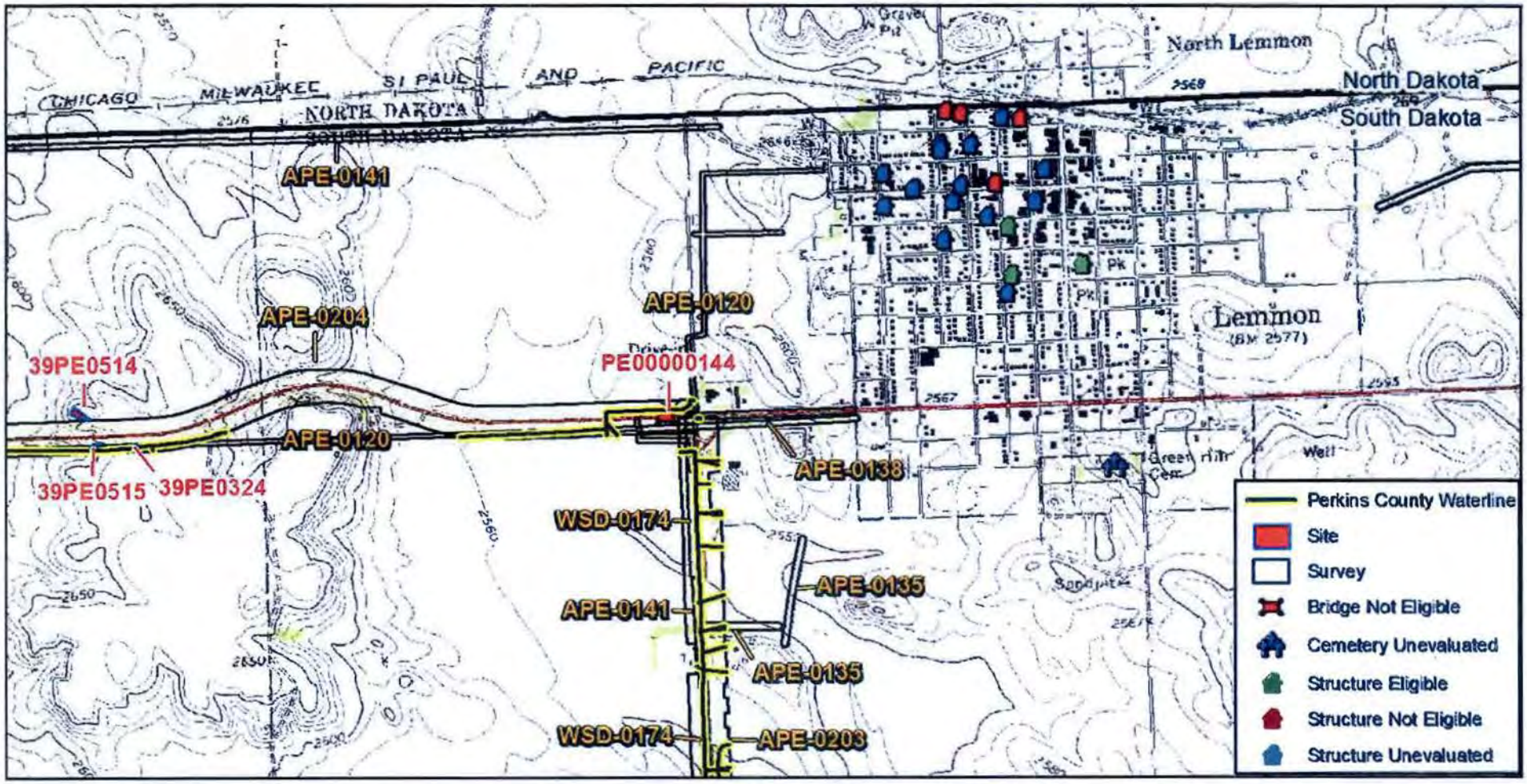
Miles

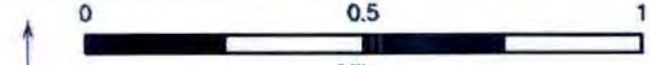
1:24,000

Sections 24-26, T23N R15E
Sections 19, 20, 29 & 30, T23N R16E
USGS 7.5' Lemmon Quadrangle
Perkins County, South Dakota



SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 4 of 4





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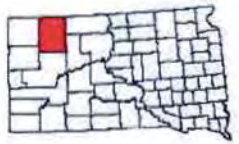
Sections 24-26, T23N R15E
Sections 19, 20, 29 & 30, T23N R16E
USGS 7.5' Lemmon Quadrangle
Perkins County, South Dakota



SDDOT PCN 023A and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 5 of 5

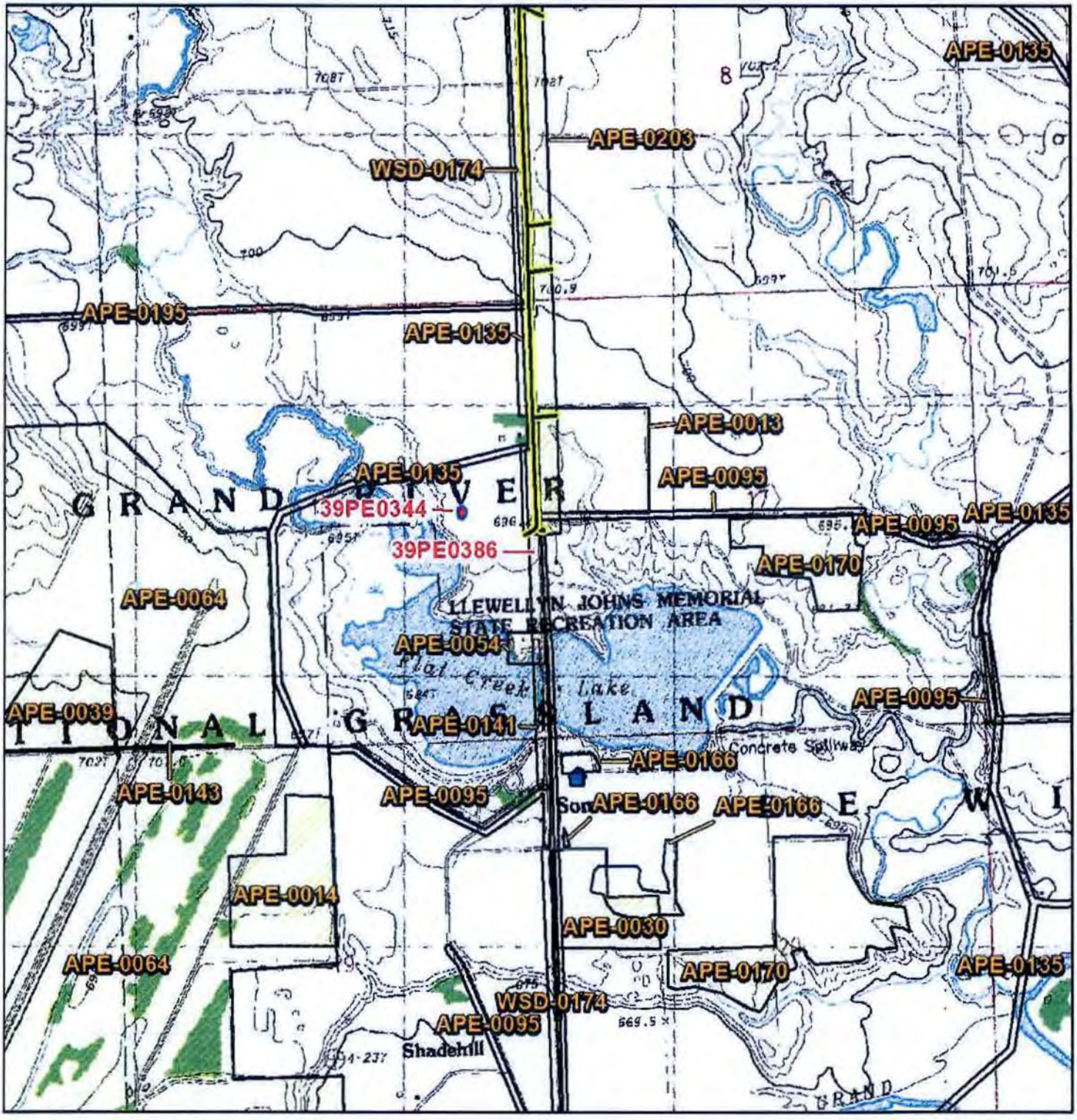
Perkins County Waterline
Site
Survey
Structure Unevaluated

0 0.5 1
Miles

1:24,000

Sections 7, 8, 17, 18, 19 & 20, T21N R16E
USGS 7.5' Summerville Quadrangle
Perkins County, South Dakota

SDDOT PCN 023A and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 5 of 5



Perkins County Waterline
Site
Survey
Structure Unevaluated

0 0.5 1
Miles

1:24,000

Sections 7, 8, 17, 18, 19 & 20, T21N R16E
USGS 7.5' Summerville Quadrangle
Perkins County, South Dakota

www.ae2s.com

October 29, 2015

Jim Donohue, Asst. State Archaeologist
SD State Historical Society
217 Kansas City Street
Rapid City, SD 57701

RE: Cultural Resources Evaluation

Dear Mr. Donohue:

We understand that you have completed a cultural resources report for the following SD-DOT projects in Perkins County, South Dakota. Projects: NH-PH 0012(168)80, P-PH 0073(60)229 & NH 0012(59)91 US Highway 12 and SD Highway 73. As we discussed, certain rural water pipes owned by Perkins County Rural Water District will need to be moved or modified as a result of the SD-DOT project.

As a result, we have prepared and enclosed preliminary plans to show where the proposed SD-DOT road modifications and the existing Perkins County Rural Water pipeline may conflict. We are requesting you review and determine if proposed pipeline modifications have any cultural resource impacts. We are proposing to either insulate the pipe or lower the pipeline in it's current location.

If you have any questions regarding proposed pipeline modifications (and our plans to avoid conflict with SD-DOT) or need more information, please contact Deon Stockert at Deon.Stockert@AE2S.com or (701) 225-9636 or myself.

Sincerely,

Larry Thelen

Larry Thelen, Program Coordinator
Advanced Engineering and
Environmental Services, Inc. (AE2S)
1815 Schafer St., Suite 301
Bismarck, ND 58501
Larry.Thelen@AE2S.com
www.ae2s.com
Voice: 701.221.0530
Fax: 701.221.0531

Enc.

Perkins County Rural Water System

104 W. Main St., PO Box 160
Bison, SD 57620-0160

Facility Plan for Drinking Water State Revolving Fund Application

US Hwy 12 and SD Hwy 73 Waterline Realignment Project

1. INTRODUCTION

1.1 Background Information

Perkins County Rural Water System, Inc. (PCRWS) is located in Perkins County, South Dakota which is located in north western South Dakota. The administrative office of PCRWS is located at 104 West Main Street, Bison, SD. The system purchases all its water supply from Southwest Water Authority in Dickinson, ND. The PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon, SD and Bison, SD. The system also supplies water to Prairie City, SD as individual users and the Shadehill Reservoir Recreation Area. There are approximately 2,000 individuals supplied water by PCRWS.

1.2 Purpose and Scope

In March 2015, the Board of Directors entered into a professional services agreement with Advanced Engineering and Environmental Services (AE2S) to consult with the Board of Directors, staff of PCRWS, and South Dakota Department of Transportation (SD-DOT) on the realignment of water lines prior to reconstruction, by the SD-DOT, of US Highway 12 (from the North Dakota state line east to Lemmon, SD) and on SD Highway 73 (south of Lemmon, SD for approximately 11 miles). The SD-DOT project is scheduled to be bid in August 2016. This will allow PCRWS to relocate the water lines during the 2016 construction season and prior to the reconstruction of the highways.

As PCRWS will need funds to relocate some pipe in 2016, it is intended that this Facility Plan support a PCRWS grant/loan application as administered by the South Dakota State Board of Water and Natural Resources. Inclusion of this project in the State Water Plan is a necessary step to a grant/loan application for DENR sponsored funding programs. This report presents an overview of the proposed US Hwy 12 and SD Hwy 73 Realignment projects along with technical information supporting the project components.

2. PROJECT DEVELOPMENT

2.1 Need for the Project

The PCRWS pipe relocation project is a result of South Dakota Department of Transportation (DOT) widening and reconstruction work along US Hwy 12 and SD Hwy 73. The US Highway 12 Right-of-Way (ROW) is being widened from 100 feet to 150 feet. SD Highway 73 ROW is not widening; however, because of road elevation changes, the cover over the existing pipeline will be negatively impacted.

Because of the reconstruction of both US Hwy 12 and SD Hwy 73, the DOT is securing additional easements along both highway projects. Temporary construction easements for soil borrowing will remove cover along portions of the waterline causing insufficient ground cover to protect the waterline from damage and prevent freezing of the waterline during the winter.

Therefore, it is necessary to adjust the depth of the waterline to ensure it will remain operational.

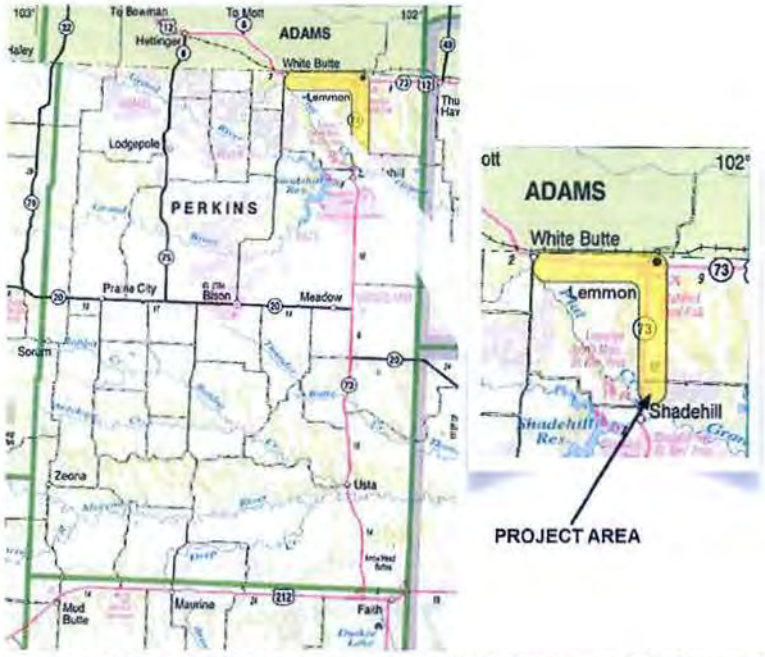


Figure 1: Map of US Highway 12 and SD Highway 73 (Near Lemmon)

2.2 Condition of the Existing System

The portions of the existing PCRWS pipe systems affected by the highway construction are PCRWS's Phase II and Phase III, shown below in Figure 2.

Figure 2: Phase II and III were built in 2005 and 2006

The portion along US Hwy 12 (Phase II) was installed in 2005 by Morris, Inc. from Ft. Pierre, SD. Phase III, along SD Hwy 73, was installed in 2006 and 2007 by Northern Improvement, Co. from Bismarck, ND. Both PCRWS Phases II and III were built using a combination of Bureau of Reclamation, DENR, and local funds.

3. ENVIRONMENTAL CONSIDERATIONS

3.1 Environmental Review

The following agencies were sent letters requesting an environmental review of the proposed project.

United States Department of Interior
Fish and Wildlife Service
420 S. Garfield Avenue
Pierre, SD 57501-5408

United States Department of Agriculture
Natural Resources Conservation Service
200 Fourth Street SW
Huron, SD 57350-2475

South Dakota Dept. of Game, Fish and Parks
Division of Wildlife
523 E. Capitol Avenue
Pierre, SD 5750-3181

U.S. Army Corps of Engineers, Omaha District
Planning Division
Attention: CENWO-PM-AE
106 South 15th Street
Omaha, NE 68102-4901

A response was received from all the agencies, and it was determined the project would have no environmental impacts. The letters and responses are attached herein as Attachment 1.

3.2 Cultural Assessment

PCRWS and AE2S worked with Jim Donohue, Asst. State Archaeologist and Terri Bruce, GIS Coordinator of the SD State Historical Society, Archaeological Research Center in Rapid City, SD for the proposed project cultural assessment. On November 18, 2015 the SD State Historic Preservation Office made a Section 106 determination of "No Historic Properties Affected" for this project. The letter and report are attached herein as Attachment 2.

4. PUBLIC PARTICIPATION

4.1 Public Hearing

A public hearing was held on November 12, 2015 at 7:00 PM in the office of PCRWS. The hearing was called to order by Board President Don Melling. Larry Thelen from AE2S and Ali DeMersseman from the Black Hills Council of Local Governments did a power point presentation to discuss the project. Mr. Thelen discussed the need for the project and alternatives that were considered. Ms. DeMersseman discussed the financial aspects of the project including SRF loan information, revenue sources for repayment, interest rate and term of the loan and effect on user rates. A copy of the presentation is attached herein as Attachment 3.

5. ALTERNATIVE DEVELOPMENT and SELECTION

5.1 Do Nothing Alternative:

This was determined to not be a reasonable alternative as protecting the waterlines from damage is paramount. Highway modifications will cause PCRWS pipes to freeze and lose water service to a large portion of the system and threaten the public health of their users.

- Advantages
    - Least cost alternative
- Disadvantages
    - Loss of water service
    - Freezing will occur as a result of reduced cover
    - Potential contamination of the system from broken waterlines
    - Risk to motorist along impacted areas

5.2 Excavate and Insulate Impacted Pipes:

This alternative assures PCRWS can maintain water service to users along the highway corridors and maintains compliance with the Safe Drinking Water Act and minimize construction costs.

- Advantages
  - Maintain regulatory compliance issues
  - Maintain water service to users
  - Protects motorists
  - Less costly as compared to relocating/replacing existing pipe
- Neutral
  - Status quo level of water quality for users
- Disadvantages
  - Cost
- Environmental Impacts
  - Limited environmental impacts due to construction activities

5.3 Health and Safety Issues

Residents in Perkins County are drinking safe water from the PCRWS and thanks to the Board and staff, their drinking water meets all health and regulatory requirements of the Safe Drinking Water Act. In order for those residents who are currently served along the US Highway 12 and SD Highway 73 corridors to continue to receive this benefit, the PCRWS pipeline will need to be moved to an appropriate elevation that avoids the highway reconstruction or its negative impacts associated with insufficient cover.

Furthermore, any pipe that breaks in winter season could create a safety concern for motorists if freezing water were to impact driving conditions. Hence, protecting/insulating the pipeline also protects the safety of motorists.

A photograph of the installation in 2006 is shown in Figure 3.

Figure 3: Pipe Installation

6. US HWY 12 and SD HWY 73 PROPOSED PROJECT

6.1 Description of the Proposed Project

The proposed project will consist of primarily excavating and insulating existing waterlines; however, about 40% of impacted areas will involve excavating and installing new waterlines at a lower elevation due to the improvements to US Hwy 12 and SD Hwy 73.

6.2 Land Acquisition/Easements/Legal

Because PCRWS will be excavating and insulating or excavating and lowering the waterline in place, there will be no need to acquire any additional land or easements for this project.

Mr. Eric Bogue of Bogue and Bogue has been retained to review and approve all documentation for the project and advise the board of Directors on any legal questions they may have.

6.3 Design Parameters

The project is located in the service area of PCRWS and is not an expansion of the service area. It is anticipated that the water usage of the area will remain the same after the project is completed.

6.4 Cost Estimates

The following tables show the anticipated summary of construction items and total project costs needed to resolve insufficient soil cover and prevent conflicts with the proposed SD DOT plans. It should be noted that opinions of total probable costs, which are presented in this report, are based on preliminary engineering data obtained to date and conceptual information included in this report. All estimates are based on engineering experience, recent bid tabulations for projects of similar scope, and input from area contractors and material suppliers. It should be noted that all costs are presented in 2015 dollars.

Preliminary Opinion of Probable Project Construction Costs

Item	Type	Quantity	Unit	Unit Cost	Total Cost
Insurance, Bonds, Mobilization		1	LS	$100,000	$100,000
Traffic Control		1	LS	$10,000	$10,000
SWPPP Implementation		1	LS	$5,000	$5,000
Remove Existing and Install New	1.5" PVC – Class 250	43	LF	$3.75	$161
Remove Existing and Install New	2.0" PVC – Class 250	5,810	LF	$4.75	$27,598
Remove Existing and Install New	6.0" PVC – Class 200	2,100	LF	$8.50	$17,850
Remove Existing and Install New	6.0" PVC – Class 250	1,561	LF	$9.00	$14,049
Remove Existing and Install New	8.0" PVC – Class 200	1,134	LF	$12.50	$14,175
Install 2.0" Temp Line Stops		6	EA	$800	$4,800
Install 6.0" Insert Valve		14	EA	$4,000	$56,000
Install 8.0" Temp Line Stops		3	EA	$6,000	$18,000
Excavate and Install Insulation	All Types	9,463	LF	$10	$94,630
Water Main Fittings	6"-8"	52	EA	$750	$39,000
Water Service Fittings	1.5"-2"	12	EA	$200	$2,400
Salvage and Reinstall Gate Value and Risers	All Types	2	EA	$2,500	$5,000
Salvage and Reinstall Meter Pits		2	EA	$2,000	$4,000
Uncased Bore Wetland Crossing	8" SDR 7 HDPE	1,649	LF	$200	$329,800
Plug and Abandon 8" Water Main		2	EA	$300	$600
Hydro Excavation		1	LS	$10,000	$10,000
Topsoil Strip, Stockpile and Respread		12,000	SY	$15	$180,000
Seeding	Class II Seed	2.48	AC	$2,500	$6,200
Fiber Roll		8,000	LF	$3.20	$25,600
Silt Fence		22,000	LF	$5	$110,000
Silt Fence Removal		22,000	LF	$0.50	$11,000
Hwy Sign Salvage and Reinstall		1	LS	$5,000	$5,000
Rock Excavation		20	CY	$200	$4,000
				TOTAL COST	**$1,094,863**

*This cost estimate prepared in December is preliminary. To be revised as design progresses.

Project Costs Breakdown

	Approximate Cost
Construction Costs: Water Distribution System – US Hwy 12 & SD Hwy 73	$1,094,863
Engineering & Construction Phase Services	$289,856
Booster Station Improvements	$46,000
Legal and Bond Council	$5,000
Contingencies	$286,281
Total Probable Project Costs	**$1,722,000**

*This cost estimate prepared in December is preliminary. To be revised as design progresses.

6.5 Engineering

AE2S will provide the following services (please note this is an abbreviated list of services meant to provide general insight):

- Preliminary Engineering Report
- Work with DENR, RD, BHC, MAP to secure financing
- All necessary work of Design Phase to develop a plan set and specifications (including bidding requirements) so this project can be publicly bid and awarded. Plans and specifications will need to be approved by PCRWS and funding agencies.
- All necessary Bid Phase services including advertising, coordination with bidders, addendums, and bid opening assistance. All Bid Documents shall be approved by PCRWS, legal counsel, and funding agencies.
- Provide Construction Phase Services including the following:
    - Survey the waterline route and provide construction staking
    - Review shop drawings
    - Provide on-site visits and observe/document construction (Resident Project Rep)
    - Prepare/Submit monthly pay applications to PCRWS and funding agencies.
    - Provide assistance with pressure testing and disinfection of the water line
    - Provide Substantial and Final Completion Certificates
- Provide Post-Construction Phase Services including any warranty coordination with contractor and assist PCRWS with funding agency closeout.

6.6 Administration

The staff of PCRWS will play an important role in helping to administer this project and the amount of time they will contribute to the project. The office staff, consisting mainly of Brandi Baysinger, will handle a portion of the administrative work that will be required for the loan application and the documentation necessary to complete the loan application. The operations staff (Shiloh Baysinger and Eric Newman) will work with the contractor in the field to ensure the integrity of the system is maintained during construction.

6.7 User Rate Impacts

Currently; PCRWS's Fixed Water Charge is $64.00 per month for residual hook-ups and $365 per year for pasture and seasonal hook-ups. The water rate is $5.86 per 1,000 gallons. After the proposed project is completed, the typical monthly water bill for a residential hook-up is anticipated to be $105.02 for 7,000 gallons of water. This is the highest water rate in the four state area, (SD, ND, MT and MN) according to a voluntary utility rate study done by AE2S Nexus group in 2014. It is anticipated there will be no impact on users rates as a result of the proposed financing. The annual O&M costs should not increase because of this project.

6.8 Implementation Schedule

Item	Date
Submit State Water Application Form to Black Hills Council of Local Governments	May 1, 2015
Placement on State Water Plan	June, 2015
Funding Application Due	January 1, 2016
Preliminary Plans & Specification Submitted	January, 2016
Funding Award	March, 2016
Board Approval and Accept Loan and Proceed	March, 2016
Final Plans and Specifications Submitted for Bidding	March, 2016
Bidding	March, 2016
Begin Construction	Summer, 2016
Construction Completed	Fall, 2016

6.9 Project Summary

The following conclusions were developed from the information provided by the PCRWS staff and the SD DOT.

- The SD DOT will be widening and reconstructing US Hwy 12 and SD Hwy 73 and that will require PCRWS to relocate and adjust approximately 4 miles of waterline located along the two highways.
- The waterline that is in-place provides water service to the City of Lemmon and it's rural users.
- The reconstruction of the highways will require ground cover be removed and thus leave the waterline exposed to damage during the DOT construction or to freezing during the winter months. The damaged waterline would mean loss of service to PCRWS consumers, potential contamination of the system, and potential hazard to motorists.

Based on the information provided, AE2S recommends the PCRWS Board of Directors proceed with the steps necessary to secure the financing to move the waterline in 2016 and protect the integrity of the public water system (thus continuing service to their users).

BLACK HILLS

October 26, 2015

CENWO-PM-AC
United States Army Corps of Engineers, Omaha District
Planning Branch
1616 Capitol Avenue, Ste. 9000
Omaha, NE 68102

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear CENWO-PM-AC,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

PCRWS is located in Perkins County in northwestern South Dakota. The system purchases all its water supply from Southwest Water Authority in Dickinson, ND. The PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon, SD and Bison, SD. The system also supplies water to Prairie City, SD users and the Shadehill Reservoir Recreation Area. There are approximately 2,000 individuals supplied water by PCRWS.

In March 2015, the Board of Directors entered into a professional services agreement with Advanced Engineering and Environmental Services (AE2S) to consult with the Board of Directors, staff of PCRWS, and South Dakota Department of Transportation (SD-DOT) on the realignment/lower of certain water lines prior to reconstruction by the SD-DOT of US Highway 12 (from the North Dakota state line east to Lemmon, SD) and on SD Highway 73 (south of Lemmon, SD for approximately 11 miles). The SD-DOT project is scheduled to be bid in August 2016. This will allow PCRWS to relocate/lower certain water lines during the 2016 construction season and prior to the reconstruction of the highways.

As part of this project, PCRWS will also be installing a SCADA system at the Highway 20 booster station in order to monitor and preempt any issues with the station. In addition, fencing will be installed at the Highway 75 booster station to provide security. The attached maps and plans identify the location of all proposed improvements.

We are respectfully requesting your written response to this letter within 30 days. Even if your agency has no concerns, please send a written response. If you have any questions regarding this letter, or require additional information, please contact me at ademersseman@tie.net or (605) 394-2681.

Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

REPLY TO
ATTENTION OF

November 13, 2015

Planning, Programs, and Project Management Division

Ms. Ali DeMersseman
Black Hills Council of Local Governments
730 East Watertown Street, Suite 102
Rapid City, South Dakota 57701

Dear Ms. DeMersseman:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated October 26, 2015 (received October 30, 2015) regarding the environmental review of the Perkins County Rural Water Highway 12 & 73 Waterline Relocation and Booster Station Improvements Project in Perkins County, South Dakota. We offer the following comments for your consideration:

Your plans should be coordinated with the state water quality office that has jurisdiction within the area where the project is located to ensure compliance with federal and state water quality standards and regulations mandated by the Clean Water Act and administered by the U.S. Environmental Protection Agency. Please coordinate with the South Dakota Department of Environment & Natural Resources concerning state water quality programs.

If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks regarding fish and wildlife resources. In addition, the South Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

If the proposed waterline construction crosses the floodplains of small drainageways and streams, flood-related problems should not occur if the lines are buried far enough below the beds of drainageways and streams to prevent exposure due to streambed erosion during periods of high floodflows. Any aboveground construction subject to flood damage, such as pump houses, should either be placed above, or flood proofed to, a level above the one percent annual chance flood elevation.

Since the proposed project does not appear to be located within Corps owned or operated lands, your plans should be submitted to the local floodplain administrator for review and approval prior to construction. It should be ensured that the proposed project is in compliance with the floodplain management criteria of Perkins County and the State of South Dakota. In addition, please coordinate with the following floodplain management office:

South Dakota Division of Emergency Management
Attention: Mr. Marc Macy
118 W. Capitol Avenue
Pierre, South Dakota 57501
Telephone: 605-773-3231
Fax: 605-773-3580
Email: marc.macy@state.sd.us

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (http://www.nwo.usace.army.mil/Missions/RegulatoryProgram.aspx) to determine if this project requires a 404 permit. For a detailed review of the permit requirements, preliminary and final project plans should be sent to:

U.S. Army Corps of Engineers
Pierre Regulatory Office
Attention: Mr. Steve Naylor, CENWO-OD-R-SD
28563 Powerhouse Road, Room 120
Pierre, South Dakota 57501

If you have any questions, please contact Ms. Amanda Ciurej of my staff at (402) 995-2897 or amanda.k.ciurej@usace.army.mil and reference PD# 6763 in the subject line.

Sincerely,

Eric A. Laux
Chief, Environmental Resources and Missouri River Recovery Program Plan Formulation Section

BLACK HILLS

October 26, 2015

Deanna Peterson
United States Department of Agriculture
Natural Resources Conservation Services
Federal Building, 200 Fourth Street SW
Huron, SD 57350

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Ms. Peterson,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

PCRWS is located in Perkins County in northwestern South Dakota. The system purchases all its water supply from Southwest Water Authority in Dickinson, ND. The PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon, SD and Bison, SD. The system also supplies water to Prairie City, SD users and the Shadehill Reservoir Recreation Area. There are approximately 2,000 individuals supplied water by PCRWS.

In March 2015, the Board of Directors entered into a professional services agreement with Advanced Engineering and Environmental Services (AE2S) to consult with the Board of Directors, staff of PCRWS, and South Dakota Department of Transportation (SD-DOT) on the realignment/lower of certain water lines prior to reconstruction by the SD-DOT of US Highway 12 (from the North Dakota state line east to Lemmon, SD) and on SD Highway 73 (south of Lemmon, SD for approximately 11 miles). The SD-DOT project is scheduled to be bid in August 2016. This will allow PCRWS to relocate/lower certain water lines during the 2016 construction season and prior to the reconstruction of the highways.

As part of this project, PCRWS will also be installing a SCADA system at the Highway 20 booster station in order to monitor and preempt any issues with the station. In addition, fencing will be installed at the Highway 75 booster station to provide security. The attached maps and plans identify the location of all proposed improvements.

We are respectfully requesting your written response to this letter within 30 days. Even if your agency has no concerns, please send a written response. If you have any questions regarding this letter, or require additional information, please contact me at ademersseman@tie.net or (605) 394-2681.

Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

USDA

United States Department of Agriculture

November 27, 2015

Ali DeMersseman
Black Hills Council of Local Governments
730 E. Watertown Street, Suite 102
Rapid City, SD 57701

RE: Environmental Review for
Perkins Co. Rural Water System, Highways 12 &73 Waterline Relocation and Booster Improvements Project

Dear Ali:

Thank you for the opportunity to provide Farmland Protection Policy Act (FPPA) review of this project. The project area as outlined **does** contain FPPA affected soils. I have included a map illustrating their approximate location relative to the project area. However, because this is a corridor type project to be installed below the soil surface it will have **no effect** on prime or important farmland as long as the soil is replaced in the order it was removed (First soil out of the trench needs to be the last back in).

If you have any questions, please contact me at (605) 348-2889 ext. 104.

Sincerely,

TIMOTHY NORDQUIST
NRCS Conservation Agronomist

Natural Resources Conservation Service
414 E Stumer Road, Suite 700
Voice: 605.348.2889 ext 104 Fax: 855.256.2553
An Equal Opportunity Provider and Employer

BLACK HILLS

October 26, 2015

Scott Larson, Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
420 South Garfield Avenue
Pierre, SD 57501

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Mr. Larson,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

PCRWS is located in Perkins County in northwestern South Dakota. The system purchases all its water supply from Southwest Water Authority in Dickinson, ND. The PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon, SD and Bison, SD. The system also supplies water to Prairie City, SD users and the Shadehill Reservoir Recreation Area. There are approximately 2,000 individuals supplied water by PCRWS.

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As part of this project, PCRWS will also be installing a SCADA system at the Highway 20 booster station in order to monitor and preempt any issues with the station. In addition, fencing will be installed at the Highway 75 booster station to provide security. The attached maps and plans identify the location of all proposed improvements.

We are respectfully requesting your written response to this letter within 30 days. Even if your agency has no concerns, please send a written response. If you have any questions regarding this letter, or require additional information, please contact me at ademersseman@tie.net or (605) 394-2681.

Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

BLACK HILLS
COUNCIL OF LOCAL GOVERNMENTS

RECEIVED
OCT 29 2015
U.S. FISH & WILDLIFE SERVICE

October 26, 2015

Scott Larson, Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
420 South Garfield Avenue
Pierre, SD 57501

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Mr. Larson,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

PCRWS is located in Perkins County in northwestern South Dakota. The system purchases all its water supply from Southwest Water Authority in Dickinson, ND. The PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon, SD and Bison, SD. The system also supplies water to Prairie City, SD users and the Shadehill Reservoir Recreation Area. There are approximately 2,000 individuals supplied water by PCRWS.

In March 2015, the Board of Directors entered into a professional services agreement with Advanced Engineering and Environmental Services (AE2S) to consult with the Board of Directors, staff of PCRWS, and South Dakota Department of Transportation (SD-DOT) on the realignment/lower of certain water lines prior to reconstruction by the SD-DOT of US Highway 12 (from the North Dakota state line east to Lemmon, SD) and on SD Highway 73 (south of Lemmon, SD for approximately 11 miles). The SD-DOT project is scheduled to be bid in August 2016. This will allow PCRWS to relocate/lower certain water lines during the 2016 construction season and prior to the reconstruction of the highways.

As part of this project, PCRWS will also be installing a SCADA system at the Highway 20 booster station in order to monitor and preempt any issues with the station. In addition, fencing will be installed at the Highway 75 booster station to provide security. The attached maps and plans identify the location of all proposed improvements.

We are respectfully requesting your written response to this letter within 30 days. Even if your agency has no concerns, please send a written response. If you have any questions regarding this letter, or require additional information, please contact me at ademersseman@tie.net or (605) 394-2681.

Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

This constitutes a report of the Department of the Interior prepared in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). We have reviewed and have NO OBJECTION to this proposed project.

11/9/15
Date

Scott Larson
Field Supervisor

BLACK HILLS

October 26, 2015

Leslie Murphy, Senior Biologist
Department of Game, Fish & Parks
Division of Wildlife
523 East Capitol Avenue
Pierre, SD 57501

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Ms. Murphy,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

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Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

DEPARTMENT OF GAME, FISH, AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

October 29, 2015

Ms. Ali DeMersseman
Black Hills Council of Local Governments
730 East Watertown St.
Suite 102
Rapid City, SD 57701

RE: Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation & Booster Station
Perkins County, South Dakota

Dear Ms. DeMersseman:

The South Dakota Department of Game, Fish and Parks, Wildlife Division, has reviewed the above project involving the relocation of water lines along Highways 12 & 73, installation of a SCADA system at the Highway 20 booster station, and construction of a security fence at the Highway 75 booster station.

At this time, the project as proposed will have no impacts on fish and wildlife resources. If the project design changes, please submit the revised project for review.

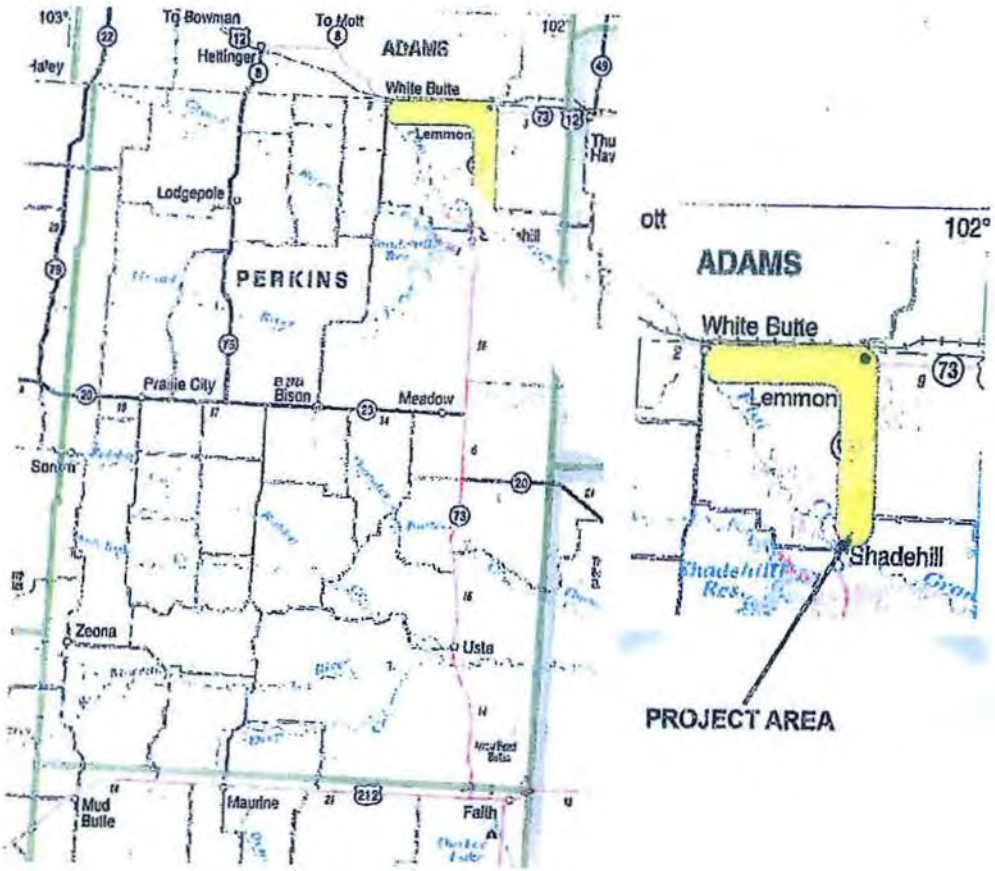
Thank you for the opportunity to provide comments on this project. If you have any questions, please contact me at 605.773.6208.

Sincerely,

Leslie Murphy
Senior Biologist

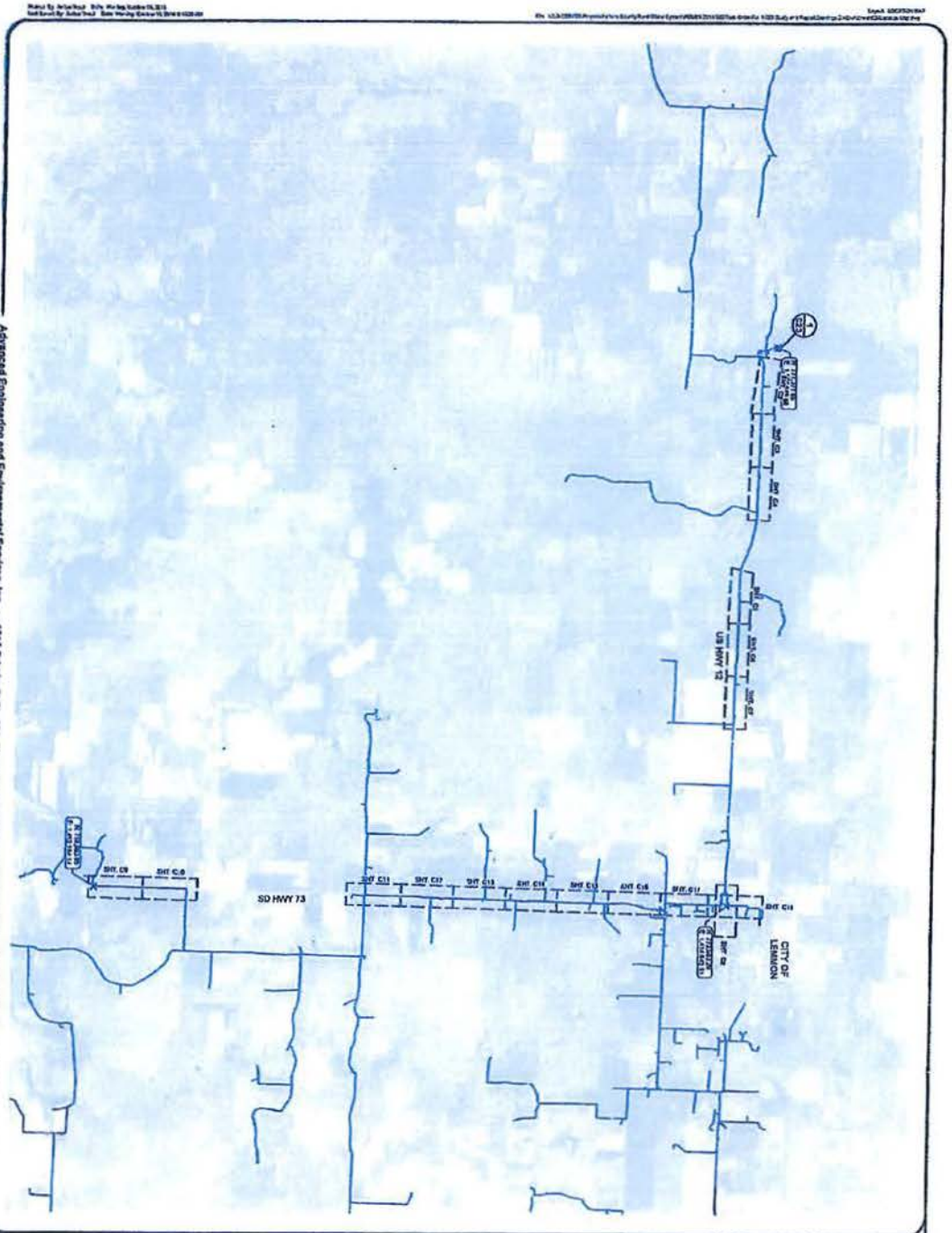
www.ae2s.com

Perkins County Rural Water System, Inc.
US Highway 12 and SD Highway 73 Waterline Realignment Project



Map of US Highway 12 and SD Highway 73 (Near Lemmon)

Advanced Engineering and Environmental Services, Inc.
1815 Schafer Street Suite 301 • Bismarck, ND 58501 • (t) 701-221-0530 • (f) 701-221-0531



Advanced Engineering and Environmental Services, Inc. • • 1815 Schafer St Ste 301 Bismarck, ND 58501 • • (t) 701-221-0530 (f) 701-221-0531 • • www.ae2s.com

PRELIMINARY

MILESTONE - 40%

Scale in Feet

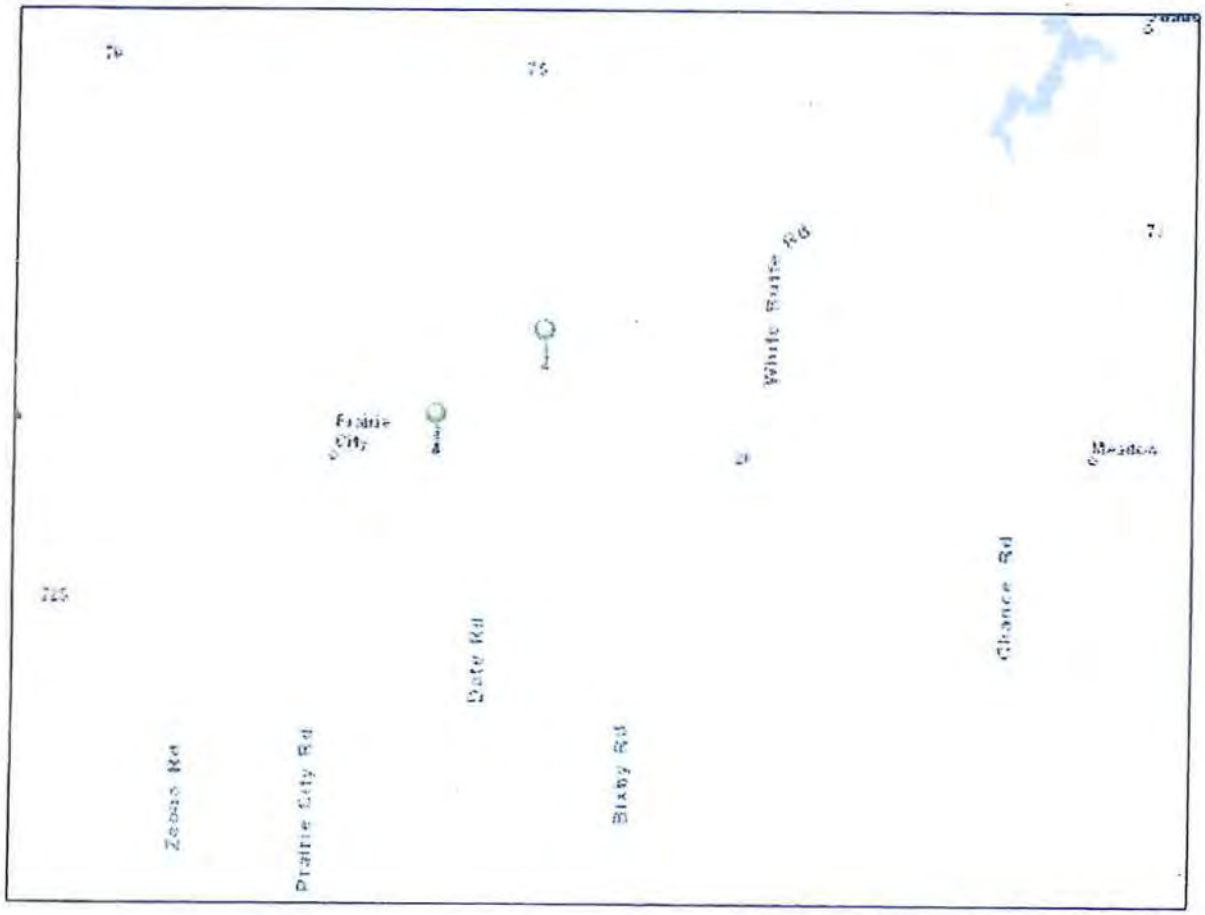
G4

PERKINS COUNTY RURAL WATER SYSTEMS, INC.
PERKINS COUNTY RURAL WATER SYSTEM, INC.
BISON, SOUTH DAKOTA
LOCATION MAP

AE2S

SYM	DATE	DESCRIPTION	APPR

PCRWS Booster Station Improvements Map



Esri, HERE, DeLorme, NGA, USGS

Attachment 2

Cultural Assessment

Department of Transportation
Office of Project Development
Environmental Office
700 E Broadway Avenue
Pierre, South Dakota 57501-2586
605/773-3268 Fax: 605/773-6608

NOV 18 2015
South Dakota SHPO

November 17, 2015

Amy Rubingh, Review & Compliance Archaeologist
State Historic Preservation Office
Cultural Heritage Center
900 Governors Drive
Pierre, SD 57501-2217

RE: Perkins Co. Rural Water District Water Line Project along SDDOT projects: PCN 0234
NH-PH 0012(168)80 PCN 02QB & P-PH 0073(60)231 PERKINS COUNTY
US12 from the ND State Line to Lemmon & SD73 from Dewitt Rd. to the W. US12 Jct

Dear Ms. Rubingh:

Attached is a copy of an ARC records search report dated November 17, 2015 for water line modifications along the above projects. Three previously recorded sites (39PE0324, 39PE0515 & 39PE0338) may be impacted by the water line project, however, all were previously determined Not Eligible for the NRHP.

The report recommends a Section 106 Finding of No Historic Properties Affected for the water line project. The SDDOT concurs and requests SHPO concurrence in a Section 106 determination of ***No Historic Properties Affected*** for the Perkins County Rural Water District water line project.

Sincerely,

Alice Whitebird

Alice Whitebird
Environmental Scientist III
Office of Project Development
(605) 773-3309

alice.whitebird@state.sd.us

SECTION 106 DETERMINATION
Based upon the information provided to the South Dakota State Historic Preservation Office on 11/18/15 we concur with your agency's determination of "No Historic Properties Affected" for this undertaking.

Gary D. Vost
State Historic Preservation Officer (SHPO)
By: Amy Rubingh
11/24/15 95118001F
Date SHPO Project #

Attachment

SECTION 106 CONSULTATION
Concurrence of the State Historic Preservation Office does not relieve the federal agency official from consulting with other appropriate parties, as described in 36 CFR Part 800.2(c).

Pursuant to 36 CFR part 800.13, if historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the Section 106 process, the agency official shall avoid, minimize or mitigate the adverse effects to such properties and notify the SHPO/THPO, and Indian tribes that might attach religious and cultural significance to the affected property within 48 hours of the discovery.

Whitebird, Alice

From: Donohue, Jim
Sent: Tuesday, November 17, 2015 9:41 AM
To: Whitebird, Alice
Subject: FW: Perkins County Rural Water District Plans for PCNs 02QB and 023A
Attachments: AE2S Letter for Perkins County Rural Water from Larry Thelen.pdf; Perkins County Rural Water Pipeline Record Search Results.xlsx; Perkins County Water and DOT 023A 5 Aerial.jpg; Perkins County Water and DOT 023A 5 Topo.jpg; Perkins County Water and DOT 02QB 1 Aerial.jpg; Perkins County Water and DOT 02QB 1 Topo.jpg; Perkins County Water and DOT 02QB 2 Aerial.jpg; Perkins County Water and DOT 02QB 2 Topo.jpg; Perkins County Water and DOT 02QB 3 Aerial.jpg; Perkins County Water and DOT 02QB 3 Topo.jpg; Perkins County Water and DOT 02QB 4 Aerial.jpg; Perkins County Water and DOT 02QB 4 Topo.jpg; Perkins County Water and DOT 023A 1 Aerial.jpg; Perkins County Water and DOT 023A 1 Topo.jpg; Perkins County Water and DOT 023A 2 Aerial.jpg; Perkins County Water and DOT 023A 2 Topo.jpg; Perkins County Water and DOT 023A 3 Aerial.jpg; Perkins County Water and DOT 023A 3 Topo.jpg; Perkins County Water and DOT 023A 4 Aerial.jpg; Perkins County Water and DOT 023A 4 Topo.jpg

Hi Alice:

Perkins County Rural Water is going to be moving waterlines due to the proposed road reconstruction of Highway 12, PCN 02QB and Highway 73 for SDDOT Projects PCN023A. Attached please find the maps and files search for the proposed project. Two sites could be impacted by PCN 02QB (Highway 12). These are 39PE0324 and 39PE0515 and both were determined to be Not Eligible by SHPO. One site, 39PE0338, could be impacted by SDDOT Project PCN023A (Highway 73). Site 39PE0338 was also determined to be Not Eligible by SHPO. Consequently, I am recommending a Section 106 Finding of No Historic Properties Affected for this water line project based on the previous surveys, site evaluations, and the results of the attached files search. Please do not hesitate to contact me if you have any questions in regards to this files search.

Best regards

Jim

Perkins County Rural Water Pipeline , Perkins County			
In Regards to SDDOT Projects 02QB (APE-0204) and 032A (APE-0203)			
T. Bruce 11/13/15			
Within Project Area			
Sites			
Site No.	**Description**	**Eligibility**	
39PE0324	native american isolated find	Not Eligible	
39PE0338	school foundation; well/cistern	Not Eligible	
39PE0515	prehistoric artifact scatter	Not Eligible	
Surveys			
Archive No	**Author(s)**	**Year**	**Report Title**
APE-0013	Hovde, David M.	1980	South Dakota Department of Transportation Gravel Pit Survey, Butte, Harding and PERKINS (Pit #6-T17N-R10E, Section 7; Pit #70-T16N, R16E, Section 24; Pit #72-T21N, R16E, Section 17) Counties, South Dakota. CIS No. 26e
APE-0095	Buechler, Jeffrey V.	2002	An Intensive Cultural Resources Inventory Survey of Buried Cable Routes Associated with West River Cooperative Telephone Company's Lemmon Exchange Service Area in the Shadehill Reservoir Vicinity of Perkins County, South Dakota. Project No. 02-60
APE-0120	Buechler, Jeffrey V.	2005	A Class III Cultural Resources Inventory Survey of Phase 2 of the Perkins County Rural Water System, Inc. in Northern Perkins County, South Dakota. Project No. 05-16
APE-0135	Buechler, Jeffrey V.	2006	A Class III Cultural Resources Inventory Survey of Phase III of the Perkins County Rural Water System, Inc. in Adams County, North Dakota & Perkins County, South Dakota. Project No. 06-17
APE-0138	Buechler, Jeffrey V.	2007	A Cultural Resources Inventory Survey of West River Cooperative Telephone Company's Buried Cable Routes in the Bison/Lemmon Vicinity of Adams County, North Dakota and Perkins County, South Dakota. Project No. 07-07

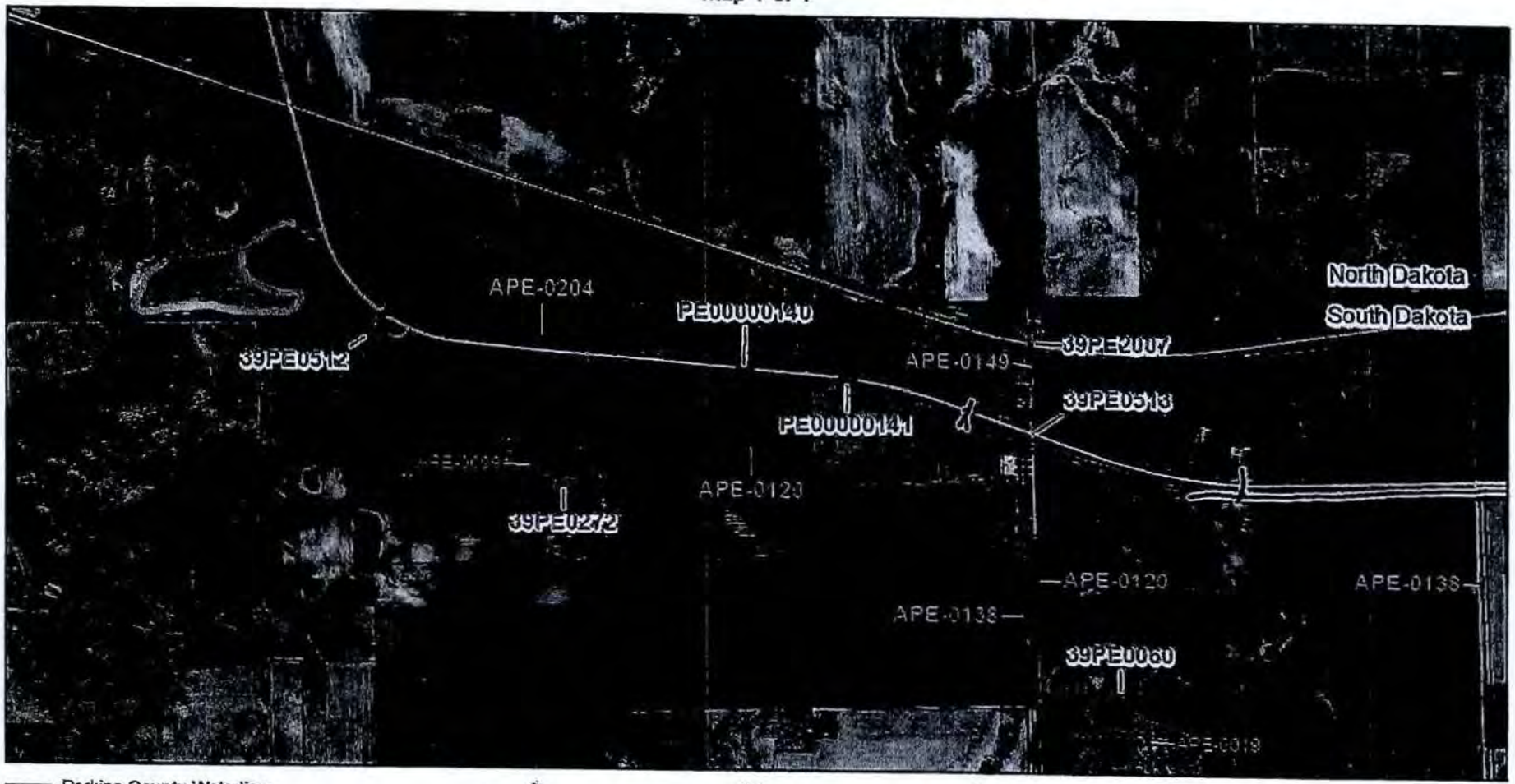
APE-0141	Buechler, Jeffrey V.	2008	A Cultural Resources Inventory Survey of West River Cooperative Telephone Company's Lemmon Exchange Buried Cable Routes in the Lemmon Vicinity of Adams County, North Dakota and Perkins County, South Dakota. Project No. 08-28
APE-0149	Buechler, Jeffrey V.	2008	A Cultural Resources Inventory Survey of Perkins County Rural Water Systems, Inc.'s Phase V Project in Perkins Counties, South Dakota. Project No. 08-35
APE-0195	Buechler, Jeffrey V.	2014	A Short Format Report of a Cultural Resources Inventory Survey of Grand Electric Cooperative's Underground Conversion Projects in Perkins County, South Dakota (Part II). Project No. 14-22
APE-0203	Byrne, Daniel	2015	An Intensive Cultural Resources Survey of SDDOT Project P-PH 0073(60)229, PCN 023A, a Segment of SD 73 from the Grand River Bridge North to the West Junction US Highway 12, Perkins County, South Dakota. CIS No. 2845
APE-0204	Byrne, Daniel	2015	An Intensive Cultural Resources Survey of SDDOT Project NH-PH 0012(68), PCN 02QB, US Highway 12 from the North Dakota State Line East to its Junction with SD Highway 73, Perkins County, South Dakota. CIS No. 2846
APE-0210	Byrne, Daniel	2015	The National Register of Historic Places Evaluation of Site 39PE515 for SDDOT Project NH-PH 0012(168), PCN 02QB and Sites 39PE509, 39PE510 and 39PE511 for SDDOT Project P-PH 0073(60)229, PCN 023A, Perkins County, South Dakota. CIS No. 2876
WSD-0174	Buechler, Jeffrey V.	1997	An Intensive Cultural Resources Inventory Survey of West River Cooperative Telephone Association's 1997 Buried Cable Routes in Butte, Harding, Meade and Perkins Counties, South Dakota. Project No. 97-22
Within a 1 Mile Radius			
Sites			
Site No.	**Description**	**Eligibility**	
39PE0060	native american artifact scatter	Unevaluated	
39PE0222	school foundation	Unevaluated	
39PE0272	farmstead; euroamerican artifact scatter	Unevaluated	
39PE0323	farmstead; euroamerican artifact scatter	Unevaluated	

39PE0344	native american artifact scatter	Unevaluated	
39PE0348	native american isolated find	Recommended Not Eligible; No SHPO Determination	
39PE0380	native american isolated find	Not Eligible	
39PE0381	euroamerican monument	Eligible	
39PE0386	prehistoric isolated find	Not Eligible	
39PE0509	prehistoric artifact scatter	Recommended Not Eligible; No SHPO Determination	
39PE0510	prehistoric artifact scatter	Recommended Not Eligible; No SHPO Determination	
39PE0511	prehistoric artifact scatter	Recommended Not Eligible; No SHPO Determination	
39PE0513	well/cistern	Unevaluated	
39PE0514	prehistoric cairn; prehistoric artifact scatter	Unevaluated	
39PE2007	railroad	Eligible	
Surveys			
Archive No	**Author(s)**	**Year**	**Report Title**
APE-0014	Hovde, David M.	1981	South Dakota Department of Transportation Gravel Pit Survey, District Five: Butte, Harding, Pennington and PERKINS (SDGF&P-T21N, R16E, Section 19) Counties, South Dakota. CIS No. 26n
APE-0019	Haberman, Thomas W.	1984	Cultural Resources Survey of a DOT Materials Pit in Section 26, T23N, R14E, Perkins County, South Dakota. CIS No. 130
APE-0030	Rhodd, Ben	1987	Cultural Resources Survey of a Department of Transportation Materials Pit Located in Section 20, T21N, R16W, Perkins County, South Dakota. SDDOT Project No. F0012(48)99, PCEMS 1268. CIS No. 330
APE-0039	Banks, Kimball M.	1992	Where the Grass Grows Green: A Cultural Resources Inventory of Three Habitat Areas, Shadehill Reservoir, Perkins County, South Dakota. Project No. 92-BF-18
APE-0054	Hanson, Rick	1993	Letter Report on an Intensive Cultural Resources Survey of DOT Project P0073(38)229, PCEMS 3153, Perkins County, South Dakota. CIS No. 854
APE-0064	Toom, Dennis L., and Cythnia Kordecki	1994	Shadehill Reservoir Project Area Cultural Resources Inventory, Perkins County, South Dakota, 1992 Field Season. Contribution No. 290
APE-0071	Byrne, Daniel	1998	A Letter Report on an Intensive Cultural Resources Survey of a Bridge Replacement Project BRF 6339() PCEMS 5723, Perkins County, South Dakota. CIS No. 1298

APE-0089	Hendrickson, Gary	2002	Cultural Resource Inventory of the Larry Lutz Tree Planting Project, T22N, R16E, Section 6, Perkins, South Dakota. NRCS CRM Report No. 02PE005
APE-0099	Armitage, Charles	2003	Cultural Resource Inventory for a Tree Planting Project in the Grand/Moreau Tablelands Study Unit, T23N, R14E, Section 21, Perkins County, South Dakota. NRCS CRM Report No. 03PE002
APE-0143	Symes, Steven A.	1976	Cultural Resources Survey for Northwestern Bell Telephone, T21N, R14E, Sections 11 & 12; T21N, R15E, Section 8; T21N, R15E, Section 13 and T21N, R16E, Section 18, Perkins County, South Dakota
APE-0166	Buechler, Jeffrey V.	2010	A Cultural Resources Inventory Survey of the Merriman Gravel Pit in the Sommerville Vicinity of Perkins County, South Dakota. Project No. 10-40
APE-0170	Buechler, Jeffrey V.	2011	Letter Format Report of a Cultural Resources Inventory Survey of Two Proposed Gravel Quarries in the Sommerville Vicinity of Perkins County, South Dakota. Project No. 11-11
Bridge			
SHPIO ID	**Eligibility**		
PE00000140	Not Eligible		
PE00000141	Not Eligible		
PE00000142	Not Eligible		
PE00000143	Not Eligible		
PE00000144	Not Eligible		
Cemetery			
SHPO ID	**Eligibility**		
PE00000054	Unevaluated		
Structures			
SHPO ID	**Eligibility**		
PE00000001	Unevaluated		
PE00000039	Unevaluated		
PE00000040	Unevaluated		
PE00000043	NR Eligible		
PE00000048	Unevaluated		

PE00000049	Unevaluated		
PE00000050	Unevaluated		
PE00000051	Unevaluated		
PE00000052	Unevaluated		
PE00000055	Not Eligible		
PE00000060	Unevaluated		
PE00000061	Unevaluated		
PE00000062	Unevaluated		
PE00000063	NR Eligible		
PE00000064	Unevaluated		
PE00000065	Unevaluated		
PE00000066	Unevaluated		
PE00000067	Unevaluated		
PE00000125	NR Eligible		
PE00000136	Not Eligible		
PE00000137	Not Eligible		
PE00000138	Not Eligible		

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 1 of 4

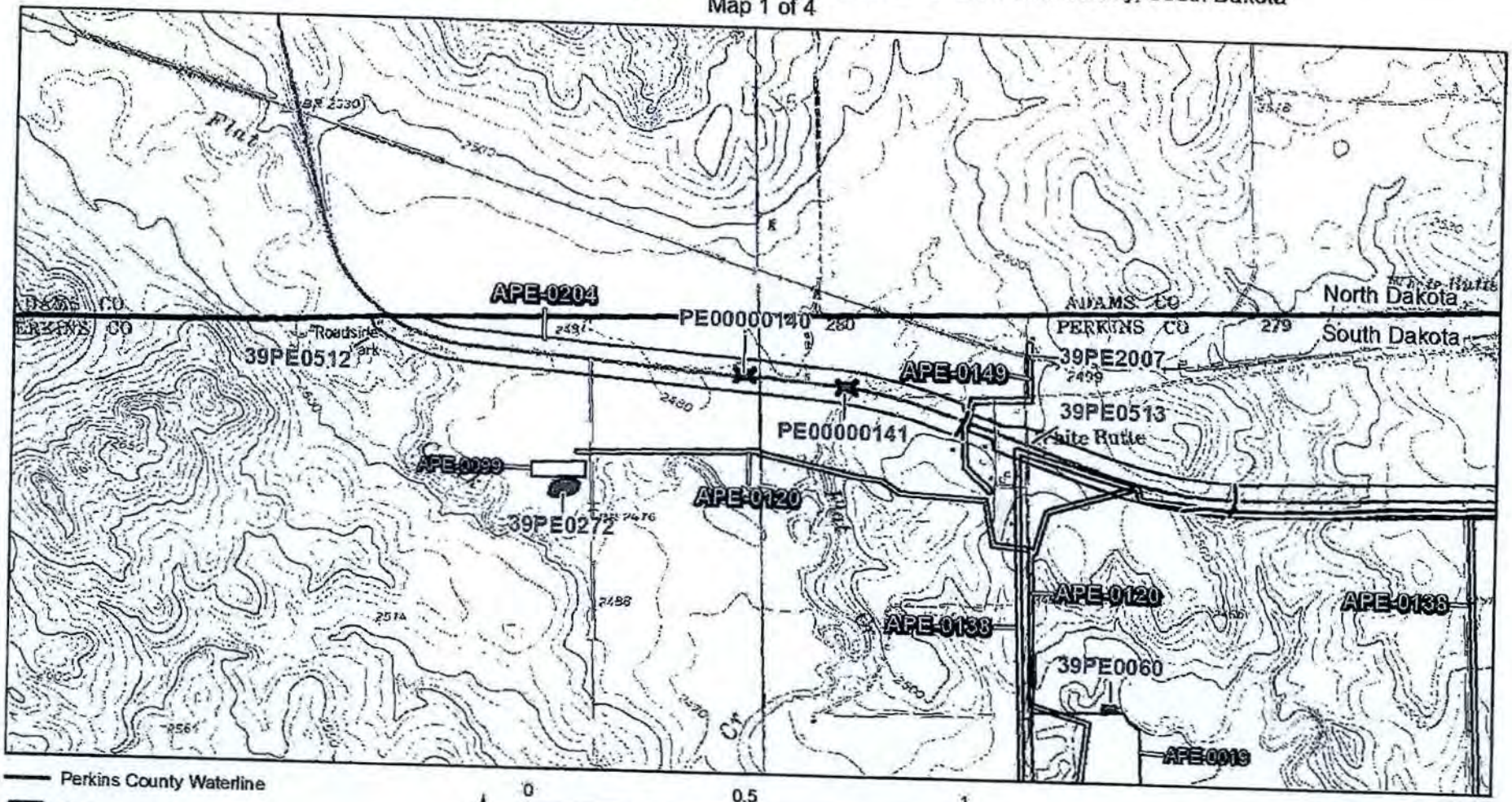


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 21-23, T23N R14E
USGS 7.5' Haynes & White Butte Quadrangles
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 1 of 4

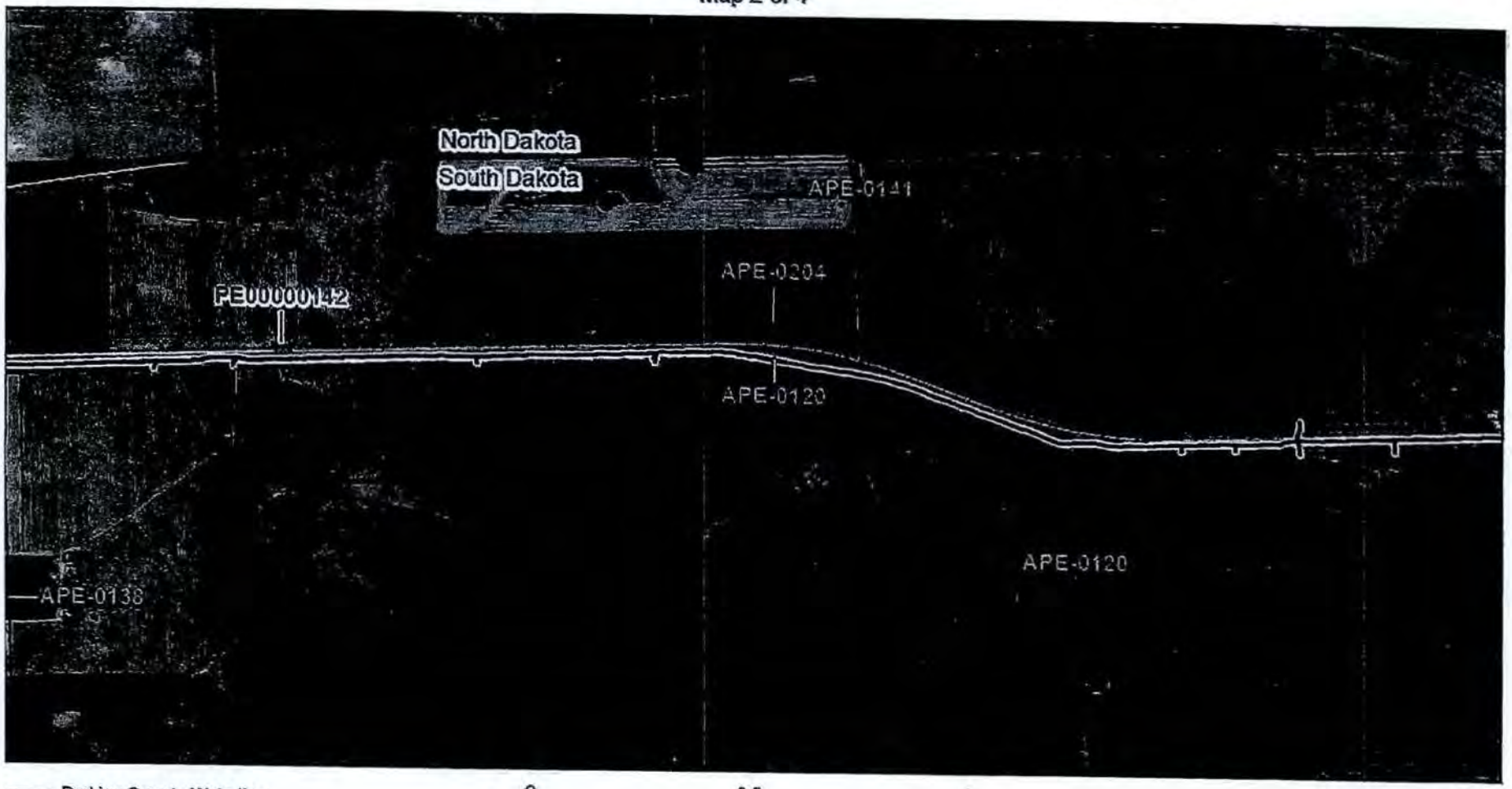


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 21-23, T23N R14E
USGS 7.5' Haynes & White Butte Quadrangles
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 2 of 4

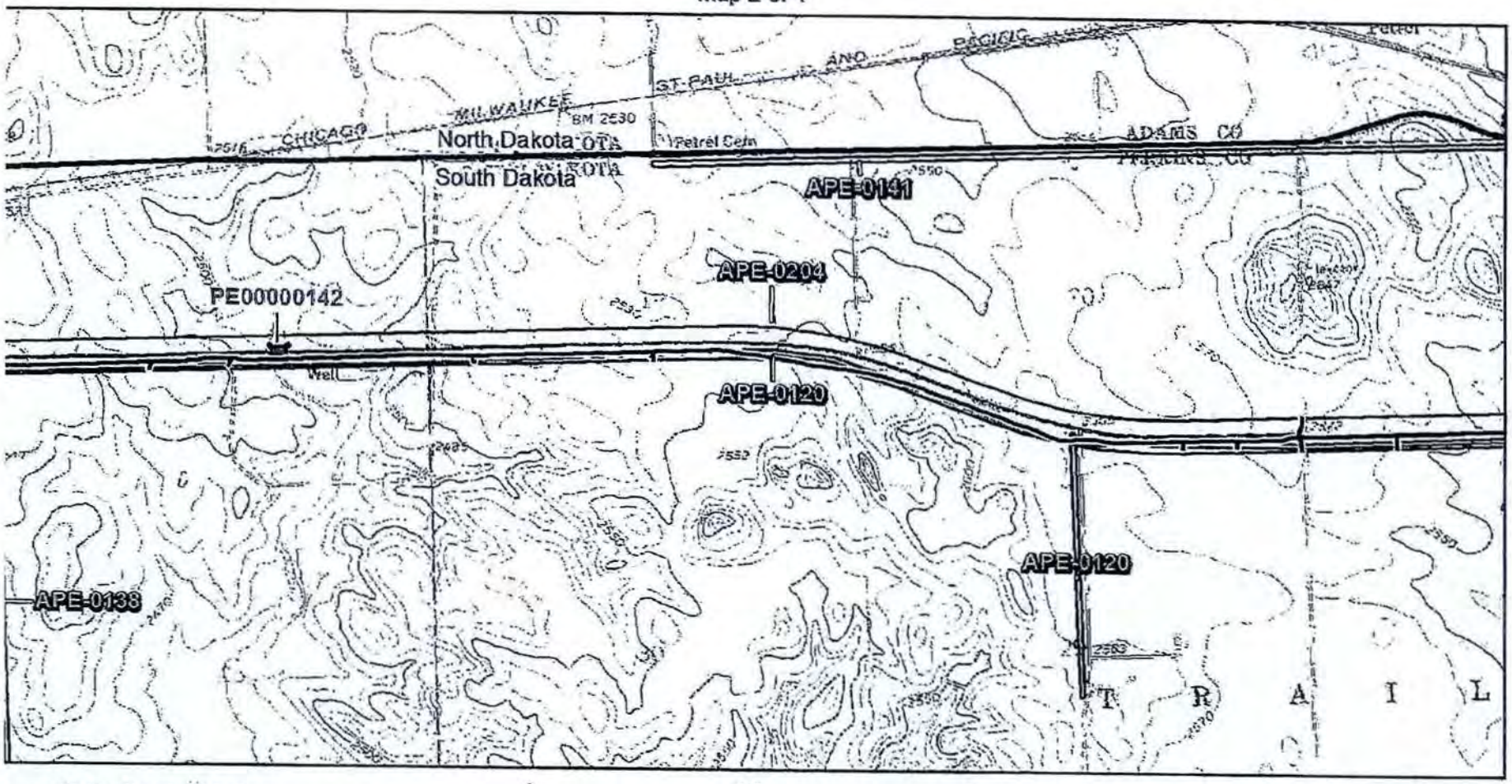


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 24 & 25, T23N R14E
Sections 19-21, 28 & 29, T23N R15E
USGS 7.5' White Butte Quadrangle
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 2 of 4

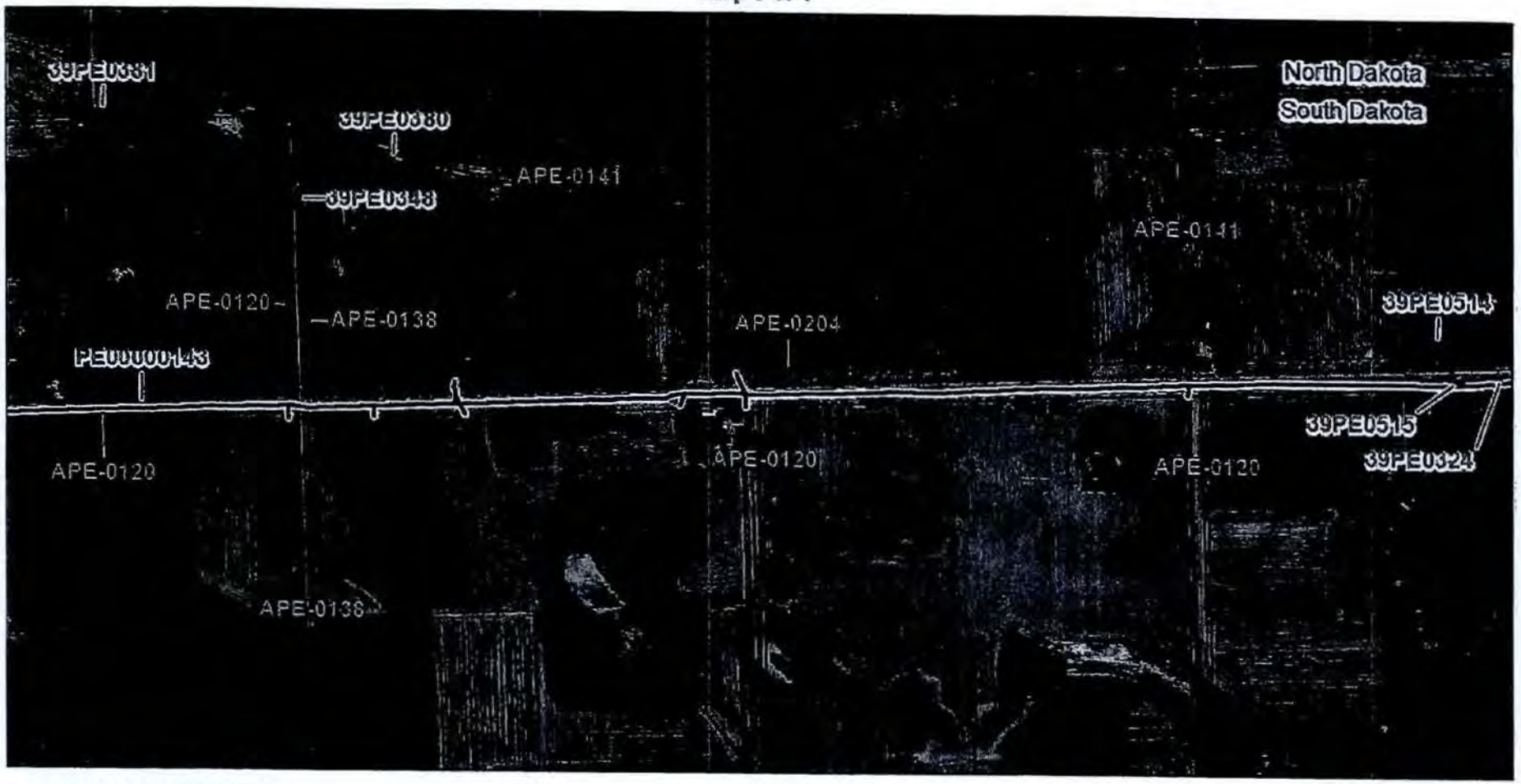


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 24 & 25, T23N R14E
Sections 19-21, 28 & 29, T23N R15E
USGS 7.5' White Butte Quadrangle
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 3 of 4

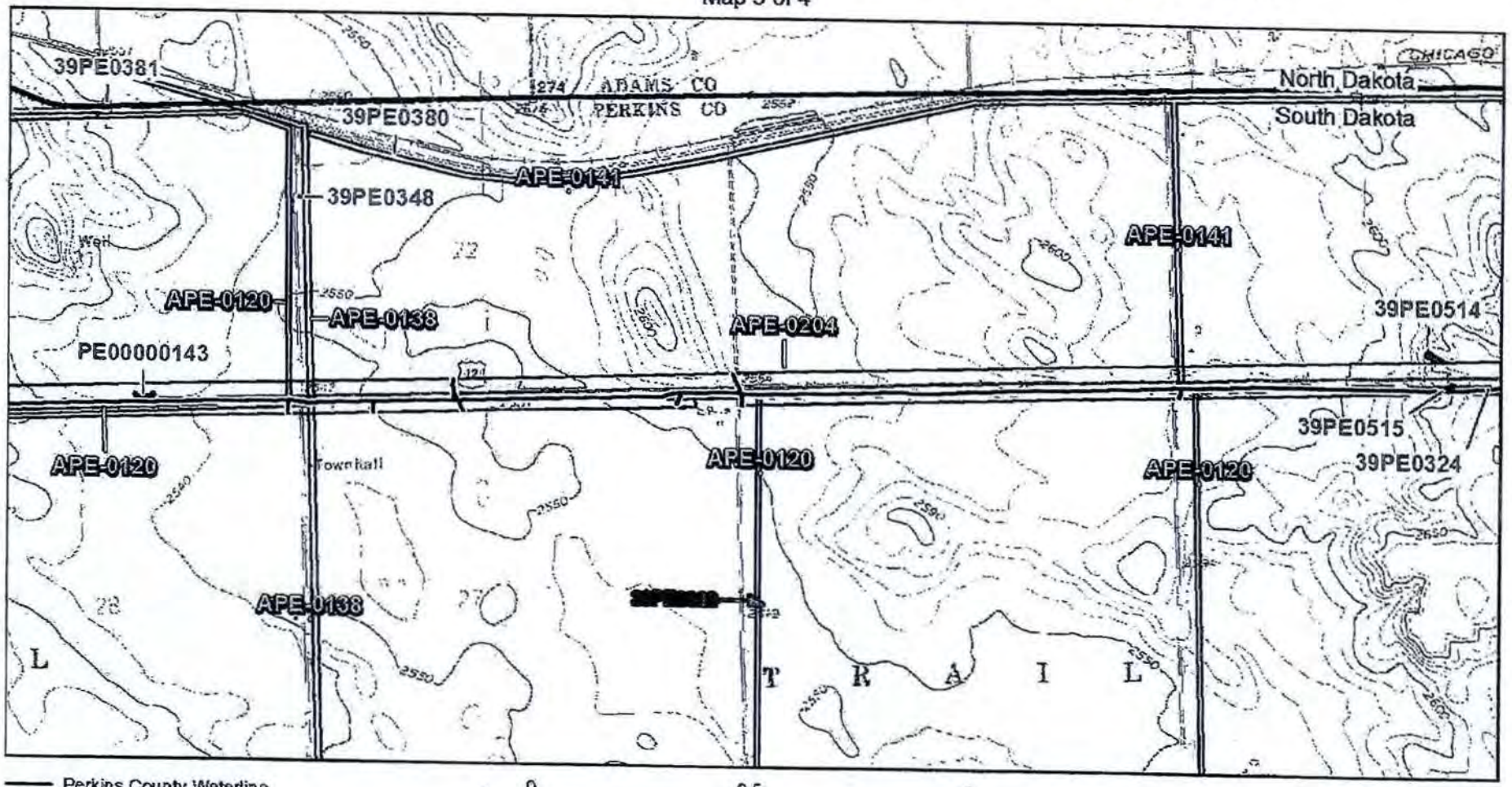


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 21-28, T23N R15E
USGS 7.5' White Butte & Lemmon Quadrangles
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 3 of 4



Perkins County Waterline
Site
Survey
Bridge Not Eligible

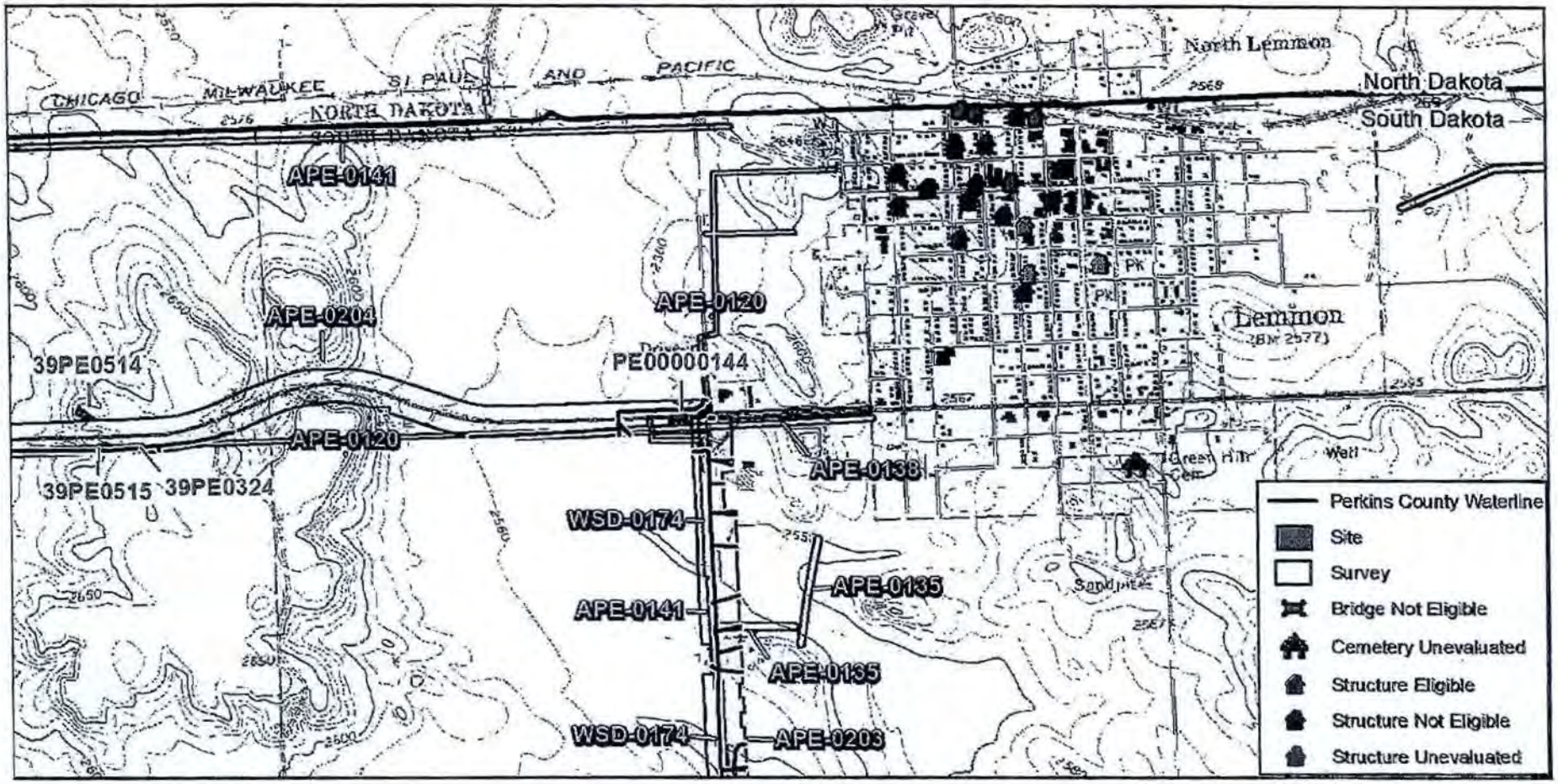
0 0.5 1
Miles
1:24,000

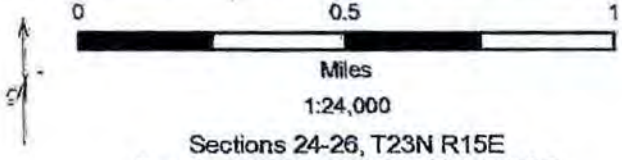
Sections 21-28, T23N R15E
USGS 7.5' White Butte & Lemmon Quadrangles
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 4 of 4

Sections 24-26, T23N R15E
Sections 19, 20, 29 & 30, T23N R16E
USGS 7.5' Lemmon Quadrangle
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 4 of 4

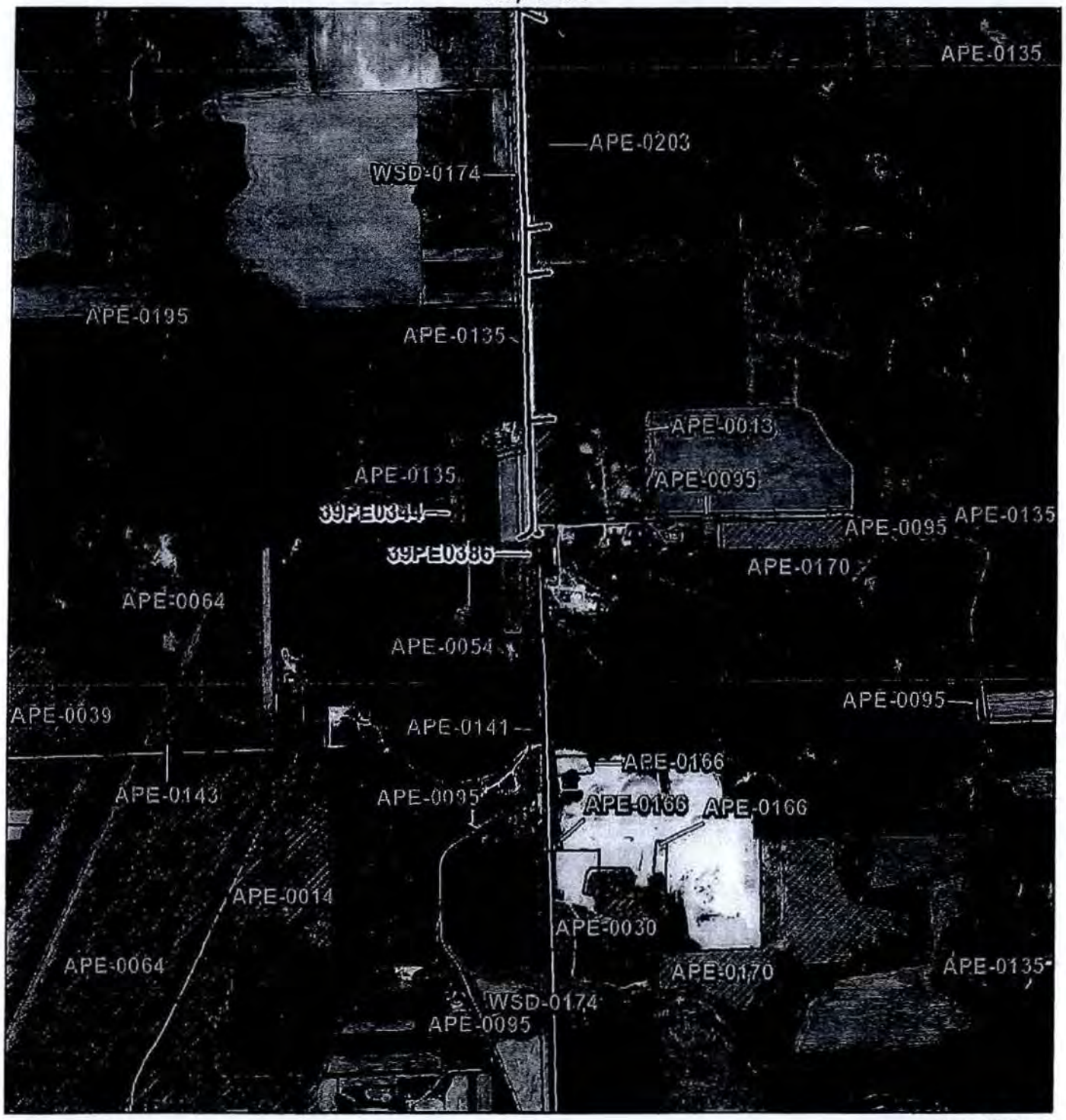




1:24,000

Sections 24-26, T23N R15E
Sections 19, 20, 29 & 30, T23N R16E
USGS 7.5' Lemmon Quadrangle
Perkins County, South Dakota

SDDOT PCN 023A and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 5 of 5



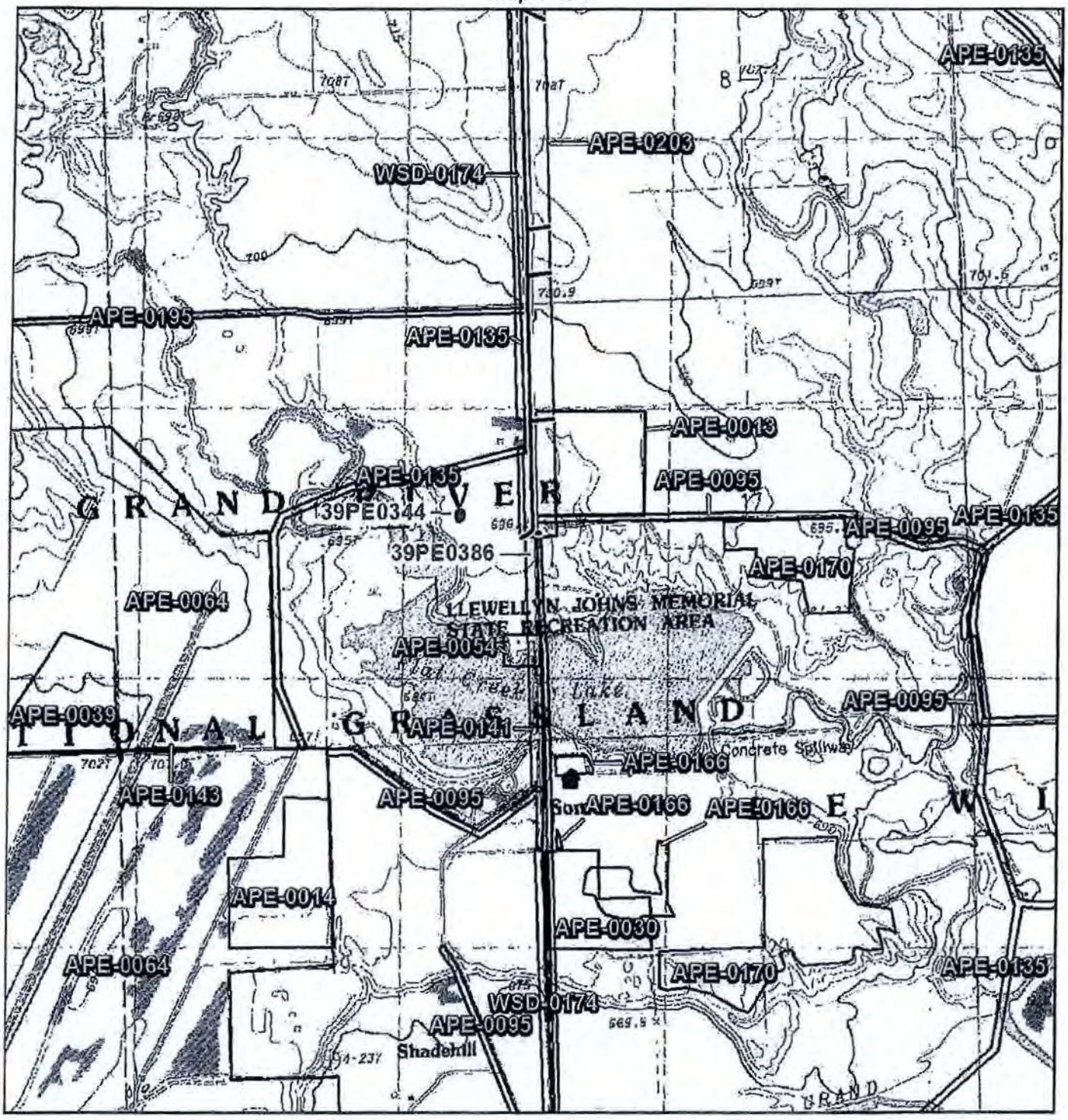
Perkins County Waterline
Site
Survey
Structure Unevaluated

0 0.5 1
Miles

1:24,000

Sections 7, 8, 17, 18, 19 & 20, T21N R16E
USGS 7.5' Summerville Quadrangle
Perkins County, South Dakota

SDDOT PCN 023A and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 5 of 5



Perkins County Waterline
Site
Survey
Structure Unevaluated

0 0.5 1
Miles
1:24,000

Sections 7, 8, 17, 18, 19 & 20, T21N R16E
USGS 7.5' Summerville Quadrangle
Perkins County, South Dakota

AE2S
www.ae2s.com

October 29, 2015

Jim Donohue, Asst. State Archaeologist
SD State Historical Society
217 Kansas City Street
Rapid City, SD 57701

RE: Cultural Resources Evaluation

Dear Mr. Donohue:

We understand that you have completed a cultural resources report for the following SD-DOT projects in Perkins County, South Dakota. Projects: NH-PH 0012(168)80, P-PH 0073(60)229 & NH 0012(59)91 US Highway 12 and SD Highway 73. As we discussed, certain rural water pipes owned by Perkins County Rural Water District will need to be moved or modified as a result of the SD-DOT project.

As a result, we have prepared and enclosed preliminary plans to show where the proposed SD-DOT road modifications and the existing Perkins County Rural Water pipeline may conflict. We are requesting you review and determine if proposed pipeline modifications have any cultural resource impacts. We are proposing to either insulate the pipe or lower the pipeline in it's current location.

If you have any questions regarding proposed pipeline modifications (and our plans to avoid conflict with SD-DOT) or need more information, please contact Deon Stockert at Deon.Stockert@AE2S.com or (701) 225-9636 or myself.

Sincerely,

Larry Thelen

Larry Thelen, Program Coordinator
Advanced Engineering and
Environmental Services, Inc. (AE2S)
1815 Schafer St., Suite 301
Bismarck, ND 58501
Larry.Thelen@AE2S.com
www.ae2s.com
Voice: 701.221.0530
Fax: 701.221.0531

Enc.

Attachment 3

Public Hearing Presentation

PERKINS COUNTY RURAL WATER SYSTEM

RELOCATION OF RURAL WATER PIPE ALONG PARTS OF US HWY 12 & SD HWY 73

AE2S | THINK BIG, GO BEYOND

PERKINS COUNTY RURAL WATER SYSTEM

Need for the Project

- Resulting from proposed SDDOT widening and reconstruction work along US Hwy 12 & SD Hwy 73.
- New road and ditch elevations negatively impacting the amount of soil "cover" over existing rural water lines.
- Soil cover needed to protect the waterline from damage and prevent freezing during the winter.

AE2S

PERKINS COUNTY RURAL WATER SYSTEM

Alternatives Evaluated

1. **Do Nothing:**
   Not a reasonable approach as protecting the waterlines from damage and freezing is paramount.

DISADVANTAGES

- Loss of water service
- Pipe freezing will occur as a result of reduced cover.
- Potential contamination of the system from broken water lines.
- Potential risk to motorists along impacted areas.
- No cost now, but future repairs to fix frozen/damaged lines very costly.

PERKINS COUNTY RURAL WATER SYSTEM

Alternatives Evaluated

2. **Protect Impacted Pipes (insulation/deeper installation):**
   Ensures Rural Water System can maintain water service to users along impacted areas of US Hwy 12 & SD Hwy 73.

ENVIRONMENTAL IMPACT

- None Identified

PERKINS COUNTY RURAL WATER SYSTEM

Proposed Project Description

- Project area is along US Hwy 12 from the ND State border to Lemmon, and along SD Hwy 73 from Lemmon to approximately 11 miles south.
- Project consists primarily of either excavating and insulating existing water lines, or excavating and installing new water lines at lower elevations at affected areas.
- Gate valves, curb stops, air release and pressure reducing valves relocated as needed.
- Bore a new water line across Wetland 10.

AE2S

PERKINS COUNTY RURAL WATER SYSTEM

Booster Station Improvements

- $46,000 Allocated
- Description:
  - Installation of a SCADA system at the Highway 20 booster station west of Prairie City
  - Installation of a security fence at the Highway 75 booster station

PERKINS COUNTY RURAL WATER SYSTEM

Proposed Financing

- The portion of work within state right-of-way (ROW) will need to be financed by PCRWS. The portion of work needed outside of state ROW will be reimbursable by the state DOT.
- Anticipating grants and/or loans from Dept. of Environmental and Natural Resources (DENR).

PERKINS COUNTY RURAL WATER SYSTEM

State Revolving Fund (SRF) Loan

Preliminary Total Estimated Project Cost: $1.7M

- Loan amount expected to be borrowed: $1.7M
  - Current preliminary estimate is that 85% of the work occurs within the 150ft DOT ROW, thus 15% cost would be reimbursed by SDDOT
- Revenue source pledged for repayment: Water Revenues
  - Perkins County (approx. 876 Users)
- Interest rate and term of loan: Disadvantaged Rates
  - Current DENR interest rate and term is 2.25% for up to 30 years.

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES
PROTECTING SOUTH DAKOTA'S TOMORROW...TODAY!
Air Land Water Funding

PERKINS COUNTY RURAL WATER SYSTEM

Effect of Proposed Financing on Users

- PCRWS current fixed water charge is $64.00/month for residential hookups, and $365/year for pasture and seasonal hookups.
- Water rate is $5.86/1,000 Gallons.
- Typical monthly water bill for residential hookup is $105 for 7,000 Gal of water.
- It is anticipated that there will be **no impact on user rates** as a result of the proposed financing.

PERKINS COUNTY RURAL WATER SYSTEM

Thank you! Questions?

- **PCRWS**
  - Brandi Baysinger | 605-244-5608
- **AE2S**
  - Larry Thelen | 701-221-0530;
  - Deon Stockert | 701-225-9636
- **Black Hills Council of Local Governments**
  - Ali DeMersseman | 605-394-2681

BLACK HILLS COUNCIL OF LOCAL GOVERNMENTS

AE2S

Perkins County Rural Water System
104 W. Main St., PO Box 160
Bison, SD 57620-0160

Facility Plan for Drinking Water State Revolving Fund Application

US Hwy 12 and SD Hwy 73 Waterline Realignment Project

1. INTRODUCTION

1.1 Background Information

Perkins County Rural Water System, Inc. (PCRWS) is located in Perkins County, South Dakota which is located in north western South Dakota. The administrative office of PCRWS is located at 104 West Main Street, Bison, SD. The system purchases all its water supply from Southwest Water Authority in Dickinson, ND. The PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon, SD and Bison, SD. The system also supplies water to Prairie City, SD as individual users and the Shadehill Reservoir Recreation Area. There are approximately 2,000 individuals supplied water by PCRWS.

1.2 Purpose and Scope

In March 2015, the Board of Directors entered into a professional services agreement with Advanced Engineering and Environmental Services (AE2S) to consult with the Board of Directors, staff of PCRWS, and South Dakota Department of Transportation (SD-DOT) on the realignment of water lines prior to reconstruction, by the SD-DOT, of US Highway 12 (from the North Dakota state line east to Lemmon, SD) and on SD Highway 73 (south of Lemmon, SD for approximately 11 miles). The SD-DOT project is scheduled to be bid in August 2016. This will allow PCRWS to relocate the water lines during the 2016 construction season and prior to the reconstruction of the highways.

As PCRWS will need funds to relocate some pipe in 2016, it is intended that this Facility Plan support a PCRWS grant/loan application as administered by the South Dakota State Board of Water and Natural Resources. Inclusion of this project in the State Water Plan is a necessary step to a grant/loan application for DENR sponsored funding programs. This report presents an overview of the proposed US Hwy 12 and SD Hwy 73 Realignment projects along with technical information supporting the project components.

2. PROJECT DEVELOPMENT

2.1 Need for the Project

The PCRWS pipe relocation project is a result of South Dakota Department of Transportation (DOT) widening and reconstruction work along US Hwy 12 and SD Hwy 73. The US Highway 12 Right-of-Way (ROW) is being widened from 100 feet to 150 feet. SD Highway 73 ROW is not widening; however, because of road elevation changes, the cover over the existing pipeline will be negatively impacted.

Because of the reconstruction of both US Hwy 12 and SD Hwy 73, the DOT is securing additional easements along both highway projects. Temporary construction easements for soil borrowing will remove cover along portions of the waterline causing insufficient ground cover to protect the waterline from damage and prevent freezing of the waterline during the winter.

Therefore, it is necessary to adjust the depth of the waterline to ensure it will remain operational.

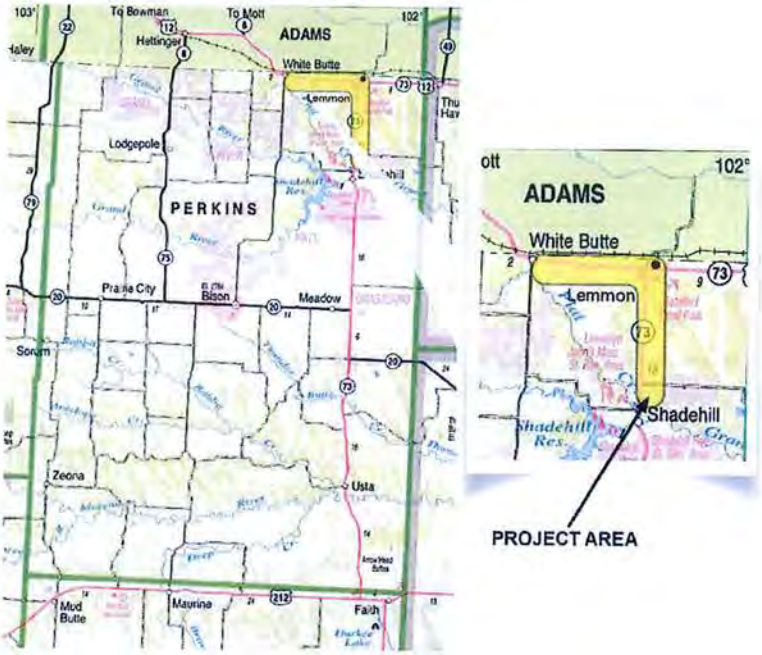


Figure 1: Map of US Highway 12 and SD Highway 73 (Near Lemmon)

2.2 Condition of the Existing System

The portions of the existing PCRWS pipe systems affected by the highway construction are PCRWS's Phase II and Phase III, shown below in Figure 2.

Figure 2: Phase II and III were built in 2005 and 2006

The portion along US Hwy 12 (Phase II) was installed in 2005 by Morris, Inc. from Ft. Pierre, SD. Phase III, along SD Hwy 73, was installed in 2006 and 2007 by Northern Improvement, Co. from Bismarck, ND. Both PCRWS Phases II and III were built using a combination of Bureau of Reclamation, DENR, and local funds.

3. ENVIRONMENTAL CONSIDERATIONS

3.1 Environmental Review

The following agencies were sent letters requesting an environmental review of the proposed project.

United States Department of Interior
Fish and Wildlife Service
420 S. Garfield Avenue
Pierre, SD 57501-5408

United States Department of Agriculture
Natural Resources Conservation Service
200 Fourth Street SW
Huron, SD 57350-2475

South Dakota Dept. of Game, Fish and Parks
Division of Wildlife
523 E. Capitol Avenue
Pierre, SD 5750-3181

U.S. Army Corps of Engineers, Omaha District
Planning Division
Attention: CENWO-PM-AE
106 South 15th Street
Omaha, NE 68102-4901

A response was received from all the agencies, and it was determined the project would have no environmental impacts. The letters and responses are attached herein as Attachment 1.

3.2 Cultural Assessment

PCRWS and AE2S worked with Jim Donohue, Asst. State Archaeologist and Terri Bruce, GIS Coordinator of the SD State Historical Society, Archaeological Research Center in Rapid City, SD for the proposed project cultural assessment. On November 18, 2015 the SD State Historic Preservation Office made a Section 106 determination of "No Historic Properties Affected" for this project. The letter and report are attached herein as Attachment 2.

4. PUBLIC PARTICIPATION

4.1 Public Hearing

A public hearing was held on November 12, 2015 at 7:00 PM in the office of PCRWS. The hearing was called to order by Board President Don Melling. Larry Thelen from AE2S and Ali DeMersseman from the Black Hills Council of Local Governments did a power point presentation to discuss the project. Mr. Thelen discussed the need for the project and alternatives that were considered. Ms. DeMersseman discussed the financial aspects of the project including SRF loan information, revenue sources for repayment, interest rate and term of the loan and effect on user rates. A copy of the presentation is attached herein as Attachment 3.

5. ALTERNATIVE DEVELOPMENT and SELECTION

5.1 Do Nothing Alternative:

This was determined to not be a reasonable alternative as protecting the waterlines from damage is paramount. Highway modifications will cause PCRWS pipes to freeze and lose water service to a large portion of the system and threaten the public health of their users.

- Advantages
    - Least cost alternative
- Disadvantages
    - Loss of water service
    - Freezing will occur as a result of reduced cover
    - Potential contamination of the system from broken waterlines
    - Risk to motorist along impacted areas

5.2 Excavate and Insulate Impacted Pipes:

This alternative assures PCRWS can maintain water service to users along the highway corridors and maintains compliance with the Safe Drinking Water Act and minimize construction costs.

- Advantages
  - Maintain regulatory compliance issues
  - Maintain water service to users
  - Protects motorists
  - Less costly as compared to relocating/replacing existing pipe
- Neutral
  - Status quo level of water quality for users
- Disadvantages
  - Cost
- Environmental Impacts
  - Limited environmental impacts due to construction activities

5.3 Health and Safety Issues

Residents in Perkins County are drinking safe water from the PCRWS and thanks to the Board and staff, their drinking water meets all health and regulatory requirements of the Safe Drinking Water Act. In order for those residents who are currently served along the US Highway 12 and SD Highway 73 corridors to continue to receive this benefit, the PCRWS pipeline will need to be moved to an appropriate elevation that avoids the highway reconstruction or its negative impacts associated with insufficient cover.

Furthermore, any pipe that breaks in winter season could create a safety concern for motorists if freezing water were to impact driving conditions. Hence, protecting/insulating the pipeline also protects the safety of motorists.

A photograph of the installation in 2006 is shown in Figure 3.

Figure 3: Pipe Installation

6. US HWY 12 and SD HWY 73 PROPOSED PROJECT

6.1 Description of the Proposed Project

The proposed project will consist of primarily excavating and insulating existing waterlines; however, about 40% of impacted areas will involve excavating and installing new waterlines at a lower elevation due to the improvements to US Hwy 12 and SD Hwy 73.

6.2 Land Acquisition/Easements/Legal

Because PCRWS will be excavating and insulating or excavating and lowering the waterline in place, there will be no need to acquire any additional land or easements for this project.

Mr. Eric Bogue of Bogue and Bogue has been retained to review and approve all documentation for the project and advise the board of Directors on any legal questions they may have.

6.3 Design Parameters

The project is located in the service area of PCRWS and is not an expansion of the service area. It is anticipated that the water usage of the area will remain the same after the project is completed.

6.4 Cost Estimates

The following tables show the anticipated summary of construction items and total project costs needed to resolve insufficient soil cover and prevent conflicts with the proposed SD DOT plans. It should be noted that opinions of total probable costs, which are presented in this report, are based on preliminary engineering data obtained to date and conceptual information included in this report. All estimates are based on engineering experience, recent bid tabulations for projects of similar scope, and input from area contractors and material suppliers. It should be noted that all costs are presented in 2015 dollars.

Preliminary Opinion of Probable Project Construction Costs

Item	Type	Quantity	Unit	Unit Cost	Total Cost
Insurance, Bonds, Mobilization		1	LS	$100,000	$100,000
Traffic Control		1	LS	$10,000	$10,000
SWPPP Implementation		1	LS	$5,000	$5,000
Remove Existing and Install New	1.5" PVC – Class 250	43	LF	$3.75	$161
Remove Existing and Install New	2.0" PVC – Class 250	5,810	LF	$4.75	$27,598
Remove Existing and Install New	6.0" PVC – Class 200	2,100	LF	$8.50	$17,850
Remove Existing and Install New	6.0" PVC – Class 250	1,561	LF	$9.00	$14,049
Remove Existing and Install New	8.0" PVC – Class 200	1,134	LF	$12.50	$14,175
Install 2.0" Temp Line Stops		6	EA	$800	$4,800
Install 6.0" Insert Valve		14	EA	$4,000	$56,000
Install 8.0" Temp Line Stops		3	EA	$6,000	$18,000
Excavate and Install Insulation	All Types	9,463	LF	$10	$94,630
Water Main Fittings	6"-8"	52	EA	$750	$39,000
Water Service Fittings	1.5"-2"	12	EA	$200	$2,400
Salvage and Reinstall Gate Value and Risers	All Types	2	EA	$2,500	$5,000
Salvage and Reinstall Meter Pits		2	EA	$2,000	$4,000
Uncased Bore Wetland Crossing	8" SDR 7 HDPE	1,649	LF	$200	$329,800
Plug and Abandon 8" Water Main		2	EA	$300	$600
Hydro Excavation		1	LS	$10,000	$10,000
Topsoil Strip, Stockpile and Respread		12,000	SY	$15	$180,000
Seeding	Class II Seed	2.48	AC	$2,500	$6,200
Fiber Roll		8,000	LF	$3.20	$25,600
Silt Fence		22,000	LF	$5	$110,000
Silt Fence Removal		22,000	LF	$0.50	$11,000
Hwy Sign Salvage and Reinstall		1	LS	$5,000	$5,000
Rock Excavation		20	CY	$200	$4,000
				TOTAL COST	**$1,094,863**

*This cost estimate prepared in December is preliminary. To be revised as design progresses.

Project Costs Breakdown

	Approximate Cost
Construction Costs: Water Distribution System – US Hwy 12 & SD Hwy 73	$1,094,863
Engineering & Construction Phase Services	$289,856
Booster Station Improvements	$46,000
Legal and Bond Council	$5,000
Contingencies	$286,281
Total Probable Project Costs	**$1,722,000**

*This cost estimate prepared in December is preliminary. To be revised as design progresses.

6.5 Engineering

AE2S will provide the following services (please note this is an abbreviated list of services meant to provide general insight):

- Preliminary Engineering Report
- Work with DENR, RD, BHC, MAP to secure financing
- All necessary work of Design Phase to develop a plan set and specifications (including bidding requirements) so this project can be publicly bid and awarded. Plans and specifications will need to be approved by PCRWS and funding agencies.
- All necessary Bid Phase services including advertising, coordination with bidders, addendums, and bid opening assistance. All Bid Documents shall be approved by PCRWS, legal counsel, and funding agencies.
- Provide Construction Phase Services including the following:
    - Survey the waterline route and provide construction staking
    - Review shop drawings
    - Provide on-site visits and observe/document construction (Resident Project Rep)
    - Prepare/Submit monthly pay applications to PCRWS and funding agencies.
    - Provide assistance with pressure testing and disinfection of the water line
    - Provide Substantial and Final Completion Certificates
- Provide Post-Construction Phase Services including any warranty coordination with contractor and assist PCRWS with funding agency closeout.

6.6 Administration

The staff of PCRWS will play an important role in helping to administer this project and the amount of time they will contribute to the project. The office staff, consisting mainly of Brandi Baysinger, will handle a portion of the administrative work that will be required for the loan application and the documentation necessary to complete the loan application. The operations staff (Shiloh Baysinger and Eric Newman) will work with the contractor in the field to ensure the integrity of the system is maintained during construction.

6.7 User Rate Impacts

Currently; PCRWS's Fixed Water Charge is $64.00 per month for residual hook-ups and $365 per year for pasture and seasonal hook-ups. The water rate is $5.86 per 1,000 gallons. After the proposed project is completed, the typical monthly water bill for a residential hook-up is anticipated to be $105.02 for 7,000 gallons of water. This is the highest water rate in the four state area, (SD, ND, MT and MN) according to a voluntary utility rate study done by AE2S Nexus group in 2014. It is anticipated there will be no impact on users rates as a result of the proposed financing. The annual O&M costs should not increase because of this project.

6.8 Implementation Schedule

Item	Date
Submit State Water Application Form to Black Hills Council of Local Governments	May 1, 2015
Placement on State Water Plan	June, 2015
Funding Application Due	January 1, 2016
Preliminary Plans & Specification Submitted	January, 2016
Funding Award	March, 2016
Board Approval and Accept Loan and Proceed	March, 2016
Final Plans and Specifications Submitted for Bidding	March, 2016
Bidding	March, 2016
Begin Construction	Summer, 2016
Construction Completed	Fall, 2016

6.9 Project Summary

The following conclusions were developed from the information provided by the PCRWS staff and the SD DOT.

- The SD DOT will be widening and reconstructing US Hwy 12 and SD Hwy 73 and that will require PCRWS to relocate and adjust approximately 4 miles of waterline located along the two highways.
- The waterline that is in-place provides water service to the City of Lemmon and it's rural users.
- The reconstruction of the highways will require ground cover be removed and thus leave the waterline exposed to damage during the DOT construction or to freezing during the winter months. The damaged waterline would mean loss of service to PCRWS consumers, potential contamination of the system, and potential hazard to motorists.

Based on the information provided, AE2S recommends the PCRWS Board of Directors proceed with the steps necessary to secure the financing to move the waterline in 2016 and protect the integrity of the public water system (thus continuing service to their users).

BLACK HILLS

October 26, 2015

CENWO-PM-AC
United States Army Corps of Engineers, Omaha District
Planning Branch
1616 Capitol Avenue, Ste. 9000
Omaha, NE 68102

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear CENWO-PM-AC,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

PCRWS is located in Perkins County in northwestern South Dakota. The system purchases all its water supply from Southwest Water Authority in Dickinson, ND. The PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon, SD and Bison, SD. The system also supplies water to Prairie City, SD users and the Shadehill Reservoir Recreation Area. There are approximately 2,000 individuals supplied water by PCRWS.

In March 2015, the Board of Directors entered into a professional services agreement with Advanced Engineering and Environmental Services (AE2S) to consult with the Board of Directors, staff of PCRWS, and South Dakota Department of Transportation (SD-DOT) on the realignment/lower of certain water lines prior to reconstruction by the SD-DOT of US Highway 12 (from the North Dakota state line east to Lemmon, SD) and on SD Highway 73 (south of Lemmon, SD for approximately 11 miles). The SD-DOT project is scheduled to be bid in August 2016. This will allow PCRWS to relocate/lower certain water lines during the 2016 construction season and prior to the reconstruction of the highways.

As part of this project, PCRWS will also be installing a SCADA system at the Highway 20 booster station in order to monitor and preempt any issues with the station. In addition, fencing will be installed at the Highway 75 booster station to provide security. The attached maps and plans identify the location of all proposed improvements.

We are respectfully requesting your written response to this letter within 30 days. Even if your agency has no concerns, please send a written response. If you have any questions regarding this letter, or require additional information, please contact me at ademersseman@tie.net or (605) 394-2681.

Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

REPLY TO
ATTENTION OF

November 13, 2015

Planning, Programs, and Project Management Division

Ms. Ali DeMersseman
Black Hills Council of Local Governments
730 East Watertown Street, Suite 102
Rapid City, South Dakota 57701

Dear Ms. DeMersseman:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated October 26, 2015 (received October 30, 2015) regarding the environmental review of the Perkins County Rural Water Highway 12 & 73 Waterline Relocation and Booster Station Improvements Project in Perkins County, South Dakota. We offer the following comments for your consideration:

Your plans should be coordinated with the state water quality office that has jurisdiction within the area where the project is located to ensure compliance with federal and state water quality standards and regulations mandated by the Clean Water Act and administered by the U.S. Environmental Protection Agency. Please coordinate with the South Dakota Department of Environment & Natural Resources concerning state water quality programs.

If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks regarding fish and wildlife resources. In addition, the South Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

If the proposed waterline construction crosses the floodplains of small drainageways and streams, flood-related problems should not occur if the lines are buried far enough below the beds of drainageways and streams to prevent exposure due to streambed erosion during periods of high floodflows. Any aboveground construction subject to flood damage, such as pump houses, should either be placed above, or flood proofed to, a level above the one percent annual chance flood elevation.

Since the proposed project does not appear to be located within Corps owned or operated lands, your plans should be submitted to the local floodplain administrator for review and approval prior to construction. It should be ensured that the proposed project is in compliance with the floodplain management criteria of Perkins County and the State of South Dakota. In addition, please coordinate with the following floodplain management office:

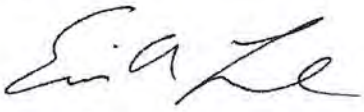
South Dakota Division of Emergency Management
Attention: Mr. Marc Macy
118 W. Capitol Avenue
Pierre, South Dakota 57501
Telephone: 605-773-3231
Fax: 605-773-3580
Email: marc.macy@state.sd.us

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (http://www.nwo.usace.army.mil/Missions/RegulatoryProgram.aspx) to determine if this project requires a 404 permit. For a detailed review of the permit requirements, preliminary and final project plans should be sent to:

U.S. Army Corps of Engineers
Pierre Regulatory Office
Attention: Mr. Steve Naylor, CENWO-OD-R-SD
28563 Powerhouse Road, Room 120
Pierre, South Dakota 57501

If you have any questions, please contact Ms. Amanda Ciurej of my staff at (402) 995-2897 or amanda.k.ciurej@usace.army.mil and reference PD# 6763 in the subject line.

Sincerely,



Eric A. Laux
Chief, Environmental Resources and Missouri River Recovery Program Plan Formulation Section

BLACK HILLS

October 26, 2015

Deanna Peterson
United States Department of Agriculture
Natural Resources Conservation Services
Federal Building, 200 Fourth Street SW
Huron, SD 57350

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Ms. Peterson,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

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Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

USDA

United States Department of Agriculture

November 27, 2015

Ali DeMersseman
Black Hills Council of Local Governments
730 E. Watertown Street, Suite 102
Rapid City, SD 57701

RE: Environmental Review for
Perkins Co. Rural Water System, Highways 12 &73 Waterline Relocation and Booster Improvements Project

Dear Ali:

Thank you for the opportunity to provide Farmland Protection Policy Act (FPPA) review of this project. The project area as outlined **does** contain FPPA affected soils. I have included a map illustrating their approximate location relative to the project area. However, because this is a corridor type project to be installed below the soil surface it will have **no effect** on prime or important farmland as long as the soil is replaced in the order it was removed (First soil out of the trench needs to be the last back in).

If you have any questions, please contact me at (605) 348-2889 ext. 104.

Sincerely,

TIMOTHY NORDQUIST
NRCS Conservation Agronomist

Natural Resources Conservation Service
414 E Stumer Road, Suite 700
Voice: 605.348.2889 ext 104 Fax: 855.256.2553
An Equal Opportunity Provider and Employer

BLACK HILLS

October 26, 2015

Scott Larson, Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
420 South Garfield Avenue
Pierre, SD 57501

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Mr. Larson,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

PCRWS is located in Perkins County in northwestern South Dakota. The system purchases all its water supply from Southwest Water Authority in Dickinson, ND. The PCRWS consists of 846 miles of pipe supplying water to 876 metered accounts and the cities of Lemmon, SD and Bison, SD. The system also supplies water to Prairie City, SD users and the Shadehill Reservoir Recreation Area. There are approximately 2,000 individuals supplied water by PCRWS.

In March 2015, the Board of Directors entered into a professional services agreement with Advanced Engineering and Environmental Services (AE2S) to consult with the Board of Directors, staff of PCRWS, and South Dakota Department of Transportation (SD-DOT) on the realignment/lower of certain water lines prior to reconstruction by the SD-DOT of US Highway 12 (from the North Dakota state line east to Lemmon, SD) and on SD Highway 73 (south of Lemmon, SD for approximately 11 miles). The SD-DOT project is scheduled to be bid in August 2016. This will allow PCRWS to relocate/lower certain water lines during the 2016 construction season and prior to the reconstruction of the highways.

As part of this project, PCRWS will also be installing a SCADA system at the Highway 20 booster station in order to monitor and preempt any issues with the station. In addition, fencing will be installed at the Highway 75 booster station to provide security. The attached maps and plans identify the location of all proposed improvements.

We are respectfully requesting your written response to this letter within 30 days. Even if your agency has no concerns, please send a written response. If you have any questions regarding this letter, or require additional information, please contact me at ademersseman@tie.net or (605) 394-2681.

Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

BLACK HILLS
COUNCIL OF LOCAL GOVERNMENTS

RECEIVED
OCT 29 2015
U.S. FISH & WILDLIFE SERVICE

October 26, 2015

Scott Larson, Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
420 South Garfield Avenue
Pierre, SD 57501

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

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Sincerely,

Ali DeMersseman, Senior Community Development Planner

Encl.

This constitutes a report of the Department of the Interior prepared in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). We have reviewed and have NO OBJECTION to this proposed project.

11/9/15 Scott Larson
Date Field Supervisor

BLACK HILLS

October 26, 2015

Leslie Murphy, Senior Biologist
Department of Game, Fish & Parks
Division of Wildlife
523 East Capitol Avenue
Pierre, SD 57501

RE: *Environmental Review, Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation and Booster Station Improvements Project*

Dear Ms. Murphy,

The Black Hills Council of Local Governments is conducting an environmental review on behalf of the Perkins County Rural Water System (PCRWS) for a project that includes: the relocation of water lines along Highways 12 and 73; installation of a SCADA system at the Highway 20 booster station; and, construction of a security fence at the Highway 75 booster station. This environmental review is necessary as PCRWS is proposing to finance the project through the South Dakota Drinking Water State Revolving Fund Loan Program. We are contacting you to receive official written comments regarding the proposed project.

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Sincerely,

A. DeMersseman

Ali DeMersseman, Senior Community Development Planner

Encl.

DEPARTMENT OF GAME, FISH, AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

October 29, 2015

Ms. Ali DeMersseman
Black Hills Council of Local Governments
730 East Watertown St.
Suite 102
Rapid City, SD 57701

RE: Perkins County Rural Water System, Highways 12 & 73 Waterline Relocation & Booster Station
Perkins County, South Dakota

Dear Ms. DeMersseman:

The South Dakota Department of Game, Fish and Parks, Wildlife Division, has reviewed the above project involving the relocation of water lines along Highways 12 & 73, installation of a SCADA system at the Highway 20 booster station, and construction of a security fence at the Highway 75 booster station.

At this time, the project as proposed will have no impacts on fish and wildlife resources. If the project design changes, please submit the revised project for review.

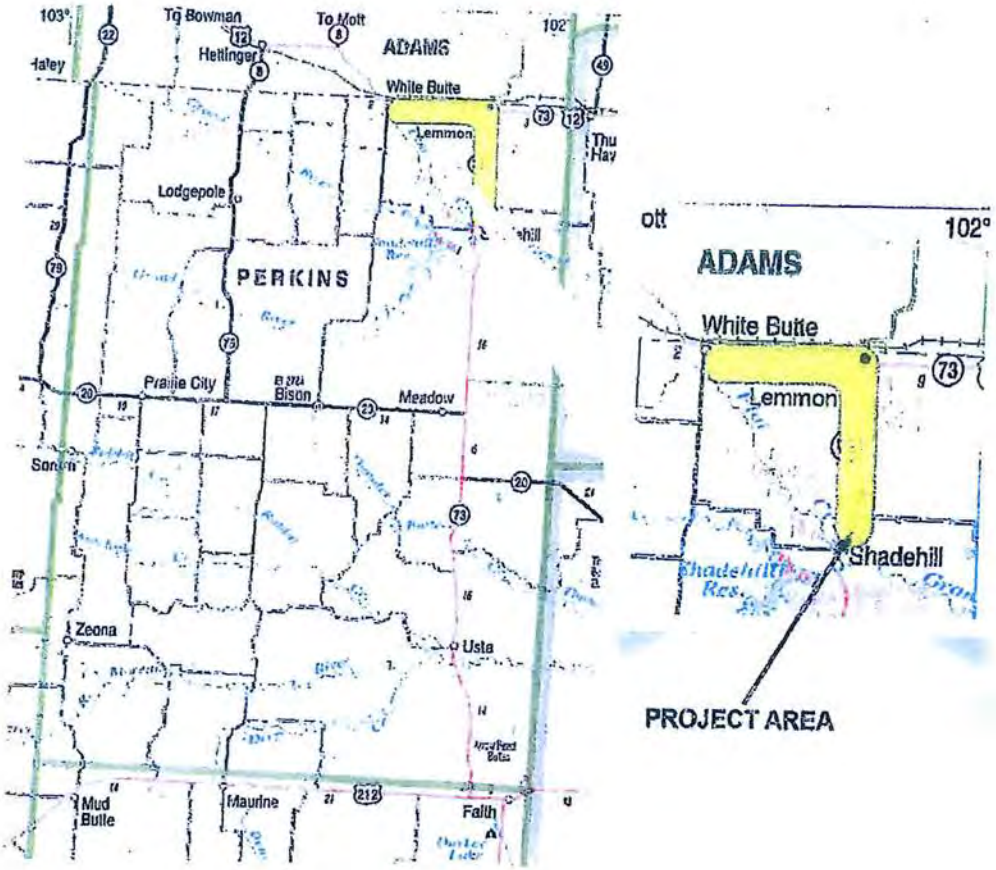
Thank you for the opportunity to provide comments on this project. If you have any questions, please contact me at 605.773.6208.

Sincerely,

Leslie Murphy
Senior Biologist

www.ae2s.com

Perkins County Rural Water System, Inc.
US Highway 12 and SD Highway 73 Waterline Realignment Project



Map of US Highway 12 and SD Highway 73 (Near Lemmon)

Advanced Engineering and Environmental Services, Inc. • • 1815 Schafer St Ste 301 Bismarck, ND 58501 • • (t) 701-221-0530 (f) 701-221-0531 • • www.ae2s.com

PRELIMINARY

MILESTONE - 40%

G4

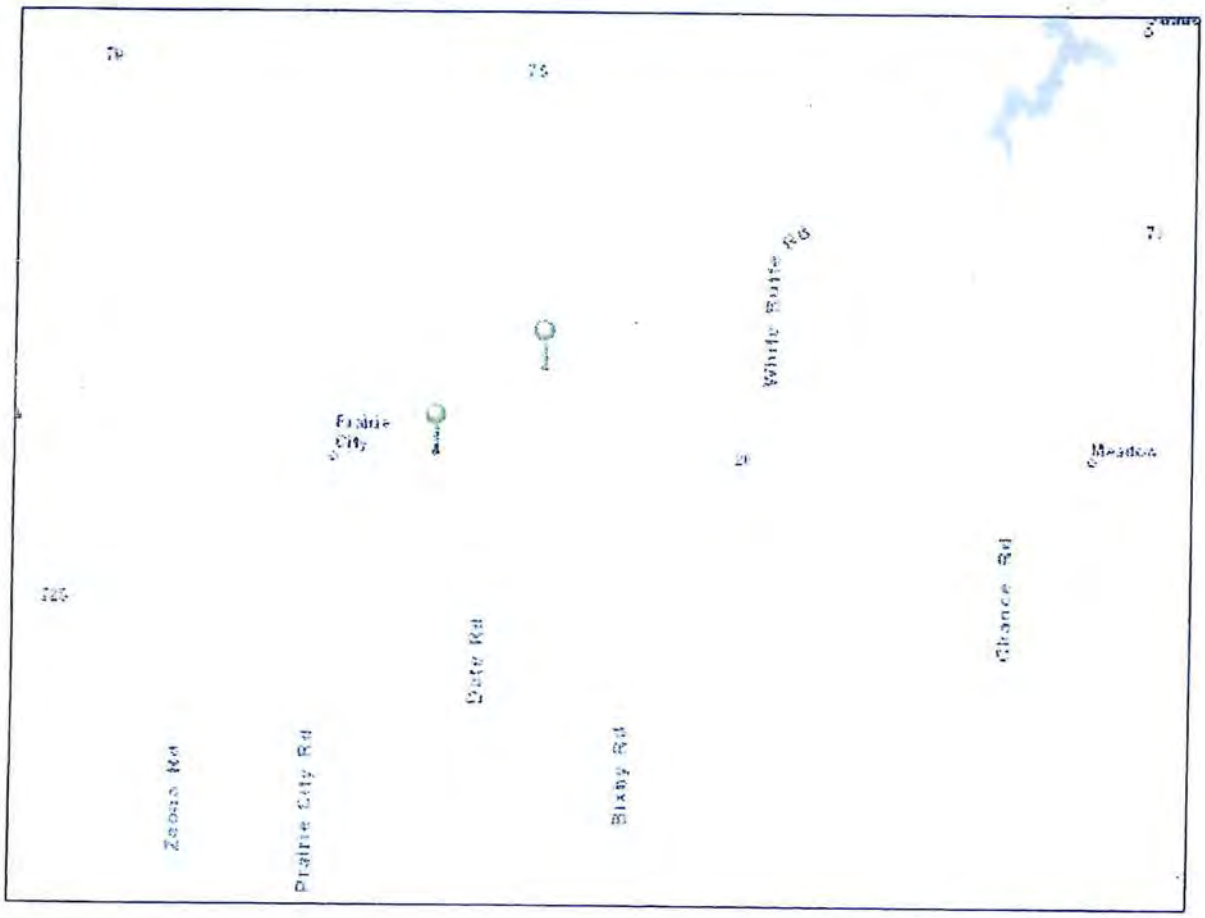
PERKINS COUNTY RURAL WATER SYSTEMS, INC.
PERKINS COUNTY RURAL WATER SYSTEM, INC.
BISON, SOUTH DAKOTA
LOCATION MAP

AE2S

SYM	DATE	DESCRIPTION	APPR

DRAWING STATUS: PRELIMINARY
DESIGNED: PIONEER
DRAWN: ALT
CHECKED: DAR / DNG
DATE: NOV 2015
PROJECT NO: 0511
SHEET: 4 OF 30
DRAWING

PCRWS Booster Station Improvements Map



Esri, HERE, DeLorme, NGA, USGS

Attachment 2

Cultural Assessment

Department of Transportation
Office of Project Development
Environmental Office
700 E Broadway Avenue
Pierre, South Dakota 57501-2586
605/773-3268 Fax: 605/773-6608

NOV 18 2015
South Dakota SHPO

November 17, 2015

Amy Rubingh, Review & Compliance Archaeologist
State Historic Preservation Office
Cultural Heritage Center
900 Governors Drive
Pierre, SD 57501-2217

RE: Perkins Co. Rural Water District Water Line Project along SDDOT projects: PCN 0234
NH-PH 0012(168)80 PCN 02QB & P-PH 0073(60)231 PERKINS COUNTY
US12 from the ND State Line to Lemmon & SD73 from Dewitt Rd. to the W. US12 Jct

Dear Ms. Rubingh:

Attached is a copy of an ARC records search report dated November 17, 2015 for water line modifications along the above projects. Three previously recorded sites (39PE0324, 39PE0515 & 39PE0338) may be impacted by the water line project, however, all were previously determined Not Eligible for the NRHP.

The report recommends a Section 106 Finding of No Historic Properties Affected for the water line project. The SDDOT concurs and requests SHPO concurrence in a Section 106 determination of ***No Historic Properties Affected*** for the Perkins County Rural Water District water line project.

Sincerely,

Alice Whitebird

Alice Whitebird
Environmental Scientist III
Office of Project Development
(605) 773-3309

alice.whitebird@state.sd.us

SECTION 106 DETERMINATION
Based upon the information provided to the South Dakota State Historic Preservation Office on 11/18/15 we concur with your agency's determination of "No Historic Properties Affected" for this undertaking.

Gary D. Vost
State Historic Preservation Officer (SHPO)
By: Amy Rubingh
11/24/15 9511R001F
Date SHPO Project #

Attachment

SECTION 106 CONSULTATION
Concurrence of the State Historic Preservation Office does not relieve the federal agency official from consulting with other appropriate parties, as described in 36 CFR Part 800.2(c).

Pursuant to 36 CFR part 800.13, if historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the Section 106 process, the agency official shall avoid, minimize or mitigate the adverse effects to such properties and notify the SHPO/THPO, and Indian tribes that might attach religious and cultural significance to the affected property within 48 hours of the discovery.

Whitebird, Alice

From: Donohue, Jim
Sent: Tuesday, November 17, 2015 9:41 AM
To: Whitebird, Alice
Subject: FW: Perkins County Rural Water District Plans for PCNs 02QB and 023A
Attachments: AE2S Letter for Perkins County Rural Water from Larry Thelen.pdf; Perkins County Rural Water Pipeline Record Search Results.xlsx; Perkins County Water and DOT 023A 5 Aerial.jpg; Perkins County Water and DOT 023A 5 Topo.jpg; Perkins County Water and DOT 02QB 1 Aerial.jpg; Perkins County Water and DOT 02QB 1 Topo.jpg; Perkins County Water and DOT 02QB 2 Aerial.jpg; Perkins County Water and DOT 02QB 2 Topo.jpg; Perkins County Water and DOT 02QB 3 Aerial.jpg; Perkins County Water and DOT 02QB 3 Topo.jpg; Perkins County Water and DOT 02QB 4 Aerial.jpg; Perkins County Water and DOT 02QB 4 Topo.jpg; Perkins County Water and DOT 023A 1 Aerial.jpg; Perkins County Water and DOT 023A 1 Topo.jpg; Perkins County Water and DOT 023A 2 Aerial.jpg; Perkins County Water and DOT 023A 2 Topo.jpg; Perkins County Water and DOT 023A 3 Aerial.jpg; Perkins County Water and DOT 023A 3 Topo.jpg; Perkins County Water and DOT 023A 4 Aerial.jpg; Perkins County Water and DOT 023A 4 Topo.jpg

Hi Alice:

Perkins County Rural Water is going to be moving waterlines due to the proposed road reconstruction of Highway 12, PCN 02QB and Highway 73 for SDDOT Projects PCN023A. Attached please find the maps and files search for the proposed project. Two sites could be impacted by PCN 02QB (Highway 12). These are 39PE0324 and 39PE0515 and both were determined to be Not Eligible by SHPO. One site, 39PE0338, could be impacted by SDDOT Project PCN023A (Highway 73). Site 39PE0338 was also determined to be Not Eligible by SHPO. Consequently, I am recommending a Section 106 Finding of No Historic Properties Affected for this water line project based on the previous surveys, site evaluations, and the results of the attached files search. Please do not hesitate to contact me if you have any questions in regards to this files search.

Best regards

Jim

Perkins County Rural Water Pipeline , Perkins County			
In Regards to SDDOT Projects 02QB (APE-0204) and 032A (APE-0203)			
T. Bruce 11/13/15			
Within Project Area			
Sites			
Site No.	**Description**	**Eligibility**	
39PE0324	native american isolated find	Not Eligible	
39PE0338	school foundation; well/cistern	Not Eligible	
39PE0515	prehistoric artifact scatter	Not Eligible	
Surveys			
Archive No	**Author(s)**	**Year**	**Report Title**
APE-0013	Hovde, David M.	1980	South Dakota Department of Transportation Gravel Pit Survey, Butte, Harding and PERKINS (Pit #6-T17N-R10E, Section 7; Pit #70-T16N, R16E, Section 24; Pit #72-T21N, R16E, Section 17) Counties, South Dakota. CIS No. 26e
APE-0095	Buechler, Jeffrey V.	2002	An Intensive Cultural Resources Inventory Survey of Buried Cable Routes Associated with West River Cooperative Telephone Company's Lemmon Exchange Service Area in the Shadehill Reservoir Vicinity of Perkins County, South Dakota. Project No. 02-60
APE-0120	Buechler, Jeffrey V.	2005	A Class III Cultural Resources Inventory Survey of Phase 2 of the Perkins County Rural Water System, Inc. in Northern Perkins County, South Dakota. Project No. 05-16
APE-0135	Buechler, Jeffrey V.	2006	A Class III Cultural Resources Inventory Survey of Phase III of the Perkins County Rural Water System, Inc. in Adams County, North Dakota & Perkins County, South Dakota. Project No. 06-17
APE-0138	Buechler, Jeffrey V.	2007	A Cultural Resources Inventory Survey of West River Cooperative Telephone Company's Buried Cable Routes in the Bison/Lemmon Vicinity of Adams County, North Dakota and Perkins County, South Dakota. Project No. 07-07

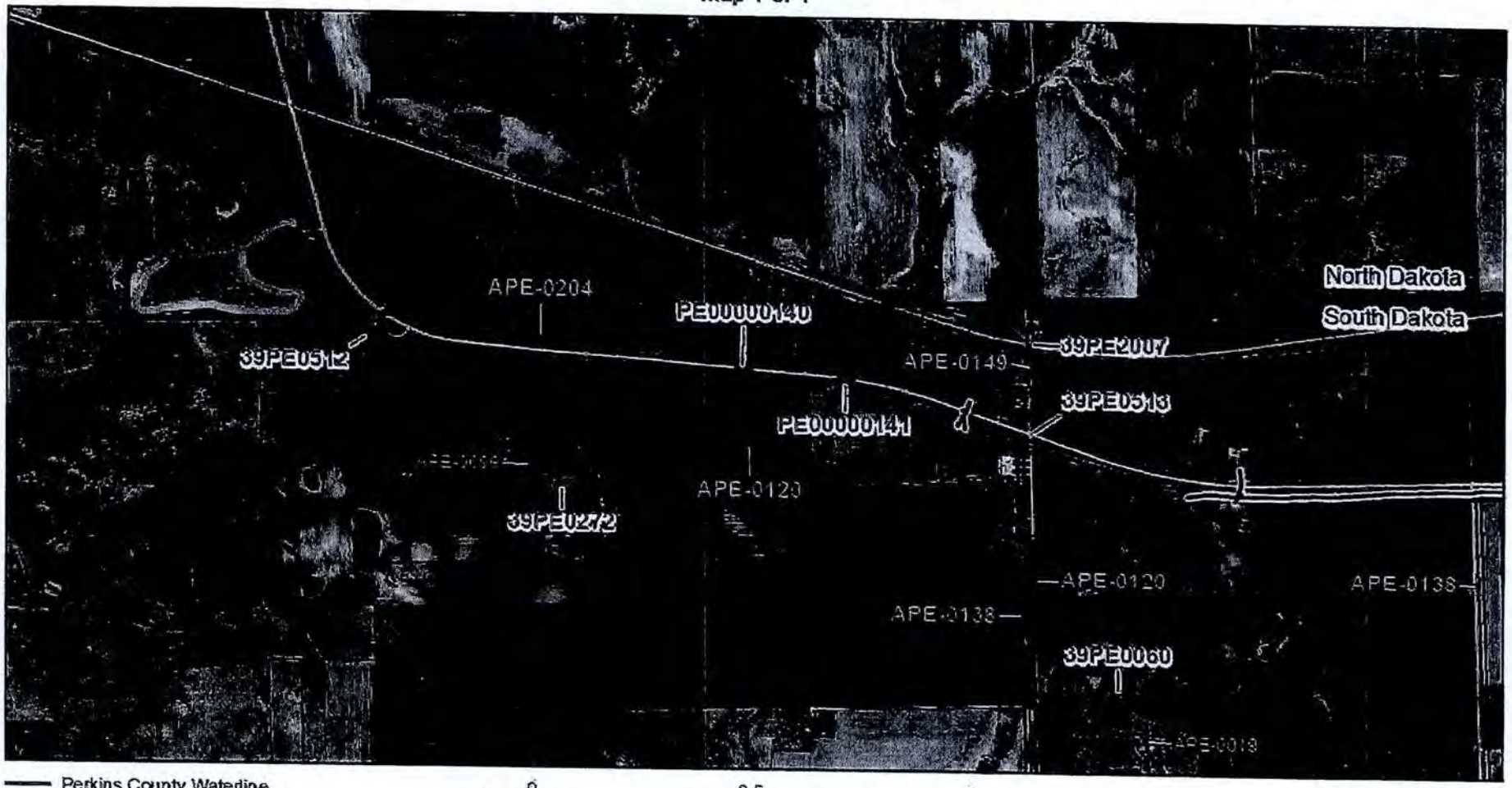
APE-0141	Buechler, Jeffrey V.	2008	A Cultural Resources Inventory Survey of West River Cooperative Telephone Company's Lemmon Exchange Buried Cable Routes in the Lemmon Vicinity of Adams County, North Dakota and Perkins County, South Dakota. Project No. 08-28
APE-0149	Buechler, Jeffrey V.	2008	A Cultural Resources Inventory Survey of Perkins County Rural Water Systems, Inc.'s Phase V Project in Perkins Counties, South Dakota. Project No. 08-35
APE-0195	Buechler, Jeffrey V.	2014	A Short Format Report of a Cultural Resources Inventory Survey of Grand Electric Cooperative's Underground Conversion Projects in Perkins County, South Dakota (Part II). Project No. 14-22
APE-0203	Byrne, Daniel	2015	An Intensive Cultural Resources Survey of SDDOT Project P-PH 0073(60)229, PCN 023A, a Segment of SD 73 from the Grand River Bridge North to the West Junction US Highway 12, Perkins County, South Dakota. CIS No. 2845
APE-0204	Byrne, Daniel	2015	An Intensive Cultural Resources Survey of SDDOT Project NH-PH 0012(68), PCN 02QB, US Highway 12 from the North Dakota State Line East to its Junction with SD Highway 73, Perkins County, South Dakota. CIS No. 2846
APE-0210	Byrne, Daniel	2015	The National Register of Historic Places Evaluation of Site 39PE515 for SDDOT Project NH-PH 0012(168), PCN 02QB and Sites 39PE509, 39PE510 and 39PE511 for SDDOT Project P-PH 0073(60)229, PCN 023A, Perkins County, South Dakota. CIS No. 2876
WSD-0174	Buechler, Jeffrey V.	1997	An Intensive Cultural Resources Inventory Survey of West River Cooperative Telephone Association's 1997 Buried Cable Routes in Butte, Harding, Meade and Perkins Counties, South Dakota. Project No. 97-22
Within a 1 Mile Radius			
Sites			
Site No.	**Description**	**Eligibility**	
39PE0060	native american artifact scatter	Unevaluated	
39PE0222	school foundation	Unevaluated	
39PE0272	farmstead; euroamerican artifact scatter	Unevaluated	
39PE0323	farmstead; euroamerican artifact scatter	Unevaluated	

39PE0344	native american artifact scatter	Unevaluated	
39PE0348	native american isolated find	Recommended Not Eligible; No SHPO Determination	
39PE0380	native american isolated find	Not Eligible	
39PE0381	euroamerican monument	Eligible	
39PE0386	prehistoric isolated find	Not Eligible	
39PE0509	prehistoric artifact scatter	Recommended Not Eligible; No SHPO Determination	
39PE0510	prehistoric artifact scatter	Recommended Not Eligible; No SHPO Determination	
39PE0511	prehistoric artifact scatter	Recommended Not Eligible; No SHPO Determination	
39PE0513	well/cistern	Unevaluated	
39PE0514	prehistoric cairn; prehistoric artifact scatter	Unevaluated	
39PE2007	railroad	Eligible	
Surveys			
Archive No	**Author(s)**	**Year**	**Report Title**
APE-0014	Hovde, David M.	1981	South Dakota Department of Transportation Gravel Pit Survey, District Five: Butte, Harding, Pennington and PERKINS (SDGF&P-T21N, R16E, Section 19) Counties, South Dakota. CIS No. 26n
APE-0019	Haberman, Thomas W.	1984	Cultural Resources Survey of a DOT Materials Pit in Section 26, T23N, R14E, Perkins County, South Dakota. CIS No. 130
APE-0030	Rhodd, Ben	1987	Cultural Resources Survey of a Department of Transportation Materials Pit Located in Section 20, T21N, R16W, Perkins County, South Dakota. SDDOT Project No. F0012(48)99, PCEMS 1268. CIS No. 330
APE-0039	Banks, Kimball M.	1992	Where the Grass Grows Green: A Cultural Resources Inventory of Three Habitat Areas, Shadehill Reservoir, Perkins County, South Dakota. Project No. 92-BF-18
APE-0054	Hanson, Rick	1993	Letter Report on an Intensive Cultural Resources Survey of DOT Project P0073(38)229, PCEMS 3153, Perkins County, South Dakota. CIS No. 854
APE-0064	Toom, Dennis L., and Cythnia Kordecki	1994	Shadehill Reservoir Project Area Cultural Resources Inventory, Perkins County, South Dakota, 1992 Field Season. Contribution No. 290
APE-0071	Byrne, Daniel	1998	A Letter Report on an Intensive Cultural Resources Survey of a Bridge Replacement Project BRF 6339() PCEMS 5723, Perkins County, South Dakota. CIS No. 1298

APE-0089	Hendrickson, Gary	2002	Cultural Resource Inventory of the Larry Lutz Tree Planting Project, T22N, R16E, Section 6, Perkins, South Dakota. NRCS CRM Report No. 02PE005
APE-0099	Armitage, Charles	2003	Cultural Resource Inventory for a Tree Planting Project in the Grand/Moreau Tablelands Study Unit, T23N, R14E, Section 21, Perkins County, South Dakota. NRCS CRM Report No. 03PE002
APE-0143	Symes, Steven A.	1976	Cultural Resources Survey for Northwestern Bell Telephone, T21N, R14E, Sections 11 & 12; T21N, R15E, Section 8; T21N, R15E, Section 13 and T21N, R16E, Section 18, Perkins County, South Dakota
APE-0166	Buechler, Jeffrey V.	2010	A Cultural Resources Inventory Survey of the Merriman Gravel Pit in the Sommerville Vicinity of Perkins County, South Dakota. Project No. 10-40
APE-0170	Buechler, Jeffrey V.	2011	Letter Format Report of a Cultural Resources Inventory Survey of Two Proposed Gravel Quarries in the Sommerville Vicinity of Perkins County, South Dakota. Project No. 11-11
Bridge			
SHPIO ID	**Eligibility**		
PE00000140	Not Eligible		
PE00000141	Not Eligible		
PE00000142	Not Eligible		
PE00000143	Not Eligible		
PE00000144	Not Eligible		
Cemetery			
SHPO ID	**Eligibility**		
PE00000054	Unevaluated		
Structures			
SHPO ID	**Eligibility**		
PE00000001	Unevaluated		
PE00000039	Unevaluated		
PE00000040	Unevaluated		
PE00000043	NR Eligible		
PE00000048	Unevaluated		

PE00000049	Unevaluated		
PE00000050	Unevaluated		
PE00000051	Unevaluated		
PE00000052	Unevaluated		
PE00000055	Not Eligible		
PE00000060	Unevaluated		
PE00000061	Unevaluated		
PE00000062	Unevaluated		
PE00000063	NR Eligible		
PE00000064	Unevaluated		
PE00000065	Unevaluated		
PE00000066	Unevaluated		
PE00000067	Unevaluated		
PE00000125	NR Eligible		
PE00000136	Not Eligible		
PE00000137	Not Eligible		
PE00000138	Not Eligible		

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 1 of 4

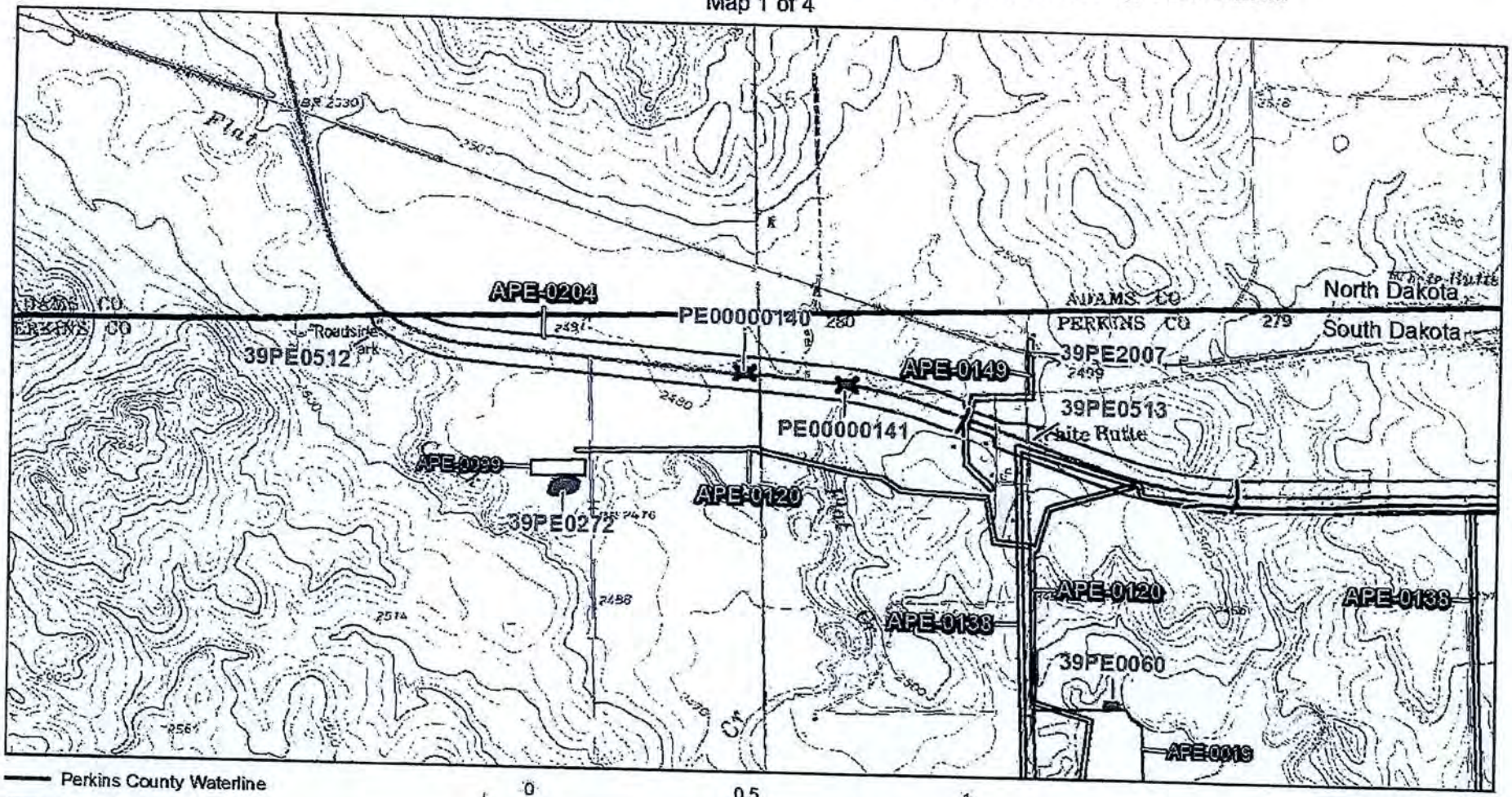


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 21-23, T23N R14E
USGS 7.5' Haynes & White Butte Quadrangles
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 1 of 4



Perkins County Waterline
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Survey
Bridge Not Eligible

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Miles
1:24,000

Sections 21-23, T23N R14E
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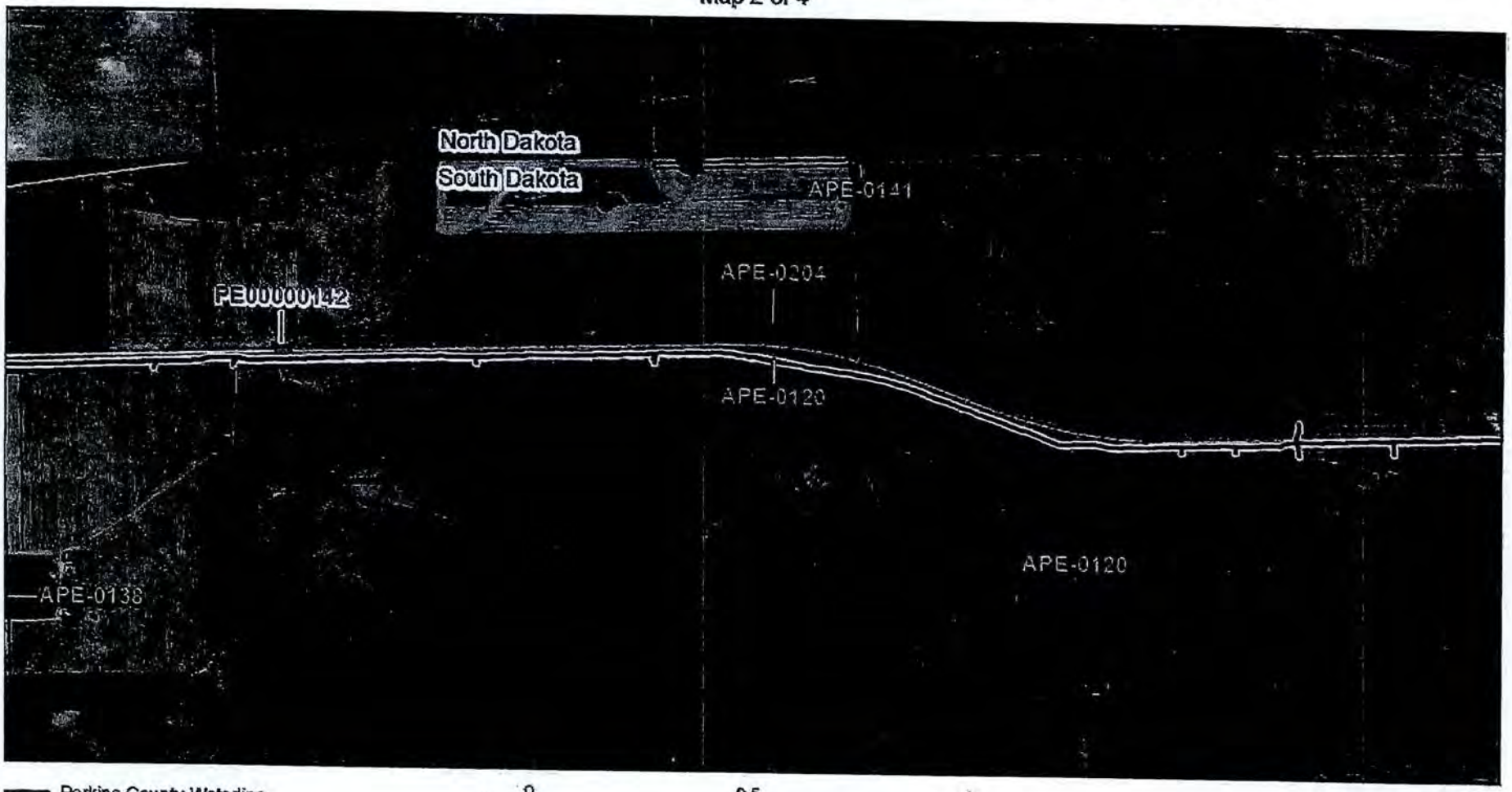
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 2 of 4

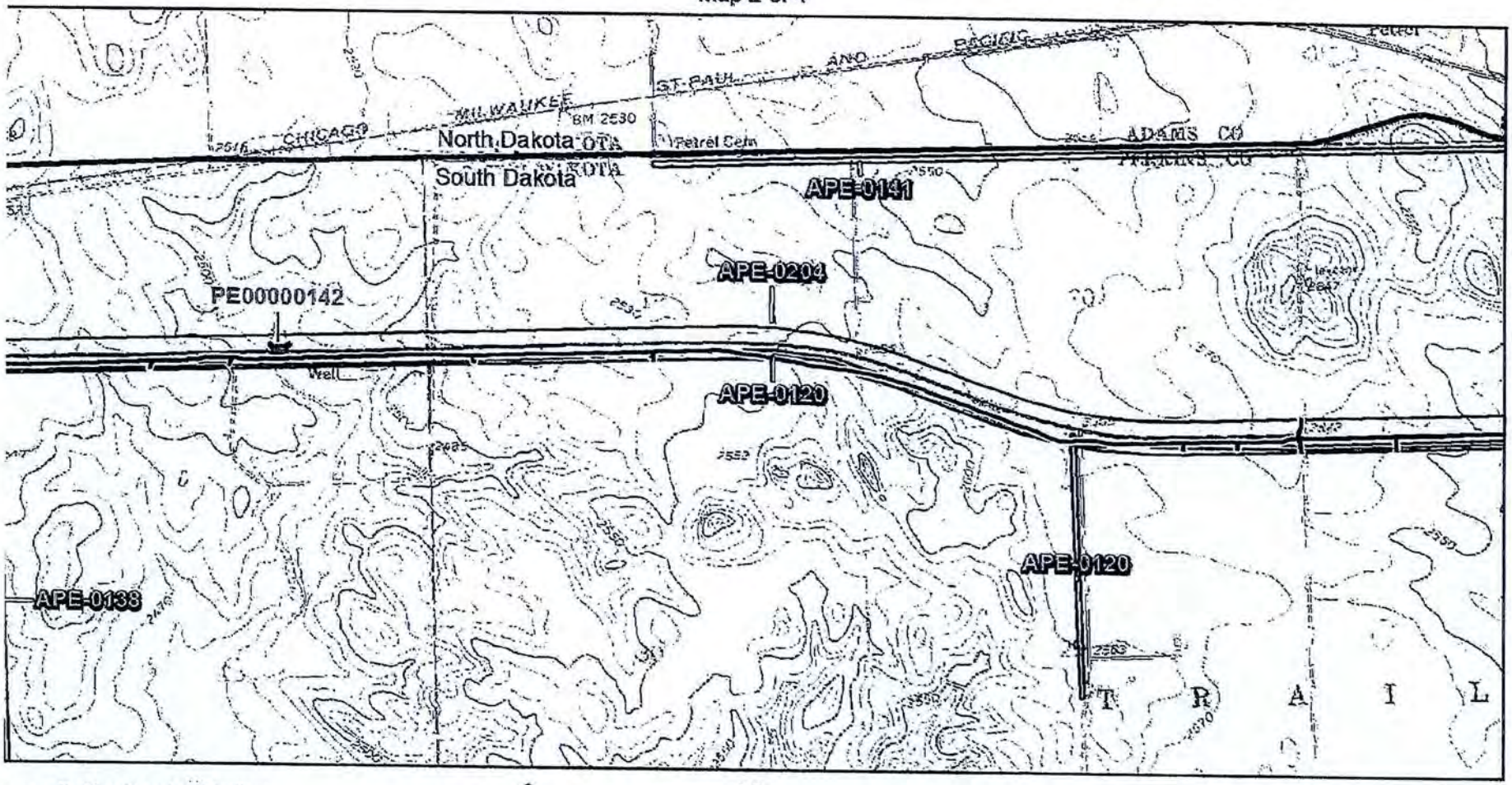


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 24 & 25, T23N R14E
Sections 19-21, 28 & 29, T23N R15E
USGS 7.5' White Butte Quadrangle
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 2 of 4

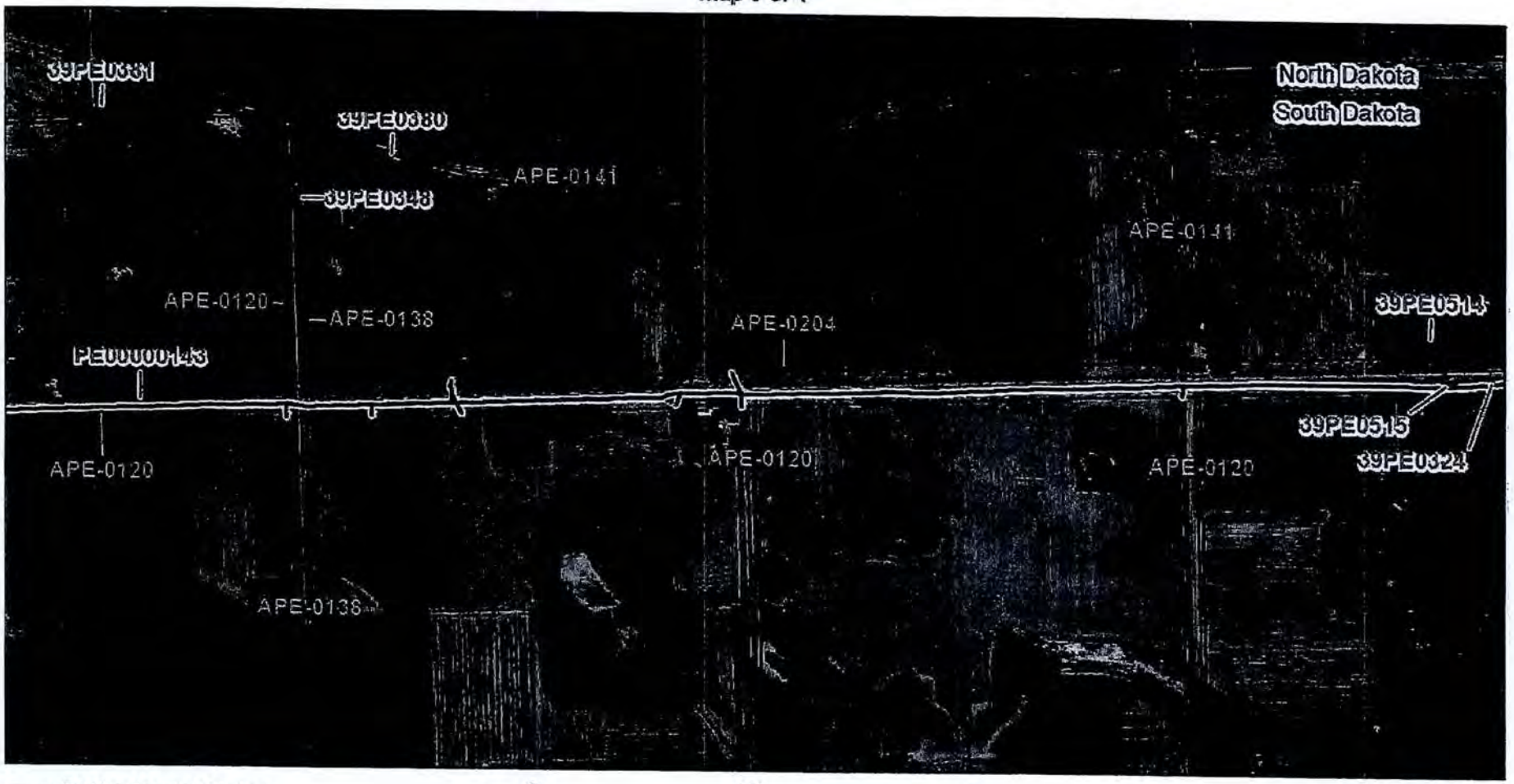


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 24 & 25, T23N R14E
Sections 19-21, 28 & 29, T23N R15E
USGS 7.5' White Butte Quadrangle
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 3 of 4

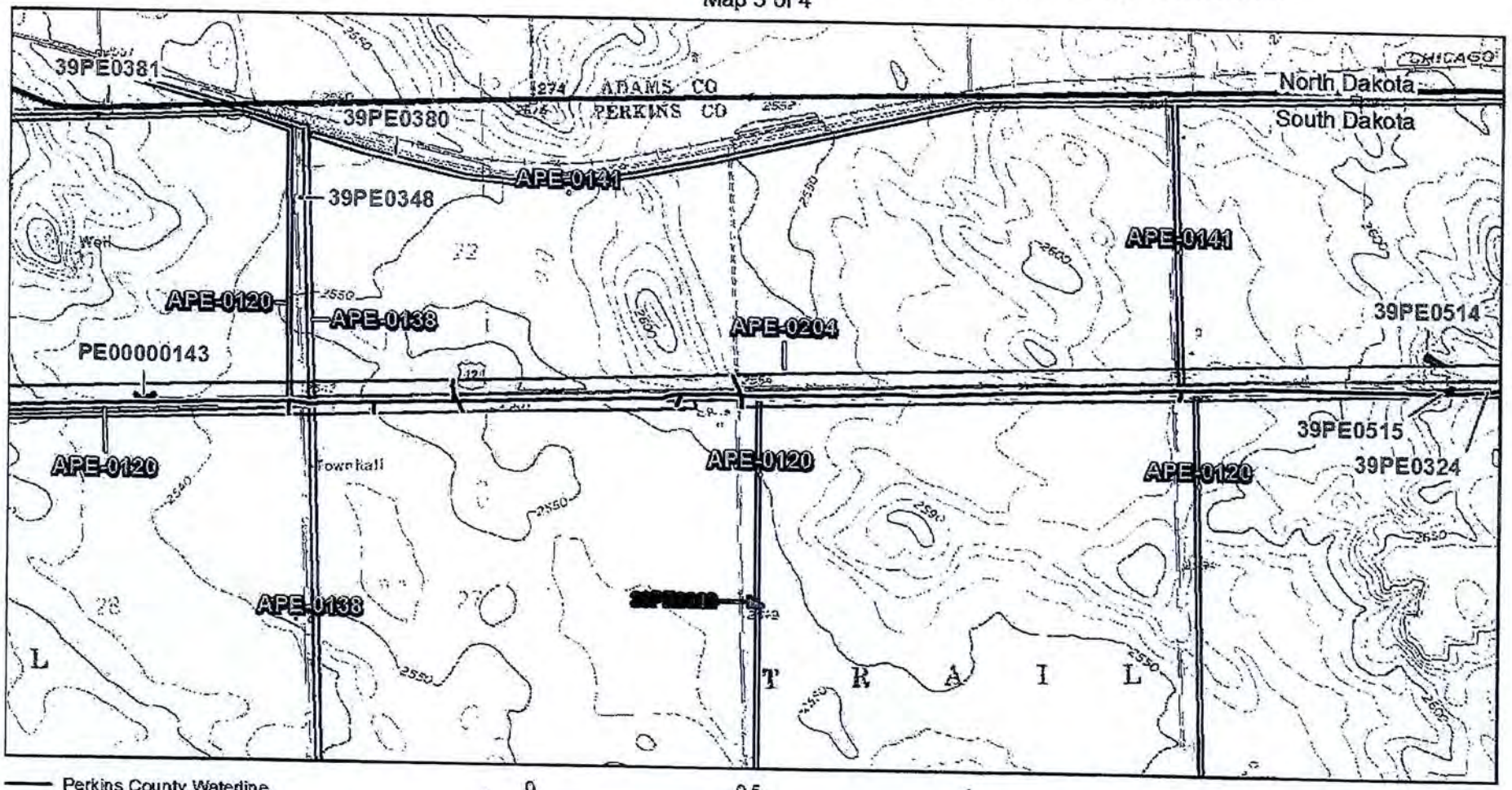


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 21-28, T23N R15E
USGS 7.5' White Butte & Lemmon Quadrangles
Perkins County, South Dakota

SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 3 of 4

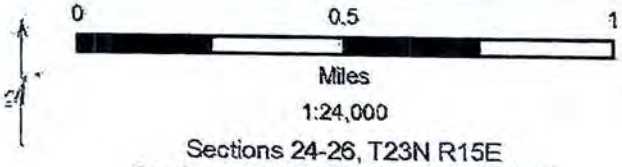


Perkins County Waterline
Site
Survey
Bridge Not Eligible

0 0.5 1
Miles
1:24,000

Sections 21-28, T23N R15E
USGS 7.5' White Butte & Lemmon Quadrangles
Perkins County, South Dakota

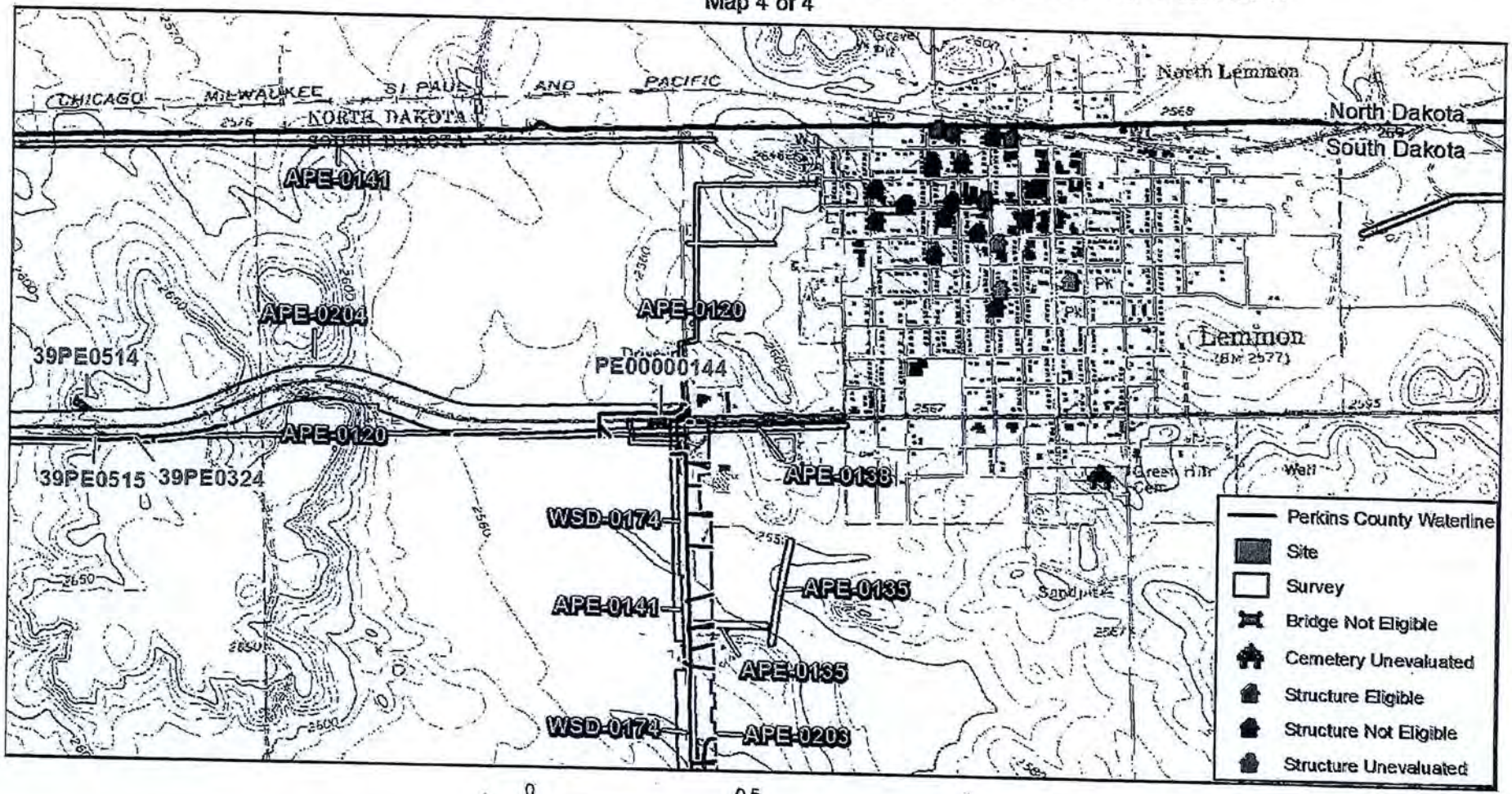
SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 4 of 4



1:24,000

Sections 24-26, T23N R15E
Sections 19, 20, 29 & 30, T23N R16E
USGS 7.5' Lemmon Quadrangle
Perkins County, South Dakota

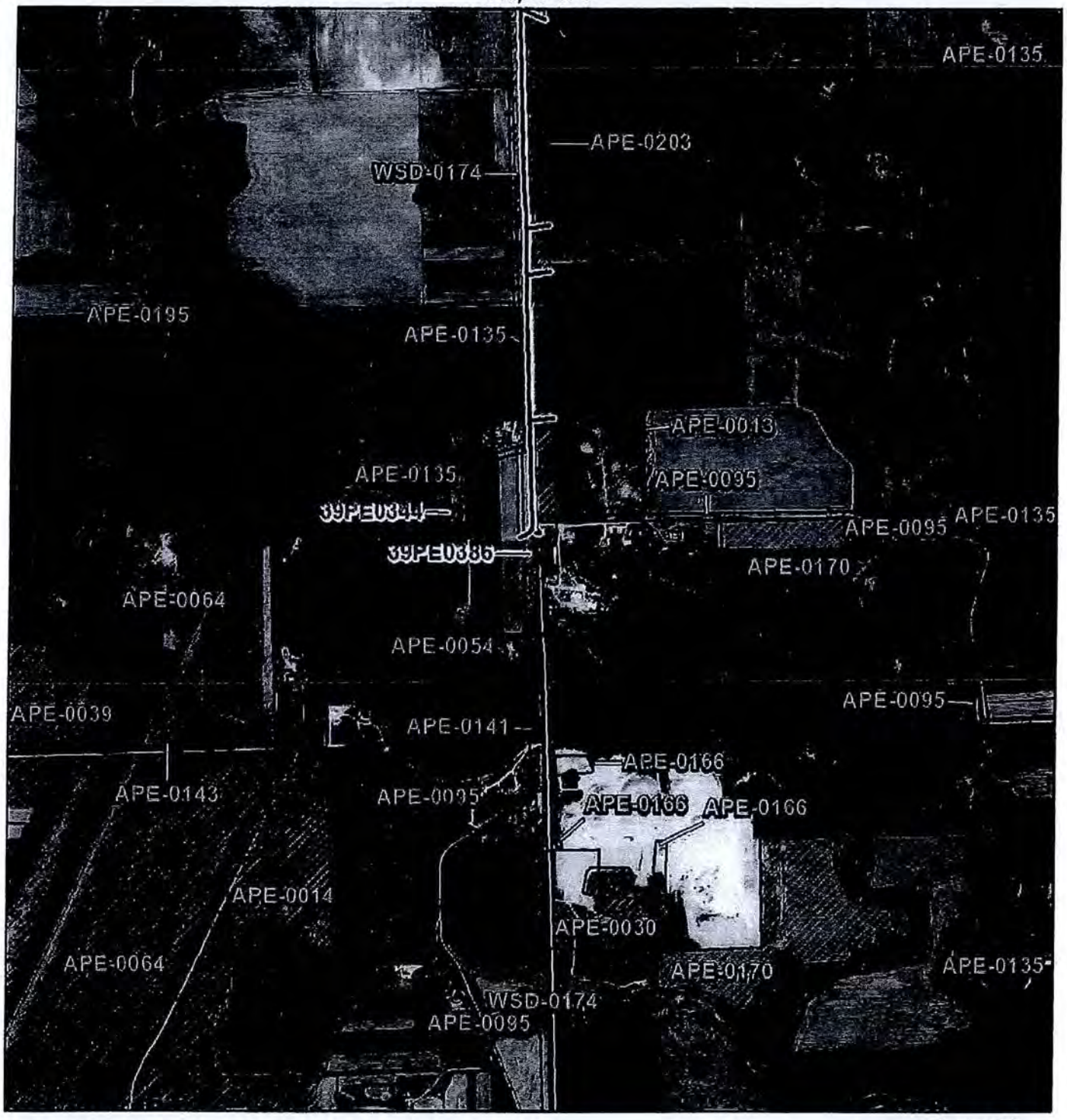
SDDOT PCN 02QB and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 4 of 4



0 0.5 1
Miles
1:24,000

Sections 24-26, T23N R15E
Sections 19, 20, 29 & 30, T23N R16E
USGS 7.5' Lemmon Quadrangle
Perkins County, South Dakota

SDDOT PCN 023A and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 5 of 5



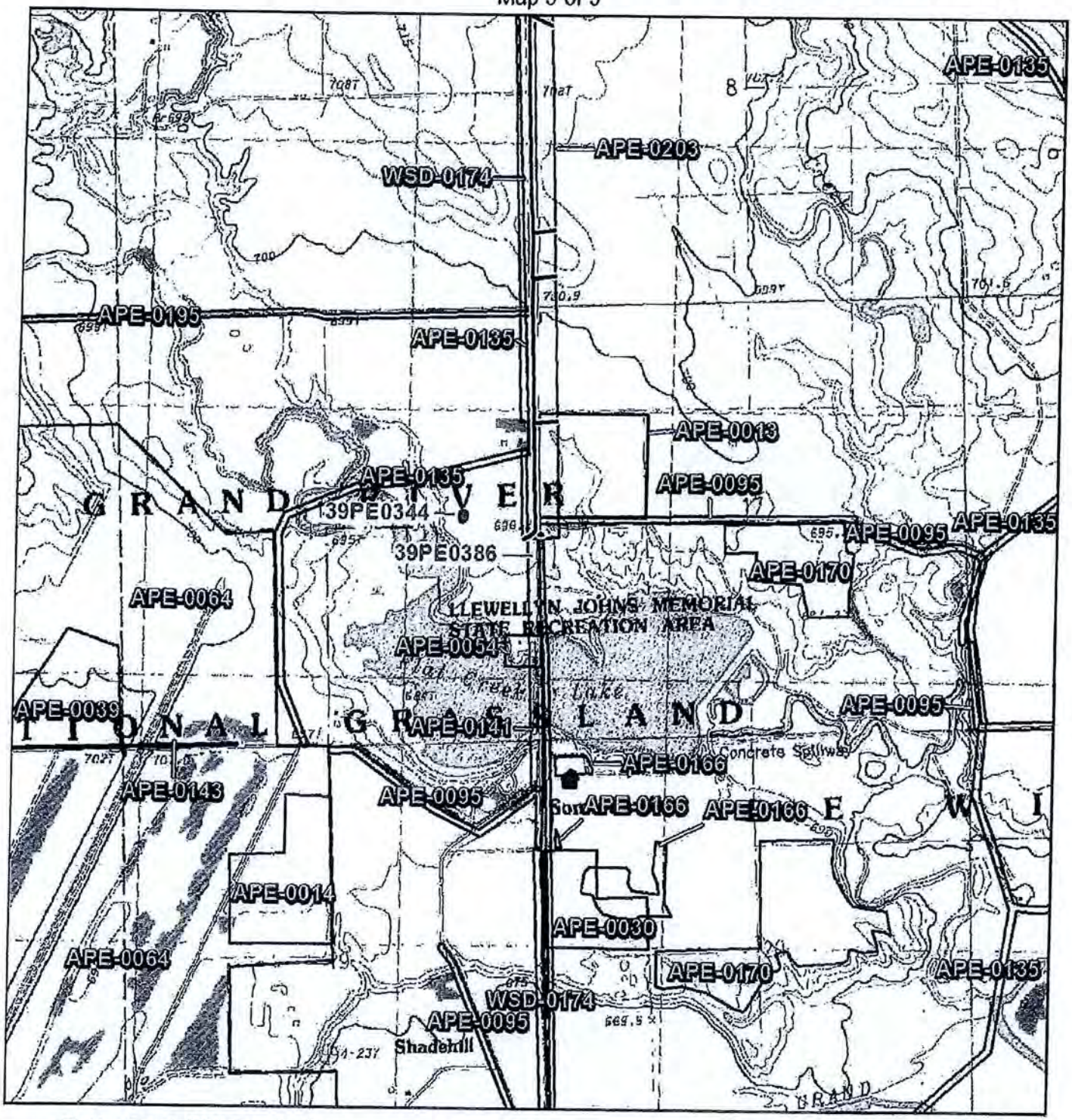
Perkins County Waterline
Site
Survey
Structure Unevaluated

0 0.5 1
Miles

1:24,000

Sections 7, 8, 17, 18, 19 & 20, T21N R16E
USGS 7.5' Summerville Quadrangle
Perkins County, South Dakota

SDDOT PCN 023A and Perkins County Rural Water District Water Line, Perkins County, South Dakota
Map 5 of 5



Perkins County Waterline
Site
Survey
Structure Unevaluated

0 0.5 1
Miles

1:24,000

Sections 7, 8, 17, 18, 19 & 20, T21N R16E
USGS 7.5' Summerville Quadrangle
Perkins County, South Dakota

www.ae2s.com

October 29, 2015

Jim Donohue, Asst. State Archaeologist
SD State Historical Society
217 Kansas City Street
Rapid City, SD 57701

RE: Cultural Resources Evaluation

Dear Mr. Donohue:

We understand that you have completed a cultural resources report for the following SD-DOT projects in Perkins County, South Dakota. Projects: NH-PH 0012(168)80, P-PH 0073(60)229 & NH 0012(59)91 US Highway 12 and SD Highway 73. As we discussed, certain rural water pipes owned by Perkins County Rural Water District will need to be moved or modified as a result of the SD-DOT project.

As a result, we have prepared and enclosed preliminary plans to show where the proposed SD-DOT road modifications and the existing Perkins County Rural Water pipeline may conflict. We are requesting you review and determine if proposed pipeline modifications have any cultural resource impacts. We are proposing to either insulate the pipe or lower the pipeline in it's current location.

If you have any questions regarding proposed pipeline modifications (and our plans to avoid conflict with SD-DOT) or need more information, please contact Deon Stockert at Deon.Stockert@AE2S.com or (701) 225-9636 or myself.

Sincerely,

Larry Thelen

Larry Thelen, Program Coordinator
Advanced Engineering and
Environmental Services, Inc. (AE2S)
1815 Schafer St., Suite 301
Bismarck, ND 58501
Larry.Thelen@AE2S.com
www.ae2s.com
Voice: 701.221.0530
Fax: 701.221.0531

Enc.

Attachment 3

Public Hearing Presentation

PERKINS COUNTY RURAL WATER SYSTEM

RELOCATION OF RURAL WATER PIPE ALONG PARTS OF US HWY 12 & SD HWY 73

AE2S | THINK BIG, GO BEYOND

PERKINS COUNTY RURAL WATER SYSTEM

Need for the Project

- Resulting from proposed SDDOT widening and reconstruction work along US Hwy 12 & SD Hwy 73.
- New road and ditch elevations negatively impacting the amount of soil "cover" over existing rural water lines.
- Soil cover needed to protect the waterline from damage and prevent freezing during the winter.

AE2S

PERKINS COUNTY RURAL WATER SYSTEM

Alternatives Evaluated

1. **Do Nothing:**

   Not a reasonable approach as protecting the waterlines from damage and freezing is paramount.

DISADVANTAGES

- Loss of water service
- Pipe freezing will occur as a result of reduced cover.
- Potential contamination of the system from broken water lines.
- Potential risk to motorists along impacted areas.
- No cost now, but future repairs to fix frozen/damaged lines very costly.

PERKINS COUNTY RURAL WATER SYSTEM

Alternatives Evaluated

2. **Protect Impacted Pipes (insulation/deeper installation):**

   Ensures Rural Water System can maintain water service to users along impacted areas of US Hwy 12 & SD Hwy 73.

ENVIRONMENTAL IMPACT

- None Identified

PERKINS COUNTY RURAL WATER SYSTEM

Proposed Project Description

- Project area is along US Hwy 12 from the ND State border to Lemmon, and along SD Hwy 73 from Lemmon to approximately 11 miles south.
- Project consists primarily of either excavating and insulating existing water lines, or excavating and installing new water lines at lower elevations at affected areas.
- Gate valves, curb stops, air release and pressure reducing valves relocated as needed.
- Bore a new water line across Wetland 10.

PERKINS COUNTY RURAL WATER SYSTEM

Booster Station Improvements

- $46,000 Allocated
- Description:
  - Installation of a SCADA system at the Highway 20 booster station west of Prairie City
  - Installation of a security fence at the Highway 75 booster station

PERKINS COUNTY RURAL WATER SYSTEM

Proposed Financing

- The portion of work within state right-of-way (ROW) will need to be financed by PCRWS. The portion of work needed outside of state ROW will be reimbursable by the state DOT.
- Anticipating grants and/or loans from Dept. of Environmental and Natural Resources (DENR).

PERKINS COUNTY RURAL WATER SYSTEM

State Revolving Fund (SRF) Loan

Preliminary Total Estimated Project Cost: $1.7M

- Loan amount expected to be borrowed: $1.7M
  - Current preliminary estimate is that 85% of the work occurs within the 150ft DOT ROW, thus 15% cost would be reimbursed by SDDOT
- Revenue source pledged for repayment: Water Revenues
  - Perkins County (approx. 876 Users)
- Interest rate and term of loan: Disadvantaged Rates
  - Current DENR interest rate and term is 2.25% for up to 30 years.

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES
PROTECTING SOUTH DAKOTA'S TOMORROW...TODAY!
Air Land Water Funding

PERKINS COUNTY RURAL WATER SYSTEM

Effect of Proposed Financing on Users

- PCRWS current fixed water charge is $64.00/month for residential hookups, and $365/year for pasture and seasonal hookups.
- Water rate is $5.86/1,000 Gallons.
- Typical monthly water bill for residential hookup is $105 for 7,000 Gal of water.
- It is anticipated that there will be **no impact on user rates** as a result of the proposed financing.

PERKINS COUNTY RURAL WATER SYSTEM

Thank you! Questions?

- **PCRWS**
  - Brandi Baysinger | 605-244-5608
- **AE2S**
  - Larry Thelen | 701-221-0530;
  - Deon Stockert | 701-225-9636
- **Black Hills Council of Local Governments**
  - Ali DeMersseman | 605-394-2681

BLACK HILLS COUNCIL OF LOCAL GOVERNMENTS

AE2S

WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: Town of Conde

Project Title:	Distribution and Storage System Improvements
Funding Requested:	$2,795,000
Total Project Cost:	$2,795,000
Project Description:	This project will replace existing 6-inch ductile iron pipe and 4-inch PVC pipe throughout the town with 6-inch PVC pipe, and new 6-inch PVC pipe to loop the system would be installed. The project also includes replacing the existing water tower with a 50,000-gallon ground storage tank and booster pumps.
Alternatives Evaluated:	No Action Alternative: This alternative was evaluated for both storage and distribution and rejected due to the problems associated with aging infrastructure. Water Storage: Two water storage alternatives were evaluated. These included 50,000-gallon elevated tank and ground storage tank with pumps. The ground storage tank with booster pumps is the chosen alternative due to its lower equivalent annual cost. Water Distribution: Two water distribution alternatives were evaluated. Both of these alternatives include replacing all ductile iron and PVC pipe in the community with 6-inch PVC pipe. The chosen alternative includes additional pipe to loop the system.
Implementation Schedule:	The town of Conde anticipates bidding the project in July 2016 with a project completion date of October 2017.
Service Population:	140
Current Domestic Rate:	$30.50 per 5,000 gallons usage

Interest Rate: 2.25% Term: 30 years Security: Project Surcharge

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan Conde would have to enact a surcharge of $113.15. When added to current rate of $30.50/5,000 gallons residents would be paying a rate of $143.65/5,000 gallons.

25% Funding Subsidy:	$698,750 subsidy with a loan of $2,096,250.
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $2,096,250 Conde would have to enact a surcharge of $84.86 thereby paying a rate of $115.36/5,000 gallons.

50% Funding Subsidy:	$1,397,500 subsidy with a loan of $1,397,500.
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $1,397,500 Conde would have to enact a surcharge of $56.57 thereby paying a rate of $87.07/5,000 gallons.

75% Funding Subsidy:	$2,096,250 subsidy with a loan of $698,750.
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $698,750 Conde would have to enact a surcharge of $28.29 thereby paying a rate of $58.79/5,000 gallons.

ENGINEERING REVIEW COMPLETED BY: ERIC MEINTSMA

FINANCIAL REVIEW COMPLETED BY: DEREK LANKFORD

RECEIVED
JAN 04 2015
Division of Finance
& Technical Assistance

ORIGINAL

CITY OF CONDE, SOUTH DAKOTA

Drinking Water Improvements

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DRINKING WATER STATE REVOLVING FUND

APPLICATION

PREPARED BY:
NORTHEST COUNCIL OF GOVERNMENTS
DECEMBER 2015

Drinking Water Facilities Funding Application

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:	Proposed Funding Package	
City of Conde		
Address: PO Box 113 Conde, SD 57434	Requested Funding	$2,795,000
	Local Cash	
Subapplicant:	Other:	
	Other:	
DUNS Number: 005467751	Other:	
	TOTAL	$2,795,000

Project Title: Conde Drinking Water Distribution & Storage System Improvements

Description:

The Town of Conde is experiencing water loss estimated at 30.9 percent and poor water pressure throughout town. The water tower has outlived its useful life and is in need of significant repairs or replacement. The City has considered several alternatives as outlined in the facility plan completed by Helms and Associates. The Town of Conde is proposing to apply for funding to replace all of the four and six inch diameter pipe and replacing it with PVC as well as looping lines in the system that are currently dead ends. The town is also considering making improvements to the water storage which includes replacing it with a new 50,000 gallon ground storage tank.

The City currently charges $30.50 per 5,000 gallons.

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Cindy L. Smith President	Cindy L. Smith	December 21, 2015
Name & Title of Authorized Signatory (Typed)	Signature	Date

Professional Consultants

Application Prepared By: NECOG

Contact Person: Jennifer Sietsema

Mailing Address: 416 Production Street N., Suite #1

City, State, and Zip: Aberdeen, SD 57401

Telephone Number: 605-626-2595 Fax: 605-626-2975

Email address: Jennifer@necog.org

Consulting Engineering Firm: Helms and Associates

Contact Person: Bob Babcock

Mailing Address: PO Box 111

City, State, and Zip: Aberdeen, SD 57402

Telephone Number: 605-225-1212 Fax:

Email address: bobb@helmsengineering.com

Legal Counsel's Firm: Delaney Nielson Sannes PC

Contact Person: David Geyer

Mailing Address: PO Box 9, 520 2nd Avenue E

City, State, and Zip: Sisseton, SD 57262

Telephone Number: 605-698-7084 Fax:

Email address: david@delaneylawfirm.com

Bond Counsel's Firm: Meierhenry Sargent LLP

Contact Person: Todd Meierhenry

Mailing Address: 315 S. Phillips Avenue

City, State, and Zip: Sioux Falls SD 57104

Telephone Number: 605-336-3075 Fax:

Email address: todd@meierhenrylaw.com

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel	$48,000					$48,000
D. Other	$315					$315
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$209,400					$209,400
B. Project Inspection Fees	$216,800					$216,800
C. Other	$11,000					$11,000
4. Construction & Improvements	$2,007,485					$2,007,485
5. Equipment						
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$2,493,000					$2,493,000
10. Contingencies	$302,000					$302,000
11. Total (Lines 9 and 10)	$2,795,000					$2,795,000
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)		$2,795,000	March 25, 2016
Other (Explain)			
Other (Explain)			
Other (Explain)			
Total		$2,795,000	$2,795,000

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: January 1st

Population Served Current: 140 2010 140 2000 187

Top three employers within 30 miles	Number of Employees	Type of Business
Avera St Lukes	1,400	Regional Medical Facility
3M	750	Manufacturing
Aberdeen Public Schools	650	Education

Repayment Information

Interest rate you are applying for: 2.25% Term: 30

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☒ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan.
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year	0					
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$25,897	$28,181	$32,092	$33,000	$33,000	$35,000
Surcharge Fees					$141,026	$141,026
Other (Explain)		$4,592				
Operating Expenses						
Personal Services	($1,319)	($11,020)			($12,000)	($2,500)
Chemical, Material & Supplies	($13,267)	($13,926)			($14,500)	($15,000)
Electric & Other Utilities						
Other (Explain)	($5,219)	($12,802)	($32,092)	($33,000)	($5,500)	($5,000)
Operating Net Cash	$6,092	($4,975)	0	0	$142,026	$153,526
Nonoperating Cash Flow						
Interest Revenue						
Transfers In (Explain)		$6,000				
Fixed Asset Purchases						
Transfers Out (Explain)	($5,393)					
Principal Debt Payments					($68,722)	($71,000)
Interest Debt Payments					($59,433)	($57,155)
Other (Explain)						
Nonoperating Net Cash	($5,393)	$6,000			($128,155)	($128,155)
Increase (Decrease) Cash	$699	$1,025	0	0	$13,871	$25,371
Beginning Cash Balance	$8,877	$9,576	$10,601	$10,601	$10,601	$24,472
Ending Cash Balance	$9,576	$10,601	$10,601	$10,601	$24,472	$49,843
Restricted Balance						
Unrestricted Balance						

Explanations

Surcharge in 2017 and 2018 for new debt based on 110% debt coverage using 104 users x $113 surcharge x 12 months.

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: [X] Incorporated Municipality or Sanitary District

or

[ ] Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic	$30.50	$0.00	70	3500
Business	$30.50	$0.00	16	1000
Other: Seasonal	$18.00	$0.00	18	1000
Other:				

Are fees based on usage or flat rate? $18 base fee plus $2.50/1000 gal (see rate info)

When is proposed fee scheduled to take effect? NA

When did the current fee take effect? November 8, 2014

What was the fee prior to the current rate? $15.00 base, plus $2.50 per 1000 gal

Four Largest Customers	Type of Business	% of System Revenue
Hildebrant	Residential	1%
Menzia	Residential	1%
Miles	Residential	1%
Worlie	Residential	1%

Property Tax Information

(Complete section only if General Obligation bond is pledged to repay your loan.)

Three year valuation trend:

Year	_____	_____	_____
Assessed Valuation	_____	_____	_____

Three year levies and collection trend:

Year	_____	_____	_____
Amount Levied	_____	_____	_____
Collected	_____	_____	_____

Five Largest Taxpayers	Description	Assessed Valuation
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Comments:

General Fund Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Sales Tax Information

(Complete section only if sales tax is pledged to repay your loan.)

Sales tax revenue history for the most current fifteen months:

Month/Year	Amount Collected

Comments:

Sales Tax Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Facilities Plan Checklist

Before submitting the application, please take a few moments to complete the following checklist. Addressing these items prior to submitting the application will expedite the review process.

Drinking Water Facilities Plan document can be found at http://denr.sd.gov/dfta/wwf/dwsrf/dwfunding.aspx

Checklist of SRF Facilities Plan Requirements

Have the following items been addressed?

- Submission of a Facilities Plan to the department that addresses those items found in the Water Facilities Plan document. [x]
- A public hearing held discussing the project and the use of an SRF loan to finance the project. [x]
- Minutes of the public hearing prepared and submitted to the department's engineer for inclusion into the final Facilities Plan. [x]
- The affidavit of publication of the public hearing received and submitted to the department's engineer for inclusion into the final Facilities Plan. [x]
- The four review agencies contacted and responses received for inclusion into the final Facilities Plan. [x]
- The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. [x]

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$2,307,985
Treatment	
Storage	$486,700
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$2,794,685

Cindy L. Smith, President

Name & Title of Authorized Representative

Cindy L Smith

Signature of Authorized Representative

12/21/2015

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Cindy L. Smith, President

Name & Title of Authorized Representative

Cindy L Smith

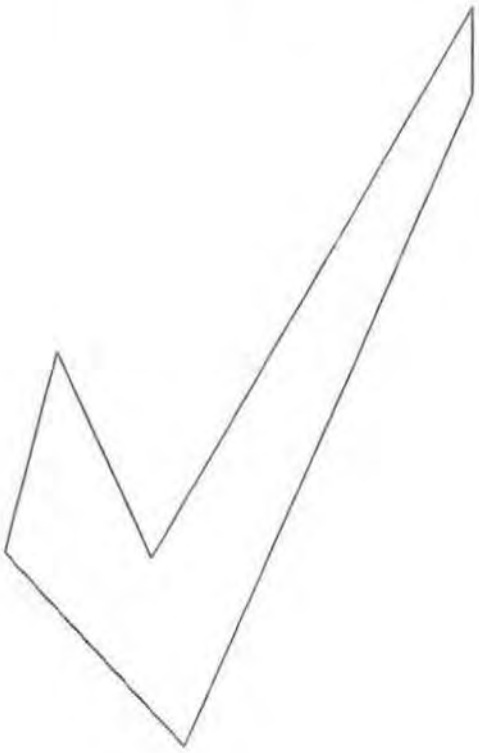
Signature of Authorized Representative

12/21/2015

Date

☐ I am unable to certify to the above statements. Attached is my explanation

8.3.16 Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2007

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: City of Conde, SD

Prepared by: David J. Wick EIT
Helms & Associates
P.O. Box 111, Aberdeen, SD 57402
Phone #: 605-225-1212
Date: March 19, 2015

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µg/L: micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: Yes, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** 10,660 gpd	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 15,268 gpd	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 35,280 gpd, supplied by Web Water, 24.5 gpm	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 230% Higher	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:***	☐	☑	☐	☐
Have you been able to provide adequate volumes of water during drought cycles?	☐	☑	☐	☐
Have you had to restrict usage at any time for any reason? ***Please specify:*** During very dry summers.	☑	☐	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:***	☐	☑	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.***	☐	☐	☑	☐
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☐ ***growing,*** ☐ ***declining, or*** ☑ ***stable.***	☑	☐	☐	☐
Does your source have additional water available for appropriation?	☑	☐	☐	☐
Do you have a water right? ***Water right permit number(s):*** #4076-3	☑	☐	☐	☐
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☐	☐	☐	☑
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☑	☐	☐	☐
Do you have a contract to purchase water? ***If yes, with whom?*** Web Water	☑	☐	☐	☐
Are you currently staying within your contract?	☑	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☐	☑	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☑	☐	☐	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☐	☑	☐	☐
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** 1100 feet	☑	☐	☐	☐
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** Artesian Ground Water	☑	☐	☐	☐
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☐	☐	☐	☑

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☐ **yes** ☑ **no**

(If you checked "no", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☐	☐
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☐	☐
Are repair parts available?	☐	☐	☐	☐
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:***	☐	☐	☐	☐
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☐	☐
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☐	☐
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:***	☐	☐	☐	☐
Do you have the capability to add coagulant before the filter?	☐	☐	☐	☐

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☐	☐	☐	☐
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** _____	☐	☐	☐	☐
Is your well(s) constructed according to current South Dakota regulations?	☐	☐	☐	☐
Do you have a source water protection plan?	☐	☐	☐	☐
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☐	☐	☐	☐

Disinfection

Do you disinfect? ☐ **yes** ☑ **no** ***(If "no", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** _____ ***How often?*** _____ ***Disinfectant used:*** _____	☐	☐	☐	☐
Do you have back-up equipment? ***Type:*** _____	☐	☐	☐	☐
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** _____	☐	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** _____ ***Total Chlorine Residual:*** _____ (if using chloramines)	☐	☐	☐	☐

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☑
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☑

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☐	☑	☐	☐
Are chemicals used for treatment properly stored and secure?	☐	☐	☐	☑
Does the water system track chemical usage? (i.e. a sudden	☐	☐	☐	☑

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping

	Yes	No	Unknown	NA
Condition of Pumping Equipment				
Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** Monthly	☑	☐	☐	☐
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☑	☐	☐	☐
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☑	☐	☐	☐
Standby/Emergency Power Equipment	**Yes**	**No**	**Unknown**	**NA**
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☐	☑	☐	☐
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☐	☐	☐	☑
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☐	☑	☐	☐

Infrastructure - Storage

	Yes	No	Unknown	NA
Storage Capacity				
Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:***	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** 44,000 gallons	☑	☐	☐	☐
Security Measures	**Yes**	**No**	**Unknown**	**NA**
Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☑	☐	☐	☐
Are access hatches locked?	☑	☐	☐	☐
Is the tank and the immediate surrounding area fenced?	☐	☑	☐	☐
Control Systems				
Is there a high and low water level signal system to control the pumps?	☑	☐	☐	☐

Is there a drain valve or hydrant to allow for draining of the tank?	☑	☐	☐	☐
Tank Maintenance Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☐	☑	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☑	☐	☐	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:*** Twice a year, spring and fall	☑	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☑	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☑	☐	☐	☐
Are all valves exercised and lubricated periodically?	☐	☑	☐	☐
Is the system free of severe "water hammer" problems?	☑	☐	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☐	☐	☐	☑
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month?	☐	☑	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 30 %	☐	☑	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 23 to 30 psi	☐	☑	☐	☐
Do you have a routine leak detection and repair program?	☐	☑	☐	☐
Are all sources of supply and customers metered?	☐	☑	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☐	☑	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☐	☑	☐	☐

Are any inspections for cross-connections performed?	☐	☐	☐	☑
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☐	☐	☐	☑
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☐	☑	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** 82% 6" DI, 18% 4" PVC	☑	☐	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☐	☑	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☑	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☐	☑	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** 2 to 3 per year ***Most common complaint:*** Water Distribution I, Operatc	☑	☐	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☐	☑	☐	☐

The Management Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

	Yes	No	Unknown	NA
Operations Staff Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** Water Distribution I, Operator ID #2353	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** DENR, WEB Water Systems	☑	☐	☐	☐

Management & Administration

	Yes	No	Unknown	NA
Who's in Charge? Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☐	☑	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☑	☐	☐	☐
Rules and Standards Do you have explicit rules and standards for system modifications?	☑	☐	☐	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☑	☐	☐	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☐	☑	☐	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☑	☐	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☑	☐	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☑	☐	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** Unsure.	☑	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☐	☑	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☑	☐	☐
Do you know what to do in the event of a violation?	☑	☐	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☑	☐	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☐	☐	☑	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☑	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☑	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** Andy Van Steenwyk (Water District Maint., LLC)	☑	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☐	☐	☑	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☑	☐	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☐	☐	☐	☑
Do you have written operating procedures for both routine and emergency system operations?	☑	☐	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☑	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☐	☑	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☑	☐	☐	☐

Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☑	☐	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☑	☐	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☐	☐	☑	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☑	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: Yes, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☑	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☑	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** _____	☐	☑	☐	☐
Does the system have reserve funds available in the event of an emergency?	☑	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☐	☑	☐	☐
Do you have a process for scheduling and committing to capital projects?	☑	☐	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☐	☐	☑	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☐	☑	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** Yearly	☑	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☑	☐	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** $18.00 flat rate plus $2.50 per 1000 gal. (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: $2.50 per 1000 gallons	☐	☑	☐	☐
Does the rate structure assure proportionality among users?	☑	☐	☐	☐
Do you have procedures for billing and collection?	☑	☐	☐	☐
Is your billing collection rate greater than 95%?	☑	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☑	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☐	☑	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☐	☑	☐	☐
Does your water utility support other enterprise funds or the general fund?	☑	☐	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☑	☐	☐	☐
Do you employ standardized accounting and tracking systems?	☐	☑	☐	☐
Do you track budget performance?	☑	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☐	☑	☐	☐
Are financial management recordkeeping systems organized?	☑	☐	☐	☐
Are controls exercised over expenditures?	☑	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☑	☐	☐	☐
Are there purchasing procedures?	☑	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☐	☐	☐	☑

Financial Spreadsheet

Applicant: City of Conde
Completed by: NECOG
Date: 3/30/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	$9,576	$10,601	$10,601	$152,627	$166,448
2. Cash Receipts:					
a. Unmetered Water Revenue					
b. Metered Water Revenue	$28,181	$32,092	$33,000	$33,000	$34,000
c. Other Water Revenue			$141,026	$141,026	$141,026
d. Total Water Revenues (2a through 2c)	$28,181	$32,092	$174,026	$174,026	$175,026
e. Connection Fees					
f. Interest and Dividend Income					
g. Other Income					
h. Total Cash Revenues (2d through 2g)	$28,181	$32,092	$174,026	$174,026	$175,026
i. Transfers in/Additional Rev Needed					
j. Loans, Grants or other Cash					
Please specify					
SCPG-Water Study	$6,000				
3. Total Cash Receipts (2h through 2j)	$34,181	$32,092	$174,026	$174,026	$175,026
4. Total Cash Available (1+3)	$43,758	$42,693	$184,627	$326,653	$341,474
5. Operating Expenses					
a. Salaries and wages	$11,020	$12,000	$12,000	$12,000	$12,000
b. Employee Pensions and Benefits					
c. Purchased Water					
d. Purchased Power					
e. Fuel for Power Production					
f. Chemicals					
g. Materials and Supplies	$13,926	$14,500	$14,500	$14,500	$14,500
h. Engineering Services	$7,500				
i. Contractual Services – Other					
j. Equip. Rent/Real Property					
k. Transportation Expenses					
l. Laboratory					
m. Insurance					
n. Regulatory Commission Expenses					
o. Advertising					
p. Miscellaneous	$5,302	$5,592	$5,500	$5,500	$5,500
q. Total Cash O&M Expenses (5a through 5p)	$37,748	$32,092	$32,000	$32,000	$32,000
r. Replacement Expenditures					
s. Total OM&R Expenditures (5q+5r)	$37,748	$32,092	$32,000	$32,000	$32,000
t. Loan Principal/Capital Lease Payments				$68,722	$70,336
u. Loan Interest Payments				$59,483	$57,869
v. Transfers Out					
w. Capital Purchases (specify):					
Adjustment made by FO	($4,592)				
x. Other					
6. Total Cash Paid Out (5s through 5x)	$33,156	$32,092	$32,000	$160,205	$160,205
7. Ending Cash Position (4 - 6)	$10,601	$10,601	$152,627	$166,448	$181,269

Financial Spreadsheet

Applicant: City of Conde
Completed by: NECOG
Date: 3/30/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts	104	104	103	102	101
9. Avg Annual User Charge Account (2d/8)	$271	$309	$1,690	$1,706	$1,733
10. Coverage Ratio (2h-5s)/(5t+5u)	0.0	0.0	0.0	1.1	1.1
11. Operating Ratio (2d/5s)	0.7	1.0	5.4	5.4	5.5
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve					
b. Bond Retirement Reserve			$141,026	$128,205	$128,205
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other					
13. Total Reserves (12a through 12e)			$141,026	$128,205	$128,205
14. Year End Operating Cash (7 – 13)	$10,601	$10,601	$11,601	$38,243	$53,064

FINANCIALS AND CURRENT YEAR BUDGET

SAM
SYSTEM FOR AWARD MANAGEMENT

- Getting Started
- Draft
- Work in Progress
- Submitted
- Active
- Inactive / Expired
- What If My Entity Fails Registration?
- Federal Service Desk
- Find Your Registration in SAM

005467751 Search Reset

Search Reset

CONDE, CITY OF

Status: Active

Your registration was activated on Jun 10, 2015. It expires on Jun 09, 2016 which is one year after you submitted it for processing.

Core Data	Assertions	Reps & Certs	POCs	Submit	Processing	Active
Completed	Completed	Completed	Completed	Completed	Completed	Completed

Check Your Registration Status in SAM

You can quickly check your registration status in SAM by entering your DUNS number or (N)CAGE Code. The SAM Status Tracker will show you the current status of the entity associated with that DUNS number or (N)CAGE Code, as well as tell you what steps you have left to complete based on why you are registering.

The SAM Status Tracker uses seven circles to represent the registration process: Core Data, Assertions, Reps & Certs, POCs, Submit, Processing, and Active. Visual indicators in the circles, text underneath the circles, a status message in bold above the circles and user messaging combine to give the registration status.

You will only see results for publicly searchable registration records. Federal government users must log into SAM to search for non-public records.

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Exhibit I

MUNICIPALITY OF CONDE
STATEMENT OF FUND CASH BALANCES
ALL FUNDS
December 31, 2012

				Enterprise Funds					
	General Fund	School Fund	Fund	Water Fund	Sewer Fund	Wastewater Fund	Fund	Fund	Total
Cash Assets:									
Cash in Checking Accounts	30,997.70	2,643.24		8,876.86		0.00			42,517.80
Change and Petty Cash	60.00								60.00
Passbook Savings (M.Mkt.)	65,449.94	255,140.29			25,405.52				345,995.75
Savings Certificates	30,000.00								30,000.00
									0.00
									0.00
									0.00
									0.00
101 FUND CASH BALANCES (Note 1)	126,507.64	257,783.53	0.00	8,876.86	25,405.52	0.00	0.00	0.00	418,573.55

Municipal funds are deposited or invested with the following depositories:
(Plains Commerce Bank, Conde, SD)

Checking accounts (city, school, water, wastewater)	42,517.80
Petty Cash	60.00
Savings or Money Markets (city & school)	345,995.75
CD's	30,000.00
	418,573.55

Note 1: These amounts must equal the amounts stated on the bottom line of Exhibit II, page 3.

MUNICIPALITY OF CONDE
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2012

				Enterprise Funds					
	General Fund	School Fund	Fund	Water Fund	Sewer Fund	Wastewater Fund	Fund	Fund	Total
Receipts (Source):									
311 Property Taxes	69,199.22								69,199.22
313 Sales Tax	30,771.89								30,771.89
316 911 Telephone Surcharge									0.00
311-319 Other Taxes (319)	1,426.42								1,426.42
320 Licenses and Permits	1,545.00								1,545.00
331 Federal Grants									0.00
335.1 Bank Franchise Tax	288.13								288.13
335.2 Motor Vehicle Commercial Prorate	1,775.13								1,775.13
335.3 Liquor Tax Reversion	908.13								908.13
335.4 Motor Vehicle Licenses (5%)	5,891.25								5,891.25
335.6 Fire Insurance Premium Reversion									0.00
335.7 Liquor License Reversion									0.00
335.8 Local Government Highway and Bridge Fund									0.00
338.1 County Road Tax (25%)	14,669.01								14,669.01
338.2 County Highway and Bridge Reserve Tax (25%)	329.43								329.43
338.3 County Wheel Tax	155.40								155.40
331-339 Other Intergovernmental Revenue (339)	252.30								252.30
341-349 Charges for Goods and Services (341)									0.00
351-359 Fines and Forfeits (351)	15,737.95								15,737.95
361 Investment Earnings									0.00
362 Rentals	231.83	653.81							885.64
363-369 Other Revenues (369)		7,460.00							7,460.00
	11,621.27	3,000.00							14,621.27

MUNICIPALITY OF CONDE
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2012
(continued)

				Enterprise Funds					
	General Fund	School Fund	Fund	Water Fund	Sewer Fund	Wastewater Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
410 Personal Services				1,974.45	7,470.14	1,413,579.54			1,423,024.13
420 Other Expenses				8,136.71	2,510.82	19,649.84			30,297.37
426 Supplies and Materials				15,668.26	1,957.64				17,625.90
Total Disbursements	105,714.74	25,459.38	-	25,779.42	11,938.60	1,433,229.38	-	-	1,602,121.52
39101 Transfers In	4,185.96								4,185.96
51100 Transfers Out	( )	(4,185.96)	( )	( )	( )	( )	( )	( )	(4,185.96)
391.2 Money Received From Borrowing						167,895.00			167,895.00
391.07 Capital Contributions (Grants)									-
(CDBG, Water Quality, & Rural Dev. Grants)						1,080,578.03			1,080,578.03
									-
Subtotal of Receipts, Disbursements and Transfers	53,273.58	(18,531.53)	-	6,865.03	27,776.15	(184,756.35)	-	-	(115,373.12)
Fund Cash Balance, January 1, 2012	77,365.23	276,151.12	-	7,982.25	21,662.74	143,997.74	-	-	527,159.08
Adjustments:									
	(4,131.17)	163.94		(5,970.42)	(24,033.37)	40,758.61			6,787.59
									-
									-
Restated Fund Cash Balance, January 1, 2012	73,234.06	276,315.06	-	2,011.83	(2,370.63)	184,756.35	-	-	533,946.67
FUND CASH BALANCE, DECEMBER 31, 2012	126,507.64	257,783.53	-	8,876.86	25,405.52	-	-	-	418,573.55

Exhibit III

MUNICIPALITY OF CONDE
STATEMENT OF CHANGES IN LONG-TERM DEBT
For the Year Ended December 31, 2012

	General Long-Term Debt			Enterprise	
	General Obligation Bonds	Special Assessment Bonds	Other	Revenue Bonds (Wastewater)	Total
Debt Payable, January 1, 2012				280,640.99	280,640.99
Add New Issues:					
USDA Rural Development loans				167,895.00	167,895.00
(more continued funding)					0.00
					0.00
Less Debt Retired				9,076.07	9,076.07
DEBT PAYABLE, DECEMBER 31, 2012	0.00	0.00	0.00	439,459.92	439,459.92
	(23101)	(23103)	(23900)	(23102)	

Note: Amounts reported do not include interest.

Exhibit I

MUNICIPALITY OF CONDE
STATEMENT OF FUND CASH BALANCES
ALL FUNDS
December 31, 2013

	General Fund	School Fund	Fund	Enterprise Funds: Water Fund	Sewer Fund	Wastewater Fund	Fund	Fund	Total
Cash Assets:									
Cash in Checking Accounts	28,804.23	981.83		9,576.37		0.00			39,362.43
Change and Petty Cash	60.00								60.00
Passbook Savings (inc. M.Mkt.)	100,581.57	192,039.92			1,886.14				294,507.63
Savings Certificates	52,572.00								52,572.00
									0.00
									0.00
									0.00
									0.00
101 FUND CASH BALANCES (Note 1)	182,017.80	193,021.75	0.00	9,576.37	1,886.14	0.00	0.00	0.00	386,502.06

Municipal funds are deposited or invested with the following depositories:

Checking accounts (city, school, water, wastewater)	39,362.43
Petty Cash	60.00
Money Markets (city & school) and sewer savings	294,507.63
CD's	52,572.00
	386,502.06

Note 1: These amounts must equal the amounts stated on the bottom line of Exhibit II, page 3.

MUNICIPALITY OF CONDE
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2013

				Enterprise Funds					
	General Fund	School Fund	Fund	Water Fund	Sewer Fund	Wastewater Fund	Fund	Fund	Total
Receipts (Source):									
311 Property Taxes	73,120.89								73,120.89
313 Sales Tax	29,549.85								29,549.85
316 911 Telephone Surcharge									0.00
311-319 Other Taxes (319)	1,365.94								1,365.94
320 Licenses and Permits	2,135.00								2,135.00
331 Federal Grants									0.00
335.1 Bank Franchise Tax	375.29								375.29
335.2 Motor Vehicle Commercial Prorate	1,826.77								0.00 1,826.77
335.3 Liquor Tax Reversion	1,703.53								1,703.53
335.4 Motor Vehicle Licenses (5%)	6,370.38								6,370.38
335.6 Fire Insurance Premium Reversion									0.00 0.00
335.7 Liquor License Reversion									0.00
335.8 Local Government Highway and Bridge Fund	12,259.23								0.00 12,259.23
338.1 County Road Tax (25%)	329.43								329.43
338.2 County Highway and Bridge Reserve Tax (25%)	2,854.56								0.00 2,854.56
338.3 County Wheel Tax	256.35								256.35
331-339 Other Intergovernmental Revenue (339)									0.00 0.00
341-349 Charges for Goods and Services (341)	13,371.50								0.00 13,371.50
351-359 Fines and Forfeits (351)									0.00
361 Investment Earnings	240.74	362.63							603.37
362 Rentals		8,502.00							8,502.00
363-369 Other Revenues (369)	5,228.52	250.00							5,478.52

MUNICIPALITY OF CONDE
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2013
(continued)

				Enterprise Funds					
	General Fund	School Fund	Fund	Water Fund	Sewer Fund	Wastewater Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
380 Enterprise Operating Revenue Surcharge as Security for Debt				25,897.00	14,390.00				40,287.00
380.05 Lottery Revenues					21,572.00				21,572.00
330 Operating Grants									0.00
									0.00
Total Receipts	150,987.98	9,114.63	0.00	25,897.00	35,962.00	0.00	0.00	0.00	221,961.61
Disbursements (Function):									
411-419 General Government (414)	59,288.52	68,941.97							128,230.49
421 Police									0.00
422 Fire									0.00
423-429 Other Public Safety (429)									0.00
431 Highways and Streets (includes snow removal & street lights)	18,859.60								18,859.60
432 Sanitation (includes garbage & rubble sites)	18,175.85	374.12							18,549.97
437 Cemeteries									0.00
433-439 Other Public Works (435)									0.00
441-449 Health and Welfare (441)									0.00
451-459 Culture-Recreation (451)	19,485.22	3,683.91							23,169.13
461-469 Conservation and Development (465)									0.00
470 Debt Service									0.00
480 Intergovernmental Expenditures									0.00
490-492 Miscellaneous (492)									0.00

MUNICIPALITY OF CONDE
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2013
(continued)

				Enterprise Funds					
	General Fund	School Fund	Fund	Water Fund	Sewer Fund	Wastewater Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
410 Personal Services				1,318.85	7,805.60	241,710.39			250,834.84
420 Other Expenses				5,218.93	1,622.39	20,691.00			27,532.32
426 Supplies and Materials				13,266.73	1,457.07				14,723.80
Total Disbursements	115,809.19	73,000.00	0.00	19,804.51	10,885.06	262,401.39	0.00	0.00	481,900.15
39101 Transfers In	4,541.10				21,422.00				25,963.10
51100 Transfers Out	(21,422.00)	(4,541.10)	( )	( )	(22,572.00)	( )	( )	( )	(48,535.10)
391.2 Money Received From Borrowing						4,760.64			4,760.64
391.07 Capital Contributions (Grants)									0.00
(CDBG, Water Quality, & Rural Dev. Grants)						212,637.46			212,637.46
									0.00
Subtotal of Receipts, Disbursements and Transfers	18,297.89	(68,426.47)		6,092.49	23,926.94	(45,003.29)			(65,112.44)
Fund Cash Balance, January 1, 2013	126,507.64	257,783.53		8,876.86	25,405.52	0.00			418,573.55
Adjustments:									
	37,212.27	3,664.69		(5,392.98)	(47,446.32)	45,003.29			33,040.95
									0.00
									0.00
Restated Fund Cash Balance, January 1, 2013	163,719.91	261,448.22	0.00	3,483.88	(22,040.80)	45,003.29	0.00	0.00	451,614.50
FUND CASH BALANCE, DECEMBER 31, 2013	182,017.80	193,021.75	0.00	9,576.37	1,886.14	0.00			386,502.06

Exhibit III

MUNICIPALITY OF CONDE
STATEMENT OF CHANGES IN LONG-TERM DEBT
For the Year Ended December 31, 2013

	General Long-Term Debt			Enterprise	
	General Obligation Bonds	Special Assessment Bonds	Other	Revenue Bonds (Wastewater)	Total
Debt Payable, January 1, 2013				439,459.92	439,459.92
Add New Issues:					
USDA Rural development loans				71,174.00	71,174.00
(more continued funding)					0.00
					0.00
Less Debt Retired				7,752.16	7,752.16
DEBT PAYABLE, DECEMBER 31, 2013	0.00	0.00	0.00	502,881.76	502,881.76
	(23101)	(23103)	(23900)	(23102)	

Note: Amounts reported do not include interest.

MUNICIPALITY OF CONDE
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014

				Enterprise Funds					
	General Fund	"School" Fund	Fund	Water Fund	Sewer Fund	Wastewater Fund	Fund	Fund	Total
Receipts (Source):									
311 Property Taxes	75,917.61								75,917.61
313 Sales Tax	27,113.19								27,113.19
316 911 Telephone Surcharge									0.00
311-319 Other Taxes (319)	361.89								361.89
320 Licenses and Permits	2,025.00								2,025.00
331 Federal Grants									0.00
335.1 Bank Franchise Tax	427.18								427.18
335.2 Motor Vehicle Commercial Prorate	1,925.09								0.00 1,925.09
335.3 Liquor Tax Reversion	1,292.57								1,292.57
335.4 Motor Vehicle Licenses (5%)	7,856.65								7,856.65
335.6 Fire Insurance Premium Reversion									0.00 0.00
335.8 Local Government Highway and Bridge Fund	17,012.96								0.00 17,012.96
338.1 County Road Tax (25%)	329.43								329.43
338.2 County Highway and Bridge Reserve Tax (25%)	155.40								0.00 155.40
338.3 County Wheel Tax	260.16								260.16
331-339 Other Intergovernmental Revenue (339)									0.00 0.00
341-349 Charges for Goods and Services (341)	13,430.75								0.00 13,430.75
351-359 Fines and Forfeits (351)									0.00
361 Investment Earnings	172.62	251.25							423.87
362 Rentals		6,675.00							6,675.00
363-369 Other Revenues (369)	1,633.23	2,691.22							4,324.45

MUNICIPALITY OF CONDE
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014
(continued)

				Enterprise Funds					
	General Fund	"School" Fund	Fund	Water Fund	Sewer Fund	Wastewater Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
380 Enterprise Operating Revenue				28,181.25	14,767.50				42,948.75
Surcharge as Security for Debt					21,847.50				21,847.50
380.05 Lottery Revenues									0.00
330 Operating Grants					12,815.80				12,815.80
Total Receipts	149,913.73	9,617.47	0.00	28,181.25	49,430.80	0.00	0.00	0.00	237,143.25
Disbursements (Function):									
411-419 General Government (414)	72,071.01	44,359.92							116,430.93
421 Police									0.00
422 Fire									0.00
423-429 Other Public Safety (429)									0.00
431 Highways and Streets (includes snow removal & street lights)	112,438.64								112,438.64
432 Sanitation (includes garbage & rubble sites)	18,648.12	407.04							19,055.16
437 Cemeteries									0.00
433-439 Other Public Works (435)									0.00
441-449 Health and Welfare (441)									0.00
451-459 Culture-Recreation (451)	43,452.98								43,452.98
461-469 Conservation and Development (465)									0.00
470 Debt Service									0.00
480 Intergovernmental Expenditures									0.00
490-492 Miscellaneous (492)	450.00								450.00

Motion by Amy Hearnen, second by Cindy Smith, to offer the full-time city maintenance position to Chet Moss. Pay: $12.00/hour; one week vacation starting January 1, 2015; four sick leave days starting January 1, 2015; and $100 (net) towards personal health insurance (starting October 2014). All aye.

The recent tractor purchase was reviewed. The City is financing $54,500.00 of the purchase price with the Plains Commerce Bank. The loan is for 5 years with an interest rate of 4.750%. A $10,000 CD was also cashed in.

Wastewater project update: the sidewalk just south of the apartment on 2nd St. needs to be repaired yet by B&B and the asphalt on the road east of the school parking lot should be addressed. In addition, the dry well is not dry so the city will get someone from Helms Engineering to look at it.

FO reminded board members of a special meeting on Wednesday, September 24th @ 10:30 at city hall where Helms and NECOG representatives will present the results of their water study.

The finished road project on 1st – 4th Streets and the camper pads in the park were briefly discussed.

The new sidewalk at the school was discussed. Motion by Amy Hearnen, second by Cindy Smith, to contact Country Concrete to see if they can come back this fall and do some additional work to add a step from the side of the street up onto the sidewalk. FO will request an estimate first. All aye. A railing was also discussed but was tabled until a later date.

The park restroom project was discussed. Hanlon Brothers has been contacted about moving the structure from the football field to the park. They will not be held responsible if something breaks in the process. Electricity and plumbing (including fixtures) were also discussed.

After hearing about two different options from the FO, motion by Amy Hearnen, second by Cindy Smith, to go with James Valley Telecommunications for a "mass call" notification system to notify city residents of important messages. All aye.

Motion by Amy Hearnen, second by Cindy Smith, to declare the following two parcels surplus: (1) Parcel #008454 (*Original B1, L3 & 4, Conde City)* and (2) Parcel #011391 (*Hermans 2nd B5, L N1/2 11 Conde City)*. All aye.

Motion by Amy Hearnen, second by Cindy Smith, to approve the following regarding the platting of part of the railroad right-of-way being done by Clark Engineering. All aye. (1) The new plat will be named "Conde Railroad Addition, Lots 1-5"; (2) Thirty feet (30') (later Greg P. said 50') of roadside city property adjacent to these same lots and Sherman Avenue, which runs along the east side of the plat, will be split with 16' going towards Sherman Ave. for a 66' wide right-of-way and 14' will go with the newly-platted lots that are also adjacent to Sherman Ave.; (3) The owner of parcel #011839 (legal description: *Unplatted portion of warehouse lots known as lots 13, 14, & 15 Conde City)* has agreed to dedicate the south 50' of warehouse lot 13 to the City of Conde for street purposes. This will be indicated as such on the plat.

The matter of the bathroom in the school kitchen needing repair was tabled for the time being.

FO has contacted several audit firms regarding an audit for the funds received for the wastewater project. Estimates from them are forthcoming.

Reviewing the draft ordinance book was tabled since the entire board was not present.

New Business:

After visiting with Andy Van Steenwyk of Water District Maintenance, LLC, motion by Amy Hearnen, second by Cindy Smith, to take out a contract with Water District Maintenance to be the city's certified water operator. All aye. Contract starts on September 8, 2014 and ends on March 31, 2015. Necessary documents were signed and will be sent to Pierre by Mr. Van Steenwyk.

Ann Hearnen addressed the city board on behalf of Civic Development. The group would like to move the old wooden concession stand from the football field to the park and fix it up. Motion by Amy Hearnen, second by Cindy Smith, to allow this structure to be moved to the city park. All aye. Details of placement to be worked out later.

Motion by Amy Hearnen, second by Cindy Smith, to approve Resolution 2014-3 regarding the following nuisance property: *Lots 7, 8, and 9 all of Block 12 in Hermans 4th Addition, City of Conde, Spink County, South Dakota.* All aye. (Entire text published separately.)

Water/sewer/garbage rates were discussed. Due to increased costs and the rates not having been increased since 2011, motion by Amy Hearnen, second by Cindy Smith, to increase the residential rates by $5.00 to $65.00/month for water-sewer garbage, and to increase business rates by $4.00 to $49.00/month for water-sewer. These rates will become effective starting with the November 2014 bills (for October use). All aye.

FO informed board that informational paperwork from the DENR regarding the city's Surface Water Discharge Permit is in the renewal process. New permit will be effective October 1, 2014.

Motion by Amy Hearnen, second by Cindy Smith, to accept the full estimated amount of $75,934.50 offered by Spink County for 2015. All aye. FO will send required letter of acceptance.

Weather stripping on the bottom of a bus barn door was discussed. Replacement weather stripping will be installed.

Pet tags were briefly discussed. These were due to be renewed with the city by September 1st by any city residents who have indoor or outdoor cats & dogs.

There was a request made to have yellow lines painted on the tennis court to indicate boundaries for those who play pickle ball. Board was agreeable to this, but it will need to be done next spring/summer when the city has additional summer help.

FO informed board that the new address for city hall is "343 Broadway St. SW".

Board members discussed the former "Construction" bank account which was used during the wastewater project. No decision was made on it.

Motion by Amy Hearnen, second by Cindy Smith, to allow the Municipal Building to be used for the annual Haunted House. All aye.

FO updated delinquent water accounts.

Motion by Amy Hearnen, second by Cindy Smith, to enter into executive session for purposes pursuant to 1-25-2 (1) and 1-25-2 (3). All aye.

Executive Session

Council entered into executive session at 9:33 p.m. Present were Amy Hearnen, Cindy Smith, and Julie Bruckner. Executive session ended at 9:47 p.m.

Correspondence

The FO presented some miscellaneous correspondence.

The next regular meeting of the Conde City Board will be Monday, October 6, 2014, at 6:00 p.m. at City Hall.

Meeting adjourned at 10:02 p.m.

Julie Bruckner, Finance Officer

"The City of Conde is an equal opportunity provider and employer."

Jennifer Sietsema

From: City of Conde <ctyconde@nvc.net>
Sent: Wednesday, January 14, 2015 1:29 PM
To: jennifer@necog.org
Subject: Re: public meeting

Finally had a chance to sit down and go through the users list. There are a number of "situations" that people have with the city for their water, but here is a basic summary.

*First off, our basic residential rate (water-sewer-garbage) is $65/month. (Water is $18, Garbage is $16, regular Sewer is $13, and Sewer Loan set-aside is $18. Additional water use is $2.50 per 1,000 gallons.)

*The basic business rate is $49/month which excludes garbage pickup. Everything else is the same. This, of course, applies to the businesses in town but also to a few folks who also have a "shop" account along with their household account.

*The snowbird rate is also $49/month, just excluding garbage pickup.

Summary (these counts are very close if not right on, but situations change):

70 users - Folks who pay the regular rate year-round.
16 users – Business or "shop" accounts.
5 users – Those who pay part of the year at regular rate and part at snowbird rate when they're gone for 4-6 months.
6 users – Those who choose to have their water shut off (for a fee but then no regular monthly payment) the 4-6 months they're gone then pay regularly when they're back.
7 users - Others (hunter houses, out-of town family who own houses, etc.) who are on the snowbird rate almost year-round.

Total: 104

Hope this helps. Sorry for the delay.

Julie

From: Jennifer Sietsema
Sent: Wednesday, January 07, 2015 4:11 PM
To: 'City of Conde'
Subject: RE: public meeting

I want the number of users who pay a monthly fee. It would be helpful if you could tell me how many pay year round and how many are seasonal users. I will also need the breakout between business and residential, unless they are billed the same (based on the same fee schedule).

From: City of Conde [mailto:ctyconde@nvc.net]
Sent: Wednesday, January 07, 2015 3:58 PM

AUTHORIZING RESOLUTION

RESOLUTION NO. 2015-1

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the City of Conde (the "City") has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to replacing the water tower with ground storage and looping the distribution lines (the "Project");

WHEREAS, the City has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the City and to certify and sign payment requests in the event financial assistance is awarded for the Project.

NOW THEREFORE BE IT RESOLVED by the City as follows:

1. The City hereby approves the submission of an Application for financial assistance in an amount not to exceed $2,795,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Town Board President is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Town Board President is hereby designated as the authorized representative of the City to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at Conde, South Dakota, this 4th day of February, 2015.

APPROVED:

President, City of Conde

(Seal)

Attest: Julie Bruckner

City Finance Officer

AFFIDAVIT OF PUBLICATION

Affidavit of Publication

STATE OF SOUTH DAKOTA

SS

County of Spink

I, Tina M. Sanderson, of said County of Spink and State of South Dakota, being duly sworn, on her oath says: The Conde News is a weekly newspaper of general circulation printed and published in Conde, Spink County and the State of South Dakota, by Tina M. Sanderson and has been such newspaper during the times hereinafter mentioned: that the Conde News is a legal newspaper and has been in existence for more than one year immediately preceding the first publication herein mentioned, and has more then two hundred bonafide subscribers: that I, the undersigned, am publisher of said newspaper in charge of the advertising thereof, and have personal knowledge of all the facts stated in this affidavit: and that the advertisements headed

Notice of Public Hearing

a printed copy of which is hereto attached, was printed and published in the said

newspaper for once successive issues.

the first publication January 7 20 15

the second publication _____ 20____

the third publication _____ 20____

the fourth publication _____ 20____

the fifth publication _____ 20____

the sixth publication D. Ams 20____

the seventh publication _____ 20____

the eighth publication _____ 20____

That $ 15.62 being the full amount of the fee of publication of the annexed notice, insures solely to the benefit of the publisher of said newspaper: that no arrangement or understanding for a division thereof has been made with any person, and that no part thereof has been agreed to pay to any other person, whomsoever.

Tina M Sanderson

Subscribed and sworn to before me this 20th

day of February 20 15

Cynthia L. Geary

Notary Public, Spink County, South Dakota

CYNTHIA L. GEARY NOTARY Seal PUBLIC SOUTH DAKOTA

Exp 3/13/15

Notice of Public Hearing for the Town of Conde Drinking Water System Improvements Project

The Town of Conde is proposing to replace all of the four and six inch diameter pipe and replacing it with PVC as well as looping the lines in the system that are currently dead ends to improve water pressure. The Town has very low water pressure throughout town and is experiencing about 31 percent water loss. The Town has also considered making improvements to the water storage which would include removing the existing water tower and replacing it with a 50,000 gallon water tower. The City will be submitting a Drinking Water State Revolving Fund application in the amount of $3,443,000 to the Department of Environment and Natural Resources. The funding may be awarded in the form of a grant, a loan, or a principal forgiveness loan; any portion of the loan that is not forgiven will have a term of up to 30 years at a rate of up to 3.0 percent. The amount and source of funds will be determined by the Board of Water and Natural Resources when the application is presented at a schedule board meeting. The purpose of the public hearing is to discuss the proposed project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

The public hearing will be held at the Community Center in Conde on Thursday, January 15, 2015 @ 2:00 pm.

* * *

CONDE BOARD OF TRUSTEES PROCEEDINGS
PUBLIC HEARING FOR PROPOSED DRINKING WATER SYSTEM IMPROVEMENTS PROJECT
THURSDAY, JANUARY 15, 2015

A public hearing was held on Thursday, January 15, 2015, at 2:00 p.m. at the Conde Community Center for a proposed drinking water system improvements project.

Present were board chairman Cindy Smith, trustee Amy Hearnen, trustee Austin Hearnen, finance officer Julie Bruckner, Bob Babcock of Helms and Associates, Jennifer Sietsema of NECOG, and residents Pierre Fontenelle, Pat Fontenelle, and Jim Zeck. No other city residents attended.

The public hearing started at 2:00 p.m. with Bob Babcock and Jennifer Siestema presenting the following information:

- The need for the project: The Town of Conde is experiencing water loss estimated at 30.9 percent and poor water pressure throughout town. The water tower has outlived its useful life and is need of significant repairs or replacement.

- Alternatives: The city has considered several alternatives as outlined in the water study completed by Helms and Associates.

- Project: The Town of Conde is proposing to apply for funding to replace all of the four and six inch diameter pipe and replacing it with PVC as well as looping lines in the system that are currently dead ends. The Town is also considering making improvements to the water storage which includes replacing it with a new 50,000 gallon ground storage tank.

- Proposed Financing: The Town of Conde is applying to the South Dakota Department of Environment and Natural Resources for a Clean Water State Revolving Fund for grant, loan, principal forgiveness loan, or a combination of each.

- The maximum amount of SRF loan to be borrowed: Up to $2,795,000.

- The revenue source pledged for repayment: Project Surcharge Revenue Bond.

- Interest Rate and Term: The note will be for up to 3.00% at a term no greater than 30 years.

- The effect of the proposed financing on user rates: If the proposed project financing is borrowed at the full amount, rate and term, the surcharge rate would need to be $124.64 per user per month to meet the 110 percent debt coverage requirement based on 104 users. The surcharge rates will be determined after the funding package has been put in place. The project surcharge will be lower if DENR awards grant or principal forgiveness.

- Resolution to Authorize Signatory on all documents pertaining to the funding application was discussed and will be passed at the February 2015 board meeting.

After any questions were answered, the public hearing ended at 3:30 p.m.

Julie Bruckner, Finance Officer

"The City of Conde is an equal opportunity provider and employer."

NORTHEAST COUNCIL OF GOVERNMENTS

416 PRODUCTION STREET N., SUITE 1
ABERDEEN, SD 57401
(605)-626-2595

FACILITY PLAN

FOR THE

WATER SYSTEM IMPROVEMENTS

CONDE, SOUTH DAKOTA

JANUARY 2015

HELMS # A-5684

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

By: _____
Brandon D. Smid, P.E.

Registration Number: 11937

Date: 1-8-2015

Helms & ASSOCIATES
CIVIL ENGINEERS & LAND SURVEYORS
P.O. Box 111
Aberdeen, South Dakota 57402

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1 INTRODUCTION

1.1 PURPOSE

The Town of Conde has contracted with the engineering firm of Helms and Associates (Helms) to complete an investigation of its existing water and wastewater collection and treatment systems. The intent of the study is to identify and quantify problems that exist within these systems.

The results of the completed investigation are presented in this Facility Plan. The Facility Plan contains the information on which the Town Board of Conde can base cost-effective decisions relating to the necessary improvements to its water and wastewater collection and treatment systems. The Town Board will, after appropriate public input, determine the best options to make any needed improvements that are identified in the Facility Plan.

Loan and grant funding will undoubtedly be desired to make any of the improvements that are recommended herein. This Facility Plan will be a valuable tool for the community to pursue the funding necessary in its efforts to make needed public improvements.

1.2 WATER SCOPE OF WORK

The scope of work for this Water Evaluation and Study includes:

1) Completion of an analysis of requirements of governmental authorities having jurisdiction to approve the design of the project and participation in consultations with such authorities.
2) Completion of an analysis of the existing water distribution system relating to quantity and quality, compliance with existing and proposed drinking water standards, water losses in the system, identification of system age, evaluation of current water pressures and fire flow capacities and evaluation of current and future needs.
3) Completion of a general economic analysis and comparison of various alternatives.
4) Preparation of a written report, with maps and sketches, setting forth the findings and recommendations of the Preliminary Study, providing Conde with ten (10) copies of said report and meeting with Conde to review said report.

5) Assistance in the presentation of the findings and recommendations of the Preliminary Study at not more than one (1) public hearing.

1.3 AUTHORIZATION

The firm of Helms and Associates was authorized as per a Letter of Agreement dated April 24, 2013, by the governing body of the Town of Conde to proceed with the evaluation of the Town of Conde's water systems. The following report presents the findings and conclusions resulting from the authorized study.

2 COMMUNITY DESCRIPTION

2.1 GENERAL INFORMATION

The Town of Conde is a relatively small community that was founded in 1889. According to the 2010 Census Bureau information, Conde has a population of 140. Conde is located in the northeastern Spink County, South Dakota. Conde is located in the southwest quarter of Section 31, Township 120 North, Range 60 West. Its primary access is via South Dakota State Highway 37 and SD Highway 20. The Town is approximately halfway between US Highway 12 and 212 southeast of Aberdeen as indicated in Figure 2.1-1.

Figure 2.1-1 - Location Map of the Town of Conde

Because of its population, the Town of Conde is classified as a third class city. Its government consists of a three-member Board of Trustees. A full-time water/sewer/street superintendent is employed by the Board. This individual provides necessary public utility maintenance within the community. The town also employs a part-time finance officer to assist the board with financial matters.

Conde is primarily a residential community, with limited services available. Most residents are employed in agricultural sector or its related service industry, or commute to jobs in nearby Aberdeen or Redfield. There are no major industries located in the town. Retail trade is generally related to goods and services associated with agricultural activities in the area.

Spink County is in the northeastern part of South Dakota. It has a total surface area of approximately 965,958 acres. Communities located within the county include Redfield (the county seat), Ashton, Athol, Brentford, Doland, Frankfort, Mellette, Northville, Tulare and Turton. Approximately 71 percent of the total acreage of the county is devoted to crop production. Corn, soybeans, spring wheat and sunflowers are the main crops (USDA, 1997).

2.2 POPULATION CHARACTERISTICS

Conde's population is 140 according to the 2010 census. The most recent Census Bureau data available at the time of this report indicates that Conde's median age was 54 years as compared to the state's median age of 36.9. At the time census data was gathered, 25% of its population was over the age of 65. In comparison, the state's population that is over the age of 65 is 14.3%.

Data from the 2010 census indicates that the community's median household income of $25,208 was about $19,792 lower than the state's median household income of $45,000. At the time the census data was gathered, about 15.1% of the families living in the community had incomes at or below the poverty level while 17.0% of the families living in Spink County fell into this category.

2.3 POPULATION PROJECTIONS

The 2010 Census Bureau data shows the population for Conde to be 140. Table 2.3-1 and Figure 2.3.1 indicate Census Bureau population data from 1910 to 2010 and present the estimated population for the community through the year 2040. As shown by the historical data, the population has fluctuated over the past 60 years. In general the population has been in decline since 1950. The decline in recent years is typical for rural communities such as Conde. This can be accredited to the number and size of the farming families decreasing and the large population of elderly people. The decline in population has slowed and it is projected that the population will level out at its current population.

As with all communities of similar size, there are always efforts to entice new industrial and commercial enterprises into locating in Conde. Even though this possibility exists, it is not anticipated that these would have a significant impact on the projected water flows. As a result, the 2010 census population of 140 will be utilized in determining the current and projected water usage. The data shown in Table 2.3-1 is shown graphically in Figure 2.3-1.

Table 2.3-1 - Historic and Projected Population

Year	Population	Year	Population
1910	265	1980	259
1920	544	1990	203
1930	431	2000	187
1940	395	2010	140
1950	469	2020 (Est.)	130
1960	388	2030 (Est.)	125
1970	279	2040 (Est.)	120

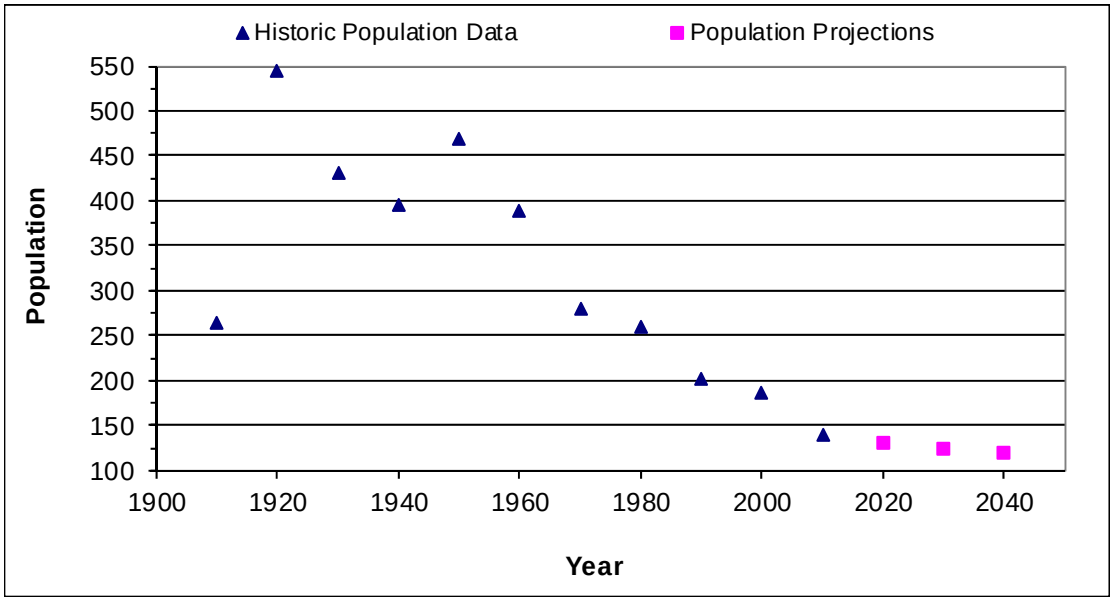

Figure 2.3-1 - Historic and Projected Population

2.4 TOPOGRAPHY / CLIMATE

Spink County lies mostly in the Glacial Lake Dakota Plain with a small area in the east part of the county being part of the Doland Ridge. The major drainage ways in the county are the James River, Dry Run, Snake Creek, Turtle Creek and Timber Creek. Elevations in the county range from 1,290 feet from the surface of the lake plain to 1,430 feet above mean sea level along the eastern county boarder.

The area's climate is generally described as a continental climate. Winters are relatively long and cold while summers are fair and warm. Normal annual precipitation for the area is about 19 inches. Approximately 67 percent (13 inches) of the total precipitation generally occurs between April and September, but in two years out of ten, rainfall during this period was less than seven inches. Precipitation received from November through March is generally in the form of snowfall, with the average seasonal amount being 34 inches.

Temperatures range from an average daily temperature of 15º F in winter to an average daily temperature of 73º F in summer. However, temperatures have been as low as -39º F and have

exceeded 112º F. Winds average 13 miles per hour in spring with prevailing directions from the south during the summer and northwest during the winter months.

2.5 ENVIRONMENTAL REVIEW INFORMATION

As part of the environmental assessment requirement for the facility planning process, the project sponsor is required to contact various state and federal agencies. Environmental assessment letters have been sent to the following agencies: South Dakota Department of Environment and Natural Resources, United States Department of Interior Fish and Wildlife Service, US Army Corps of Engineers, Natural Resources Conservation Service, South Dakota Department of Game, Fish, and Parks. It is expected that no adverse environmental impacts will occur due to construction taking place on previously disturbed areas.

2.5.1 Floodplains and Wetlands

The US Fish and Wildlife Service, the US Army Corps of Engineers and the South Dakota Department of Game, Fish and Parks were contacted for input related to the proposed improvements. No floodplains or wetlands in the area are expected to be involved in the project. The US Army Corps of Engineers had no response. Correspondences from the US Fish and Wildlife Service along with the South Dakota Game Fish and Parks are located in Appendix A.

2.5.1.1 Flood Hazard Evaluation

The U.S. Army Corps of Engineers was contacted for the purpose of soliciting input on the proposed improvements. Correspondence has not been received. After their review, it is anticipated that the U.S. Army Corps of Engineers concluded that there will not be a flood hazard concern.

2.5.1.2 Floodplain Construction Permits

The U.S. Army Corps of Engineers was contacted for the purpose of soliciting its review and comments related to the possible need for permits authorized under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Correspondence has not been received at the time of this report. It is anticipated that after their review, the U.S. Army Corps

of Engineers will concluded that there will not be a need for permits authorized under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act.

2.5.1.3 Wetlands

The U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on wetlands. Correspondence has been received and is included in Appendix A from the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks. The U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks have found that this project will have no significant potential impact on wetlands.

2.5.2 Agricultural Lands

The U.S. Department of Agriculture State Soil Scientist was contacted for the purpose of soliciting input on the proposed improvements. The NRCS has indicated that no impacts to prime or important farmlands would result from the proposed projects. Correspondence has been received and is included in Appendix A.

2.5.3 Wild and Scenic Rivers

The U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted in regards to “Wild and Scenic Rivers” in the area. After their review, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks have found that this project will have no significant potential impact on “Wild and Scenic Rivers”. Correspondence has been received and is included in Appendix A.

2.5.4 Fish and Wildlife Protection

2.5.4.1 Endangered Species

The U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on endangered species which might result from construction of the proposed improvements. Correspondence

has been received and is included in Appendix A. After their review, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks have found that this project will have no significant impact on fish and wildlife resources.

2.5.4.2 Critical Habitat

The U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on critical wildlife habitats which might result from construction of the proposed improvements. Correspondence has been received and is included in Appendix A. After their review, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks have found that this project will have no significant impact on fish and wildlife resources.

2.5.5 Water Quality and Quantity

The South Dakota Department of Environment and Natural Resources was contacted for the purpose of soliciting review and comments related to potential impact on water quality and quantity that could result from the proposed project. Correspondence has been received and is included in Appendix A. After their review, the South Dakota Department of Environment and Natural Resources has found that this project will have no significant impact on the water quality.

2.5.6 Historic and Archaeological Sites

The South Dakota Archeological Research Center was contacted for the purpose of conducting a records search for any potential historic and archaeological sites in the area impacted by the proposed project. Correspondence has been received and is included in Appendix A. Based on the records search information, there doesn't appear to be any historic sites that would be impacted by this project. However, this needs to be forwarded onto the State Historical Preservation Office by the funding agency for concurrence.

2.6 DIRECT AND INDIRECT IMPACTS

Negative environmental impacts which may be expected during a project of this nature include, but are not necessarily limited to, soil erosion, noise pollution, traffic obstruction, and increased

surface runoff due to trench dewatering operations. However, such impacts are temporary and will not significantly affect the environment over the long term.

Positive environmental impacts include enhanced human health and safety and more efficient delivery and treatment of municipal water. Such impacts are of long-term value to the residents of Conde and Spink County.

2.7 MITIGATION ADVERSE IMPACTS

Adverse impacts will be minimized to the greatest extent possible by the implementation of accepted cautionary measures. Temporary and permanent erosion control will be included in construction contracts. Appropriate permits will be secured prior to the discharge of any trench dewatering or storm waters, and protection of public health, safety and welfare will be incorporated into the specifications and contract documents. Additionally, should any permanent adverse impacts result from the project, mitigating measures will be followed to the satisfaction of the appropriate review agency.

3 EVALUATION OF EXISTING WATER SYSTEM

3.1 GENERAL INFORMATION

The Town of Conde currently provides water service to approximately 104 structures in the community. Of the 104 services, 5 of these services provided by the Town are commercial. The water system was originally installed in the early 1920's. The Town of Conde currently purchases 100% of its domestic water demand from WEB Water. Figure 3.1.1 shows the existing water distribution system.

Most of the original water distribution system is still in place. According to available information there are several types and sizes of water main used throughout the distribution system. The approximate total length of each size and type of pipe in the water distribution system is listed below:

Poly Vinyl Chloride Pipe (PVC) - 4 inch – 3,200 feet

Ductile Iron Pipe (DI) -- 6 inch - 14,860 feet

The Town has experienced numerous breaks in the system over the past years. Repairs have been made with newer PVC piping, but the Town has not kept a record of the repairs. Also, additions to the water distribution system have been completed. Areas like the south west section of town, where it is believed that the waterlines in this area are 4 inch PVC placed in the mid to late 1970's.

The approximate location of the current system is shown in Figure 3.1-1. The modeled pressures, pipe velocities, and flows are provided in Figures 3.1-2.

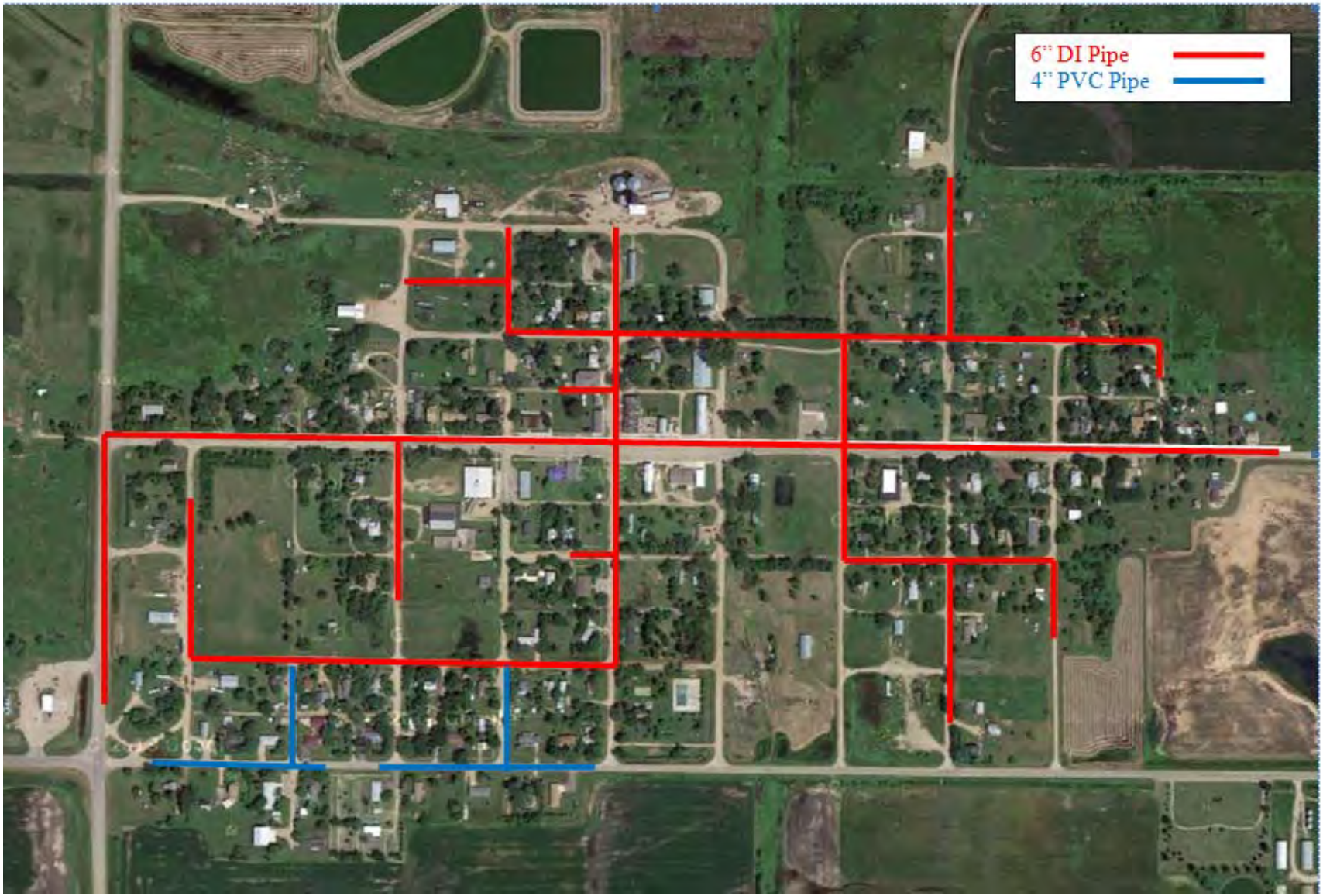

Figure 3.1-1 - Existing Water System

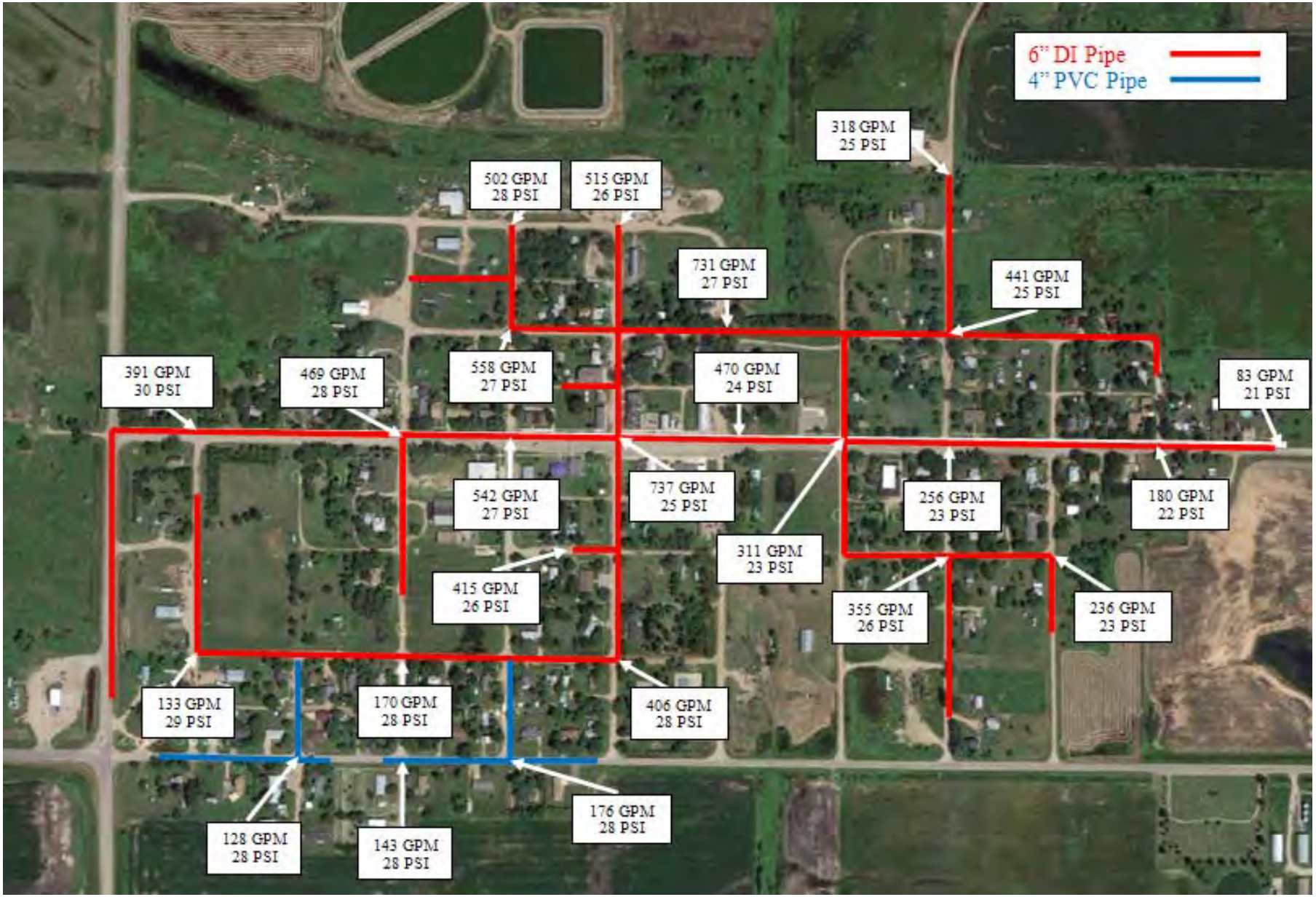

Figure 3.1-2 - Existing Water System Fire Flows and Pressures at Hydrants

3.2 WATER DEMAND

To evaluate the Town of Conde's potential to meet the needs of the future, a review of past water usage records was completed. The process used to estimate future water demand included a determination of the current average per capita demand combined with a projection of the future population. Records of water usage from January 2012 through December 2013 were obtained and utilized to create Table 3.2-1.

The sources and methods used to develop the information presented in Table 3.2-1 are described by the following:

- Water purchased per month is based on data provided by the Town of Conde.
- Water usage billed per month is based on data provided by the Town of Conde.
- The percentage of unaccounted-for water per month and year is calculated by dividing the difference between the water purchased and the water billed.
- Monthly precipitation data for 2010-2013 is from the National Climatic Data Center Aberdeen Station.
- Per capita per day usage for each month is calculated by dividing the water purchased by the population and the days per month.
- The daily water purchased and billed for each year was calculated by dividing the sum of the water for each month by the days in that period

Table 3.2-1 indicates that the purchased per capita water usage ranges from 58 gpcpd during February 2013 to 113 gpcpd during June and July 2012. The average per capita water usage based on purchased water data for the period of January 2012 through December 2013 was determined to be approximately 72 gpcpd which is typical for communities in South Dakota. For the purpose of this report 75 gpcpd will be utilized as the average per capita per day water usage.

Table 3.2-1 indicates that the water losses in the system averages 30%. The Town should try to keep the water loss below the generally accepted standard of 15%. The typical reasons for losses in the system are leaks, slow or malfunctioning meters, fire fighting and water used at non-metered locations. The only locations that are not metered are the City Maintenance Shop, Fire

Hall, a Farm Hydrant at City Park and the City Offices. Based on a recent conversation with Town officials, they have a self payment system, which could be a contributor for the water losses. The City of Conde currently uses Badger Water Meters which the city would like to upgrade to digital water meters.

A significant increase in water usage is noticeable during the growing months of June through September. It should be noted that above-average precipitation during these months typically lessens the increase in water usage as indicated in June 2013 just as the below-normal precipitation typically magnifies the increase in water usage as indicated in July 2012.

Table 3.2-1 - Water Purchased per Capita from 2012 & 2013

	2010			2011			2012					2013				
Month	Purchased (Gal)	Precip (in)	Purchased (gpcpd)	Purchased (Gal)	Precip (in)	Purchased (gpcpd)	Purchased (Gal)	Billed (Gal)	Unaacc. for %	Precip (in)	Purchased (gpcpd)	Purchased (Gal)	Billed (Gal)	Unaacc. for %	Precip (in)	Purchased (gpcpd)
January		0.43	0	337,200	0.30	78	292,400	195,287	33%	0.48	67	293,200	230,460	21%	0.78	68
February		0.46	0	249,400	0.03	64	325,900	180,723	45%	1.02	83	251,100	181,700	28%	0.64	64
March		0.03	0	232,500	1.14	54	290,000	169,116	42%	3.09	67	293,600	192,180	35%	0.24	68
April		0.4	0	257,000	4.18	61	257,600	219,749	15%	4.39	61	268,800	191,104	29%	2.12	64
May	355,600	2.57	82	270,400	3.23	62	427,000	191,294	55%	8.60	98	319,300	175,532	45%	4.32	74
June	377,500	8.21	90	362,400	2.35	86	473,300	276,754	42%	3.32	113	311,500	249,833	20%	2.20	74
July	390,400	2.93	90	362,000	0.60	83	472,700	289,135	39%	1.41	109	359,700	221,880	38%	2.70	83
August	426,900	3.44	98	426,700	3.97	98	431,400	368,855	14%	1.66	99	367,300	220,010	40%	0.34	85
September	441,000	1.84	105	364,100	4.09	87	309,300	246,974	20%	6.22	74	329,300	257,642	22%	2.44	78
October	353,500	1.33	81	314,200	0.25	72	314,100	211,313	33%	2.44	72	233,500	175,772	25%	4.72	54
November	409,800	0.59	98	345,900	0.26	82	284,200	218,398	23%	0.00	68	265,400	217,283	18%	0.1	63
December	361,300	0.24	15,268	341,600	0.29	79	371,300	267,090	28%	1.31	86	268,000	244,910	9%	0.88	62
		Avg.	1,326		Avg.	76				Avg.	83				Avg.	70
Total	3,116,000	22.47		3,863,400	20.69		4,249,200	2,834,688		33.94		3,560,700	2,558,306		21.48	
Average Day	8,537			10,585			11,642	7,766				9,755	7,009			
Average (gpcd)	61			76			83	55				70	50			
Average Unacc %									32.4%					27.4%		

3.3 PROJECTION OF WATER DEMAND

Future water demand projections are the basis for establishing the water distribution system capacity and storage. These projections are based on historical data of per capita water flows and population projections to determine peak day and peak hour demands to ensure that the system is capable of meeting the future demands of the Town. As shown in Section 2.3 the population of Conde is expected to stabilize at its current population. For this reason the current population is used for determining the future water demands and as discussed in Section 3.2. An average demand of 75 gpcpd will be utilized and 15% added for water loss in the system.

To meet the peak day water usage that may occur in the future, a peaking factor is generally determined. Smaller cities have a greater fluctuation than larger cities, but these fluctuations generally occur over a shorter period of time. As can be seen in Table 3.2-1, the water use in a Town such as Conde that does not have a significant commercial or industrial user is largely dependent on the climate and the amount of lawn watering. Our experience has shown that the ratio of average daily usage to peak day usage ranges from 2.0 to 3.0 average daily water usage for communities in South Dakota. It is our opinion that the peaking factor for the peak day water demand should not be less than 2.5 times the average day to cover lawn watering and other summertime uses. This number can be justified by taking the average day of the peak water month of June 2012 which is approximately 15,268 gpd. Knowing that the variance within the peak month is likely to be on the order of 1.25 to 1, an estimated peak day of 19,085 (15,268 x 1.25) gpd is calculated. Dividing 19,085 gpd by an average day of 10,130 gpd (purchased average day for study period) results in a peak day to average day ratio of 1.9 to 1. Since this data is limited at best, utilizing the slightly higher value of 2.5 times the average day water usage is justified in our opinion. This number will be used throughout the remainder of the report. The result is a peak day water demand of 30,188 gpd (140 people X 75 gpcpd X 2.5 X 1.15 (water loss)).

It must be noted at this point that an attempt has been made to determine design flow parameters as accurately as possible but if any error is to be made in the selection, it must be on the high side to ensure an adequate supply of water for the Town throughout the design period.

3.4 WATER SOURCES

3.4.1 WEB Water Systems

The Town of Conde is under contract with WEB Water to supply water not to exceed 25 gpm. There is an Excess Flow Rate of $3.50 per thousand gallons of water delivered in excess of 1,095,000 per month. The Excess Flow Rate could be enforced if the town of Conde had a supply rate over 24.5 gpm. The town of Conde should have enough water, around 21 gpm, to meet their needs.

The purchase of the current demand rate of water from WEB costs the Town a minimum monthly charge of $458.25 plus a water rate of $1.10 per thousand gallons delivered by WEB. Water provided by WEB over the contract amount costs $3.50 per 1,000 gallons, as previously mentioned.

3.4.2 Existing Wells

The Town has two wells that are currently not used to supply the system with water. The wells are only used to fill the fire trucks. The wells are located in the east side of the Fire Hall and in the city park. The Town of Conde currently has Water Right Permit #4076-3 for the wells. Information about the wells was taken from the SD Public System Data and is shown in the following tables. The level of iron at 0.85 mg/l is above the secondary standard of 0.3 mg/l. The use of the well water could result in turning clothes red when washing laundry.

Table 3.4.2-1 - Well Information

Well #	Date Constructed	Diameter (in)	Depth (ft)	Pump Rate (gpm)
2	1939	2	911	16
3	1956	3	1174	15

Table 3.4.2-2 - Well Quality

Well #	TDS (MG/L)	Iron (MG/L)	Sodium (MG/L)	Sulfate (MG/L)	Fluoride (MG/L)	Hardness (MG/L)
2	1049	0.85	194	376	0.32	401

3.5 STORAGE

The Town currently has one 55,000-gallon elevated water reservoir. It is assumed that the tank was built around 1923, the same time the distribution system was installed. An interior lining system was installed in 2001. The elevated storage tank functions properly but is nearing the end of its useful life cycle. The elevated storage tank was measured and is 54 feet from the ground to the bottom of the tank.

H & H Contracting Inc. completed an inspection/maintenance of the elevated storage reservoir in September of 2006. H & H recommended monitoring the floor coating over the contract maintenance period due to signs of deteriorating. H & H commented that the coating and structural integrity of the tower remains in good condition.

Water storage establishes the pressure(s) for the distribution system; provides a means for equalizing operating pressures during high demand periods; provides emergency storage to temporarily offset the effects of downtime for pump repairs, pipeline repairs and power outages; and provides fire protection.

There is not a defined method for determining the volume of elevated storage for water distribution systems. Standards such as the Ten State Standards say that if fire flow is to be provided, the flow guidelines established by the International Standards Organization (ISO) should be met. Thus, at 1,500 gpm, a two-hour fire event requires 180,000 gallons for the downtown area.

Equalization and emergency storage are the other factors in determining the volume of water required or desired. Equalization storage is required to supply the varying demands throughout each day. Figure 3.5-1 illustrates a typical variation of water demand over a peak day. During

those times that the water usage is shown to be over 100% of the supply rate, the system's storage must provide the additional water to meet the demands. Mays states that storage for equalization with constant rate pumps typically ranges from 10% to 25% of the peak day water demand. The higher end of the range is for communities with high ratios of average day to peak day water usage. Since the selected peak day to average day ratio for Conde is at the middle of the typical range of 2.0 to 3.0, the mid-point of the required range of equalization storage, or 17.5%, is selected for the desired equalization storage. The projected peak day water demand is 30,188 gallons and results in an equalization storage volume of approximately 5,283 gallons (30,188 gpd x .175).

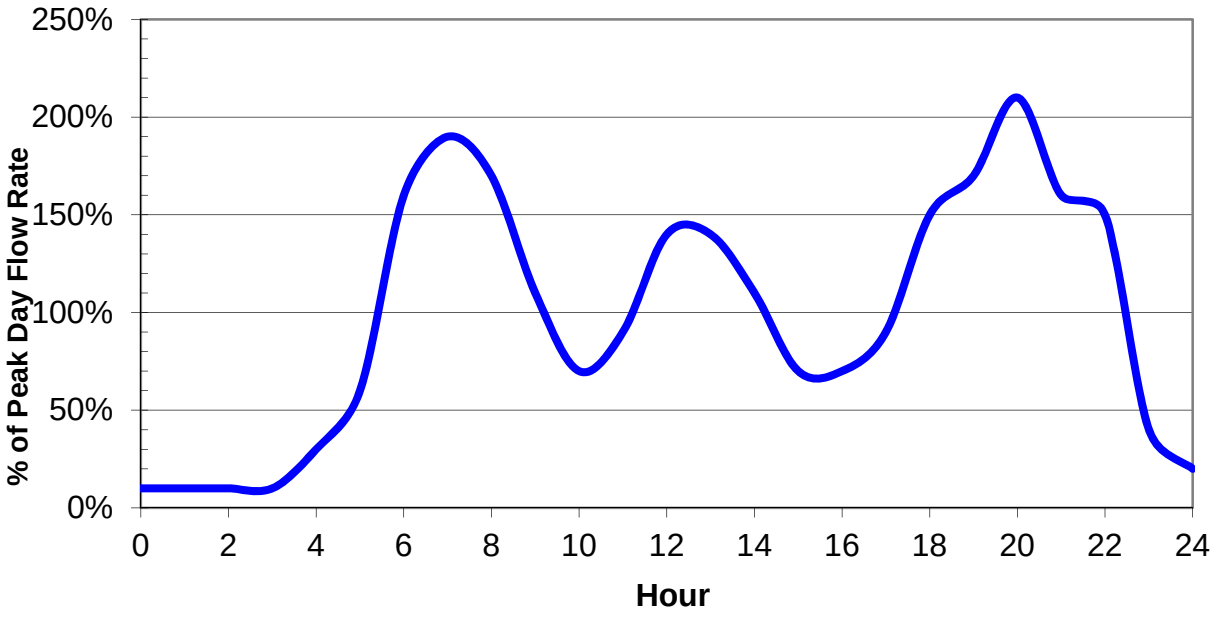

Figure 3.5-1 - Water Demand Pattern Used in Model

Emergency storage is essentially the storage that a community feels comfortable with based on the reliability of the power supply and its water system in general. Emergency storage equal to two days of the average day usage is commonly used for the emergency storage volume and is utilized in this report. The current average day water demand is 24,150 gallons (2 * 140 people * 75 gpcpd * 1.15 (water loss)).

The total required water storage for a community is generally considered to be the peak day storage plus the larger of fire or emergency storage (Mays 2000). The total storage generally considered as needed for a community would then be 185,283 gallons (5,283 + 180,000); however, the funding agencies currently don't consider fire protection as an eligible expense. Therefore, the total water storage evaluated for this report is double the average daily use (emergency storage) plus the equalization storage. The Town of Conde should currently have storage of at least 29,433 (24,150 + 5,283) gallons of water.

3.6 DISTRIBUTION SYSTEM

Currently, the existing system is known to have several dead ends. Without looping and multi-directional flow of water in the distribution system, water is supplied, for the most part, through a long single pipeline. In this type of distribution system, total water usage decreases the closer one gets toward the end of the lines. This results in decreased movement of water in the pipe and the possibility of exceptionally long retention times of the water in various segments of the pipe. Long retention times in a pipe can have a detrimental effect on the quality of the water in the pipe such as:

- A decrease in the disinfection levels in the water;
- An increase in the potential for the formation of carcinogenic disinfection process by-products; and
- An increased potential for the formation of biological growth.

Conde's distribution system consists of approximately five dead ends with four to six-inch lines. The distribution system is composed of mostly Ductile Iron Pipe (DI). The DI is old and brittle. Typically, the inside of the DI will corrode over time reducing the inside diameter and capacity of the pipe. Two of the dead ends do not have a fire hydrant at the end. Fire hydrants allow the lines to be properly flushed to maintain water quality. The Town flushes the water mains twice a year, once in the spring and again in the fall.

3.6.1 **Hydrants**

The SD Department of Environment and Natural Resources (SD DENR), which is the state regulatory agency for public water supplies, requires that fire hydrants be served by water mains with a minimum diameter of six inches. The system has several hydrants that are served by four-

inch lines because of the large amount of four-inch pipe. Hydrants used only for flushing dead-end lines may be located on four-inch mains. Figure 3.1-1 shows the current main sizes of the Town's distribution system. Based on information provided by the Town, there are approximately 24 hydrants.

With the new proposed system, fire protection would be available throughout Town. Because of this, home insurance is likely to decrease.

3.6.2 **Hydraulic Evaluation**

A hydraulic evaluation of the water system was conducted by the KYPipe 2010 hydraulic computer model. This model utilizes the Hazen-Williams formula and commonly accepted friction factors for the pipeline material being considered to calculate head loss due to pipe friction and resulting flows and pressures. Two types of hydraulic analyses were performed with the KYPipe 2010 program to evaluate the Town of Conde's distribution system. The two types of hydraulic analyses are a general system analysis which provides a snapshot of the system at the set parameters and fire flow analysis. All analyses were utilized to obtain a complete picture of the existing distribution system and to allow proper recommendations to be made that will improve the existing conditions.

Any hydraulic evaluation can find the existing water system to be inadequate by simply making the requirements very stringent. In the same manner, generally all systems are adequate to meet the average day demands. Deficiencies in a system are typically not apparent until system demands increase to provide the peak day and peak hour flows. The reason for this is that the flow rate in a pipeline significantly affects the downstream pressures. The friction loss, or the pressure loss, in a pipe is a function of the square of the velocity. Therefore, as the flow rate and corresponding velocity in a pipe increase, the resulting friction increases exponentially. As the flow rate increases above two feet per second, the corresponding friction loss begins to climb rapidly with a velocity of five feet per second, generally considered the maximum desired flow rate. As a result, it is common practice to evaluate the overall system deficiencies in a distribution system based on peak hour and peak day flows.

3.6.3 **Modeled Flow Rates**

The total water demand for the Town consists of two main components. First, the non-residential use is modeled by distributing demands that represent the Town's watering of parks and non-residential high-use water users (the school) throughout the water distribution model. The other component consists of a residential flow rate which is modeled at each metered connection. Two sets of modeled system demands are created to place different loading conditions on the model:

- Peak Hour Demand

  (Mays) states that the peak hour to average day flow ratio typically ranges from 2.0 to 7.0:1. It is our opinion that the peak hour to average day ratio should be modeled as 5.0. This number was obtained by taking the highest usage in Table 3.2-1 of 200% and multiplying that by peak day and dividing it by the minutes in a day and the average usage (2.0 x 26,283 / 1440 / 7.1). Typically, the water demand in a system is concentrated over 16 hours in the day since water use is minimized during the night. Therefore, based on the current average day per capita pumped usage of 75 gpcpd, a 16-hour pumping day and the total population of 140 the total modeled peak hour flow rate is estimated to be 55 gpm (75 x 140 x 5.0 / 16 / 60). This flow will be utilized in the general analysis with the water tower set at mid-level to evaluate the distribution system's hydraulic capacity to maintain adequate water pressure during this high-use period.

- Peak Day Demand

  The peak day demand in the models was set to approximately 32 gpm (30,188 / 16 / 60) based on the current population, per capita usage, estimated peaking factor and a 16-hour day. An estimated variation of the peak day's usage over the course of the day including the peak hour is utilized in the extended period simulation to evaluate the system's overall hydraulic capacity.

3.6.4 **Pressure Analysis**

To check the water system for low-pressure problems, hydraulic models are created with the following assumptions made:

- The peak hour demand is placed on the model according to Section 3.6.2
- The operating elevation of the water tower is set to the mid-tank level which is approximately an elevation of 1,377 feet above mean sea level. The base elevation of the tank is assumed to be 1,321 feet above mean sea level.

SD DENR Recommended Design Criteria states in Section 8.4.2:

> *"A water distribution system shall be designed so as to provide a pressure of 20 pounds per square inch at each service outlet or connection under any or all conditions or demands that can be placed on the system. Under normal conditions, minimum pressures should be approximately 60 psi and not less than 35 psi."*

Section 7.3.1 of the Recommended Standards for Water Works by the Committee of the Great Lakes further recommends a minimum working pressure of 35 psi with a normal working pressure of 60 to 80 psi. The AWWA Distribution System Handbook by Mays states on page 3.8 that low operating pressures of less than 30 psi can result in annoying reductions in water flow when more than one water-using device is in service. The new minimum desired by many residents is 40 psi as that pressure is typically required to properly operate lawn sprinkler systems. Based on the references above, the recommended pressures for services are shown in Table 3.6.4-1.

Table 3.6.4-1 - Recommended Pressures

Condition	Service Pressure Criteria (psi)
Maximum Pressure	60-80
Minimum Pressure During Peak Day	40
Minimum Pressure During Peak Hour	40
Minimum Pressure During Fire Flow	20

To check the water system for low-pressure problems, a high demand is simulated. The basis for the model in Figure 3.6.4-1 is that each meter is using an average of 0.88 gpm (75 gpm / 85 connections plus individual node demand of 5 gpm for the school). Figure 3.6.4-1 indicates that the operating pressures are below the minimum recommended pressure of 40 psi throughout most of the community. These results are reinforced by Town Board members stating that only

one shower can run at one time in a home. It was discovered, that multiple houses on the east side of Town have installed pressure tanks to increase water pressure.

The primary reason for the low pressure is the low height of the water tower. The height of the tower provides a static pressure of only 36 psi. However there are still significant losses in the system due to the piping.

Figure 3.6.4-1 - Fire Flows and Pressures under Peak Hour Demand

3.6.5 **Fire Flow Simulation**

In order to check the water system for low flow problems, hydraulic models are created with the following assumptions made:

- The peak day demand of 0.31 gallons per meter (32 gpm / 104 connections plus individual node demand of 5 gpm for the school) is placed on the model according to Section 3.6.2.
- The operating level of the tower is set to the mid-tank level.
- The minimum residual pressure is set at 20 psi.

Main pipelines are to deliver the needed fire flow to each hydrant in accordance with the ISO guidelines. The ISO guidelines are based on a number of variables including size of structure, construction material, occupancy, exposure and connections to other structures. For one- and two-family dwellings not exceeding two stories in height, the following needed fire flows are required:

Distance Between Buildings	Fire Flow Requirement
Over 100 feet	500 gpm
31 to 100 feet	750 gpm
11 to 30 feet	1,000 gpm
10 feet or less	1,500 gpm

As for the business district, the needed fire flow would be variable for each structure and an inspection and analysis of each structure would be required. Rather than performing these inspections and analyses, a minimum needed fire flow of 2,000 gpm is sought for business and school areas.

As can be seen in the fire flow analyses shown in the figure3.6.5-1, the majority of the flows are below 500 gpm (the minimum by ISO) only 6 out of the 24 hydrants are above the 500 gpm (by ISO). The low flow can be expected with the large amount of ductile iron (DI) and 4-inch pipe still in use throughout the system. Over time, the inside of the ductile iron will corrode and the inside diameter will decrease significantly.

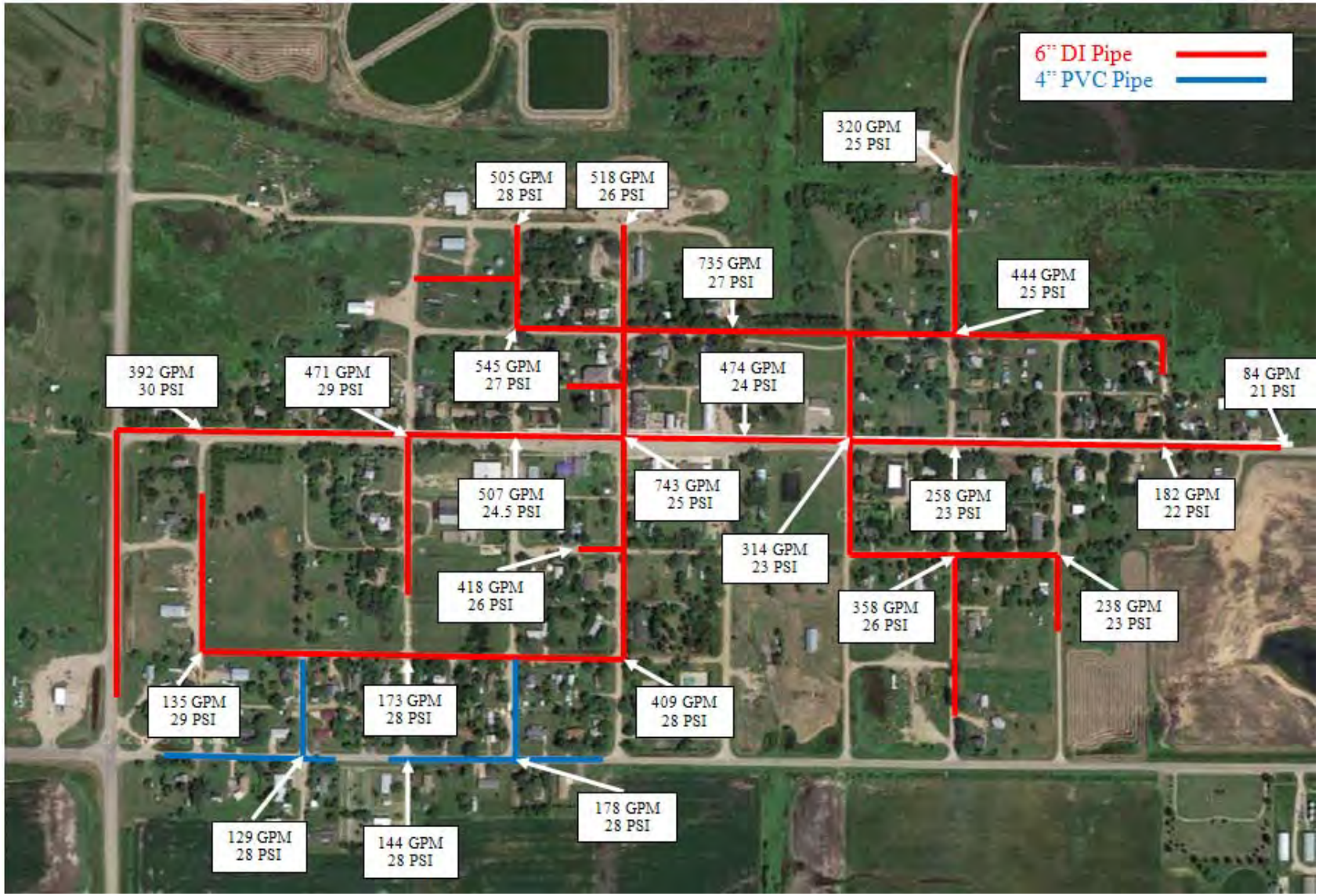

Figure 3.6.5-1 - Fire Flow Analysis under Peak Day Demand

3.7 FUTURE CONDITIONS

Without some system improvements, the Town will continue to repair broken lines and have major water losses in the system. This could possibly overwhelm the WEB Water system to the point of failure within the Town of Conde. The Town needs to make improvements to prevent a water shortage or complete failure in the future.

Specific information on population projections is found in Section 2.3. Land use is not expected to change significantly in the immediate vicinity of the Town. Currently there are no immediate plans for additional community growth; however there is some land available for future development and based on the past growth of the community. It is viewed as sufficient to meet community needs.

Due to the importance of conserving water, money and energy, various means for reducing water usage are recommended. By using faucet aerators, reduced flush toilets, and limited flow showerheads, water use can be reduced. However, these improvements would be wasted unless the water system is improved.

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4 DEVELOPMENT AND EVALUATION OF WATER ALTERNATIVES

4.1 GENERAL

The alternatives developed for the Town of Conde were composed to demonstrate some options available to fix the identified deficiencies in the water system.

4.2 CAUTIONARY NOTES CONCERNING COST ESTIMATES

The opinions of probable cost provided with the following alternatives reflect the anticipated costs for administration, engineering design, construction, contingencies, construction observation, and other costs related to completion of the project. The costs as presented are based on an analysis and comparison of projects of similar size and scope. The actual construction and project costs will vary on an individual project basis. The actual bid cost will reflect the bidder's evaluation of construction problems, weather, soils and difficulty of work. Thus, the engineer cannot be held responsible for the accuracy of the estimates made in this report as the engineer has no control over the contractors' bid costs.

Changes in materials, equipment and energy costs, as well as availability of other construction work at the time of the bid opening, could substantially influence actual project cost. Construction costs will also vary somewhat based on the quantity of items necessary to construct the project. The quantities and costs contained in this report are preliminary estimates based on our best judgment without field measurements. Final quantities and opinions of probable cost and final construction costs must be based upon final design.

Different funding sources have different requirements for some non-construction items. Therefore, actual costs of non-construction items should be considered tentative at this time and subject to later modifications and adjustments as current situations and funding sources dictate. Further, in as much as the period of construction cannot be accurately predicted, the costs as presented in this report have not been adjusted to reflect projected inflation factors. Therefore, it is important that the estimate of costs as presented be reviewed and updated periodically to reflect construction cost trends.

4.3 EQUIVALENT UNIFORM ANNUAL COST

The alternatives relating to Conde's water system that were evaluated are described in the following sections. In addition to an opinion of cost for each alternative discussed in this section, a breakdown of the estimated equivalent uniform annual cost (EUAC) is also given. The EUAC not only takes the capital costs into account when evaluating the options but also looks at the salvage value of the components and the expected annual operation and maintenance costs. Rural Development has published guidance under Bulletin 1780-3 to analyze life cycle costs:

"Present Worth (life cycle) cost analysis (an engineering economics technique to evaluate present and future costs for comparison of alternatives) should be completed to compare the feasible alternatives. All of the items from the cost estimate should be included in the analysis. The "real" federal discount rate from Appendix C of OMB Circular A-94 should be used for determining the present worth of the uniform series of O & M values (in today's dollars) and the salvage value. This rate may be found at: www.whitehouse.gov/omb/circulars/a094/a94_appx-c.html."

The result is a comparison of the alternatives will be on an overall basis throughout a design life of 20 years. As a result, the EUAC may show that the lowest capital cost alternative is not the lowest cost alternative. This situation would occur when options have a low capital cost but high operation and maintenance costs. The terms and values utilized in performing the EUAC are given in Table 4.3.1.

Table 4.3-1 - Equivalent Uniform Annual Cost Terminology and Values Used

Term	Definition	Value Used
Interest = I	Annual interest rate	0.80%
Salvage Value = SV	Value of component at end of 20-year design life	0% or 50%
Present Worth = PW	Present worth (equal to opinion of cost for that item)	Variable
Net Present Worth of Salvage Value = PWSV	Present worth of salvage value	85.3%
Net Present Worth of Capital Costs = NPW	Present worth less the present worth of the salvage value	Variable
Net Present Worth of Annual Costs	Present worth of annual costs over the 20-year design life	1840%
Equivalent Uniform Annual Costs = EUAC	Annual cost of total present worth of capital and annual costs	5.43%
Design Life	Length of time facilities are projected to operate and/or meet design parameters	20 years

4.4 WATER SOURCE

Currently the Town of Conde gets all of their water from WEB Water. WEB Water has supplied the town since 1983 when the Town of Conde entered into an agreement with WEB Water. WEB Water currently meets the demands of the Town and should be able to meet the demands of Conde well into the future.

4.4.1 Water Source Alternative 1: Do Nothing

The first alternative for water source system improvements is to do nothing. This alternative is an acceptable alternative as WEB Water has been adequately supplying the Town of Conde with quality water at an acceptable rate since 1983. WEB Water also has the ability to meet the needs of Conde in the future. As a result, the “Do Nothing” alternative is considered as an acceptable alternative.

4.4.2 Water Source Alternative 2: Drill New Well

Water source alternative 2 recommends that the Town of Conde drill a new well. Currently the Town has two wells within city limits. One well is located near the fire hall; the other one is

located near the existing water tower. According to city officials, the wells are currently used to fill the fire trucks. As a result, the "Drill New Well" alternative will not be considered as the current water quality standards for the existing wells are poor.

Table 4.4.2-1 - Cost Estimate for Water Source Alternative 2

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$7,000.00	$7,000.00
2	Well House	1	LS	$15,000.00	$15,000.00
3	Site Work	1	LS	$5,000.00	$5,000.00
4	Electrical	1	LS	$7,500.00	$7,500.00
5	Well Pumps	2	Each	$3,000.00	$6,000.00
6	Training	1	LS	$5,000.00	$5,000.00
7	Disinfection System	1	LS	$10,000.00	$10,000.00
8	Controls	1	LS	$10,000.00	$10,000.00
9	Test / Pilot Hole	50	Ft	$15.00	$750.00
10	Abandonment and Plugging Test/Pilot Hole	50	Ft	$2.00	$100.00
11	Sampling, Analysis and Logging	1	LS	$2,500.00	$2,500.00
12	Drilling Bore Holes	50	Ft	$50.00	$2,500.00
13	Steel Well Casing	40	Ft	$50.00	$2,000.00
14	Stainless Steel Slotted Screen	20	Ft	$150.00	$3,000.00
15	Graded Gravel Pack	20	Ft	$25.00	$500.00
16	Grout Seal	30	Ft	$20.00	$600.00
17	Well Development	12	Hour	$200.00	$2,400.00
18	Furnish, Install and Remove Pump and Discharge Column for Test Pumping	1	Each	$5,000.00	$5,000.00
19	Test Pumping	48	Hour	$150.00	$7,200.00
20	Pitless Discharge Unit	1	LS	$10,000.00	$10,000.00
21	6" PVC Watermain	500	Ft	$22.00	$11,000.00
22	6" Gate Valve W/Box	2	Each	$1,000.00	$2,000.00
23	Seeding, Fertilizing and Mulching	2.0	Acre	$1,500.00	$3,000.00
	Construction Subtotal				$118,050.00
	Contingencies (15%)				$18,000.00
	Construction Total				**$136,050.00**
	Design Engineering				$13,600.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$13,600.00
	Administration & Legal				$3,000.00
	Total Project Cost				**$171,750.00**

Table 4.4.2-2 - EUAC for Water Source Alternative 2

Item Description	Cost	SV	PW SV	NPW
Mobilization	$7,000.00	$0.00	$0.00	$7,000.00
Well House	$15,000.00	$7,500.00	$6,395.15	$8,604.85
Site Work	$5,000.00	$0.00	$0.00	$5,000.00
Electrical	$7,500.00	$0.00	$0.00	$7,500.00
Well Pumps	$6,000.00	$3,000.00	$2,558.06	$3,441.94
Training	$5,000.00	$0.00	$0.00	$5,000.00
Disinfection System	$10,000.00	$5,000.00	$4,263.43	$5,736.57
Controls	$10,000.00	$5,000.00	$4,263.43	$5,736.57
Test / Pilot Hole	$750.00	$0.00	$0.00	$750.00
Abandonment and Plugging Test/Pilot Hole	$100.00	$0.00	$0.00	$100.00
Sampling, Analysis and Logging	$2,500.00	$0.00	$0.00	$2,500.00
Drilling Bore Holes	$2,500.00	$0.00	$0.00	$2,500.00
Steel Well Casing	$2,000.00	$1,000.00	$852.69	$1,147.31
Stainless Steel Slotted Screen	$3,000.00	$1,500.00	$1,279.03	$1,720.97
Graded Gravel Pack	$500.00	$0.00	$0.00	$500.00
Grout Seal	$600.00	$0.00	$0.00	$600.00
Well Development	$2,400.00	$0.00	$0.00	$2,400.00
Furnish, Install and Remove Pump and Discharge Column for Test Pumping	$5,000.00	$0.00	$0.00	$5,000.00
Test Pumping	$7,200.00	$0.00	$0.00	$7,200.00
Pitless Discharge Unit	$10,000.00	$5,000.00	$4,263.43	$5,736.57
6" PVC Watermain	$11,000.00	$5,500.00	$4,689.78	$6,310.22
6" Gate Valve W/Box	$2,000.00	$1,000.00	$852.69	$1,147.31
Seeding, Fertilizing and Mulching	$3,000.00	$0.00	$0.00	$3,000.00
Capital Costs	$53,700.00	$0.00	$0.00	$53,700.00
Total Construction Cost	$171,750.00	$34,500.00	$29,417.68	$142,332.32
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$1,500.00			$27,621.29
Utilities	$1,000.00			$18,414.19
Miscellaneous	$1,000.00			$18,414.19
Subtotal	$3,500.00			$64,449.68
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$142,332.32
NPW of O & M Costs				$64,449.68
Total Net Present Worth				**$206,782.00**
Equivalent Uniform Annual Cost				**$11,229.49**

4.5 WATER STORAGE

The Town of Conde currently has a 55,000 gallon elevated water reservoir. The elevated tower is over 90 years old and coming to the end of its useful lifecycle. During a contract maintenance project in September of 2006, it was noted that the floor coating is showing signs of deteriorating.

4.5.1 Water Storage Alternative 1: Do Nothing

The first Water Storage Alternative that was considered is the "Do Nothing" alternative. This alternative will not address the low water pressure problem in some parts of Town, nor does this alternative improve the deteriorating condition of the floor. As a result, the "Do Nothing" alternative is not considered as an acceptable alternative.

4.5.2 Water Storage Alternative 2: New 50,000-Gallon Water Tower with Booster Pumps

Water Storage Alternative 2 recommends a new 50,000 Gallon Water Tower with booster pump station. The Water Tower would provide the storage that the Town needs. A new 50,000-gallon water tower is proposed in order to ensure that the City has adequate capacity and adequate pressures. It should be noted that a 50,000-gallon tank is the minimum pedestal tank size. It is recommended that the Town construct a 50,000 gallon water tower with a recirculation system. To provide pressure to the distribution system, the water tower would be required to be set at an additional height than the current water tower.

A new booster pump station would undoubtedly be desired if this alternative was chosen. The current booster station is in poor condition and needs to be replaced. One of the current booster pumps is not working. This alternative considers a below-ground style booster station. This style of booster station would be detached from City Shop to provide easier access and maintenance. A duel-pump system would be desired to reduce stress on a single pump and to provide back-up pumping in case of failure. The booster station should utilize variable frequency drives (VFD's) to start the pumps. VFD's would prevent any potential water hammer because the VFD would slowly ramp the pumps to full speed and slowly ramp the pumps down

to shut off. Water hammer is caused by an instantaneous surge of water which can put undesired stresses on the distribution system. A VFD would also lower pumping costs because it may not be necessary to run the pump at full speed depending on the water demand. In addition, VFD's tend to extend the life of the pump because of the gradual starting and stopping of the pumps.

The new elevated tank is proposed to have a mid-tank elevation of 1452 feet which is approximately 87 feet higher than the mid-level of the existing tank. This increase in height will add approximately 20 psi to the water distribution system. Tables 4.5.2-1 and 4.5.2-2 provide the estimated costs of this alternate and the equivalent uniform annual costs for the alternative.

Table 4.5.2-1 - Cost Estimate for Storage Alternative 2

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$ 44,000.00	$44,000.00
2	50,000-Gallon Single Pedestal Tank	1	LS	$325,000.00	$325,000.00
3	Tank Foundation	1	LS	$30,000.00	$30,000.00
4	Booster Pump Station	1	LS	$125,000.00	$125,000.00
5	Electrical and Control Wiring	1	LS	$35,000.00	$35,000.00
6	6" PVC Watermain	100	LF	$25.00	$2,500.00
7	8" DIP Water Main	100	LF	$40.00	$4,000.00
8	6" Gate Valve W/Box	3	Each	$1,000.00	$3,000.00
9	8" Gate Valve W/Box	2	Each	$1,250.00	$2,500.00
10	Fire Hydrant	1	Each	$3,000.00	$3,000.00
11	Chain Link Fencing	200	LF	$45.00	$9,000.00
12	Seeding, Fertilizing and Mulching	1,000	SqYd	$2.00	$2,000.00
	Construction Subtotal				$585,000.00
	Contingencies (15%)				$88,000.00
	Construction Total				**$673,000.00**
	Design Engineering				$63,300.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$47,100.00
	Administration & Legal				$14,000.00
	Total Project Cost				**$802,900.00**

Table 4.5.2-2 - EUAC for Storage Alternative 2

Item Description	Cost	SV	PW SV	NPW
Mobilization	$44,000.00	$0.00	$0.00	$44,000.00
50,000-Gallon Single Pedestal Tank	$325,000.00	$162,500.00	$138,561.55	$186,438.45
Tank Foundation	$30,000.00	$0.00	$0.00	$30,000.00
Booster Pump Station	$125,000.00	$62,500.00	$53,292.90	$71,707.10
Electrical and Control Wiring	$35,000.00	$0.00	$0.00	$35,000.00
6" PVC Watermain	$2,500.00	$1,250.00	$1,065.86	$1,434.14
8" DIP Water Main	$4,000.00	$2,000.00	$1,705.37	$2,294.63
6" Gate Valve W/Box	$3,000.00	$1,500.00	$1,279.03	$1,720.97
8" Gate Valve W/Box	$2,500.00	$1,250.00	$1,065.86	$1,434.14
Fire Hydrant	$3,000.00	$1,500.00	$1,279.03	$1,720.97
Chain Link Fencing	$9,000.00	$0.00	$0.00	$9,000.00
Seeding, Fertilizing and Mulching	$2,000.00	$0.00	$0.00	$2,000.00
Capital Costs	$217,900.00	$0.00	$0.00	$217,900.00
Total Construction Cost	$802,900.00	$232,500.00	$198,249.60	$604,650.40
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$1,500.00			$27,621.29
Utilities	$2,500.00			$46,035.49
Miscellaneous	$2,000.00			$36,828.39
Subtotal	$6,000.00			$110,485.17
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$604,650.40
NPW of O & M Costs				$110,485.17
Total Net Present Worth				**$715,135.57**
Equivalent Uniform Annual Cost				**$38,836.10**

4.5.3 Water Storage Alternative 3: New 50,000-Gallon Ground Storage Tank with Booster Pumps

Water Storage Alternative 3 recommends a new ground storage tank with a booster pump station. The ground storage tank would provide the storage that the Town needs. A 25,543 gallon ground storage tank would be a minimum size needed. It is recommended that the Town construct a minimum 50,000 gallon tank with a recirculation system. To provide pressure to the distribution system, a pumping system would be required. The pump system would operate off a variable frequency drive (VFD) to eliminate the start and stop cycling that a traditional pump setup would have. Since there would not be an elevated tank to equalize pressures, the VFD's

will allow the Town to maintain equal pressures on the lines regardless of the flow rates. A couple of small pressure tanks would be included to eliminate the need for pumps to run with low flow i.e. leaking toilet, dripping faucet, etc. Tables 4.5.3-1 and 4.5.3-2 provide the estimated costs of this alternative and the equivalent uniform annual costs for the alternative.

Table 4.5.3-1 - Cost Estimate for Storage Alternative 3

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$ 27,000.00	$27,000.00
2	50,000 Gallon Ground Storage Tank	1	LS	$140,000.00	$140,000.00
3	Booster Pump Station	1	LS	$125,000.00	$125,000.00
4	Electrical and Control Wiring	1	LS	$35,000.00	$35,000.00
5	6" PVC Watermain	100	LF	$22.00	$2,200.00
6	8" DIP Water Main	100	LF	$40.00	$4,000.00
7	6" Gate Valve W/Box	3	Each	$1,000.00	$3,000.00
8	8" Gate Valve W/Box	2	Each	$1,250.00	$2,500.00
9	Fire Hydrant	1	Each	$3,000.00	$3,000.00
10	Chain Link Fencing	200	LF	$45.00	$9,000.00
11	Seeding, Fertilizing and Mulching	1,000	SqYd	$2.00	$2,000.00
	Construction Subtotal				$352,700.00
	Contingencies (15%)				$53,000.00
	Construction Total				**$405,700.00**
	Design Engineering				$38,100.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$28,400.00
	Administration & Legal				$9,000.00
	Total Project Cost				**$486,700.00**

Table 4.5.3-2 - EUAC for Storage Alternative 3

Item Description	Cost	SV	PW SV	NPW
Mobilization	$27,000.00	$0.00	$0.00	$27,000.00
50,000 Gallon Ground Storage Tank	$140,000.00	$70,000.00	$59,688.05	$80,311.95
Booster Pump Station	$125,000.00	$62,500.00	$53,292.90	$71,707.10
Electrical and Control Wiring	$35,000.00	$0.00	$0.00	$35,000.00
6" PVC Watermain	$2,200.00	$1,100.00	$937.96	$1,262.04
8" DIP Water Main	$4,000.00	$2,000.00	$1,705.37	$2,294.63
6" Gate Valve W/Box	$3,000.00	$1,500.00	$1,279.03	$1,720.97
8" Gate Valve W/Box	$2,500.00	$1,250.00	$1,065.86	$1,434.14
Fire Hydrant	$3,000.00	$1,500.00	$1,279.03	$1,720.97
Chain Link Fencing	$9,000.00	$0.00	$0.00	$9,000.00
Seeding, Fertilizing and Mulching	$2,000.00	$0.00	$0.00	$2,000.00
Capital Costs	$134,000.00	$0.00	$0.00	$134,000.00
Total Construction Cost	$486,700.00	$139,850.00	$119,248.20	$367,451.80
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$1,500.00			$27,621.29
Utilities	$2,500.00			$46,035.49
Miscellaneous	$2,000.00			$36,828.39
Subtotal	$6,000.00			$110,485.17
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$367,451.80
NPW of O & M Costs				$110,485.17
Total Net Present Worth				**$477,936.97**
Equivalent Uniform Annual Cost				**$25,954.81**

4.6 WATER DISTRIBUTION

The negative characteristics of Conde's water distribution system are summarized below:

- The DI pipe is of poor quality and has outlived its useful life expectancy;
- The 6 inch DI lines do not provide adequate fire flow for fire hydrants due to the buildup of residue. The 4 inch PVC lines do not provide adequate flows for fire hydrants.
- The system has limited ways to flush lines;
- The water losses are estimated at 30% well above the standard level of 15%;
- There are several dead end lines within the system;
- The system has very low pressures and flows. The pressures on the east end of town are so poor that residents have installed booster pumps within their homes.

The alternatives for water main replacement will also include the installation of meters for the homes.

4.6.1 **Water Distribution Alternative 1: Do Nothing**

The first alternative for water distribution system improvements is to do nothing. This alternative will not help address any of the negative characteristics of the system. As a result, the "Do Nothing" alternative is not considered as an acceptable alternative.

4.6.2 **Water Distribution Alternative 2: Replace all 6" DI and 4" PVC with 6" PVC**

Water Distribution Alternative 2 recommends that all of the existing 6" DI and 4" PVC be replaced with 6" PVC lines. The Town has been experiencing many breaks over the years with the current DI pipe. The frequency of the breaks is only expected to increase in the future. This would be a larger diameter system operated by the Town and would provide fire protection. In turn, residents should see a decrease in their homeowners insurance and an increase in their fire protection. Tables 4.6.2-1 and 4.6.2-2 provide the estimated costs of this alternate and the equivalent uniform annual costs for the alternative. Figure 4.6.2-1 provides a proposed layout of the water system. Figures 4.6.2-2 and 4.6.2-3 provide the modeled results for the system assuming a ground storage tank with booster pumps.

Table 4.6.2-1 - Cost Estimate for Distribution Alternative 2

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$99,000.00	$99,000.00
2	Remove and Dispose of Existing Asphalt	6,400	SqYd	$3.25	$20,800.00
3	6" PVC Water Main	18,060	Ft	$22.00	$397,320.00
4	Fire Hydrants	25	Each	$2,625.00	$65,625.00
5	6" PVC Fire Hydrant Lead	500	Ft	$24.00	$12,000.00
6	6" MJ Gate Valve w/Box	45	Each	$1,000.00	$45,000.00
7	6" MJ Cross	3	Each	$600.00	$1,800.00
8	6" MJ Tee	30	Each	$350.00	$10,500.00
9	6" 90° MJ Bend	7	Each	$300.00	$2,100.00
10	Bore & Case Watermain Under State Highway	125	Ft	$150.00	$18,750.00
11	Bore & Case Watermain Under County Highway	200	Ft	$150.00	$30,000.00
12	1" Corp Stop/Service Saddle	118	Each	$175.00	$20,650.00
13	1" Curb Stop w/Box	118	Each	$200.00	$23,600.00
14	1" HDPE Service Line	3,900	Ft	$15.00	$58,500.00
15	Water Meters & Setter	118	Each	$250.00	$29,500.00
16	Connect to Existing Service	118	Each	$150.00	$17,700.00
17	Asphalt Surfacing (4")	1,500.0	Ton	$165.00	$247,500.00
18	Gravel Base Course (10")	3,600.0	Ton	$18.00	$64,800.00
19	Gravel Surfacing	9,630.0	Ton	$17.00	$163,710.00
20	Topsoil, Seed, Fertilize & Mulch	3.4	Acres	$1,500.00	$5,100.00
	Construction Subtotal				$1,333,955.00
	Contingencies (15%)				$201,000.00
	Construction Total				**$1,534,955.00**
	Design Engineering				$130,500.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$143,600.00
	Administration & Legal				$31,000.00
	Total Project Cost				**$1,845,555.00**

Table 4.6.2-2 - EUAC for Distribution Alternative 2

Item Description	Cost	SV	PW SV	NPW
Mobilization	$99,000.00	$0.00	$0.00	$99,000.00
Remove and Dispose of Existing Asphalt	$20,800.00	$0.00	$0.00	$20,800.00
6" PVC Water Main	$397,320.00	$198,660.00	$169,394.69	$227,925.31
Fire Hydrants	$65,625.00	$32,812.50	$27,978.77	$37,646.23
6" PVC Fire Hydrant Lead	$12,000.00	$6,000.00	$5,116.12	$6,883.88
6" MJ Gate Valve w/Box	$45,000.00	$22,500.00	$19,185.44	$25,814.56
6" MJ Cross	$1,800.00	$900.00	$767.42	$1,032.58
6" MJ Tee	$10,500.00	$0.00	$0.00	$10,500.00
6" 90° MJ Bend	$2,100.00	$0.00	$0.00	$2,100.00
Bore & Case Watermain Under State Highway	$18,750.00	$9,375.00	$7,993.94	$10,756.06
Bore & Case Watermain Under County Highway	$30,000.00	$15,000.00	$12,790.30	$17,209.70
1" Corp Stop/Service Saddle	$20,650.00	$10,325.00	$8,803.99	$11,846.01
1" Curb Stop w/Box	$23,600.00	$0.00	$0.00	$23,600.00
1" HDPE Service Line	$58,500.00	$0.00	$0.00	$58,500.00
Water Meters & Setter	$29,500.00	$0.00	$0.00	$29,500.00
Connect to Existing Service	$17,700.00	$0.00	$0.00	$17,700.00
Asphalt Surfacing (4")	$247,500.00	$0.00	$0.00	$247,500.00
Gravel Base Course (10")	$64,800.00	$0.00	$0.00	$64,800.00
Gravel Surfacing	$163,710.00	$0.00	$0.00	$163,710.00
Topsoil, Seed, Fertilize & Mulch	$5,100.00	$0.00	$0.00	$5,100.00
Capital Costs	$511,600.00	$0.00	$0.00	$511,600.00
Total Construction Cost	$1,845,555.00	$295,572.50	$252,030.66	$1,593,524.34
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$1,500.00			$27,621.29
Materials	$500.00			$9,207.10
Miscellaneous	$1,000.00			$18,414.19
Subtotal	$3,000.00			$55,242.58
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$1,593,524.34
NPW of O & M Costs				$55,242.58
Total Net Present Worth				**$1,648,766.92**
Equivalent Uniform Annual Cost				**$89,537.82**

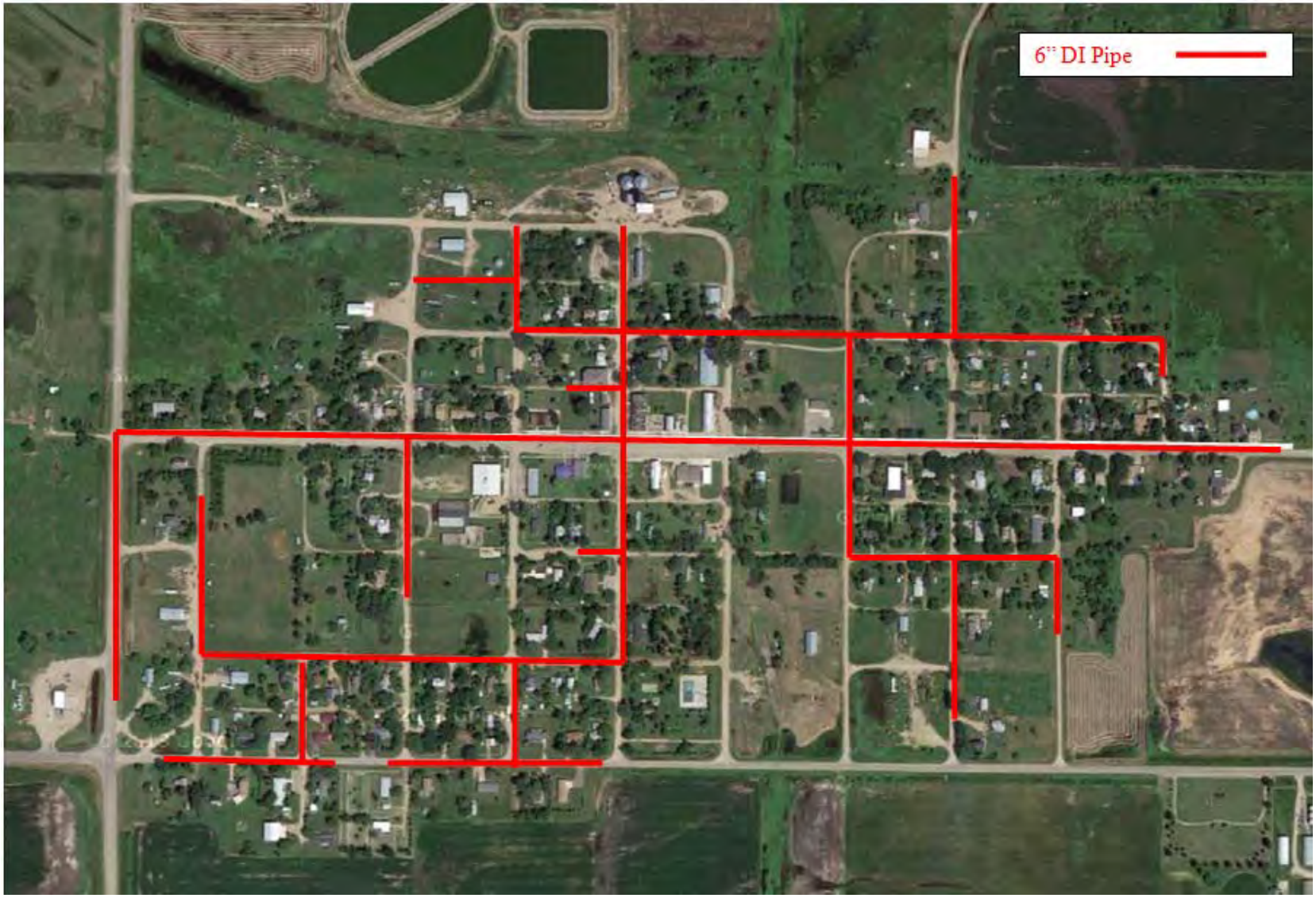

Figure 4.6.2-1 – Proposed Alternative 2: 6" Water main Layout

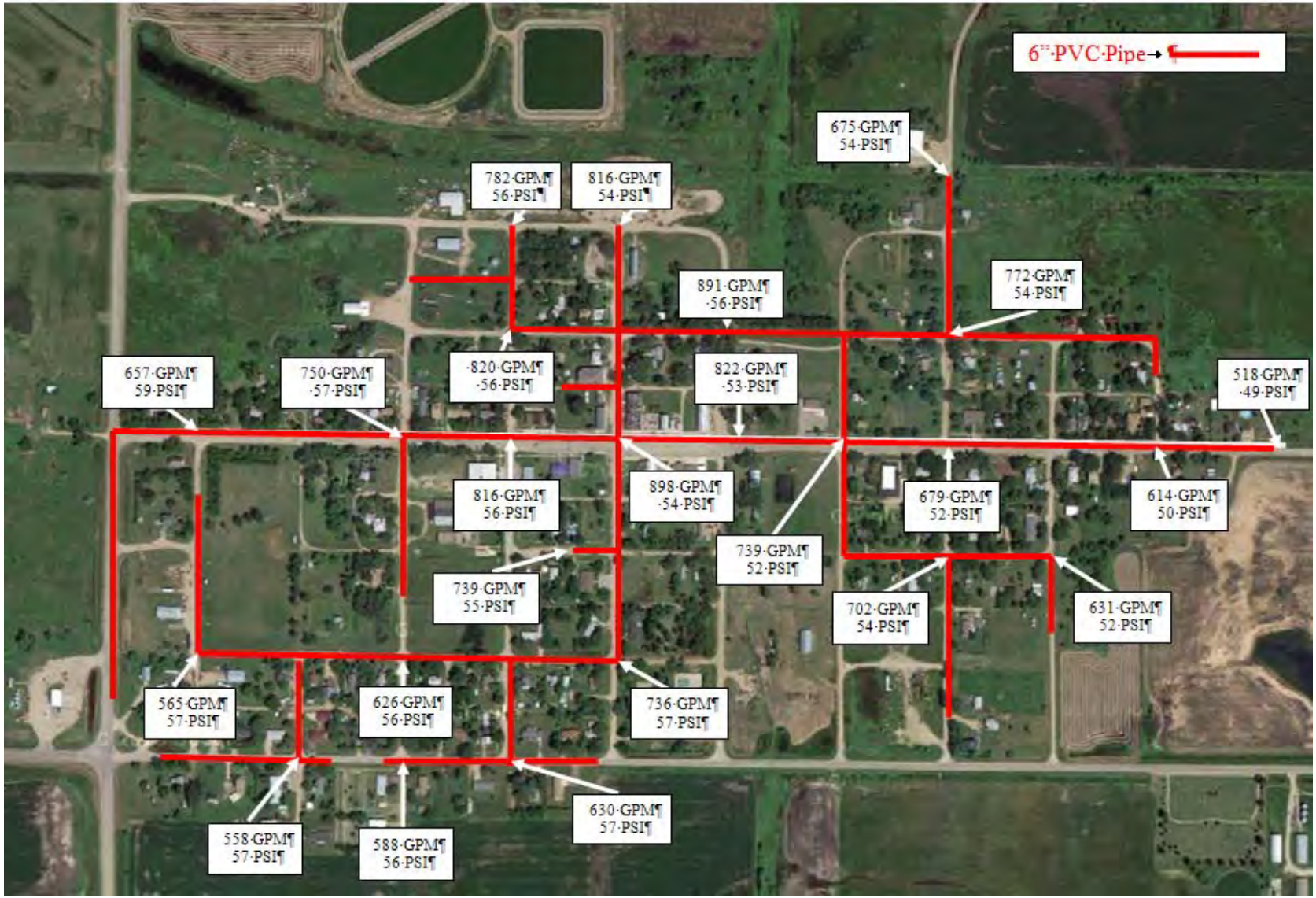

Figure 4.6.2-2 – Proposed Fire Flows and Pressures Alternative 2: 6” Water main Layout

4.6.3 **Water Distribution Alternative 3: Replace all 6” DI & 4” PVC with 6” PVC and Loop the system**

Water Distribution Alternative 3 recommends that all of the 6” DI and 4” PVC be replaced with 6” PVC lines and the placement of water main to reduce the number of dead end lines within the current water system. The Town has been experiencing many breaks over the years with the current DI pipe. The frequency of the breaks is only expected to increase in the future. The proposed looping of PVC pipe will increase the pressures throughout the entire system, and will provide fire flow protection throughout the Town. Looping the system will also increase the water quality due to the reduction of dead ends. In turn residents should see a decrease in their homeowners insurance. It is also assumed that the replacement of the DI will help reduce the amount of water losses in the system. Tables 4.6.3-1 and 4.6.3-2 provide the estimated costs of this alternate and the equivalent uniform annual costs for the alternative. Figure 4.6.3-1 provides a proposed layout of the water system. Figures 4.6.3-2 and 4.6.3-3 provide the modeled results for the system assuming an elevated storage tank.

Table 4.6.5-1 –Cost Estimate for Distribution Alternative 3

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$123,000.00	$123,000.00
2	Remove and Dispose of Existing	7,200	SqYd	$3.25	$23,400.00
3	6" PVC Water Main	18,800	Ft	$22.00	$413,600.00
4	Fire Hydrants	30	Each	$2,650.00	$79,500.00
5	6" PVC Fire Hydrant Lead	990	Ft	$24.00	$23,760.00
6	6" DI Gate Valve w/Box	65	Each	$1,200.00	$78,000.00
7	6" DI Cross	4	Each	$600.00	$2,400.00
8	6" DI Tee	34	Each	$450.00	$15,300.00
9	6" 90 DI Bend	8	Each	$350.00	$2,800.00
10	1" Corp Stop/Service Saddle	127	Each	$250.00	$31,750.00
11	1" Curb Stop w/Box	127	Each	$225.00	$28,575.00
12	1" HDPE Service Line	4,200	Ft	$15.00	$63,000.00
13	Water Meters & Setting	127.0	Each	$250.00	$31,750.00
14	Connect to Existing Service	127.0	Each	$150.00	$19,050.00
15	Asphalt Surfacing (4")	2,500.0	Ton	$150.00	$375,000.00
16	Gravel Base Course (10")	6,100.0	Ton	$21.00	$128,100.00
17	Gravel Surfacing	11,000.0	Ton	$19.00	$209,000.00
18	Topsoil, Seed, Fertilize & Mulch	6.8	Acres	$1,000.00	$6,800.00
	Construction Subtotal				$1,654,785.00
	Contingencies (15%)				$249,000.00
	Construction Total				**$1,903,785.00**
	Design Engineering				$171,300.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$188,400.00
	Administration & Legal				$39,000.00
	Total Project Cost				**$2,307,985.00**

Table 4.6.5-2 - EUAC for Distribution Alternative 3

Item Description	Cost	SV	PW SV	NPW
Mobilization	$123,000.00	$0.00	$0.00	$123,000.00
Remove and Dispose of Existing As	$23,400.00	$11,700.00	$9,976.43	$13,423.57
6" PVC Water Main	$413,600.00	$206,800.00	$176,335.56	$237,264.44
Fire Hydrants	$79,500.00	$39,750.00	$33,894.29	$45,605.71
6" PVC Fire Hydrant Lead	$23,760.00	$11,880.00	$10,129.91	$13,630.09
6" DI Gate Valve w/Box	$78,000.00	$39,000.00	$33,254.77	$44,745.23
6" DI Cross	$2,400.00	$1,200.00	$1,023.22	$1,376.78
6" DI Tee	$15,300.00	$7,650.00	$6,523.05	$8,776.95
6" 90 DI Bend	$2,800.00	$1,400.00	$1,193.76	$1,606.24
1" Corp Stop/Service Saddle	$31,750.00	$15,875.00	$13,536.40	$18,213.60
1" HDPE Service Line	$28,575.00	$0.00	$0.00	$28,575.00
Water Meters & Setting	$63,000.00	$0.00	$0.00	$63,000.00
Connect to Existing Service	$31,750.00	$0.00	$0.00	$31,750.00
Asphalt Surfacing (4")	$19,050.00	$0.00	$0.00	$19,050.00
Asphalt Surfacing (4")	$375,000.00	$0.00	$0.00	$375,000.00
Gravel Base Course (10")	$128,100.00	$0.00	$0.00	$128,100.00
Gravel Surfacing	$209,000.00	$0.00	$0.00	$209,000.00
Topsoil, Seed, Fertilize & Mulch	$6,800.00	$0.00	$0.00	$6,800.00
Capital Costs	$653,200.00	$0.00	$0.00	$653,200.00
Total Construction Cost	$2,307,985.00	$335,255.00	$285,867.39	$2,022,117.61
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$1,500.00			$27,621.29
Materials	$500.00			$9,207.10
Miscellaneous	$1,000.00			$18,414.19
Subtotal	$3,000.00			$55,242.58
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$2,022,117.61
NPW of O & M Costs				$55,242.58
Total Net Present Worth				**$2,077,360.19**
Equivalent Uniform Annual Cost				**$112,812.98**

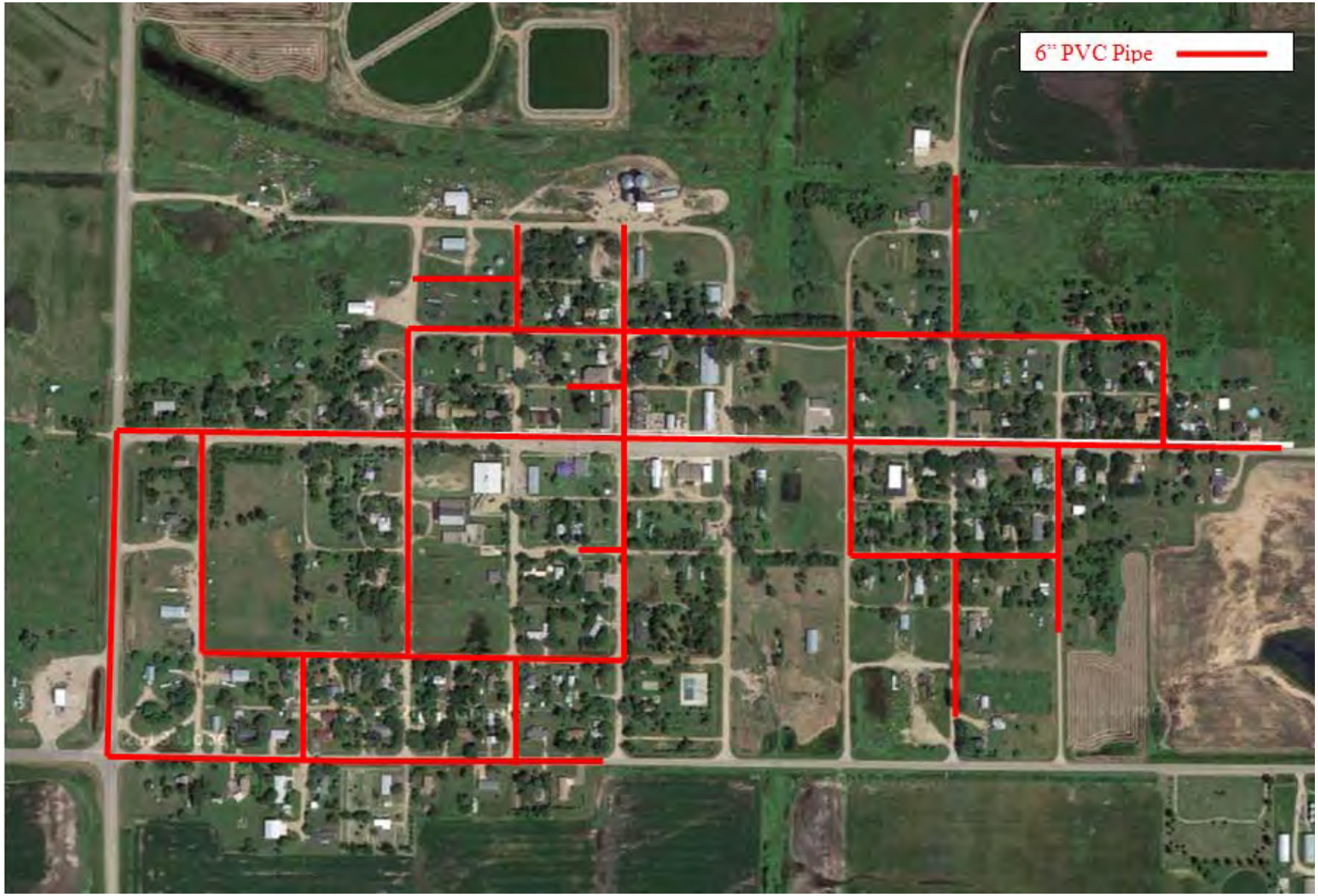

Figure 4.6.3-1 – Proposed Layout Alternative 3, 6" PVC Looped System

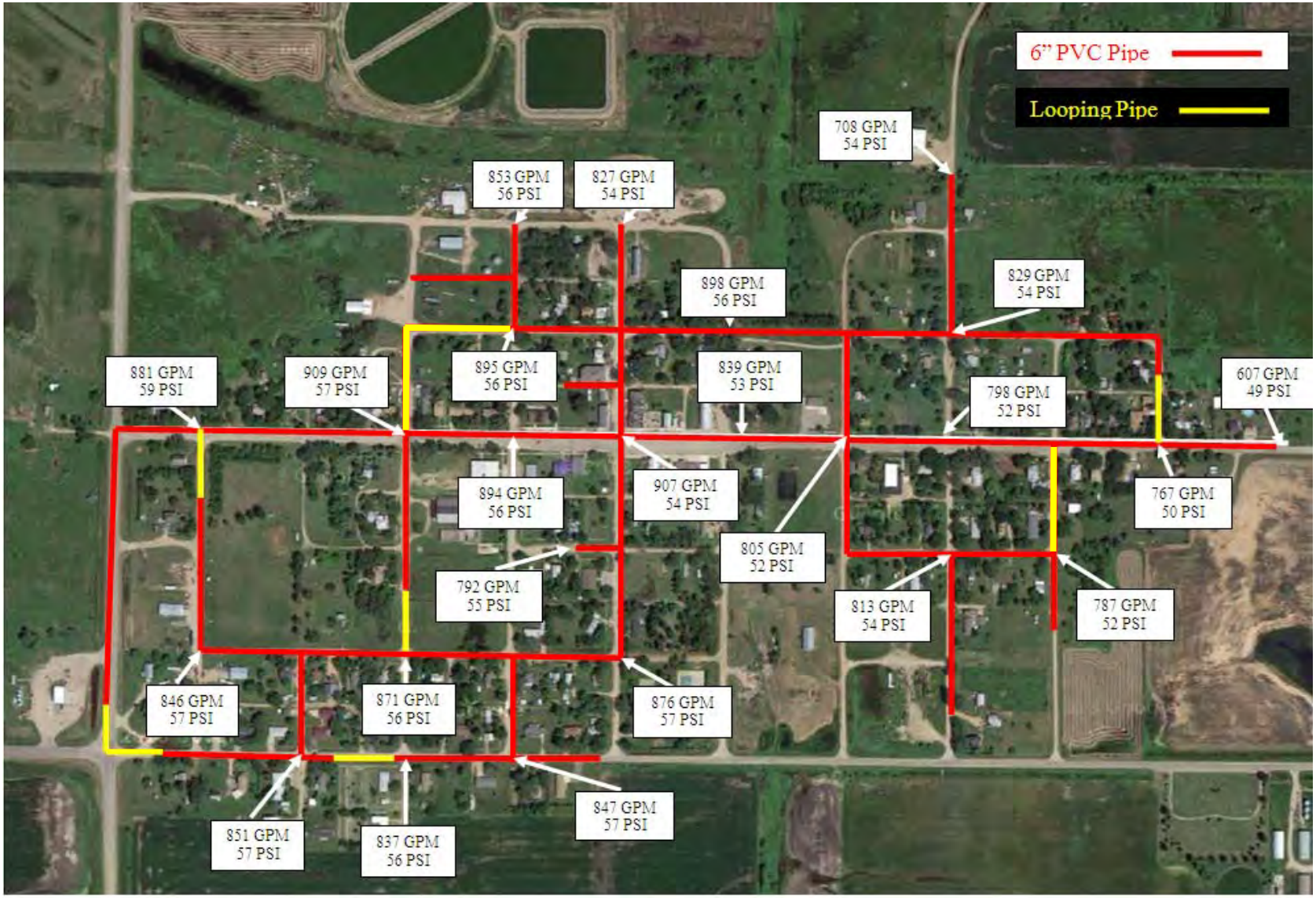

Figure 4.6.3-2 – Proposed Fire Flows and Pressures Alternative 3, 6" PVC Looped System

5 SELECTION OF WATER ALTERNATIVES

5.1 WATER SOURCE

Water Source Alternative 1 (Do Nothing) could be a viable option because the Town currently is supplied by Web Water. Web Water has adequately supplied the Town with quality water at an acceptable rate in years past and can supply the Town of Conde in the future.

Water Source Alternative 2 (Install Additional Well) with a total cost of $171,750 is also a viable option if included with distribution line updates. The Town currently has a well that can be used to fill fire trucks, but does not currently meet the water quality standards for drinking and would turn laundry a rust color. Based on the difficulties locating a well, maintenance, and treatment the option of continuing to use Web Water, or the "Do Nothing" should be the preferred choice.

Table 5.1-1 – Summary of Water Source Alternatives

Water Source Alternatives	Total Costs	EUAC
Alternative 1: Do Nothing	$0.00	$0.00
Alternative 2: Install Additional Well	$171,750.00	$11,229.49

5.2 WATER STORAGE

Water Storage Alternative 1 (Do Nothing) is not recommended because it will not provide adequate storage or pressure for the Town of Conde.

Water Storage Alternative 2 (New 50,000 Gallon Water Tower & Booster Pumps) is a viable option. The initial costs for the elevated tank with booster pumps are higher; the EUAC is also higher due to the additional costs for operation and maintenance of the pumping facility.

Water Storage Alternative 3 (New 50,000 Gallon Ground Storage Tank & Booster Pumps) is recommended. The initial cost for the ground storage tank is lower and the EUAC is less due to the additional costs for operation and maintenance of the pumping facility.

Table 5.2-1 – Summary of Water Storage Alternatives

Water Storage	Total Costs	EUAC
Alternative 1: Do Nothing	$0.00	$0.00
Alternative 2: New 50,000 Gallon Water Tower w/ Booster Pumps	$802,900.00	$38,836.10
Alternative 3: New 50,000 Gallon Ground Storage Tank & Booster Pumps	$486,700.00	$25,954.81

5.3 WATER DISTRIBUTION

Water Distribution Alternative 1 (Do Nothing) is not recommended because it will not address any of the negative characteristics of the system.

Water Distribution Alternative 2 (Replace all 4" PVC and 6" DI with 6" PVC) with a total project cost of $1,845,555.00 is a viable option. This alternative will replace the entire current system. This alternative will increase the pressure and provide fire flow throughout the system, especially in the areas that are experiencing problems. These improvements will correct the current issues with the water distribution system. The pressures and water quality would be improved for the Town.

Water Distribution Alternative 3 (Replace all 6" DI and 4" PVC with 6" PVC and Loop the system) with a total project cost of $2,307,985.00 is recommended. This alternative will replace the current system and remove some of the dead ends within the current system. This alternative will increase the pressure, especially in the areas that are experiencing problems. These improvements will correct the current issues with the water distribution system and will be capable for future expansion.

Table 5.3-1 – Summary of Water Distribution Alternatives

Water Distribution	Total Costs	EUAC
Alternative 1: Do Nothing	$0.00	$0.00
Alternative 2: Replace all 4" PVC & 6" DI with 6" PVC	$1,845,555.00	$89,537.82
Alternative 3: Replace all 4" PVC & 6" DI with 6" PVC and Loop	$2,307,985.00	$112,812.98

5.4 EVALUATION OF ALTERNATIVES

Based on the Town's desire for their water system, the following alternatives are evaluated for the Town of Conde. The first table will be the alternatives analyzed and the second table will be the impact on user rates based on 100% loan and 50% loan/grant.

Financial data supplied by the Town of Conde was used to determine the current operational status of the funds. The current water rate is $18.00 flat rate per month plus $2.50 per 1,000 gallons used. So for example, if a household uses 5,000 gallons for a month their monthly charge would be $30.50 ($18.00 + 5,000/1,000 * $2.50).

The impact on user fees utilizes an interest rate of 2.75% for a 40 year period. This is assuming Rural Development (RD) financing for the project. If other funding is secured, these costs will change depending on interest rate and term.

The operation and maintenance cost is expected to decrease with the proposed improvements. Tables 5.4-3 and 5.4-5 provide the O&M costs associated with each alternative.

The short lived asset replacement value was obtained from Table 5.4-1. This table indicates how much the Town needs to budget annually in order to replace the needed items. The short lived assets will include the booster pumps and maintenance on the ground storage tank.

Table 5.4-1 – Short Lived Assets

Expenses	Year							
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Booster Pumps	$600	$600	$600	$600	$600	$600	$600	$600
Ground Storage Tank Painting	$2,300	$2,300	$2,300	$2,300	$2,300	$2,300	$2,300	$2,300
Annual Total to Be Budgeted	**$2,900**	**$2,900**	**$2,900**	**$2,900**	**$2,900**	**$2,900**	**$2,900**	**$2,900**
Expenses	**Year**							
	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Booster Pumps	$600	$600	$600	$600	$600	$600	$600	$600
Ground Storage Tank Painting	$2,300	$2,300	$2,300	$2,300	$2,300	$2,300	$2,300	$2,300
Annual Total to Be Budgeted	**$2,900**	**$2,900**	**$2,900**	**$2,900**	**$2,900**	**$2,900**	**$2,900**	**$2,900**

The evaluation provided in Tables 5.4-2 & 5.4-3 is for the Town to install a new ground storage tank with booster pumps and replace the existing water system with new 6” PVC pipe and looping the system.

Table 5.4-2 - Option 1: Recommendation for Water System Upgrades (New Ground Storage Tank with Booster Pumps, 6” Mains Looped)

Selection of Improvements	Total Costs	EUAC
Water Source Alternative 1: Do Nothing	$0.00	$0.00
Water Storage Alternative 3: New 50,000 Gallon Ground Storage Tank w/ Booster Pumps	$486,700.00	$25,954.81
Water Distribution Alternative 3: Replace all 4" PVC & 6" DI with 6" PVC and Loop Lines	$2,307,985.00	$112,812.98
Total Costs of Alternatives	**$2,794,685.00**	**$138,767.79**

Table 5.4-3 – Option 1: Impact on User Fees (New Ground Storage Tank with Booster Pumps, 6" Mains Looped)

	No Grant	50% Grant
Gross Revenue from Water Fees	$38,064.00	$38,064.00
Water Purchase	$0.00	$0.00
Proposed O & M Cost	$9,000.00	$9,000.00
Retirement of Current Debt	$0.00	$0.00
Short Lived Asset Replacement	$2,900.00	$2,900.00
Net Income	**$26,164.00**	**$26,164.00**
Retirement of Debt Incurred with This Project	$116,067.50	$58,033.75
Amount to Be Set Aside for Debt Reserves	$11,606.75	$5,803.38
Remaining Surplus/Deficit After Project	**-$101,510.25**	**-$37,673.13**
Increase of Water Charge	$81.34	$30.19
Number of Accounts	104	104
Added Revenue	$101,510.25	$37,673.13
Surplus After Increase in Water Charge	**$0.00**	**$0.00**

The evaluation provided in Tables 5.4-4 & 5.4-5 is for the Town to install a ground storage tank with booster pumps, and replace the existing water system with new 6” PVC pipe.

Table 5.4-4 – Option 2: Recommendation for Water System Upgrades (New Ground Storage Tank with Booster Pumps, 6” Mains)

Selection of Improvements	Total Costs	EUAC
Water Source Alternative 1: Do Nothing	$0.00	$0.00
Water Storage Alternative 3: New 50,000 Gallon Ground Storage Tank & Booster Pumps	$486,700.00	$25,954.81
Water Distribution Alternative 2: Replace all 4" PVC & 6" DI with 6" PVC	$1,845,555.00	$89,537.82
Total Costs of Alternatives	**$2,332,255.00**	**$115,492.64**

Table 5.4-5 – Option 2: Impact on User Fees Water System Upgrades (New Ground Storage Tank with Booster Pumps, 6" Mains)

	No Grant	50% Grant
Gross Revenue from Water Fees	$38,064.00	$38,064.00
Water Purchase	$0.00	$0.00
Proposed O & M Cost	$9,000.00	$9,000.00
Retirement of Current Debt	$0.00	$0.00
Short Lived Asset Replacement	$2,900.00	$2,900.00
Net Income	**$26,164.00**	**$26,164.00**
Retirement of Debt Incurred with This Project	$96,862.08	$48,431.04
Amount to Be Set Aside for Debt Reserves	$9,686.21	$4,843.10
Remaining Surplus/Deficit After Project	**-$80,384.29**	**-$27,110.15**
Increase of Water Charge	$64.41	$21.72
Number of Accounts	104	104
Added Revenue	$80,384.29	$27,110.15
Surplus After Increase in Water Charge	**$0.00**	**$0.00**

5.5 IMPACT ON USER FEES

A summary of the alternatives, project costs, and potential user fees is given in Table 5.5-1, based on the needs of the community.

Table 5.5-1 - Summary Alternative Costs and Associated User Fees

Alternatives	Project Cost	Monthly Rate (No Grant)	Monthly Rate (50% Grant)
Option 1: Impact on User Fees (New Ground Storage Tank with Booster Pumps, 6" Mains Looped)	$2,794,685.00	$81.34	$30.19
Option 2: Impact on User Fees (New Ground Storage Tank with Booster Pumps, 6" PVC Mains)	$2,332,255.00	$64.41	$21.72

As the summary shows, the water rates would be required to increase dramatically. The preferred project for the Town would be Option 1. This would result in an increase of $30.19 per month if 50% grant funding was obtained. Table 5.5-2 breaks down different grant/loan combinations and show how the water rates will be affected for Option 1.

Option 2 is also a viable option and would also increase the monthly rate by $21.72 if 50% grant funding was obtained. Table 5.5-3 breaks down different grant/loan combinations and show how the water rates will be affected for Option 2.

Table 5.5-2 - Water Rate Analysis Option 1

Funding Percentages	10/90	20/80	30/70	40/60	50/50	60/40	70/30	80/20
grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan
Annual O & M	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000
Grant Amount	$279,469	$558,937	$838,406	$1,117,874	$1,397,343	$1,676,811	$1,956,280	$2,235,748
Loan Amount	$2,515,217	$2,235,748	$1,956,280	$1,676,811	$1,397,343	$1,117,874	$838,406	$558,937
Annual Loan Payment	$104,461	$92,854	$81,247	$69,641	$58,034	$46,427	$34,820	$23,214
Debt Reserves	$10,446	$9,285	$8,125	$6,964	$5,803	$4,643	$3,482	$2,321
Short Lived Asset Replacement	$2,900	$2,900	$2,900	$2,900	$2,900	$2,900	$2,900	$2,900
Total Annual Costs	$126,807	$114,039	$101,272	$88,505	$75,737	$62,970	$50,202	$37,435
Annual Revenue	$38,064	$38,064	$38,064	$38,064	$38,064	$38,064	$38,064	$38,064
Surplus/Deficit After Project	-$88,743	-$75,975	-$63,208	-$50,441	-$37,673	-$24,906	-$12,138	$629
Minimum Water Rate Increase	$71.11	$60.88	$50.65	$40.42	$30.19	$19.96	$9.73	$0.00
Current Water Rate	$30.50	$30.50	$30.50	$30.50	$30.50	$30.50	$30.50	$30.50
New Water Rate	$101.61	$91.38	$81.15	$70.92	$60.69	$50.46	$40.23	$30.50

The actual rates will be dependent upon the actual grant and loan funding that would be obtained.

Table 5.5-3 - Water Rate Analysis Option 2

Funding Percentages	10/90	20/80	30/70	40/60	50/50	60/40	70/30	80/20
grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan
Annual O & M	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000
Grant Amount	$233,226	$466,451	$699,677	$932,902	$1,166,128	$1,399,353	$1,632,579	$1,865,804
Loan Amount	$2,099,030	$1,865,804	$1,632,579	$1,399,353	$1,166,128	$932,902	$699,677	$466,451
Annual Loan Payment	$87,176	$77,490	$67,803	$58,117	$48,431	$38,745	$29,059	$19,372
Debt Reserves	$8,718	$7,749	$6,780	$5,812	$4,843	$3,874	$2,906	$1,937
Short Lived Asset Replacement	$2,900	$2,900	$2,900	$2,900	$2,900	$2,900	$2,900	$2,900
Total Annual Costs	$107,793	$97,139	$86,484	$75,829	$65,174	$54,519	$43,864	$33,210
Annual Revenue	$38,064	$38,064	$38,064	$38,064	$38,064	$38,064	$38,064	$38,064
Surplus/Deficit After Project	-$69,729	-$59,075	-$48,420	-$37,765	-$27,110	-$16,455	-$5,800	$4,854
Minimum Water Rate Increase	$55.87	$47.34	$38.80	$30.26	$21.72	$13.19	$4.65	$0.00
Current Water Rate	$30.50	$30.50	$30.50	$30.50	$30.50	$30.50	$30.50	$30.50
New Water Rate	$86.37	$77.84	$69.30	$60.76	$52.22	$43.69	$35.15	$30.50

The actual rates will be dependent upon the actual grant and loan funding that would be obtained.

5.6 CAPITAL FINANCING PLAN

The Town of Conde will make applications to state and federal resources for loan and grant assistance to begin the project during the 2016 construction season.

5.7 ENVIRONMENTAL EVALUATION

The Town of Conde has requested comments from concerned federal agencies. The correspondence related to these inquiries is included in Appendix A.

5.8 VIEWS OF THE PUBLIC AND CONCERNED INTEREST GROUPS

The Town of Conde is planning to conduct a public hearing on the proposed project. Information related to the hearing will be submitted after it is conducted.

6 SELECTED PLAN, DESCRIPTION AND IMPLEMENTATION ARRANGEMENTS FOR WATER IMPROVEMENTS

6.1 JUSTIFICATION AND DESCRIPTION OF SELECTED PLAN

Option 1 to include a new Ground Storage Tank with booster pumps and 6" Looped Watermains is the preferred option for the Town. The Conde Board of Trustees, prefer Option 1 as they feel that this is the best Option for their Town.

6.2 DESIGN OF SELECTED PLAN

The design of the improvements to the water system will provide enhanced flexibility in operation and will be designed in accordance with the SD DENR design criteria and the accepted principles and standards for the design of the water distribution system.

6.3 ARRANGEMENT FOR IMPLEMENTATION

This report provides information to describe the proposed project and to support the Board's decision to proceed with the selected options as quickly as possible. Final design will be completed by the Town of Conde's consultant and approved by the Department of Environment and Natural Resources, as it is definitely a "work of significance". Cost estimates have been prepared and are referenced elsewhere in this document.

The project will be bid in accordance with state statutes that govern municipal corporations and will be constructed by the lowest responsible bidder.

Table 6.3-1 - Proposed Schedule

Facility Plan Submitted to Funding Agencies	August 11, 2014
Environmental Review Completed	March 1, 2015
Funding Agency Approval of Facility Plan	September 29, 2014
Final Funding Package Complete	April 15, 2016
Begin Design	May 15, 2016
Plans & Specifications Submitted to DENR	August 15, 2016
Plans & Specifications Approved by DENR	September 15, 2016
Advertisement for Bids	September 29, 2016
Open Bids	October 14, 2016
Award Bids	October 31, 2016
Begin Construction	March 15, 2017
Construction Complete	September 11, 2017
Project Close-out	October 11, 2017

6.4 LAND ACQUISITION

If the Town would decide to pursue the installation of a new ground storage tank, it is likely that a new ground storage tank could be located in existing Town property that has been previously disturbed. No land acquisition would be required for the water system improvements as all work will be completed in existing street rights-of-way or in easements that have already been or will be obtained. The land will be found within the areas already submitted in with the environmental letters. It is assumed that an Archeological Survey would be required on any potential new sites.

6.5 INTERAGENCY AGREEMENTS

No operating agreements with other agencies are needed as the Town of Conde owns, operates and maintains its municipal water system. Loan documents will have to be executed with the appropriate lender but as Conde is a municipal corporation, it has the legal authority to enter into such agreements. Conde's attorney will advise the Board on any legal matters related to this issue.

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7 FINANCING OPTIONS

7.1 GENERAL

Financing any major construction project is difficult for a community that has limited resources. "Routine" community needs such as the improvements to streets, equipment replacement, correction of drainage problems, and solid waste issues cannot be neglected. These needs must be met and projects relating to addressing them must continue to be financed.

These "routine" types of projects frequently consume all or nearly all available community financial resources just to maintain an acceptable level of service. Consequently, to finance major capital improvement projects, other methods of obtaining capital must be investigated.

7.2 PAY-AS-YOU-GO

For small communities, the most common method of financing needed improvements is the "pay-as-you-go" method. This method obtains revenue from general taxation, fees, service charges, special funds and/or special assessments. The advantages of this method are:

1) No interest payments; and
2) Greater budget flexibility.

Disadvantages of this method are:

1) Inequities between age groups (older citizens pay for a share of the project and younger citizens who may not have paid any of the costs realize greater benefits simply because of greater life spans);
2) Difficulty in generating large amounts of capital that is often required for large scale capital improvements; and
3) Large scale capital improvements often cannot be constructed efficiently by phased construction.

7.3 RESERVE FUNDS

A variation of the "pay-as-you-go" method is using reserve fund financing. Communities using this method accumulate funds in advance for construction of needed capital improvements. This accumulation may be the result of surplus operating funds that are allowed to remain in the operating budget from year to year. These funds are often "earmarked" for a specific purpose. It may also be revenues from a certain percentage of the water or sewer rate that are specifically placed in a depreciation account. Financing projects in this manner is often attractive to communities.

This method can have its drawbacks. The most obvious drawback is that the fund has to have been established for some time to allow it to generate sufficient capital for a project that is needed today. Also, good management is required to ensure that the investment pays an adequate return. If the interest generated on the investment is not greater than the inflation rate, then gains in the accumulation of the fund may be lost to inflation.

7.4 SALES TAXES

Sales taxes can also be used to finance capital improvements. State statutes allow a Town to dedicate sales tax revenues to capital improvement construction. A long-range plan can be developed to allow capital improvements to be constructed in phases. As revenue is generated each year, a segment of the overall plan is constructed. This method of constructing capital improvement projects is being used successfully by many communities.

7.5 BONDS

Another method of generating revenue for capital improvements is through the sale of bonds on the private bond market. Three different types of bonds are frequently used to finance capital improvement projects. Each has different requirements and will need the involvement of the Town's Attorney. The three types are General Obligation (GO), revenue and special assessment.

7.6 GENERAL OBLIGATION BONDS

General Obligation bonds always require a bond election with a 60% majority because General Obligation bonds pledge the taxing authority of the Town to repay the bond. As they are backed

by the taxing authority of the Town, General Obligation bonds frequently offer a lower interest rate than revenue bonds.

7.7 REVENUE BONDS

Revenue bonds, which pledge revenues (that is, user fees) generated from the project, are often sold to finance capital improvement projects. They, like special assessment bonds, do not require a bond election but with any action of a governmental body, the enabling ordinance that must be approved by the board can be referred. Sales tax revenues can be and are frequently used to repay both revenue and general obligation bonds.

7.8 SPECIAL ASSESSMENT BONDS

Special assessment bonds have a limited payback period. Assessment for principal and interest repayment are levied against and collected from adjacent property owners over a given period of years. The special assessments are collected with property tax payments. Street improvements are frequently financed through the use of special assessment bonds.

7.9 LEASE-PURCHASE

Local financial institutions are becoming interested in financing community improvements through lease-purchase programs. This interest appears to be the result of recently passed federal legislation that provides tax advantages to financial institutions that participate in community improvement efforts. Lease-purchase plans can also use sales tax revenues to provide the vehicle for repayment.

7.10 OTHER SOURCES OF FINANCING

All of the previously discussed methods of financing rely on 100% local funding. Often it is difficult, if not impossible, for a community to finance projects with 100% local funding. Fortunately, there are other resources and programs available that can be used in conjunction with local funding to assist communities in financing projects such as the one being considered by the Town.

7.11 FEDERALLY FUNDED LOANS / GRANTS

Federal agencies such as the US Department of Agriculture's Rural Development / Rural Utility Service (RD / RUS) has both grant and loan funds available for financing community improvements. RD / RUS requires a preliminary engineering report and pre-application, along with certain other information, before it can invite a community to submit a full application for project funding.

While the RD / RUS is the primary federal agency that funds local projects, there are other federal agencies that do assist local communities under "special" circumstances. These agencies include, but are not limited to, the Federal Emergency Management Agency (FEMA), the Economic Development Administration (EDA) and the US Department of Housing and Urban Development (HUD). However, these federal agencies normally do not become involved in funding local projects unless there has been a declared disaster or a major economic development activity is imminent.

7.12 STATE FINANCED LOANS / GRANTS

The State of South Dakota has several programs that can provide financial assistance for community facility improvements. The programs are operated through various departments of state government. Some are financed with 100% state resources, some use a combination of state and federal funds and some are federal "pass-through" funds.

7.13 DENR PROGRAMS

The Department of Environment and Natural Resources (DENR) has a low interest loan and grant program known as the Consolidated Water Facilities Construction Program (CWFCP). This program was established in 1986 by combining several existing grant and loan programs. It is funded entirely with state financing and is designed to provide financial assistance through grants and loans for water and wastewater projects throughout the state.

DENR also operates the State Revolving Fund (SRF) loan program. It began in 1987 as a result of amendments to the Federal Clean Water Act. This program was designed to replace the EPA, the federal construction grants program. EPA had, for a number of years, provided grants

directly to communities to construct and/or rehabilitate wastewater treatment and collection systems. The funding from the construction grants program has been made available to the state. The federal funds are to be used in combination with state funds to create a revolving loan program that will be self-perpetuating. SRF funds are targeted specifically to wastewater treatment and collection systems, storm drain systems and other construction activities that will improve surface and groundwater quality.

7.14 GOED PROGRAM

The Governor's Office of Economic Development (GOED) administers the Community Development Block Grant (CDBG) program. This program utilizes the US Department of Housing and Urban Development (HUD) small cities program funding. CDBG funds may be used for a variety of community development activities, including water and sewer system renovations and rehabilitation. The emphasis of this program is to provide benefits for low and moderate income people. Information supplied by GOED indicates that most communities can probably qualify for funds from this program; however, an income survey may be necessary.

7.15 SUMMARY OF FUNDING OPTIONS

No existing program will provide a 100% grant to finance a project. Most of the programs (both state and federal) require or strongly recommend that the applicant provide some local funding. Low interest loans and grant offers are frequently "packaged" with available local funds to completely finance capital improvement project activities. DENR also has minimum rate requirements that must be met by a community for it to be eligible for grant funding under the CWFCP. The department is recommending that the minimum rate for municipal water be $25.00 per month for 5,000 gallons of water used. If a community does not have its rates at or above this level, it will not be eligible for grant assistance from the consolidated program. Currently, Conde's water rate for 5,000 gallons is $27.50 per month. This level makes them eligible for grant assistance.

7.16 FUNDING RECOMMENDATIONS

Given the cost of construction of a project of this scope and the limited amount of local finances available, it is recommended that the community should:

1. Make application to place this project on the State Water Facilities Plan.
2. Evaluate its own financial resources, rate structure and various funding sources available to construct capital improvement projects to see if rate increases or other funding options may be used to finance all or part of the proposed project.
3. Complete applications for financial assistance to programs such as the CWFCP, CDBG Program, and/or USDA's Rural Development / Rural Utility Service Water and Sewer Program when the project is approved for the State Water Facilities Plan.

The process of completing applications for financial assistance could begin when an application to the State Water Facilities Plan is submitted. Early application for financial assistance could speed the process of obtaining financing for project construction as obtaining financing can be a lengthy process.

References

Committee of Great Lakes – Upper Missouri River Council of State Public Health and Environmental Managers, (1997). Recommended Standards for Water Works (Albany, NY: Health Education Services), pp.

Mays, Larry W., (2000). Water Distribution Systems Handbook, (New York, NY: McGraw Hill), pp.

Soil Conservation Service, South Dakota Agricultural Experiment Station. Soil Survey of Codington County, South Dakota. South Dakota: National Cooperative Soil Survey, 1966.

South Dakota Department of Environment and Natural Resources, (May 1990). *Recommended Design Criteria Manual for Water Works,* Pierre, SD: Division of Environmental Regulation.

Appendix A Environmental Comment Letters

Appendix B Correspondence from Web Water

Appendix C Drinking Water Project Eligibility and Priority Point Self-Assessment

Appendix D SD-DENR 2012 Drinking Water Report

WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: City of Colman

Project Title:	Phase 3 – Highway 34 Water Main Replacement
Funding Requested:	$1,200,000
Total Project Cost:	$1,200,000
Project Description:	The City of Colman is proposing to replace approximately 4,430 linear feet of water main along Highway 34. This phase of construction is a proposed continuation of line replacement work that has already been completed in the community and funded by the Board of Water and Natural Resources. The cost of this work is estimated at $730,000. The requested funding includes an additional $400,000 to address a funding shortfall in the current water project and another $70,000 to recoup expenses from an emergency repair on the Highway 34 water main.
Alternatives Evaluated:	"No Action Alternative" is not recommended as it does not correct the deteriorating conditions of the Highway 34 water main or address other funding shortfalls. "Entire Distribution System Replacement" alternative would replace the full 43,000 feet of watermain distribution lines within the city. This is not necessary as many of the lines do not need to be replaced at this time. This alternative is not recommended.
Implementation Schedule:	The City of Colman would utilize some funding almost immediately after award to address the funding shortfall on Phase 2. The Highway 34 water main work is anticipated to be bid in the spring of 2016 with completion in the fall of 2016.
Service Population:	594
Current Domestic Rate:	$42.00 per 5,000 gallons usage

Interest Rate: 3.0% Term: 30 years Security: Project Surcharge

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan Colman would have to establish a surcharge of approximately $18.58. When added to current rate of $42.00/5,000 gallons residents would be paying $60.58/5,000 gallons.

25% Funding Subsidy:	$300,000 subsidy with a loan of $900,000.
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $900,000 Colman would have to establish a surcharge of approximately $13.93 thereby paying a rate of $55.93/5,000 gallons.

50% Funding Subsidy:	$600,000 subsidy with a loan of $600,000.
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $600,000 Colman would have to establish a surcharge of approximately $9.29 thereby paying a rate of $51.29/5,000 gallons.

75% Funding Subsidy:	$900,000 subsidy with a loan of $300,000.
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $300,000 Colman would have to establish a surcharge of approximately $4.64 thereby paying a rate of $46.64/5,000 gallons.

ENGINEERING REVIEW COMPLETED BY: DREW HUISKEN

FINANCIAL REVIEW COMPLETED BY: DEREK LANKFORD

Drinking Water Facilities Funding Application

Consolidated Water Facilities Construction Program (CWFCP)
Drinking Water State Revolving Fund Program (DWSRF)

Applicant

City of Colman

Address

PO Box 54
Colman, SD 57017

Subapplicant

None

DUNS Number

832619675

Proposed Funding Package

CWFCP / DWSRF	$1,200,000
Local Cash	
Other	
Other	
Other	
TOTAL	$1,200,000

Project Title: Phase 3 - Highway 34 Watermain Replacement

Description:

The City of Colman proposed to replace approximately 4,430 linear feet of watermain along Highway 34 inside of the corporate boundaries of the City. Estimated cost for this project is $730,000 and the City is seeking to fund the project with funding from SD DENR. This phase of construction is a proposed continuation of the work already completed throughout the community that was recently funded by SD DENR. Increases in construction costs experienced during the previous phases have resulted in a funding shortfall of that funding package and the City of Colman is requesting to complete the final phase of the proposed projects.

The City of Colman is also seeking additional funding to address a funding shortfall in the current water tower project in the amount of $400,000.

The City of Colman is also seeking $70,000 in expenses previously incurred for an emergency repair that was associated with the above mentioned Highway 34 watermain replacement.

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DEC 31 2015
Division of Financial
& Technical Assistance

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Gloria Van Duyn, Mayor — Gloria Van Duyn — 12/14/15

Name & Title of Authorized Signatory (Typed) — Signature — Date

Professional Consultants

Application Prepared By: First District

Contact Person: Ted Haeder

Mailing Address: PO Box 1207

City, State, and Zip: Watertown, SD 57201

Telephone Number: (605) 882-5115 Fax: (605) 882-5049

Email address: ted@1stdistrict.org

Consulting Engineering Firm: Clark Engineering

Contact Person: Dave Burwitz, P.E.

Mailing Address: Convention Center Plaza - 1410 West Russell Street

City, State, and Zip: Sioux Falls, SD 57104

Telephone Number: (605) 331-2505 Fax:

Email address: dburwitz@clark-eng.com

Legal Counsel's Firm: Issenhuth & Leibel, LLP

Contact Person: Jay Leibel

Mailing Address: PO Box 28

City, State, and Zip: Madison, SD 57042

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Email address: aiplaw@midconetwork.com

Bond Counsel's Firm: Meierhenry Sargent LLP

Contact Person: Todd Meierhenry

Mailing Address: 315 S. Phillips Ave

City, State, and Zip: Sioux Falls, SD 57104

Telephone Number: (605) 336-3075 Fax:

Email address: todd@meierhenrylaw.com

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel	$12,000					$12,000
D. Other						
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$20,000					$20,000
B. Project Inspection Fees	$25,000					$25,000
C. Other						
4. Construction & Improvements	$1,143,000					$1,143,000
5. Equipment						
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$1,200,000					$1,200,000
10. Contingencies						
11. Total (Lines 9 and 10)	$1,200,000					$1,200,000
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)			
Other (Explain) SD DENR		$1,200,000	March 31, 2016
Other (Explain)			
Other (Explain)			
Total		$1,200,000	$1,200,000

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: January 1

Population Served Current: 594 2010 572 2000 482

Top three employers within 30 miles	Number of Employees	Type of Business
SDSU	2121	Education
Daktronics	2000	Manufacturing
3M	880	Manufacturing

Repayment Information

Interest rate you are applying for: 3.25% Term: 30

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☒ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan.
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year	2013	2014				
Purpose	Phase 1	Phase 2/3				
Security Pledged	User fees	User fees				
Amount	$439,000	$632,000				
Maturity Date (mmm/yyyy)	Feb/2045	Feb/2046				
Debt Holder	DENR	DENR				
Debt Coverage Requirement	110%	110%				
Avg. Annual Required Payment	$22,398	$32,244				
Outstanding Balance	$427,740	$632,000				

Comments:

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$127,500	$57,444	$57,000	$60,000	$63,000	$66,000
Surcharge Fees		$70,056	$76,000	$80,385	$80,385	$132,000
Other (Explain)	$500	$500	$500	$560	$600	$650
Operating Expenses						
Personal Services	($18,278)	($18,843)	($22,730)	($22,700)	($23,000)	($24,000)
Chemical, Material & Supplies	($20,194)	($20,818)	($2,360)	($9,160)	($3,000)	($3,500)
Electric & Other Utilities	($1,063)	($1,095)	($34,500)	($34,500)	($36,000)	($37,500)
Other (Explain)	($2,878)	($2,967)	($50,000)	($50,000)	($50,000)	($50,000)
Operating Net Cash	$85,587	$84,277	$23,910	$24,585	$31,985	$83,650
Nonoperating Cash Flow						
Interest Revenue						
Transfers In (Explain)						
Fixed Asset Purchases						
Transfers Out (Explain)						
Principal Debt Payments	($2,783)	($2,937)	($22,512)	($22,512)	($22,512)	($47,735)
Interest Debt Payments	($9,697)	($9,543)	($32,130)	($32,130)	($32,130)	($68,130)
Other (Explain)	($23,410)	($23,410)	($23,410)			
Nonoperating Net Cash	($35,890)	($35,890)	($78,052)	($54,642)	($54,642)	($115,865)
Increase (Decrease) Cash	$49,697	$48,387	($54,142)	($30,057)	($22,657)	($32,215)
Beginning Cash Balance	$109,375	$159,072	$207,459	$153,317	$123,260	$100,603
Ending Cash Balance	$159,072	$207,459	$153,317	$123,260	$100,603	$68,388
Restricted Balance						
Unrestricted Balance	$159,072	$207,459	$153,317	$123,260	$100,603	$68,388

Explanations

Operating Revenue (other) - hookup fees
Operating Expenses (other) - repair and replace water lines
Nonoperating Cash Flow (other) - Reserve fund - USDA (retired in 2015)

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber
$63,698	Debt Repayment	Surcharge

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: [x] Incorporated Municipality or Sanitary District

or

[ ] Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic	$42.00	$42.42	259	3,883
Business	$42.00	$42.42	29	4,170
Other: School	$90.00	$90.20	2	18,167
Other: City of Colman	$42.00	$42.42	10	1,325

Are fees based on usage or flat rate? Usage

When is proposed fee scheduled to take effect? January 2016

When did the current fee take effect? September 2014

What was the fee prior to the current rate? $38.75

Four Largest Customers	Type of Business	% of System Revenue
T&R Electric	Manufacturer	
Colman-Egan School	Education	
Diversified Property Mgmt.	Property Management	
City Pool	Municipal	

7.3.8 Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$1,200,000.00
Treatment	
Storage	
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
TOTAL	$1,200,000.00

Gloria Van Duyn, Mayor - City of Colman

Name of Applicant

Gloria Van Duyn

Signature of Authorized Representative

12/14/15

Date

7.3.10 Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. §1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Gloria Van Duyn, Mayor - City of Colman

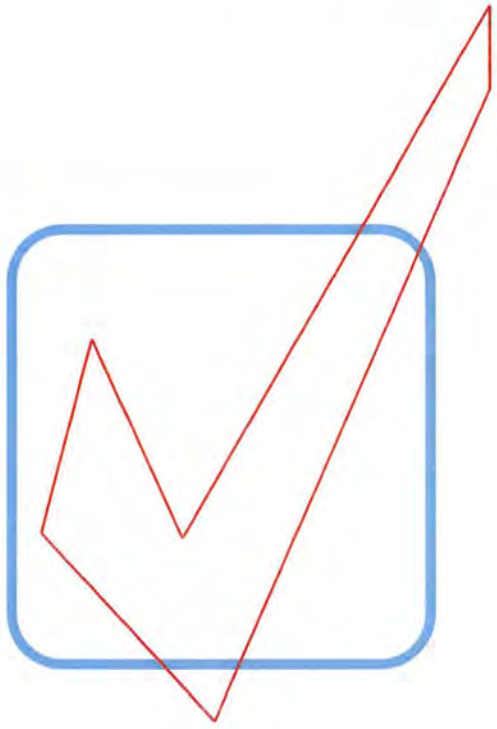
Name & Title of Authorized Representative

Gloria Van Duyn 12/14/15

Signature of Authorized Representative Date

___ I am unable to certify to the above statements. Attached is my explanation

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: City of Colman

Prepared by: Grant Groos, Public Works Director

Phone #: (605) 534-3611

Date: December 14, 2015

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µg/L: micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: Yes, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** 60,000 gallons per day	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 100,000 gallons per day	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 300 gallons per minute - Big Sioux CWS	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 432% higher	☐	☑	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** _____	☑	☐	☐	☐
Have you been able to provide adequate volumes of water during drought cycles?	☑	☐	☐	☐
Have you had to restrict usage at any time for any reason? ***Please specify:*** _____	☐	☑	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:*** Emergency Volume Plan	☑	☐	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.***	☑	☐	☐	☐
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☑ ***growing,*** ☐ ***declining, or*** ☐ ***stable.***	☑	☐	☐	☐
Does your source have additional water available for appropriation?	☑	☐	☐	☐
Do you have a water right? ***Water right permit number(s):*** 1061-3 and 244-3	☑	☐	☐	☐
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☐	☐	☐	☑
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☑	☐	☐	☐
Do you have a contract to purchase water? ***If yes, with whom?*** Big Sioux Community Water System	☑	☐	☐	☐
Are you currently staying within your contract?	☑	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☑	☐	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☑	☐	☐	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☑	☐	☐	☐
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** _____	☐	☑	☐	☐
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** Howard Aquifer	☑	☐	☐	☐
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☐	☐	☐	☐

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☐ **Yes** ☑ **No**

(If you checked "No", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☐	☐
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☐	☐
Are repair parts available?	☐	☐	☐	☐
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:*** _____	☐	☐	☐	☐
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☐	☐
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☐	☐
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:*** _____	☐	☐	☐	☐
Do you have the capability to add coagulant before the filter?	☐	☐	☐	☐

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☐	☐	☐	☐
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** _____	☐	☐	☐	☐
Is your well(s) constructed according to current South Dakota regulations?	☐	☐	☐	☐
Do you have a source water protection plan?	☐	☐	☐	☐
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☐	☐	☐	☐

Disinfection

Do you disinfect? ☐ **Yes** ☑ **No** ***(If "No", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** _____ ***How often?*** _____ ***Disinfectant used:*** _____	☐	☐	☐	☐
Do you have back-up equipment? ***Type:*** _____	☐	☐	☐	☐
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** _____	☐	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** _____ ***Total Chlorine Residual:*** _____ (if using chloramines)	☐	☐	☐	☐

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☐
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☐

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☐	☐	☐	☐
Are chemicals used for treatment properly stored and secure?	☐	☐	☐	☐
Does the water system track chemical usage? (i.e. a sudden	☐	☐	☐	☐

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping

Condition of Pumping Equipment	**Yes**	**No**	**Unknown**	**NA**
Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** Annual	☑	☐	☐	☐
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☑	☐	☐	☐
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☑	☐	☐	☐
Standby/Emergency Power Equipment	**Yes**	**No**	**Unknown**	**NA**
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☑	☐	☐	☐
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☑	☐	☐	☐
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☑	☐	☐	☐

Infrastructure - Storage

Storage Capacity	**Yes**	**No**	**Unknown**	**NA**
Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:*** _____	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** _____	☑	☐	☐	☐
Security Measures	**Yes**	**No**	**Unknown**	**NA**
Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☑	☐	☐	☐
Are access hatches locked?	☑	☐	☐	☐
Is the tank and the immediate surrounding area fenced?	☑	☐	☐	☐
Control Systems				
Is there a high and low water level signal system to control the pumps?	☑	☐	☐	☐

Is there a drain valve or hydrant to allow for draining of the tank?	☑	☐	☐	☐
Tank Maintenance	**Yes**	**No**	**Unknown**	**NA**
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☑	☐	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☑	☐	☐	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:*** Two times per year	☑	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☑	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☑	☐	☐	☐
Are all valves exercised and lubricated periodically?	☑	☐	☐	☐
Is the system free of severe "water hammer" problems?	☑	☐	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☑	☐	☐	☐
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month?	☑	☐	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 13 %	☑	☐	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 50 psi	☑	☐	☐	☐
Do you have a routine leak detection and repair program?	☑	☐	☐	☐
Are all sources of supply and customers metered?	☑	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☑	☐	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☑	☐	☐	☐

Are any inspections for cross-connections performed?	☑	☐	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☑	☐	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☑	☐	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** _____	☑	☐	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☑	☐	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☑	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☑	☐	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** _____ ***Most common complaint:*** Class 1 Water Distribution	☐	☑	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☑	☐	☐	☐

The Management Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** Class 1 Water Distribution	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** DENR, Clark Engineering and SDRWS	☑	☐	☐	☐

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☑	☐	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☑	☐	☐	☐
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications?	☑	☐	☐	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☑	☐	☐	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☑	☐	☐	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☑	☐	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☑	☐	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☑	☐	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** 7 years - longer if required	☑	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☑	☐	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☑	☐	☐	☐
Do you know what to do in the event of a violation?	☑	☐	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☑	☐	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☐	☑	☐	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☑	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☑	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** Grant Groos, Public Works Director	☑	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☑	☐	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☑	☐	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☑	☐	☐	☐
Do you have written operating procedures for both routine and emergency system operations?	☑	☐	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☑	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☑	☐	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☑	☐	☐	☐

Maintenance	Yes	No	Unknown	NA
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☑	☐	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☑	☐	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☑	☐	☐	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☑	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☑	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☑	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** Debt service/project surcharge	☑	☐	☐	☐
Does the system have reserve funds available in the event of an emergency?	☑	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☑	☐	☐	☐
Do you have a process for scheduling and committing to capital projects?	☑	☐	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☑	☐	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☑	☐	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** Annually	☑	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☑	☐	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** $4.00 in 2015, $4.04 in 2016 (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***:	☐	☑	☐	☐
Does the rate structure assure proportionality among users?	☑	☐	☐	☐
Do you have procedures for billing and collection?	☑	☐	☐	☐
Is your billing collection rate greater than 95%?	☑	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☑	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☑	☐	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☑	☐	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☑	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☐	☑	☐	☐
Do you employ standardized accounting and tracking systems?	☑	☐	☐	☐
Do you track budget performance?	☑	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☑	☐	☐	☐
Are financial management recordkeeping systems organized?	☑	☐	☐	☐
Are controls exercised over expenditures?	☑	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☑	☐	☐	☐
Are there purchasing procedures?	☑	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☑	☐	☐	☐

Financial Spreadsheet

Complete the financial spreadsheet on the following page using the guidance presented on the reverse side of the form.

GUIDELINES:

This cash flow projection form provides a systematic method of estimating cash receipts, disbursements and balances. The entries listed on the form will not necessarily apply to every PWS, and some entries may not be included which would be pertinent to each PWS. It is suggested, therefore, that the form be adapted to each particular PWS, with appropriate changes in the entries as may be required.

Procedure: Most of the entries on the form are self-explanatory; however, the following suggestions are offered to simplify the procedure:

(1) First gather the audited financial statements, internally prepared statements or budgets and other information for the current year and the two prior years. Include the most recent audited financial statement with your self-assessment report.

(2) Complete the columns for the prior two years using actual data from your audited financial statements, if available, or your internally prepared financial statements. Keep in mind, for purposes of this analysis, it is important to use **cash** receipts and disbursements. ***Suggestion: Round amounts to the nearest dollar.***

(3) Complete the current year's column using the most recent budget information. Include all expenditures incurred by the utility.

(4) Complete the form using the suggestions in the partial form below for each entry. Be sure to include any expenditures resulting from planned plant improvement and estimate the impact of inflation on all expenditures.

(5) Item #1 (Beginning Cash on Hand) plus Item #3 (Total Cash Receipts) minus Item #6 (Total Cash Paid Out) should equal Item #7 (Ending Cash Position).

(6) Item #13 (Total Added to Reserves) plus Item #14 (Operating Cash) should equal Item #7 (Ending Cash Position).

(7) Item #1 (Beginning Cash on Hand) should equal Item #14 (Ending Cash Position) from the prior financial period.

(8) Items #8 & 9 are used together to determine the impact of the rate structure on the equivalent residential user. If industrial or business customers contribute a significant portion of the revenues, these amounts should be looked at separately. Consideration should be given to design a rate structure so that each

category of user pays its proportional share of the costs of operating and maintaining the PWS.

(9) Item #10 is used to determine to what extent a PWS's net operating income is able to cover its debt service requirements.

(10) Item #11 is used to determine to what extent a PWS's rate structure produces revenues sufficient to cover operating expenses.

(11) Item #14 is the operating cash balance at year end. The operating cash balance at the end of any financial period should be adequate to meet the cash requirements for a minimum of one month. If there is too little cash, additional cash may have to be injected or expenditures may have to be reduced. If there is excessive cash on hand, the money should be invested or otherwise deposited into interest bearing accounts (e.g., set up reserves for replacement or capital improvements, etc.)

Financial Spreadsheet

Applicant: _____

Completed by: _____

Date: _____

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:					
1. Beginning Cash on Hand					
2. Cash Receipts:					
a. Unmetered Water Revenue					
b. Metered Water Revenue					
c. Other Water Revenue					
d. Total Water Revenues (2a through 2c)					
e. Connection Fees					
f. Interest and Dividend Income					
g. Other Income					
h. Total Cash Revenues (2d through 2g)					
i. Transfers in/Additional Rev Needed					
j. Loans, Grants or other Cash					
Please specify					
3. Total Cash Receipts (2h through 2j)					
4. Total Cash Available (1+3)					
5. Operating Expenses					
a. Salaries and wages					
b. Employee Pensions and Benefits					
c. Purchased Water					
d. Purchased Power					
e. Fuel for Power Production					
f. Chemicals					
g. Materials and Supplies					
h. Engineering Services					
i. Contractual Services – Other					
j. Equip. Rent/Real Property					
k. Transportation Expenses					
l. Laboratory					
m. Insurance					
n. Regulatory Commission Expenses					
o. Advertising					
p. Miscellaneous					
q. Total Cash O&M Expenses (5a through 5p)					
r. Replacement Expenditures					
s. Total OM&R Expenditures (5q+5r)					
t. Loan Principal/Capital Lease Payments					
u. Loan Interest Payments					
v. Transfers Out					
w. Capital Purchases (specify):					
x. Other					
6. Total Cash Paid Out (5s through 5x)					
7. Ending Cash Position (4 - 6)					

Financial Spreadsheet

Applicant: _____

Completed by: _____

Date: _____

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts					
9. Avg Annual User Charge Account (2d/8)					
10. Coverage Ratio (2h-5s)/(5t+5u)					
11. Operating Ratio (2d/5s)					
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve					
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other					
13. Total Reserves (12a through 12e)					
14. Year End Operating Cash (7 – 13)					

4 Year Projections	Last Year Actual	Current Year Budget	Year 2 Projected	Year 3 Projected	Year 4 Projected
1. Beginning Cash on Hand	For the prior period and the current year budget, use the actual cash balance. For all other years, cash on hand should equal item #14 from previous period.				
2. Cash Receipts:					
a. Unmetered Water Revenue	All cash received/estimated for water supplied to residential, commercial, industrial and public customers where the customer charge is not based on quantity, i.e., its based on diameter of service pipe, room, foot of frontage or other type units.				
b. Metered Water Revenue	all cash received/estimated for water supplied to residential, commercial, industrial and public customers where the charge is based on quantity of water delivered.				
c. Other Water Revenue	Other cash received/estimated from sale of water, e.g., sales for irrigation, sales for resale, inter- municipal sales, advalorem taxes (OM&R portion) etc.				
d. Total Water Revenues (2a through 2c)	**Self-explanatory**				
e. Connection Fees	All cash received/estimated for connection of customer service during the year.				
f. Interest and Dividend Income	All cash received/estimated on interest income from securities, loans, notes, etc., whether the securities are carried as investments or included in sinking or reserve accounts.				
g. Other Income	Other revenues collected/estimated during the period (e.g., disconnection or change in service fees, Profit on materials billed to customers, servicing of customer lines, late payment fees, rents, sales of assets, advalorem taxes (infrastructure portion) etc.).				
h. Total Cash Revenues (2d through 2g)	**Self-explanatory**				
i. Transfers in/Additional Rev Needed	Includes transfers from other funds w/i the municipality or can be used as a "plug" figure when determining the additional cash needed to cover cash needs.				
j. Loans, Grants or other Cash Injection	Includes loans or grants from financial institutions, inter-municipal loans, state or federal sources.				
3. Total Cash Receipts (2h through 2j)	**Self-explanatory**				
4. Total Cash Available (1+3)	**Self-explanatory**				
5. Operating Expenses	Use actual amounts paid when completing the prior year. Estimate the amounts for projected years based on prior year amounts, trends and other known variables (including those related to needs identified in the self-assessment.				
a. Salaries and wages	Cash expenditures made/estimated for salaries, bonuses and other consideration for work related to the O&M of the facility, including administration, and compensation for officers, directors, etc.				
b. Employee Pensions and Benefits	Paid vacations, paid sick leave, health insurance, unemployment insurance, pension plan, etc.				
c. Purchased Water	Amounts paid/estimated for cost of water purchased for resale.				
d. Purchased Power	Amounts paid/estimated for all electrical power for the utility.				
e. Fuel for Power Production	Amounts paid/estimated for fuel purchased for the production of power to operate pumps, etc.				
f. Chemicals	Amounts paid/estimated for chemicals used in the treatment and distribution.				
g. Materials and Supplies	Amounts paid/estimated for materials and supplies used for O&M of the PWS other than those under contractual services.				
h. Contractual Services – Engineering	Amounts paid/estimated to outside engineers to perform ongoing engineering work for the facility.				
i. Contractual Services - Other	Amounts paid/estimated for costs of outside accounting, legal, managerial, and other services.				
j. Rental of Equipment/Real Property	Amounts paid/estimated for costs associated w/the rental of equipment, buildings and real property.				
k. Transportation Expenses	Amounts paid/estimated for automobile, truck, equipment, and other vehicle use and maintenance.				
l. Laboratory	Self-explanatory				
m. Insurance	Amounts paid/estimated for vehicle, liability, workers' compensation and other insurance.				
n. Regulatory Commission Expenses	Amounts paid/estimated for rate cases and other activities with a regulatory commission				
o. Advertising	Amounts paid/estimated for informational, instructional and other advertising.				
p. Miscellaneous	Amounts paid/estimated for all expenses not included elsewhere (e.g. permit fees, training, etc.).				
q. Total Cash O&M Expenses (5a through 5p)	**Total of lines 5a through 5p.**				
r. Replacement Expenditures	Amounts paid/estimated for replacement of equipment to maintain system integrity.				
s. Total OM&R Expenditures (5q+r)					
t. Loan Principal/Capital Lease Payments	Include cash payments made/estimated for principal on all loans, including vehicle and equipment purchases on time payments and capital lease payments.				
u. Loan Interest Payments	Self-explanatory				

v. Transfers Out	Include cash transfers made/estimated to funds or entities outside the PWS.
w. Capital Purchases (specify):	Amount of cash outlays/estimates for items such as equipment, building, vehicle purchases, and leasehold improvements that were not a part of the initial design of the PWS infrastructure.
6. Total Cash Paid Out (5s through 5x)	Self-explanatory
7. Ending Cash Position (4 – 6)	Self-explanatory
8. Number of Customer Accounts	Use most recent system data or expected increases.
9. Ave User Charge per Customer (2d/8)	Self-explanatory
10. Coverage Ratio (2h-5s)/(5t+5u)	Measure of the sufficiency of net operating profit to cover the debt service requirements of the system. A bond covenant might require this to meet or exceed certain limits (e.g. 1.25)
11. Operating Ratio (2d/5s)	Measure of whether operating revenues are sufficient to cover OM&R expenses. An operating ratio of 1.0 is the bare Minimum for a self-supporting facility. With debt service requirements, the operating ratio would have to be higher.
12. Additions to Reserve Funds for the Year:	Do not include depreciation as a reserve unless there is actually a "depreciation' reserve that has cash set-aside for future expansion. **Include only amounts that are added to the reserve funds for the year (i.e., do not include accrued interest on CDs).**
a. Debt Service Reserve	Funds specifically set-aside to meet debt service requirements or requirements set forth in a loan Convenant/bond indenture.
b. Bond Retirement Reserve	Funds specifically set aside to retire debt as it is scheduled.
c. Capital Improvement Reserve	Funds specifically set aside to meet long-term objectives for major facility expansion, improvement and/or the construction of a new facility.
d. Replacement Reserve	Funds specifically set aside for the future replacement of equipment needed to maintain the integrity of the facility over its useful life.
e. Other	Other cash set-aside for reserve.
13. Total Added to Reserves (12a through 12e)	**Total of lines 12a through 12e.**
14. Year End Operating Cash (7-13)	**All non-reserved cash.**

Capacity Requirements for New Drinking Water System

Certificate of Approval: Obtaining a certificate of approval for a new drinking water system is required by law. More importantly, a certificate of approval shows that the drinking water system has gone through the planning process. Planning is critical for all new, as well as existing, water systems. A system that lacks technical, managerial, or financial capacity will have problems complying with all of the requirements of the 1996 Safe Drinking Water Act amendments. Since new water systems are required to complete the planning process, this will help ensure that these systems have adequate capacity and that the public will be provided with safe drinking water.

Who needs a certificate of approval?

All new community and nontransient noncommunity water systems that begin operation after October 1, 1999, are required to obtain a certificate of approval from the Department of Environment and Natural Resources (DENR) before beginning operation.

This includes water systems that do not meet the definition of community or nontransient noncommunity water system (NTNC) at start-up, but are designed to one day meet that definition. For example, a developer plats out 30 lots for homes in the development, but when the water system begins operation, there are only four homes connected to the system. Obviously, the intent is for this water system to one day be large enough to qualify as a public water system; therefore, the developer must meet all the new water system requirements.

Any system that has infrastructure in place before October 1, 1999, and then becomes a new community or NTNC water system only by the addition of new users is not required to obtain a certificate of approval.

What is the process for obtaining a certificate of approval?

DENR recommends that you apply as soon as possible to receive approval of the required documents in a timely manner. Approval may be delayed if more information is needed by the department during the review process. The following are minimum guidelines for certificate approval.

- Submit the New Water System Application and business plan no later than *90 days* before you anticipate beginning operation.
- Submit plans and specifications no later than *30 days* before the anticipated bid-letting and contract award date.
- Submit the operations and maintenance manual as soon as practicable before system start-up

Drinking Water Facilities Funding
Application Instructions

Note: This application is for Drinking Water State Revolving Fund Program and Consolidated Water Facilities Construction Program funding. This application is for drinking water projects only.

Application Cover Page (page 1)

Applicant. Name, mailing address and phone number of the entity sponsoring the project. Sub applicant is an organization who is submitting the application on behalf of an entity.

DUNS Number. The Data Universal Numbering System (DUNS) number is a nine-digit number, issued by D&B, assigned to each business location in the D&B database, having a unique, separate, and distinct operation for the purpose of identifying them. To applicant must submit documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

Proposed Funding Package. Include the amount and type of funds requested, the amount of local funds being provided, including direct public or private contributions, loans, federal funds, and water development district grants. Multi-year or phased projects should enter only the costs associated with activities for which assistance is being requested.

Project Title/Description. Provide a one line title for the project and a brief narrative describing the project. Be specific, providing the feet or miles of pipe, treatment process being utilized, capacity of the storage tanks, and so forth. Include the current monthly drinking water rate. If the rate is not a flat rate, compute the monthly rate at 5,000 gallons for municipalities or sanitary districts and at 7,000 gallons for all other water systems. Additionally, indicate whether a reserve fund has been established for the drinking water utility.

Certification. An official of the sponsoring entity, who has been authorized by resolution of the governing body to submit the application, must read and sign the application.

Professional Contacts (page 2)

Application Prepared By: Identify the entity, the individual that helped prepare the application, and the other contact information requested in case questions arise about the application.

Consulting Engineering Firm: Identify the engineering firm retained by the sponsor, the engineer's name, and the other contact information requested in case questions arise about the application.

Legal Counsel's Firm: Identify the law firm retained by the sponsor, the attorney's name, and the other contact information requested in case questions arise about the application.

Bond Counsel's Firm: This section is required only if the applicant is a political subdivision. Identify the bond counsel firm retained by the sponsor, the attorney's name, and the other contact information requested in case questions arise about the application.

Budget Sheet (page 3)

Note: Multi-year projects should enter only budget costs associated with activities for which financial assistance is being requested.

Line 1.A - Amount needed for personal services related to loan management and clerical duties.

Line 1.B - Amount needed for travel including vehicle rental.

Line 1.C - All legal fees associated with this project including bond counsel fees.

Line 1.D - Amount needed for other administration expenses, including an independent financial audit, publishing, meetings, and any other expenses expected for project administration, including planning district contracts.

Line 2 - Amounts directly associated with the acquisition of land, existing structures, and related rights_of_way.

Line 3.A - Fees for engineering bidding and design services.

Line 3.B - Fees for engineering construction inspection and audit of construction and related programs.

Line 3.C- Amounts for other technical services, such as surveys, O&M manual preparation, tests, and borings not included in Line 3.A or 3.B.

Line 4 - Amounts for the actual construction of, addition to, or restoration of a facility. Also include in this category the amounts of project improvements, such as roads, access restrictions, new trenches, landscaping, and run-off control measures.

Line 5 - Amount needed for purchase or rent equipment required for the project.

Line 6 - Amount of contracts (excluding legal, engineering, and construction) associated with the project, including sampling and laboratory services.

Lines 7 & 8 - Identify amounts for items not specifically mentioned above.

Line 9 - Sum of Lines 1 through 8.

Line 10 - Estimated amount for contingencies. Contingencies may not exceed 10% of the amount on Line 9.

Line 11 - Sum of Lines 9 and 10.

Line 12 - Funding percentage of total project costs.

Proposed Method of Financing (page 4)

Indicate the source of the secured/unsecured share of funding. If funds have been secured, indicate the amount in the "secured" column. If funds are unsecured at time of application, indicate the amount of the unsecured funds and the date funds are anticipated to be secured in the "unsecured" column. Include any remarks regarding funding in a separate narrative. Total the secured and unsecured funding amounts at the bottom of the table.

Other Funds to be Borrowed (page 4)

Provide the amount, rate, and term of other funds to be borrowed to help finance the project. Include the amount of the annual debt service and security pledged towards loan repayment. For "other," explain the source of funds along with the above mentioned items. Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information (page 5)

The following information will be used to evaluate the applicant's capacity to provide local funds for the project and the continuing operation, maintenance, and replacement of the system.

Fiscal Year - The month and date your fiscal year begins.

Population Served - Fill in population data. Estimate current year if necessary.

List the top three employers in a 30 mile radius of your service area. Also list the number of employees at the facility and the type of business.

Repayment Information (page 5)

Identify the specific rate and term of the loan for which the sponsor is applying. If the applicant is a political subdivision, specify the security pledged to repay the loan.

Documents That Must Be Submitted With The Application (page 5)

Provide a copy of the most recent audited or unaudited financial statements to include specific accounting for the utility affected by the project. If certain funds are reported in separate documents, include all reports concerning fiscal operations of the entity. If different funds are accounted for by differing fiscal years, make this notation. If the audit for the most recent year is not available, list the reason.

Provide a copy of the current year's budget, if approved by the governing board. Also include amortization schedules for all existing debt secured by proposed revenue pledged.

Provide a copy of the existing or any proposed user charge ordinance or resolution currently governing the utility department.

Provide a copy of the resolution of authorized signatory for the person or persons signing the loan agreement and payment requests. The resolution must also include the maximum loan amount requested and description of proposed project.

Submit documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database (https://www.sam.gov).

Submit the Facilities Plan, Cultural Resources Effects Assessment Summary, and Capacity Assessment Worksheets.

For Non-profit entities submit a copy of the organization's By-laws, Articles of Incorporation, and Certificate of Good Standing from the Secretary of State.

Drinking Water Fund Debt Information (page 6)

Provide the information requested in the table for each obligation pledged towards repayment. Include all required debt information requested in the table to assure an appropriate review of the applicant's finances.

Drinking Water Fund Cash Flow Information (page 7)

Note: Enter negative numbers for cash out activities.

Complete the Utility Cash Flow table. Obtain prior years information from previous utility audits. The Current Year column should contain information from the system's current year budget and expenditures. The Future Year column should contain anticipated cash flow information for the utility's next three full fiscal years of operation.

Provide the total balance for each restricted account or activity. Utilize the explanation section below to describe numbers inputted in the "other" sections and any other pertinent information.

(page 8)

Restricted Funds Breakdown: Provide a the balances for each restricted account or activity, identify the activity to be completed with the funding, and specify the method used to restrict the funds (*i.e.* governing board resolution, board motion, by-laws, etc.).

Drinking Water Fees: Check whether the sponsor is an incorporated municipality, sanitary district or other system. Municipalities and Sanitary Districts provide rate information based on 5,000 gallons (670 cubic feet) per month. All Other Systems provide rates based on 7,000 gallons (935 cubic feet) per month.

Fill in the current monthly rate being charged to domestic and business users to include individual households and farmsteads. If fees are billed quarterly, calculate the monthly rate. Include the proposed new monthly rate. Complete the information for the total number of domestic and business hookups which will be served system wide. Provide the current average monthly usage by business, domestic, and other customers and specify either gallons or cubic feet. If there is a special rate being charged for users other than business and domestic hookups, provide information about that rate, the number of customers for which the rate applies, and the user's average usage.

Indicate whether fees are calculated on the amount used or on a flat rate.

Furnish dates for when the current rate was adopted, when the proposed fee schedule will take effect, and what the rate was prior to the current rate.

Provide the four largest customers, the type of business, and the percentage of system revenues.

Property Tax Information (page 9)

Note: Fill out this section only if a general obligation bond is being pledged towards repayment of the loan.

The property tax information will be used to evaluate the applicant's ability to repay the loan. The purpose of this section is to evaluate a borrower's tax base and customers in order to assess the condition of the community.

Provide the assessed valuation and full and true valuation for the current and last two years.

Provide the amount levied and collected for the most recent three years for which data is available. Indicate any penalties, interest charged, or late payments.

List the five largest taxpayers within the system's service area and describe the type of property involved and the assessed valuation.

General Fund Debt Information (page 10)

Note: Fill out this section only if a general obligation bond is being pledged towards repayment of the loan.

Provide the information requested in the table for each obligation pledged towards repayment. Include all required debt information requested in the table to assure an appropriate review of the applicant's finances.

Sales Tax Information (page 11)

Note: Fill out this section only if a sales tax is being pledged towards repayment of the loan.

The sales tax information will be used to evaluate the applicant's ability to repay the loan. Provide the amount of sales tax collections by month for each of the last fifteen months.

Sales Tax Debt Information (page 12)

Note: Fill out this section only if a sales tax is being pledged towards repayment of the loan.

Provide the information requested in the table for each obligation to which sales tax has been pledged towards repayment.

Facilities Plan Checklist (page 13)

The Facilities Plan Checklist is provided for your convenience. Please review the checklist and make sure that the required steps have been taken to ensure that an adequate Facilities Plan has been prepared.

Drinking Water Facilities Plan document can be found at http://denr.sd.gov/dfta/wwf/dwsrf/dwfunding.aspx

Certification of Drinking Water Needs Categories (page 14)

Form is self-explanatory.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters (page 15)

Under Executive Order 12549, an individual or organization debarred or excluded from participation in federal assistance or benefit programs may not receive any assistance award under a federal program, or a sub-agreement thereunder for $25,000 or more.

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or sub-agreement participant thereunder must certify to or provide an explanation why they cannot. For further details, see 40 CFR 32.510, Participants' responsibilities.

Capacity Assessment Worksheets (pages 16 - 37)

All applicants must complete the Capacity Assessment for the Drinking Water Program to determine the applicant's technical, managerial, and financial capacity to operate its system.

For more information please contact the Drinking Water Program at (605) 773-3754.

RESOLUTION NO. 335-15

RESOLUTION APPROVING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the City of Colman (the "City") has determined it is necessary to proceed with improvements to its Drinking Water Distribution System, including but not limited to Highway 34 Water Main Replacement (the "Project"); and

WHEREAS, the City has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") has been prepared; and

WHEREAS, the City has reviewed the Application to be submitted to the Board, true copies of which are attached hereto, and finds it proper in all respects; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the City and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the City as follows:

1. The City hereby approves an Application for financial assistance to the South Dakota Board of Water and Natural Resources for the Project as set forth with particularity in the Application attached hereto, which Application is hereby approved.

2. The Mayor is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance submitted to the Board in accordance with all terms herein set forth.

3. The Mayor is hereby designated as the authorized representative of the City to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

SAM Search Results
List of records matching your search for :

Search Term : city* of colman*
Record Status: Active, Inactive

ENTITY	COLMAN, CITY OF	Status:Inactive
DUNS: 832619675	+4:	CAGE Code: 5TBD5 DoDAAC:
Expiration Date: Jan 10, 2012	Has Active Exclusion?: No	Delinquent Federal Debt?: No
Address: 112 N MAIN AVE City: COLMAN ZIP Code: 57017-0054		State/Province: SOUTH DAKOTA Country: UNITED STATES

UPDATED ON DECEMBER 14, 2015

RESOLUTION # 331-14

A Resolution Amending Resolution No. 313 Water User Rates For The City Of Colman, South Dakota

WHEREAS, the Colman City Council believes that it is necessary and in the best interest of the City of Colman, in order to pay all costs for the operation and maintenance of the Colman City water system, to amend the rates for the sale of water provided by the City of Colman; now

THEREFORE, IT IS HEREBY RESOLVED by the Colman City Council, that as of the effective date indicated below, the following rates shall be charged for public water usage:

Section 1. Monthly water debt service charges per unit and living unit will be as follows:

1.1	Residential	$22.00
1.2	Commercial	$22.00
1.3	Apartment/Mobile Home	$22.00 per unit
1.4	School/Compound	$70.00
1.5	1" meter	$27.50
1.6	1 ½" meter	$30.00
1.7	2" meter	$35.00
1.8	3" meter	$50.00

Section 2. In addition to the above monthly base rate charges, there will be a $4.00 per 1,000 gallons of water usage charge.

Section 3. $16.81 of the base charge goes directly to paying off loans for the Waterline Replacement Project

Section 4. All water service charges will be billed monthly.

Section 5. This resolution shall be in full force and effect with the October 20, 2014 meter readings.

Signed: Gloria Van Dump
. Mayor
City of Colman

Attest:
Signed:
. Finance Officer

Adopted: September 8, 2014
Published: September 17, 2014

List of Current Loans and Balances

Loan	Interest Rate	Remaining Balance	Matures
Heartland (2006)	4.50%	$17,615	October 2016
Agricredit (golf carts)	5.00%	$13,982	October 2017
SD Housing (2007)	4.67%	$346,900	June 2022
Home Federal (Sales Tax Bond – 2009)	4.00% (first 10 years) 5.00% (last 10 years)	$149,000	December 2029
Sheffield Financial (Bobcat Mower)	0%	$4,756.38	August 2017
2013 Drinking Water (Phase 1)	3.00%	$427,740.96	February 2045
2013 Clean Water (Phase 1)	3.25%	$1,199,509.65	February 2045
2014 Drinking Water (Phase 2/3)	3.00%	$632,000	February 2046
2014 Clean Water (Phase 2)	3.25%	$300,000	February 2046
T&R Service Loan (Golf)	2.00%	$26,198.81	2020

FUND 602 Water Fund

DEPT General Revenue	2015	2016
R 602-0000-3810 Monthly Debt Service-water	$76,000.00	$ 80,385.00
R 602-0000-3811 Water monthly metered.	$57,000.00	$ 60,000.00
R 602-0000-3813 Sale of Supplies & Materials	$0.00	$ -
Total Water Revenue	**$133,000.00**	**$140,385.00**
DEPT 4330 Water		
E 602-4330-4110 Salaries and Wages	$20,000.00	$ 20,000.00
E 602-4330-4120 OASI	$1,530.00	$ 1,500.00
E 602-4330-4130 Retirement	$1,200.00	$ 1,200.00
E 602-4330-4190 Water Samples	$500.00	$ 500.00
E 602-4330-4210 Insurance	$1,200.00	$ 700.00
E 602-4330-4220 Drinking Water Fee	$560.00	$ 560.00
E 602-4330-4228 School	$100.00	$ 400.00
E 602-4330-4256 Painting	$0.00	$ 7,000.00
E 602-4330-4280 Utilities	$2,500.00	$ 2,500.00
E 602-4330-4331 Water Supplier	$32,000.00	$ 32,000.00
E 602-4330-4520 Repairs	$30,000.00	$ 30,000.00
E 602-4330-4528 Reserve	$23,410.00	$ -
E 602-4330-5010 Water Line Replacement	$20,000.00	$ 20,000.00
E 602-0000-4529 SRF Loan Payments	$0.00	$ 24,025.00
Total Water Expenses	**$133,000.00**	**$140,385.00**

		2015 YTD Budget	2015 YTD Amt	November MTD Amt YTD	2015 Balance	% of Budget
Water Fund						
	Revenues	$133,000.00	$793,510.36	$26,491.18	-$660,510.36	596.62%
	Expenditures	$133,000.00	$666,514.77	$206,087.26	-$533,514.77	501.14%
	Gain/(Loss)	$0.00	$126,995.59	($179,596.08)	($126,995.59)	
General Revenue						
Active	R 602-0000-3634 Penalties, utilities	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-0000-3690 Other - Misc.	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-0000-3810 Monthly Debt	$76,000.00	$76,910.22	$7,015.98	-$910.22	101.20%
Active	R 602-0000-3811 Water monthly	$57,000.00	$52,815.60	$4,191.20	$4,184.40	92.66%
Active	R 602-0000-3813 Sale of Supplies &	$0.00	$2,510.00	$0.00	-$2,510.00	0.00%
Active	R 602-0000-3814 Reconnect Fee -	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-0000-3819 Other, Area Rec	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-0000-3834 Penalties, utilities	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-0000-3911 Operation Transfer In	$0.00	$0.00	$0.00	$0.00	0.00%
Revenue		$133,000.00	$132,235.82	$11,207.18	$764.18	99.43%
Active	E 602-0000-4529 SRF Loan Payments	$0.00	$29,075.73	$5,504.43	-$29,075.73	0.00%
Expenditure		$0.00	-$29,075.73	-$5,504.43	$29,075.73	0.00%
	Total General Revenue	$133,000.00	$103,160.09	$5,702.75	$29,839.91	77.56%
Water						
Active	R 602-4330-3340 State Grants	$0.00	$661,274.54	$15,284.00	-$661,274.54	0.00%
Revenue		$0.00	$661,274.54	$15,284.00	-$661,274.54	0.00%
Active	E 602-4330-4110 Salaries and Wages	$20,000.00	$14,733.87	$1,388.50	$5,266.13	73.67%
Active	E 602-4330-4120 OASI	$1,530.00	$1,102.51	$103.74	$427.49	72.06%
Active	E 602-4330-4130 Retirement	$1,200.00	$842.48	$83.32	$357.52	70.21%
Active	E 602-4330-4190 Water Samples	$500.00	$174.00	$43.50	$326.00	34.80%
Active	E 602-4330-4200 Postage	$150.00	$0.00	$0.00	$150.00	0.00%
Active	E 602-4330-4210 Insurance	$1,200.00	$1,431.00	$734.00	-$231.00	119.25%
Active	E 602-4330-4216 Phase III	$0.00	$401,743.00	$127,305.00	-$401,743.00	0.00%
Active	E 602-4330-4218 Phase I	$0.00	$0.00	$0.00	$0.00	0.00%
Active	E 602-4330-4219 Phase II	$0.00	$90,279.60	$0.00	-$90,279.60	0.00%
Active	E 602-4330-4220 Drinking Water Fee	$560.00	$560.00	$0.00	$0.00	100.00%
Active	E 602-4330-4228 School	$100.00	$400.00	$0.00	-$300.00	400.00%
Active	E 602-4330-4256 Painting	$0.00	$0.00	$0.00	$0.00	0.00%
Active	E 602-4330-4280 Utilities	$2,500.00	$1,473.75	$68.99	$1,026.25	58.95%
Active	E 602-4330-4331 Water Supplier	$32,000.00	$32,346.71	$2,614.04	-$346.71	101.08%
Active	E 602-4330-4401 Debt Service	$0.00	$15,924.53	$0.00	-$15,924.53	0.00%
Active	E 602-4330-4520 Repairs	$30,000.00	$76,427.59	$68,241.74	-$46,427.59	254.76%
Active	E 602-4330-4528 Reserve	$23,260.00	$0.00	$0.00	$23,260.00	0.00%
Active	E 602-4330-5010 Water Line	$20,000.00	$0.00	$0.00	$20,000.00	0.00%
Active	E 602-4330-5136 Misc.	$0.00	$0.00	$0.00	$0.00	0.00%
Expenditure		-$133,000.00	-$637,439.04	-$200,582.83	$504,439.04	479.28%
	Total Water	-$133,000.00	$23,835.50	-$185,298.83	-$156,835.50	-17.92%
	Total Water Fund	$0.00	$126,995.59	-$179,596.08	-$126,995.59	

CITY OF COLMAN
COLMAN, SOUTH DAKOTA

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FOR THE ONE YEAR ENDING DECEMBER 31, 2014

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NOTE: All figures shown in this financial report are in U.S. dollars.
For space considerations, the "$" symbol is not used.

INDEPENDENT AUDIT SERVICES, PC
Benjamin Elliott, CPA
P.O. Box 262
Madison, South Dakota 57042
605.483.3225

To the Honorable Mayor and
Members of the Colman City Council
Colman, South Dakota

INDEPENDENT AUDITOR'S REPORT

I have audited the accompanying financial statements of governmental activities, business-type activities, and each major fund of the City of Colman (City), Moody County, South Dakota, as of December 31, 2014 and for the year then ended, and related notes to the financial statements, which collectively comprise the City's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatements, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express opinions on these financial statements based on my audit. I conducted my audit in accordance with auditing standards generally accepted in the United States of America and the standard applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that I plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risk of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the City's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the City's internal control. Accordingly, I express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my unqualified audit opinions on governmental activities, business-type activities, and on each major fund.

Unmodified Opinions

In my opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, business-type activities, and each major fund of the City of Colman, South Dakota, as of December 31, 2014, and the respective changes in its financial position and, where applicable, cash flows thereof for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

Other Matters - Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis (page 3 to 9) and the budgetary comparison schedule (page 37 to 38) be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Government Accounting Standards Board who considers it to be an essential part of financial reporting by placing the basic financial statements in an appropriate operational, economic, or historical context. I have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the formation and comparing the information for consistency with management's responses to my inquiries, the basic financial statements, and other knowledge I obtained during my audit of the basic financial statements. I do not express an opinion or provide any assurance on the information because the limited procedures do not provide me with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, I have also issued my report (page 39) dated November 20, 2015 on my tests of City of Colman's compliance with certain provisions of laws, regulations, and contracts, and other matters and my consideration of its internal control over financial reporting. The purpose of that report is to describe the scope of my testing of compliance and internal control over financial reporting, and the results of that testing, and not to provide an opinion on compliance or internal control over financial reporting. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the City's compliance and internal control over financial reporting.

Independent Audit Services, PC
Benjamin Elliott, CPA
Madison, South Dakota

November 20, 2015

MANAGEMENT'S DISCUSSION AND ANALYSIS (MD&A)

This section of the City of Colman's (City) annual financial report presents our discussion and analysis of the City's financial performance for the year ending December 31, 2014. Please read it in conjunction with the City's financial statements which follow this section.

FINANCIAL HIGHLIGHTS	2014
Revenue:	
Charges for goods and services	1,469,209
Operating grants	4,167
Capital grants, contributions	1,877,342
General revenue	331,042
Total	3,681,760
Expenses:	
Governmental	358,098
Business-type	1,285,031
Total	1,643,129
Increase in Net Position	2,038,631
Net Position:	
December 31, 2013	3,395,951
December 31, 2014	5,434,582
Governmental Funds:	
General	154,106
TIF #1	(12,682)
Capital Assets	1,240,899
Long-term Debt	(561,768)
Business-Type Funds:	
Liquor	92,075
Water	1,349,366
Electric	553,411
Sewer	2,583,108
Solid waste	19,640
Recreation (golf)	16,427
Total	5,434,582

During the year ending December 31, 2014, the City:

* Contracted for water system improvements of which $1,927,509 had been completed by the end of 2014. Drew down the remainder of a $434,528 loan and a new $370,273 loan to help finance this project.

* Contracted for sewer system improvements of which $3,225,907 had been completed by the end of 2014. Drew down the remainder of a $1,217,748 loan and a new $229,569 loan to help finance this project.

* Received a Homeland Security grant of $38,300 to purchase a backup generator for sewer operations.

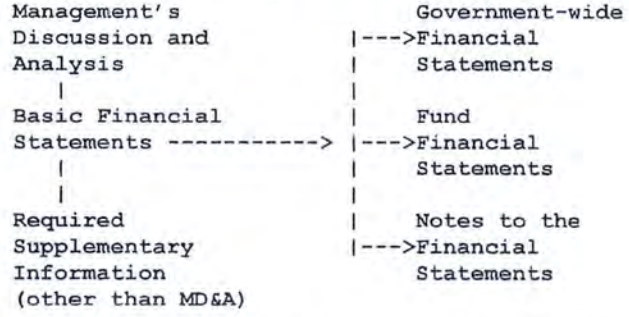
* Made improvements to the ball field of $11,259.

* Paid-off early a 2000 Wastewater Utility Revenue Bond of $63,134.

BRIEF DISCUSSION OF THE BASIC FINANCIAL STATEMENTS

This financial report is presented in a format consistent with the presentation requirements of the Governmental Accounting Standards Board (GASB) Statement-34.

Here is an overview of the City's financial statements.



The financial report consists of three parts: (1) management's discussion and analysis (page 3 to 9), (2) the basic financial statements (page 10 to 36) and (3) required supplementary information (page 37 to 38). The basic financial statements include two types of statements that present the City from two different financial points of view.

Government-wide financial statements (View #1):
The first two statements are government-wide financial statements that provide both long-term and short-term information about the City's overall financial status.

Fund financial statements (View #2):
The remaining financial statements are fund financial statements that focus on significant operations of the governmental, enterprise, and fiduciary (if any) activities of the City.

The governmental fund financial statements tell how general governmental services were financed in the short-term, as well as what remains for future spending. Governmental funds operated by the City are the general fund and TIF #1 debt service fund.

The enterprise fund financial statements offer short-term and long-term financial information about the activities of the City that operate like a business. Enterprise funds operated by the City are the liquor, water, electric, sewer, solid waste and recreation funds.

The fiduciary fund financial statements provide information about the financial status of activities (like a Sec. 125 Cafeteria Plan) in which the City acts solely as a trustee or agent for the benefit of those groups to whom these funds belong. In 2014 the City did not maintain any fiduciary funds.

The financial statements include notes that explain in more detail some of the information found in the financial statements. The financial statements are also followed by a section of required supplementary information that presents a budgetary analysis for the general fund.

Required Supplementary Information:

This Management's Discussion and Analysis (page 3 to 9) and the Budgetary Comparison Schedules (page 37 to 38) are financial information required to be presented by GASB. Such information provides readers of this report with additional data that supplements the government-wide statements and fund financial statements. The Budgetary Comparison Schedule is presented on a budgetary basis of accounting, which reports capital expenditures within their respective expenditure function rather than as a separate capital outlay expenditure.

This is a summary of the major features of these financial statement.

	Government-wide Statements	Fund Statements		
		Governmental Funds	Enterprise Funds	Fiduciary Funds (if any)
Scope	Entire City (except fiduciary funds)	City activities except Enterprise (ie: water) and Fiduciary	Activities operated like a private business (ie: water)	City's custody of money that belongs to others
Required Financial Statements	Statement of Net Position Statement of Activities	Balance Sheet Statement of Revenues, Expenditures and Changes in Fund Balances	Statement of Net Position Statement of Revenues, Expenses and Changes in Net Position Statement of Cash Flows	Statement of Fiduciary Net position
Basis of Accounting	Accrual	Modified accrual	Accrual	Accrual
Measurement Focus	Economic resources	Current financial resources	Economic resources	Economic resources
Types of Assets & Liabilities	All - financial and capital, short- and long-term	Only current financial assets and liabilities No capital assets	All - financial and capital, short- and long-term	All - financial and capital (if any), short- and long-term
Types of Revenue and Expenditures or Expense	All - regardless of when cash is received	Revenues when cash is received during year or within 30 days of year-end Expenditures when goods or services are received and payment is due during year or soon after year-end	All - regardless of when cash is received	All - regardless of when cash is received

GOVERNMENT-WIDE STATEMENTS
(Reporting the City as a whole)

The government-wide statements (page 10 and 11) report information about the City as a whole using accounting methods similar to those used for private companies. There are two government-wide statements: the Statement of Net Position and the Statement of Activities.

The Statement of Net Position includes all of the government's assets and liabilities. Net position is the difference between assets and liabilities. Changes in these accounts is one way to measure the City's financial health.

Increases or decreases in net position measures improvements or declines in the City's financial health. To assess the City's overall financial health you also need to consider other factors such as changes in the, property tax base and sales tax revenue, sales tax revenue and/or grant activity.

The Statement of Activities includes all of the year's revenues and expenses. You will notice that expenses are listed in the first column by program. Revenues related each program are reported to the right of the expense. The result is a net revenue/expense for each program. After listing program activity, general receipts of the City are listed, which include all taxes and interest earned.

The government-wide financial statements have two broad categories of information: governmental activity and business-type activity.

The governmental activities include operation of the government such and City Council, public safety, streets and highway, snow removal, debt service, and recreational programs. Property taxes, sales taxes, revenue from the state, user fees and interest earnings finance most of these activities.

Business-type activities account for the City's liquor, water, electric, sewer, solid waste and recreation operations. These operations are financed by user fees and grants for certain capital projects.

FUND FINANCIAL STATEMENTS
(Reporting the City's most significant funds)

The fund financial statements (page 12 to 16) provide more detailed information about the City's most significant funds, not the City as a whole. Funds are accounting tools used to keep track of the receipt and disbursement of City's resources. State law requires the use of some funds and the City Council establishes other funds to manage money for a specific purpose, like a capital project fund for infrastructure improvements.

The fund financial statements show information in three broad categories: governmental, enterprise (business-type), and fiduciary (if any).

Governmental funds: Most of the City's basic services are included in the governmental funds, which focus on (1) how cash, and other financial assets which can readily be converted into cash, flow in and out of that fund, and (2) the balances left at year-end that are available for spending in the next year. Consequently, governmental funds statements provide you a detailed short-term view to help you determine whether there are more or fewer financial resources available for spending in the near future to finance the City's programs. Because this information does not encompass the additional long-term focus of the government-wide statements, we provide additional information at the bottom of the governmental funds statements to reconcile the differences between the governmental fund statements and the government-wide statements.

Enterprise fund: Services for which the City charges the customer a fee are generally reported in enterprise funds. Enterprise funds, like the government-wide statements, provide both short-term and a long-term financial information. Liquor, water, electric, sewer, solid waste and recreation funds are the enterprise funds maintained by the City.

Fiduciary funds: The City can be the agent (or fiduciary) for various internal and external parties. As such, the City is responsible for ensuring that the assets reported in these funds are used for their intended purposes. All of the City's fiduciary activities are reported in a separate statement of fiduciary net position. Fiduciary funds are excluded from the City's government-wide financial statements because the City can not use these assets to finance City operations. In 2014 the City did not have any fiduciary funds.

MATERIAL CHANGES IN STATEMENT OF NET POSITION AND STATEMENT OF ACTIVITIES

Year Ending December 31, 2014
(Material changes for governmental activities = changes greater than $ 25,000)
(Material changes for business-type activities = changes greater than $150,000)

	Increase (Decrease)	Principal Reason
Governmental Activities:		
Capital assets	67,000	Recreational improvements less depreciation.
Other assets	(50,000)	Recognized CARI note receivable as a culture and recreation expenditure.
Public works	(40,000)	Fewer street projects in 2014.

	Increase (Decrease)	Principal Reason
Business-type Activities:		
Current assets	(586,000)	Decrease in grants receivable.
Capital assets	3,285,000	Water/sewer project improvements.
Current liabilities	(381,000)	Decrease in accounts payable to contractors.
Long-term debt	1,081,000	New financing to pay for water/sewer project.
Capital grant	1,488,000	New grants and debt forgiveness.

SIGNIFICANT VARIATIONS BETWEEN ORIGINAL AND FINAL GENERAL FUND BUDGET

The City's 2014 general fund budget of $395,267 is an increase of $66,226 or 20.13% from 2013. The increase was primarily in other governmental expenditures and parks and recreation. There was one supplemental budget. See page 37 for more information.

SIGNIFICANT CAPITAL ASSET ACTIVITY

At December 31, 2014, the City had invested $8,033,605 in a broad range of capital assets, including land, buildings, improvements, and equipment. This amount represents a net increase (including additions and deductions) of $3,352,211 or 71.61% from December 31, 2013.

Significant capital asset activity is reported above. See page 33 for more information.

SIGNIFICANT LONG-TERM DEBT ACTIVITY

Significant long-term debt activity is reported above. The City is current on all long-term debt. See page 34 to 36 for more information.

CURRENTLY KNOWN FACTS

Funding in 2013, 2014 and 2015 of water and sewer improvements is:

	2013	2014	2015	Total
WATER FUND				
2013 Drinking water loan -01	$ 165,440	$ 0	$ 0	$ 165,440
Amount forgiven	(165,440)	(0)	(0)	(165,440)
2013 Drinking water loan -02	317,049	117,479	0	434,528
2014 Drinking water loan -03		937,399	662,601	1,600,000
Amount forgiven		(567,126)	(400,874)	(968,000)
SEWER FUND				
2013 Clean water loan -01	985,863	588,385	0	1,574,248
Amount forgiven	(223,790)	(132,710)	(0)	(356,500)
2014 Clean water loan -02		612,184	187,816	800,000
Amount forgiven		(382,615)	(117,385)	(500,000)
2014 Consolidated Water Facility		756,591	243,409	1,000,000
Construction Project grant (CWFCP)		(756,591)	(243,409)	(1,000,000)
Net new loans	$1,079,122	$1,172,996	$ 332,158	$2,584,276

The City will be installing 200 electrical radio-read meters in 2015.

In November 2014 the City awarded a low bid of $767,990 to Maguire Iron to build a new water tower in 2015.

In 2015 the City submitted an application to the Department of Environment and Natural Resources for funding related to its Highway 34 Water Main Replacement project (Phase 3). The project is expected to cost $525,000 with financing from a State Revolving Fund Loan (SRF).

CITY OF COLMAN

TABLE 1 - NET POSITION (condensed and in thousands)
FULL ACCRUAL - BASED ON GOVERNMENT-WIDE FINANCIAL STATEMENTS
AS OF DECEMBER 31, 2014 AND DECEMBER 31, 2013

	Governmental Activities		Business-Type Activities		Total Government	
	2014	2013	2014	2013	2014	2013
Assets:						
Current assets	178	170	537	1,123	715	1,293
Capital assets	1,241	1,174	6,793	3,508	8,034	4,682
Other assets	20	70			20	70
Total	1,439	1,414	7,330	4,631	8,769	6,045
Liabilities:						
Current liabilities	56	61	398	779	454	840
Long-term debt	562	573	2,318	1,237	2,880	1,810
Total	618	634	2,716	2,016	3,334	2,650
Net position:						
Net invested in capital assets	681	602	4,468	2,275	5,149	2,877
Restricted	20	70	132	12	152	82
Unrestricted	120	108	14	328	134	436
Total	821	780	4,614	2,615	5,435	3,395

TABLE 2 - CHANGES IN NET POSITION (condensed and in thousands)
FULL ACCRUAL - BASED ON GOVERNMENT-WIDE FINANCIAL STATEMENTS
FOR THE YEAR ENDING DECEMBER 31, 2014 AND DECEMBER 31, 2013

	Governmental Activities		Business-Type Activities		Total Government	
	2014	2013	2014	2013	2014	2013
Revenues:						
Program revenues:						
Charges for services	24	27	1,445	1,457	1,469	1,484
Operating grants and contributions	2		3		5	0
Capital grants and contributions			1,877	389	1,877	389
General revenues:						
Property taxes	83	80			83	80
Sales taxes	176	166			176	166
State shared revenue	35	32			35	32
County shared revenue	2	2			2	2
Interest earnings	1	3			1	3
Rents and franchise fees	34	22			34	22
Miscellaneous	1				1	0
Total revenues	358	332	3,325	1,846	3,683	2 178
Expenses:						
General government	107	111			107	111
Public safety	64	56			64	56
Public works	65	105			65	105
Health and welfare	9	10			9	10
Culture and recreation	86	78			86	78
Economic development		7			0	7
Interest expense and fees	27	26			27	26
Liquor			28	36	28	36
Water			126	104	126	104
Electric			866	838	866	838
Sewer			78	62	78	62
Solid waste			43	37	43	37
Recreation (golf)			144	164	144	164
Total expenses	358	393	1,285	1,241	1,643	1,634
Revenues over (under) expenses	0	(61)	2,040	605	2,040	544
Transfers	41	24	(41)	(24)	0	0
Change in net position	41	(37)	1,999	581	2,040	544
Net position:						
December 31, 2012		817		2,034		2,851
December 31, 2013	780	780	2,615	2,615	3,395	3,395
December 31, 2014	821		4,614		5,435	

In April 2014 the Council passed a motion to have First District and Power Systems Engineering start a pre-mitigation grant application process to bury and update overhead electrical lines, which is expected to be done in 2016.

CONTACTING THE CITY'S FINANCIAL MANAGEMENT

This financial report is designed to provide our citizens, taxpayers, customers, investors and creditors with a general overview of the City's finances and to demonstrate the City's accountability for the money it receives. If you have questions about this report or need additional information, contact the City of Colman's business office at 112 Main Street, Colman, SD 57017 or call 605.534.3611.

CITY OF COLMAN

GOVERNMENT-WIDE - STATEMENT OF NET POSITION
AS OF DECEMBER 31, 2014

	Primary Government		
	Governmental Activities	Business-Type Activities	Total
ASSETS:			
Current assets:			
Cash and cash equivalents	169,411	88,918	258,329
Taxes receivable - delinquent	970		970
Due from other governments	5,039	281,672	286,711
Accounts receivable	2,527	166,444	168,971
Internal balances	0	0	0
Capital assets:			
Land	292,386	10,770	303,156
Other capital assets, net of accumulated depreciation	948,513	6,781,936	7,730,449
Other assets:			
Insurance deposit	19,942		19,942
Total assets	1,438,788	7,329,740	8,768,528
LIABILITIES:			
Current liabilities:			
Accounts payable	16,238	363,355	379,593
Payroll deductions payable	10,644		10,644
Customer deposits	5,012	22,964	27,976
Matured interest payable	24,571	11,990	36,561
Noncurrent liabilities:			
Leave liability	1,604	4,350	5,954
Due within one year	31,602	54,294	85,896
Due in more than one year	528,562	2,258,760	2,787,322
Total liabilities	618,233	2,715,713	3,333,946
NET POSITION:			
Net invested in capital assets	680,735	4,467,662	5,148,397
Restricted for:			
Debt service		131,911	131,911
Insurance deposit	19,942		19,942
Unrestricted	119,878	14,454	134,332
Total net position	820,555	4,614,027	5,434,582

See accompanying notes.

CITY OF COLMAN

GOVERNMENT-WIDE - STATEMENT OF ACTIVITIES
FOR THE YEAR ENDING DECEMBER 31, 2014

Functions/Programs:	Expenses	Program Revenues: Charges for Services and Reimbursements	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants and Contributions	Net (Expenses) Revenues and Changes in Net Position: Governmental Activities	Net (Expenses) Revenues and Changes in Net Position: Business-type Activities	Totals
Primary government:							
Governmental activities:							
General government	107,022	1,518			(105,504)		(105,504)
Public safety	63,540				(63,540)		(63,540)
Public works	65,140				(65,140)		(65,140)
Health and welfare	9,196	10,136	1,667		2,607		2,607
Culture and recreation	86,322	12,292			(74,030)		(74,030)
Interest and fees (all)	26,878				(26,878)		(26,878)
Total governmental activities	358,098	23,946	1,667	0	(332,485)	0	(332,485)
Business-type activities:							
Liquor	27,905	32,576				4,671	4,671
Water	126,002	135,780		567,126		576,904	576,904
Electric	865,916	973,228	2,500			109,812	109,812
Sewer	78,178	133,369		1,310,216		1,365,407	1,365,407
Solid waste	43,461	36,844				(6,617)	(6,617)
Recreation	143,569	133,466				(10,103)	(10,103)
Total business-type activities	1,285,031	1,445,263	2,500	1,877,342	0	2,040,074	2,040,074
Total primary government	1,643,129	1,469,209	4,167	1,877,342	(332,485)	2,040,074	1,707,589
General revenues:							
Taxes:							
Property taxes					82,514		82,514
Sales taxes					175,988		175,988
Amusement taxes					120		120
State shared revenue					34,593		34,593
County shared revenue					1,811		1,811
Interest earnings					484	78	562
Rents and franchise fees					33,839		33,839
Miscellaneous					1,615		1,615
Transfers in (out)					41,512	(41,512)	0
Total general revenue and transfers					372,476	(41,434)	331,042
Change in net position					39,991	1,998,640	2,038,631
Net position, January 1, 2014					780,564	2,615,387	3,395,951
Net position, December 31, 2014					820,555	4,614,027	5,434,582

See accompanying notes.

CITY OF COLMAN

BALANCE SHEET - GOVERNMENTAL FUNDS
AS OF DECEMBER 31, 2014

	General Fund	TIF #1 Debt Service Fund	Total Governmental Funds
ASSETS:			
Cash and cash equivalents	157,522	11,889	169,411
Property taxes receivable	970		970
Due from other governments	5,039		5,039
Accounts receivable	2,527		2,527
Insurance deposit	19,942		19,942
Total assets	186,000	11,889	197,889
DEFERRED OUTFLOWS OF RESOURCES			
None			0
Total deferred outflows of resources	0	0	0
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	186,000	11,889	197,889
LIABILITIES:			
Accounts payable	16,238		16,238
Payroll deductions payable	10,644		10,644
Customer deposits	5,012		5,012
Matured interest payable		24,571	24,571
Total liabilities	31,894	24,571	56,465
DEFERRED INFLOWS OF RESOURCES			
Unavailable revenue - property taxes	970		970
Total deferred inflows of resources	970	0	970
FUND BALANCES (DEFICIT):			
Nonspendable	19,942		19,942
Restricted			0
Committed			0
Assigned			0
Unassigned	133,194	(12,682)	120,512
Total fund balance	153,136	(12,682)	140,454
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND FUND BALANCES	186,000	11,889	197,889

Reconciliation of the above balance sheet - governmental funds to the government-wide statement of net position	
Total fund balance - governmental funds (above)	140,454
Amounts reported in the government-wide statement of net assets are different because:	
Capital assets and other assets used in governmental activities are not financial resources and therefore are not reported as assets in governmental funds.	
Capital assets are:	2,260,261
Less: accumulated depreciation	(1,019,362)
Assets such as taxes receivable (delinquent) are not available to pay for current period expenditures and therefore are deferred in the funds.	970
Long-term liabilities are not due and payable in the current period and therefore are not reported as liabilities in the funds.	
Long term liabilities at year end consist of:	
2007 South Dakota Housing loan	(390,000)
2009 Sales Tax Revenue Bonds	(165,000)
2013 Bobcat loan	(5,164)
Accrued leave payable	(1,604)
Total net position on government-wide statement of net position	820,555

See accompanying notes.

CITY OF COLMAN

STATEMENT OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCES -- GOVERNMENTAL FUNDS
FOR THE YEAR ENDING DECEMBER 31, 2014

	General Fund	TIF #1 Debt Service Fund	Total Governmental Funds
Revenue:			
Revenue from local sources:			
Taxes: Ad valorem taxes	52,296	31,136	83,432
General sales and use taxes	175,988		175,988
Amusement taxes	120		120
Licenses and permits:	1,432		1,432
Intergovernmental revenue:			
State shared revenue:			
Grant - tobacco prevention	1,667		1,667
Bank franchise tax	504		504
Commercial prorate	1,621		1,621
Liquor tax reversion	3,716		3,716
Motor vehicle licenses (5%)	8,104		8,104
Highway and bridge	20,648		20,648
County shared revenue:			
Road taxes	1,811		1,811
Charges for goods and services:			
West Nile	10,136		10,136
Swimming pool	6,231		6,231
Camping	5,211		5,211
Events	850		850
Fines and forfeits:	86		86
Miscellaneous revenue:			
Interest earned	484		484
Rental and franchise	33,839		33,839
Other	1,615		1,615
Total revenues	326,359	31,136	357,495
Expenditures:			
General government:			
Mayor and Council	18,895		18,895
Elections	241		241
Financial administration	12,438		12,438
Other	70,322		70,322
Public safety:			
Police	27,917		27,917
Fire	28,854		28,854
Public works:			
Highways and streets	54,490		54,490
Health and welfare:			
West Nile	8,902		8,902
Culture and recreation:			
Swimming pool	31,485		31,485
Parks and recreation	28,646		28,646
Debt service:			
Principal	11,595		11,595
Interest	8,666	18,213	26,879
Capital outlay	116,163		116,163
Total expenditures	418,614	18,213	436,827
Excess of revenues over (under) expenditures	(92,255)	12,923	(79,332)
Other financing sources (uses): Transfers in	41,512		41,512
Net change in fund balance	(50,743)	12,923	(37,820)
Fund balance (deficit):			
January 1, 2014	203,879	(25,605)	178,274
December 31, 2014	153,136	(12,682)	140,454

Reconciliation of the above statement of revenues, expenditures, and changes in fund balances to the government-wide statement of activities.	
Amounts reported in the government-wide statement of net position are different because:	
Net change in fund balances - total governmental funds (above)	(37,820)
Governmental funds report capitalized cost as expenditures. However, in the statement of activities the cost of these assets is allocated over their estimated useful lives and reported as depreciation.	
2014 capitalized cost are	116,163
2014 depreciation is	(48,993)
Long-term debt proceeds are reported as other financing sources in governmental funds statement. However, in the statement of net position, issuing debt increases long-term liabilities and does not effect the statement of activities. Similarly, repayment of principal is an expenditure in the governmental funds, but reduces the liability in the statement of net position.	
Therefore: Add: 2009 sales tax revenue bond principal payments	8,000
Add: 2013 Bobcat loan payments	3,595
Some property taxes will not be collected for several months after the City's year-end. Therefore, they are not considered "available" revenues and are deferred in the governmental funds statement.	(919)
Governmental funds do not reflect the change in "accrued leave", but the statement of activities reflects the change in "accrued leave" through expenditures.	(35)
Change in net position on government-wide statement of activities	39,991

See accompanying notes.

CITY OF COLMAN

STATEMENT OF REVENUES, EXPENSES, AND CHANGES
IN NET POSITION - ENTERPRISE FUNDS
FOR THE YEAR ENDING DECEMBER 31, 2014

	Liquor Fund	Water Fund	Electric Fund	Sewer Fund	Solid Waste Fund	Recreation Fund	Total Enterprise Funds
Operating revenue:							
Charges for goods and services	8,215	135,780	973,228	133,369	36,844	133,466	1,420,902
Lottery sales	24,361						24,361
Total operating revenue	32,576	135,780	973,228	133,369	36,844	133,466	1,445,263
Operating expenses:							
Personal services	5,397	19,702	26,595	15,758		69,150	136,602
Other current services	3,698	34,079	124,752	27,664	8,309	39,496	237,998
Cost of goods sold	16,280	34,814	700,157		35,152	25,583	811,986
Depreciation	2,530	21,407	12,024	24,021		7,863	67,845
Total operating expenses	27,905	110,002	863,528	67,443	43,461	142,092	1,254,431
Total operating income (loss)	4,671	25,778	109,700	65,926	(6,617)	(8,626)	190,832
Nonoperating revenue (expense):							
Interest earnings	8		36			34	78
Interest expense and fees			(2,388)	(2,735)		(1,477)	(6,600)
Operating grant			2,500				2,500
Debt issue cost - bond counsel		(16,000)		(8,000)			(24,000)
Total nonoperating revenue (expense)	8	(16,000)	148	(10,735)	0	(1,443)	(28,022)
Income (loss) before transfer	4,679	9,778	109,848	55,191	(6,617)	(10,069)	162,810
Transfers in				61,613		25,000	86,613
Transfers (out)	(10,234)		(117,891)				(128,125)
SRF loan forgiven		567,126		515,325			1,082,451
State grant (CWFCP)				756,591			756,591
Homeland security grant				38,300			38,300
Change in net position	(5,555)	576,904	(8,043)	1,427,020	(6,617)	14,931	1,998,640
Net position:							
January 1, 2014	97,630	772,462	561,454	1,156,088	26,257	1,496	2,615,387
December 31, 2014	92,075	1,349,366	553,411	2,583,108	19,640	16,427	4,614,027

See accompanying notes.

CITY OF COLMAN

STATEMENT OF NET POSITION - ENTERPRISE FUNDS
AS OF DECEMBER 31, 2014

	Liquor Fund	Water Fund	Electric Fund	Sewer Fund	Solid Waste Fund	Recreation Fund	Total Enterprise Funds
ASSETS:							
Current assets:							
Cash and cash equivalents	30,284	0	27,196	0	16,936	14,502	88,918
Due from other governments		105,028		176,644			281,672
Accounts receivable		18,242	124,137	18,441	5,624		166,444
Due from other funds			226,531				226,531
Total current assets	30,284	123,270	377,864	195,085	22,560	14,502	763,565
Noncurrent assets:							
Capital assets:							
Land				10,770			10,770
Buildings	126,506	10,353		6,746			143,605
Improvements		710,350	523,059	1,005,139			2,238,548
Equipment	8,540			38,300		47,178	94,018
Accumulated depreciation	(71,793)	(318,153)	(222,685)	(211,431)		(23,589)	(847,651)
Construction-in-progress		1,927,509		3,225,907			5,153,416
Total noncurrent assets	63,253	2,330,059	300,374	4,075,431	0	23,589	6,792,706
Total assets	93,537	2,453,329	678,238	4,270,516	22,560	38,091	7,556,271
LIABILITIES:							
Current liabilities:							
Accounts payable	1,280	108,264	71,890	178,604	2,920	397	363,355
Due to other funds		166,144		60,387			226,531
Customer deposits		11,482	11,482				22,964
Accrued interest payable		11,990					11,990
Current portion of:							
Long-term debt		6,857	21,914	18,238		7,285	54,294
Total current liabilities	1,280	304,737	105,286	257,229	2,920	7,682	679,134
Noncurrent liabilities:							
Leave liability	182	1,282	1,786	1,100			4,350
Noncurrent portion of long-term debt		797,944	17,755	1,429,079		13,982	2,258,760
Total noncurrent liabilities	182	799,226	19,541	1,430,179	0	13,982	2,263,110
Total liabilities	1,462	1,103,963	124,827	1,687,408	2,920	21,664	2,942,244
NET POSITION (DEFICIT)							
Net invested in capital asset	63,253	1,513,268	260,705	2,628,114		2,322	4,467,662
Restricted:							
Debt service		78,337		53,574			131,911
Unrestricted	28,822	(242,239)	292,706	(98,580)	19,640	14,105	14,454
Total net position	92,075	1,349,366	553,411	2,583,108	19,640	16,427	4,614,027

See accompanying notes.

CITY OF COLMAN

STATEMENT OF CASH FLOWS - ENTERPRISE FUNDS
FOR THE YEAR ENDING DECEMBER 31, 2014

	Liquor Fund	Water Fund	Electric Fund	Sewer Fund	Solid Waste Fund	Recreation Fund	Total Enterprise Funds
Cash flows from:							
Operating activities:							
Receipts from customers	32,748	131,986	949,102	133,301	35,702	133,466	1,416,305
Estimated rec. from other funds		3,500	30,000	3,000	1,500		38,000
Payments to employees	(5,373)	(19,650)	(26,536)	(15,730)		(69,150)	(136,439)
Payments to suppliers	(20,338)	(64,151)	(836,994)	(24,764)	(43,437)	(60,034)	(1,049,718)
Estimated pymts. to other funds		(2,000)		(1,000)		(5,000)	(8,000)
Net cash provided (used) by operating activities	7,037	49,685	115,572	94,807	(6,235)	(718)	260,148
Noncapital financing activities:							
Due from other funds		89,600	(68,943)				20,657
Due to other funds		166,144		(186,800)			(20,656)
Operation grant			2,500				2,500
Transfers in				61,613		25,000	86,613
Transfers (out)	(10,234)		(117,891)				(128,125)
Capital financing activities:							
SRF loans forgiven (capital contri.)		567,126		515,325			1,082,451
SRF loans proceeds		487,752		685,244			1,172,996
Capital grants		189,169		618,247			807,416
Cash paid for equipment				(38,300)			(38,300)
Cash paid for construction		(1,533,476)		(1,676,267)			(3,209,743)
Principal paid on debt			(21,312)	(63,134)		(8,337)	(92,783)
Interest paid on debt			(2,388)	(2,735)		(1,477)	(6,600)
Debt issue cost - bond counsel		(16,000)		(8,000)			(24,000)
Investing activities:							
Interest received	8		36			34	78
Investments redeemed			101,936				101,936
Net increase (decrease) in cash	(3,189)	0	9,510	0	(6,235)	14,502	14,588
Cash:							
January 1, 2014	33,473	0	17,686	0	23,171	0	74,330
December 31, 2014	30,284	0	27,196	0	16,936	14,502	88,918
Reconciliation of operating income (loss) to net cash provided (used) by operating activities:							
Operating income (loss)	4,671	25,778	109,700	65,926	(6,617)	(8,626)	190,832
Depreciation	2,530	21,407	12,024	24,021		7,863	67,845
(Increase) decrease in:							
Receivables	172	(294)	5,874	2,932	358		9,042
Increase (decrease) in:							
Accounts payable	(360)	2,742	(12,085)	1,900	24	45	(7,734)
Leave liability	24	52	59	28			163
Net cash provided (used) by operating activities	7,037	49,685	115,572	94,807	(6,235)	(718)	260,148
Noncash investing, capital and financing activities:							
Accrued interest		11,990					

See accompanying notes.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accounting policies of the City of Colman conform to generally accepted accounting principles applicable to government entities in the United States of America.

a. Reporting Entity:

The funds and account groups included in this report are controlled by or dependent upon the City of Colman's (City) Governing Board.

The City's officials at December 31, 2014 are:

Mayor:
Gloria Van Duyn

Finance Officer:
Michael Hauglid

Governing Board:
Mike Uhing, President
Roger Broghammer
Ben Elhoff
Russ May
Brad Schroeder
David Voelker

Attorney:
Jay Leibel

The City's financial reporting entity is composed of the following:

Financial Reporting Entity:
Primary Government: - The City of Colman
Component Units: - None

To determine the financial reporting entity, the City complies with the provisions of GASB Statement No. 14, *The Financial Reporting Entity*.

The reporting entity of the City of Colman consists of (1) the primary government, which includes all of the funds, organizations, institutions, agencies, departments, and offices that make up the legal entity, plus those funds for which the primary government has a fiduciary responsibility, even though those fiduciary funds may represent organizations that do not meet the criteria for inclusion in the financial reporting entity; (2) those organizations for which the primary government is financially accountable; and (3) other organizations for which the nature and significance of their relationship with the primary government are such that their exclusion would cause the financial reporting entity's financial statements to be misleading or incomplete.

Component units are legally separate organizations for which the elected officials of the primary government are financially accountable. The City is financially accountable if its governing board appoints a voting majority of another organization's governing body and it has the ability to impose its will on that organization, or there is a potential for that organization to provide specific financial benefits to, or impose specific financial burdens on the City (the primary government). The City may also be financially accountable for another organization if that organization is fiscally dependent on the City unless that organization can, without the approval of the City: (1) set its own budget; (2) determine its own rates or charges; and (3) borrow money.

Based upon the application of these criteria the City of Colman has no component units.

b. Basis of Presentation:

Government-wide Financial Statements:

The government-wide financial statements include the Statement of Net Position and the Statement of Activities. These statements display information about the reporting entity as a whole. They include all funds of the reporting entity except for fiduciary funds. The statements distinguish between governmental and business-type activities. Governmental activities generally are financed through taxes, intergovernmental revenues, and other non-exchange revenues. Business-type activities are financed in whole or in part by fees charged to external parties for good and services.

The Statement of Net Position reports all financial and capital resources, in a net position form (assets minus liabilities equal net position). Net position is displayed in three components, as applicable: net invested in capital assets, restricted (distinguishing between major categories of restrictions), and unrestricted.

The Statement of Activities presents a comparison between direct expenses and program revenues for each function of the City's governmental activities and for each segment of City's business-type activities. Direct expenses are associated with a specific program or function and are clearly identifiable to a particular function. Program revenues include (a) charges paid by recipients of goods and services offered by the program and (b) grants and contributions that are restricted to meeting the operational or capital requirements of a particular program. Revenues that are not classified as program revenues, including all taxes and interest, are presented as general revenues.

Fund Financial Statements:

The fund financial statements include specific information about individual funds used by the reporting entity. Each fund is considered a separate accounting entity with a separate set of self-balancing accounts that constitutes its assets, liabilities, net position, revenues, and expenditures/expenses. Funds are organized into three major categories: governmental, enterprise, and fiduciary. An emphasis is placed on major funds within the governmental and enterprise categories. A fund is considered major if it is the primary operating fund of the City or if it meets the following criteria:

a. Total assets, liabilities, revenues, or expenditures/expenses of the individual governmental or enterprise fund are at least 10 percent of the corresponding element total (assets, liabilities, revenues, or expenditures/ expenses) for all funds of that category (that is, total governmental or total enterprise), and

b. The same element that meets the 10 percent criterion in (a) is at least 5 percent of the corresponding element total for all governmental and enterprise funds combined.

c. In addition to funds that meet the major fund criteria, any other governmental or enterprise fund that the government's official believe is particularly important to financial statement users (for example, because of public interest or consistency) may be reported as a major fund.

The City has elected to classify all of its funds as major funds.

Funds of the City are described below within their respective fund type:

Governmental Funds

General Fund - a fund established by South Dakota Codified Law (SDCL) 4-11-6 to met all the general operational costs of the City except those required to be accounted for in another fund. The general fund is always a major fund.

Debt Service Fund Type - debt service funds are used to account for the accumulation of resources for, and the payment of, general long-term debt principal, interest, and related costs. The City has the following debt service funds:

Tax Increment Financing (TIF) District funds - Funds allowed by SDCL 11-9-24 to account for the proceeds of incremental property taxes, restricted to the payment of principal and interest on debt issued to finance a public improvement. The City accounts for 1 legally separate TIF debt fund. This TIF debt service fund is a major fund.

Enterprise Funds
(Business-Type)

Enterprise Funds - Enterprise funds are used to account for activity for which a fee is charged to external users for goods or services. The City has the following enterprise funds:

Liquor fund - A fund established by SDCL 35-3-21 to provide liquor services to customers in the City of Colman. The liquor fund is a major fund.

Water fund - A fund established by SDCL 9-47-1 to provide water to customers within the City of Colman. The water fund is a major fund.

Electric fund - A fund established by SDCL 9-39-1 and 9-39-26 to provide electrical service to customers within the City of Colman. The electric fund is a major fund.

Sewer fund - A fund established by SDCL 9-48-2 to provide sewer services to customers within the City of Colman. The sewer fund is a major fund.

Solid Waste fund - A fund established by SDCL 9-32-11 and 34A-6 to provide collection and disposal of solid waste from the City of Colman. The solid waste fund is a major fund.

Recreation fund - A fund established by SDCL 35-3-21, 9-38-60 and 9-38-69 to provide clubhouse (liquor), golf and swimming pool activities from the City of Colman. The recreation fund is a major fund.

Fiduciary Funds

Fiduciary are never considered to be major funds.

In 2014 the City did not have any fiduciary funds.

c. Measurement Focus and Basis of Accounting:

Measurement focus is a term used to describe "what" transactions are recorded within the various financial statements. Basis of accounting refers to "when" revenues and expenditures or expenses are recognized in the accounts and reported in the financial statements, regardless of the measurement focus.

Measurement Focus

Government-wide Financial Statements:

Both governmental and business-type activities are presented using the "economic resources" measurement focus, applied on the accrual basis of accounting.

The "economic resources" measurement focus includes all assets and liabilities (whether current or noncurrent, financial, or nonfinancial) on the balance sheet. Operating statements use the flow of all economic resources to present operating income, changes in net position, and cash flows during the accounting period. This measurement focus uses the term "net position" to describe its equity at the end of the accounting period.

Fund Financial Statements:

All governmental funds are presented using the "current financial resources" measurement focus and the modified accrual basis of accounting.

The "current financial resources" measurement focus includes only current financial assets and liabilities on the balance sheet. Operating statements present sources and uses of available spendable financial resources during the accounting period. This measurement focus uses the term "fund balance" to describe its equity at the end of the accounting period. It is a measure of available spendable financial resources.

Enterprise and fiduciary funds are presented using the "economic resources" measurement focus (described above) and the accrual basis of accounting.

Basis of Accounting

Government-wide Financial Statements:

In the government-wide financial statements, the accrual basis of accounting is used for both governmental and business-type activities in the Statement of Net Position and Statement of Activities. Under the accrual basis of accounting, revenues and related assets generally are recorded when earned (usually when the right to receive cash vests); and, expenses and related liabilities are recorded when an obligation is incurred (usually when the obligation to pay cash in the future vests).

Fund Financial Statements:

In the fund financial statements, all governmental funds are accounted for using the modified accrual basis of accounting. Their revenues, including property taxes, generally are recognized when they become measurable and available. "Available" means resources are collected or to be collected soon enough after the end of the fiscal year that they can be used to pay the bills of the current period. The accrual period does not exceed one bill-paying cycle, which for the City is 30 days. Revenue which is accrued at December 31, 2014 are amounts due from other governments and other accounts receivable.

Under the modified accrual basis of accounting, receivables may be measurable but "not available". Not available means not collectible within the current period or soon enough thereafter (30 days) to be used to pay liabilities of the current period. Reported "deferred inflow of resources" are those where the asset recognition criteria has been met but for which the revenue recognition criteria has not been met because the receivable is not available.

Expenditures generally are recognized when the related fund liability is incurred. Exceptions to this general rule include principal and interest on general long-term debt which are recognized when due. However, the City of Colman budgets for, and makes payment of, debt obligations due on January 1st as of December 31st, the end of the City's fiscal year.

All enterprise funds and fiduciary funds (if any) are accounted for using the accrual basis of accounting, the same as in the government-wide financial statements. Their revenues are recognized when they are earned, and their expenses are recognized when they are incurred.

d. Interfund Eliminations and Reclassifications:

Government-wide Financial Statements:

In the process of aggregating data for the government-wide financial statements, some amounts reported as interfund activity and balances in the fund financial statements have been eliminated or reclassified as follows:

In order to minimize the grossing-up effect on assets and liabilities within the governmental and business-type activities columns of the primary government, amounts reported as interfund receivables and payables have been eliminated in the governmental and business-type activities columns, except for the net residual amounts due between governmental and business-type activities, which are presented as "Internal Balances" (if any).

Fund Financial Statements:

In the fund financial statements, noncurrent portions of long-term interfund receivables (reported in "Advance to" asset accounts) are equally offset by a nonspendable fund balance which indicates that they do not constitute "available spendable resources" since they are not a component of net position. Current portions of interfund receivables (reported in "Due from" asset accounts) are considered "available spendable resources."

e. Interfund Transactions:

Transactions that constitute reimbursements to a fund for disbursements made from it, and that are properly applicable to another fund, are recorded as a disbursement in the reimbursing fund and as reductions of disbursements in the fund that is reimbursed. All other interfund transactions are reported as transfers.

f. Cash and Cash Equivalents:

In the enterprise funds' statement of cash flows, the City considers all highly liquid investments and deposits (including restricted assets) with a term to maturity of three months or less when purchased to be cash equivalents. Those portions of the enterprise funds' cash resources that are included in the City's internal cash management pool are considered to be cash and cash equivalents, regardless of the form in which they are held, because use of the pool provides each enterprise fund with access to its cash resources essentially on demand.

g. Capital Assets and Infrastructure assets:

Capital assets include land, buildings, improvements, and equipment, and all other tangible or intangible assets that are used in operations, which have initial useful lives extending beyond a single reporting period. *Infrastructure* assets are long-lived capital assets that normally are stationary in nature and normally can be preserved for significantly greater number of years than most capital assets. Infrastructure assets, if any, are classified as "Improvements Other then Buildings."

Government-wide Financial Statements:

In the government-wide financial statements, capital assets are accounted for on the accrual basis of accounting. Capital asset purchases are capitalized and not expensed. Instead, capital purchases are expensed over the life of the asset as depreciation or amortization.

Capital assets are valued at historical cost, or estimated historical cost, if actual historical cost is not available. Donated capital assets are valued at their estimated fair value on the date donated. Reported cost values include ancillary charges necessary to place the asset into its intended location and condition for use. After an item has been capitalized, subsequent improvements or betterments that are significant, and which extend the useful life of the item, are also capitalized.

The total December 31, 2014 balance of capital assets for governmental activities include approximately 10% for which the costs were determined by estimates of the original costs. The total December 31, 2014 balance of capital assets for business-type activities includes approximately 10% for which the costs were determined by estimates of the original costs. Estimated original costs were established by basing the estimates on a comparison to historical costs of similar items.

Interest cost incurred during construction of general capital assets are not capitalized with other capital asset cost. Interest cost incurred during construction of enterprise capital assets are capitalized with other capital asset cost.

Depreciation of all exhaustible capital assets is recorded as an allocated expense in the government-wide statement of activities and the enterprise fund statement of revenue, expenses and changes in fund net position. Accumulated depreciation is reported on the government-wide statement of net position and on the enterprise fund's statement of net position. See also page 33.

Capitalization thresholds (the dollar values above which asset acquisitions are added to the capital asset accounts), depreciation method, and estimated useful lives of capital assets reported in the government-wide statements and enterprise funds are as follows:

	Capitalization Threshold	Depreciation Method	Estimated Life in Years
Land	All		NA
Buildings and structures	All	Straight-line	33-50
Improvements	5,000	Straight-line	20-25
Equipment	5,000	Straight-line	5-10

Land is an inexhaustible capital asset and is not depreciated.

There is construction-in-progress at December 31, 2014 for water and sewer line improvements. See page 33 for more information.

Fund Financial Statements:

Capital assets and related depreciation expenses are not recorded in governmental funds of the fund financial statements because these funds have a "current financial resources" measurement focus. Instead, these funds report capital asset acquisitions as capital outlay expenditures.

Capital assets and related depreciation expenses are recorded on the accrual basis of accounting in the enterprise funds of the fund financial statements, the same as in the government-wide statements.

h. Long-term Liabilities:

Government-wide Financial Statements:

In the government-wide financial statement, all long-term liabilities to be repaid from governmental or business-type resources are reported as liabilities. Long-term liabilities primarily consist of revenue bonds and accrued leave payable.

Fund Financial Statements:

In the fund financial statements, governmental debt proceeds are reported as revenues (other financing sources), while payments of principal and interest are reported as expenditures when they become due. Enterprise fund long-term debt is reported as a liability, the same as in the government-wide statements.

i. Program Revenues and General Revenues and Deferred Inflows and Deferred Outflows of Resources:

Program Revenue

In the government-wide Statement of Activities, reported program revenues derive directly from the program itself or from parties other than the City's taxpayers or citizenry, as a whole. Program revenues are classified into three categories, as follows:

1. Charges for services - These arise from charges to customers, applicants, or others who purchase, use, or directly benefit from the goods, services, or privileges provided, or are otherwise directly affected by the services.

2. Program-specific operating grants and contribution - These arise from mandatory and voluntary non-exchange transactions with other governments, organizations, or individuals that are restricted for use in a particular program.

3. Program-specific capital grants and contribution - These arise from mandatory and voluntary non-exchange transactions with other governments, organizations, or individuals that are restricted for the acquisition of capital assets for use in a particular program.

General Revenue

General revenues include all revenues not specifically earmarked for a specific program. General revenues include all taxes, interest earnings, unrestricted receipts from federal, state, or county governments, and miscellaneous revenues not related to a program. These revenues are not restricted and can be used for the regular operation of the City.

Deferred Outflows and Deferred Inflows of Resources

In addition to assets, the statement of financial position and balance sheet reports a separate section for deferred outflows of resources (if any). Deferred outflows of resources represent consumption of net position that applies to a future period or periods. These items will not be recognized as an outflow of resources until the applicable future period.

In addition to liabilities, the statement of financial position and balance sheet reports a separate section for deferred inflows of resources (if any). Deferred inflows of resources represent acquisitions of net position that applies to a future period or periods. These items will not be recognized as an inflow of resources until the applicable future period.

j. Enterprise Fund Revenue and Expense Classifications:

In the government-wide and fund financial statements, enterprise revenues and expenses are classified in a manner consistent with how they are classified in the statement of cash flows. That is, transactions for which related cash flows are reported as capital and related financing activities, noncapital financing activities, or investing activities are not reported as components of operating revenues or expenses.

k. Equity Classifications:

Government-wide Financial Statements:

Equity is classified as "Net Position" and is displayed in three components:

1. Net Invested in Capital Assets - Consists of capital assets, including restricted capital assets, net of accumulated depreciation (if applicable) and reduced by the outstanding balances of any bonds payable, capitalized leases payable, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets.

2. Restricted Net Position - Consists of net position with constraints placed on its use either by (a) external groups such as creditor, grantor, contributors, or laws and regulations of other governments; or (b) law through constitutional provisions or enabling legislation.

3. Unrestricted Net Position - Other net position that does not meet the criteria of 1 or 2 above.

Fund Financial Statements:

Governmental fund equity is classified as "Fund Balance", and may distinguish between "Nonspendable", "Restricted", "Committed, "Assigned", and "Unassigned" components. Enterprise fund equity is classified as "Net Position", the same as in the government-wide financial statements. Fiduciary fund equity (except for agency funds, which have no fund equity) is reported as "Net Position" held in trust for a purpose.

l. Fund Balance Classification Policies and Procedures:

In accordance with Government Accounting Standards Board (GASB) No. 54, Fund Balance Reporting and Governmental Fund Type Definitions, the City classifies governmental fund balances as follows:

* Nonspendable - includes fund balance amounts that cannot be spent either because it is not in spendable form or because of legal or contractual constraints.

* Restricted - includes fund balance amounts that are constrained for specific purposes which are externally imposed by providers, such as creditors, or amounts constrained due to constitutional provisions or enabling legislation.

* Committed - includes fund balance amounts that are constrained for specific purposes that are internally imposed (or modified or rescinded) by the government through formal action at the highest level of decision making authority and does not lapse at year-end.

* Assigned - includes fund balance amounts that are intended to be used for specific purposes that are neither considered restricted or committed. Fund balance may be assigned by the Council or Finance Officer.

* Unassigned - includes positive fund balance within the general fund which has not been classified within the above categories and negative fund balances in other governmental funds.

The City of Colman fund balance classifications are made up of:

Fund Balance Classifications	Account or Fund	Authority or Action	Amount
Nonspendable	General - Insurance deposit	SDPAA Contract	19,942
Restricted	None		0
Committed	None		0
Assigned	None		0
Unassigned	General		133,194
Unassigned	TIF #1		(12,682)
			140,454

The City uses "restricted" and "committed" amounts first when restricted and unrestricted fund balance is available unless there are legal documents/contracts that prohibit doing this, such as a grant agreement requiring dollar for dollar spending. Additionally, the City would first use "committed", then "assigned", and lastly "unassigned" amounts of unrestricted fund balance when expenditures are made.

The City does not have a formal minimum fund balance policy.

The City does not have any special revenue funds.

m. Application of Net Position:

It is the City's policy to first use restricted net position, prior to the use of unrestricted net position, when an expense is incurred which can be charged to either restricted or unrestricted net position.

n. Allowance for Doubtful Accounts:

Because write-off of uncollected taxes and/or utility billings is minimal, is it not considered necessary to establish an estimated allowance for doubtful accounts.

o. Accounting Estimates:

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual amounts could differ from these estimates. Following are the estimates made by management during the year:

* Allowance for doubtful accounts - estimated uncollectables
* Inventory - estimated fair market value
* Depreciation - estimated service lives

2. VIOLATIONS OF FINANCE-RELATED LEGAL AND CONTRACTUAL PROVISIONS

The City is prohibited by statute from spending in excess of appropriated amounts by department within a fund. The following are overdrafts of departmental expenditures compared to appropriations:

2014:	General fund/general government/Mayor and Council	$ 3,710
	/public safety/fire	10,154
	/culture and recreation/parks	75,312
	/debt service	15,261

In the future, the City expects to make contingency transfers or adopt supplemental appropriations to cover expenditures that will exceed their original appropriation.

3. DEPOSITS AND RELATED RISKS

The City follows the practice of aggregating deposits of its various funds for cash management efficiency and returns, except for restricted cash held by 3rd parties and certificates of deposits purchased for an individual fund.

The City's deposits are made in qualified public depositories as defined by SDCL 4-6A-1, 9-22-6, 9-22-6.1 and 9-22-6.2. Qualified depositories are required by SDCL 4-6A-3 to maintain, at all times, segregated from their other assets, eligible collateral having a value equal to at least 100 percent of the public deposit accounts which exceed deposit insurance such as FDIC and NCUA. In lieu of pledging eligible securities, a qualified public depository may furnish irrevocable standby letters of credit issued by federal home loan banks accompanied by written evidence of that bank's public debt rating which may not be less than "AA" or a qualified public depository may furnish a corporate surety bond of a corporation authorized to do business in South Dakota.

Deposits are reported at cost, plus interest, if the account is the add-on type.

Actual bank balances at December 31, 2014 were as follows: Insured $315,776, Collateralized ** $346,867 for a total of $662,643.

** Uninsured, collateral jointly held by state's/municipality's agent in the name of the state and the pledging financial institution.

The carrying amount of these deposits, including cash on hand of $7,793, at December 31, 2014 was $258,329.

Reconciliation of deposits to government-wide statement of net position is:

Statement of Net Position:	
Bank Cash	$ 250,536
Cash on hand	7,793
	$ 258,329

Certificates of deposit, with a term to maturity of greater than 90 days when purchased, are insured or collateralized and are considered deposits.

Deposit Credit Risk - State law limits eligible deposits for the City, as discussed above. The City has no deposit policy that would further limit its deposit choices.

Deposit Custodial Risk - The risk that, in the event of a depository failure, the City's deposits may not be returned to it. At December 31, 2014, the City's deposits in financial institutions were not exposed to custodial deposit risk.

Concentration of Credit Risk - The City places no limit on the amount that may be deposited in any one institution. All of the City's deposits are with Home Federal Bank.

4. INVESTMENTS AND RELATED RISKS

In general, SDCL 4-5-6 permits City money to be invested only in (a) securities of the United States and securities guaranteed by the United States government either directly or indirectly or (b) repurchase agreements fully collateralized by securities described in (a) or (c) in shares of an open-end, no-load fund administered by an investment company whose investments are in securities described in (a) and repurchase agreements described in (b). Also, SDCL 4-5-9 requires investments to be in the physical custody of the political subdivision or may be deposited in a safekeeping account with any bank or trust company designated by the political subdivision as its fiscal agent.

At December 31, 2014, the City had no investments.

Investment Custodial Risk - The risk that, in the event of a default by the counterparty to a transaction, the City will not be able to recover the value of an investment or collateral securities held by the counterparty.

Investment Credit Risk - State law limits eligible investments for the City, as discussed above. The City has no investment policy that would further limit its investment choices.

Interest Rate Risk - The City does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Assignment of Investment Income - State law allows income from deposits and investments to be credited to either the general fund or the fund making the investment. The City's policy is to credit all income from deposits and investments to the fund with the investment.

5. RECEIVABLES AND PAYABLES:

Receivables and payables are not aggregated in the financial statements. The City expects all receivables to be collected within one year. Allowances for estimated uncollectible accounts are not material to these financial statements.

6. DUE FROM OTHER GOVERNMENTS

At December 31, 2014, amounts due from other governments were:

	Governmental	Enterprise
Liquor tax reversion	$ 941	
Highway and bridge receipts	4,098	
Water project expense reimbursements		$ 105,028
Sewer project expense reimbursements		176,644
	$ 5,039	$ 281,672

7. CARI NOTE RECEIVABLE AND DEPOSIT TO PURCHASE REAL ESTATE

In 2008 the City leased the Clubhouse and golf course from Colman Area Recreation, Inc. (CARI) for the 2008 year with automatic one year renewals subject to certain conditions. The City's lease payment is based on the City's payment of CARI's existing loan obligations plus insurance and property taxes related to the real estate. CARI is also obligated to repay the City for other payments made on its behalf, which the City secured with a mortgage on CARI's Clubhouse and golf course real estate.

By 2012 it became apparent that CARI would not be able to pay its existing loan obligations and other amounts owed to the City. Consequently, the following adjustments were made: (1) The City's initial 2008 note receivable from CARI for payments made on CARI's behalf plus accrued interest was reclassified from the recreation fund to the general fund. (2) City payments made on behalf of CARI after 2008 have been recognized as an economic development expense in the general fund. (3) Recreation fund profit and losses since the City took over operations in 2008 are now fully recognized in that fund.

In 2013 the name Colman Area Recreation, Inc. (CARI) was changed to Sunrise Ridge Golf Course, Inc.

In 2014 City's initial 2008 note receivable from CARI was reclassified as a culture and recreation capital outlay expenditure.

8. INVENTORY OF SUPPLIES AND SMALL TOOLS

Government-wide Statements: (consumption method)

In the government-wide financial statements inventories of supplies and small tools are recorded as assets when purchased and charged to expense when they are consumed. Inventories of supplies and small tools are recorded at cost. Donated items are valued at estimated market value at the date of receipt. The cost valuation method is first-in first-out.

Fund Financial Statements: (consumption method)

In the fund financial statements inventories of supplies and small tools are recorded as assets when purchased and charged to expenditure/expense when they are consumed. Reported governmental inventories are equally offset by nonspendable fund balance which indicates that they do not constitute "available spendable resources" even though they are a component of net current assets.

Inventory of supplies and small tools is recorded at cost. Donated items are valued at estimated market value at the date of receipt. The cost valuation method is first-in first-out.

There are no material amounts of governmental inventory items to report at December 31, 2014.

Inventory of enterprise funds consist of liquor and food held for resale and expendable supplies at the Clubhouse and golf course. These inventory items are initially recorded as assets and charged to cost of goods sold when they are sold or used. Inventory is stated at the lower of cost or market and the cost valuation method used is first-in first-out.

Because Clubhouse and golf course activities stop in October, inventory is immaterial at year end and is not taken. No amounts are reported in these financial statements for Clubhouse and golf course inventory.

9. INTERFUND BALANCES

At December 31, 2014 the water fund owed the electric fund $166,144 and the sewer fund owed the electric fund $60,387 to cover overdrafts.

10. INTERFUND TRANSFERS

Net transfers "in" and "(out)" between funds are:

For operations:	Governmental	Enterprise
General	$ 41,512	
Liquor		$ (10,234)
Electric		(117,891)
Sewer		61,613
Recreation		25,000
	$ 41,512	$ (41,512)

11. CAPITAL ASSETS AND DEPRECIATION

A summary of the changes in capital assets is presented in schedule one at the end of these notes. There is construction-in-progress at December 31, 2014 for water and sewer line improvements. See page 33 for more information.

12. LONG-TERM DEBT

A summary of changes in long-term liabilities is presented in schedule two at the end of these notes. The City did not have any short-term or conduit debt during 2014. See page 34 to 36 for more information.

13. FUTURE REVENUES PLEDGED TO SECURE DEBT

All water fund net revenue (after normal operating, repair and maintenance expenses) is pledged to secure drinking water borrower bonds which have a remaining balance of $804,801. The bonds were incurred to cover the cost of water improvements as described on page 35. The bonds will matures in 2045 and 2046. In 2014 the bond had pledged revenue of $47,185 before depreciation and total payments of zero because the first payment on these loans is in 2015 and 2016.

All electric fund net revenue (after normal operating, repair and maintenance expenses) is pledged to secure a electric capital lease which has a remaining balance of $39,669. The lease was incurred to cover the cost of electrical improvements as described on page 35. The lease will mature in 2016. In 2014 the lease had pledged revenue of $121,724 before depreciation and total lease payments of $23,700.

All sewer fund net revenue (after normal operating, repair and maintenance expenses) is pledged to secure two revenue bonds loan which have a remaining balance of $1,447,317. The bonds were incurred to cover the cost of sewer improvements as described on page 35. The bonds will mature in 2045 and 2046. In 2014 the bonds had pledged revenue of $89,947 before depreciation and principal payments of zero and capitalized interest payments of $27,789.

14. RESTRICTED NET POSITION

The following table shows the net position restricted for specific purposes as shown on the statement of net position:

Purpose:	Restricted By:	Governmental Activities	Business-Type Activities
Insurance deposit	Contract	$ 19,942	
Debt service	Covenants		$ 131,911

15. RETIREMENT PLAN

All regular full and part time employees participate in the South Dakota Retirement System (SDRS), a cost-sharing, multiple employer public employee retirement system established to provide retirement benefits for employees of the State of South Dakota and its political subdivisions. SDRS provides retirement, disability and survivor benefits. The right to receive retirement benefits vests after three years of credited service. Authority for establishing, administering and amending plan provisions are found in South Dakota Codified Law 3-12. SDRS issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained by writing to SDRS, PO Box 1098, Pierre, SD 57501-1098 or calling (605) 773-3731.

Covered employees are required by state stature to contribute the following percentages of their salary to the plan: Class A Members, 6.0% of salary; Class B Judicial Members, 9.0% of salary; and Class B Public Safety Members, 8.0% of salary. State statute also requires the employer to contribute an amount equal to the employee's contribution. State statute also requires the employer to make an additional contribution in the amount of 6.2 percent for any compensation exceeding the maximum taxable amount for social security for general employees only. The City's share of contributions to the SDRS for the years ending December 31, 2014, 2013, and 2012 were $6,342, $6,501, and $6,174 respectively (employer's share), equal to the required contribution each year.

The City does not owe any deferred contributions to the retirement plan.

16. PROPERTY TAX

Taxes are levied on or before October 1, attach as an enforceable lien on property, become due and payable on the following January 1, and are payable in two installment on or before the following April 30 and October 31. The county bills and collects the City's taxes and remits them to the City.

Property taxes are recognized to the extent they are used to finance each year's appropriations. Revenue related to current year property taxes receivable which is intended to be used to finance the current year's appropriations, but which will not be collected during the current fiscal year or within the "availability period" of 30 days has been deferred in the fund financial statements. Property tax revenues intended to finance the current year's appropriations, and therefore susceptible to accrual, has been reported as revenue in the government-wide financial statements, even though collection will occur in a future year.

Delinquent property taxes, from prior year tax levies, are included in "net position" in the government-wide statement of activities but are deferred in the fund financial statements. See reconciliations on page 12 and 13.

17. RISK MANAGEMENT

The City is exposed to various risks of loss related to injuries to employees; torts; theft of or damage to property; errors and omissions of public officials; and natural disasters. During the year ending December 31, 2014, the City managed its risks as follows:

Employee Health Insurance:

None. Two employees get $200 a month as a premium reimbursement for their private plans.

Liability Insurance:

The City joined the South Dakota Public Assurance Alliance (SDPAA), a public entity risk pool currently operating as a common risk management and insurance program for South Dakota local government entities. The City pays an annual premium to the pool to provide coverage for law enforcement liability, general liability, officials liability, automobile, and property insurance.

The agreement with the SDPAA provides that the above coverage's will be provided to a $1,000,000 limit. Member premiums are used by the pool for payment of claims and to pay for reinsurance for claims in excess of $250,000 to the upper limit. The City carries a $2,000 deductible for the law enforcement liability coverage and a $500 deductible for wrongful acts. The remaining coverages are $0 deductible.

The objective of the SDPAA is to administer and provide risk management services and risk sharing facilities to the members and to defend and protect the members against liability, to advise members on loss control guidelines and procedures, and provide them with risk management services, loss control and risk reduction information and to obtain lower cost for that coverage. The City's responsibility is to promptly report to and cooperate with the SDPAA to resolve any incident which could result in a claim being made by or against the City. The City pays an annual premium, to provide liability coverage detailed above, under a claims-made policy and the premiums are accrued on the ultimate cost of the experience to date of the SDPAA member, based on their exposure or type of coverage.

A portion of the member premiums are also allocated to a cumulative reserve fund. The City would be eligible to receive a refund for a percentage of the amount allocated to the cumulative reserve on the following formula:

End of the City's:
First Full Year (50%), Second Full Year (60%), Third Full Year (70%)
Fourth Full Year (80%), Fifth Full Year (90%), Sixth Full Year (100%)

As of December 31, 2014, the City has a vested balance in the cumulative reserve fund of $19,942.

The City does not carry additional insurance to cover claims in excess of the upper limit. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

Worker's Compensation:

The City joined the South Dakota Municipal League Workers' Compensation Fund, a public entity risk pool currently operating as a common risk management and insurance program for South Dakota local government entities. The City pays an annual premium to the pool to provide worker's compensation coverage for its employees. Coverage limits are set by state statute. The pool pays the first $250,000 of any claim per individual. The pool has reinsurance which covers up to an additional $1,750,000 per individual per incident.

The objective of the Fund is to formulate, develop, and administer, on behalf of the member organizations, a program of worker's compensation coverage, to obtain lower costs for that coverage, and to develop a comprehensive loss control program. The City's responsibility is to initiate and maintain a safety program to give its employees safe and sanitary working conditions and to promptly report to and cooperate with the Fund to resolve any worker's compensation claims. The City pays an annual premium, to provide worker's compensation coverage for its employees, under a retrospective rated policy and the premiums are accrued based on the ultimate cost of the experience to date of the Fund members. The City may also be responsible for additional assessments in the event the pool is determined by its board of trustees to have inadequate reserves to satisfy current obligations or judgments. Additional assessments, if any, are to be determined on a prorated basis based upon each participant's percentage of contribution in relation to the total contributions to the pool of all participants for the year in which the shortfall occurs.

The City does not carry additional insurance to cover claims in excess of the upper limit. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

Unemployment Benefits:

The City has elected to reimburse the state of South Dakota for unemployment payments made on its behalf. No unemployment benefits were paid or incurred during 2014 and none are expected to be paid in 2015.

18. TAX INCREMENT FINANCING DISTRICT -- DEFICIT FUND BALANCE

The City established Tax Increment Financing (TIF) District #1 for $390,000 of water and sewer infrastructure improvements to a new subdivision. The City received approval for a $390,000 loan from South Dakota Housing Development Authority (SDHDA) to pay for these improvements. At December 31, 2014 South Dakota Housing had advanced the full $390,000 on this loan. The loan and infrastructure improvements are accounted for in the TIF #1 debt service fund.

At December 31, 2014, TIF #1 debt service fund had a deficit fund balance of $12,682 from unpaid interest accrued on the SDHDA loan. In time, incremental property tax revenues are expected to be sufficient to pay the past due interest and eliminate the deficit fund balance.

19. SEWER FUND LOAN AGREEMENT WITH THE SOUTH DAKOTA DEPT OF ENVIRONMENT AND NATURAL RESOURCES

Because of statutory debt limitations, the City entered into the following agreements with the South Dakota Department of Environment and Natural Resources by Resolution 327-14.

> The City of Colman designates $26.17 of the established monthly sewer rates collected in accordance with City Ordinance #313-12 as captured and committed. Said Commitment is subject to adjustment from time to time by ordinance as necessary to repay two (2) Clean Water State Revolving Fund loans (SRF) over a period of no more than thirty (30) years at an

interest rate of three and one-quarter percent (3.25%), in accordance with the loan agreement to be entered into by the City of Colman and the SD Department of Environment and Natural Resources, the proceeds of which loan are to be used for the Phase 1 sewer line replacement/repair project and Phase 2 sewer line replacement/repair projects.

C462144-01 (Clean Water) $1,217,748 3.25% 30 Years Surcharge $21.00
C462144-02 (Clean Water) $ 300,000 3.25% 30 Years Surcharge $ 5.17

Such surcharge shall be segregated from all other funds of the City of Colman, shall be and hereby pledged to secure such loan, and shall be used for no purposes other than for repayment thereof. Said surcharge will be implemented and reflected with first utility billing on February 2014.

In 2014 a total surcharge of $81,363 was collected and $27,789 was used for a remaining balance of $53,574.

20. WATER FUND LOAN AGREEMENT WITH THE SOUTH DAKOTA DEPT OF ENVIRONMENT AND NATURAL RESOURCES

Because of statutory debt limitations, the City entered into the following agreements with the South Dakota Department of Environment and Natural Resources by Resolution 328-14.

The City of Colman designates $16.81 of the established monthly water rates collected in accordance with City Ordinance #313-12 as captured and committed. Said Commitment is subject to adjustment from time to time by ordinance as necessary to repay two (2) Drinking Water State Revolving Fund loans (SRF) over a period of no more than thirty (30) years at an interest rate of three percent (3.00%), in accordance with the loan agreements to be entered into by the City of Colman and the SD Department of Environment and Natural Resources, the proceeds of which loans are to be used for the Phases 1, 2, and 3 drinking water system repair and replacements projects.

C462144-02 (Drinking Water) $439,008 3.00% 30 Years Surcharge $6.89
C462144-03 (Drinking Water) $632,008 3.00% 30 Years Surcharge $9.92

Such surcharges shall be segregated from all other funds of the City of Colman, shall be and hereby pledged to secure such loan, and shall be used for no purposes other than for repayment thereof. Said surcharges will be implemented and reflected with first utility billing on February 2014.

In 2014 a total surcharge of $78,337 was collected and none was used.

21. OTHER DISCLOSURES AND SUBSEQUENT EVENTS

The City does not offer any "Other Post Employment Benefits."

Funding in 2013, 2014 and 2015 of water and sewer improvements is:

	2013	2014	2015	Total
WATER FUND				
2013 Drinking water loan -01	$ 165,440	$ 0	$ 0	$ 165,440
Amount forgiven	(165,440)	(0)	(0)	(165,440)
2013 Drinking water loan -02	317,049	117,479	0	434,528
2014 Drinking water loan -03		937,399	662,601	1,600,000
Amount forgiven		(567,126)	(400,874)	(968,000)
SEWER FUND				
2013 Clean water loan -01	985,863	588,385	0	1,574,248
Amount forgiven	(223,790)	(132,710)	(0)	(356,500)
2014 Clean water loan -02		612,184	187,816	800,000
Amount forgiven		(382,615)	(117,385)	(500,000)
2014 Consolidated Water Facility		756,591	243,409	1,000,000
Construction Project grant (CWFCP)		(756,591)	(243,409)	(1,000,000)
Net new loans	$1,079,122	$1,172,996	$ 332,158	$2,584,276

Federal funding in 2014 related to the above projects is:

		Federal	State/Other
2013 Drinking water loan	-02	$	$ 117,479
2014 Drinking water loan/grant	-03		937,399
2013 Clean water loan/grant	-01	78,104	510,281
2014 Clean water loan/grant	-02		612,184
2014 CWFCP			756,591
		$ 78,104	$ 2,933,934

The City will be installing 200 electrical radio-read meters in 2015.

In November 2014 the City awarded a low bid of $767,990 to Maguire Iron to build a new water tower in 2015.

In 2015 the City submitted an application to the Department of Environment and Natural Resources for funding related to its Highway 34 Water Main Replacement project (Phase 3). The project is expected to cost $525,000 with financing from a State Revolving Fund loan (SRF).

In April 2014 the Council passed a motion to have First District and Power Systems Engineering start a pre-mitigation grant application process to bury and update overhead electrical lines, which is expected to be done in 2016.

CITY OF COLMAN

NOTES TO THE FINANCIAL STATEMENTS -- SCHEDULE ONE
CHANGES IN CAPITAL ASSETS
FOR THE YEAR ENDING DECEMBER 31, 2014

	Beginning 12-31-13	Book Adjustments	Additions		Deletions	Ending 12-31-14	Accumulated Depreciation 12-31-13	Book Adjustments	Depreciation (Additions)	Depreciation Deletions	Accumulated Depreciation 12-31-14	Remaining Cost 12-31-14
General capital assets:												
Land	292,386					292,386						292,386
Buildings	1,221,866		104,904	(1)		1,326,770	(544,428)	(1)	(29,063)		(573,492)	753,278
Improvements	348,484		11,259			359,743	(166,967)	1	(16,282)		(183,248)	176,495
Equipment	281,362					281,362	(258,974)		(3,648)		(262,622)	18,740
Construction-in-progress	0					0	0				0	0
Totals	2,144,098	0	116,163		0	2,260,261	(970,369)	0	(48,993)	0	(1,019,362)	1,240,899

(1) Reclassification of CARI note receivable 50,436
Payments on Colman Economic Development Corp loan 48,687
Payments on T&R Electric loan 5,781
104,904 (1)

Allocation of Depreciation:

General government	5,126
Public safety	6,769
Public works	10,615
Health and welfare	294
Culture and recreation	26,189
Economic development	0
	48,993

Business-type activity:												
Enterprise funds:												
Land	10,770					10,770						10,770
Buildings	143,605					143,605	(73,157)	(2)	(3,048)		(76,207)	67,398
Improvements	2,238,549	(1)				2,238,548	(682,383)		(53,102)		(735,485)	1,503,063
Improvements - leasehold	0					0	0				0	0
Equipment	64,218		38,300		(8,500)	94,018	(32,766)		(11,693)	8,500	(35,959)	58,059
Construction-in-progress	1,838,829		3,314,588			5,153,417	0				0	5,153,417
Totals	4,295,971	(1)	3,352,888		(8,500)	7,640,358	(788,306)	(2)	(67,843)	8,500	(847,651)	6,792,707

CITY OF COLMAN

NOTES TO THE FINANCIAL STATEMENTS -- SCHEDULE TWO
CHANGES IN LONG-TERM DEBT
FOR THE ONE YEAR ENDING DECEMBER 31, 2014

	Beginning 12-31-13	2014 Additions	2014 (Deletions)	Governmental Ending 12-31-14	Business-Type Ending 12-31-14	Principal Due in 2015
GOVERNMENTAL						
2007 South Dakota Housing Loan:						
Actual draws to total $390,000						
First payment due 6-1-2009						
Financing for Tax Increment Financing District #1						
Maturing on 6-1-2022						
Interest at 4.67%						
Required payments equals TIF revenue						
Paid by TIF #1 debt service fun	390,000			390,000		21,058
2009 Sales Tax Revenue Bonds, Series 2009A:						
Original bond amount: $200,000						
Maturing on 12-1-2029						
Interest at 4.00% first 10 years						
Interest at 5.00% second 10 years						
Annual payments of principal						
Semi-annual payment of interest						
Secured by "..so much of the Sales Tax as is necessary.." to make bond payments						
Callable at option of City after 12-1-2014						
Paid by general fund	173,000		(8,000)	165,000		8,000
2013 Bobcat Loan:						
Original amount: $11,416						
Imputed interest at 6.0% is $1,430						
Calculated original amount: $9,986						
Maturing on August 2017						
Monthly payments of $237.84						
Callable at any time						
Paid by general fund	8,759		(3,595)	5,164		2,544
Accrued leave payable: general fu	1,569	1,604	(1,569)	1,604		1,604
Totals	573,328	1,604	(13,164)	561,768		33,206

SCHEDULE OF PAYMENTS FOR LONG-TERM DEBT
AT DECEMBER 31, 2014

	Total Payment	Principal	Interest	Balance
2007 South Dakota Housing Loan: 2	39,271	21,058	18,213	368,942
2016	39,271	22,042	17,229	346,900
2017	39,271	23,071	16,200	323,829
2018	39,271	24,148	15,123	299,681
2019	39,271	25,276	13,995	274,405
2020-2024	196,356	145,228	51,128	129,177
2025-2026	139,690	129,177	10,513	0
Totals	532,401	390,000	142,401	
2009 Sales Tax Revenue Bonds, Series 2009A:				
2015	15,820	8,000	7,820	157,000
2016	15,500	8,000	7,500	149,000
2017	16,180	9,000	7,180	140,000
2018	15,820	9,000	6,820	131,000
2019	15,460	9,000	6,460	122,000
2020-2024	79,350	54,000	25,350	68,000
2025-2029	78,550	68,000	10,550	0
Totals	236,680	165,000	71,680	
2013 Bobcat Loan: 2	2,854	2,544	310	2,620
2016	2,777	2,620	157	0
Totals	5,631	5,164	467	

CITY OF COLMAN

NOTES TO THE FINANCIAL STATEMENTS -- SCHEDULE TWO (continued)
CHANGES IN LONG-TERM DEBT
FOR THE ONE YEAR ENDING DECEMBER 31, 2014

	Beginning 12-31-13	2014 Additions	2014 (Deletions)	Governmental Ending 12-31-14	Business-Type Ending 12-31-14	Principal Due in 2015
BUSINESS-TYPE						
2000 Wastewater Utility Revenue Bonds:						
Original issue of $200,000						
Maturing on 11-27-2040						
Interest at 5.5%						
Callable at option of City						
Monthly payments of $1,040						
Paid by sewer fund	63,134		(63,134)		0	0
2006 Electric Utility Improvement Lease/Purchase:						
Original lease/purchase of $190,000						
Maturing on 10-1-2016						
Interest at 4.5%						
Callable at option of City						
Quarterly payments of $5,925						
Paid by electric fund	60,981		(21,312)		39,669	21,914
2012 Golf Cart Lease/Purchase:						
Original amount: $47,178						
Down payment of $4,800						
Six monthly payment per year of $1,391.10						
Maturing October 2017						
Paid by recreation fund	29,604		(8,337)		21,267	7,285
2013 Drinking Water Borrower Bond (DW-2):						
Original amount of $439,008						
Interest at 3.0%						
First payment February 15, 2015						
Last payment February 15, 2045						
Water line replacement						
Paid by water fund	317,049	117,479			434,528	6,857
2014 Drinking Water Borrower Bond (DW-3):						
Original amount of $1,600,000						
Forgiven at closing: $968,000						
Interest at 3.0%						
First payment May 15, 2016						
Last payment February 15, 2046						
Water line and water tower replacement						
Paid by water fund	0	370,273			370,273	0
2013 Clean Water Borrower Bond (CW-1):						
Original amount of $1,574,248						
Forgiven at closing: $356,500						
Interest at 3.25%						
First payment February 15, 2015						
Last payment February 15, 2045						
Sewer line replacement						
Paid by sewer fund	762,073	455,675			1,217,748	18,238
2014 Clean Water Borrower Bond (CW-2):						
Original amount of $800,000						
Forgiven at closing: $500,000						
Interest at 3.25%						
First payment February 15, 2016						
Last payment February 15, 2046						
Sewer line replacement						
Paid by sewer fund	0	229,569			229,569	0
Accrued leave payable:						
Paid by the enterprise funds	4,187	4,350	(4,187)		4,350	4,350
Totals	1,237,028	1,177,346	(96,970)		2,317,404	58,644

CITY OF COLMAN

NOTES TO THE FINANCIAL STATEMENTS -- SCHEDULE TWO (continued)
CHANGES IN LONG-TERM DEBT
FOR THE ONE YEAR ENDING DECEMBER 31, 2014

SCHEDULE OF PAYMENTS FOR LONG-TERM DEBT
AT DECEMBER 31, 2014

	Total Payment	Principal	Interest	Balance
2006 Electric Utility Improvement Lease/Purchase:				
2015	23,699	21,914	1,785	17,755
2016	18,554	17,755	799	0
Totals	42,253	39,669	2,584	
2012 Golf Cart Lease/Purchase:				
2015	8,347	7,285	1,062	13,982
2016	8,347	7,649	698	6,333
2017	6,648	6,333	315	0
Totals	23,342	21,267	2,075	
2013 Drinking Water Borrower Bond (DW-2):				
2015	28,674	6,857	21,817	427,671
2016	22,245	9,385	12,860	418,286
2017	22,245	9,670	12,575	408,616
2018	22,245	9,963	12,282	398,653
2019	22,245	10,266	11,979	388,387
2020-2024	111,224	56,192	55,032	332,195
2025-2029	111,223	65,250	45,973	266,945
2030-2034	111,224	75,767	35,457	191,178
2035-2039	111,223	87,980	23,243	103,198
2040-2044	111,224	102,160	9,064	1,038
2045	1,079	1,038	41	0
Totals	674,851	434,528	240,323	
2014 Drinking Water Borrower Bond (DW-3):				
2015		(261,727)		632,000
2016	24,018	9,871	14,147	622,129
2017	32,024	13,511	18,513	608,618
2018	32,024	13,921	18,103	594,697
2019	32,023	14,343	17,680	580,354
2020-2024	160,118	78,513	81,605	501,841
2025-2029	160,118	91,168	68,950	410,673
2030-2034	160,119	105,863	54,256	304,810
2035-2039	160,118	122,926	37,192	181,884
2040-2044	160,118	142,740	17,378	39,144
2045-2046	40,028	39,144	884	0
Totals	960,708	370,273	328,708	
2013 Clean Water Borrower Bond (CW-1):				
2015	47,774	18,238	29,536	1,199,510
2016	63,698	25,017	38,681	1,174,493
2017	63,698	25,840	37,858	1,148,653
2018	63,698	26,690	37,008	1,121,963
2019	63,698	27,568	36,130	1,094,395
2020-2024	318,491	152,056	166,435	942,339
2025-2029	318,491	178,769	139,722	763,570
2030-2034	318,491	210,174	108,317	553,396
2035-2039	318,491	247,096	71,395	306,300
2040-2044	318,490	290,505	27,985	15,795
2045	15,923	15,795	128	0
Totals	1,910,943	1,217,748	693,195	
2014 Clean Water Borrower Bond (CW-2):				
2015	0	(70,431)		300,000
2016	11,769	4,493	7,276	295,507
2017	15,692	6,163	9,529	289,344
2018	15,693	6,366	9,327	282,978
2019	15,693	6,575	9,118	276,403
2020-2024	78,462	36,267	42,195	240,136
2025-2029	78,463	42,638	35,825	197,498
2030-2034	78,462	50,129	28,333	147,369
2035-2039	78,463	58,935	19,528	88,434
2040-2044	78,462	69,289	9,173	19,145
2045-2046	19,614	19,145	469	0
Totals	470,773	229,569	170,773	

CITY OF COLMAN

REQUIRED SUPPLEMENTARY INFORMATION
BUDGETARY COMPARISON SCHEDULE - BUDGETARY BASIS
FOR THE YEAR ENDING DECEMBER 31, 2014

GENERAL FUND	Budgeted Amounts					Variance Positive
Revenue:	Original	Contingency Transfers	Supplemental:	Final	Actual	(Negative)
Revenue from local sources:						
Taxes:						
Ad valorem taxes	56,400			56,400	52,296	(4,104)
Sales and use tax	186,000			186,000	175,988	(10,012)
Amusement tax					120	120
Licenses and permits:	720			720	1,432	712
Intergovernmental revenue:	30,685			30,685		(30,685)
State shared revenue:						
Grant					1,667	1,667
Bank franchise tax					504	504
Motor vehicle - commercial					1,621	1,621
Liquor tax reversion					3,716	3,716
Motor vehicle licenses (5%)					8,104	8,104
Highway and bridge					20,648	20,648
County shared revenue:					1,811	1,811
Charges for goods and services	5,250			5,250		(5,250)
Health and welfare (West Nile)					10,136	10,136
Swimming pool					6,231	6,231
Camping					5,211	5,211
Events					850	850
Fines and forfeits:					86	86
Miscellaneous revenue:	44,700			44,700		(44,700)
Interest earned					484	484
Rentals and franchise fees					33,839	33,839
Other					1,615	1,615
Total revenues	323,755	0	0	323,755	326,359	2,604
Expenditures:						
General government:						
Mayor and Council	15,185			15,185	18,895	(3,710)
Contingency	10,000			10,000		10,000
Amount transferred		(3,000)		(3,000)		(3,000)
Elections	630			630	241	389
Financial administration	13,955			13,955	12,438	1,517
Other	73,490	3,000		76,490	70,322	6,168
Public safety:						
Police	32,455			32,455	27,917	4,538
Fire	18,700			18,700	28,854	(10,154)
Public works:						
Highways and streets	111,260			111,260	54,490	56,770
Health and welfare:						
West Nile	12,800			12,800	8,902	3,898
Culture and recreation:						
Swimming pool	32,295			32,295	31,485	810
Parks and recreation	27,985		41,512	69,497	144,809	(75,312)
Debt service	5,000			5,000	20,261	(15,261)
Total expenditures	353,755	0	41,512	395,267	418,614	(23,347)
Excess of revenues over (under) expenditures	(30,000)	0	(41,512)	(71,512)	(92,255)	(20,743)
Other financing sources (uses):						
Transfers in	30,000			30,000	41,512	11,512
Net change in fund balance	0	0	(41,512)	(41,512)	(50,743)	(9,231)
Fund balance:						
January 1, 2014	203,879			203,879	203,879	0
December 31, 2014	203,879	0	(41,512)	162,367	153,136	(9,231)

CITY OF COLMAN

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF BUDGETARY COMPARISON FOR THE
GENERAL FUND FOR THE TWO YEARS ENDING DECEMBER 31, 2014

1. BUDGETS AND BUDGETARY ACCOUNTING

The City follows these procedures in establishing the budgetary data reflected in the required supplementary information:

a. At the first regular board meeting in September of each year or within ten days thereafter, the governing board introduces the annual appropriation ordinance for the ensuing fiscal year.

b. After adoption by the governing board, the operating budget is legally binding and actual expenditures for each purpose cannot exceed the amounts budgeted, except as indicated in d.

c. A line item for contingencies may be included in the annual budget. Such a line item may not exceed 5 percent of the total municipal budget and may be transferred by resolution of the governing board to any other budget category that is deemed insufficient during the year.

d. If it is determined during the year that sufficient amounts have not been budgeted, state statute allows the adoption of supplemental appropriations. During 2014 there was one supplemental appropriation to increase the general fund's budget. See page 37.

e. Unexpended appropriations lapse at year end unless encumbered by resolution of the governing board. There were no appropriations encumbered at December 31, 2014.

   Encumbrance accounting, under which purchase orders, contracts, and other commitments for the expenditure of monies are recorded in order to reserve that portion of the applicable appropriation, is employed as an extension of formal budgetary integration in the general fund.

f. Formal budgetary integration is employed as a management control device for the general fund.

g. The budget for the general fund is adopted on a basis consistent with generally accepted accounting principles (GAAP).

2. GAAP and Budgetary Accounting Basis Difference:

The financial statements prepared in conformity with U.S.GAAP present capital outlay expenditure information in a separate category of expenditures. Under the budgetary basis of accounting, capital outlay expenditures are reported within the function to which they relate. For example, the purchase of a road grader would be reported as a capital expenditure on the governmental funds statement of revenues, expenditures and changes in fund balances. However, in the budgetary RSI schedule, the purchase of a road grader would be reported as an expenditure in the public works function of general fund, along with all other current public works expenditures.

REPORT ON
COMPLIANCE AND OTHER MATTERS AND ON
INTERNAL CONTROL OVER FINANCIAL REPORTING
BASED ON AN AUDIT OF FINANCIAL STATEMENTS
PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Honorable Mayor and
Members of the Colman City Council
Colman, South Dakota

INDEPENDENT AUDITOR'S REPORT

I have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of governmental activities, business-type activities, and each major fund, of the City of Colman (City), Moody County, South Dakota, as of December 31, 2014 and for year then ended, and the related notes to the financial statements, which collectively comprise the City's basic financial statements and have issued my report thereon dated November 20, 2015 which was unmodified.

Compliance and Other Matters:

As part of obtaining reasonable assurance about whether City of Colman's financial statements are free of material misstatement, I performed tests of its compliance with certain provisions of laws, regulations, and contracts, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of my audit and, accordingly, I do not express such an opinion.

The results of my tests disclosed an instance of noncompliance or other matters that is required to be reported under *Government Auditing Standards*, which is described as finding 2014-01 in the attached schedule of current audit findings and responses.

However, I did note other minor matters involving compliance that I reported to the governing body and management of the City of Colman in a separate Letter of Comments dated November 20, 2015.

Internal Control Over Financial Reporting

In planning and performing my audit of the financial statements, I considered City of Colman's internal control over financial reporting (internal control) to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing my opinions on the financial statement, but not for the purpose of expressing an opinion on the effectiveness of the City's internal control. Accordingly, I do not express an opinion on the effectiveness of City of Colman's internal control.

A *deficiency in internal control* exist when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis.

A *material weakness* is a deficiency, or combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of City of Colman's financial statements will not be prevented, or detected and corrected on a timely basis.

0A *significant deficiency*, is a deficiency, or combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

My consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during my audit I did not identify any deficiencies in internal control that I consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

I did identify a deficiencies in internal control, that I consider to be a significant deficiencies. I consider the deficiencies described in the accompanying schedule of current audit findings and responses as findings 2014-01 and 2014-02 to be significant deficiencies.

I did note other matters involving internal control that I reported to the governing body and management of the City of Colman in a separate Letter of Comments dated November 20, 2015.

Management responses to the findings identified in my audit are described in the accompanying schedule of current audit findings and responses. I did not audit the management responses and, accordingly, I express no opinion on them.

Purpose of this Report

The purpose of this report is solely to describe the scope of my testing of compliance and internal control over financial reporting, and the results of that testing, and not to provide an opinion on the effectiveness of the City's compliance or internal control over financial reporting. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the City's compliance and internal control over financial reporting. Accordingly this communication is not suitable for any other purpose.

As required by South Dakota Codified Law 4-11-11, this report is a mater of public record and its distribution is not limited.

Independent Audit Services, PC
Benjamin Elliott, CPA
Madison, South Dakota

November 20, 2015

CITY OF COLMAN
DECEMBER 31, 2014

SCHEDULE OF PRIOR AUDIT FINDINGS

Prior Other Audit Findings:
2006-01: Budget Overdrafts -- Repeated below
2008-04: Preparation of Financial Statements - Repeated Below

SCHEDULE OF CURRENT AUDIT FINDINGS AND RESPONSES

Summary of the Independent Auditor's Results:

Financial Statements

Type of auditor's report issued:	Unqualified on: Governmental Activities Business-Type Activities All Funds
Noncompliance noted:	Finding: 2014-1
Internal control over financial reporting: * Significant deficiency(ies) identified that are not considered to be material weaknesses?	Findings: 2014-01 and 2014-02
* Material weakness(es) identified?	None Reported

Finding 2014-01: General Fund Budget Overdraft
(compliance and internal control)

Criteria:
SDCL 9-21 requires governmental expenditures to be authorized in an annual appropriation ordinance, or by a supplemental appropriation ordinance, by the governing body before the end of year. The City is prohibited from spending in excess of appropriated amounts at the sub-function level.

Condition:
City expenditures exceeded their appropriation in the following areas:

2014:	General fund/general government/Mayor and Council	$ 3,710
	/public safety/fire	10,154
	/culture and recreation/parks	75,312
	/debt service	15,261

Possible Effect:
Expenditures in excess of a budget can lead to unnecessary expenditures and unnecessary taxation. Also, joint and several liability may attach to any official who approves an expenditure in excess of the amount budgeted for any purpose or department. SDCL 9-21-9 and 9-21-10

Recommendation:
I recommend the City stay within its budget, using contingency transfers and supplemental appropriations to adjust budget line items when necessary.

Management Response:
In the future, the City expects to make contingency transfers or adopt sufficient supplemental appropriations to cover expenditures that will exceed their original appropriation.

Finding 2014-02: Preparation of Financial Statements
(internal control)

Criteria:

A good system of internal control contemplates an adequate system for recording and processing entries material to the financial statements. Also, South Dakota Codified Law (SDCL) 9-14-17 and 9-14-18 requires the finance officer to keep regular books of account.

Condition:

The City has elected not to have an internal control system designed to provide for the preparation of the financial statement being audited. As the auditor, I was requested to draft these financial statements and accompanying notes to the financial statements.

Effect:

This control deficiency could result in a misstatement of the financial statements that would not be prevented or detected.

Recommendation:

It is the responsibility of management, and those charged with governance, to make the decision whether to accept the degree of risk associated with this condition because of cost or other considerations.

Management Response:

Due to cost constraints, the City will continue to have the auditor draft the financial statements and accompanying notes to the financial statements.

FDDC
FIRST DISTRICT DEVELOPMENT COMPANY
124 1st Avenue NW, P.O. Box 1207 • Watertown, SD 57201 • Bus: 605-882-5115 • Fax: 605-882-5049

DATE: DECEMBER 29, 2015

TO: FDDC BOARD OF DIRECTORS

FROM: AMY WAITE

SUBJECT: WATSON PROPERTIES, LLC / DAKOTA MANUFACTURING & SERVICES, LLC, HURON, SD

Please find enclosed a copy of an SBA 504 application for Watson Properties, LLC. The operating company is Dakota Manufacturing & Services, LLC. Both entities are owned by Ryan B. Watson (100%).

The subject is requesting an SBA 504 loan in the amount of $183,000 to purchase land, construct a building, and purchase equipment in Huron, SD, to move his existing business into. Dakotaland Federal Credit Union in Huron will be financing $221,694. The required 10% equity injection, or $44,339, is coming from a cash gift Ryan is receiving from his father. This project is eligible to receive SBA 504 loan funds, as it is considered rural development.

We will discuss this application at our next meeting scheduled for **Tuesday, January 5, 2016, at 10:00 a.m. This meeting will be a phone conference. Dial 1-605-224-1125 promptly at 10:00 a.m. and use code 0197013# to join the meeting.** Please let any one of us know whether or not you'll be able to attend this meeting.

Please review these materials carefully and call the office prior to the meeting if you have any questions. Thank you.

CLARK
ENGINEERING CORPORATION

CONSULTING ENGINEERS & LAND SURVEYORS

WATER SYSTEM
ENGINEERING REPORT

Prepared for the City of Colman

Brent Nelson	-	Mayor
Gloria VanDuyn	-	Finance Officer
William J. Ellingson	-	City Attorney
Grant Groos	-	Maintenance Manager

Councilmembers:

Dave Costine	Matthew Bennett
Shaun Lebert	Scott Shafer
Merle Gulbranson	Russ May

Prepared by:

CLARK ENGINEERING CORPORATION
CONVENTION CENTER PLAZA
1410 WEST RUSSELL STREET
SIOUX FALLS, SD 57104-1328

OCTOBER 2008

WATER SYSTEM
ENGINEERING REPORT

COLMAN
SOUTH DAKOTA

OWNERSHIP OF DOCUMENT

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Clark Engineering Corporation and is not to be used, in whole or in part, for any other project without the written authorization of Clark Engineering Corporation.

CERTIFICATION:

I, Kevin Goff, PE, hereby certify that this Report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

10-30-08

WATER SYSTEM ENGINEERING REPORT
CITY OF COLMAN

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APPENDIX

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C. Figure 1 – Soil Information for the City of Colman
Figure 2 – Colman Water Records
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Figure 4 – Precipitation Records for the City of Colman

D. Copy of Ordinances 11.01 & 222

E. Reserved for the Notice of Public Hearing

F. Copy of 2004 Water Quality Report for the City of Colman

G. Service Agreement Between the City of Colman and BSCWS

WATER SYSTEM ENGINEERING REPORT
CITY OF COLMAN

EXECUTIVE SUMMARY

Clark Engineering Corporation was retained by the City of Colman to prepare this water system engineering report. The primary purpose of this study is to evaluate alternatives to upgrade the existing water system for the City of Colman.

Colman is a community of 572 people (2000 census) located in Moody County in east-central South Dakota. The water system for the City of Colman was initially installed in the 1920's and consists of many transite, asbestos concrete and cast iron mains with a 50,000 gallon cone elevated water storage tank. The City of Colman has its water supplied by Big Sioux Community Water Service (BSCWS) through a six inch line that ties into the existing distribution system on the west edge of town. From here, water flows to the tower but also back feeds the various types of 4", 6" and 8" mains. The current system has a total of 42,765 feet of water main. The City has had issues with discrepancies in their water records, water main breaks and areas of stagnant water. Additionally the storage capacity of their current water tower is insufficient.

Population and water use projections were made for the 20-year planning period (through 2025). The City of Colman is projected to increase in population by 2025 and the daily water use is expected to increase with this trend.

It is recommended that Colman repair their existing system by replacing many of the older and substandard water mains. The City should also extend parts of their distribution system to aid in flow circulation. A list and map of the proposed replacement and extended lines are located in Appendix A, Figures 5 and 6. Furthermore, the City of Colman should replace their existing 50,000 gallon water tower with a new 100,000 gallon elevated storage tank.

In addition to the previous proposed improvements, the formal service agreement between the City of Colman and BSCWS should be redrafted.

The estimated cost of the proposed water main replacements and extensions is $1,434,765 and the estimated cost for the new water tower is $678,015. The City of Colman plans to use designated funds to pay what they are able, but will need to apply for financial assistance.

WATER SYSTEM ENGINEERING REPORT
CITY OF COLMAN

I. Environmental Review

A. Environmental Information

Colman is a community of 572 people (2000 census) located in Moody County in east-central South Dakota; refer to Figure 1 in Appendix A for an aerial photo of the location. The water system for the City of Colman was initially installed in the 1920's and consists of many transite, asbestos concrete and cast iron mains. See Appendix A, Figure 2 for details on the existing water system.

The city has a 50,000 gallon cone elevated water storage tank that was erected in 1922. Besides the regular maintenance that has occurred since the 1960's, additional improvements include:

- Epoxy-coating the interior in 1980
- Painting the exterior in 1987
- Installing a new riser pipe in 1993
- Installing a new frost jacket in 1993
- Upgrading for OSHA/AWWA in 1996

In December of 1995, the City of Colman began purchasing their treated water from Big Sioux Community Water Service (BSCWS). The water source for BSCWS comes from eight wells that draw from the Big Sioux Aquifer, which is a shallow sand and gravel aquifer. The wells are approximately 40 feet deep and located within the Big Sioux River Valley in central Moody County.

The primary soil types located in and around the City of Colman are:

- Egan – Ethan Complex (2 to 6% slopes)
- Wentworth - Egan Silty Clay Loams (2 to 6% slopes)
- Wentworth – Trent Silty Clay Loams (0 to 2% slopes)

All of these soils are deep and well drained with a moderate organic matter content and permeability. Additionally, these soils have a high available water capacity. Soil information was collected through NRCS can be found in Appendix C, Figure 1.

Additionally, the anticipated normal yearly precipitation is 24.49 inches for the City of Colman. Refer to Figure 4 in Appendix C for precipitation tabulations.

B. Historical and Archaeological Sites

A Cultural Resources Effects Assessment has yet to be submitted to the Department of Environment and Natural Resources. Upon local government approval and possible SRF funding, a thorough assessment will be performed.

C. Floodplains and Wetlands

Pending local government approval and selection of a plan, the Planning, Programs, and Project Management Division of the Army Corp of Engineers, Omaha District, will be contacted for any recommendations that they may have.

D. Agricultural Lands

Pending local government approval and selection of a plan, the US Department of Agriculture - Natural Resource Conservation Service (NRCS) will be contacted to ensure that no unique or prime farmland will be affected.

E. Wild and Scenic Rivers

This project is not located on a wild or scenic river. The nearest river is Bachelor Creek, which is approximately a mile and a half south of the City of Colman.

F. Fish and Wildlife Protection

Pending local government approval and selection of a plan, the U.S. Fish and Wildlife Service and the S.D. Dept. of Game, Fish and Parks will be contacted to ensure that fish and wildlife resources will not be harmed from the implementation of this project.

G. Water Quality and Quantity

The projects will improve the quality and quantity of water that is available to the Citizens of Colman. Corroded and deteriorated water mains will be replaced, which will decrease the number of water main breaks. Furthermore, based on previous replacement efforts, many of the distribution mains have tuberculated causing a significantly decreased cross-section of flow. Replacement will increase the amount of water available to areas of town with these older mains.

Some lines are being extended to create a looped system that will help reduce the amount of stagnant water and mineral build-up in pipes. Looping will also increase the reliability of the water services in those areas.

Adding a larger capacity water tower with a mixer will provide the citizens of Colman with ample storage of water that will be less susceptible to becoming stagnant.

H. Direct and Indirect Impacts

Repairing existing asbestos concrete water mains involves cutting the pipe and exposing the workers to asbestos fibers. Replacement of these mains will remove this potential hazard.

This project should have no major negative impacts.

I. Mitigating Adverse Impacts

There are no adverse impacts for this project. Mitigation of wetlands is not anticipated to be a concern. All planned work is on City streets or previously disturbed turf areas such as ditches throughout the community.

II. Existing and Future Conditions

A. Project Need and Planning Area Identification

The City of Colman has its water supplied by BSCWS through a six inch line that ties into the existing distribution system on the west edge of town. From here, water flows to the tower but also back feeds the various types of 4", 6" and 8" mains. The current system has a total of 42,765 feet of water main with the following attributes:

4" Asbestos Concrete Pipe – Approximately 1,190 feet
4" Cast Iron Pipe – Approximately 3,620 feet
4" Transite Pipe – Approximately 965 feet
6" Cast Iron Pipe – Approximately 1,390 feet
6" PVC Pipe – Approximately 25,005 feet
6" Transite Pipe – Approximately 3,770 feet
8" PVC Pipe – Approximately 6,825 feet

Age and corrosion has degraded these pipes and the City is experiencing a rise in the number of water main breaks. The City has had two water main breaks in the past month; one occurring while flushing a fire hydrant. This proved to be quite the burden as the break occurred right before the elbow leading up to the fire hydrant and there was no valve on the fire hydrant line. It is important that the City improves their water mains and upgrades their line sizes so that fire demand will not cause such a strain and cause mains to collapse in a time of need. It is also important that the City install valves on all their fire hydrant lines to provide an effective means of isolating the line. Furthermore, there are many older valves throughout the City that cannot be located; a water main break results in turning off the water for multiple city blocks.

Past replacement efforts have confirmed that many of the four inch mains have corroded and tuberculated to an effective inside diameter of two inches or less; replacement of these older mains will provide better water quality, quantity and reliability. The proposed lines to be replaced are located throughout the City of Colman. A detailed list and map of the replacement areas can be referenced in Appendix A, Figures 5 and 6. The idea is to replace the needed mains in manageable sections.

Some of the areas are to be extended in order to create a looped system to reduce stagnant water, reduce head loss, reduce mineral build-up in pipes and increase reliability of water service. All replacement mains are to be a minimum of six inches in diameter to conform to the minimum standards for fire protection.

The Insurance Services Office (ISO) evaluated the City of Colman in the summer of 2007 for compliance. The City received various deductions due to lacking of six-inch mains, having hydrants without a pumper outlet and having limited fire flows. Five hydrants were tested and only three had flows over 400 gpm at 20psi.

Further investigation was taken into water pressure at various places throughout the City of Colman. The following results were found:

Location	Pressure (PSI)	
	Static	Residual
Highway 34 - Hydrant #44	51	15
S Main Ave. - Hydrant #28	52	45
S Loban Ave. - Hydrant #17	52	42
NE 2nd St. - Hydrant #25	51	45
S 5th St. - Hydrant #49	59	15
S Allen Ave. - Hydrant #2	53	Not Taken
NE 4th St. - Hydrant #10	50	Not Taken
N Crummer Ave. - Hydrant #37	54	Not Taken

The locations with a low residual pressure indicate that the various hydrants were limited by the condition and size of the associated distribution mains. In general the static pressures were good and indicate that the overflow elevation of the water tower is adequate. It is ideal to see the static pressure around 60psi but not less than 35psi.

A steady state analysis was performed on the existing water distribution system. The model was assembled using ideal conditions, so no valves were included and nominal diameter pipe sizes were used (a four-inch main is a four-inch main - not a main tuburculated to a two-inch diameter). The system handled the flows adequately with an acceptable pressure range between 47psi and 62psi. The majority (approximately 80%) of the analyzed mains maintained a flow rate around 1200 gpm under ideal conditions. Areas with four-inch mains showed lesser flow rates that continued to decrease depending on the distance from the water source and the network of pipes

surrounding the area. This can be expected. An upgrade to six-inch mains throughout the city will rid the burden of these decreased flow rates. Furthermore, the looping of various mains also provides increased flow rates.

Please note that a fire flow analysis was not modeled due to the unlikely ability for the storage capacity of the City of Colman to supply the needed water. Some initial calculations were performed to establish that the City of Colman would need an additional 97,000 gallons of water storage to provide two hours worth of fire flow. Fire flow capacity will be ignored due to the extreme over design for a City of this size which would lead to problems with stagnant water.

While the pressure and flow to developed areas South of Highway 34 are adequate, future consideration should be taken into looping in these areas for better reliability.

B. Existing Water Usage and Treatment Systems

In December of 1995, the City of Colman began purchasing their treated water from Big Sioux Community Water Service (BSCWS).

The agreement between BSCWS and the City of Colman states that BSCWS will supply up to 100 gallons per minute (gpm) at enough pressure to fill their elevated water tank. This agreement also allows for up to 350 gpm of water to be available for fire bypass. BSCWS is capable of supplying the City of Colman with water at 350 gpm, with up to 500 gallons per minute available for fire bypass.

The City of Colman is currently supplied at a rate that varies from 100 gpm to 250 gpm. A copy of the service agreement between the City of Colman and BSCWS is included in Appendix G. The City of Colman needs to renegotiate this agreement to ensure that their supply won't be limited to 100 gpm.

The water records from 2005 were analyzed. During this year, the City of Colman used 23,436,000 gallons of water. This equates to an average usage of 112 gallons per person per day (GPPPD) over the entire year {23,436,000gallons/572 people/365 days}. However, the monthly records exhibit large amounts of fluctuation. December had an average usage of 67 GPPPD whereas July was 172 GPPPD. Based on the average usage of 112 GPPPD, the peak usage is estimated to be at 280 GPPPD (112 GPPPD*2.5).

When evaluating a winter quarter, the average usage in 2005 was 91 GPPPD. This number more accurately reflects the actual consumption of water and discounts water that is used for land application. Refer to Figure 2 in Appendix C for water records.

The entire distribution system is set up with individual water meters at each service connection with one three inch master meter located on the west edge of town at the BSCWS supply line. The master and individual meters are read monthly by the city

maintenance manager. There is a large margin of difference (approximately 4,351,600 gallons in 2005) between the findings. Tabulations of the water records and observations are included in Figure 2 in Appendix C.

The difference between the two tallies can be attributed to various leaks, breaks and meter reading discrepancies. There are no known un-metered services in the City of Colman. The meters were installed in 1997 and have a general life of 15 years. When the City decides to replace these water meters, they should consider direct report water meters to avoid some of these usage discrepancies.

Based on the average usage of 112 GPPPD, the average daily demand can be identified as 64,064 GPD {112GPPPD*572 people}. The 10 states standards maintain that the storage capacity for systems designed without fire protection shall be equal to the average daily demand. The current water storage capacity for the City of Colman is 50,000 gallons. This should be increased.

C. Effluent Limitations

The City of Colman began purchasing their treated water from the Big Sioux Community Water System in December 1995. This system annually monitors the water for microbial, inorganic, organic, chemical and radioactive contaminants. In addition, they also screen their water for pesticides and herbicides. No recent contaminations have occurred and the system has set goals for the desired contamination levels. Furthermore, the water quality for Colman complies with SDDENR standards. Please refer to Appendix F for a thorough analysis of the water quality.

D. Future Conditions

1. Population and Land Use Projections

The City of Colman's current population is 572 people (2000 census). The city population has grown over the last 10 years.

Census information from the SDSU Census Center was used to project the population through the year 2025. The estimated population for 2025 was determined by averaging data obtained through use of a constant percentage method, an arithmetic progression method and a linear regression method. It is believed that the population will continue to grow and stabilize somewhere around 641 persons. This trend is expected due to the proximity to main arteries and the proactive approach towards development. The Colman Development Corporation is currently in the process of developing 160 acres for residential, commercial and industrial use. For our calculations, a design population of 650 people will be used. A plot of the population vs. year is included in Appendix C Figure 3.

The projected land uses are somewhat uncertain at the moment due to the new commercial and industrial development. However, the Colman Economic Development Corporation is not expecting any new additions that will provide a significant burden on the water available to the City of Colman. Such industry would have to provide its own water arrangements with BSCWS.

2. Forecasts of Flows

The population for the City of Colman is projected to increase by the year 2025. A population of 650 people will be used in all calculations. Additionally, the water records from 2005 will be used as a standard of usage.

In 2005 the City of Colman used 23,436,000 gallons of water. This equates to an average usage of 112 GPPPD over the entire year {23,436,000gallons/572 people/365 days}. Water usage per person is not expected to increase with time. Based on this average usage, the future average daily demand can be identified as 72,800 GPD {112GPPPD*650 people}.

The 10 states standards maintain that the storage capacity for systems designed without fire protection shall be equal to the average daily consumption. Therefore, the water tower capacity shall be increased to at least 75,000 gallons. This is very important for the City of Colman since if something were to happen to BSCWS, they would be without water until BSCWS was back online.

3. Flow Reduction

The average usage of 112 GPPPD is less than the states average water use which was reported at 136 GPPPD by USGS in a 2000 report. Flow reduction is not necessary at this time.

III. Development and Screening of Alternatives

A. Development of Alternatives

The goal of this facility plan is to provide a sound and cost-effective means of improving the water system for the City of Colman.

There are six alternatives to be considered. The first alternative is to do nothing. The second alternative is to replace the entire water distribution system. The third alternative is to repair and upgrade selective areas of the water distribution system. The fourth alternative is to replace the existing water tower with a new 75,000 gallon water tower. The fifth alternative is to replace the existing water tower with a new 100,000 gallon water tower. The sixth alternative is to erect a new 50,000 gallon water tower in the City Park to work in conjunction with the existing water tower.

B. Optimum Operation of Existing Facilities

Optimum operation of the water system would provide adequate water service, quality and supply to the Citizens of Colman. This includes eliminating the possibility of leaking in the existing water mains, providing effective fire protection and insuring an ample amount of available water.

C. Regionalization

The City of Colman has its water provided by BSCWS at a rate that varies from 100 gpm to 250 gpm. A copy of the service agreement between the City of Colman and BSCWS is included in Appendix G. The City of Colman needs to renegotiate this agreement to ensure that their supply won't be limited to 100 gpm.

IV. Evaluation of Principal Alternatives and Plan Adoption

A. Alternative Evaluation

Alternative 1 – "Do Nothing"
This alternative does not solve the problems of poor circulation, leaks and breaks in the water mains. Furthermore, the system is still susceptible to additional failure from fire station hookups that may force the mains to collapse. Doing nothing will also neglect the need for added water storage for the growing City of Colman.

Alternative 2 – Replace Entire Water Distribution System
This alternative involves a complete renewal of the entire water distribution system for the City. This includes the various water mains that have been replaced over the last few years.

Alternative 3 – Repair and Upgrade Selective Areas of the Water Distribution System
This alternative would solve the problem with aged and deteriorated pipes, resulting in less leaks and breaks. Additionally, the project could be phased and completed over multiple years to provide less inconvenience to the Citizens of Colman. It would also extend various mains to create a looped system to reduce stagnant water, reduce head loss, reduce mineral build-up in pipes and increase reliability of water service.

Alternative 4 - Replace the Existing Water Tower with a New 75,000 Gallon Water Tower
This option would provide the City of Colman with a new 75,000 gallon capacity water tower to replace the existing tank. Water storage capacity would be increased by 25,000 gallons.

Alternative 5 - Replace the Existing Water Tower with a New 100,000 Gallon Water Tower

This alternative involves demolishing and removing the existing water tower to place a new 100,000 gallon capacity tower in its place. Thus, increasing the water storage capacity for the City of Colman.

Alternative 6 - Erect a New 50,000 Gallon Water Tower in the City Park

Instead of tearing down the existing elevated storage tank, this alternative would place a new 50,000 gallon tower in the Southern part of town to work in conjunction with the existing tower. Water storage capacity would be increased from 50,000 gallons to 100,000 gallons total.

Regardless of which alternative is selected, a new formal service agreement between the City of Colman and BSCWS should be negotiated to ensure the best possible service for the City of Colman.

B. Evaluation of Monetary Costs

The opinion of probable cost for Alternative #3 is estimated to be approximately $1,434,765. However, the project has been split up into phases. See Figure 3 in Appendix A for further evaluation of costs for the entire project. A breakdown of these costs for each of the phases can be viewed in Appendix A, Figure 7.

The opinion of probable cost for Alternative #5 is estimated to be approximately $678,015. See Figure 4 in Appendix A for further evaluation of costs for the new 100,000 gallon water tower.

The cost of elevated water tanks have no extreme bearing on the capacity these tanks can hold. For example the cost of the 50,000 gallon tank is approximately $450,000, whereas the cost of the 100,000 gallon tank is approximately $525,000.

Please note that these cost estimates are time dependent - subject to inflation and market changes.

C. Demonstration of Financial Capability

Currently the water rates for the City of Colman are $2.50 for every 1,000 gallons. An additional base rate fee is assessed for each of the following:

- $15.00 for Residential
- $15.00 for Commercial, unless equipped with a larger meter, then the charges are as follows.
    - $22.50 for a 1" meter
    - $30.00 for a 2" meter
    - $45.00 for a 3" meter
- $15.00 per Apartment Unit
- $25.00 for the Golf Course
- $70.00 for the School.

Please refer to Resolution 222 in Appendix D for further information.

D. Capital Financing Plan

The City of Colman will need to apply for additional funding. First District Association of Local Government is working with the city to apply for the needed finances.

E. Environmental Evaluation

This project should have no major effects on the environment. Planned work is on City streets or previously disturbed turf areas such as ditches throughout the community.

F. Evaluation of Recreational Opportunities

This project will not significantly affect any recreational activities in the area.

G. Comparison of Alternatives

Alternative 3 – Repair and Upgrade Selective Areas of the Water Distribution System

This is the best option for the distribution main problems in the City of Colman. The Citizens of Colman will benefit from improved water quality, protection and service. Furthermore, the replacement of the selected mains can be done in phases, which eliminates any timing or financial concerns.

Alternative 5 - Replace the Existing Water Tower with a New 100,000 Gallon Water Tower

This is the best way to proactively obtain additional water storage for the City of Colman. The capacity is large enough to provide for the growing needs of the community.

Alternative 1 – "Do Nothing"

Wasted water due to main breaks and leaks is an unnecessary expense for the City of Colman. Furthermore, this alternative doesn't address the need for additional water storage. The bottom line is this alternative will not provide the citizen of Colman with adequate water services.

Alternative 2 – Replace Entire Water Distribution System

Currently there is approximately 42,765 feet (not taking service connections into effect) of water lines running throughout the City of Colman. Maintenance and history reports signify that only 10,935 feet of pipe needs to be replaced. Replacement of the additional mains would be a waste of money.

Alternative 4 - Replace the Existing Water Tower with a New 75,000 Gallon Water Tower

This option will provide the needed storage capacity for the City of Colman. However, it does not allow for growing room. The volume provided will likely be exhausted by the new development.

Alternative 6 - Erect a New 50,000 Gallon Water Tower in the City Park

The capacity provided by this alternative (totaling 100 gallons) is sufficient for the City of Colman. The main concern is the need for additional piping and maintenance of two towers.

H. Views of the Public and Concerned Interest Groups

After the plan is reviewed and accepted by various city officials, a public hearing will be scheduled in order for the community to voice any concerns about the project.

V. Selected Plan, Description and Implementation Arrangements

A. Justification and Description of Selected Plan

The most practical and cost effective alternatives are to update selective areas of the existing water distribution system and install a new 100,000 gallon water storage tank. The City of Colman deserves decent water service, quality, supply and protection. Alternatives #3 and #5 can provide this for the community.

Additionally, a new formal service agreement between the City of Colman and BSCWS should be drafted.

B. Design of Selected Plan

The proposed improvements have varied timelines. The sectioned water main replacement (Alternative #3) shall occur over the next 15 years. Priority shall be placed to match that of the wastewater replacements so various roadways do not have to be torn up twice. The new water tower shall be installed within the next 5 to 10 years.

Appendix A, Figure 6 is a map of the City of Colman identifying areas proposed for eventual water main replacement and extension. The design will be focused around replacement as close to the existing location as possible. There is approximately 10,935 feet of piping that is proposed to be replaced. A few extensions totaling 1,885 feet will be made to provide for looped mains with better circulation. All proposed new water main is to be six inches with the exception of one block on Main Street where an eight inch main has been planned. A detailed list of the replacement and extended mains as well as other appurtenances can be examined in Appendix A, Figure 5.

One obstacle will be crossing Highway 34 (as needed with section 5). This section could be open-cut, but traffic control could create some issues. When this section is programmed to be replaced, directional drilling should be considered. Sections 8 & 9 involve placing water main along Highway 34. This can be accomplished in the existing ditches next to the road with the only obstacles being a few driveways and intersecting streets.

The installation of a new 100,000 gallon water tank to replace the existing 50,000 gallon tank should have no major complications as most of the needed appurtenances are already in place. A mixer is to be installed in the tank to reduce stagnant water and ice effects.

C. Cost Estimates for the Selected Plan

The opinion of probable cost for Alternative #3 is estimated to be approximately $1,434,765 for complete replacement. However, the project has been split up into phases. See Figure 3 in Appendix A for further evaluation of costs for the entire project. Furthermore, a breakdown of these costs can be viewed in Appendix A, Figure 7.

The opinion of probable cost for Alternative #5 is estimated to be approximately $678,015. See Figure 4 in Appendix A for further evaluation of costs for the new 100,000 gallon water tower.

Please note that these cost estimates are time dependent - subject to inflation and market changes.

D. User Rate Impacts

First District Association of Local Governments will examine user rates.

E. Environmental Impacts of Selected Plan

This project should have no major effects on the environment.

F. Arrangements for Implementation

1. Intermunicipal Service Agreements

The City has been purchasing their water from BSCWS. The City of Colman needs to renegotiate this agreement to ensure that their supply won't be limited.

2. Operation and Maintenance Requirements

The Operation and Maintenance requirements of the proposed projects will be very similar to what the City of Colman has experienced in the past. No additional staff should be required. In fact, the projects will require less time due to the improved quality of the system.

G. Land Acquisition

All of the proposed work will be completed within the City of Colman's right-of-way or on city-owned land. Therefore, no land acquisition will be necessary.

H. Implementation Schedule

Due to the varied available timelines for the proposed projects, a generalized implementation schedule has been developed. Phased water main replacement and new tower installation should take approximately a year and a half to see through completion (based upon adequate funding being available). The general implementation schedule is as follows:

Application for State Water Plan	January – Year 1
Finalize Funding Plan	March – Year 1
Apply for Grant(s) and SRF Loan(s)	June – Year 1
Grant(s) and SRF loan(s) Awarded Begin Survey & Design	August – Year 1
Submit Final Plans & Specifications	November – Year 1
Advertise for Bids	February – Year 2
Open Bids Award Contract	March – Year 2
Begin Construction	April – Year 2
Complete Construction	July – Year 2

APPENDIX A

CLARK ENGINEERING CORPORATION
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Sioux Falls, SD 57104-1328
(605) 331-2505
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EOE

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CHECKED BY:	KRG
REVISIONS:	

DATE: 10/28/08

SCALE: 1" = 600'

Appendix A - Figure 1

City of Colman - Water System Report

Aerial Photo of the City of Colman

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SCALE: 1" = 500'

Appendix A - Figure 2

City of Colman - Water System Report

Existing Water System Map

N W E S

Opinion of Probable Cost
City of Colman
Water System Replacement

PROPOSED REPLACEMENT

Item	*Quantity*	*Unit*	*Unit Cost*	*Cost*
MOBILIZATION & INCIDENTAL WORK	1	LS	$98,575.00	$98,575.00
WATER MAIN TIE-INS	37	EA	$700.00	$25,900.00
6" PVC WATER MAIN	12500	LF	$21.00	$262,500.00
8" PVC WATER MAIN	320	LF	$25.00	$8,000.00
WATER MAIN BEDDING MATERIAL	12820	LF	$5.00	$64,100.00
6" GATE VALVE & BOX	49	EA	$1,000.00	$49,000.00
8" GATE VALVE & BOX	1	EA	$1,200.00	$1,200.00
6" & 8" FITTINGS	57	EA	$450.00	$25,650.00
FIRE HYDRANT	18	EA	$2,200.00	$39,600.00
1" SADDLE w/ CORP	130	EA	$300.00	$39,000.00
1" CURB STOP & BOX	130	EA	$275.00	$35,750.00
1" SERVICE	2980	LF	$13.00	$38,740.00
RESTORATION - STREET - 12" GRAVEL	12499	TON	$15.00	$187,485.00
RESTORATION - STREET - 2" ASPHALT MAT	2202	TON	$75.00	$165,150.00
RESTORATION - SERVICES	130	EA	$300.00	$39,000.00

Contingency	10	%		$107,965.00
			Subtotal	$1,187,615.00

SURVEY & DESIGN ENGINEERING	1	LS	$107,050.00	$107,050.00
CONSTRUCTION ENGINEERING	1	LS	$95,100.00	$95,100.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$45,000.00	$45,000.00

TOTAL PROJECT COST	**$1,434,765.00**

Opinion of Probable Cost
City of Colman
Water System

New 100,000 Gallon Water Tower

Item	*Quantity*	*Unit*	*Unit Cost*	*Cost*
MOBILIZATION & INCIDENTAL WORK	1	LS	$15,000.00	$15,000.00
100,000 GALLON ELEVATED WATER TANK, COMPLETE	1	LS	$525,000.00	$525,000.00
8" PVC WATER MAIN	80	LF	$25.00	$2,000.00
8" GATE VALVE & BOX	2	EA	$1,200.00	$2,400.00
6" & 8" FITTINGS	5	EA	$450.00	$2,250.00
TANK MIXER	1	EA	$5,000.00	$5,000.00
DEMOLISH AND REMOVE EXISTING WATER TANK	1	EA	$20,000.00	$20,000.00
Contingency	10	%		$57,165.00
			Subtotal	$628,815.00
SURVEY & DESIGN ENGINEERING	1	LS	$25,200	$25,200.00
CONSTRUCTION ENGINEERING	1	LS	$19,000	$19,000.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$5,000	$5,000.00
TOTAL PROJECT COST				***$678,015.00***

Recommended Water Mains for Replacement
Colman, SD

ID	Location	Action	Existing				Proposed			
			Length	Hydrants	Valves	Type	Length	Hydrants	Valves	Type
1	N. Main Ave. (From NE 1st St. to NE 4th St.)	Replace	1395	2	3	4" CIP	1075	2	3	6" PVC
		Replace	350	1		6" TIP	320		1	8" PVC
2	N. Florence Ave. (From NW 1st St. to NW 3rd St.)	Replace	900	2		4" CIP	1340	3	7	6" PVC
	NW 1st St. (From N. Florence Ave. to N. Main Ave.)	Loop								
3	N. Crummer Ave. (From NW 1st St. to NW 3rd St.)	Replace	860	2	1	4" CIP	1220	2	7	6" PVC
	NW 1st St. (From N. Crummer Ave. to N. Florence Ave.)	Loop								
4	S. Main Ave. (From Highway 34 to SE 1st St.)	Replace	660	1	1	6" TIP	1060	2	2	6" PVC
		Replace	400	1		4" CIP				
5	S. Florence Ave. (From Circle Dr. to SW 1st St.)	Replace	340			4" TIP	1640	1	5	6" PVC
		Replace	760	1	2	4" ACP				
		Replace	540		1	6" TIP				
6	SW 2nd St. (From S. Crummer Ave to S. Florence Ave.)	Replace	430	2	1	4" ACP	430	2	2	6" PVC
	SW 1st St. (From S. Crummer Ave. to S. Main Ave.)	Replace & Extend	625	1	1	4" TIP	845	1	3	6" PVC
7	NW 2nd St. (From Huebner Dr. to N. Main Ave.)	Replace	1390	3	2	6" CIP	1390	3	6	6" PVC
8	Highway 34 (From T&R Electric to S. Florence Ave.)	Replace	1710	2	2	6" TIP	1775	2	7	6" PVC
		Replace	65		1	4" CIP				
9	Highway 34 (From S. Florence Ave. to S. Allen Ave.)	Replace & Extend	510		1	6" TIP	1725		7	6" PVC

Summary

Total Existing Pipe	10,935
Existing 4" ACP	1,190
Existing 4" CIP	3,620
Existing 4" TIP	965
Existing 6" CIP	1,390
Existing 6" TIP	3,770
Total Existing Hydrants	18
Total Existing Valves	16
Total Proposed Pipe	12,820
Proposed 6" PVC	12,500
Proposed 8" PVC	320
Total Proposed Hydrants	18
Total Proposed Valves	50

1 – N. Main Ave. (From NE 1st St. to NE 4th St.)
2 – N. Florence Ave. (From NW 1st St. to NW 3rd St.)
NW 1st St. (From N. Florence Ave. to N. Main Ave.)
3 – N. Crummer Ave. (From NW 1st St. to NW 3rd St.)
NW 1st St. (From N. Crummer Ave. to N. Florence Ave.)
4 – S. Main Ave. (From Highway 34 to SE 1st St.)
5 – S. Florence Ave. (From Circle Dr. to SW 1st St.)
6 – SW 2nd St. (From S. Crummer Ave to S. Florence Ave.)
SW 1st St. (From S. Crummer Ave. to S. Main Ave.)
7 – NW 2nd St. (From Huebner Dr. to N. Main Ave.)
8 – Highway 34 (From T&R Electric to S. Florence Ave.)
9 – Highway 34 (From S. Florence Ave. to S. Allen Ave.)

Water Legend

- Existing Water Main
- Proposed 6" PVC (12,500')
- Proposed 8" PVC (320')
- Proposed Areas for Replacement
- Water Tower
- BSCWS Source
- Fire Hydrant (Color/ Size Specific)
- Water Valve (Color/ Size Specific)

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SCALE: 1" = 500'

Appendix A - Figure 6

City of Colman - Water System Report

Proposed Replacement Areas

N W E S

Opinion of Probable Cost
City of Colman
Water System Replacement

Section 1

Item	*Quantity*	*Unit*	*Unit Cost*	*Cost*
MOBILIZATION & INCIDENTAL WORK	1	LS	$14,525.00	$14,525.00
WATER MAIN TIE-INS	3	EA	$700.00	$2,100.00
6" PVC WATER MAIN	1075	LF	$21.00	$22,575.00
8" PVC WATER MAIN	320	LF	$25.00	$8,000.00
WATER MAIN BEDDING MATERIAL	1395	LF	$5.00	$6,975.00
6" GATE VALVE & BOX	3	EA	$1,000.00	$3,000.00
8" GATE VALVE & BOX	1	EA	$1,200.00	$1,200.00
6" & 8" FITTINGS***	6	EA	$450.00	$2,700.00
FIRE HYDRANT	2	EA	$2,200.00	$4,400.00
1" SADDLE w/ CORP	36	EA	$300.00	$10,800.00
1" CURB STOP & BOX	36	EA	$275.00	$9,900.00
1" SERVICE	825	LF	$13.00	$10,725.00
RESTORATION - STREET - 12" GRAVEL	1758	TON	$15.00	$26,370.00
RESTORATION - STREET - 2" ASPHALT MAT	310	TON	$75.00	$23,250.00
RESTORATION - SERVICES	36	EA	$300.00	$10,800.00

Contingency	10	%		$15,732.00
			Subtotal	$173,052.00

SURVEY & DESIGN ENGINEERING	1	LS	$15,600	$15,600.00
CONSTRUCTION ENGINEERING	1	LS	$13,850	$13,850.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$5,000	$5,000.00

TOTAL PROJECT COST	***$207,502.00***

*** The number of fittings is subject to change depending on the sequencing of replacement for the sections

Opinion of Probable Cost
City of Colman
Water System Replacement

Section 2

Item	*Quantity*	*Unit*	*Unit Cost*	*Cost*
MOBILIZATION & INCIDENTAL WORK	1	LS	$12,100.00	$12,100.00
WATER MAIN TIE-INS	4	EA	$700.00	$2,800.00
6" PVC WATER MAIN	1340	LF	$21.00	$28,140.00
8" PVC WATER MAIN	0	LF	$25.00	$0.00
WATER MAIN BEDDING MATERIAL	1340	LF	$5.00	$6,700.00
6" GATE VALVE & BOX	7	EA	$1,000.00	$7,000.00
8" GATE VALVE & BOX	0	EA	$1,200.00	$0.00
6" & 8" FITTINGS***	7	EA	$450.00	$3,150.00
FIRE HYDRANT	3	EA	$2,200.00	$6,600.00
1" SADDLE w/ CORP	16	EA	$300.00	$4,800.00
1" CURB STOP & BOX	16	EA	$275.00	$4,400.00
1" SERVICE	365	LF	$13.00	$4,745.00
RESTORATION - STREET - 12" GRAVEL	1688	TON	$15.00	$25,320.00
RESTORATION - STREET - 2" ASPHALT MAT	297	TON	$75.00	$22,275.00
RESTORATION - SERVICES	16	EA	$300.00	$4,800.00

Contingency	10	%		$13,283.00
			Subtotal	$146,113.00

SURVEY & DESIGN ENGINEERING	1	LS	$13,150	$13,150.00
CONSTRUCTION ENGINEERING	1	LS	$11,700	$11,700.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$5,000	$5,000.00

TOTAL PROJECT COST	***$175,963.00***

*** The number of fittings is subject to change depending on the sequencing of replacement for the sections

Opinion of Probable Cost
City of Colman
Water System Replacement

Section 3

Item	Quantity	Unit	Unit Cost	Cost
MOBILIZATION & INCIDENTAL WORK	1	LS	$10,850.00	$10,850.00
WATER MAIN TIE-INS	4	EA	$700.00	$2,800.00
6" PVC WATER MAIN	1220	LF	$21.00	$25,620.00
8" PVC WATER MAIN	0	LF	$25.00	$0.00
WATER MAIN BEDDING MATERIAL	1220	LF	$5.00	$6,100.00
6" GATE VALVE & BOX	7	EA	$1,000.00	$7,000.00
8" GATE VALVE & BOX	0	EA	$1,200.00	$0.00
6" & 8" FITTINGS***	6	EA	$450.00	$2,700.00
FIRE HYDRANT	2	EA	$2,200.00	$4,400.00
1" SADDLE w/ CORP	14	EA	$300.00	$4,200.00
1" CURB STOP & BOX	14	EA	$275.00	$3,850.00
1" SERVICE	320	LF	$13.00	$4,160.00
RESTORATION - STREET - 12" GRAVEL	1537	TON	$15.00	$23,055.00
RESTORATION - STREET - 2" ASPHALT MAT	271	TON	$75.00	$20,325.00
RESTORATION - SERVICES	14	EA	$300.00	$4,200.00

Contingency	10	%		$11,926.00
			Subtotal	$131,186.00

SURVEY & DESIGN ENGINEERING	1	LS	$11,800	$11,800.00
CONSTRUCTION ENGINEERING	1	LS	$10,500	$10,500.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$5,000	$5,000.00

TOTAL PROJECT COST	***$158,486.00***

*** The number of fittings is subject to change depending on the sequencing of replacement for the sections

Opinion of Probable Cost
City of Colman
Water System Replacement

Section 4

Item	*Quantity*	*Unit*	*Unit Cost*	*Cost*
MOBILIZATION & INCIDENTAL WORK	1	LS	$10,650.00	$10,650.00
WATER MAIN TIE-INS	3	EA	$700.00	$2,100.00
6" PVC WATER MAIN	1060	LF	$21.00	$22,260.00
8" PVC WATER MAIN	0	LF	$25.00	$0.00
WATER MAIN BEDDING MATERIAL	1060	LF	$5.00	$5,300.00
6" GATE VALVE & BOX	2	EA	$1,000.00	$2,000.00
8" GATE VALVE & BOX	0	EA	$1,200.00	$0.00
6" & 8" FITTINGS***	5	EA	$450.00	$2,250.00
FIRE HYDRANT	2	EA	$2,200.00	$4,400.00
1" SADDLE w/ CORP	26	EA	$300.00	$7,800.00
1" CURB STOP & BOX	26	EA	$275.00	$7,150.00
1" SERVICE	595	LF	$13.00	$7,735.00
RESTORATION - STREET - 12" GRAVEL	1336	TON	$15.00	$20,040.00
RESTORATION - STREET - 2" ASPHALT MAT	235	TON	$75.00	$17,625.00
RESTORATION - SERVICES	26	EA	$300.00	$7,800.00

Contingency	10	%		$11,711.00
			Subtotal	$128,821.00

SURVEY & DESIGN ENGINEERING	1	LS	$11,600	$11,600.00
CONSTRUCTION ENGINEERING	1	LS	$10,300	$10,300.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$5,000	$5,000.00

TOTAL PROJECT COST	***$155,721.00***

*** The number of fittings is subject to change depending on the sequencing of replacement for the sections

Opinion of Probable Cost
City of Colman
Water System Replacement

Section 5

Item	*Quantity*	*Unit*	*Unit Cost*	*Cost*
MOBILIZATION & INCIDENTAL WORK	1	LS	$14,125.00	$14,125.00
WATER MAIN TIE-INS	6	EA	$700.00	$4,200.00
6" PVC WATER MAIN	1640	LF	$21.00	$34,440.00
8" PVC WATER MAIN	0	LF	$25.00	$0.00
WATER MAIN BEDDING MATERIAL	1640	LF	$5.00	$8,200.00
6" GATE VALVE & BOX	5	EA	$1,000.00	$5,000.00
8" GATE VALVE & BOX	0	EA	$1,200.00	$0.00
6" & 8" FITTINGS***	7	EA	$450.00	$3,150.00
FIRE HYDRANT	1	EA	$2,200.00	$2,200.00
1" SADDLE w/ CORP	22	EA	$300.00	$6,600.00
1" CURB STOP & BOX	22	EA	$275.00	$6,050.00
1" SERVICE	505	LF	$13.00	$6,565.00
RESTORATION - STREET - 12" GRAVEL	2066	TON	$15.00	$30,990.00
RESTORATION - STREET - 2" ASPHALT MAT	364	TON	$75.00	$27,300.00
RESTORATION - SERVICES	22	EA	$300.00	$6,600.00

Contingency	10	%		$15,542.00
			Subtotal	$170,962.00
SURVEY & DESIGN ENGINEERING	1	LS	$15,400	$15,400.00
CONSTRUCTION ENGINEERING	1	LS	$13,700	$13,700.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$5,000	$5,000.00
TOTAL PROJECT COST				***$205,062.00***

*** The number of fittings is subject to change depending on the sequencing of replacement for the sections

Opinion of Probable Cost
City of Colman
Water System Replacement

Section 6

Item	Quantity	Unit	Unit Cost	Cost
MOBILIZATION & INCIDENTAL WORK	1	LS	$10,075.00	$10,075.00
WATER MAIN TIE-INS	5	EA	$700.00	$3,500.00
6" PVC WATER MAIN	1275	LF	$21.00	$26,775.00
8" PVC WATER MAIN	0	LF	$25.00	$0.00
WATER MAIN BEDDING MATERIAL	1275	LF	$5.00	$6,375.00
6" GATE VALVE & BOX	5	EA	$1,000.00	$5,000.00
8" GATE VALVE & BOX	0	EA	$1,200.00	$0.00
6" & 8" FITTINGS***	8	EA	$450.00	$3,600.00
FIRE HYDRANT	3	EA	$2,200.00	$6,600.00
1" SADDLE w/ CORP	3	EA	$300.00	$900.00
1" CURB STOP & BOX	3	EA	$275.00	$825.00
1" SERVICE	70	LF	$13.00	$910.00
RESTORATION - STREET - 12" GRAVEL	1607	TON	$15.00	$24,105.00
RESTORATION - STREET - 2" ASPHALT MAT	283	TON	$75.00	$21,225.00
RESTORATION - SERVICES	3	EA	$300.00	$900.00

Contingency	10	%		$11,079.00
			Subtotal	$121,869.00

SURVEY & DESIGN ENGINEERING	1	LS	$11,000	$11,000.00
CONSTRUCTION ENGINEERING	1	LS	$9,750	$9,750.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$5,000	$5,000.00

TOTAL PROJECT COST	***$147,619.00***

*** The number of fittings is subject to change depending on the sequencing of replacement for the sections

Opinion of Probable Cost
City of Colman
Water System Replacement

Section 7

Item	Quantity	Unit	Unit Cost	Cost
MOBILIZATION & INCIDENTAL WORK	1	LS	$11,400.00	$11,400.00
WATER MAIN TIE-INS	3	EA	$700.00	$2,100.00
6" PVC WATER MAIN	1390	LF	$21.00	$29,190.00
8" PVC WATER MAIN	0	LF	$25.00	$0.00
WATER MAIN BEDDING MATERIAL	1390	LF	$5.00	$6,950.00
6" GATE VALVE & BOX	6	EA	$1,000.00	$6,000.00
8" GATE VALVE & BOX	0	EA	$1,200.00	$0.00
6" & 8" FITTINGS***	6	EA	$450.00	$2,700.00
FIRE HYDRANT	3	EA	$2,200.00	$6,600.00
1" SADDLE w/ CORP	9	EA	$300.00	$2,700.00
1" CURB STOP & BOX	9	EA	$275.00	$2,475.00
1" SERVICE	205	LF	$13.00	$2,665.00
RESTORATION - STREET - 12" GRAVEL	1751	TON	$15.00	$26,265.00
RESTORATION - STREET - 2" ASPHALT MAT	309	TON	$75.00	$23,175.00
RESTORATION - SERVICES	9	EA	$300.00	$2,700.00

Contingency	10	%		$12,492.00
			Subtotal	$137,412.00

SURVEY & DESIGN ENGINEERING	1	LS	$12,400	$12,400.00
CONSTRUCTION ENGINEERING	1	LS	$11,000	$11,000.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$5,000	$5,000.00

TOTAL PROJECT COST	***$165,812.00***

*** The number of fittings is subject to change depending on the sequencing of replacement for the sections

Opinion of Probable Cost
City of Colman
Water System Replacement

Section 8

Item	Quantity	Unit	Unit Cost	Cost
MOBILIZATION & INCIDENTAL WORK	1	LS	$7,425.00	$7,425.00
WATER MAIN TIE-INS	3	EA	$700.00	$2,100.00
6" PVC WATER MAIN	1775	LF	$21.00	$37,275.00
8" PVC WATER MAIN	0	LF	$25.00	$0.00
WATER MAIN BEDDING MATERIAL	1775	LF	$5.00	$8,875.00
6" GATE VALVE & BOX	7	EA	$1,000.00	$7,000.00
8" GATE VALVE & BOX	0	EA	$1,200.00	$0.00
6" & 8" FITTINGS***	6	EA	$450.00	$2,700.00
FIRE HYDRANT	2	EA	$2,200.00	$4,400.00
1" SADDLE w/ CORP	3	EA	$300.00	$900.00
1" CURB STOP & BOX	3	EA	$275.00	$825.00
1" SERVICE	70	LF	$13.00	$910.00
RESTORATION - STREET - 12" GRAVEL	252	TON	$15.00	$3,780.00
RESTORATION - STREET - 2" ASPHALT MAT	44	TON	$75.00	$3,300.00
RESTORATION - SERVICES	3	EA	$300.00	$900.00

Contingency	10	%		$8,039.00
			Subtotal	$88,429.00

SURVEY & DESIGN ENGINEERING	1	LS	$8,000	$8,000.00
CONSTRUCTION ENGINEERING	1	LS	$7,100	$7,100.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$5,000	$5,000.00

TOTAL PROJECT COST	***$108,529.00***

*** The number of fittings is subject to change depending on the sequencing of replacement for the sections

Opinion of Probable Cost
City of Colman
Water System Replacement

Section 9

Item	*Quantity*	*Unit*	*Unit Cost*	*Cost*
MOBILIZATION & INCIDENTAL WORK	1	LS	$7,425.00	$7,425.00
WATER MAIN TIE-INS	6	EA	$700.00	$4,200.00
6" PVC WATER MAIN	1725	LF	$21.00	$36,225.00
8" PVC WATER MAIN	0	LF	$25.00	$0.00
WATER MAIN BEDDING MATERIAL	1725	LF	$5.00	$8,625.00
6" GATE VALVE & BOX	7	EA	$1,000.00	$7,000.00
8" GATE VALVE & BOX	0	EA	$1,200.00	$0.00
6" & 8" FITTINGS***	6	EA	$450.00	$2,700.00
FIRE HYDRANT	0	EA	$2,200.00	$0.00
1" SADDLE w/ CORP	1	EA	$300.00	$300.00
1" CURB STOP & BOX	1	EA	$275.00	$275.00
1" SERVICE	25	LF	$13.00	$325.00
RESTORATION - STREET - 12" GRAVEL	504	TON	$15.00	$7,560.00
RESTORATION - STREET - 2" ASPHALT MAT	89	TON	$75.00	$6,675.00
RESTORATION - SERVICES	1	EA	$300.00	$300.00

Contingency	10	%		$8,161.00
			Subtotal	$89,771.00

SURVEY & DESIGN ENGINEERING	1	LS	$8,100	$8,100.00
CONSTRUCTION ENGINEERING	1	LS	$7,200	$7,200.00
ADMINISTRATION, LEGAL & BOND COUNCIL	1	LS	$5,000	$5,000.00

TOTAL PROJECT COST	***$110,071.00***

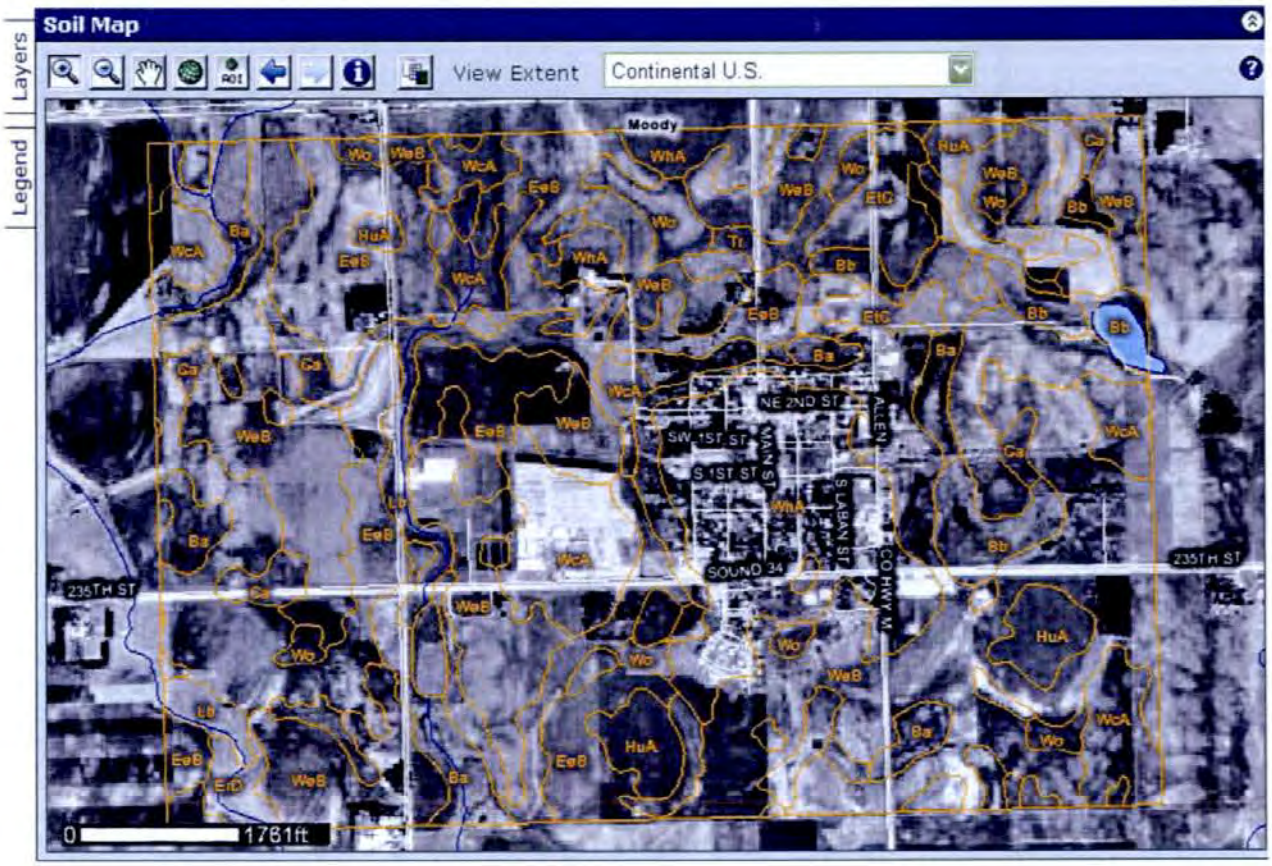
*** The number of fittings is subject to change depending on the sequencing of replacement for the sections

APPENDIX B

Reserved for Agency Letters

APPENDIX C

Area of Interest Interactive Map
Legend
Layers
View Extent
Continental U.S.
MAIN ST
470TH AVE
NW 3RD ST
NE 3RD ST
NW 2ND ST
NE 2ND ST
SW 1ST ST
NE 1ST ST
ALLEN
Moody
S 1ST ST
SE 1ST ST
SW 2ND ST
S MAIN ST
PERRY ST
S LABAN ST
235TH ST
235TH ST
469TH AVE
S FLORENCE ST
S PHILLIPS ST
CO HWY M
0
1761ft


Soil Map
Layers
Legend
View Extent
Continental U.S.
Moody
NE 2ND ST
SW 1ST ST
S 1ST ST
MAIN ST
S LABAN ST
ALLEN
CO HWY M
SOUND 34
235TH ST
235TH ST
0
1761ft

Moody County, South Dakota

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ba	BALTIC SILTY CLAY LOAM	90.8	4.8
Bb	BALTIC SILTY CLAY LOAM, PONDED	54.7	2.9
Ca	CHANCELLOR SILTY CLAY LOAM	81.7	4.3
DnB	DEMPSTER-TALMO COMPLEX, 2 TO 9 PERCENT SLOPES	0.1	0.0
EeB	EGAN-ETHAN COMPLEX, 2 TO 6 PERCENT SLOPES	397.2	21.1
ErD	ETHAN-CLARNO LOAMS, 6 TO 25 PERCENT SLOPES	28.0	1.5
EtC	ETHAN-EGAN COMPLEX, 5 TO 9 PERCENT SLOPES	80.8	4.3
HuA	HUNTIMER SILTY CLAY LOAM, 0 TO 3 PERCENT SLOPES	53.9	2.9
Lb	LAMO SILTY CLAY LOAM, FREQUENTLY FLOODED	53.3	2.8
M-W	MISCELLANEOUS WATER	9.5	0.5
Sa	SALMO SILTY CLAY LOAM	10.6	0.6
Tr	TRENT SILTY CLAY LOAM	11.3	0.6
Wa	WAKONDA-CHANCELLOR SILTY CLAY LOAMS	2.0	0.1
WcA	WENTWORTH-CHANCELLOR-WAKONDA SILTY CLAY LOAMS, 0 TO 2 PERCENT SLOPES	148.1	7.8
WeB	WENTWORTH-EGAN SILTY CLAY LOAMS, 2 TO 6 PERCENT SLOPES	609.1	32.3
WhA	WENTWORTH-TRENT SILTY CLAY LOAMS, 0 TO 2 PERCENT SLOPES	183.3	9.7
Wo	WORTHING SILTY CLAY LOAM	72.7	3.9

Record of Water Usage

Colman, SD

Current Population = 572 People

Design Population = 650 People

	JAN-05	FEB-05	MAR-05	APR-05	MAY-05	JUN-05	JUL-05	AUG-05	SEP-05	OCT-05	NOV-05	DEC-05	ANNUAL
RESIDENTIAL	1,112,000	1,226,000	1,000,000	1,031,000	1,157,000	1,150,000	1,661,000	1,556,000	1,560,000	1,056,000	1,283,000	1,017,000	14,809,000
SCHOOL	32,000	54,000	32,000	40,000	39,000	7,000	61,000	20,000	59,000	60,000	45,000	36,000	485,000
COMMERCIAL	55,000	45,000	28,000	88,000	500,000	477,000	639,000	546,000	474,000	125,000	88,000	50,000	3,115,000
TAX EXEMPT	16,000	19,000	11,000	17,000	28,000	20,000	64,000	47,000	36,000	13,000	18,000	9,000	298,000
TOTAL BILLED	*1,215,000*	*1,344,000*	*1,071,000*	*1,176,000*	*1,724,000*	*1,654,000*	*2,425,000*	*2,169,000*	*2,129,000*	*1,254,000*	*1,434,000*	*1,112,000*	*18,707,000*
CONSTRUCTION/ MAINTAINENCE		100,000		11,550	5,000		8,600	1,000	3,900	27,000	1,000		158,050
FIRE DEPARTMENT	27,000			9,700	14,000		13,650	3,000	10,000	1,000	12,000		90,350
POOL							129,000						129,000
TOWER OVERFLOW			4,000	7,000		40,000			10,000				61,000
TOTAL METERED WATER USAGE	1,242,000	1,444,000	1,075,000	1,204,250	1,743,000	1,694,000	2,576,250	2,173,000	2,152,900	1,282,000	1,447,000	1,112,000	19,145,400
BIG SIOUX READING	*1,509,000*	*1,791,000*	*1,344,000*	*1,507,000*	*2,022,000*	*1,979,000*	*3,052,000*	*2,803,000*	*2,786,000*	*1,899,000*	*1,622,000*	*1,183,000*	*23,497,000*
DIFFERENCE	267,000	347,000	269,000	302,750	279,000	285,000	475,750	630,000	633,100	617,000	175,000	71,000	4,351,600
USAGE (GALLONS)	1,509,000	1,791,000	1,340,000	1,500,000	2,022,000	1,939,000	3,052,000	2,803,000	2,776,000	1,899,000	1,622,000	1,183,000	23,436,000
USAGE (GPD)	48677	63964	43226	50000	65226	64633	98452	90419	92533	61258	54067	38161	64208
USAGE (GPPPD)	85.1	111.8	75.6	87.4	114.0	113.0	172.1	158.1	161.8	107.1	94.5	66.7	112.3

RECORD OF WATER USAGE

COLMAN, SD

CURRENT POPULATION = 572 PEOPLE

DESIGN POPULATION = 650 PEOPLE

	JAN-06	FEB-06	MAR-06	APR-06	MAY-06	JUN-06	JUL-06	AUG-06	SEP-06	OCT-06	NOV-06	DEC-06	ANNUAL
RESIDENTIAL	1,058,000	938,000	1,142,000	1,105,000	1,094,000	1,546,000	1,878,000	1,616,000	1,148,000	1,050,000	1,122,000	1,057,000	14,754,000
SCHOOL	37,000	46,000	35,000	41,000	54,000	61,000	69,000	70,000	38,000	40,000	41,000	33,000	565,000
COMMERCIAL	45,000	0	170,000	81,000	74,000	146,000	130,000	124,000	90,000	57,000	63,000	44,000	1,024,000
TAX EXEMPT	14,000	16,000	16,000	21,000	23,000	34,000	44,000	85,000	60,000	15,000	18,000	28,000	374,000
TOTAL BILLED	*1,154,000*	*1,000,000*	*1,363,000*	*1,248,000*	*1,245,000*	*1,787,000*	*2,121,000*	*1,895,000*	*1,336,000*	*1,162,000*	*1,244,000*	*1,162,000*	*16,717,000*
CONSTRUCTION/ MAINTAINENCE			3,000	5,400	18,000	98,200	129,200			65,000	20,600		339,400
FIRE DEPARTMENT			1,500	7,000	5,200	12,000	5,100	8,000		35,000		10000	83,800
POOL						150,800							150,800
TOWER OVERFLOW												10000	10,000
TOTAL METERED WATER USAGE	1,154,000	1,000,000	1,367,500	1,260,400	1,268,200	2,048,000	2,255,300	1,903,000	1,336,000	1,262,000	1,264,600	1,182,000	17,301,000
BIG SIOUX READING	*1,316,000*	*1,223,000*	*1,571,000*	*1,261,000*	*1,391,000*	*2,197,000*	*2,362,000*	*1,982,000*	*1,526,000*	*1,490,000*	*1,380,000*	*1,341,000*	*19,040,000*
DIFFERENCE	162,000	223,000	203,500	600	122,800	149,000	106,700	79,000	190,000	228,000	115,400	159,000	1,739,000
USAGE (GALLONS)	1,316,000	1,223,000	1,571,000	1,261,000	1,391,000	2,197,000	2,362,000	1,982,000	1,526,000	1,490,000	1,380,000	1,331,000	19,030,000
USAGE (GPD)	42,452	43,679	50,677	42,033	44,871	73,233	76,194	63,935	50,867	48,065	46,000	42,935	52,137
USAGE (GPPPD)	74.2	76.4	88.6	73.5	78.4	128.0	133.2	111.8	88.9	84.0	80.4	75.1	91.1

RECORD OF WATER USAGE

COLMAN, SD

CURRENT POPULATION = 572 PEOPLE

DESIGN POPULATION = 650 PEOPLE

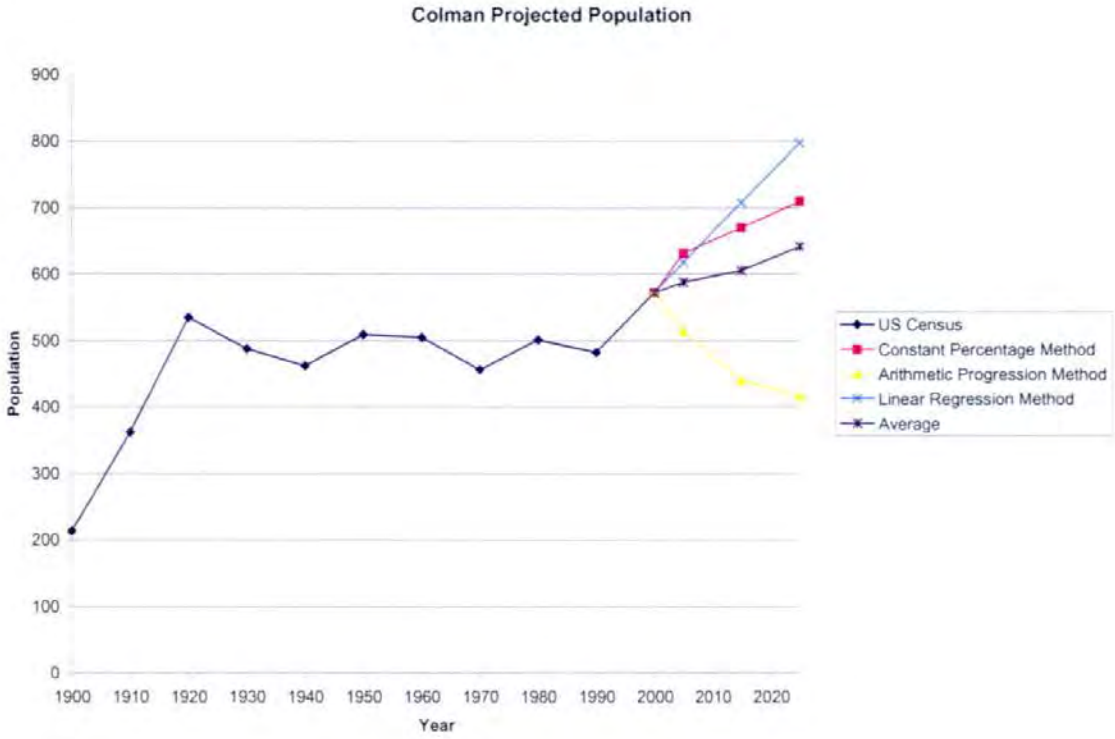
	JAN-07	FEB-07	MAR-07	APR-07	MAY-07	JUN-07	JUL-07	AUG-07	SEP-07	OCT-07	NOV-07	DEC-07	ANNUAL
RESIDENTIAL	1,184,000	1,056,000	898,000	1,142,000	1,231,000	1,335,000	1,933,000	1,813,000	1,148,000	1,112,000	1,242,000	1,014,000	15,108,000
SCHOOL	41,000	51,000	27,000	44,000	40,000	7,000	98,000	98,000	32,000	41,000	41,000	36,000	556,000
COMMERCIAL	50,000	61,000	40,000	63,000	66,000	61,000	82,000	123,000	59,000	69,000	71,000	54,000	799,000
TAX EXEMPT	50,000	19,000	18,000	18,000	29,000	41,000	72,000	29,000	14,000	17,000	16,000	14,000	337,000
TOTAL BILLED	*1,325,000*	*1,187,000*	*983,000*	*1,267,000*	*1,366,000*	*1,444,000*	*2,185,000*	*2,063,000*	*1,253,000*	*1,239,000*	*1,370,000*	*1,118,000*	*16,800,000*
CONSTRUCTION/ MAINTAINENCE					72,100	46,500		14,000	11,000	11,250	5,000		159,850
FIRE DEPARTMENT			3,000			110,000	30,000						143,000
POOL						26,000							26,000
TOWER OVERFLOW	3,000					10,000			10,000	10,000			33,000
TOTAL METERED WATER USAGE	1,328,000	1,187,000	986,000	1,267,000	1,438,100	1,636,500	2,215,000	2,077,000	1,274,000	1,260,250	1,375,000	1,118,000	17,161,850
BIG SIOUX READING	*1,357,000*	*1,556,000*	*1,087,000*	*1,589,000*	*1,506,000*	*2,256,000*	*2,553,000*	*2,542,000*	*1,445,000*	*1,588,000*	*1,453,000*	*1,412,000*	*20,344,000*
DIFFERENCE	29,000	369,000	101,000	322,000	67,900	619,500	338,000	465,000	171,000	327,750	78,000	294,000	3,182,150
USAGE (GALLONS)	1,354,000	1,556,000	1,087,000	1,589,000	1,506,000	2,246,000	2,553,000	2,542,000	1,445,000	1,578,000	1,453,000	1,412,000	20,311,000
USAGE (GPD)	43,677	55,571	35,065	52,967	48,581	74,867	82,355	82,000	47,833	50,903	48,433	45,548	55,647
USAGE (GPPPD)	76.4	97.2	61.3	92.6	84.9	130.9	144.0	143.4	83.6	89.0	84.7	79.6	97.3

Water System Engineering Report
Colman, SD
Population Projections

Constant Percentage Method		Arithmetic Progression Method	
Year	Population	Year	Population
1900	213	1900	213
1910	362	1910	362
1920	535	1920	535
1930	488	1930	488
1940	462	1940	462
1950	509	1950	509
1960	505	1960	505
1970	456	1970	456
1980	501	1980	501
1990	482	1990	482
2000	572	2000	572
2005	631	2005	515
2015	669	2015	440
2025	710	2025	416

Linear Regression Method		Average	
Year	Population	Year	Population
1900	213	1900	213
1910	362	1910	362
1920	535	1920	535
1930	488	1930	488
1940	462	1940	462
1950	509	1950	509
1960	505	1960	505
1970	456	1970	456
1980	501	1980	501
1990	482	1990	482
2000	572	2000	572
2005	617	2005	588
2015	707	2015	605
2025	797	***2025***	***641***

Population Projection, 2005 - 2025 Table 1


Colman Projected Population
900
800
700
600
500
400
300
200
100
0
Population
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Year
US Census
Constant Percentage Method
Arithmetic Progression Method
Linear Regression Method
Average

Water System Engineering Report
Colman, SD
Population Projections

Constant Percentage Method

Year	Population	K (from yr to 2000	P2010	P2015	P2025	Average	
1900	213	0.0099	393	417	442	K	0.005838
1910	362	0.0051	630	668	708	P2010	631
1920	535	0.0008	879	932	988	P2015	669
1930	488	0.0023	756	802	850	P2025	710
1940	462	0.0036	675	716	759		
1950	509	0.0023	702	744	789		
1960	505	0.0031	657	696	738		
1970	456	0.0076	559	593	629		
1980	501	0.0066	580	615	652		
1990	482	0.0171	526	558	591		
2000	572		589	624	662		
2005	631						
2015	669						
2025	710						

Arithmetic Progression (US Census)

Year	Population	Increase	% Increase	Population
1900	213			
1910	362	149	69.95%	
1920	535	173	47.79%	
1930	488	(47)	-8.79%	
1940	462	(26)	-5.33%	
1950	509	47	10.17%	
1960	505	(4)	-0.79%	
1970	456	(49)	-9.70%	
1980	501	45	9.87%	
1990	482	(19)	-3.79%	
2000	572	90	18.67%	
2005	515	(57)	-10.02%	
2015	440	(75)	-14.59%	
2025	416	(99)	-19.16%	

Linear Regression (US Census)

Year	Population	Linear Regression
1900	213	
1910	362	
1920	535	
1930	488	
1940	462	
1950	509	
1960	505	
1970	456	
1980	501	
1990	482	
2000	572	
2005	617	617
2015	707	707
2025	797	797

Regression Output:

Constant = 17428.0000

X-Coefficient(s) = 9.0000

Average

Year	Population
1900	213
1910	362
1920	535
1930	488
1940	462
1950	509
1960	505
1970	456
1980	501
1990	482
2000	572
2005	588
2015	605
2025	641

SOUTH DAKOTA HISTORICAL DATA:
COMMUNITY POPULATION BY COUNTY, 1890-2000

Area	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	1990-2000 Percent	
													Number	Change
Moody County	5941	8326	8659	9742	9603	9341	9252	8810	7622	6692	6507	6595	88	1.4
Colman	0	213	362	535	488	462	509	505	456	501	482	572	90	18.7
Egan	399	503	516	569	419	418	347	310	281	248	244	265	21	8.6
Flandreau	569	1244	1484	1929	1934	2212	2193	2129	2027	2114	2311	2376	65	2.8
Trent	0	0	0	295	256	240	213	232	177	197	211	254	43	20.4
Ward	0	0	72	118	90	84	96	74	57	43	35	41	6	17.1

Source: U.S. Census

Monthly Precipitation Total (inches)
Wentworth, SD (399042)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
2001	1.24	1.16	0.89	5.7	1.89	3.35	1.89	1.96	2.75	1.5	2.95	0.07	25.35
2002	0.3	0.08	1.19	1.33	1.12	1.93	0.55	6.38	1.07	3.01	0	0.31	17.27
2003	0.27	0.32	0.14	2.99	2.22	3.73	1.73	1.52	3.06	1.07	0.3	0.58	17.93
2004	0.34	0.27	1.75	1.07	5.28	3	8.03	2.41	5.64	0.54	0.45	0.07	28.85
2005	0.41	0.73	1.04	2.04	4.19	6.81	3.97	2.5	6.73	1.65	2.71	1.97	34.75
2006	0.1	0.3	1.96	3.01	1.04	2.76	1.28	3.35	5.73				

Source: SDSU South Dakota Climate and Weather Center

Period of Record Statistics (inches)
Wentworth, SD (399042)
From January 1, 1940 to October 1, 2006

	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Mean	0.48	0.70	1.48	2.38	3.16	4.08	3.18	3.03	2.63	1.69	1.11	0.58	24.49

Source: SDSU South Dakota Climate and Weather Center

APPENDIX D

Chapter 11.01 – WATER

11.0101 – Obtaining Water. Property owners desiring water from the City Waterworks shall make application to the City Finance Officer stating premises, purpose for which water is desired, and if the said property fronts the street in which the water main is laid. Water taps of the size of three-fourth inch only shall be permitted. The City Finance Officer shall upon the payment of the water hook-up fee of $100.00, instruct the general superintendent to tap the said main and put in a service pipe and necessary stop cocks and iron cut off box from the street main to the property line; provided no such laying shall be ordered during the months of November to May 1 in each year.

11.0102 – Stop Cocks. There shall be a brass stop cock in each service pipe under the exclusive control of the City, said stop cock to be placed in the pipe outside of the sidewalk, and no person except a direct employee of the said City shall open or close or otherwise interfere with the stop cock. A cut off or roadway box shall be placed over the stop cock and the top of the same shall extend about to the surface of the ground and shall have sufficient covering to prevent being struck or broken by wheels.

11.0103 – Expense for Repairs. Persons taking water from said service pipes must keep their fixtures connected therewith in good repair and protected from frost at their own expense must prevent all unnecessary waste of water or water will be turned off. No abatement or reduction shall be allowed from the prices charged by reason of any breakage or freezing or obstruction of any kind in the pipes or fixtures of any kind.

11.0104 – Water rates. Water rates shall be set by resolution by the City Council.

11.0105 – Distinct Premises. When two or more premises are supplied from one tap and only one stop cock is used, the person or persons controlling the same must pay or cause to be paid the separate water rate for each of said premises so separated or the water shall be turned off from all of such premises.

11.0106 – Repairing Main. The City reserves the right at any time to shut off the water in the main pipe for the purpose of repairing the same or making connections or extensions to the same or for the purpose of cleaning the same and it is expressly understood that no claim shall be made against the City by reason of the breaking of the service pipe, stop cock or from any damage arising from the shutting off of the supply of water, repairing, laying or relaying mains, hydrants, or other connections. And it is hereby made the duty of the general superintendent to give such reasonable notice as shall be practical.

11.0107 – Discontinuing Use. Any person desiring to discontinue taking water must notify the City Finance Officer in writing to that effect and the rental shall be charged to the first day of the next succeeding month.

11.0108 – Turning on Water. No water shall be turned on any premises except for testing purposes until the work has been inspected by the Superintendent and by him deemed satisfactory and in conformity to the rules.

11.0109 – Impurities. No person shall cast, throw, or suffer, or permit to be case or thrown any impure or unwholesome substance into any drinking fountain.

11.0110 - Reactivation Charge. Any time that a water service is discontinued either voluntarily at the request of the user or involuntarily for nonpayment of charges, such service may be reactivated upon request upon payment of any outstanding balance owed for such service and upon payment of the additional sum of $25.00 service fee. The City reserves the right to waive said reactivation fee if service is discontinued in case of an emergency.

CHAPTER 11.03 – GARBAGE & TRASH REMOVAL

11.0301 – Definitions.

(a) Family Domestic Unit. Any single independent family unit, irrespective of the number of persons constituting such family, but shall not include a situation where one or more independent families may be living together in any single residence or abode, but in such situation, each of such independent families shall be deemed and regarded as a separate and distinct family domestic unit. Each independent family unit living in multiple dwelling residences, shall each be deemed a family domestic unit for the purpose of this Chapter, a rooming house that supplies lodging for hire and which does not serve meals, shall be deemed one family domestic unit for the purpose of this Chapter.
(b) Garbage. All organic refuse from the preparation of food and decayed or spoiled animal or vegetable food from any source.
(c) Rubbish. Includes nonputrescribe solid waste consisting of combustible and noncombustible waste materials from residential apartments, commercial, industrial, and institutional establishments, including yard wastes and items commonly referred to as "trash".
(d) Solid Waste. Refuse, rubbish, garbage, trash and bulky refuse.
(e) Trash. Includes wood, tree leaves, dead leaves, small branches, chips, shavings, grass cuttings, sticks, old papers, and magazines, paper or wood cartons, rags, sawdust, old clothing, and other combustible materials of a like nature which are not included in the definition of garbage.

RESOLUTION NO. 222

A Resolution Amending Resolution No. 147 Water User Rates For The City Of Colman, South Dakota

IT IS HEREBY RESOLVED by the City of Colman, South Dakota that as of the effective date indicated below, the following rates shall be charged for public water usage:

Section 1. Monthly water debt service charges per unit and living unit will be as follows:

1.1	Residential	$15.00
1.2	Commercial	$15.00
1.3	Golf Course	$25.00
1.4	Apartment	$15.00 per unit
1.5	School	$70.00
1.6	1" meter	$15.00 x 1.5
1.7	2" meter	$15.00 x 2
1.8	3" meter	$15.00 x 3

Section 2. In addition to the above monthly debt service charges, there will be a charge of $2.50 per 1,000 gallons of water usage.

Section 3. All water debt service charges will be billed monthly.

Section 4. This resolution shall be in full force and effect with the December 20, 2005 meter readings.

Signed: _____
Mayor, City of Colman

Attest:
Signed: _____
City of Colman Finance Officer

1st reading: November 14, 2005
Published: November 30, 2005

APPENDIX E

Reserved for the Notice of Public Hearing

APPENDIX F

Community Water System, Inc.

Annual Drinking Water Quality Report

January 1, 2004– December 31, 2004

Introduction

The purpose of this report is to inform you of the quality of the drinking water that we provide you. We are required by the U.S. Environmental Protection Agency (EPA) to test our water frequently for the presence and concentrations of more than 90 different chemicals or chemical compounds. The South Dakota Department of Environment and Natural Resources (DENR) reviews all of our testing data to ensure that

1) we are providing safe drinking water to our customers, and 2) we are complying with EPA regulations

We hope you fully understand the information contained in this report. If you have any questions, you are welcome to attend our Board meetings (held the 3rd Wednesday of the month) or please contact:

Dave Bennett
Big Sioux Community Water System, Inc.
P.O. Box 158
Egan, SD
Phone: (605) 997-2098

Where does our water come from?

The source of our drinking water is ground water from the Big Sioux Aquifer. The Big Sioux Aquifer is a shallow sand and gravel aquifer. We have eight wells located within the Big Sioux River valley in central Moody County, SD. The wells are approximately 40 feet deep. Well-head protection ordinances are in place in Moody County, and efforts are ongoing to protect our raw water quality.

Why do we test our drinking water?

The water we pump from our wells originally comes from the surface, and very slowly seeps down into the aquifer. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals, and pick up substances resulting from the presence of animals or from human activity. Too much of any substance, either naturally occurring or resulting from human activities, can be considered a contaminant.

Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic chemicals or compounds, such as salts and metals, which can be naturally occurring or result from urban storm-water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm-water runoff, and residential uses.

Organic chemicals or compounds, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, septic systems and agriculture.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to

contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Summary of Results: Of the 90+ chemical parameters tested for, the table below represents all that were even detected.

Levels of Antimony, Barium, Chromium, Nickel, Selenium and Alpha emitters were found at levels consistent with our aquifer type. Fluoride levels are consistent with the amount we add to promote healthy teeth. Nitrate levels are consistent with area land-use, and well below the MCL. Lead and Copper levels, a function of plumbing fixtures, are very low due to the chemical stability of the water we produce. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Our Drinking Water Meets Or Exceeds Federal & State Requirements.

Definition of Terms

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Picocuries per liter (pCi/l), a measure of radioactivity.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

2004 Water Quality Test Results

Detected Inorganic Chemicals

Chemical	Sample Date	Level Detected	Average Level Detected	Range of Detection	Units	MCLG	MCL	Likely source of contamination
Alpha emitters	11/4/2003	3			pCi/l	0	15	Erosion of natural deposits
Antimony	5/27/2003	0.5			ppb	6	6	Refineries, electronics
Haloacetic Acids	8/30/2004	4.8			ppb	0	60	By-product of disinfection
Total Trihalomethanes	8/30/2004	36.8			ppb	0	80	By-product of disinfection
Nickel	6/5/2001	1.1			ppb	100	100	Metal alloys, batteries
Chromium	5/27/2003	1.6			ppb	100	100	Pulp mills, natural deposits
Barium	5/27/2003	0.01			ppm	2	2	Erosion of natural deposits
Fluoride	Twice Monthly	1.34	1.2	1.04 – 1.34	ppm	4	4	Water additive to promote strong teeth
Nitrate (as Nitrogen)	1/8/2004	2.7			ppm	10	10	Fertilizer runoff; septic tank; erosion of natural deposits
Selenium	5/27/2003	3.6			ppb	50	50	Erosion of natural deposits

Lead and Copper (Regulated at the Consumers Tap)

Chemical	Date Sampled	Level Detected (90th Percentile)	# of Samples above the	Units	MCLG	MCL	Likely source of contamination
Lead	6/10/2003	0.8	0	ppb	0	AL=15 ppb	Corrosion of household plumbing systems
Copper	6/11/2003	0.03	0	ppm	0	AL = 1.3 ppm	Corrosion of household plumbing systems

APPENDIX G

WATER PURCHASE AGREEMENT

THIS AGREEMENT made and entered into this 11 day of DECEMBER 1995, by and between Big Sioux Community Water System, Inc., a South Dakota corporation, of Rural Route, Egan, South Dakota, hereinafter referred to as "Big Sioux" and the City of Colman, South Dakota, a municipal corporation in Moody County, South Dakota, hereinafter referred to as "City", as follows:

WHEREAS, Big Sioux is organized and exists for the purpose of constructing and operating a water distribution system within a designated area in which the City is located; and

WHEREAS, the City desires to change its source of water from the City wells to Big Sioux to suit the needs of its citizens and consumers; and

WHEREAS, Big Sioux is desirous of adding to its system and in conjunction with that addition, is desirous of expanding its system to sell water to the city;

NOW THEREFORE, in consideration of the terms, conditions, and mutual covenants herein contained, the parties agree as follows:

1. Big Sioux shall furnish to the City potable treated water meeting the water quality standards of Big Sioux's other customers for drinking water in effect at any time during the full term hereof, in the gallonage hereinafter described. In the event of equipment failure or on account of any other cause known by Big Sioux such that the water quality standards fail to meet the specifications called for in this paragraph 1, Big Sioux shall immediately notify the City of the specifics of the problem, and Big Sioux shall repair or otherwise rectify the situation as quickly as reasonably possible. The parties further acknowledge that Big Sioux is not responsible for water quality after the water enters the city's tower or water system.

2. Big Sioux shall furnish to the City the following quantities of water:

a. Big Sioux shall furnish and deliver to City up to one hundred (100) gallons a minute at sufficient pressure to fill the City water tower. Big Sioux is not obligated but may furnish additional amounts of water upon mutual agreement with the city.

b. It is understood that in order to provide water service to City, Big Sioux must make certain improvements to its water system including, but not limited to, raw water pipeline, booster station pumping facilities, telemetry control of City tower.

3. In the event of failure or on account of any other cause known by Big Sioux, such that there is a decrease in water quantity that Big Sioux can furnish to City, Big Sioux shall immediately notify the City of that fact, and Big Sioux shall repair or otherwise rectify the situation as quickly as reasonably possible.

4. Emergency failures of pressure or supply due to main supply breaks, power failure, flood, fire, earthquake, or other catastrophe, or any of them, shall excuse Big Sioux from compliance with this agreement for such periods of time as are reasonably necessary to fully restore service.

5. City agrees that on the first day of each month the main metering equipment shall be read and by the fifteenth of each month, provide a written report of usage and remit payment for such water used.

6. City agrees to have meters installed at every service connection within City limits. Cost of meter installation and inspection is included in total cost of project. City is obligated to read meters and collect payment from such meters on a monthly basis.

7. At the City's request, Big Sioux shall provide water samples for testing, and, prior to operation, Big Sioux shall satisfy the City by proper documentation that the water to be delivered shall satisfy all quality standards as previously alluded to herein. Big Sioux shall maintain its regular water sample tests results on file, and shall make the same available to the City, on request.

8. At the request of either party, either party may at its expense and cost, check the metering equipment of the other party, but the same shall not be done more often than once every twelve (12) consecutive months, unless faulty operation of said metering equipment is suspected or discovered within said time frame. A meter registering not more than two percent (2%) above or below the test result shall be deemed accurate. Previous meter readings disclosed by test to be inaccurate shall be corrected for the two months immediately prior to the test in accordance with the percentage of inaccuracy found. If the meter fails to register for any period, the amount of water furnished during such period shall be deemed to be the amount of water delivered for the immediately preceding period, unless the parties shall otherwise mutually agree on a different quantity.

9. This agreement does not alter territorial service rights. City agrees that now and in the future, the only use of this connection with Big Sioux is to furnish City with potable water, and is not to be used to service present or future customers in the Big Sioux customer service area. City reserves the right to extend its boundaries in accordance with state law.

10. As the purchase price for the water delivered, the City shall pay monthly to Big Sioux at Big Sioux's business office on or before the fifteenth day of each month, the amounts to calculated as follows :

A. Production Cost:

This portion of the water rates shall be based on the unit cost per one thousand (1,000) gallons of water production for water supply and treatment plant, administration and operation expenses pertaining to direct labor, testing, energy, chemicals, repair and maintenance. These costs will be reviewed annually for the entire system and thereafter the rates shall be adjusted from time to time as deemed necessary. This rate shall initially be set at one dollar and forty cents ($1.40) per thousand gallons of metered water.

B. RECD Loan and Plant Debt Service:

City acknowledges that Big Sioux intends to borrow funds through RECD (formerly Fmha) to fund capital costs for Colman connection. This loan will be amortized over a forty year payment requiring monthly debt service. City will pay Big Sioux a percentage of this debt service. City also acknowledges that City will be liable for percentage of debt service on water treatment plant. These combined liabilities, as specified by preliminary Engineering plan (July 1995) and supported by a referendum of the electorate, amount to an annual loan payment to Big Sioux of twenty-one thousand, nine hundred and sixty dollars ($21,960). This amounts to a monthly payment of one thousand, eight hundred and thirty dollars ($1,830).

C. Rate Adjustment:

Water rates may be adjustable annually. Rate increases or decreases shall be based solely on the amounts of increases or decreases in the fluctuating items listed in subparagraph (A) of this paragraph 10 and then only in the proportion associated with the City's demand as compared with the total demand of all the Corporation's customers. The City shall have the right to verify Big Sioux's figures by an independent audit, at the City's cost, of Big Sioux's operating expense record.

11. The initial term of this contract shall be for a period of forty (40) years from and after the date of the completion of the hookup. The parties agree to extend this agreement for such additional five year terms upon the terms and conditions as the parties shall mutually agree.

12. Big Sioux shall, at all times, operate and maintain the system in an efficient manner and shall take prompt action whenever necessary to remedy any situation hindering full delivery to the City as specified herein. In the event of any water shortage occurring on peak usage days, or caused by drought or unforeseen natural circumstances, Big Sioux shall have the power to reduce the quantity of water delivered to the City, but the City's water supply shall be reduced only in the same ratio or proportion as the supply to Big Sioux's other consumers is reduced.

13. Big Sioux agrees to service the City with a 6" supply line and a 3" meter, capable of providing up to 350 gallons per minute. Big Sioux also agrees to furnish a meter bypass loop that permits higher flows during emergency conditions. The City understands and agrees, and hereby holds harmless Big Sioux from any and all liability, expressed or implied, arising out of or in connection with personal or property damages or injuries occasioned by fire within the City's distribution system. In respect thereto, the City understands and agrees that Big Sioux does not warrant or guarantee sufficient quantities of water to meet the Municipality's fire fighting needs.

14. The City shall have absolute discretion and authority as to the rates or charges it establishes for its own consumers, so long as monthly financial obligations as set forth and owed to Big Sioux under this contract are met.

15. This agreement shall be subject to such rules, regulations or laws as may be applicable to similar agreements in the State of South Dakota, and also subject to the approval of the appropriate officers of RECD. The parties agree to cooperate in the obtaining of all permits, certificates and other documents necessary or convenient to carry out the terms and purpose thereof.

16. Big Sioux's interest in and to this agreement may be assigned to RECD as security for any loan made to Big Sioux by RECD for the purchase, construction or improvement of any of its equipment or rural water systems.

17. This agreement may be modified at any time by mutual written consent of the parties and approved by RECD.

18. The parties mutually acknowledge that this entire water purchase agreement and all parts thereof is conditioned upon obtaining reasonable financing, and satisfactory bids for construction.

19. This agreement and all terms and conditions herein shall be binding upon the parties and their agents, successors and assigns.

IN WITNESS WHEREOF, the parties have hereunto executed this agreement by and through their authorized officers, on the date first above written.

BIG SIOUX COMMUNITY WATER SYSTEM, INC.

By: _____
Its President

Attest:

_____
Its General Manager

CITY OF COLMAN, SOUTH DAKOTA

By: _____
Its Mayor

Attest:

_____
Its Municipal Finance Officer

WATER SYSTEM ENGINEERING REPORT UPDATE 2016
CITY OF COLMAN

EXECUTIVE SUMMARY

Clark Engineering Corporation was retained by the City of Colman to prepare the water system engineering report submitted in October 2008. The primary purpose of the 2008 study was to evaluate alternatives to upgrade the existing water system for the City of Colman. This report is meant to update the October 2008 report with additional information.

The City has completed Phase 1 and Phase 2 projects to replace the water main north of Highway 34, installed new meters, and started construction of a new 100,000 gallon water tower to replace the existing water tower built in 1918. The 2008 engineering report should be updated to include the following two alternatives concerning the insufficient water main in the Cityôs distribution system.

Alternative 1 is the ñDo Nothingò alternative. This alternative does not address the current issues of inadequate water main and reliability of the system south of Highway 34. Therefore, this alternative is not recommended.

Alternative 2 is to replace insufficient water main along Highway 34 and increase reliability of the system to customers south of Highway 34. New 6-inch pipe is proposed from Allen Avenue to the cemetery west of Colman. A new 6-inch pipe is proposed to be installed across the north edge of the golf course to connect the two developments south of Highway 34 and provide a second loop to improve reliability to these customers. This alternative includes spot repairs to improve the system along Discovery Street and north of T&E. Alternative 2 is the recommended alternative. A map of the proposed improvements is located in the following page.

The estimated construction cost for Alternative 2 is approximately $620,000. The City of Colman plans to use designated funds to pay what they are able, but will need to apply for financial assistance.

David Burwitz, PE LEED
Office Manager
Clark Engineering
1410 W. Russell Street
Sioux Falls, SD 57104

City Map of Colman, South Dakota

WATER FACILITIES

N

W E

S

- City Limits
- 4" Cast Iron
- 4" Transite
- 4" Abestic
- 6" PVC
- 6" Cast Iron
- 6" Transite
- 8" PVC
- Service Line (Less than 4")
- (T) Water Tower
- (S) BSCWS Source
- Fire Hydrant (Color/Size Specific)
- Water Valve (Color/Size Specific)

FOURTH STREET NORTH
THIRD STREET NORTH
SECOND STREET NORTH
FIRST STREET NORTH
FIRST STREET SOUTH
SECOND STREET SOUTH
CORNELL STREET
TOURNAL STREET
PERRY STREET
OSMARK STREET
MAIN STREET
LIBBY STREET
ALLEN STREET
SD HWY 34
4TH STREET
5TH STREET
FLORENCE STREET
PHILIPS AVENUE
DISCOVERY STREET
PIONEER AVENUE
WILLWOOD AVENUE
FUTURE STREET
FAIRWAY DRIVE
WETLAND / POND

A - Main Complex
B - Office
C - Switchgear
D - Junking
E - Lab T & R-S
F - T & R-S Shop
G - Bus Garage
H - Mechanic Shop
I - Storage Buildings
J - Ponds
K - Parking Lot

DATE: 01/11/2016

SCALE: 1" = 300'

DRAWN BY: TLB

PROJ. NO. X14082

CLARK ENGINEERING CORPORATION

Convention Center Plaza
1410 West Russell Street
Sioux Falls, SD 57104-1328
Phone: (605) 331-2505
Fax: (605) 331-2602
siouxfalls@clark-eng.com

EOE

City of Colman
Highway 34 Watermain Replacement - Phase 3
Engineer's Opinion of Construction Costs

BID SCHEDULE				
Item Number	**Item Description**	**Estimated Quantity**	**Unit Cost**	**Item Total**
	Removals			
1	Mobilization	1 LS	$65,000.00	$65,000.00
2	Clear and Grub Tree	13 EA	$550.00	$7,150.00
3	Clearing	1 LS	$5,000.00	$5,000.00
4	Abandon Water Main Service	13 EA	$15.00	$195.00
5	Abandon Water Main Pipe	9 EA	$15.00	$135.00
6	Remove Curb and Gutter	76 LF	$5.00	$380.00
7	Remove Asphalt Pavement	1,082 SY	$2.00	$2,164.67
8	Remove Concrete Pavement	453 SY	$4.00	$1,812.00
9	Remove Concrete Sidewalk	11 SY	$4.00	$44.00
10	Remove 90 Degree Bend	4 EA	$200.00	$800.00
11	Remove Silt Fence	200 LF	$1.00	$200.00
12	Remove Yard Hydrant	1 EA	$200.00	$200.00
13	Remove Fire Hydrant	3 EA	$300.00	$900.00
14	Remove Valve Box	5 EA	$100.00	$500.00
15	Remove Curb Stop	16 EA	$100.00	$1,600.00
16	Remove Water Main	20 LF	$6.00	$120.00
17	Saw Existing Asphalt	580 LF	$3.00	$1,740.00
18	Miscellaneous Work	1 EA	$100.00	$100.00
	Excavation			
19	Unclassified Excavation	3,280 CY	$10.00	$32,800.00
20	Scarify and Recompact Subgrade	632 SY	$0.50	$316.00
21	Placing Topsoil, 4"	1,093 CY	$3.00	$3,279.00
22	Salvaging Topsoil, 4"	1,093 CY	$2.00	$2,186.00
23	Dewatering	1 LS	$10,000.00	$10,000.00
	Paving			
24	Aggregate Base Course, 6ò	500 TON	$15.00	$7,500.00
25	Asphalt Concrete Composite, 6ò	248 TON	$70.00	$17,360.00
26	Concrete Pavement, 6"	453 SY	$50.00	$22,650.00
27	Concrete Sidewalk, 4"	99 SF	$6.00	$594.00
28	Concrete Curb and Gutter	76 LF	$6.00	$456.00
	Traffic Control			
29	Traffic Control	2,631 UNIT	$2.00	$5,262.00
30	Traffic Control Miscellaneous	1 LS	$2,000.00	$2,000.00
	Erosion Control			
31	Permanent Seed Mixture	2,100 LB	$10.00	$21,000.00
32	Fertilizing	700 LB	$1.00	$700.00
33	Mulching	7 ACRE	$500.00	$3,500.00
34	Curb Inlet Protection	1 EA	$20.00	$20.00
35	Silt Fence	182 LF	$3.00	$546.00
	Water Main			
36	6ò C900 DR 18 PVC Water Main	7,613 LF	$26.00	$197,938.00
37	6" Restrained Joint PVC Pipe	31 LF	$35.00	$1,085.00
38	6ò MJ Gate Valve With Box	22 EA	$1,000.00	$22,000.00
39	Valve Box Adjustment	22 EA	$175.00	$3,850.00
40	Valve Box Concrete Collar	22 EA	$250.00	$5,500.00

Item Number	Item Description	Estimated Quantity	Unit Cost	Item Total
41	6" MJ Elbow 45 Degree	4 EA	$250.00	$1,000.00
42	6" MJ Elbow 90 Degree	2 EA	$300.00	$600.00
43	6" x 6" MJ Tee	16 EA	$350.00	$5,600.00
44	6" MJ Cap	1 EA	$200.00	$200.00
45	6" MJ Long Sleeve	9 EA	$300.00	$2,700.00
46	6" MJ Retainer Gland	80 EA	$50.00	$4,000.00
47	Fire Hydrant	4 EA	$2,850.00	$11,400.00
48	6" Fire Hydrant Extension	4 EA	$600.00	$2,400.00
49	Fire Hydrant Markers	4 EA	$33.00	$132.00
50	6" Water Main Adjustment	1 EA	$1,500.00	$1,500.00
51	Water Service Reconnect	16 EA	$400.00	$6,400.00
52	6" Water Main Bedding Material	7,613 LF	$4.00	$30,452.00
53	2" Curb Stop with Box	3 EA	$300.00	$900.00
54	2" Service Saddle and Tap	4 EA	$300.00	$1,200.00
55	2" Service Pipe	278 LF	$20.00	$5,560.00
56	1" Curb Stop with Box	17 EA	$250.00	$4,250.00
57	1" Service Saddle and Tap	11 EA	$250.00	$2,750.00
58	1" Service Pipe	673 LF	$15.00	$10,095.00
59	1" Yard Hydrant	1 EA	$200.00	$200.00
60	Water Main Tracer Wire	7,613 LF	$0.50	$3,806.50
61	12" Steel Encasement Pipe	200 LF	$200.00	$40,000.00
62	12" PVC Encasement Pipe	40 LF	$150.00	$6,000.00
63	4" PVC Encasement Pipe	180 LF	$100.00	$18,000.00
64	3" PVC Encasement Pipe	120 LF	$75.00	$9,000.00
65	Water Main Pressure Test	1 LS	$2,000.00	$2,000.00

TOTAL AMOUNT BASE BID (ITEMS 1 THROUGH 65)	**$618,728.17**

WRAP REVIEW SHEET
DRINKING WATER FACILITIES FUNDING APPLICATION
APPLICANT: TOWN OF WAKONDA

Project Title:	Drinking Water Systems Improvements Project
Funding Requested:	$2,836,710
Total Project Cost:	$2,836,710
Project Description:	The Town of Wakonda is proposing several improvements to its water system. The Town is proposing to replace the existing meter pit and rehabilitate the water tower. The Town also has three unused wells that will be abandoned. Cast iron lines accounting for 42 percent of the water distribution system will be replaced. Looping and replacement of undersized water mains is also included.
Alternatives Evaluated:	"Do Nothing" is not recommended as it does not correct the deteriorating conditions that face the Town's water system. "Rehabilitate Meter Pit" alternative would rehabilitate the existing structure by including a new coating of the existing surfaces and an installation of an exterior bypass. This alternative was not recommended in favor of Meter Pit Replacement. "Water Tower" and "Ground Storage with Booster Station" alternatives propose to construct new storage tanks to increase the Town's water storage. These alternatives were not chosen in favor of prioritizing the water distribution system replacement. Water storage alternatives will be considered in the future. "Rural Water Takeover" alternative would fully delegate control of supplying the Town's drinking water to their rural water provider. The Town rejected this alternative because they believed it was not in their best interest.
Implementation Schedule:	The Town of Wakonda plans to advertise bids for this project in July of 2016 with a completion date of December 2017.
Service Population:	313
Current Domestic Rate:	$38.25 per 5,000 gallons usage

Interest Rate: 3.0% Term: 30 years Security: Project Surcharge

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan Wakonda would have to establish a surcharge of approximately $81/month. When added to current rate of $38.25/5,000 gallons residents would be paying $119.25/5,000 gallons. However, based on cash flow projections, Wakonda needs to raise its current rate structure to approximately $41/5,000 gallons to cover operating costs. With the required increase in current rate the monthly rate would go up to $122/5,000 gallons.

25% Funding Subsidy:	$709,200 subsidy with a loan of $2,127,510.
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $2,127,510 Wakonda would have to establish a surcharge of approximately $60.70 thereby paying a rate of $101.70/5,000 gallons.

50% Funding Subsidy:	$1,418,355 subsidy with a loan of $1,418,355.
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $1,418,355 Wakonda would have to establish a surcharge of approximately $40.50 thereby paying a rate of $81.50/5,000 gallons.

75% Funding Subsidy:	$2,127,510 subsidy with a loan of $709,200.
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $709,200 Wakonda would have to establish a surcharge of approximately $20.25 thereby paying a rate of $61.25 /5,000 gallons.

ENGINEERING REVIEW COMPLETED BY: DREW HUISKEN

FINANCIAL REVIEW COMPLETED BY: DAVE RUHNKE

SECOG
SOUTH EASTERN COUNCIL OF GOVERNMENTS
SOUTH DAKOTA

RECEIVED
JAN 04 2015
Division of Financial
& Technical Assistance

December 30, 2015

Mike Perkovich
SD-DENR
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

Dear Mr. Perkovich:

Enclosed, please find the Drinking Water State Revolving Loan Funding Application for the Town of Wakonda's Drinking Water Systems Improvements Project. Included with the general application are the following appendices:

Appendix A – Supplemental Signed Application Forms including the Certification of Drinking Water Needs Categories, Certification Regarding Debarment, Suspension, and Other Responsibility Matters.
Appendix B – Draft Application Resolution (Will be Signed at January 4th Public Hearing)
Appendix C – Capacity Assessment Worksheets
Appendix D – Capacity Assessment Financial Spreadsheet
Appendix E – User Rate Ordinance
Appendix F – 2014 Unaudited Financial Statements
Appendix G – 2015 Budget
Appendix H – 2016 Budget
Appendix I – Documentation of an Active Registration in the SAM Database
Appendix J – Public Hearing Notice-Public Hearing Will Be Held January 4th. Minutes, Affidavit of Publication & Sign-in Sheets will be forwarded to DENR When Available

The Facility Plan was sent directly to Claire Peschong at DENR by SPN and Associates.

Sincerely,

Kristen Benidt
GIS Technician/Planner

Enclosures

Cc: Town of Wakonda
Camden Hofer, SPN and Associates

500 N. Western Ave. Suite 100 • Sioux Falls, SD 57104
Phone: 605.367.5390 • Fax: 605.367.5394
Website: www.secog.org • E-mail: gis@secog.org
Lynne Keller Forbes, Executive Director

Drinking Water Facilities Funding Application

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:	Proposed Funding Package	
Town of Wakonda		
Address: PO Box 265 Wakonda, SD 57073	Requested Funding	$2,836,710
	Local Cash	
Subapplicant:	Other:	
	Other:	
DUNS Number: 109270293	Other:	
	TOTAL	$2,836,710

Project Title: Drinking Water Systems Improvements Project

Description:

The Town of Wakonda is proposing to complete the Drinking Water Systems Improvement Project. A new meter pit is proposed to replace the old pit which has failing steel surfaces and is in need of bypass piping and larger pipe. The water tower will be rehabilitated by sandblasting and recoating. The Town's old wells have not been used for many years so they will be properly abandoned. Approximately 42 percent of the existing water distribution system is composed of cast iron pipe which is becoming problematic and is suspected of at least partially being the source of the average 28 percent water loss that the community is experiencing. The replacement of the cast iron pipe is proposed as part of this project. Additional piping will be installed to eliminate dead ends and to replace small diameter water mains which are under-sized for their use. A leak detection survey is also included in the project to detect any minor leaks upon completion of the proposed water main installation.

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Steve Mohr, Town Board President		12-23-2015
Name & Title of Authorized Signatory (Typed)	Signature	Date

Professional Consultants

Application Prepared By: South Eastern Council of Governments

Contact Person: Kristen Benidt

Mailing Address: 500 N Western Ave, Suite 100

City, State, and Zip: 500 N Western Ave, Suite 100

Telephone Number: (605)367-5390 Fax: (605)367-5394

Email address: gis@secog.org

Consulting Engineering Firm: SPN and Associates

Contact Person: Camden Hofer, P.E.

Mailing Address: 2100 North Sanborn Blvd., PO Box 398

City, State, and Zip: Mitchell, SD 57301

Telephone Number: (605)996-7761 Fax: (605) 996-0015

Email address: chofer@spn-assoc.com

Legal Counsel's Firm: Ward Law Office

Contact Person: Gary Ward

Mailing Address: 109 North Main

City, State, and Zip: Viborg, SD 57070

Telephone Number: (605)326-5282 Fax: (605)776-5231

Email address: wardg@iw.net

Bond Counsel's Firm: Davenport, Evans, Hurwitz & Smith, LLP

Contact Person: Doug Hajek

Mailing Address: PO Box 1030

City, State, and Zip: Sioux Falls, SD 57101-1030

Telephone Number: 605-336-2880 Fax: 605-335-3639

Email address: dhajek@dehs.com

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel	$89,100					$89,100
D. Other SECOG	$3,000					$3,000
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$190,400					$190,400
B. Project Inspection Fees	$249,500					$249,500
C. Other						
4. Construction & Improvements	$2,089,610					$2,089,610
5. Equipment						
6. Contractual Services						
7. Other Leak Detection	$6,000					$6,000
8. Other						
9. Subtotal (Lines 1-8)	$2,627,610					$2,627,610
10. Contingencies	$209,100					$209,100
11. Total (Lines 9 and 10)	$2,836,710					$2,836,710
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)			
Other (Explain) DWSRF/CWFCP		$2,836,710	March 2016
Other (Explain)			
Other (Explain)			
Total		$2,836,710	$2,836,710

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: January 1

Population Served Current: 313 2010 321 2000 374

Top three employers within 30 miles	Number of Employees	Type of Business
University of South Dakota	1200	Higher Education
Sanford Vermillion Medical Center	250	Medical
Walmart	225	Retail

Repayment Information

Interest rate you are applying for: 3% Term: 30

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☒ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan.
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$62,953	$63,896	$64,850	$66,950	$66,950	$66,950
Surcharge Fees						
Other (Explain)	$2,975	$8,849	$8,895	$9,500	$9,500	$9,500
Operating Expenses						
Personal Services	($17,991)	($19,982)	($18,568)	($21,630)	($22,279)	($22,947)
Chemical, Material & Supplies	($34,168)	($45,486)	($46,576)	($57,230)	($57,230)	($48,073)
Electric & Other Utilities	($8,071)	($7,085)	($7,197)	($9,167)	($9,442)	($9,725)
Other (Explain)						
Operating Net Cash	$5,697	$193	$1,404	($11,577)	($12,501)	($4,296)
Nonoperating Cash Flow						
Interest Revenue				$35		
Transfers In (Explain)						
Fixed Asset Purchases						
Transfers Out (Explain)						
Principal Debt Payments						($59,299)
Interest Debt Payments						($84,438)
Other (Explain)						
Nonoperating Net Cash				$35		($143,737)
Increase (Decrease) Cash	$5,697	$193	$1,404	($11,542)	($12,501)	($148,033)
Beginning Cash Balance	($11,434)	($5,738)	($5,545)	($4,140)	($15,682)	($28,183)
Ending Cash Balance	($5,738)	($5,545)	($4,140)	($15,682)	($28,183)	($176,216)
Restricted Balance						
Unrestricted Balance						

Explanations

Other Operating Revenue is a Water System Improvement fee.
Water purchase expense decreases in first year after project completion due to a reduction in water loss.

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: [X] Incorporated Municipality or Sanitary District

or

[ ] Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic	$38.25		163	2955
Business				
Other:				
Other:				

Are fees based on usage or flat rate? Usage

When is proposed fee scheduled to take effect? N/A

When did the current fee take effect? December 2014

What was the fee prior to the current rate? $33.25

Four Largest Customers	Type of Business	% of System Revenue
Wakonda Heritage Manor	Assisted Living	7.4%
Apartment Complex	Multi-resident complex	1.8%
Irene/Wakonda Elementary	Education	0.95%
Irene/Wakonda School Additi	Education	0.87%

Appendix A

Certification of Drinking Water Needs Categories and Certification Regarding Debarment, Suspension and Other Responsibility Matters

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$2,454,110
Treatment	
Storage	$186,400
Source	$196,200
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$2,836,710

Steve Mohr, Town Board President

Name & Title of Authorized Representative

Signature of Authorized Representative

12-23-2015

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Steve Mohr, Town Board President

Name & Title of Authorized Representative

Signature of Authorized Representative

12-23-2015

Date

☐ I am unable to certify to the above statements. Attached is my explanation

Appendix B

Application Resolution

RESOLUTION NO. 2016-01

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the Town of Wakonda (the "Town") has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to the Drinking Water Systems Improvement Project (the "Project"); and

WHEREAS, the Town has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the Town and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the Town as follows:

1. The Town hereby approves the submission of an Application for financial assistance in an amount not to exceed $2,836,710 to the South Dakota Board of Water and Natural Resources for the Project..

2. The Board President is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Board President is hereby designated as the authorized representative of the Town to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at Wakonda, South Dakota, on this 4th day of Jan 2016.

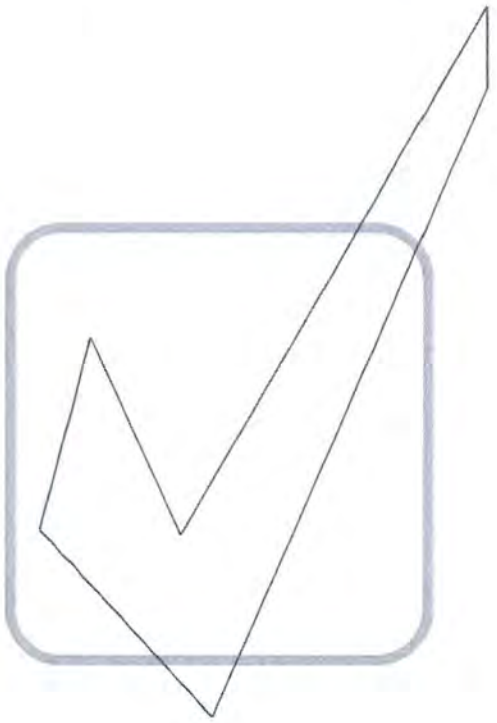
APPROVED:

Steve Mohr, Board President
Town of Wakonda

(Seal)

Attest: Nancy J Andresen
Town Finance Officer

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: Town of Wakonda

Prepared by: Nancy Andresen

Finance Officer

111 Ohio St, PO Box 265, Wakonda, SD

Phone #: (605)267-3118

Date: 12/10/2015

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µg/L: micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** 30,000	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 40,000	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** _____	☐	☐	☐	☑
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** _____	☐	☐	☐	☑
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** _____	☐	☐	☐	☑
Have you been able to provide adequate volumes of water during drought cycles?	☑	☐	☐	☐
Have you had to restrict usage at any time for any reason? ***Please specify:*** _____	☐	☐	☐	☑
Does your system have an emergency or supplemental water supply? ***Please specify:*** _____	☐	☑	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.***	☐	☐	☐	☑
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☐ ***growing,*** ☐ ***declining, or*** ☑ ***stable.***	☑	☐	☐	☐
Does your source have additional water available for appropriation?	☐	☑	☐	☐
Do you have a water right? ***Water right permit number(s):*** _____	☐	☑	☐	☐
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☐	☐	☐	☑
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☐	☐	☐	☑
Do you have a contract to purchase water? ***If yes, with whom?*** Clay Rural Water System	☑	☐	☐	☐
Are you currently staying within your contract?	☑	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☐	☑	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☐	☑	☐	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☐	☐	☐	☑
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** _____	☐	☐	☐	☑
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** _____	☐	☐	☐	☑
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☑	☐	☐	☐

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☐ **Yes** ☑ **No**

(If you checked "No", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☐	☐
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☐	☐
Are repair parts available?	☐	☐	☐	☐
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:*** _____	☐	☐	☐	☐
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☐	☐
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☐	☐
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:*** _____	☐	☐	☐	☐
Do you have the capability to add coagulant before the filter?	☐	☐	☐	☐

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☐	☐	☐	☐
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** _____	☐	☐	☐	☐
Is your well(s) constructed according to current South Dakota regulations?	☐	☐	☐	☐
Do you have a source water protection plan?	☐	☐	☐	☐
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☐	☐	☐	☐

Disinfection

Do you disinfect? ☐ **Yes** ☑ **No** ***(If "No", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** _____ ***How often?*** _____ ***Disinfectant used:*** _____	☐	☐	☐	☐
Do you have back-up equipment? ***Type:*** _____	☐	☐	☐	☐
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** _____	☐	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** _____ ***Total Chlorine Residual:*** _____ (if using chloramines)	☐	☐	☐	☐

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☐
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☐

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☐	☐	☐	☐
Are chemicals used for treatment properly stored and secure?	☐	☐	☐	☐
Does the water system track chemical usage? (i.e. a sudden	☐	☐	☐	☐

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping

Condition of Pumping Equipment	**Yes**	**No**	**Unknown**	**NA**
Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** _____	☐	☐	☐	☑
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☐	☐	☐	☑
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☐	☐	☐	☑
Standby/Emergency Power Equipment	**Yes**	**No**	**Unknown**	**NA**
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☐	☐	☐	☑
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☐	☐	☐	☑
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☐	☐	☐	☑

Infrastructure - Storage

Storage Capacity	**Yes**	**No**	**Unknown**	**NA**
Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:*** _____	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** 24,700 gallons	☑	☐	☐	☐
Security Measures	**Yes**	**No**	**Unknown**	**NA**
Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☑	☐	☐	☐
Are access hatches locked?	☑	☐	☐	☐
Is the tank and the immediate surrounding area fenced?	☐	☑	☐	☐
Control Systems				
Is there a high and low water level signal system to control the pumps?	☑	☐	☐	☐

Is there a drain valve or hydrant to allow for draining of the tank?	☑	☐	☐	☐
Tank Maintenance	**Yes**	**No**	**Unknown**	**NA**
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☑	☐	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☑	☐	☐	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:***	☑	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☑	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☑	☐	☐	☐
Are all valves exercised and lubricated periodically?	☑	☐	☐	☐
Is the system free of severe "water hammer" problems?	☑	☐	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☑	☐	☐	☐
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month?	☑	☐	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 28.3 %	☐	☑	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 32-44 psi	☑	☐	☐	☐
Do you have a routine leak detection and repair program?	☑	☐	☐	☐
Are all sources of supply and customers metered?	☑	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☑	☐	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☑	☐	☐	☐

Are any inspections for cross-connections performed?	☑	☐	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☐	☑	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☑	☐	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** 11.5%	☐	☑	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☑	☐	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☑	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☐	☐	☐	☑
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** _____ ***Most common complaint:*** Certified Operator	☐	☐	☑	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☐	☑	☐	☐

The Management Portion of your System

Please mark the appropriate box: Yes, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** Certified Operator	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** DENR, Rural Water Association	☑	☐	☐	☐

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☑	☐	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☐	☐	☐	☑
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications?	☑	☐	☐	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☐	☐	☑	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☑	☐	☐	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☑	☐	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☑	☐	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☑	☐	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** 12 years	☑	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☐	☑	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☑	☐	☐
Do you know what to do in the event of a violation?	☑	☐	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☑	☐	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☑	☐	☐	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☑	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☑	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** Mike Pohlmann-Fire Chief	☑	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☑	☐	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☐	☐	☑	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☑	☐	☐	☐
Do you have written operating procedures for both routine and emergency system operations?	☑	☐	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☑	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☐	☑	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☐	☑	☐	☐

Maintenance	Yes	No	Unknown	NA
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☑	☐	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☐	☑	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☐	☑	☐	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☑	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☑	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☑	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** _____	☐	☑	☐	☐
Does the system have reserve funds available in the event of an emergency?	☑	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☑	☐	☐	☐
Do you have a process for scheduling and committing to capital projects?	☑	☐	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☑	☐	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☑	☐	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** yearly	☑	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☐	☑	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** $17 minimum plus $4.25/1000 gallons (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: _____	☐	☑	☐	☐
Does the rate structure assure proportionality among users?	☑	☐	☐	☐
Do you have procedures for billing and collection?	☑	☐	☐	☐
Is your billing collection rate greater than 95%?	☑	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☑	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☑	☐	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☑	☐	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☑	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☐	☑	☐	☐
Do you employ standardized accounting and tracking systems?	☑	☐	☐	☐
Do you track budget performance?	☑	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☑	☐	☐	☐
Are financial management recordkeeping systems organized?	☑	☐	☐	☐
Are controls exercised over expenditures?	☑	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☑	☐	☐	☐
Are there purchasing procedures?	☑	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☑	☐	☐	☐

8.3.16.1.1

Financial Spreadsheet

Applicant: Town of Wakonda

Completed by: Nancy Andresen & SECOG Staff

Date: 12/10/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	**-$5,738**	**-$5,546**	**-$4,141**	**-$15,683**	**-$28,184**
2. Cash Receipts:					
a. Unmetered water Revenue					
b. Metered Water Revenue	$63,896	$64,850	$66,950	$66,950	$66,950
c. Other Water Revenue	$8,849	$8,895	$9,500	$9,500	$9,500
d. Total Water Revenues (2a through 2c)	**$72,745**	**$73,745**	**$76,450**	**$76,450**	**$76,450**
e. Connection Fees					
f. Interest and Dividend Income			$35		
g. Other -Sale of Investments					
h. Total Cash Revenues (2d through 2g)	**$72,745**	**$73,745**	**$76,485**	**$76,450**	**$76,450**
i. Transfers in/Additional Rev Needed					
j. Loans, Grants orother Cash					
Received from Interfund Services					
Due from Other Funds					
3. Total Cash Receipts (2h through 2j)	**$72,745**	**$73,745**	**$76,485**	**$76,450**	**$76,450**
4. Total Cash Available (1+3)	**$67,007**	**$68,199**	**$72,344**	**$60,767**	**$48,266**
5. Operating Expenses					
a. Salaries and Wages	$19,982	$18,568	$21,630	$22,279	$22,947
b. Employee Pensions and Benefits					
c. Purchased Water	$45,486	$46,576	$57,230	$57,230	$48,073
d. Purchased Power					
e. Fuel for Power Productin					
f. Chemicals, mat'ls, supplies					
g. Materials and Supplies	$7,085	$7,197	$9,167	$9,442	$9,725
h. Engineering Services					
i. Contractual Services - Other					
j. Equip. Rent/Real Property					
k. Transportation Expenses					
l. Laboratory					
m. Insurance					
n. Regulatory Commission Expenses					
o. Advertising					
p. Paid for Interfund Services					
q. Total Cash O&M Expenses (5a through 5p)	**$72,552**	**$72,341**	**$88,027**	**$88,951**	**$80,745**
r. Replacement Expenditures					
s. Total OM&R Expenditures (5q+5r)	**$72,552**	**$72,341**	**$88,027**	**$88,951**	**$80,745**
t. Loan Principal/Capital Lease Payments					$59,299
u. Loan Interest Payments					$84,438
v. Transfers Out					
w. Capital Purchases (specify):					
Due to Other Funds					
x. Other					
6. Total Cash Paid Out (5s through 5x)	**$72,552**	**$72,341**	**$88,027**	**$88,951**	**$224,482**
7. Ending Cash Position (4 - 6)	**-$5,546**	**-$4,141**	**-$15,683**	**-$28,184**	**-$176,216**

Financial Spreadsheet

Applicant: Town of Wakonda

Completed by: Nancy Andresen & SECOG Staff

Date: 12/10/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts	163	163	163	163	163
9. Avg Annual User Charge Account (2d/8)	$446.29	$452.42	$469.02	$469.02	$469.02
10. Coverage Ratio (2h-5s)/(5t+5u)	N/A	N/A	N/A	N/A	-0.03
11. Operating Ratio (2d/5s)	1.00	1.02	0.87	0.86	0.95
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve					
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other					
13. Total Reserves (12a through 12e)	$0	$0	$0	$0	$0
14. Year End Operating Cash (7 - 13)	**-$5,546**	**-$4,141**	**-$15,683**	**-$28,184**	**-$176,216**

RESOLUTION NO. 2014 - 2

A RESOLUTION AMENDING WATER RATES

WHEREAS, the Wakonda Town Board of Trustees believes that it is necessary and in the best interest of the Town of Wakonda, in order to pay all costs for the operation and maintenance of the water system, to amend the rates for the sale of water provided by the Town of Wakonda; and

WHEREAS, Section 8.0103 of the Wakonda Municipal Ordinances gives the Wakonda Town Board of Trustees the authority to revise water rates by Resolution of the Wakonda Town Board of Trustees.

NOW, THEREFORE, BE IT RESOLVED by the Wakonda Town Board of Trustees as follows:

SECTION 1. The minimum service charge per month will be as follows:

All customers shall pay a minimum monthly fee of twelve dollars ($12.00) plus five dollars ($5.00) for Water System Improvement fee.

SECTION 2. The consumptive charge per month will be as follows:

The consumptive use of water charge shall be four dollars and twenty-five cents ($4.25) per 1,000 gallons.

SECTION 3. Voluntary discontinuance of service rate will be as follows:

If the discontinuance of a water service continues more than thirty (30) days, the consumer may request that the water service be placed on a standby basis. While on a standby basis, the water service rates during each monthly billing period for which no water is utilized shall be the minimum service charge per month (Section 1), except no Water System Improvement fee.

SECTION 4. This rate change is effective beginning with the DEC, 2014 bills.

Adopted this 3rd day of NOV, 2014.

President, Town Board of Trustees

Exhibit I

MUNICIPALITY OF Wakonda
STATEMENT OF FUND CASH BALANCES
ALL FUNDS
31-Dec-14

				Enterprise Funds					
	General Fund	Fund	Fund	Water Fund	Sewer Fund	Fund	Fund	Fund	Total
Cash Assets:									
Cash in Checking Accounts	68,957.68			(5,545.07)	109,513.89				172,926.50
Change and Petty Cash									0.00
Passbook Savings	295,494.89								295,494.89
Savings Certificates	34,197.32				52,280.13				86,477.45
									0.00
									0.00
									0.00
									0.00
101 FUND CASH BALANCES (Note 1)	398,649.89	0.00	0.00	(5,545.07)	161,794.02	0.00	0.00	0.00	554,898.84

Municipal funds are deposited or invested with the following depositories:

	0.00

Note 1: These amounts must equal the amounts stated on the bottom line of Exhibit II, page 3.

MUNICIPALITY OF WAKONDA
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014

				Enterprise Funds					
	General Fund	Fund	Fund	Water Fund	Sewer Fund	Fund	Fund	Fund	Total
Receipts (Source):									
311 Property Taxes	113,649.74								113,649.74
313 Sales Tax	74,181.32								74,181.32
316 911 Telephone Surcharge									0.00
311-319 Other Taxes (319)									0.00
320 Licenses and Permits	1,662.50								1,662.50
331 Federal Grants									0.00
335.1 Bank Franchise Tax	595.04								595.04
335.2 Motor Vehicle Commercial Prorate									0.00
									0.00
335.3 Liquor Tax Reversion	2,585.14								2,585.14
335.4 Motor Vehicle Licenses (5%)	5,828.66								5,828.66
335.6 Fire Insurance Premium Reversion									0.00
									0.00
335.8 Local Government Highway and Bridge Fund	6,763.53								0.00
									6,763.53
338.1 County Road Tax (25%)									0.00
338.2 County Highway and Bridge Reserve Tax (25%)	787.96								0.00
									787.96
338.3 County Wheel Tax									0.00
331-339 Other Intergovernmental Revenue (339)	2,619.93								0.00
									2,619.93
341-349 Charges for Goods and Services (341)	2,008.56								0.00
									2,008.56
351-359 Fines and Forfeits (351)									0.00
361 Investment Earnings	340.16				145.58				485.74
362 Rentals									0.00
363-369 Other Revenues (369)	14,679.79								14,679.79

MUNICIPALITY OF WAKONDA
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014
(continued)

				Enterprise Funds					
	General Fund	Fund	Fund	Water Fund	Sewer Fund	Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
380 Enterprise Operating Revenue				72,744.67	74,789.55				147,534.22
Surcharge as Security for Debt									0.00
380.05 Lottery Revenues									0.00
330 Operating Grants									0.00
Total Receipts	225,702.33	0.00	0.00	72,744.67	74,935.13	0.00	0.00	0.00	373,382.13
Disbursements (Function):									
411-419 General Government (414)	41,114.40								41,114.40
421 Police	10,000.00								10,000.00
422 Fire	3,907.17								3,907.17
423-429 Other Public Safety (429)									0.00
431 Highways and Streets (includes snow removal & street lights)	83,075.57								83,075.57
432 Sanitation (includes garbage & rubble sites)									0.00
437 Cemeteries									0.00
433-439 Other Public Works (435)									0.00
441-449 Health and Welfare (441)									0.00
451-459 Culture-Recreation (451)	24,167.93								24,167.93
461-469 Conservation and Development (465)									0.00
470 Debt Service									0.00
480 Intergovernmental Expenditures									0.00
490-492 Miscellaneous (492)									0.00

MUNICIPALITY OF WAKONDA
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014
(continued)

				Enterprise Funds					
	General Fund	Fund	Fund	Water Fund	Sewer Fund	Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
410 Personal Services				19981.60	19981.64				39,963.24
420 Other Expenses				7084.61	11297.38				18,381.99
426 Supplies and Materials				45485.55					45,485.55
Total Disbursements	162,265.07	0.00	0.00	72,551.76	31,279.02	0.00	0.00	0.00	266,095.85
391.01 Transfers In									0.00
51100 Transfers Out	( )	( )	( )	( )	( )	( )	( )	( )	0.00
391.03 Sale of Municipal Property									0.00
391.04 Compensation for Loss or Damage to Capital Assets									0.00
391.2 Money Received From Borrowing									0.00
391.07 Capital Contributions (Grants)					462,898.59				462,898.59
					-461,742.50				-461,742.50
									0.00
Subtotal of Receipts, Disbursements and Transfers	63,437.26	0.00	0.00	192.91	44,812.20	0.00	0.00	0.00	108,442.37
Fund Cash Balance, January 1, 2014	335,212.63			-5,737.98	116,981.82				446,456.47
Adjustments:									
									0.00
									0.00
									0.00
Restated Fund Cash Balance, January 1, 2014	335,212.63	0.00	0.00	-5,737.98	116,981.82	0.00	0.00	0.00	446,456.47
FUND CASH BALANCE, DECEMBER 31, 2014	398,649.89	0.00	0.00	-5,545.07	161,794.02	0.00	0.00	0.00	554,898.84

Exhibit III

MUNICIPALITY OFWakonda
STATEMENT OF CHANGES IN LONG-TERM DEBT
For the Year Ended December 31, 2014

	General Long-Term Debt			Enterprise	
	General Obligation Bonds	Special Assessment Bonds	Other	Revenue Bonds	Total
Debt Payable, January 1, 2014				4,801.00	4,801.00
Add New Issues:					
				462,898.59	462,898.59
					0.00
					0.00
Less Debt Retired					0.00
DEBT PAYABLE, DECEMBER 31, 2014	0.00	0.00	0.00	467,699.59	467,699.59
	(23101)	(23103)	(23700)	(23102)	

Note: Amounts reported do not include interest.

City of Wakonda
Trial Balance - General Fund
December 31, 2014

	Beginning Balance January 1, 2014			Transactions 2014			Trial Balance December 31, 2014			Adjustments December 31, 2014			Adjusted Trial Bal December 31, 2014	
	Debit	Credit		Debit		Credit	Debit	Credit		Debit		Credit	Debit	Credit
Cash	79,827.25		c	340.16	e	162,390.58	68,957.68						68,957.68	
			d	151,180.85										
Savings	221,188.06		b	74,306.83			295,494.89						295,494.89	
CDs	34,197.32		a	0.00			34,197.32						34,197.32	
Fund Balance		335,212.63						335,212.63						335,212.63
Property Tax					d	107,131.58		107,131.58						107,131.58
Prior Year Tax					d	5,384.90		5,384.90						5,384.90
Interest & Penalities					d	1,133.26		1,133.26						1,133.26
Sales Tax			e	125.51	b	74,306.83		74,181.32						74,181.32
Bank Franchise Tax					d	595.04		595.04						595.04
Licenses					d	1,662.50		1,662.50						1,662.50
Local Gov't H & B					d	6,763.53		6,763.53						6,763.53
Alcoholic Bev Tax					d	2,585.14		2,585.14						2,585.14
Road & Bridge					d	787.96		787.96						787.96
Motor Vehicle					d	5,828.66		5,828.66						5,828.66
Other County					d	2,619.93		2,619.93						2,619.93
Pool					d	2,008.56		2,008.56						2,008.56
Interest Income					a	0.00		340.16						340.16
					c	340.16								
Fines								0.00						0.00
Miscellaneous					d	1,955.73		1,955.73						1,955.73
					d	0.00	0.00						0.00	0.00
Friends of Wakonda - Pool					d	10,000.00		10,000.00						10,000.00
Insurance Refund					d	1,924.06		1,924.06						1,924.06
Donations					d	0.00		0.00						0.00
Dev Corp Café Ins					d	800.00		800.00						800.00
Trustees			e	2,548.78			2,548.78			a	423.64		2,972.42	
Finance Officer			e	5,975.32			5,975.32			a	1,941.74		9,143.48	

										b	1,226.42			
Dues				1,083.61		1,083.61							1,083.61	
Insurance			e	22,887.00		22,887.00							22,887.00	
Professional Services			e	410.00		410.00							410.00	
Miscellaneous			e	177.10		177.10							177.10	
Office Supplies			e	280.65		280.65							280.65	
Office Expenses			e	15.00	d	15.00							15.00	
Printing & Publishing			e	733.46		733.46							733.46	
Repairs & Maintenance			e	3,411.68		3,411.68							3,411.68	
Police			e	10,000.00		10,000.00							10,000.00	
Fire			e	3,907.17		3,907.17							3,907.17	
Library			e	5,000.00		5,000.00							5,000.00	
Parks			e	17,186.51		17,186.51				a	1,981.42		19,167.93	
										b	0.00			
Water				2,440.00		2,440.00							2,440.00	
Shop			e	676.41		676.41							676.41	
Streets			e	74,476.62		74,476.62				a	3,709.90		79,959.16	
										b	1,772.64			
SDRS			e	2,999.06		2,999.06						b 2,999.06	0.00	
WH			e	8,056.70	d	8,056.70						a 8,056.70	0.00	
Totals	335,212.63	335,212.63		388,218.42		388,218.42	560,914.96	560,914.96			11,055.76	11,055.76	560,914.96	560,914.96

City of Wakonda
Trial Balance - Water Fund
December 31, 2014

	Beginning Balance January 1, 2014			Transactions 2014		Trial Balance December 31, 2014		Adjustments December 31, 2014		Adjusted Trial Bal December 31, 2014	
	Debit	Credit		Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	-5,737.98		a	72,744.67 b	72,551.76	-5,545.07				-5,545.07	
Savings						0.00				0.00	
CDs						0.00				0.00	
Fund Balance		-5,737.98					-5,737.98				-5,737.98
Water Charges			a	a	63,895.52		63,895.52				63,895.52
Interest							0.00				0.00
Miscellaneous			b	a	29.15		29.15				29.15
Water & Sewer Improv				a	8,820.00		8,820.00				8,820.00
Deposit Return			a			0.00				0.00	
			b								
Salary			b	18,054.47		18,054.47				18,054.47	
SDRS			b	1,927.13		1,927.13				1,927.13	
WH			b			0.00				0.00	
Water			b	45,485.55		45,485.55				45,485.55	
Power			b	2,235.21		2,235.21				2,235.21	
Printing and Publishing			b	265.53		265.53				265.53	
Supplies			b	29.48		29.48				29.48	
Repairs			b	2,798.03		2,798.03				2,798.03	
Insurance			b			0.00				0.00	
Phone			b	256.31		256.31				256.31	
Postage			b	670.54		670.54				670.54	
Training			b			0.00				0.00	
Billing			b	295.08		295.08				295.08	
Dues			b	417.50		417.50				417.50	
Miscellaneous			b	116.93		116.93				116.93	
Water Lines			b			0.00				0.00	
Totals	-5,737.98	-5,737.98		145,296.43	145,296.43	67,006.69	67,006.69	0.00	0.00	67,006.69	67,006.69

City of Wakonda
Trial Balance - Sewer Fund
December 31, 2014

	Beginning Balance January 1, 2014			Transactions 2014		Trial Balance December 31, 2014		Adjustments December 31, 2014		Adjusted Trial Bal December 31, 2014	
	Debit	Credit		Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	64,847.27		a	537,688.14	b 493,021.52	109,513.89				109,513.89	
Savings						0.00				0.00	
CDs	52,134.55		c	145.58		52,280.13				52,280.13	
Fund Balance		116,981.82					116,981.82				116,981.82
Sewer Charges					a 42,406.80		42,406.80				42,406.80
Sewer Surcharge					a 23,562.75		23,562.75				23,562.75
Water & Sewer Impro					a 8,820.00		8,820.00				8,820.00
Interest					c 145.58		145.58				145.58
Miscellaneous							0.00				0.00
Vermillion Water Basin					a		0.00				0.00
Small Com Planning					a		0.00				0.00
SRF Loan					a 462,898.59		462,898.59				462,898.59
						0.00				0.00	
Salary			b	14,004.76		14,004.76				14,004.76	
SDRS			b	1,927.13		1,927.13				1,927.13	
WH			b	4,049.75		4,049.75				4,049.75	
Power			b	2,235.20		2,235.20				2,235.20	
Printing and Publishing			b	265.53		265.53				265.53	
Supplies				29.48		29.48				29.48	
Repairs			b	2,798.03		2,798.03				2,798.03	
Insurance			b			0.00				0.00	
Phone			b	256.31		256.31				256.31	
Postage			b	670.55		670.55				670.55	
Sewer				3,856.47		3,856.47				3,856.47	
Billing			b	295.07		295.07				295.07	
Dues			b	417.50		417.50				417.50	
Miscellaneous				473.24		473.24				473.24	
Sewer Project			b	461,742.50		461,742.50				461,742.50	
Sewer Equip			b			0.00				0.00	
Totals	116,981.82	116,981.82		1,030,855.24	1,030,855.24	654,815.54	654,815.54	0.00	0.00	654,815.54	654,815.54

SRF Loan Balance 12-31-14

Cash - CKg off by $2000

W&S Budget 2015

CATAGORY LIST	2012		2013		12 BUDGT		13 BUDG		14 BUDG		15 BUDG	
INCOME	**WATER**	**SEWER**	**WATER**	**SEWER**	**WATER**	**SEWER**	**WATER**	**SEWER**	**WATER**	**SEWER**	**WATER**	**SEWE**
WATER SALES	68544		66,642		64,000		64,000		64,000		65,000	
SEWER SALES		37,142		42,997		40,000		40,000		40,000		
BAD CHECKS	-100.00	-100	-66	-66	-100	-100	-100	-100	-100	-100		
2013 LIFT STATIION SURCHARGE		7916		7916								
2013 LIFT STATIION SRF LOAN DISTRIB.		4801		45860						400,000		
TOTAL OPERATION INCOME	**68,444**	**49,759**	**66,576**	**96,707**	**63,900**	**39,900**	**63,900**	**39,900**	**63,900**	**439,900**	**65,000**	
OPERATION EXPENSES												
WATER	41519		34,168		37,000		37,000		37,000		37,000	
REPAIRS, SUPPLIES, MAINT.	6136	13,665	4478	2676	1000	1000	1000	1000	1000	1000	4000	
POWER	2237	2237	2341	2341	2000	2000	2000	2000	2000	2000	2500	
SAL, SS, MED.	9918	9918	12,555	12,555	9000	9000	9000	9000	9000	9000	14,000	
WATER LINES	3724		2430		5,000	5,000	10,000		10,000		5000	
SEWER LINES		11,253		628	5,000	5,000		10,000		10,000		
BILLING, PRINTING, PHONE,POST, LEGAL	3989	3989	2011	2011	1750	1750	2750	2750	2750	2750	3500	
SDRS	1687	1687	1790	1790	1000	1000	1000	1000	1000	1000	1900	
LOAN PAYMENT 2013 LIFT ST PROJ												
TOTAL OPERATING EXPENSES	**69,210**	**42,749**	**59,773**	**22,001**	**61,750**	**24,750**	**62,750**	**25,750**	**62,750**	**25,750**	**67,900**	
NONOPERATING INCOME												
INTEREST ON RESERVE CD'S	446.00	446	26	26	500	500	500	500	500	500	**35**	
BEGINNING BAL.	21398	21398	9,152	9,152	15000	15000	9153	9153	9153	9153	**12,000**	
OTHER CD'S W/INT.	17022	17022	14,272	14,272	14500	14500	14193	14193	14,193	14193	**15,000**	
RESERVE CD'S NO INT.	14962	14962	11,768	11,768	15,500	15,500	14963	14963	14,963	14963	**12,000**	
TOTAL NONOPERATING INCOME	**53828**	**53828**	**35,218**	**35,218**	**45,500**	**45,500**	**38808**	**38808**	**38,808**	**38808**	**39,035**	
EQUITY END OF PERIOD	**53,062**	**60,838**	**42,021**	**109,924**	**47,650**	**60,650**	**39,958**	**52,958**	**39,958**	**452,958**	**36,135**	

2015 Budget

CATAGORY LIST	2012		2013		2014		13 BUDG		14 BUDG		15 BUDG		16 BUDG	
INCOME	**WATER**	**SEWER**	**WATER**	**SEWER**	**WATER**	**SEWER**	**WATER**	**SEWER**	**WATER**	**SEWER**	**WATER**	**SEWER**	**WATER**	**SEWER**
WATER SALES	6854		66,642		66,642		64,000		64,000		65,000		66 950	
SEWER SALES		37,142		42,997		42,997		40,000		40,000		44,000		45,560
BAD CHECKS	-100.00	-100	-66	-66	-66	-66	-100	-100	-100	-100	-100	-100	-200	-200
2013 LIFT STATIION SURCHARGE		7916		7916		7916						2483		26000
WATER & SEWER IMPROVEMENT CHG.		4801		45860		45860				400,000				19000
TOTAL OPERATION INCOME	**68,454**	**49,759**	**66,576**	**96,707**	**66,576**	**96,707**	**63,900**	**39,900**	**63,900**	**439,900**	**64,900**	**46,383**	**66,750**	**90,360**
OPERATION EXPENSES														
LOAN PAYMENT 2013 LIFT ST PROJ												22,268.00		22,936.04
WATER	4159		34,168		34,168		37,000		37,000		37,000		38 110	
REPAIRS, SUPPLIES, MAINT.	6136	13,665	4478	2676	4478	2676	1000	1000	1000	1000	4000	4000	4120	4120
NEW EQUIPMENT													15000	15000
POWER	2237	2237	2341	2341	2341	2341	2000	2000	2000	2000	2500	2500	2575	2575
SAL, SS, MED.	9918	9918	12,555	12,555	12,555	12,555	9000	9000	9000	9000	14,000	14,000	14420	14420
WATER LINES	3724		2430		2430		10,000		10,000		7000		7210	0
SEWER LINES		11,253		628		628		10,000		10,000		10,000	0	10300
BILLING, PRINTING, PHONE,POST, LEGAL	3989	3989	2011	2011	2011	2011	2750	2750	2750	2750	4500	4500	4635	4635
SDRS	1687	1687	1790	1790	1790	1790	1000	1000	1000	1000	1900	1900	1957	1957
TOTAL OPERATING EXPENSES	**69,210**	**42,749**	**59,773**	**22,001**	**59,773**	**22,001**	**62,750**	**25,750**	**62,750**	**25,750**	**70,900**	**59,168**	**88,027**	**75,943**
NONOPERATING INCOME														
INTEREST ON RESERVE CD'S	446.00	446	26	26	26	26	500	500	500	500	35	35	35	35
BEGINNING BAL.	21398	21398	9,152	9,152	9,152	9,152	9153	9153	9153	9153	12,000	12,000	12,000	12,000
OTHER CD'S W/INT.	17022	17022	14,272	14,272	14,272	14,272	14193	14193	14,193	14193	15,000	15,000	15,000	15,000
RESERVE CD'S NO INT.	14962	14962	11,768	11,768	11,768	11,768	14963	14963	14,963	14963	12,000	12,000	12,000	12,000
TOTAL NONOPERATING INCOME	**53828**	**53828**	**35,218**	**35,218**	**35,218**	**35,218**	**38808**	**38808**	**38,808**	**38808**	**39,035**	**39035**	**39,035**	**39035**
EQUITY END OF PERIOD	**53,082**	**60,838**	**42,021**	**109,924**	**42,021**	**109,924**	**39,958**	**52,958**	**39,958**	**452,958**	**33,035**	**26,250**	**17,758**	**53,452**

USER NAME PASSWORD

LOG IN

Forgot Username? Forgot Password?

Create an Account

Entity Dashboard

Entity Overview

- Entity Record
- Core Data
- Assertions
- Reps & Certs
- POCs
- Reports
- Service Contract Report
- BioPreferred Report
- Exclusions
- Active Exclusions
- Inactive Exclusions
- Excluded Family Members

RETURN TO SEARCH

WAKONDA CITY OF INC
DUNS: 109270293 CAGE Code: 5ULU0
Status: Active

217 OHIO ST
WAKONDA, SD, 57073-0000,
UNITED STATES

Expiration Date: 11/04/2016
Purpose of Registration: Federal Assistance Awards Only

Entity Overview

Entity Information

Name: WAKONDA CITY OF INC
Business Type: US Local Government
POC Name: Town of Wakonda
Registration Status: Active
Activation Date: 11/05/2015
Expiration Date: 11/04/2016

Exclusions

Active Exclusion Records? No

Appendix J

Public Hearing Notice---
Affidavit of Publication, Sign-in Sheets &
Minutes Will Be Sent after the January 4th
Meeting

Town of Wakonda

Public Hearing For DW-SRF Application
Drinking Water Systems Improvements Project
7:00 PM, Monday, January 4th, 2016
Wakonda Town Hall-111 Ohio St, Wakonda, SD

Please sign in:

NAME	ADDRESS / REPRESENTING
Kristen Benidt	Sioux Falls, SECOG
TERRY NACKETT	TOWN OF WAKONDA
Steve Mohr	Town of Wakonda
Dave Ganschow	Zoning
[illegible]	Town of Wakonda
[illegible]	Town of Wakonda
Nancy Andresen	" " "

TOWN OF WAKONDA BOARD
REGULAR MEETING
JANUARY 4, 2016

The regular meeting of the Board of Trustees for the Town of Wakonda, South Dakota was held in the council room at the new Town Office at 111 Ohio St on the 8th day of January 4, 7:00 p.m. members present: Hackett & Nelson, and Chairman Mohr. TWO visitor(s): KRISTEN BENIDT from SECOG – DAVE GANSCHOW

Kristen from SECOG discussed the project to improve the water system in Wakonda, as well as the funding status. See REVISED Resolution in a separate posting. Residents of Wakonda will be receiving a survey; this is to see if Wakonda will qualify for a greater grant amount through CDBG. If you receive one please fill it out, this will be done anonymously.

The skid loader is to remove snow from sidewalks during the winter; it will have several attachments to use during the rest of the year for mowing, backfill, and grading, etc.

Dave Ganschow attended for the purposes of reviewing and updating the zoning regulations. This item is tabled until the February meeting needing the presence of Toby Brown from SECOG.

Water meters will be read on Jan. 21 or 22.

ACTION 16 - 02
Mayor approved minutes from Dec 2015 meeting.

ACTION 16 - 03
Motion Nelson, seconded Hackett to pay the following bills: (For more detailed information about the bills, contact the finance officer.)

GENERAL FUND

SALARIES	1057.31
EFTPS	385.86
SDRS	128.70
VAST	119.09
JENKINS IRON & STEEL	7270.00
NANCYANDRESEN(payroll/website hosting)	29.57
CLAY UNION ELECT. (DEC)	960.51
TITAN MACHINERY	662.30
FISCHER DISPOSAL	36.00
BLANCHE JOHNSON	1000.00
MARKS MACHINERY	8623.50

WATER & SEWER FUND

SALARIES	2537.91
EFTPS	323.34
SDRS	148.28
CLAY RURAL WATER	2836.00
ORR FARM SUPPLY	149.66
ONE CALL	1.05
FIRST PREMIER	333.97
CLAY UNION ELECT	237.70
SD DEPT REVENUE	30.00
STAR PUBLISHING	70.05
MARKS MACHINERY	25870.50

There being no further business, meeting adjourned. Next Meeting February 8th at 7PM

Steve Mohr, Chairman

Nancy Andresen, Finance Officer

PLEASE PUBLISH IN THE LEGAL SECTION OF "THE TRI COUNTY NEWS"THE WEEK OF JAN 16, 2016

THANKS, Nancy Andresen
267-3118

Town of Wakonda
SRF PUBLIC HEARING
DRINKING WATER SYSTEMS IMPROVEMENT PROJECT
1/4/2016 @ 7:00 PM

The Town, with SECOG's assistance, will be submitting an application to the Department of Environment & Natural Resources (DENR) for a $2,836,710 Drinking Water State Revolving Fund (DW-SRF) Loan for the Drinking Water Systems Improvements Project.

The interest rate for the loan is 3% for a 30 year term. The annual payment for the $2,836,710 Drinking Water State Revolving Fund (DW-SRF) Loan would be $143,736.97. The Town is pledging to repay this loan using project surcharge revenue.

For the Drinking Water SRF loan, if there is no grant or principal forgiveness awarded for the project, there would need to be a $73.49 monthly project service charge for each user.

Town of Wakonda
SRF PUBLIC HEARING
DRINKING WATER SYSTEMS IMPROVEMENT PROJECT
1/4/2016 @ 7:00 PM

The Town, with SECOG's assistance, will be submitting an application to the Department of Environment & Natural Resources (DENR) for a $2,836,710 Drinking Water State Revolving Fund (DW-SRF) Loan for the Drinking Water Systems Improvements Project.

The interest rate for the loan is 3% for a 30 year term. The annual payment for the $2,836,710 Drinking Water State Revolving Fund (DW-SRF) Loan would be $143,736.97. The Town is pledging to repay this loan using project surcharge revenue.

For the Drinking Water SRF loan, if there is no grant or principal forgiveness awarded for the project, there would need to be a $73.49 monthly project service charge for each user.

Camden Hofer; the project engineer from SPN; is here to tell you about the need for the project, the alternatives that were evaluated, and the description of the proposed project.

FACILITY PLAN

for the

WATER SYSTEM

IN

WAKONDA, SOUTH DAKOTA

PROJECT #14079

May 2015

SPN & Associates
ENGINEERS-PLANNERS- SURVEYORS
2100 NORTH SANBORN BLVD, P.O. BOX 398
MITCHELL, SOUTH DAKOTA 57301
PHONE 605-996-7761 FAX 605-996-0015

Facility Plan for the

Water System

in

Wakonda, South Dakota

Project Number: 14079

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

By _____
Camden A. Hofer, P.E.

Registration No. SD #8322

Date 5-28-15

SCHMUCKER, PAUL, NOHR & ASSOCIATES
CONSULTING ENGINEERS - SURVEYORS
2100 NORTH SANBORN BLVD., PO BOX 398
MITCHELL, SOUTH DAKOTA 57301

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1 INTRODUCTION

1.1 PURPOSE

The Town of Wakonda has contracted with the engineering firm of Schmucker Paul Nohr and Associates (SPN) to complete an investigation of its existing water system. The intent of this study is to identify and quantify problems that exist within this system.

The results of the study are presented in this Facility Plan. The Facility Plan contains information with which the Town Board of Wakonda can make cost-effective decisions. The Town Board will, after appropriate public input, determine what its best options are to make any needed improvements that are identified in the Facility Plan. As loan and grant funding will undoubtedly be desired to make the improvements that are recommended herein, the identified project(s) will need to be placed on the State Water Plan. This Facility Plan will be a valuable tool for the community to utilize in its efforts to pursue the funding necessary to make needed public improvements.

1.2 SCOPE

The scope of the study authorized by the Town Board includes the following work to be performed by SPN and Associates:

1) Complete an analysis of the requirements of governmental authorities having jurisdiction to approve the design of the project and participate in consultations with such authorities.
2) Complete an analysis of the existing water distribution system relating to quantity and quality, compliance with existing and proposed drinking water standards, water losses in the system, identification of system age, evaluation of current water pressures and fire flow capacities and an evaluation of current and future needs.
3) Complete a general economic analysis and comparison of various alternatives to correct the identified deficiencies.

1.3 AUTHORIZATION

The studies reported herein were performed pursuant to the provisions of a letter agreement between the Town of Wakonda and SPN & Associates, Inc. dated September 18, 2013.

2 COMMUNITY DESCRIPTION

2.1 GENERAL INFORMATION

The Town of Wakonda is located in northwest Clay County, South Dakota, in Section 33, Township 95 North, Range 53 West (Latitude -97.0625, Longitude 43.0030). Refer to Figure 2.1 for a location map. The Town of Wakonda was founded in 1888.

The Town of Wakonda is classified as a Class 3 city. Its government consists of a board of three members, including the Town Board President. A part-time Utility Manager and Finance Officer are employed by the Town Board. These individuals provide the necessary public utility maintenance and financial management within the community.

Figure 2.1: Location Map

2.2 POPULATION CHARACTERISTICS

The most recent Census Bureau data available at the time of this report indicates that Wakonda's median age was 48.9 years, as compared to the state's median age of 36.9 years. At the time census data was gathered, 26.5 percent of Wakonda's population was over the age of 65, while the state's population that was over the age of 65 was 14.3 percent. Data from the 2010 Census indicates that the community's median household income of $42,500 was about $3,404 lower than the state's median household income of $45,904.

2.3 POPULATION PROJECTIONS

The 2010 Census Bureau data shows the population for Wakonda to be 321. Figure 2.2 and Table 2.1 indicate the Census Bureau population data from 1910 to 2010. As shown by the historical data, the population has been erratic with large fluctuations. The decline in recent years is typical for rural communities such as Wakonda. This can be accredited to the number and size of the farming families decreasing and the large population of elderly people.

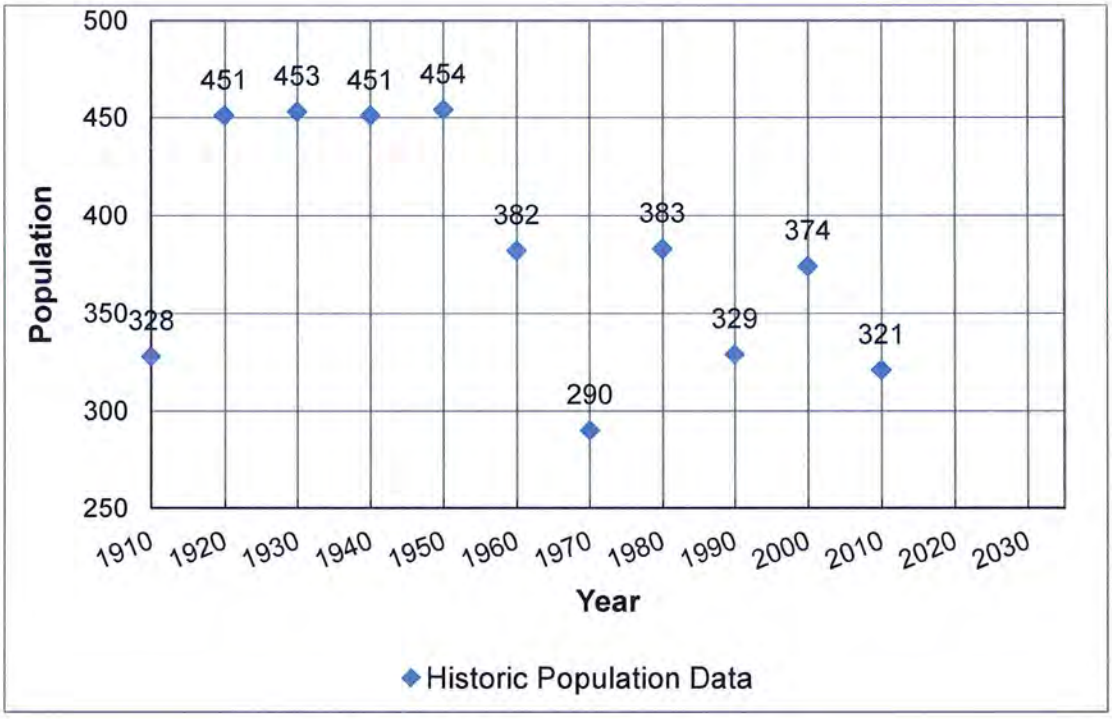


Figure 2.2: Historic Population

The possibility for a significant decline in population appears to be decreasing with the likelihood that the population will stabilize. Population growth for the design period is not expected to be significant. As with all communities, there are always efforts to entice new businesses into locating in Wakonda. Even though this possibility exists, it is not anticipated that these efforts will have a significant impact on the projected water system demand. For the purpose of this study, the 2010 population of 321 will be used for design and analysis purposes.

2.4 TOPOGRAPHY / CLIMATE

Clay County is made up of four physiographic subdivisions: the James River Lowland, James River Highland, Coteau des Prairies division of the Central Lowlands and the Missouri River Trench Division of the Great Plains. The topography of the Wakonda area can best be characterized as nearly level to undulating. Major drainages in the western area of the county are Frog Creek and Spring Creek which drain to the Vermillion River. The elevation of Wakonda is approximately 1,130 feet above mean sea level.

The area's climate is generally described as a continental climate. Winters are relatively long and cold while summers are fair and hot. Most of the precipitation occurs during the warm period of late spring and early summer. Approximately 76% of the total annual precipitation falls in April through September. Normal precipitation for the area is 25 inches annually. The average summer temperature is 74 degrees and the average winter temperature is 21 degrees.

2.5 ENVIRONMENTAL REVIEW INFORMATION

As part of the environmental assessment requirement for the facility planning process, the project sponsor is required to contact various state and federal agencies. Environmental assessment letters will be sent to the following agencies. A copy of the letter requesting comments will be included in Appendix A along with the associated comment letters and future related correspondence.

2.5.1 Historic and Archaeological Sites

Upon completion of an application for funding through one or more various funding agencies, a letter will be sent to the funding agency describing the proposed project location and construction activities as well as a general description of the existing conditions as found within the project limits. No effect on historic properties or archaeological findings is expected due to this project.

An internet search for historic properties in the area was completed on nps.gov and history.sd.gov. The historic structures shown in Figure 2.3 have been identified in Wakonda. These structures should not be affected by any proposed work by the Town of Wakonda since work will be planned in Town rights-of-way.

Figure 2.3: Historic Structures Identified

2.5.2 Floodplains and Wetlands

The US Fish and Wildlife Service, the US Army Corps of Engineers and the South Dakota Department of Game, Fish and Parks were contacted for input related to the proposed improvements. No floodplains or wetlands in the area are expected to be involved in the project. The Federal Emergency Management Agency (FEMA) website was searched for a flood hazard evaluation. The flood hazard map for Wakonda is shown in Figure 2.4.

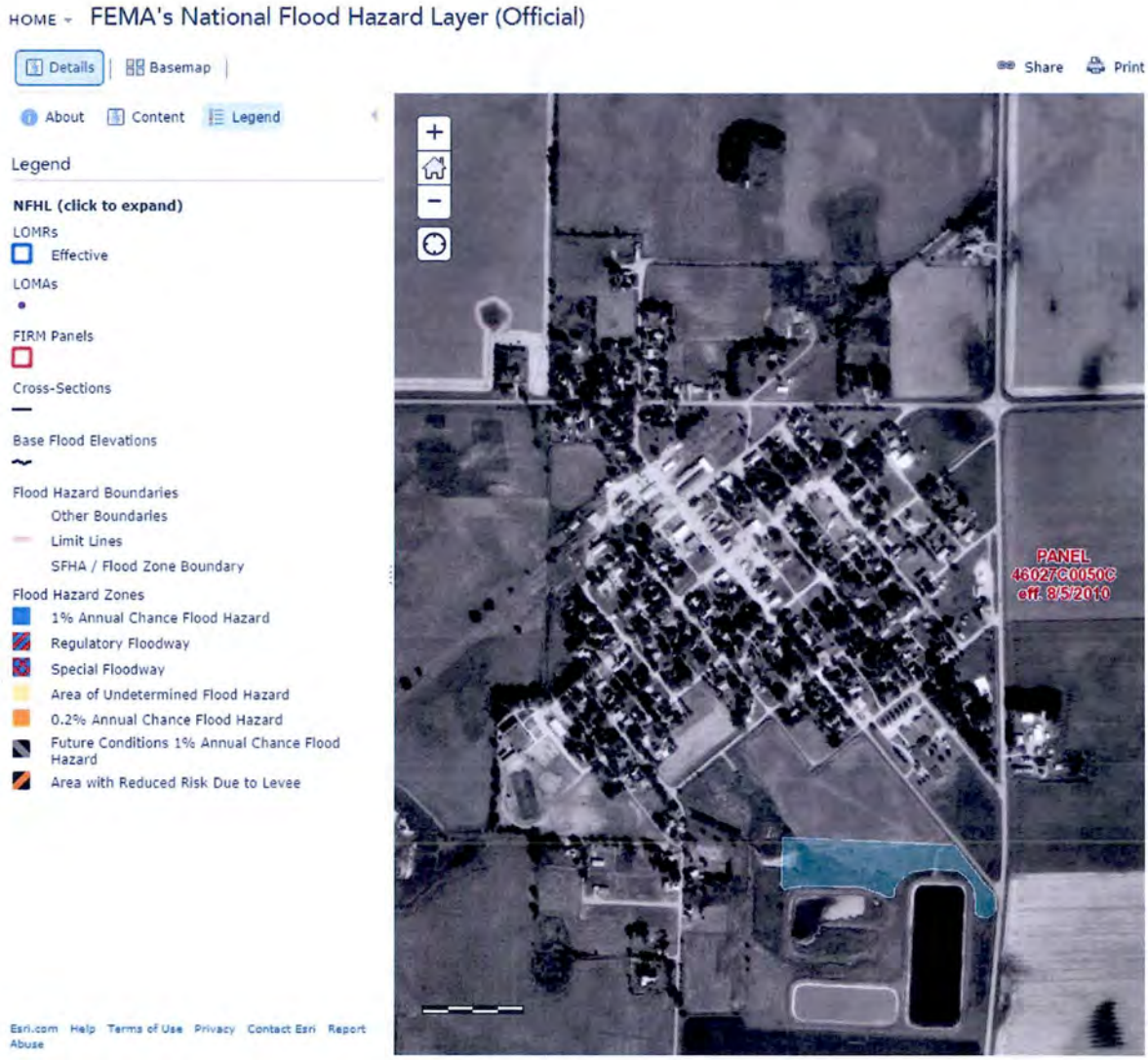


Figure 2.4: Flood Hazard Map from FEMA

The U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on wetlands. Correspondence related to these contacts will be placed in Appendix A upon receipt. A wetland map was created on the US Fish and Wildlife website for Wakonda and is shown in Figure 2.5. No impact on wetlands is expected due to this project since the work is planned in Town rights-of-way.

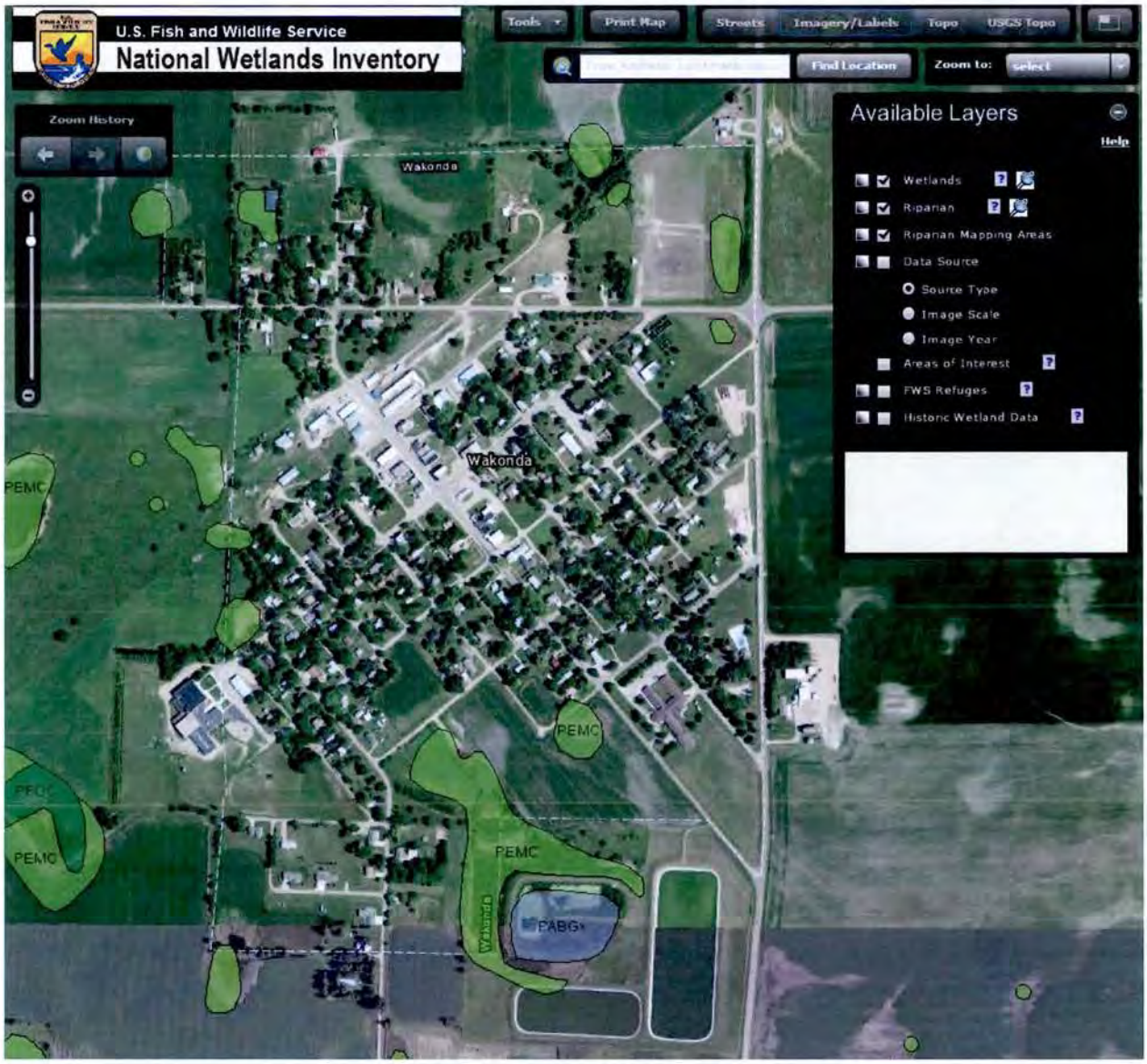


Figure 2.5: Wetland Map

2.5.3 Agricultural Lands

The U.S. Department of Agriculture State Soil Scientist was contacted for the purpose of soliciting input on the proposed improvements. No impact on agricultural lands is expected due to this project.

2.5.4 Wild and Scenic Rivers

Research indicates that there are no designated wild and scenic rivers in the area. Therefore, the proposed improvements will have no impact on this resource.

2.5.5 Water Quality and Quantity

The South Dakota Department of Environment and Natural Resources was contacted for input on the proposed improvements. No effect on water quality and quantity is expected due to the project.

2.5.6 Endangered Species and Critical Habitat

The U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on endangered species and critical habitat which might result from construction of the proposed improvements. No effect on critical habitat is expected since the project will take place in Town rights-of-way. According to the U.S. Fish and Wildlife Service website the following species are listed as threatened or endangered in the Wakonda area: Piping Plover, Least Tern, Pallid Sturgeon, Topeka Shiner, Western Prairie Fringed Orchid and Scaleshell Mussel. No impact on these or other species is expected due to this project.

2.6 DIRECT AND INDIRECT IMPACTS

Negative environmental impacts which may be expected during a project of this nature include, but are not necessarily limited to, soil erosion, noise pollution, traffic obstruction, and increased surface runoff due to trench dewatering operations. However, such impacts are temporary and will not significantly affect the environment over the long term.

Positive environmental impacts include enhanced human health and safety and more efficient delivery of municipal water. Such impacts are of long-term value to the residents of Wakonda and Clay County.

2.7 MITIGATION ADVERSE IMPACTS

Adverse impacts will be minimized to the greatest extent possible by the implementation of accepted cautionary measures. Temporary and permanent erosion control will be included in construction contracts. Appropriate permits will be secured prior to the discharge of any trench dewatering or storm waters, and protection of public health, safety and welfare will be incorporated into the specifications and contract documents. Additionally, should any permanent adverse impacts result from the project, mitigating measures will be followed to the satisfaction of the appropriate review agency.

3 EVALUATION OF EXISTING WATER SYSTEM

3.1 GENERAL INFORMATION

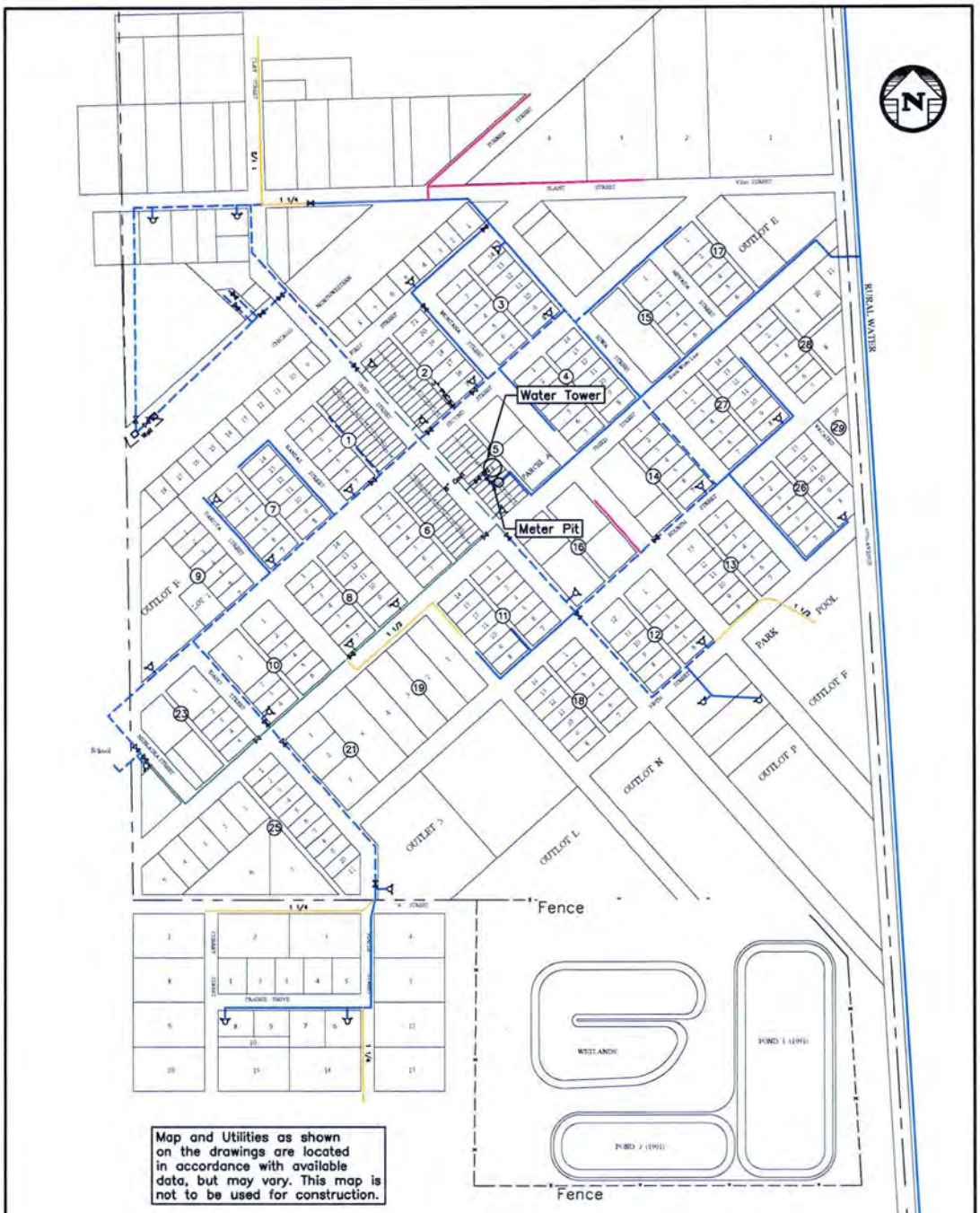
The Town of Wakonda currently provides water service to approximately 160 connections within the Town. Figure 3.1 shows the existing water distribution system. The Town purchases its water from Clay Rural Water Service. The water system was inspected by the South Dakota Department of Environment and Natural Resources (SD DENR) in June 2013. A copy of the water system evaluation is included in Appendix B.

The rural water point of connection is near the center of Town next to the water tower. The Town of Wakonda has a 50,000-gallon elevated steel water tank. This elevated tank provides the water pressure and storage for the Town of Wakonda. The elevated tank fills directly from the rural water connection.

The Town of Wakonda has two wells that have not been used for a long time. No further use for the wells is anticipated. The Town would like to abandon the wells and the buildings where the wells are housed.

3.2 WATER DEMAND

To evaluate the Town of Wakonda's potential to meet the needs of the future, a review of past water usage records was completed. The process used to estimate future water demand included a determination of the current average per capita demand. Records of water usage from 2009 through 2014 were utilized to create Table 3.1.



WAKONDA WATER MAP

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 inch = 400 ft.

LEGEND

- 6" Sand Cast Water line
- 6" PVC Water Line
- 4" Sand Cast Water Line
- 4" PVC Water Line
- 2" PVC Water Line
- HDPE Water Line
- Fire Hydrant
- Gate Valve

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Phone: (605) 996-7761 Fax: (605) 996-0015

Table 3.1: Water Use Records

Month	2009 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	740,000	635,000	14%	74	0
February	788,000	615,000	22%	88	0.17
March	689,000	567,000	18%	69	0.35
April	921,000	712,000	23%	96	1.33
May	830,000	601,000	28%	83	1.16
June	1,373,000	922,000	33%	143	3.4
July	1,052,000	794,000	25%	106	5.11
August	920,000	661,000	28%	92	2.46
September	944,000	694,000	26%	98	0.44
October	901,000	620,000	31%	91	3.75
November	645,000	762,000	-18%	67	0
December	915,000	638,000	30%	92	0.3
Total	10,718,000	8,221,000			18.47
Average Day	29,364	22,523			
Average (gpcpd)	92	70			
Average Unacc %	21.6%				

Month	2010 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	785,000	785,000	0%	79	0.35
February	777,000	657,000	15%	86	0.24
March	654,000	571,000	13%	66	1.21
April	851,000	728,000	14%	88	2.51
May	748,000	660,000	12%	75	1.83
June	1,151,000	719,000	38%	120	3.94
July	1,183,000	818,000	31%	119	5.37
August	906,000	619,000	32%	91	1.62
September	818,000	660,000	19%	85	0.52
October	734,000	686,000	7%	74	0.01
November	959,000	748,000	22%	100	0.1
December	713,000	614,000	14%	72	0.28
Total	10,279,000	8,265,000			17.98
Average Day	28,162	22,644			
Average (gpcpd)	88	71			
Average Unacc %	18.0%				

Table 3.1, Continued

Month	2011 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	849,000	653,000	23%	85	0.03
February	966,000	704,000	27%	107	0.47
March	891,000	611,000	31%	90	0.26
April	967,000	645,000	33%	100	2.25
May	939,000	758,000	19%	94	1.89
June	1,445,000	721,000	50%	150	3.58
July	1,362,000	761,000	44%	137	1.37
August	1,341,000	838,000	38%	135	4.65
September	966,000	701,000	27%	100	0.34
October	971,000	688,000	29%	98	1.36
November	1,055,000	745,000	29%	110	0.15
December	884,000	635,000	28%	89	0.22
Total	12,636,000	8,460,000			16.57
Average Day	34,619	23,178			
Average (gpcpd)	108	72			
Average Unacc %	31.7%				

Month	2012 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	1,053,000	555,000	47%	106	0.05
February	865,000	555,000	36%	93	1.44
March	832,000	675,000	19%	84	0.74
April	1,020,000	675,000	34%	106	0.04
May	975,000	614,000	37%	98	0.5
June	1,510,000	985,000	35%	157	0
July	1,672,000	1,169,000	30%	168	0.1
August	1,511,000	1,055,000	30%	152	0.31
September	1,204,000	784,000	35%	125	0.28
October	803,000	666,000	17%	81	0.26
November	800,000	626,000	22%	83	0.18
December	705,000	579,000	18%	71	0.06
Total	12,950,000	8,938,000			3.96
Average Day	35,383	24,421			
Average (gpcpd)	110	76			
Average Unacc %	30.0%				

Table 3.1, Continued

Month	2013 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	841,000	667,000	21%	85	0.06
February	836,000	671,000	20%	93	0.08
March	736,000	529,000	28%	74	0.21
April	766,000	585,000	24%	80	1.31
May	920,000	790,000	14%	92	2.59
June	973,000	623,000	36%	101	5.2
July	1,126,000	811,000	28%	113	1.48
August	1,022,000	785,000	23%	103	1.66
September	840,000	762,000	9%	87	0.57
October	797,000	582,000	27%	80	0.11
November	846,000	637,000	25%	88	0.21
December	990,000	636,000	36%	99	0
Total	10,693,000	8,078,000			13.48
Average Day	29,703	22,132			
Average (gpcpd)	93	69			
Average Unacc %	24.2%				

Month	2014 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	990,000	618,000	38%	99	0.03
February	986,000	618,000	37%	110	0.12
March	832,000	491,000	41%	84	0
April	1,000,000	661,000	34%	104	1.39
May	1,010,000	698,000	31%	101	0.96
June	1,074,000	576,000	46%	112	6.01
July	1,062,000	734,000	31%	107	2.38
August	1,173,000	673,000	43%	118	3.86
September	982,000	521,000	47%	102	2.8
October	834,000	661,000	21%	84	0.96
November	831,000	571,000	31%	86	0.07
December	896,000	636,000	29%	90	1.11
Total	11,670,000	7,458,000			19.69
Average Day	32,417	20,433			
Average (gpcpd)	101	64			
Average Unacc %	35.7%				

Table 3.1, Continued

Average Water Purchased Per Year =	11,491,000	Gal
Average Water Billed Per Year =	8,236,667	Gal
Average Per Capita Usage (Based on Purchased Water) =	98.5	gpcpd
Average Per Capita Usage (Based on Billed Water) =	70.3	gpcpd
Average Percentage of Unaccounted-for Water =	28.3%	
Maximum Purchased per Month =	1,672,000	Gal
Average Day Purchased =	31,608	Gal
Average Day Billed =	22,555	Gal

The sources and methods used to develop the information presented in Table 3.1 are described by the following:

- The volume of water purchased from Clay Rural Water Service is based on meter records provided by the Town of Wakonda.
- The quantity of water billed to the users of the system per month is based on meter records provided by the Town of Wakonda.
- The percentage of unaccounted-for water is calculated by the ratio of the difference in water purchased and water billed to the water purchased.
- Monthly precipitation data was obtained from the Weather Underground website from the nearest station which is in Yankton.
- The per capita per day water usage for each month is calculated by dividing the total water purchased by the total population equivalent and the days per month.
- The average daily water purchased and billed for each year was calculated by dividing the sum of the water for each month by the days in that period.
- The per capita per day usage for each year is calculated by dividing the annual average day water purchased by the total population equivalent.
- The percentage of unaccounted-for water per year is calculated by dividing the difference between the total purchased and total billed by the total billed amount.

Based on the available water records presented in Table 3.1 the maximum water purchase occurred during July 2012 with a per capita water production of 168 gallons per capita per day (gpcpd). August 2012 has the next highest water purchase rate at 152 gpcpd. It

should be noted that above-average precipitation during the summer months typically lessens the increase in water usage just as below-normal precipitation typically magnifies the increase in water usage. The average per capita water volume purchased for the period of record was determined to be approximately 98.5 gpcpd. This water use is nearly within the generally accepted range of 100 to 125 gpcpd typical for smaller communities in South Dakota.

3.2.1 Water Loss

An analysis of the water usage data over the period of record from 2009 through 2014 indicates that the Town of Wakonda purchased an average of approximately 11.5 million gallons per year (mgy). Of this amount, approximately 8.23 mgy were billed or accounted for through household, business or Town meters. This indicates an average loss rate of 28.3 percent.

The typical reasons for losses in the system are leaks, slow or malfunctioning meters, fire fighting and water used at non-metered locations. The identified non-metered uses in the system are fire hydrant flushing, fire flows and other typical minor uses. These water uses are important; however, the water should be metered where feasible. Most of the residential water meters are approximately six to eight years old. The meters are automatically read with a drive-by radio read system.

When considering the expense of purchasing water, the financial loss of water that is unaccounted for becomes apparent. As a result, it is important that unaccounted-for water loss be limited to a level less than the generally accepted loss of 12 percent. This would allow the Town to purchase less water by approximately 1.68 million gallons [(28.3% loss - 12% loss) x 31,600 gpd average use x 365 days per year] per year. The Town pays $3.05 per 1,000 gallons. Therefore, the estimated savings by reducing the water loss rate to 12% would amount to approximately $5,740 annually.

3.3 PROJECTION OF WATER DEMAND

Future water demand projections are the basis for establishing the water distribution system capacity and storage. These projections are based on historical data of per capita water flows and population projections to determine peak day and peak hour demands to ensure that the system is capable of meeting the future demands of the Town. As shown in Section 2.3 the population of Wakonda is assumed to have stabilized. For this reason the current total population of 321 is used for determining the future water demands.

To meet the peak day water usage that may occur in the future, a peaking factor is determined. Small cities usually have a maximum day peaking factor of 2.0 to 3.0 times the annual average day usage (Mays, 2000). Our experiences have shown that towns the size of Wakonda have a peaking factor that ranges from 2 to 3.5, which is greater than typically published values because the demand characteristics of a small town have larger variations than the more steady demand of larger cities.

Clay Rural Water Service established an automatic reading system recently. Daily water records for water usage in Wakonda are only available back to November 27, 2013. In this short period to August 19, 2014, the peak day use on record is approximately 85,000 gallons. However, this period does not include significant dry periods. The peaking factor can be estimated by first determining the average day of the peak water month which is approximately 53,900 gpd (1,672,000 gallons / 31). Typically, the ratio of the average day of the peak month to the annual average day is in the range of 1.2 to 1.5 (Salvato, 1985). As shown by the historic water use, the actual ratio is approximately 1.72 (53,900 / 31,400) which is higher than the typical range. The higher than normal ratio is a good indication that the peak day to average day ratio should be on the high side of typical values.

The monthly water supply records used in this evaluation cover a relatively short period which may not be sufficient to determine the magnitude of variation between very dry and wet years. As a result, the likelihood of observing the worst-case condition is not very probable in such a short period of record. Considering the high variation in flows it

is our opinion that a relatively high peak day to average day ratio should be established. We recommend the use of 3.2 for a peak day to average day ratio which is on the high side of the typical range for small communities. The high peaking factor should account for very dry weather and high use periods. This number will be used throughout the remainder of the report for the calculation of the peak day water demand.

It must be noted at this point that an attempt has been made to determine design flow parameters as accurately as possible but if any error is to be made in the selection, it must be on the high side to ensure an adequate supply of water for the Town throughout the design period. Utilizing the projected populations from Section 2, the average day flow of 98.5 gpcpd and ratio of peak day flow to annual average day flow of 3.2, the design peak day water production rate is estimated to be 101,000 gpd (321 people x 98.5 gpcpd x 3.2). This number will be used throughout the remainder of the report for the calculation of the peak day water demand.

3.4 WATER SOURCE

The Town began using rural water in 1982. The contract with Clay Rural Water Service does not include a limit on the water supply rate. Conversations with a representative of Clay Rural Water Service indicate that the peak hour flow, which is discussed later in this report, can be supplied. However, the rural water supply can only be guaranteed at 40 psi which is lower than desired. The existing supply line from the rural water main and the meter pit do not have sufficient capacity to provide the peak hour flow rate. According to a representative of Clay Rural Water Service, the service area near Wakonda is not experiencing growth; therefore, no expansion to the rural water system is anticipated. Currently, the purchase of the water costs the Town a monthly charge of $280 and a water rate of $3.05 per thousand gallons delivered.

Rural water is provided at an underground meter pit which is owned by the Town and located near the water tower. The meter pit was installed in 1982 and is composed of painted steel. The interior of the floor has significant coating failure. The pipe and fittings also show signs of coating failure. The piping through the meter pit is composed

of two-inch diameter painted steel pipe. The small size limits the flow rate that can be provided. There is no bypass available for emergencies such as valve or meter repair.

Figure 3.2: Meter Pit

3.5 STORAGE

The Town currently has a 50,000-gallon multi-legged elevated water storage reservoir connected to the distribution system. The water tower was constructed in 1910. Water from Clay Rural Water Service is supplied directly into the distribution system to fill the water tower. According to the Utility Manager, the water tower is usually filled to approximately two feet below the overflow elevation. This provides a usable storage of approximately 44,300 gallons. The water tower has an estimated overflow elevation of 85 feet. This provides a static pressure of approximately 36 psi when full which is generally considered low.

Views of the water tower are shown in the following collection of figures. The Town periodically hires a specialist to clean and inspect the water tower. The last inspection was completed by Maguire Iron on April 5, 2012.

Overall View

Exterior Bowl of Tank

Exterior of Roof

Tank Legs with Meter Pit on Left

Floor Inside Tank

Balcony of Tank

Interior of Roof

Figure 3.3: Existing Water Tower Photographs

The interior and exterior coatings are in an acceptable condition for their age; however, there are many locations that indicate coating failure. Some spots show severe rusting while others show delaminated coatings. Many of the steel seams show rust laterally along the seam, especially on the roof. The exterior finish coat appears to be failing in some locations, but the intermediate coats appear to be performing well. Both the interior and exterior coatings should be completely sandblasted and reapplied to extend the life of the structure. There are spaces between the roof and the walls of the tank where insects, birds or contaminants could enter the tank.

Water storage establishes the pressure for the distribution system; provides a means for equalizing operating pressures during high demand periods; provides emergency storage to temporarily offset the effects of downtime for pump repairs, pipeline repairs and power outages; and provides water for fire protection.

There is not a defined method for determining the volume of elevated storage for water distribution systems. Standards such as the Ten State Standards say that if fire flow is to be provided, the flow guidelines established by the International Standards Organization (ISO) should be met. Thus, at 2,000 gpm, a two-hour fire event requires 240,000 gallons for the downtown area. The Town's current storage capacity of 50,000 gallons is not considered adequate for this degree of fire protection.

Equalization and emergency storage are the other factors in determining the volume of water required or desired. Equalization storage is required to supply the varying demands throughout each day. Figure 3.4 illustrates a typical variation of water demand over a peak day. During those times that the water usage is shown to be over 100 percent of the supply rate, the system's storage must provide the additional water to meet the demands. Storage for equalization with a constant rural water supply typically ranges from 10 to 25 percent of the peak day water demand (Mays 2000). The higher end of the range is for communities with high ratios of average day to peak day water usage. Since the selected peak day to average day ratio for Wakonda is on the high side of the typical range of 2.0 to 3.5, the value of 25 percent is selected for the desired equalization storage. The projected peak day water

demand is 101,000 gallons which results in an equalization storage volume of approximately 25,300 gallons.

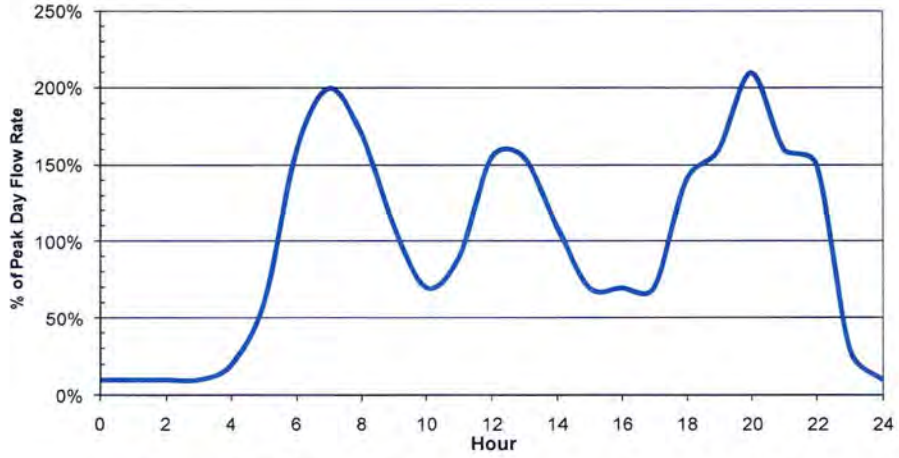


Figure 3.4: Water Demand Pattern Used in Model

Emergency storage is essentially the storage that a community feels comfortable with based on the reliability of the power supply and its water system in general. Emergency storage equal to the average day usage is commonly used for the emergency storage volume and is utilized in this report. The current average day water demand is 31,600 gpd.

The total required water storage for a community is generally considered to be the equalization storage plus the larger of fire or emergency storage (Mays 2000). The total storage generally considered as needed for Wakonda would then be 265,300 gallons (25,300 + 240,000). However, funding agencies currently do not consider fire protection an eligible expense. Therefore, the total water storage evaluated for this report is the emergency storage plus the equalization storage. The desired total storage of at least 56,900 gallons (31,600 + 25,300) is recommended. The current available storage is 50,000 gallons and is slightly less than that needed to meet the recommended storage requirements.

Although the above evaluation of the water storage is based on current design practice, an alternate criterion that is generally approved by reviewing authorities and funding agencies is to provide water storage equal to the peak day demand. The peak day water demand is

demand is 101,000 gallons which results in an equalization storage volume of approximately 25,300 gallons.

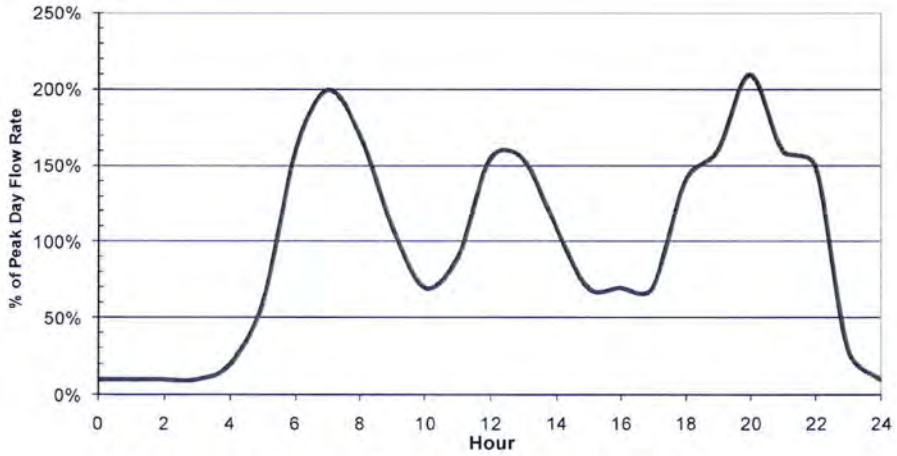


Figure 3.4: Water Demand Pattern Used in Model

Emergency storage is essentially the storage that a community feels comfortable with based on the reliability of the power supply and its water system in general. Emergency storage equal to the average day usage is commonly used for the emergency storage volume and is utilized in this report. The current average day water demand is 31,600 gpd.

The total required water storage for a community is generally considered to be the equalization storage plus the larger of fire or emergency storage (Mays 2000). The total storage generally considered as needed for Wakonda would then be 265,300 gallons (25,300 + 240,000). However, funding agencies currently do not consider fire protection an eligible expense. Therefore, the total water storage evaluated for this report is the emergency storage plus the equalization storage. The desired total storage of at least 56,900 gallons (31,600 + 25,300) is recommended. The current available storage is 50,000 gallons and is slightly less than that needed to meet the recommended storage requirements.

Although the above evaluation of the water storage is based on current design practice, an alternate criterion that is generally approved by reviewing authorities and funding agencies is to provide water storage equal to the peak day demand. The peak day water demand is

estimated to be 101,000 gpd. This sizing methodology again indicates that the storage available is inadequate.

3.6 DISTRIBUTION SYSTEM

According to available information the several types and sizes of water main used throughout the distribution system are shown previously in Figure 3.1. The Town's piping consists of cast iron, polyethylene (PE) and polyvinyl chloride (PVC). The approximate total length of each size and type of pipe in the water distribution system is listed below.

Length, Ft	Pipe Size and Type
230	8" Cast Iron
986	6" Cast Iron
1,871	6" PVC
10,065	4" Cast Iron
9,233	4" PVC
61	3" PVC
1,606	2" PVC
597	1.5" PVC
1,075	1.5" PE
1,169	1.25" PE
26,893	Total

Approximately 42 percent of the distribution system piping is composed of cast iron. Typically, the inside of a cast iron pipe will corrode and build up scale over time reducing the inside diameter and capacity of the pipe. The build-up increases the roughness of the pipe which also reduces the capacity of the pipe. The Utility Manager has confirmed by visual observation that this is the case with the pipe that has been removed from service in the past.

The cast iron pipe has generally outlived its useful life and may begin to break more frequently because the pipe generally becomes more brittle over time. The Town has been working on the replacement of the worst of the cast iron sections that seem to break frequently. There are still two sections that are known to be particularly in bad condition, one on Iowa Street between Third and Fourth Streets and one on Idaho Street between Third and A Street. These two sections amount to a total of approximately 1,150 feet. The Utility Manager has indicated that the frequency of water main breaks has not been a serious issue at

this time. However, that is expected to change as the pipe ages. The pressure throughout the distribution system is maintained at a low level which helps to prohibit water main breaks.

Five homes receive water from a small diameter service pipe on A Street. There are also five homes on Clay Street that receive water from a small diameter service pipe. The small pipes do not have the capacity necessary for multiple homes to use water at the same time. The problem is especially noticeable because the small diameter pipe has a long length which introduces significant pressure loss. The 620-foot long 1.5-inch diameter polyethylene pipe on Clay Street only has a capacity of approximately 17 gallons per minute at the low pressure available while still providing the pressure needed to flush toilets or take a shower. The 650-foot long 1 ¼-inch diameter polyethylene pipe on A Street only has a capacity of approximately 11 gallons per minute. These two sections of pipe, along with the section on the south end of Maple Street, are also known to be brittle and break frequently.

The water main in the vicinity of the two old wells is still in service. A valve at each well site is shut off to isolate the old wells from the distribution system. These valves should be removed and the water main looped to eliminate the two lengthy dead ends in this location. The two buildings where the wells are housed should be demolished and the wells properly abandoned.

The old treatment building also has water main still in service that is stopped by active valves. These valves should be removed from service and the water main capped to avoid future problems.

Wakonda's distribution system currently has approximately 10 dead ends on four and six inch diameter water mains. Fire hydrants are located at three of these dead ends. Fire hydrants allow the lines to be properly flushed to maintain water quality. Without looping and multi-directional flow of water in the distribution system, water is supplied, for the most part, through a long single pipeline. In this type of distribution system, total water usage decreases the closer one gets toward the ends of the lines. This results in decreased movement of water in the pipe and the possibility of exceptionally long retention times of the

water in various segments of the pipe. Long retention times in a pipe can have a detrimental effect on the quality of the water in the pipe such as:

- A decrease in the disinfection levels in the water;
- An increase in the potential for the formation of carcinogenic disinfection process by-products; and
- An increased potential for the formation of biological growth.

3.6.1 Hydrants and Valves

The SD Department of Environment and Natural Resources (SD DENR), which is the state regulatory agency for public water supplies, requires that fire hydrants be installed on water mains with a minimum diameter of six inches. Of the total of approximately 27 fire hydrants, five are on six-inch water main. The remaining hydrants are on smaller diameter water mains. Figure 3.1 shows the current sizes of the Town's distribution system based on available information. According to the Utility Manager there are at least five fire hydrants do not work properly.

According to the Utility Manager many of the approximately 26 main-line water valves do not work and are covered by street surfacing. Many of the water service valves also do not work. The number and locations of the non-working valves have not been identified. Additional valves are recommended to maintain water service to the users of the system when portions of the system are taken offline due to maintenance or pipe repair. The specific locations of the desired valves have not been identified at this time.

3.6.2 Hydraulic Evaluation

A hydraulic evaluation of the water system was conducted using the KY Pipe 2014 hydraulic computer model. This model utilizes the Hazen-Williams formula and commonly accepted friction factors for the pipeline material being considered to calculate head loss due to pipe friction and resulting flows and pressures. Two types of hydraulic analyses were performed with the hydraulic program to evaluate the Town of Wakonda's distribution system. The first type is a general system analysis which provides a snapshot of the system at the set parameters. The second type is a fire flow analysis which predicts the fire flow from selected fire hydrants. All analyses were utilized to obtain a representation of the existing distribution

system and to allow accurate recommendations to be made that will improve the existing conditions.

Any hydraulic evaluation can find the existing water system to be inadequate by simply making the requirements very stringent. On the other hand, generally all systems are adequate to meet the average day demands. Deficiencies in a system are typically not apparent until system demands increase to provide the peak day or peak hour flows. The reason for this is that the flow rate in a pipeline significantly affects the downstream pressures. The friction loss, or the pressure loss, in a pipe is a function of the square of the velocity. Therefore, as the flow rate and corresponding velocity in a pipe increase, the resulting friction increases exponentially. As the flow rate increases above two feet per second, the corresponding friction loss begins to climb rapidly with a velocity of three feet per second generally considered the maximum desired velocity. As a result, it is common practice to evaluate the overall system deficiencies in a distribution system based on peak hour and peak day flows.

It should be noted at this point that the hydraulic modeling provided is theoretical. The hydraulic model should not be considered completely accurate due to the complex variables involved in the calculations. The exact age or internal surface condition of the water mains is unknown which introduces a degree of error since the pipeline capacity is directly related to its interior roughness which is also related to its age.

3.6.3 Modeled Flow Rates

The total water demand for the Town is modeled by distributing demands throughout the water distribution model based on the density of housing and other connections to simulate the metered connections. Two sets of modeled system demands are created to place different loading conditions on the model:

- Peak Hour Demand

  Mays states that the peak hour to average day flow ratio typically ranges from 2.0 to 7.0:1. It is our opinion that the peak hour to average day ratio should be modeled as 6.72. This number was calculated by multiplying the highest usage in Figure 3.3 of 210 percent

by the estimated peak day to average day ratio of 3.2. Therefore, the total modeled peak hour flow rate is estimated to be 148 gpm (321 people x 98.5 gpcpd x 6.72 / 1440 minutes per day). This flow will be utilized in the general analysis with the water tower set at mid-level to evaluate the distribution system's hydraulic capacity to maintain adequate water pressure during this high-use period.

- Peak Day Demand

  The peak day demand in the models was set to approximately 101,000 gpd (321 people x 98.5 gpcpd x 3.2) or 70.3 gpm based on the estimated water use projection discussed previously.

3.6.4 Pressure Analysis

To check the water system for low-pressure problems, hydraulic models are created using the following assumptions:

- The peak hour demand is placed on the model according to Section 3.6.3.
- The operating elevation of the water tower is set to the mid-tank level.
- The rural water supply is off so the water tower supplies all of the water demand.

The SD DENR Recommended Design Criteria states in Section 8.4.2:

> *"A water distribution system shall be designed so as to provide a pressure of 20 pounds per square inch at each service outlet or connection under any or all conditions or demands that can be placed on the system. Under normal conditions, minimum pressures should be approximately 60 psi and not less than 35 psi."*

Section 7.3.1 of the Recommended Standards for Water Works by the Committee of the Great Lakes further recommends a minimum working pressure of 35 psi with a normal working pressure of 60 to 80 psi. The *AWWA Distribution System Handbook* by Mays states on page 3.8 that low operating pressures of less than 30 psi can result in annoying reductions in water flow when more than one water-using device is in service. The minimum desired pressure by many residents is 40 psi as that pressure is typically required to properly operate lawn sprinkler systems. Based on the references above, the recommended pressures for services are shown in Table 3.2.

Table 3.2: Recommended Pressures

Condition	Service Pressure Criteria (psi)
Maximum Pressure	60-80
Minimum Pressure During Peak Day	40
Minimum Pressure During Peak Hour	35
Minimum Pressure During Fire Flow	20

Figure 3.5 indicates that most of the peak operating pressures in the community are below the minimum recommended pressure of 35 psi. This coincides with the Utility Manager's indication that the pressures throughout the Town are generally low. This low pressure is due to the low elevation of the water tower.

Figure 3.5 shows in blue the expected pipeline velocities during peak flow. The highest velocity is 1.0 feet per second in the pipe that leads from the water tower. This velocity is within the recommended range and indicates sufficiently sized piping for normal distribution.

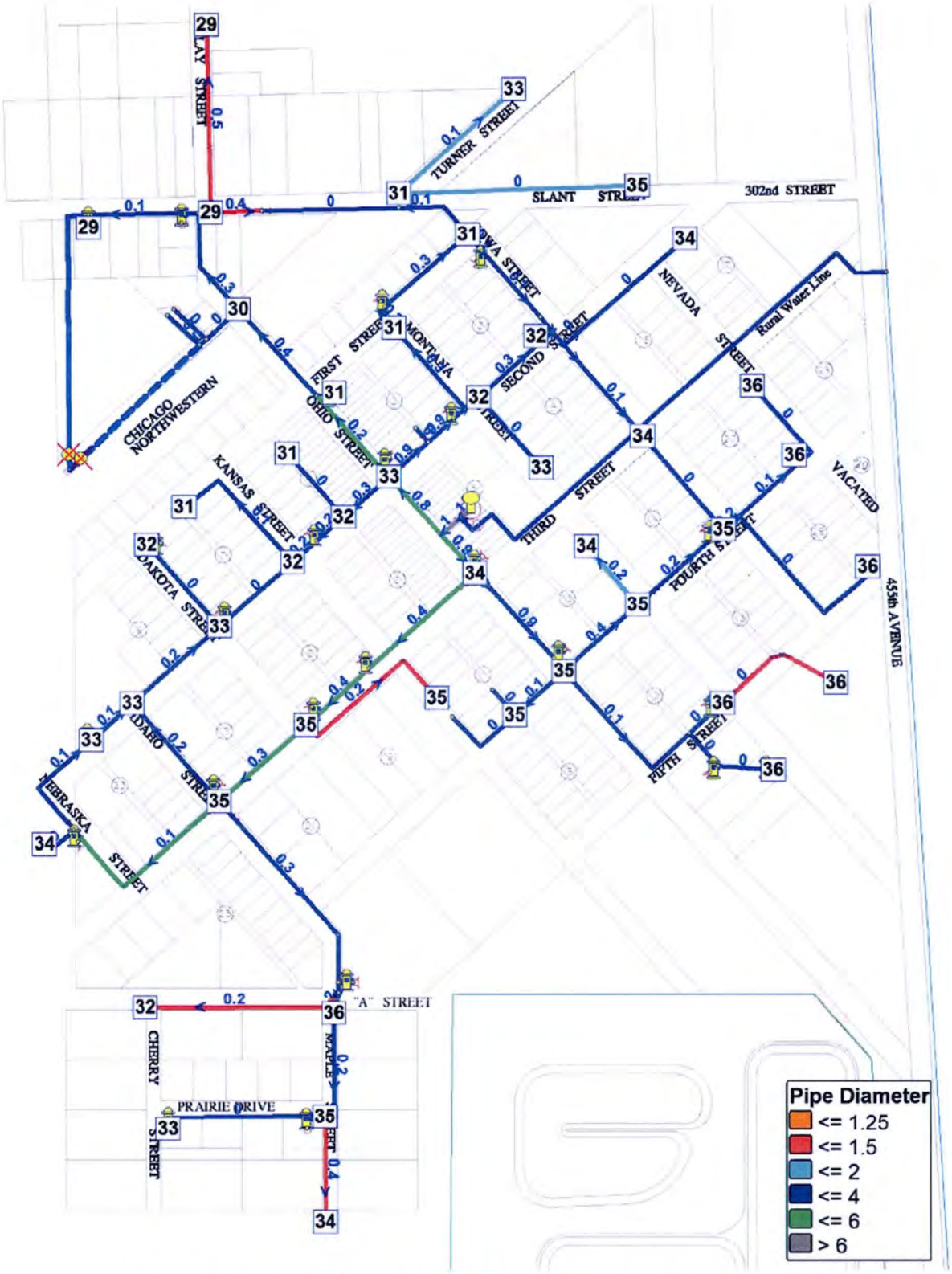


Figure 3.5: Peak Hour Pressures and Pipe Velocities

3.6.5 Fire Flow Simulation

In order to check the water system for low fire flow problems, hydraulic models are created using the following assumptions:

- The peak day demand is placed on the model according to Section 3.6.3.
- The operating level of the water tower is set to the mid-tank level.
- The rural water supply is off so the water tower supplies all of the water demand.
- The minimum residual pressure is set at 20 psi. The fire flow is limited to what flow the system can deliver while maintaining a minimum of 20 psi.

Main pipelines are to deliver the needed fire flow to each hydrant in accordance with the ISO guidelines. The ISO guidelines are based on a number of variables including size of structure, construction material, occupancy, exposure and connections to other structures. For one- and two-family dwellings not exceeding two stories in height, the following needed fire flows are required:

Distance Between Buildings	Fire Flow Requirement
Over 100 feet	500 gpm
31 to 100 feet	750 gpm
11 to 30 feet	1,000 gpm
10 feet or less	1,500 gpm

As for the business district, the needed fire flow would be variable for each structure, depending on construction and materials. For complete accuracy an inspection and analysis of each structure would be required. Rather than performing these inspections and analyses, a minimum needed fire flow of 2,000 gpm is assumed for business and school areas.

The fire flows that are estimated from the model are shown in Figure 3.6. As can be seen, all areas are served by fire flows that are less than the minimum required by ISO. The fire flows basically range from 70 gpm at the outskirts of Town to 650 gpm near the water tower. The low fire flows are due to pipe age and roughness which creates friction when water flows through the pipe. The smaller pipe sizes are also a factor that limits fire flow. In addition, the low water tower elevation limits the pressure available which also reduces the fire flow.

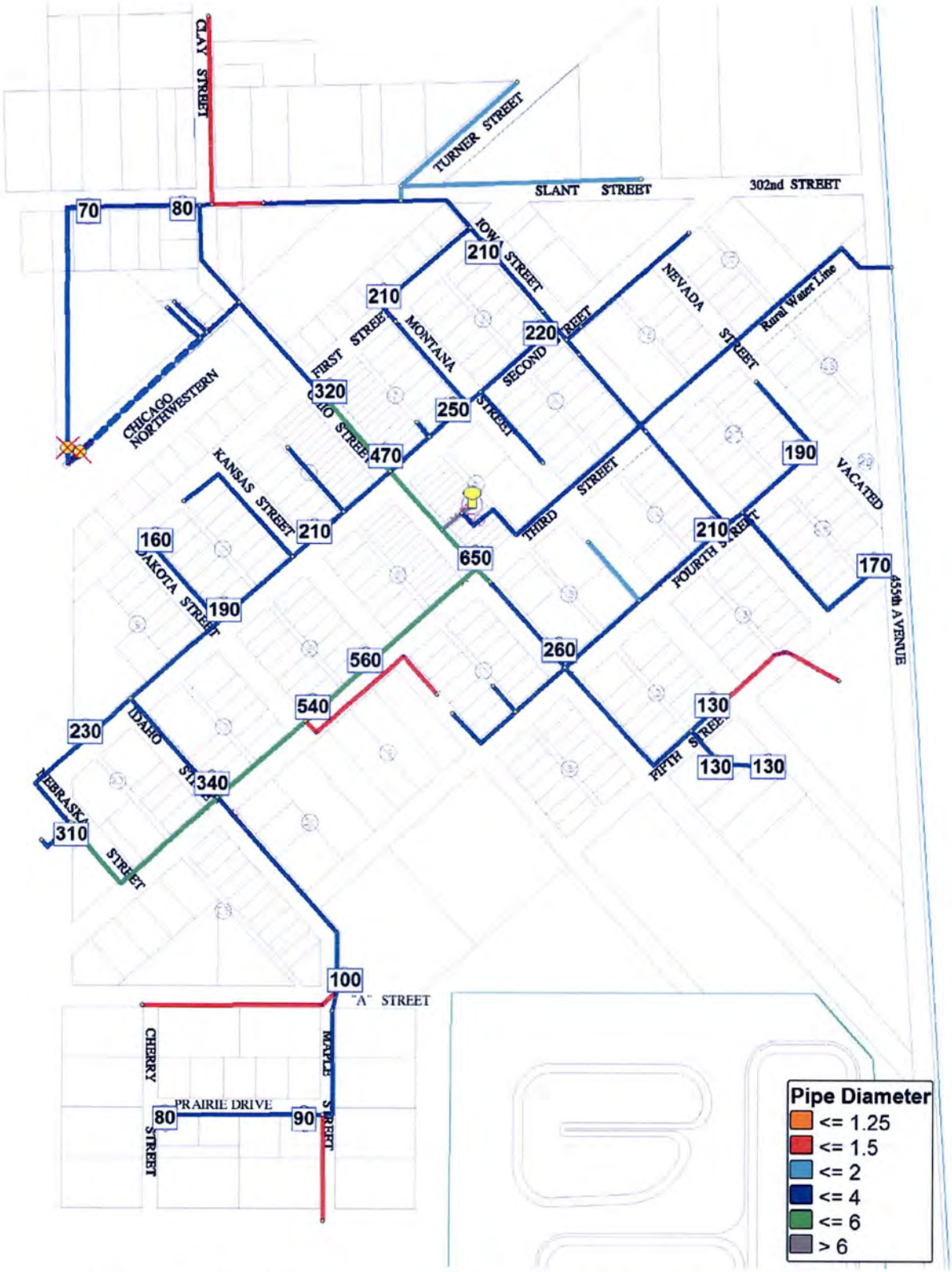


Figure 3.6: Fire Flow Analysis under Peak Day Demand

3.7 FUTURE CONDITIONS

Information related to project need and the planning area is found in Section 3.1 of this report. Specific information on population projections is found in Section 2.3. Land use is not expected to change significantly in the immediate vicinity of the Town. There is some land available for future development and based on the past growth of the community, it is viewed as sufficient to meet community needs.

Due to the importance of conserving water, money and energy, various means for reducing water usage are recommended. By using faucet aerators, reduced flush toilets, and limited flow showerheads water use can be reduced.

4 DEVELOPMENT AND EVALUATION OF ALTERNATIVES

4.1 GENERAL

The alternatives developed for the Town of Wakonda were composed to demonstrate options available to fix the identified deficiencies in the water system.

4.2 CAUTIONARY NOTES CONCERNING COST ESTIMATES

The opinions of probable cost provided with the following alternatives reflect the anticipated costs for administration, engineering design, construction, contingencies, construction observation, and other costs related to completion of the project. The costs as presented are based on an analysis and comparison of projects of similar size and scope. The actual construction and project costs will vary on an individual project basis. The actual bid cost will reflect the bidder's evaluation of construction problems, weather, soils and difficulty of work. Thus, the engineer cannot be held responsible for the accuracy of the estimates made in this report as the engineer has no control over the contractors' bid costs.

Changes in materials, equipment and energy costs, as well as availability of other construction work at the time of the bid opening, could substantially influence actual project cost. Construction costs will also vary somewhat based on the quantity of items necessary to construct the project. The quantities and costs contained in this report are preliminary estimates based on our best judgment without field measurements. Final quantities and opinions of probable cost and final construction costs must be based upon final design.

Different funding sources have different requirements for some non-construction items. Therefore, actual costs of non-construction items should be considered tentative at this time and subject to later modifications and adjustments as current situations and funding sources dictate. Further, inasmuch as the period of construction cannot be accurately predicted, the costs as presented in this report have not been adjusted to reflect projected inflation factors. Therefore, it is important that the estimate of costs as presented be reviewed and updated periodically to reflect construction cost trends.

4.3 EQUIVALENT UNIFORM ANNUAL COST

In addition to an opinion of cost for certain alternatives discussed in this section, a breakdown of the estimated equivalent uniform annual cost (EUAC) is also given. The equivalent uniform annual cost (EUAC) not only takes the capital costs into account when evaluating the options but also looks at the salvage value of the components and the expected annual operation and maintenance costs. The result is a comparison of the alternatives on an overall basis throughout a period of 20 years. As a result, the EUAC may show that the lowest capital cost alternative is not the lowest cost alternative. This situation would occur when options have a low capital cost but high operation and maintenance costs. The terms and values utilized in performing the EUAC are given in Table 4.1. The EUAC for selected alternatives is eliminated from consideration since the proposed improvements offer one viable alternative or a comparison of operating cost would be equivalent.

Table 4.1: EUAC Terminology and Values Used

Term	Definition	Value Used
Interest = I	Annual interest rate percentage	3.00-SRF
Salvage Value = SV	Value of component at end of 20-year design life	0 to 67%
Present Worth = PW	Present worth (equal to opinion of cost for that item)	Variable
Net Present Worth of Salvage Value = PW SV	Present worth of the salvage value	55.4%
Net Present Worth of Capital Costs = NPW	Present worth less the present worth of the salvage value	Variable
Net Present Worth of Annual Costs	Present worth of annual costs over the 20-year design life	1488%
Equivalent Uniform Annual Cost = EUAC	Annual cost of total present worth of capital and annual costs	6.72%
Design Period	Length of time facilities are evaluated	20 years-SRF

4.4 WATER SOURCE IMPROVEMENTS

The contract with Clay Rural Water Service currently does not include a provision for the flow rate and pressure that will be provided. It is recommended that the Town establish a contracted maximum flow rate of between 70 to 148 gpm at the maximum pressure that can be guaranteed. The size of the piping from the rural water main through town and through

the meter pit limits the flow rate and pressure currently available. Clay Rural Water Service should be requested to determine the feasibility and necessity of replacing the supply line with a larger pipe to improve pressure and flow. The existing meter pit is in need of coating repair and should have an emergency bypass.

4.4.1 Water Source Option 1: Do Nothing

The "Do Nothing" option would not address the improvements necessary for the meter pit. The coatings should be repair to extend the life of the structure. Therefore, this option is not recommended.

4.4.2 Water Source Option 2: Replace Meter Pit

One option to improve the meter pit is to replace the entire structure with a similar structure. The size of the piping, fittings and connections would be increased in the new structure to promote the peak hour flow rate. A bypass would be provided to allow continuous operation when maintenance is required on the equipment in the meter pit. The estimated costs are presented in Table 4.2.

Table 4.2: Estimated Cost for Meter Pit Replacement

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$9,000.00	$9,000.00
2	Furnish Meter Pit Complete with Fittings, Valves, Piping and Related Items	1 LS	$55,000.00	$55,000.00
3	Install Meter Pit on Concrete Pad and Provide Piping Connections	1 LS	$22,000.00	$22,000.00
4	Remove and Dispose of Existing Meter Pit	1 LS	$10,000.00	$10,000.00
			Subtotal	$96,000.00
			Contingencies	$9,600.00
			Total Construction Cost	$105,600.00
			Legal and Administration Cost	$4,200.00
			Design Engineering	$9,600.00
			Bidding Phase Engineering	$4,000.00
			Construction Engineering	$10,600.00
			Total Project Cost	$134,000.00

4.4.3 Water Source Option 3: Rehabilitate Meter Pit

Another option to address the meter pit issues is to rehabilitate the meter pit. The rusted surfaces would be ground smooth and a new coating applied. A corrosion protection system would be installed to reduce future effects of erosion. It is not practical in the space available to increase the size of the piping and fittings or to provide a bypass inside the station. Therefore, the cost evaluation includes the installation of piping, valves and fittings for an exterior bypass. The estimated costs for this option are presented in Table 4.3.

Table 4.3: Estimated Cost for Meter Pit Rehabilitation

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$2,000.00	$2,000.00
2	Grinding Surface Preparation of Floor, Piping and Fittings	1 LS	$3,000.00	$3,000.00
3	Coating Application	1 LS	$2,000.00	$2,000.00
4	Corrosion Protection System	1 LS	$8,000.00	$8,000.00
5	Bypass Piping	30 LF	$30.00	$900.00
6	Bypass Valves	2 EA	$1,000.00	$2,000.00
7	Miscelaneous Fittings and Connections	1 LS	$4,500.00	$4,500.00
			Subtotal	$22,400.00
			Contingencies	$2,200.00
			Total Construction Cost	$24,600.00
			Legal and Administration Cost	$1,000.00
			Design Engineering	$3,200.00
			Bidding Phase Engineering	$3,000.00
			Construction Engineering	$3,500.00
			Total Project Cost	$35,300.00

4.4.4 Water Source Option 4: Abandon Wells

The Town's two wells have not been used for many years and are not expected to ever be needed again. This option considers the cost which is presented in Table 4.4 to properly abandon the wells. This option also evaluates the cost to demolish the existing buildings, remove two valves and install a section of pipe to loop the water main in the area. The removal of the valves and piping to the old treatment building is also included.

Table 4.4: Estimated Cost for Abandoning Wells

Item	Description	Quantity	Unit Cost	Total Cost
1	Mobilization	1 LS	$3,000.00	$3,000.00
2	Demolish Buildings and Concrete Floors	1 LS	$10,000.00	$10,000.00
3	Remove and Dispose of Valves	4 EA	$500.00	$2,000.00
4	4" PVC Water Main	20 LF	$30.00	$600.00
5	4" Water Main 90 Degree Bend	1 EA	$500.00	$500.00
6	Connect to Existing 4" Pipe	2 EA	$900.00	$1,800.00
7	Abandon Well	2 EA	$8,000.00	$16,000.00
8	Cap Pipe	2 EA	$1,200.00	$2,400.00
			Subtotal	$36,300.00
			Contingencies (10%)	$3,700.00
			Construction Total	$40,000.00
			Legal and Administration Cost	$1,600.00
			Design Engineering	$3,500.00
			Bidding and Contract Documents	$2,000.00
			Construction Engineering	$5,000.00
			Total Project Cost	$52,100.00

4.5 WATER STORAGE IMPROVEMENTS

The existing multi-legged water tower was constructed in 1910 and has reached the end of its expected useful life. The 50,000-gallon water tower is slightly smaller than what is required to store the recommended 56,700 gallons. The low elevation of the water tower limits the pressure available throughout the Town to what is considered lower than recommended. The interior and exterior coatings have held up adequately based on their age; however, for continued service life, the coatings should be completely sandblasted and reapplied. Because of the construction method of the tank and roof, there is space between the roof and tank where contaminates can enter.

4.5.1 Water Storage Option 1: Do Nothing

In general the water tower has exceeded its useful life expectancy and should be replaced sometime in the near future. The water tower is slightly smaller than what is recommended to meet the needs of Wakonda. The rural water supply cannot provide the peak hour flow rate, because the size of the supply line and the meter pit piping is too small. Therefore, water storage is necessary. The coatings should be completely removed and reapplied for continued use of the water tower. Considering these factors, the "Do Nothing" option is not acceptable.

4.5.2 Water Storage Option 2: Water Tower Rehabilitation

This alternative considers the cost of sandblasting and recoating the inside and outside surfaces of the existing water tower. The roof of the water tower will be sealed to keep contaminants from entering the tank. The associated costs with this alternative are presented in Table 4.5. The EUAC analysis is presented to compare this alternative with the other water storage options on a total cost basis.

Table 4.5: Estimated Cost for Water Tower Rehabilitation

Item	Description	Quantity	Unit Cost	Total Cost
1	Mobilization	1 LS	$11,500.00	$11,500.00
2	Seal Non-Welded Seams	1 LS	$5,000.00	$5,000.00
3	Sandblast and Recoat Interior of Water	1 LS	$40,000.00	$40,000.00
4	Sandblast and Recoat Exterior of Water	1 LS	$70,000.00	$70,000.00
			Subtotal	$126,500.00
			Contingencies (10%)	$12,700.00
			Construction Total	$139,200.00
			Legal and Administration Cost	$6,000.00
			Design Engineering	$12,000.00
			Bidding and Contract Documents	$3,500.00
			Construction Engineering	$15,000.00
			Total Project Cost	$175,700.00

Table 4.5, Continued: Estimated Cost for Water Tower Rehabilitation

EUAC Analysis

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Mobilization	$11,500.00			$11,500.00
Seal Non-Welded Seams	$5,000.00			
Sandblast and Recoat Interior of Water Tower	$40,000.00			$40,000.00
Sandblast and Recoat Exterior of Water Tower	$70,000.00			$70,000.00
Remaining Project Costs	$49,200.00			$49,200.00
Total Construction Cost	$175,700.00	$0.00	$0.00	$170,700.00

b. Operation and Maintenance Costs

Item	Existing Annual Cost	Change in Annual Cost	NPW
Salaries and Wages	$15,900.00		$236,551.85
Water System Supplies	$4,000.00		$59,509.90
Water System Maintenance	$7,000.00		$104,142.32
Office Supplies	$4,500.00		$66,948.64
Utilities	$2,500.00		$37,193.69
Paint Water Tower	$9,100.00	-$7,420.00	$24,994.16
Rural Water Use	$37,000.00		$550,466.57
Subtotal	$80,000.00	-$7,420.00	$1,079,807.13

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$170,700.00
NPW of O & M Costs	$1,079,807.13
Total Net Present Worth	$1,250,507.13
Equivalent Uniform Annual Cost	**$84,053.72**

4.5.3 Water Storage Option 3: Water Tower

This option considers a new water tower which would be installed in the same general area as the existing water tower. The minimum recommended volume for storage is 56,700. The next typical size above the minimum recommended volume is 75,000 gallons. The costs are presented in Table 4.6 and include the typical costs of the construction of a new water tower. The EUAC analysis is presented to compare this alternative with the other water storage options on a total cost basis. New hydraulic models are shown in Figures 4.1 and 4.2 for the new water tower which will have a proposed overflow approximately 50 feet higher to

improve pressures and flow. The higher pressure available from the proposed water tower increases the pressures to an acceptable level. The fire flows also increase, but not significantly since the small diameter and corroded cast iron pipe reduce the capacity of the system.

Table 4.6: Estimated Cost for Water Tower

Item	Description	Quantity		Unit Cost	Total Cost
1	Mobilization	1	LS	$71,000.00	$71,000.00
2	75,000-Gallon Water Tower and Appurtenances	1	LS	$650,000.00	$650,000.00
3	10" PVC Water Main	250	LF	$45.00	$11,250.00
4	Control Room in Base of Water Tower	1	LS	$10,000.00	$10,000.00
5	Demolition of Existing Water Tower	1	LS	$30,000.00	$30,000.00
6	Site Work and Surfacing	1	LS	$4,000.00	$4,000.00
7	Seeding and Erosion Control	1	LS	$2,000.00	$2,000.00
				Subtotal	$778,250.00
				Contingencies (10%)	$77,900.00
				Construction Total	$856,150.00
				Legal and Administration Cost	$35,000.00
				Design Engineering	$66,000.00
				Geotechnical Engineering	$5,000.00
				Bidding and Contract Documents	$5,000.00
				Construction Engineering	$80,000.00
				Total Project Cost	$1,047,150.00

Table 4.6, Continued: Estimated Cost for Water Tower

EUAC Analysis

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Mobilization	$71,000.00			$71,000.00
75,000-Gallon Water Tower and Appurtenances	$650,000.00	$433,333.33	$239,926.16	$410,073.84
10" PVC Water Main	$11,250.00	$5,625.00	$3,114.43	$8,135.57
Control Room in Base of Water Tower	$10,000.00	$5,000.00	$2,768.38	$7,231.62
Demolition of Existing Water Tower	$30,000.00			$30,000.00
Site Work and Surfacing	$4,000.00			$4,000.00
Seeding and Erosion Control	$2,000.00			$2,000.00
Remaining Project Costs	$268,900.00			$268,900.00
Total Construction Cost	$1,047,150.00	$443,958.33	$245,808.97	$801,341.03

b. Operation and Maintenance Costs

Item	Existing Annual Cost	Change in Annual Cost	NPW
Salaries and Wages	$15,900.00		$236,551.85
Water System Supplies	$4,000.00		$59,509.90
Water System Maintenance	$7,000.00		$104,142.32
Office Supplies	$4,500.00		$66,948.64
Utilities	$2,500.00	$90.00	$38,532.66
Paint Water Tower	$9,100.00	-$7,420.00	$24,994.16
Rural Water Use	$37,000.00		$550,466.57
Subtotal	$80,000.00	-$7,330.00	$1,081,146.10

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$801,341.03
NPW of O & M Costs	$1,081,146.10
Total Net Present Worth	$1,882,487.13
Equivalent Uniform Annual Cost	**$126,532.70**

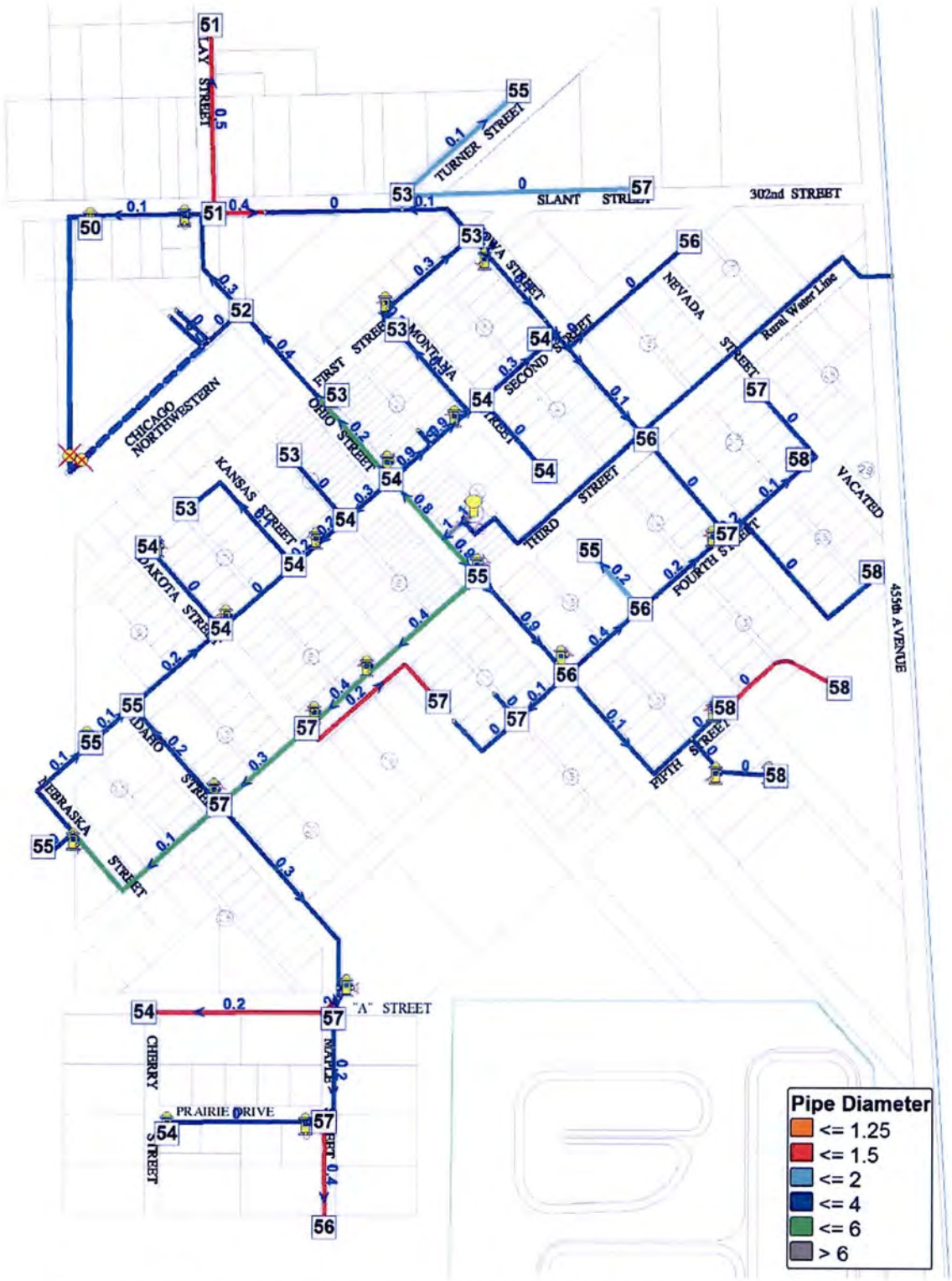


Figure 4.1: Proposed Pressures and Velocities for Water Tower

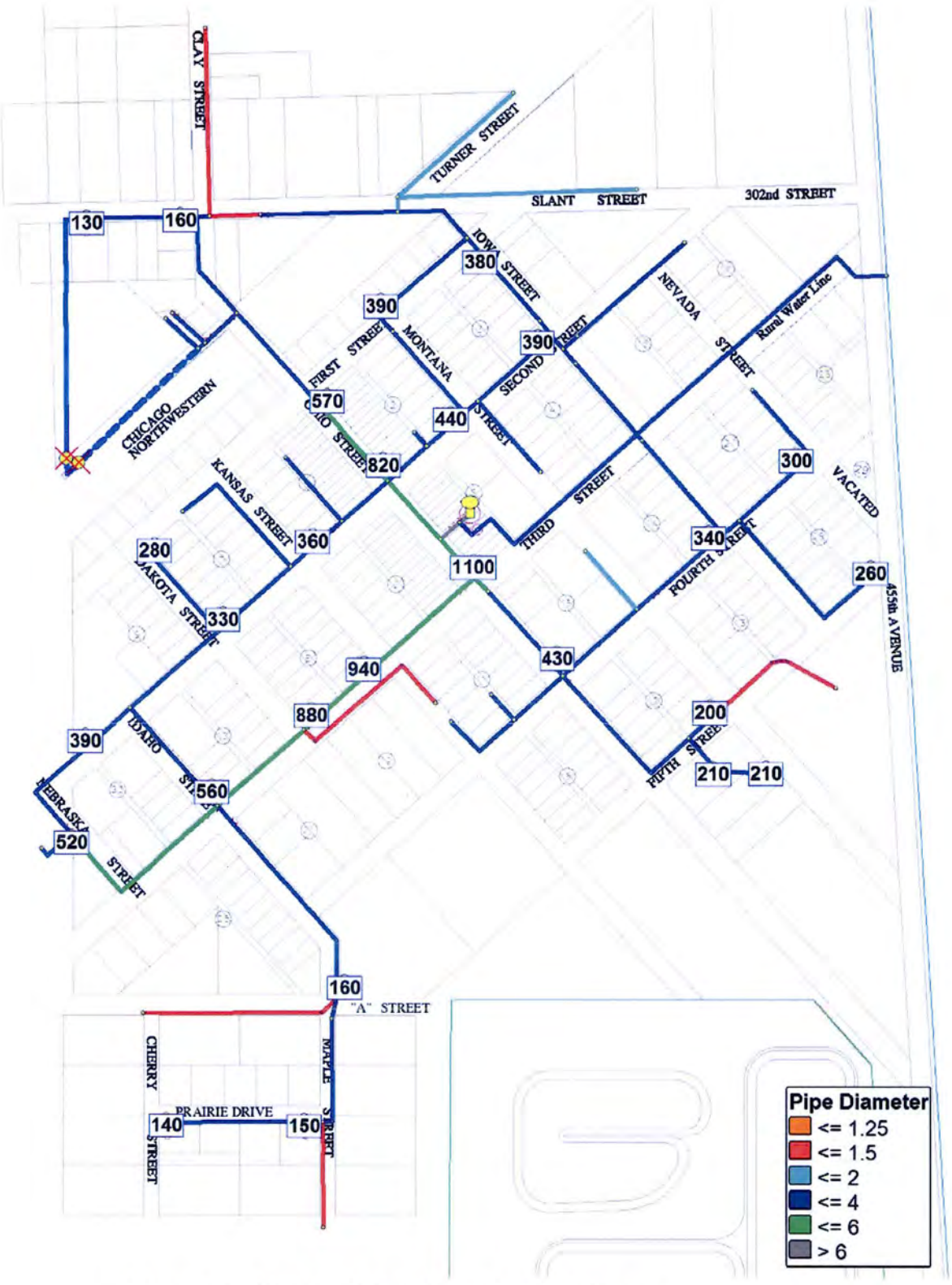


Figure 4.2: Proposed Fire Flows for Water Tower

4.5.4 Water Storage Option 4: Ground Storage with Booster Station

This option evaluates the use of a ground storage tank instead of a water tower. Typical ground storage cannot provide a pressurized supply. As a result, ground storage is often referred to as dead storage because pumping is required to use the storage. For the purpose of this evaluation a 71,000-gallon ground storage tank is evaluated.

The cost evaluation of this option includes a pumping facility to provide continuous pressure to the Town from the ground storage. A small pump would be installed sized to provide the average day flow rate. A variable frequency drive (VFD) is proposed to operate the proposed pump. The VFD would enable control of the pump's speed to provide a variable flow rate that can more closely match the flow demand from the distribution system. The VFD is also beneficial because it allows the pump to be operated no faster than the speed that is necessary. This saves on electrical costs and reduces wear on the pump. Pressure fluctuations that would be experienced with a pump cycling on and off would be reduced, if not eliminated, because the VFD will change the speed of the pump gradually.

The rural water supply would be connected directly to the Town's distribution system to reduce pumping costs when the pressure from rural water is adequate. When the rural water supply cannot meet the demand directly into the distribution system, the pumping system would automatically supplement the flow. A larger pump would be used to provide additional flow when the smaller pump cannot keep up. This pump would also be operated with a VFD.

A third pump is proposed that will increase the flow and provide more pressure during a fire flow event. The pump is operated with a larger motor and a VFD in the same manner as the previously described pumps. The larger pump will be capable of providing approximately 1,000 gpm at 40 psi. The existing distribution system piping will limit this available flow since the existing system is composed of small diameter and corroded cast iron pipe.

A control system is proposed that will enable the operation of the VFD's to be based accurately on the pressure. The control system will automatically control the pumps by

running the small pump during low demand and starting the larger pumps when the demand increases. Pressure transducers will be used to give an accurate continuous signal that is related to the pressure sensed in the system.

A standby automatic generator is proposed to give the facility the ability to operate in the case of a power outage. The generator would be installed outside in its own enclosure.

Piping, valves and fittings are proposed to provide efficient control and transporting of the water. The filling of the ground storage tank would be automatic. The new control system and piping system will allow the water in the ground storage tank to be automatically pumped and replenished to keep the water fresh.

Table 4.7 includes the cost of the proposed improvements. The EUAC analysis is also presented to compare this alternative with the other water storage options on an annual cost basis. The operation and maintenance costs due to this project would increase because of the pumping facility.

The pressures and fire flows that can be expected as a result of the improvements would be nearly identical to those of Figures 4.1 and 4.2 presented previously. Because of the higher pressure available, the pressures throughout the Town would be higher than those of the existing system. During fire flow events, all of the proposed pumps could potentially provide fire flow. Because of the restrictive existing piping, the fire flows would be limited but increased slightly over the existing system.

Table 4.7: Estimated Cost for Ground Storage

Item	Description	Quantity		Unit Cost	Total Cost
1	Mobilization	1	LS	$48,000.00	$48,000.00
2	10-Inch Buried PVC Pipe	250	LF	$45.00	$11,250.00
3	Buried Piping Connections, Valves and Fittings	1	LS	$9,000.00	$9,000.00
4	Miscellaneous Flanged Piping, Fittings, Connections, Meter and Valves	1	LS	$50,000.00	$50,000.00
5	Furnish and Install Pumps with VFD's, Control System with Pressure Sensors, Gauges and Appurtenances	1	LS	$65,000.00	$65,000.00
6	Building, Footing and Floor Slab and Related Items	1	LS	$60,000.00	$60,000.00
7	Electrical	1	LS	$30,000.00	$30,000.00
8	Automatic Stand-By Generator with Transfer Switch	1	LS	$45,000.00	$45,000.00
9	Heating and Ventilation	1	LS	$9,000.00	$9,000.00
10	Tank Foundation and Floor Slab	1	LS	$50,000.00	$50,000.00
11	71,000-Gallon Bolted Glass Lined Storage Tank	1	LS	$101,000.00	$101,000.00
12	Drain Tile System, Manhole and Piping	1	LS	$8,000.00	$8,000.00
13	6" DIP Water Main Stub-Out	1	LS	$4,000.00	$4,000.00
14	10" DIP Water Main Stub-Out	1	LS	$5,000.00	$5,000.00
15	Demolition of Existing Water Tower	1	LS	$30,000.00	$30,000.00
16	Site Work and Surfacing	1	LS	$5,000.00	$5,000.00
17	Seeding and Erosion Control	1	LS	$2,000.00	$2,000.00
				Subtotal	$532,250.00
				Contingencies (10%)	$53,300.00
				Construction Total	$585,550.00
				Legal and Administration Cost	$24,000.00
				Design Engineering	$45,000.00
				Bidding and Contract Documents	$6,000.00
				Construction Engineering	$54,000.00
				Total Project Cost	$714,550.00

Table 4.7, Continued: Estimated Cost for Ground Storage

EUAC Analysis

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Mobilization	$48,000.00		$0.00	$48,000.00
10-Inch Buried PVC Pipe	$11,250.00	$5,625.00	$3,114.43	$8,135.57
Buried Piping Connections, Valves and Fittings	$9,000.00	$4,500.00	$2,491.54	$6,508.46
Miscellaneous Flanged Piping, Fittings, Connections, Meter and Valves	$50,000.00	$25,000.00	$13,841.89	$36,158.11
Furnish and Install Pumps with VFD's, Control System with Pressure Sensors, Gauges and Appurtenances	$65,000.00		$0.00	$65,000.00
Building, Footing and Floor Slab and Related Items	$60,000.00	$40,000.00	$22,147.03	$37,852.97
Electrical	$30,000.00		$0.00	$30,000.00
Automatic Stand-By Generator with Transfer Switch	$45,000.00	$15,000.00	$8,305.14	$36,694.86
Heating and Ventilation	$9,000.00		$0.00	$9,000.00
Tank Foundation and Floor Slab	$50,000.00	$33,333.33	$18,455.86	$31,544.14
71,000-Gallon Bolted Glass Lined Storage Tank	$101,000.00	$67,333.33	$37,280.83	$63,719.17
Drain Tile System, Manhole and Piping	$8,000.00	$5,333.33	$2,952.94	$5,047.06
6" DIP Water Main Stub-Out	$4,000.00	$2,000.00	$1,107.35	$2,892.65
10" DIP Water Main Stub-Out	$5,000.00	$2,500.00	$1,384.19	$3,615.81
Demolition of Existing Water Tower	$30,000.00		$0.00	$30,000.00
Site Work and Surfacing	$5,000.00		$0.00	$5,000.00
Seeding and Erosion Control	$2,000.00	$1,200.00	$664.41	$1,335.59
Remaining Project Costs	$182,300.00		$0.00	$182,300.00
Total Construction Cost	$714,550.00	$201,825.00	$111,745.61	$602,804.39

b. Operation and Maintenance Costs

Item	Existing Annual Cost	Change in Annual Cost	NPW
Salaries and Wages	$15,900.00	$5,200.00	$313,914.72
Water System Supplies	$4,000.00		$59,509.90
Water System Maintenance	$7,000.00		$104,142.32
Pump Station Maintenance		$6,300.00	$93,728.09
Office Supplies	$4,500.00		$66,948.64
Utilities	$2,500.00	$980.24	$51,777.24
Paint Water Tower	$9,100.00	-$9,100.00	$0.00
Rural Water Use	$37,000.00		$550,466.57
Subtotal	$80,000.00	$3,380.24	$1,240,487.48

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$602,804.39
NPW of O & M Costs	$1,240,487.48
Total Net Present Worth	$1,843,291.87
Equivalent Uniform Annual Cost	**$123,898.17**

4.5.5 Water Storage Option 5: Rural Water Takeover

An alternate method of dealing with the storage deficiencies is to allow Clay Rural Water Service to take over the ownership, operation and maintenance of the water distribution system. This option would involve the Town completely eliminating the water system from its portion of responsibility. The water tower could be eliminated by CRWS expanding portions of their water system to supply sufficient flow and pressure during peak demands and making a direct connection to the water distribution system from rural water. The water distribution system improvements would need to be addressed as discussed subsequently, but could be completed by CRWS after the takeover, depending on the timing and agreements that can be made.

Preliminary discussions about this option with CRWS indicate that they would be interested in exploring this option further. No exact scope of work or details of the takeover are available at the time of writing this report.

Preliminary discussions with the Town of Wakonda indicate reluctance toward this option. First, the water system revenue source would be lost which is a concern for the Town. The Town would not have the ability to shut water off when payment for sewer fees is not made by the residents. The Town would also not have any control over setting the water rates which will most likely increase significantly due to the proposed projects. Second, the direct connection to rural water would not provide any fire flow protection. This will most likely impact insurance rates and could be disastrous under an emergency when fire flow is needed. Finally, there is concern about the different style of service that could be provided by the new management. Currently, the Town has a part-time utility manager that attends to the needs of the water system as necessary. The utility manager has done a good job with the required operation and maintenance of the system and knows the system very well. It is likely that new operating personnel would change the quality of service provided.

Because the details regarding the CRWS takeover are unknown; the Town of Wakonda is not interested in the CRWS takeover; and in the interest of saving time to produce this report, no further evaluation of this option will be made in this report.

4.6 WATER DISTRIBUTION IMPROVEMENTS

The identified deficiencies of the water distribution system are summarized below:

- The average water loss rate calculated is 28.3 percent. Approximately $5,740 could be saved per year if the loss rate was reduced to 12 percent.
- Approximately 42 percent of the distribution system piping is composed of cast iron pipe. The cast iron pipe is expected to break more frequently as it ages. The capacity of the cast iron pipe is very low due to the build-up of scale, the corrosion in the pipe and the small diameter sizes.
- Sections of the small diameter polyethylene pipe have become brittle. Two of these sections are known to be undersized.
- There are approximately 10 dead ends when considering the portion of the system made up of piping with four-inch diameter or larger. These dead ends should be looped if possible.
- Approximately seven of the dead ends do not have a fire hydrant that can be used for flushing.
- At least five of the fire hydrants do not work properly.
- Many of the main-line water valves are not working.
- The estimated pressures throughout the Town at the peak hour demand are below what is considered acceptable. However, this is due mainly to the low water tower elevation.
- The estimated fire flows are lower than those desired for insurance and fire-fighting purposes. However, the main reason for this is also due to the low water tower elevation.

4.6.1 Water Distribution Option 1: Do Nothing

The first alternative for water distribution system improvements is to do nothing. This alternative will not address any of the above identified deficiencies. As a result, the "Do Nothing" alternative is not considered as an acceptable alternative.

4.6.2 Water Distribution Option 2: Replace Cast Iron

This evaluation considers the replacement of the cast iron pipe with PVC pipe. The proposed project includes the replacement of the valves and fire hydrants that are currently on the cast iron pipe. Four additional fire hydrants are also proposed for areas where fire hydrant coverage is inadequate. Valves will be added to the system where the proposed piping intersects with existing piping to reduce the size of the system that must be shut down for emergencies. The cost estimate for the proposed improvements is shown in Table 4.8. The pipe to be replaced is shown highlighted in yellow in Figure 4.3.

The proposed PVC pipe will increase the pressures and fire flow as shown in the following figures. The pressures remain relatively low because of the low elevation of the water tower. The fire flows are increased significantly. It is also assumed that the replacement of the pipe will help reduce the amount of water loss in the system.

Table 4.8: Estimated Cost for Cast Iron Replacement

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$90,800.00	$90,800.00
2	Full Depth Asphalt Saw Cut	8,600	LF	$3.00	$25,800.00
3	Remove and Dispose of Asphalt	9,300	SY	$3.50	$32,550.00
4	Remove and Dispose of Fire Hydrant	17	EA	$250.00	$4,250.00
5	Remove and Dispose of Valve	17	EA	$150.00	$2,550.00
6	8" PVC Water Main	515	LF	$34.00	$17,510.00
7	6" PVC Water Main	10,560	LF	$30.00	$316,800.00
8	Fire Hydrant	21	EA	$3,300.00	$69,300.00
9	Fire Hydrant Lead	420	LF	$30.00	$12,600.00
10	8" Gate Valve w/Box	3	LF	$1,600.00	$4,800.00
11	6" Gate Valve w/Box	47	EA	$1,200.00	$56,400.00
12	Miscellaneous Fittings and Connections	1	LS	$73,700.00	$73,700.00
13	2" PE Service Line	30	LF	$30.00	$900.00
14	1" PE Service Line	2,610	LF	$27.00	$70,470.00
15	6"x2" Corp Stop/Service Saddle	1	EA	$400.00	$400.00
16	8"x1" Corp Stop/Service Saddle	8	EA	$300.00	$2,400.00
17	6"x1" Corp Stop/Service Saddle	71	EA	$250.00	$17,750.00
18	2" Curb Stop w/Box	1	EA	$500.00	$500.00
19	1" Curb Stop w/Box	79	EA	$275.00	$21,725.00
20	Asphalt Surface Patching	1,630	TN	$130.00	$211,900.00
21	Gravel Base Course or Surfacing	6,600	TN	$24.00	$158,400.00
22	Traffic Control	1	LS	$15,000.00	$15,000.00
23	Erosion and Siltation Control Measures	1	LS	$3,000.00	$3,000.00
24	Topsoil, Seed, Fertilize & Mulch	19,800	SY	$0.80	$15,840.00
				Subtotal	$1,225,345.00
				Contingencies	$122,500.00
				Total Construction Cost	$1,347,845.00
				Legal and Administration Cost	$54,000.00
				Design Engineering	$95,000.00
				Bidding Phase Engineering	$5,000.00
				Construction Engineering	$143,000.00
				Total Project Cost	$1,644,845.00

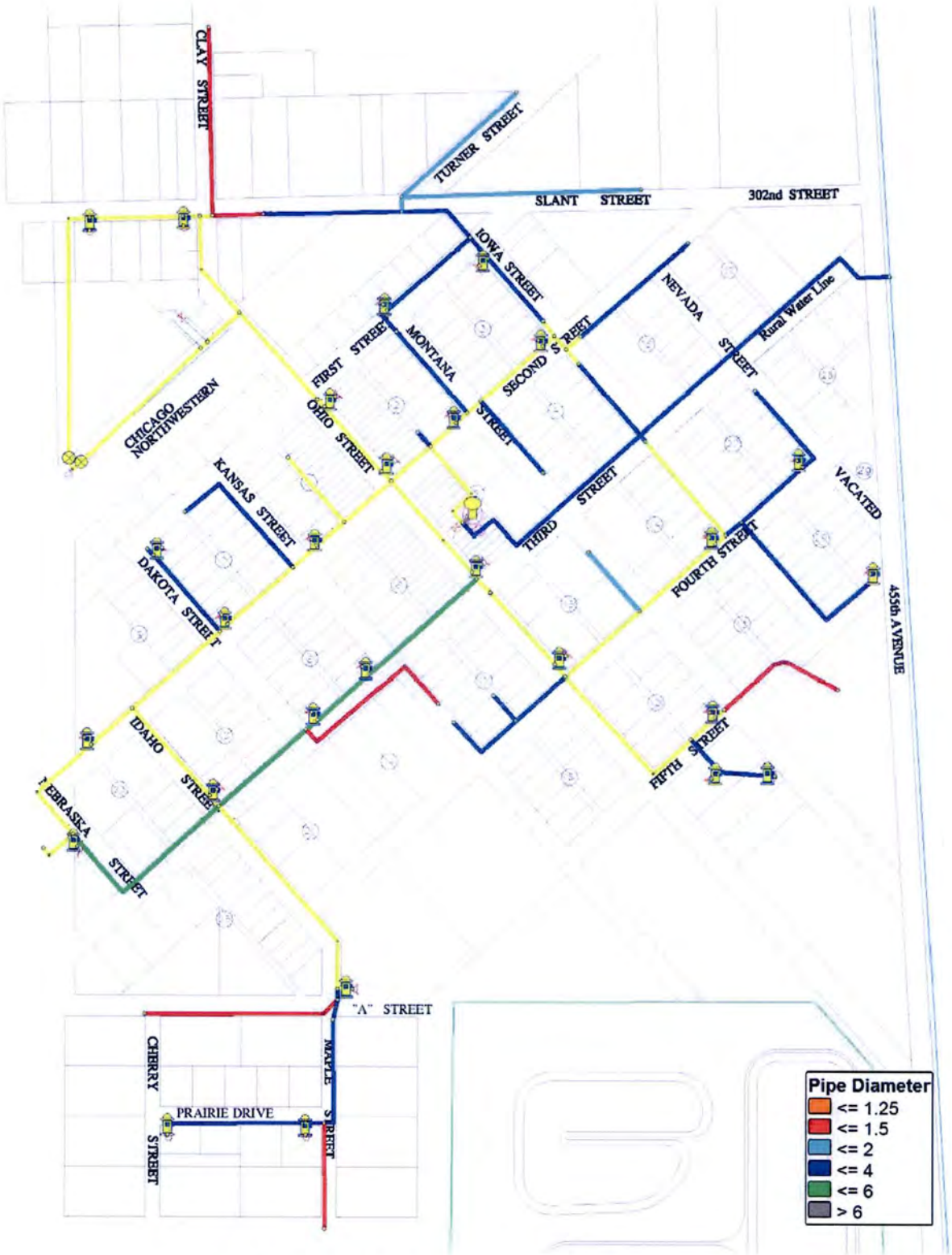


Figure 4.3: Cast Iron Pipe to Be Replaced

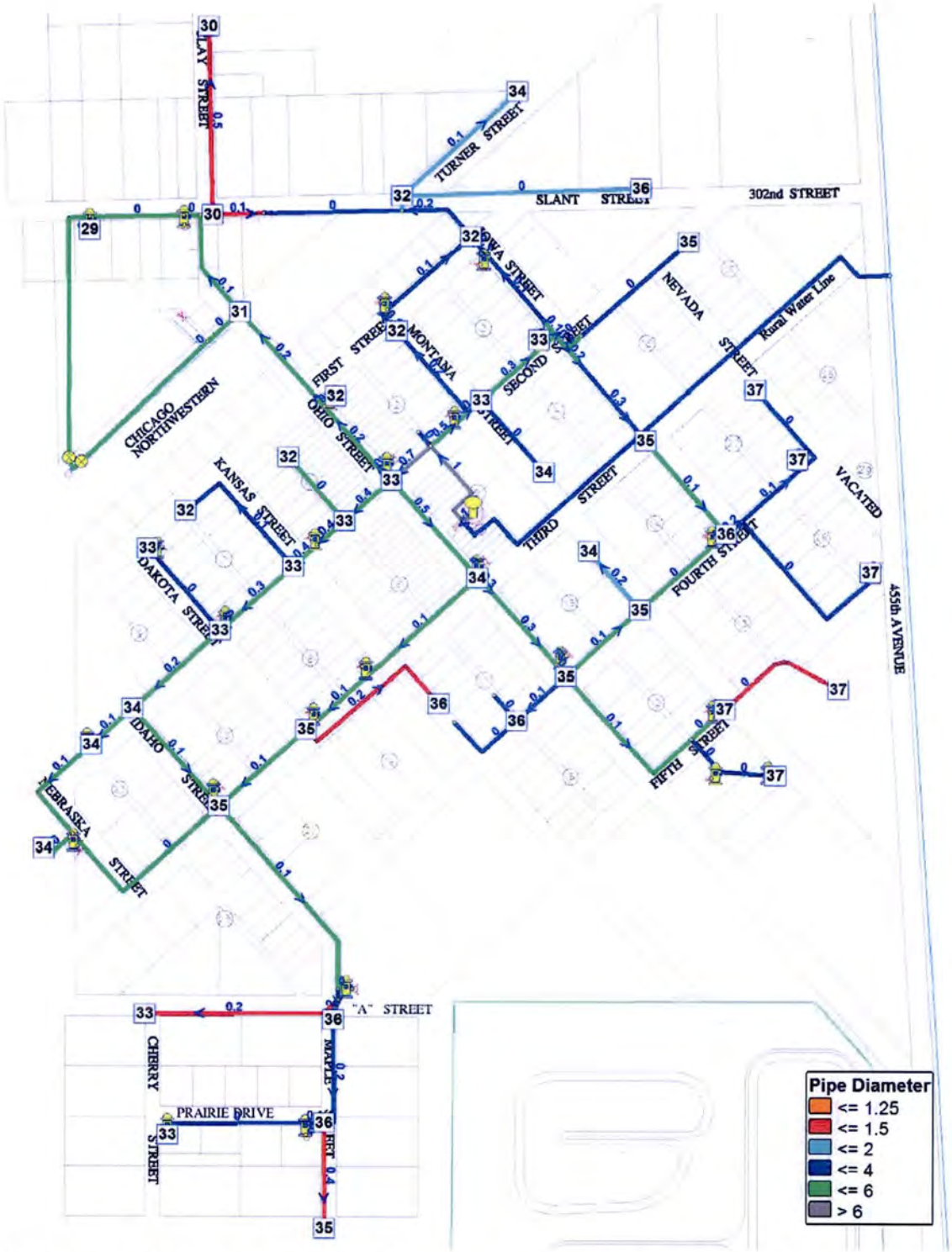


Figure 4.4: Proposed Pressures and Velocities - Cast Iron Pipe Replacement

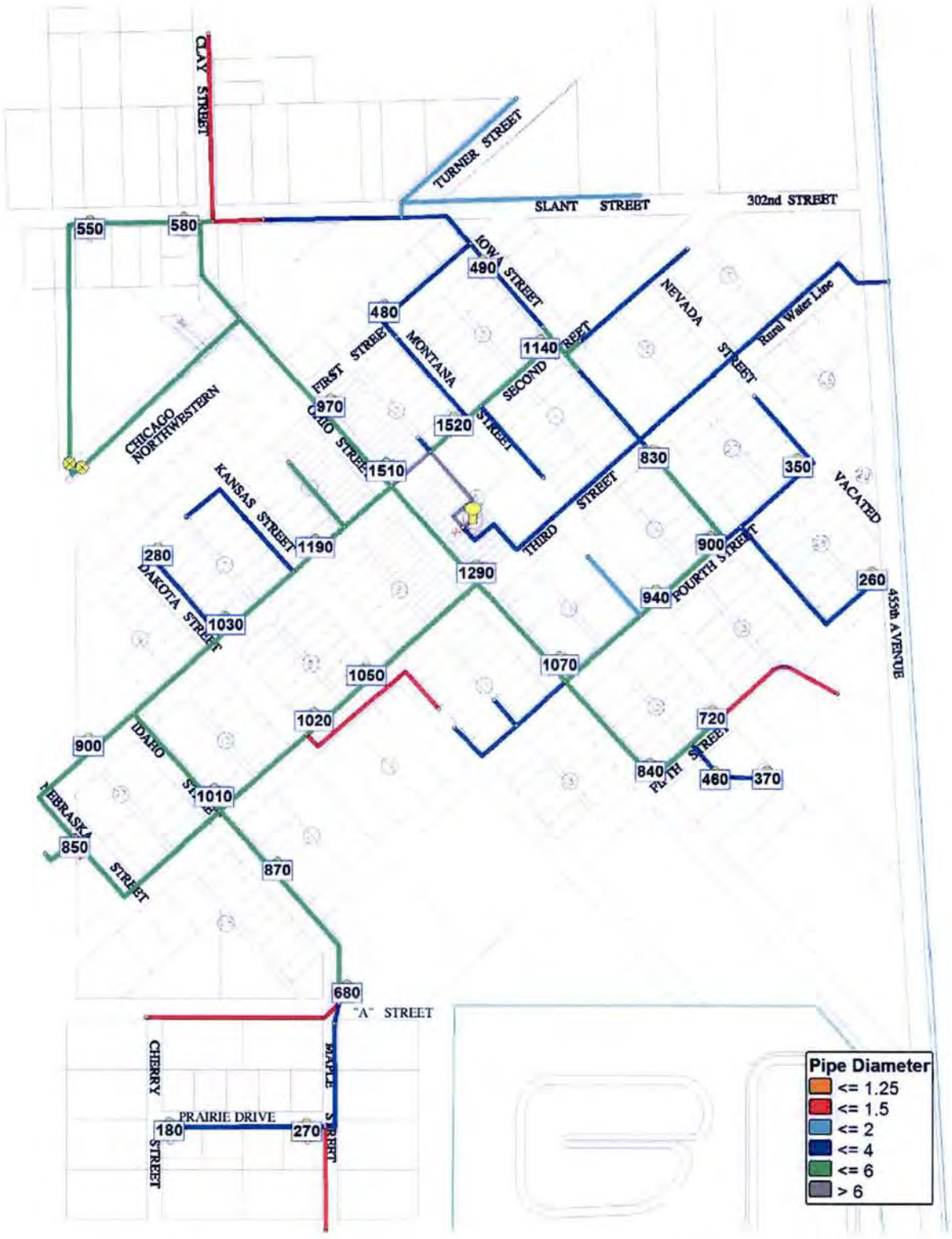


Figure 4.5: Proposed Fire Flows - Cast Iron Pipe Replacement

4.6.3 Water Distribution Option 3: Leak Detection Survey

A leak detection survey is recommended to identify and locate any possible leaks in the water distribution system. The expected cost of this work amounts to approximately $6,000. A professional firm would be hired to provide leak detection services that would include the following tasks: survey all main-line and water supply service pipes for leaks with a listening device placed on structures such as fire hydrants and valves to sense the sound made by leaks; locate leaks and provide the locations to a Town representative; estimate the flow rate of each leak; and create a detailed report of the findings of the survey and submit it to the Town.

4.6.4 Water Distribution Option 4: Looping

The purpose of this evaluation is to eliminate dead-end pipelines where practical. Table 4.9 shows the estimated costs associated with the proposed improvements. The pipes highlighted in yellow in Figure 4.6 are considered in the cost estimate for this evaluation. Six-inch PVC water main is proposed for the project. The loop piping shown eliminates entirely all but two of the dead ends that are composed of piping two inches in diameter or larger. The remaining two dead ends are not realistically able to be looped due to the location within the system. A flush hydrant is proposed for the two-inch dead end on the north side of the Town. In addition, valves will be added in selected locations where the proposed piping intersects with existing piping to allow smaller portions of the distribution system to be isolated during emergencies.

As shown in Figure 4.7, the pressures are not improved significantly. However, the benefit from improving water quality is important. The fire flows shown in Figure 4.8 are improved somewhat from those shown for the existing system.

Table 4.9: Estimated Cost for Looping

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$23,600.00	$23,600.00
2	Full Depth Asphalt Saw Cut	2,760	LF	$3.00	$8,280.00
3	Remove and Dispose of Asphalt	2,670	SY	$3.50	$9,345.00
4	6" PVC Water Main	3,120	LF	$30.00	$93,600.00
5	Flush Hydrant	1	EA	$3,300.00	$3,300.00
6	Hydrant Lead	20	LF	$20.00	$400.00
7	6" Gate Valve w/Box	13	EA	$1,200.00	$15,600.00
8	Miscellaneous Fittings and Connections	1	LS	$28,600.00	$28,600.00
12	Asphalt Surface Patching	470	TN	$140.00	$65,800.00
13	Gravel Base Course or Surfacing	2,200	TN	$24.00	$52,800.00
14	Traffic Control	1	LS	$10,000.00	$10,000.00
15	Erosion and Siltation Control Measures	1	LS	$2,000.00	$2,000.00
16	Topsoil, Seed, Fertilize & Mulch	5,200	SY	$1.00	$5,200.00
				Subtotal Construction Cost	$318,525.00
				Contingencies	$31,900.00
				Total Construction Cost	$350,425.00
				Legal and Administration Cost	$14,000.00
				Design Engineering	$26,000.00
				Bidding Phase Engineering	$5,000.00
				Construction Engineering	$39,000.00
				Total Project Cost	$434,425.00

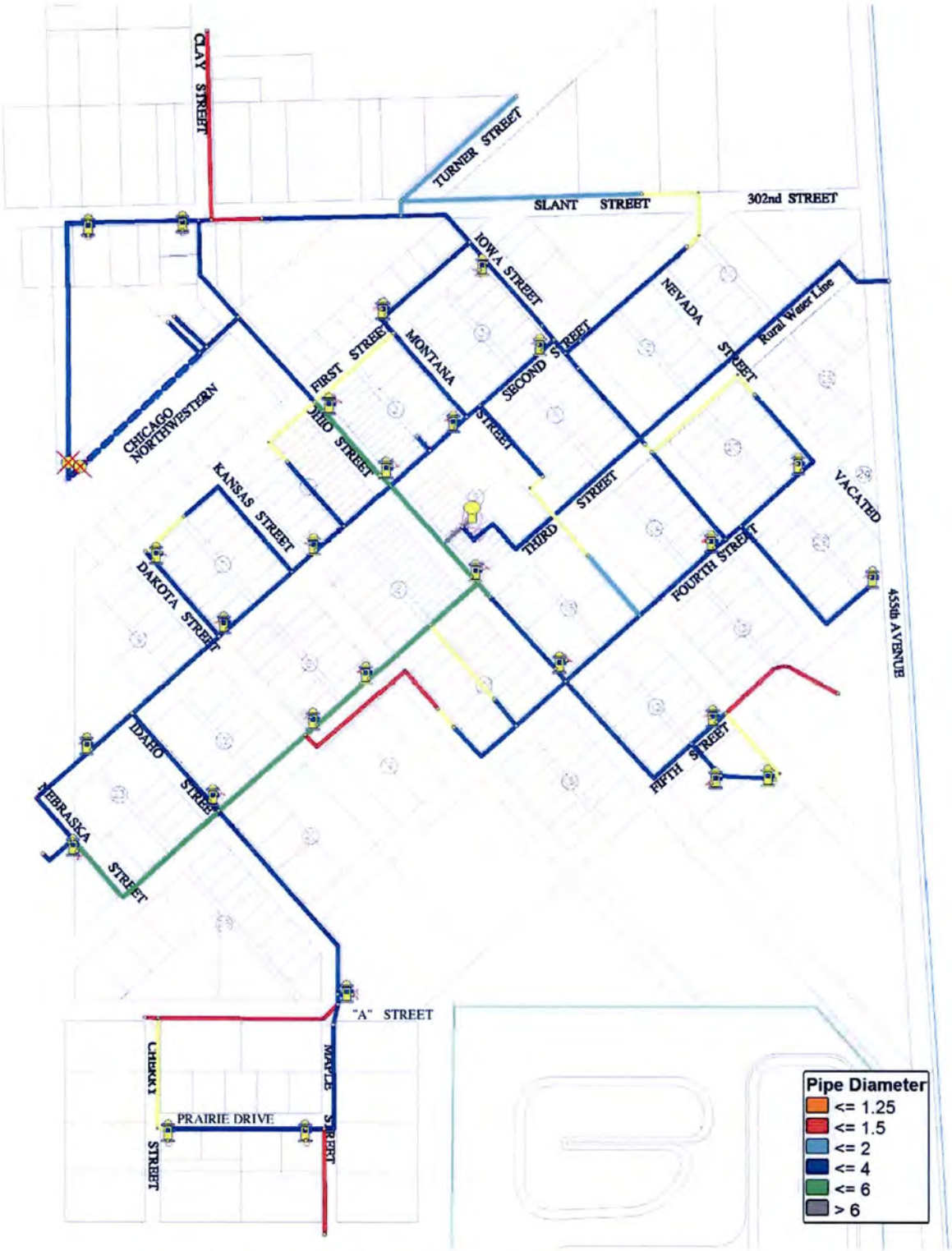


Figure 4.6: Proposed Looping Locations Shown Yellow

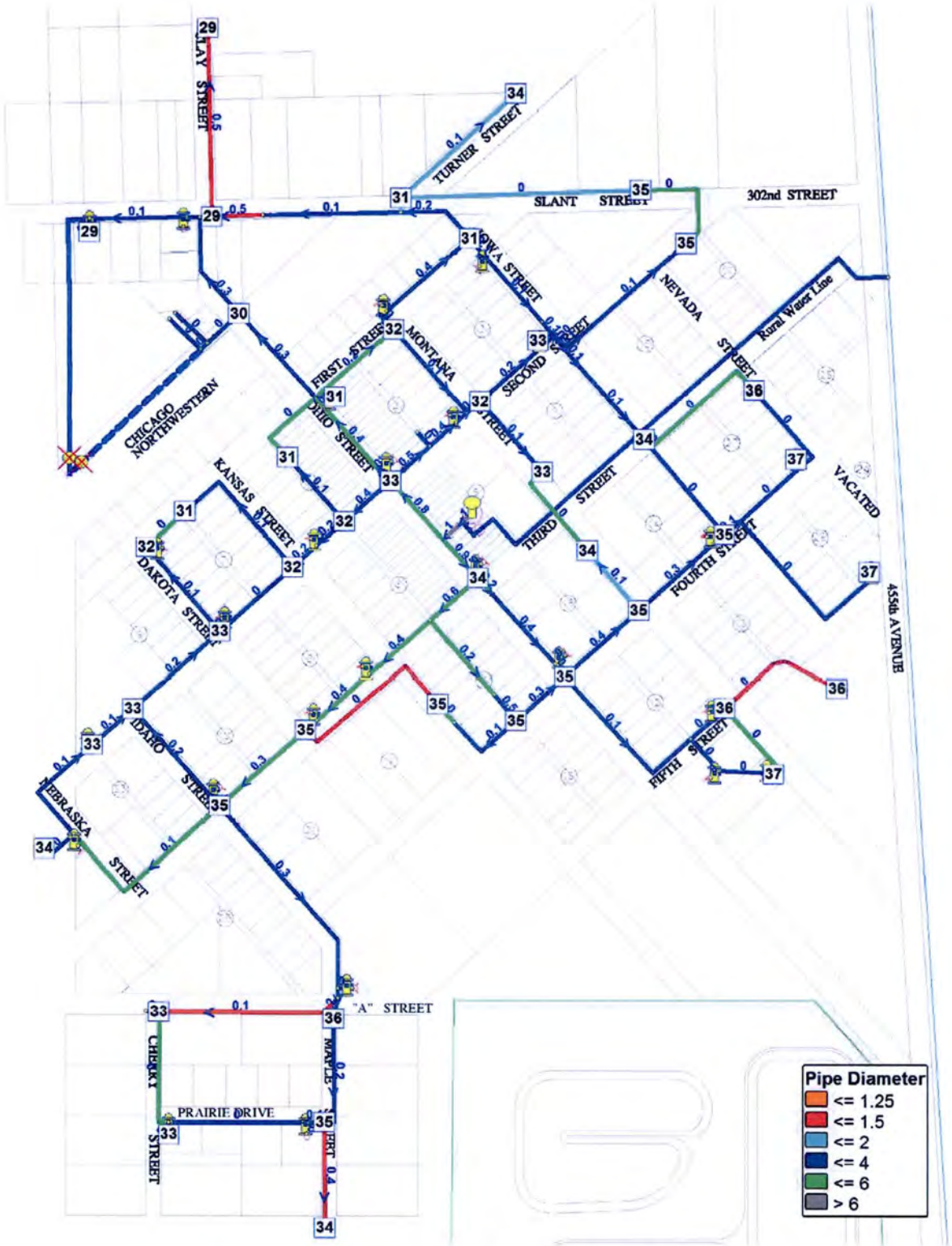


Figure 4.7: Proposed Pressures and Velocities for Looping

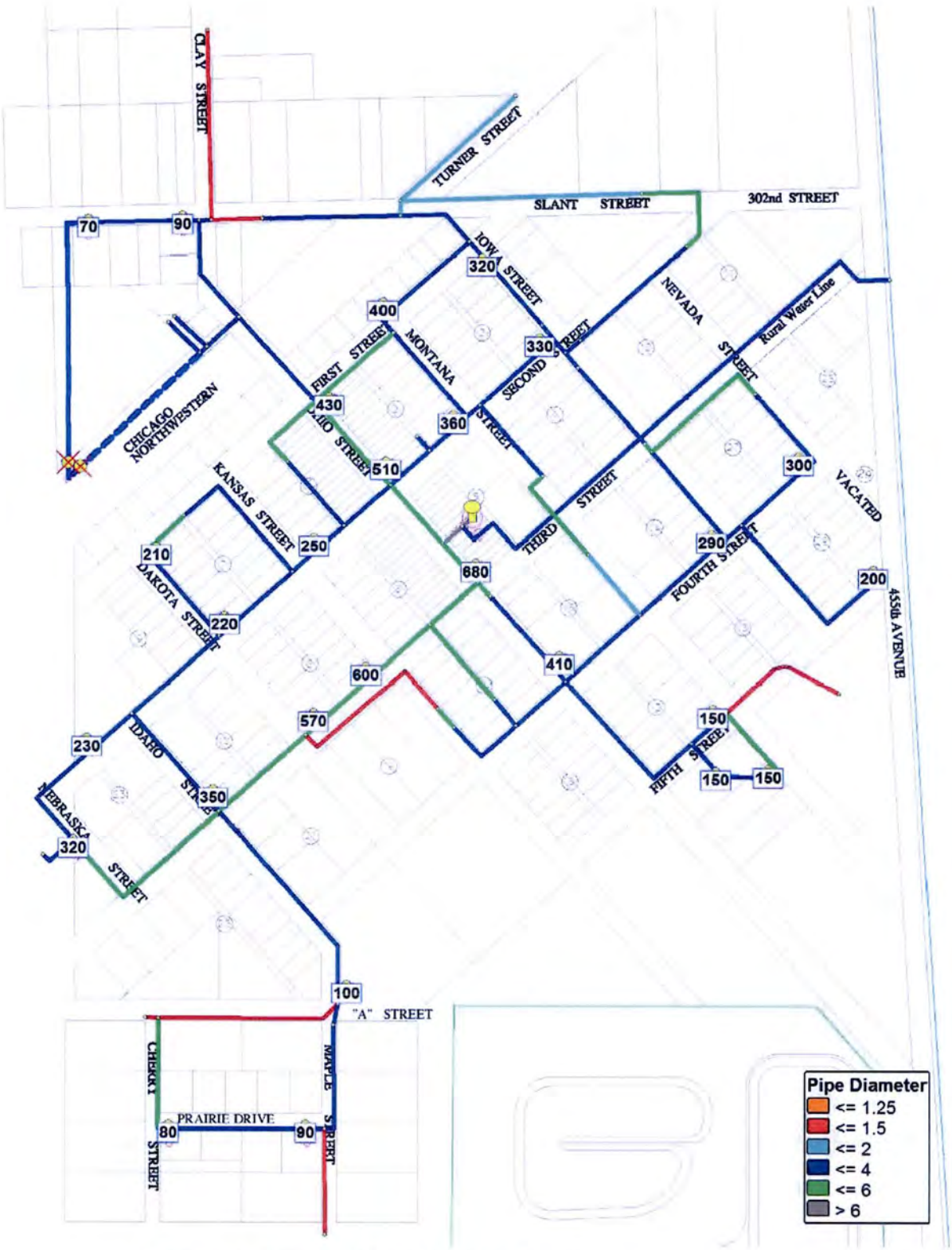


Figure 4.8: Proposed Fire Flows for Looping

4.6.5 Water Distribution Option 5: Replace Small Diameter Pipes

The small diameter water lines are not able to provide the capacity necessary to serve the multiple homes connected to each pipe. In addition, some of the small diameter piping is brittle and tends to break frequently. Table 4.10 shows the estimated costs associated with the proposed improvements. The replacement of the pipes highlighted in yellow in Figure 4.9 are considered in the cost estimate for this evaluation. Six-inch PVC water main is proposed for the project. Fire hydrants are added at the end of the dead end pipes. In addition, valves will be added in selected locations where the proposed piping intersects with existing piping to allow smaller portions of the distribution system to be isolated during emergencies.

As shown in Figures 4.10 and 4.11, the pressures and fire flows are not improved significantly. However, the benefits of the larger capacity pipelines and less frequent water main breaks are important.

Table 4.10: Estimated Cost for Small Diameter Replacement

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$16,500.00	$16,500.00
2	Full Depth Asphalt Saw Cut	1,380	LF	$3.00	$4,140.00
3	Remove and Dispose of Asphalt	1,330	SY	$3.50	$4,655.00
4	6" PVC Water Main	1,990	LF	$30.00	$59,700.00
5	Fire Hydrant	4	EA	$3,300.00	$13,200.00
6	Fire Hydrant Lead	80	LF	$30.00	$2,400.00
7	6" Gate Valve w/Box	5	EA	$1,200.00	$6,000.00
8	Miscellaneous Fittings and Connections	1	LS	$16,200.00	$16,200.00
9	1" PE Service Line	630	LF	$27.00	$17,010.00
10	6"x1" Corp Stop/Service Saddle	19	EA	$250.00	$4,750.00
11	1" Curb Stop w/Box	19	EA	$275.00	$5,225.00
12	Asphalt Surface Patching	240	TN	$140.00	$33,600.00
13	Gravel Base Course or Surfacing	1,190	TN	$24.00	$28,560.00
14	Traffic Control	1	LS	$5,000.00	$5,000.00
15	Erosion and Siltation Control Measures	1	LS	$2,000.00	$2,000.00
16	Topsoil, Seed, Fertilize & Mulch	3,400	SY	$1.00	$3,400.00
				Subtotal Construction Cost	$222,340.00
				Contingencies	$22,200.00
				Total Construction Cost	$244,540.00
				Legal and Administration Cost	$10,000.00
				Design Engineering	$19,000.00
				Bidding Phase Engineering	$5,000.00
				Construction Engineering	$29,000.00
				Total Project Cost	$307,540.00

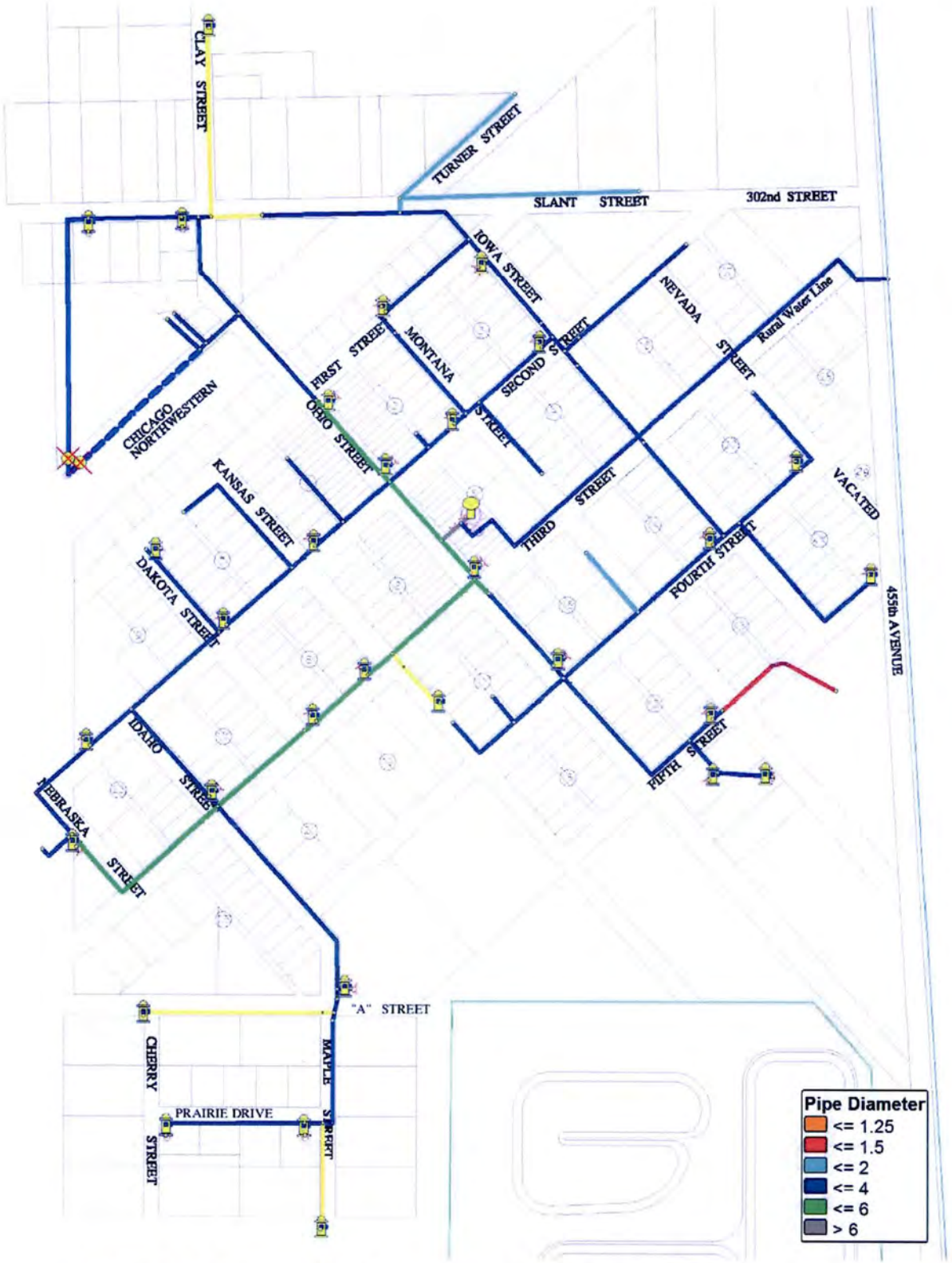


Figure 4.9: Proposed Replacement Locations Shown Yellow

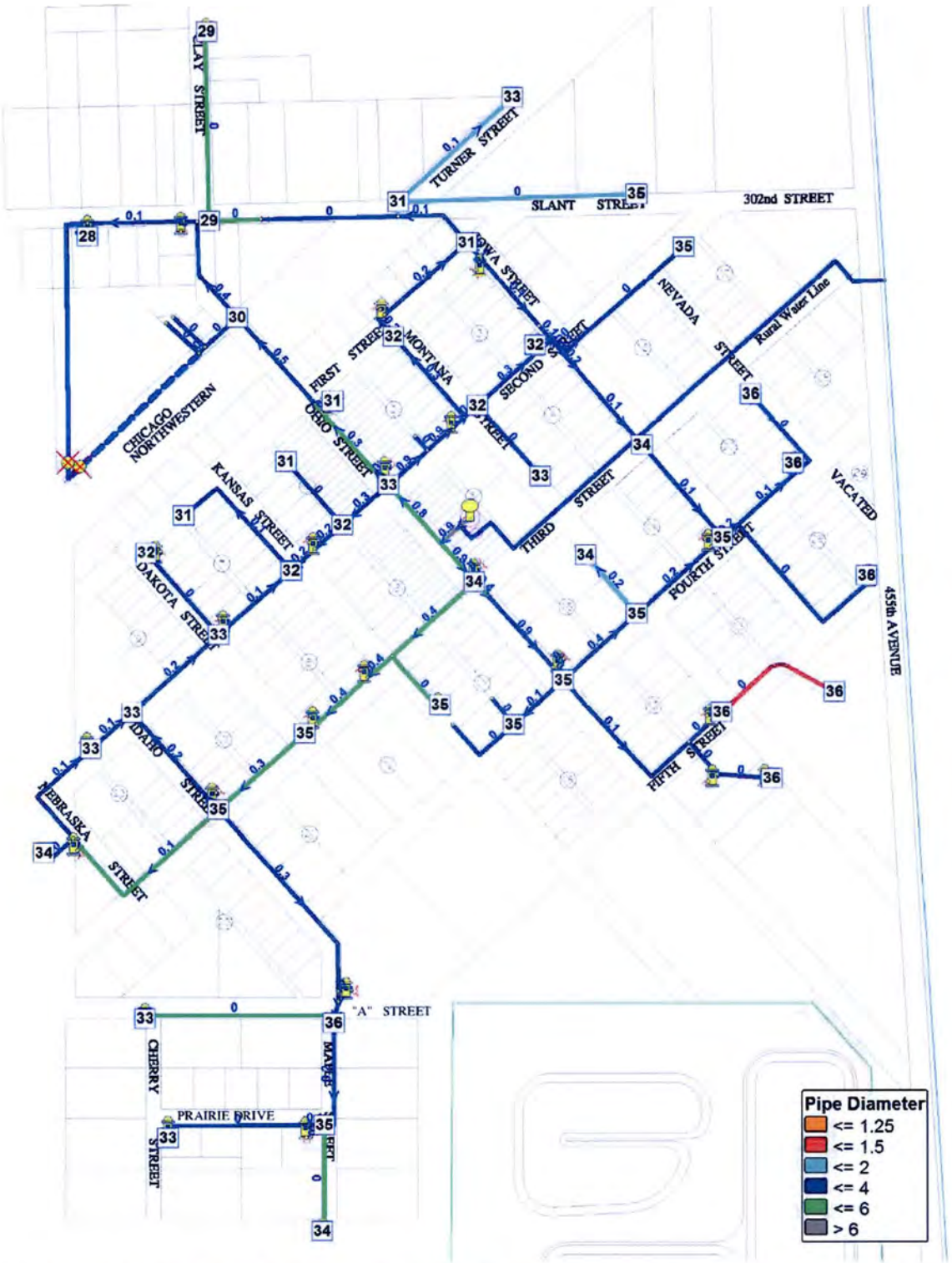


Figure 4.10: Proposed Pressures and Velocities with Proposed Replacement

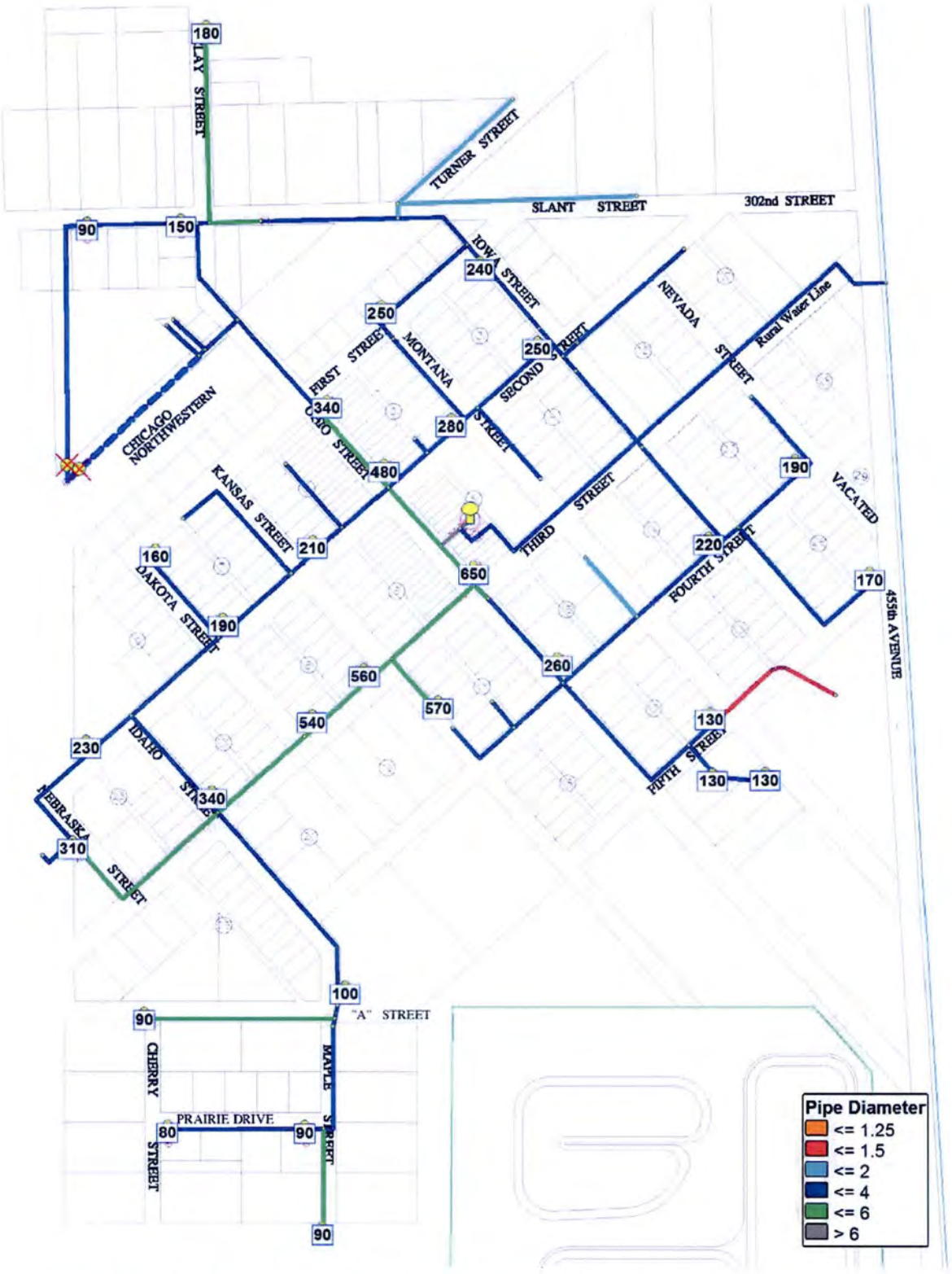


Figure 4.11: Proposed Fire Flows with Proposed Replacement

5 SELECTION OF ALTERNATIVES

A summary of the total project costs for each of the improvement alternatives discussed in Section 4 is presented below. The recommended improvements are also tabulated in Table 5.1 and discussed below.

Table 5.1: Summary of Costs

Improvement Options	Cost	EUAC	Recommended
Water Source Option 2: Replace Meter Pit	$134,000.00	NA	
Water Source Option 3: Rehabilitate Meter Pit	$35,300.00	NA	$35,300.00
Water Source Option 4: Abandon Wells	$52,100.00	NA	$52,100.00
Water Storage Option 2: Rehabilitate Water Tower	$175,700.00	$84,053.72	$175,700.00
Water Storage Option 3: Water Tower	$1,047,150.00	$126,532.70	
Water Storage Option 4: Ground Storage / Booster Station	$714,550.00	$123,898.17	
Water Distribution Option 2: Replace Cast Iron Pipe	$1,644,845.00	NA	$1,644,845.00
Water Distribution Option 3: Leak Detection Survey	$6,000.00	NA	$6,000.00
Water Distribution Option 4: Looping	$434,425.00	NA	$434,425.00
Water Distribution Option 5: Replace Small Diameter Pipe	$307,540.00	NA	$307,540.00
			$2,655,910.00

5.1 WATER SOURCE IMPROVEMENTS

Water Source Option 2 (Replace Meter Pit) is not recommended since the current meter pit should be capable of providing service for many more years. Water Source Option 3 (Rehabilitate Meter Pit) is recommended to extend the life of the structure. Water Source Option 4 (Abandon Wells) is recommended to properly remove the wells from service, loop

the water main in the area of the wells, demolish the old well houses and disconnect the piping into the old treatment building.

5.2 WATER STORAGE

Neither Water Storage Option 3 (Water Tower) or Water Storage Option 4 (Ground Storage / Booster Station) is recommended at this time. Water Storage Option 2 (Rehabilitate Water Tower) is recommended to extend the life of the structure. It is recommended that the Town focus on the water main repair as its main priority. Sometime in the future the Water Storage Option 4 (Ground Storage with Booster Station) should be considered when the maintenance of the existing water tower is no longer practical. The existing water tower should be able to provide adequate service for a many years with the Town's continued maintenance program.

5.3 WATER DISTRIBUTION

Water Distribution Option 2 (Replace Cast Iron Pipe) is recommended to improve the capacity and pressures that can be provided. The proposed work would replace the pipe that typically has an increasing frequency of water main breaks. The added fire hydrants and valves will improve the operational capability of the distribution system. Water Distribution Option 3 (Leak Detection Survey) is recommended to provide an accurate accounting of the water leaks throughout the distribution system. The leak detection survey has the potential to identify water loss that contributes to a significant loss in revenue. Water Distribution Option 4 (Looping) is recommended to improve on the water quality issues that are currently present due to the dead ends. The looped water main will also improve fire flows. Water Distribution Option 5 (Replace Small Diameter Pipe) is recommended to replace the small diameter water mains that do not have enough capacity and are becoming brittle.

5.4 DEMONSTRATION OF FINANCIAL CAPABILITY

As part of the cost analysis of the recommended improvements, the Town's ability to pay for the projects is evaluated. The total costs of the improvements are listed in Table 5.1. For the purpose of this financial evaluation, the total cost of the improvements is assumed to be eligible for a low interest loan from the State Revolving Fund Program. This, however, is subject to change due to decisions that must be made by the appropriate funding agencies.

Data used in this financial evaluation assumes that Wakonda would qualify for a loan with a 20-year loan period and an interest rate of 3.0 percent.

Table 5.2 summarizes the financial data that was supplied by the Town Finance Officer and is used to determine the proposed operational surplus or deficit of the water fund. The revenues generated from expected user fees for 2015 are listed in Table 5.2. The estimated project costs are increased by an inflation factor of three percent.

The current water fee schedule is based on water usage. The schedule of water fees is based on a $5.00 flat fee, $12.00 minimum charge and $4.25 per 1,000 gallons of water use which amounts to a charge of $38.25 for 5,000 gallons of water use. To qualify for funding the minimum water fee must be $25 for 5,000 gallons of water use per month.

The revenue for the budget year 2016 is expected to remain approximately the same. The operation and maintenance costs for the Water Fund are based on actual budget costs furnished by the Finance Officer. These costs include water purchase, salaries and all costs incurred during the year.

The short-lived asset replacement includes annual costs set aside for recoating the water tower in the future. These costs are expected to be reduced as a result of recoating the interior and exterior of the water tower.

The proposed improvements are expected to cause an insignificant change to the annual costs of operation and maintenance. However, the improvements are expected to reduce the water loss rate. This water loss rate reduction is included in Table 5.2 as cost savings in water purchases for the budget year of 2016.

The budget analysis indicates that the current revenue is adequate for current budgeting. However, this evaluation includes a significant amount of revenue due to interest. The validity and long term reliance on this revenue will have to be verified. According to available information the current revenue is inadequate to maintain a surplus when paying on

a loan for this project. The required increase in user fees will depend on the actual financing that is available. Because the financing supplied by various funding agencies is unknown at this time, multiple columns of budget information are shown in Table 5.3 based on varying grant percentages.

Table 5.2: Operation of the Water Fund

	2015 Budget	2016 Budget
Total Cost of Improvements + 3% Inflation		$2,735,587
Revenue from User Fees	+ $65,000	+ $65,000
Other Revenue (Interest)	+ $39,035	+ $39,035
Current O & M Cost - Expenses	- $70,900	- $65,160
Short-Lived Asset Replacement	- $9,100	- $1,680
Current Principal and Interest Payments	- $0	- $0
Retirement of Debt Incurred with This Project	- $0	- $183,874
Debt Reserves (10% of Loan Payment)	- $0	- $18,390
Remaining Surplus	**$24,035**	**-$165,069**
Increase of User Fee		$86.00
Number of Accounts		160
Added Revenue		$165,120
Surplus After Increase in User Fee		**$51**
Current Water Fee (5,000 gallons)	$38.25	$38.25
New Water Fee		$124.25

Table 5.3: Water Rate Analysis

	0/100 loan/grant	25/75 loan/grant	50/50 loan/grant	75/25 loan/grant	100/0 loan/grant
Annual O & M	$65,160	$65,160	$65,160	$65,160	$65,160
Amount Amortized	$0	$683,897	$1,367,794	$2,051,690	$2,735,587
Grant Amount	$2,735,587	$2,051,690	$1,367,794	$683,897	$0
Annual Payment	$0	$45,969	$91,937	$137,906	$183,874
Debt Reserves	$0	$4,597	$9,194	$13,791	$18,387
Current Debt/Asset/Other Cost	$1,680	$1,680	$1,680	$1,680	$1,680
Total Annual Costs	$66,840	$117,405	$167,971	$218,536	$269,102
Annual Revenue at Current Rate	$104,035	$104,035	$104,035	$104,035	$104,035
Surplus/Deficit After Project	$37,195	-$13,370	-$63,936	-$114,501	-$165,067
Rate Increase Due to Project	$0.00	$7.00	$33.50	$59.75	$86.00
New Water Rate	$38.25	$45.25	$71.75	$98.00	$124.25

5.5 CAPITAL FINANCING PLAN

The Town of Wakonda will make applications to state and federal resources for loan and grant assistance to complete the project during the upcoming construction season.

5.6 ENVIRONMENTAL EVALUATION

The Town of Wakonda has requested comments from concerned federal agencies. The correspondence related to these inquiries will be placed in Appendix A upon receipt.

5.7 VIEWS OF THE PUBLIC AND CONCERNED INTEREST GROUPS

The findings of this report will be presented to the Town Board. The Town will conduct a public hearing on the proposed project to meet the requirements of any applicable funding agency. Information related to the hearing will be available upon request after the completion.

5.8 DESIGN OF SELECTED PLAN

The design of the improvements to the water system will provide enhanced flexibility in operation and will be designed in accordance with the SD DENR design criteria and the

accepted principles and standards for the design of the water distribution system and water storage system.

5.9 ENVIRONMENTAL IMPACTS OF SELECTED PLAN

Environmental information gathered thus far does not indicate that any state or federal agencies will have environmental concerns related to the project or its proposed construction.

5.10 ARRANGEMENT FOR IMPLEMENTATION

This report provides information to describe the proposed project and to support the decision to proceed with the improvements as quickly as possible. Final design will be completed by the Town's consultant and approved by the DENR. Cost estimates have been prepared and are referenced elsewhere in this document. The project will be bid in accordance with state statutes that govern municipal corporations and will be constructed by the lowest responsible bidder.

The anticipated schedule for the progression of the project is as follows:

Task	Date
Facility Plan Submitted to Funding Agencies	May-2015
Environmental Review Completed	Jun-2015
Funding Agency Approval of Facility Plan	Jun-2015
Submit State Water Plan Application	Oct-2015
Submit Funding Application	Jan-2016
Final Funding Package Complete	Mar-2016
Begin Design	Mar-2016
Plans & Specifications Submitted to DENR	May-2016
Plans & Specifications Approved by DENR	Jun-2016
Advertisement for Bids	Jul-2016
Open Bids	Jul-2016
Award Bids	Aug-2016
Begin Construction	Jun-2017
Construction Complete	Dec-2017
Project Close-out	Jan-2018

5.11 LAND ACQUISITION

Land acquisition is not expected for the proposed improvements discussed in this report.

5.12 INTERAGENCY AGREEMENTS

No operating agreements with other agencies are needed as the Town of Wakonda owns, operates and maintains its municipal water system. Loan documents will have to be executed with the appropriate lender but as Wakonda is a municipal corporation, it has the legal authority to enter into such agreements. Wakonda's attorney will advise the Board on any legal matters related to this issue.

6 REFERENCES

Committee of Great Lakes – Upper Missouri River Council of State Public Health and Environmental Managers, (1997). Recommended Standards for Water Works (Albany, NY: Health Education Services), pp.

Mays, Larry W., (2000). Water Distribution Systems Handbook, (New York, NY: McGraw Hill), pp.

Soil Conservation Service, South Dakota Agricultural Experiment Station. Soil Survey of Clay County, South Dakota. South Dakota: National Cooperative Soil Survey, 2003.

South Dakota Department of Environment and Natural Resources, (May 1990). *Recommended Design Criteria Manual for Water Works,* Pierre, SD: Division of Environmental Regulation.

University of Kentucky Civil Engineering Department, (2000). Pipe 2000 Manual (Lexington, KY: University of Kentucky, Civil Engineering Software Center), pp.

Weather Underground. Precipitation Records for Yankton, SD. <www,weatherunderground.com>

Appendix A

Environmental Assessment Correspondence

Appendix B

SD DENR Water System Evaluation

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

June 28, 2013

Re: Wakonda (EPA ID# 0349)

THE HONORABLE BERNARD STEFFEN
CITY OF WAKONDA
PO BOX 372
WAKONDA SD 57073

Dear President Steffen:

The Department of Environment and Natural Resources (DENR) performed an on site evaluation of your drinking water system June 5, 2013. Based on the information obtained during that visit, we have some recommendations and requirements to assist you with maintaining compliance with regulations, improving operations and providing public health protection. The requirements and recommendations are as follows:

REQUIREMENTS FOR WAKONDA

1. Mike holds the required Class I Water Distribution certificate. We encourage him to continue to attend classes to maintain his certifications. Attendance at classes/training to achieve 10 contact hours every three years is required to maintain certifications. The classes put on by the South Dakota Association of Rural Water Systems are an opportunity for operators to learn new rules written by EPA, ask questions, learn necessary skills and attain needed contact hours. Contact the South Dakota Rural Water Association at PO Box 287 (203 Center Street West), Madison, SD 57042, 605-556-7219 for information on training classes. For information on the operator certification program contact Rob Kittay with the Drinking Water Program, 523 E. Capitol Avenue, Pierre, SD 57501, 605-773-4208.

2. Potable water that is flushed, discharged or that overflows into a storm sewer that drains to waters of the state is considered a point source discharge and is subject to state regulation. This includes overflows from treatment and storage systems, filter backwash and settling basins, disinfection and flushing of potable water lines, storage system disinfection and water line breaks and leak repairs. The "Water Treatment Plant General Permit" is specifically designed for this purpose.

   The permit application can be accessed and completed online at http://denr.sd.gov/des/sw/wtppermit.aspx. For additional information or to

determine if your water system needs or already holds this permit, contact DENR's Surface Water Quality Program at (605) 773-3351 or write the DENR-SWQ, 523 East Capitol Avenue, Pierre, SD 57501-3181.

3. State Plumbing Code requires a double check valve on all standard service connections. Existing plumbing connections are grandfathered in; however, if any work is done, such as installing a meter or pressure pump, it must include a double check valve. An approved backflow preventor will prevent back siphoning of potential contaminants into the water supply if a negative pressure is created.

4. Just as a reminder, the United States Fire Insurance Services does not recommend the use of water mains smaller than six inches in diameter. A pumper fire truck should never be connected to a fire hydrant served by mains less than six inches in diameter. Contamination of the water supply or damage to the distribution system could result from backsiphoning or negative pressures. To be assured of adequate fire and backsiphonage protection, all future water main installations must be six inches in diameter or larger. The Department of Environment and Natural Resources recommends installation of flushing hydrants when using less than six inch diameter mains.

5. The Ground Water Rule requires triggered monitoring after an unsafe routine bacteriological sample, as well as correction of significant deficiencies. This sampling is in addition to the repeat samples required by the Total Coliform Rule. The requirements are:

   -Identification of significant water system deficiencies during sanitary surveys;
   -Triggered source water monitoring by water systems that collect an unsafe sample during its normal bacteriological monitoring and assessment monitoring targeted toward high-risk systems;
   -Corrective action is required for any system with an identified significant deficiency or source water fecal contamination;
   -Compliance monitoring to ensure that treatment technology installed to treat drinking water reliably achieves 99.99 percent (4-log) inactivation or removal of viruses if fecal indicators are discovered.

RECOMMENDATIONS FOR WAKONDA

6. The free chlorine residual of the water should be tested a couple of times each week from different locations in the distribution system. A free chlorine residual of at least 0.3 mg/L (ppm) should be detectable in the distribution system at all times. Testing information (date, time, location and result) should be included in the operations records. This is in addition to the residual you measure and record when collecting your bacteriological samples.

7. Accurate records should be kept concerning operation and maintenance activities relating to the water and water system components. See attached quick reference guide on record keeping. Some examples of records we recommend keeping are:

- Main Break Information – when the main was installed, pipe material and size, frequency and location of breaks.
- Chlorine Residual Field Tests – date, time, location and result of test.
- Complaints and actions taken to address them.
- Valve Location/Inspection/Exercise Activities - All working valves be inspected annually, including examining the condition of the valve box, operating the valve and lubricating where required. Valve records should be kept to aid in planning, operation and maintenance and locating. Maintenance records verify the operator's ability to isolate main features and maintain fire flows.
- Main Flushing Activities - Mains should be flushed once or twice a year. Flushing will improve your water quality, reduce complaints due to taste and odor, restore the carrying capacity of the mains and help eliminate the nutrients that coliform bacteria need to grow.
- Main/Hydrant/Valve Replacement.
- All Maintenance/Security Activities.
- Paperwork/Correspondence.
- Equipment Repairs/Purchases.
- Master/Individual Meter Readings.

8. A valve inspection and exercise program should be developed. All working valves should be inspected annually and should include examining the condition of the valve box, operating the valve and lubricating where required. Manufacturers guidelines should be followed. Valve records should be kept to aid in planning, operation and maintenance, and locating. Maintenance records verify the operator's ability to isolate main features and maintain fire flows.

9. The figures provided show a 17% water loss which is quite high. We recommend if the loss exceeds 15%, the distribution system be surveyed for leaks, faulty meters and/or other problems which might contribute to that loss percentage and the utility can then begin to repair/replace those contributing factors and lessen the loss percentage.

10. When you collect a bacteria sample and are completing the submitter form, record the site number (1-5) in the 'site #' blank and the site name (house/building description or address) in the 'location info' blank. The address or building description is more descriptive than just the faucet information.

11. If there are no plans to use or maintain the old city wells, they should be properly plugged and abandoned. Please contact DENR's Water Rights Program at 773-3352 for the proper procdure.

12. SDWARN (South Dakota Water/Wastewater Agency Response Network) is a utility created and driven mutual aid/assistance program. It is a means of receiving help from and giving help to neighboring water/wastewater utilities when responding to and/or recovering from an emergency. SDWARN is an insurance policy a member utility can use when the inevitable flood, ice storm, blizzard, fire or even a human-caused event occurs and a utility needs assistance in response and recovery activities. All utilities, no matter their size, are invited to

join because all have something to offer. The WARN fact sheet provides answers to questions that you may have. To become a member of South Dakota WARN, a signed mutual aid agreement must be submitted to the steering committee chairman. The mutual aid agreement means to address the administrative and legal issues prior to an event/disaster so focus can be completely on response and recovery. I encourage you to take this idea and opportunity to your utility's governing body for consideration. Membership is not a requirement but there are benefits and advantages to membership. A fact sheet and mutual aid agreement are included for your consideration.

For technical assistance contact the Department of Environment and Natural Resources' Drinking Water Program at 523 East Capitol, Pierre, SD 57501, (605) 773-3754 or the South Dakota Rural Water Association at PO Box 287 (203 Center Street West), Madison, SD. 57042. (605) 556-7219. The West River office for the South Dakota Rural Water Association is at 1140 N. Main, Suite 5, Spearfish, SD 57783, 605-642-4031.

Representatives of your water system are invited to attend seminars and training courses sponsored by the DENR and the South Dakota Association of Rural Water Systems (SDARWS). Contact the SDARWS at 556-7219 or write them at PO Box 287 (203 Center Street West), Madison, SD. 57042.

Please acknowledge that you have received this report by indicating corrective actions taken. If you have questions or comments concerning the on-site evaluation, please call the Drinking Water Program in Pierre at 773-3754 or 1-800-438-3367.

Sincerely,

Barbara Friedeman

Barbara Friedeman
Drinking Water Program

cc: Mike Bohlmann, Utilities Manager
Celia Peterson, Finance Officer

South Dakota Department of Environment and Natural Resources

Drinking Water Program

Public Water System On-Site Evaluation Report

System Name: Wakonda
Address: PO Box 372
Wakonda, SD 57073-0265

EPA ID #: 0349

County: Clay

Person Contacted: Mike Bohlmann
Address: PO Box 372
Wakonda, SD 57073-0372

Work phone: (605)267-3118
Home phone: (605)267-2538
Cell phone: (605)661-2314
Fax:
E-mail: midichch@iw.net

Inspected By: Barbara Friedeman

Date of Inspection: 6/5/13 (mm/dd/yy)

Type of System: (check one)
X Community Water System
____ Non-Transient Non-Community

Population: Total Population Served: 321 System Population: 321

Number of Service Connections: 155

Susceptibility to contamination of water source: low

Sources of Water: Water data from year: 2012

Own Source(s):	NA	Total produced:	NA	% of total:	#VALUE!
Bulk Supplier:	Clay Rural Water System (0626)	Total purchased:	12,995,000	% of total:	100.0%
Contracted flow rate?:	Unlimited				
		Total Annual Use:	12,995,000		100.0%

Water Sold to: NA
(bulk connections only)

How much water can this system supply? _____ (maximum flow rate, gpm)
What major factor limits system's ability to supply water? Lines are too small and too old and leaky.

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Is there an up-to-date map or schematic of system?
☑	☐	☐	☐	☐	2 Is the system capable of meeting demand at all times (excluding fire flow)?
☐	☐	☑	☐	☐	3 Is good housekeeping evident throughout the system?

Comments:

Water Usage

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	4 Are all customers metered?	
					5 If not, what entities are not metered?	
					6 Total gallons billed:	10754000
					7 Calculated water loss:	17.2%
yes	no	n/a	unk	note	8 Peak month and amount used	Jul-12 — 1,672,000 gallons
☑	☐	☐	☐	☐	9 Does the system track unaccounted-for water?	

Comments:

Water Sources

Town of Wakonda EPA ID: 0349

Name	Year Built	Diameter (in)	Depth (ft)	GPM	Status	ID
#1	1935	6	215		Abandoned	1
#2	1953	6	208		Abandoned	2
CLAY RWS	1982				Permanent	3

Name	Water Right #	Aquifer	Location Description	ID
#1	1892-3	CARLILE		1
#2	1892-3	CARLILE		2
CLAY RWS			Meter pit by tower.	3

yes	no	n/a	unk	note		
☐	☐	☑	☐	☐	1	Has a Source Water Protection Plan been developed? Date: _____
☐	☐	☑	☐	☐	2	Is the wellhead/pumphouse protected from unauthorized personnel?
☐	☐	☑	☐	☐	3	Are there any sources of contamination with 1/4 mile?
☐	☐	☑	☐	☐	4	Are pesticides, herbicides, fertilizers applied in the area of the well(s)?
☐	☐	☑	☐	☐	5	Is a pressure gauge provided at each source?
☐	☐	☑	☐	☐	6	Is a sample tap provided for raw water?
☐	☐	☑	☐	☐	7	Can flow be measured from each well?
☐	☐	☑	☐	☐	8	Is the well house(s) kept clean, in good repair and not used to store hazardous material?

Comments: Wells are not used at all for drinking. Pumphouses are quite rundown.

Storage

Town of Wakonda EPA ID: 0349

Description	Service Date	Location	ID
1 Elevated Steel 50000	2012	Corner of 3rd Street and Ohio Street.	4

yes	no	n/a	unk	note		
☐	☐	☑	☐	☐	1	Is the area surrounding the ground-level storage structures graded in a manner that will prevent surface water from standing within 50 feet?
☑	☐	☐	☐	☐	2	Do overflows and drains have free fall discharges which are screened and are brought down to an elevation between 12 and 24 inches above the ground?
☐	☑	☐	☐	☑	3	Do the overflows and/or drains discharge to a splash pad or drainage inlet structure that is not connected to a storm or sanitary sewer?
☑	☐	☐	☐	☐	4	Do the storage reservoirs have a watertight roof or cover and are they sloped so that water will drain?
☑	☐	☐	☐	☐	5	Are storage structures designed so that they can be isolated from the distribution system without necessitating loss of pressure in the distribution system?
☐	☑	☐	☐	☐	6	Is leakage evident at the time of inspection?
☑	☐	☐	☐	☐	7	Are the storage structures vented?
☑	☐	☐	☐	☐	8	Are vents properly protected/screened?
☑	☐	☐	☐	☐	9	Are covers and hatches locked?
☐	☑	☐	☐	☐	10	Is there separate inlet and outlet piping?
☑	☐	☐	☐	☐	11	Does the drain allow for removal of accumulated silt?
☐	☑	☐	☐	☐	12	Are there any weather related problems (freezing, etc.)?
☑	☐	☐	☐	☐	13	Is there a control system to maintain level?
☑	☐	☐	☐	☑	14	Are there high and low level alarms?
					15	Are tanks filled automatically, manually or both? Automatically
☑	☐	☐	☐	☐	16	Is there a service contract for cleaning/inspecting the tanks?
☑	☐	☐	☐	☐	17	Are the tanks disinfected after being cleaned or inspected? How?
☑	☐	☐	☐	☐	18	Are the storage structures secure from unauthorized access?
☐	☑	☐	☐	☐	19	Is the area fenced?
					20	What other steps have been taken to address security? Climb guards on tower legs.

Comments: (3)Discharges to ground. (14)Light indicator and alarm. Clay plans to install a new master meter.

Distribution System

Town of Wakonda EPA ID: 0349

Main sizes and types: 80% 4" and 6" cast iron and 20% 4" and 6" PVC

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Is the water system capable of providing sufficient water during maximum demand conditions (excluding fire flow) to maintain a minimum pressure of 20 psi within the system measured at the consumer's tap?
					2	What is normal operating pressure? 30's psi
☑	☐	☐	☐	☐	3	Are there areas with chronic low pressure problems?
☑	☐	☐	☐	☐	4	Is an adequate map (shows valve locations, line sizes, etc) of the distribution system maintained?
☑	☐	☐	☐	☐	5	Is there a main flushing program? If yes, how often? annually
☐	☑	☐	☐	☐	6	Are all dead-end water mains equipped with a means to flush?
☐	☑	☐	☐	☐	7	Any plans to eliminate dead-ends (via looping of mains, etc.)?
☐	☑	☐	☐	☑	8	Are valves exercised regularly? If yes, how often?
☑	☐	☐	☐	☐	9	Are there fire hydrants on mains less than 6 inches in diameter?
☑	☐	☐	☐	☐	10	Does the system disinfect after pipe repairs or new pipe installation?
☐	☑	☐	☐	☐	11	Is the location and nature of each repair documented?
☐	☑	☐	☐	☐	12	Does the system utilize a conservation program at any time?
☑	☐	☐	☐	☐	13	Is the system adequately protected from freezing?
☑	☐	☐	☐	☐	14	Are water and sewer mains separated by a horizontal distance of 10 feet or greater?
☐	☐	☑	☐	☐	15	Is there a cross connection control program?
☐	☐	☑	☐	☐	16	Are audits conducted to check for cross connections in the system?
☐	☑	☐	☐	☐	17	Are backflow preventers installed on all consumer connections?
☐	☐	☑	☐	☐	18	Is the bulk water loading station designed with back flow prevention and appropriate air gap device to prevent contamination?
☐	☑	☐	☐	☐	19	Does the system contain any pressure reducing valves?
☐	☐	☑	☐	☐	20	For systems using chloramines, can you measure a total chlorine residual level of at least 0.5 mg/l in your distribution system at all times?
☑	☐	☐	☐	☐	21	For systems using chlorine, can you measure a free chlorine residual level of at least 0.3 mg/l in your distribution system at all times?
					22	How often do you take chlorine readings in the distribution system? Once per month.

Comments (please indicate the question number): Pressure at tower is 40 psi. (8)Some valves get done annually.

Monitoring/Reporting - Distribution

Town of Wakonda **EPA ID: 0349**

yes	no	n/a	unk	note	
					1 Are the following sampling site plans up to date?
☑	☐	☐	☐	☐	- Bacteriological
☑	☐	☐	☐	☐	- Lead and copper
☑	☐	☐	☐	☐	- Disinfection By Products (DBP)
☑	☐	☐	☐	☐	2 Are microbiological sampling sites (as approved by DENR) being rotated on a monthly basis for routine sampling?
☑	☐	☐	☐	☑	3 Does the system have a waiver for asbestos sampling?
					4 Which of the following records are kept regarding the system?
yes	no	n/a	unk	note	Operational Data:
☑	☐	☐	☐	☐	Flow meter readings:
☐	☐	☑	☐	☐	Electrical usage:
☐	☐	☑	☐	☐	Chemical usage:
☐	☐	☑	☐	☐	Hour meter readings:
☑	☐	☐	☐	☐	Storage or reservoir levels:
					Sampling data:
☑	☐	☐	☐	☐	- Chlorine residual testing
☑	☐	☐	☐	☐	- Bacteriological sampling
☐	☐	☑	☐	☐	- Fluoride levels
☐	☐	☑	☐	☐	- Asbestos sampling results
☑	☐	☐	☐	☐	- Lead and Copper sampling results
☑	☐	☐	☐	☐	- DBP Monitoring
					Other: _____
					Maintenance Data:
☐	☑	☐	☐	☐	Water main repairs:
☐	☑	☐	☐	☐	Main flushing dates:
☐	☑	☐	☐	☐	Valve exercising dates:
☐	☑	☐	☐	☐	Equipment service:
					Other: _____

Testing and Testing Equipment

Test kits present at system: Hach color comparator

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	5 Are up to date reagents present?

Tests and frequency performed by operator: Free chlorine tested once per month with bacteriological sample.

Survey test results: 1.0 ppm free chlorine.

Bacteriological Monitoring

Bacteriological sampling and analysis: April 1, 2012 to April 1, 2013

A	Samples submitted:	12
B	Samples required:	One Sample Each Month.
C	Survey samples:	0
D	Safe samples:	12
E	Unsafe samples:	0
F	Repeat samples:	0

Lead and Copper Monitoring

(These values are calculated from available data. Check correspondence for verification.)

A	Date Last Tested:	August 9, 2012	
B	Samples required:	5	
C	Sampling Frequency	Triennially	
D	Date Due Next	2015	
E	Lead - 90% Level	0.65	Action Level - 15 ug/l
F	Copper 90% Level	0.02	Action Level - 1.3 mg/l

Disinfectant Residual Monitoring

Residual sampling and analysis: April 1, 2012 to April 1, 2013

A	Samples submitted:	12	
B	Samples required:	One Sample Each Month.	
C	Last Qtr Cl Residual:	0.6	mg/l
D	Running Annual Average:	0.6	mg/l
E	Date of last DBP test:	No Tests	
F	THM - Qtr Average:		ug/l
G	Haa5 - Qtr Average:		ug/l

Asbestos

A	Date of last test:	Waiver - Testing Not Required	
B	Asbestos Result:		million fibers per liter

Comments (3)Asbestos waiver good through 12/31/2019.

Managerial Capacity

Town of Wakonda **EPA ID: 0349**

Certification Level of Water System: Distribution: I Treatment: NA

Certification Levels: Very Small Water System (VSWS) Water Distribution (WD) I - IV
Small Water Treatment System (SWTS) Water Treatment (WT) I - IV

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Does the water system have a governing body? (city council, housing association, district, etc.) City Council
					2	How often does the governing body meet to review water system data? Monthly
☑	☐	☐	☐	☐	3	Are all personnel that make water quality and quantity decisions certified?
☑	☐	☐	☐	☐	4	Is an operator certified at the level of the system available at all times?

Operator Name and Number	Water	Distribution	WW	Collection	Pond	SWTS	VSWS
Michael Bohlmann (1939)		I					

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	5	Do you feel you have received adequate training?
☑	☐	☐	☐	☐	6	Is the number of people adequate to operate the water system?
☐	☑	☐	☐	☐	7	Do you maintain records to document compliance (up to 10 years)?
☑	☐	☐	☐	☐	8	Does the system have a written Emergency Response Plan?
☐	☑	☐	☐	☐	9	Does the system have operations and/or maintenance manuals?
☑	☐	☐	☐	☐	10	Do you know what to do in the event of a violation?
☐	☑	☐	☐	☐	11	Have there been any MCL violations or compliance orders for the system in the last 12 months?
☐	☐	☑	☐	☐	12	If so, is there a compliance plan?
☑	☐	☐	☐	☐	13	Is someone responsible for emergency operations, communications and customer relations? Who? Mike
☐	☑	☐	☐	☐	14	Are routine operation and maintenance records kept?
☑	☐	☐	☐	☐	15	Is the system aware of all required sampling for the year?
☑	☐	☐	☐	☐	16	Does the system have current "as built" engineering drawings of the system facilities?
☐	☐	☑	☐	☐	17	Do you keep records of complaints and the actions taken to address each one?
					18	How many complaints do you receive on average each year? 0
					19	What is general nature of complaints (taste, odor, color, pressure)?
☑	☐	☐	☐	☐	20	Has the latest edition of the Consumer Confidence Report been distributed?
☑	☐	☐	☐	☐	21	Is a copy of the latest Consumer Confidence Report Available?

☐ ☑ ☐ ☐ ☐ 22 Have any changes been made since the last survey in the management, operations, personnel, budget, etc?

If so, what? _____

☐ ☑ ☐ ☐ ☐ 23 Have the recommendations from the previous survey been addressed?

Comments (please indicate the question number): _____

_____

_____

_____

_____

_____

Financial Capacity

Town of Wakonda **EPA ID: 0349**

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Does the public water system have an annual budget?
☑	☐	☐	☐	☐	2 Does the water system income exceed operating expenses (including debt service)?
☐	☑	☐	☐	☐	3 Does the water system track budget performance?
☐	☑	☐	☐	☐	4 Does the water system have audited financial statements?
☐	☑	☐	☐	☐	5 Are water revenues kept in a separate account?
☐	☑	☐	☐	☐	6 Is some of the water revenue set aside in reserve funds for future capital improvement projects?
☐	☑	☐	☐	☐	7 Is there a capital improvement long range plan (up to 5 years)?
☑	☐	☐	☐	☐	8 Are the water system rates reviewed on at least an annual basis?
☐	☑	☐	☐	☐	9 Is there a plan for rate increases?
☑	☐	☐	☐	☐	10 Is the rate structure based on metered water use?
					List rates: $12 minimum and $4.25 per 1000 gallons thereafter.
					(example: $22 minimum plus $1.75/1000 gallons)
☑	☐	☐	☐	☐	11 Are there procedures in place to handle delinquent accounts?
☐	☑	☐	☐	☐	12 Are more than 5% of your customer accounts delinquent?
☑	☐	☐	☐	☐	13 Are controls available to limit over-expenditures?
☑	☐	☐	☐	☐	14 Are there purchasing procedures?
☑	☐	☐	☐	☐	15 Does the system utilize computer software (accounting or otherwise) to maintain its financial records?

Comments (please indicate the question number):

Violations and Significant Deficiencies

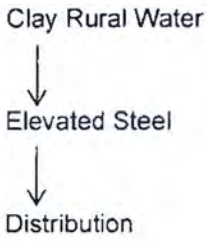
Town of Wakonda **EPA ID: 0349**

Violations From April 1, 2008 To April 1, 2013

Violation Type	Parameter	Date	Status
No Violations			

Significant Deficiency	Date Identified	Date Corrected
None		

Flow Diagram



FACILITY PLAN

for the

WATER SYSTEM

IN

WAKONDA, SOUTH DAKOTA

PROJECT #14079

May 2015

SPN & Associates
ENGINEERS-PLANNERS- SURVEYORS
2100 NORTH SANBORN BLVD, P.O. BOX 398
MITCHELL, SOUTH DAKOTA 57301
PHONE 605-996-7761 FAX 605-996-0015

Facility Plan for the

Water System

in

Wakonda, South Dakota

Project Number: 14079

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

By _____
Camden A. Hofer, P.E.

Registration No. SD #8322

Date 5-28-15

SCHMUCKER, PAUL, NOHR & ASSOCIATES
CONSULTING ENGINEERS - SURVEYORS
2100 NORTH SANBORN BLVD., PO BOX 398
MITCHELL, SOUTH DAKOTA 57301

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1 INTRODUCTION

1.1 PURPOSE

The Town of Wakonda has contracted with the engineering firm of Schmucker Paul Nohr and Associates (SPN) to complete an investigation of its existing water system. The intent of this study is to identify and quantify problems that exist within this system.

The results of the study are presented in this Facility Plan. The Facility Plan contains information with which the Town Board of Wakonda can make cost-effective decisions. The Town Board will, after appropriate public input, determine what its best options are to make any needed improvements that are identified in the Facility Plan. As loan and grant funding will undoubtedly be desired to make the improvements that are recommended herein, the identified project(s) will need to be placed on the State Water Plan. This Facility Plan will be a valuable tool for the community to utilize in its efforts to pursue the funding necessary to make needed public improvements.

1.2 SCOPE

The scope of the study authorized by the Town Board includes the following work to be performed by SPN and Associates:

1) Complete an analysis of the requirements of governmental authorities having jurisdiction to approve the design of the project and participate in consultations with such authorities.
2) Complete an analysis of the existing water distribution system relating to quantity and quality, compliance with existing and proposed drinking water standards, water losses in the system, identification of system age, evaluation of current water pressures and fire flow capacities and an evaluation of current and future needs.
3) Complete a general economic analysis and comparison of various alternatives to correct the identified deficiencies.

1.3 AUTHORIZATION

The studies reported herein were performed pursuant to the provisions of a letter agreement between the Town of Wakonda and SPN & Associates, Inc. dated September 18, 2013.

2 COMMUNITY DESCRIPTION

2.1 GENERAL INFORMATION

The Town of Wakonda is located in northwest Clay County, South Dakota, in Section 33, Township 95 North, Range 53 West (Latitude -97.0625, Longitude 43.0030). Refer to Figure 2.1 for a location map. The Town of Wakonda was founded in 1888.

The Town of Wakonda is classified as a Class 3 city. Its government consists of a board of three members, including the Town Board President. A part-time Utility Manager and Finance Officer are employed by the Town Board. These individuals provide the necessary public utility maintenance and financial management within the community.

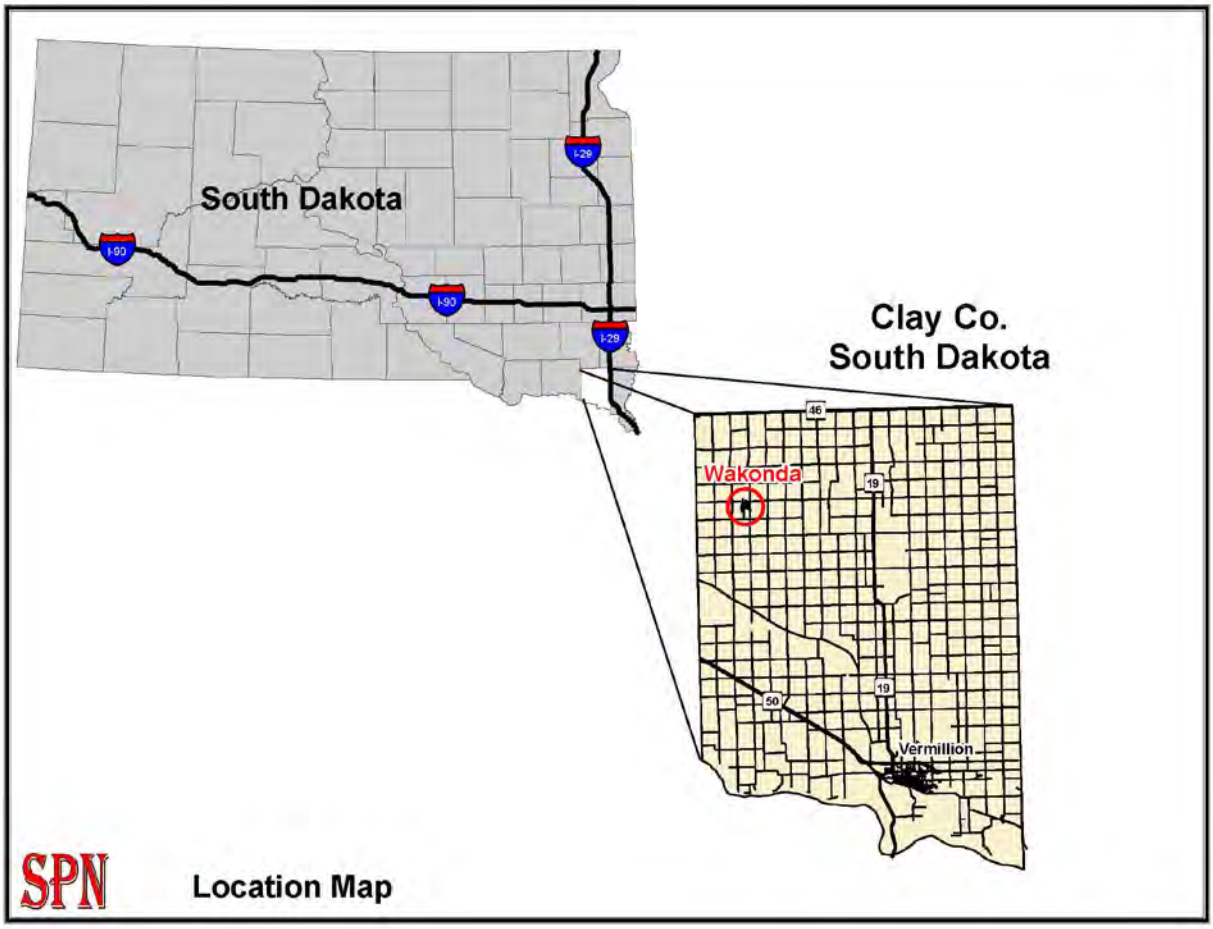


Figure 2.1: Location Map

2.2 POPULATION CHARACTERISTICS

The most recent Census Bureau data available at the time of this report indicates that Wakonda's median age was 48.9 years, as compared to the state's median age of 36.9 years. At the time census data was gathered, 26.5 percent of Wakonda's population was over the age of 65, while the state's population that was over the age of 65 was 14.3 percent. Data from the 2010 Census indicates that the community's median household income of $42,500 was about $3,404 lower than the state's median household income of $45,904.

2.3 POPULATION PROJECTIONS

The 2010 Census Bureau data shows the population for Wakonda to be 321. Figure 2.2 and Table 2.1 indicate the Census Bureau population data from 1910 to 2010. As shown by the historical data, the population has been erratic with large fluctuations. The decline in recent years is typical for rural communities such as Wakonda. This can be accredited to the number and size of the farming families decreasing and the large population of elderly people.

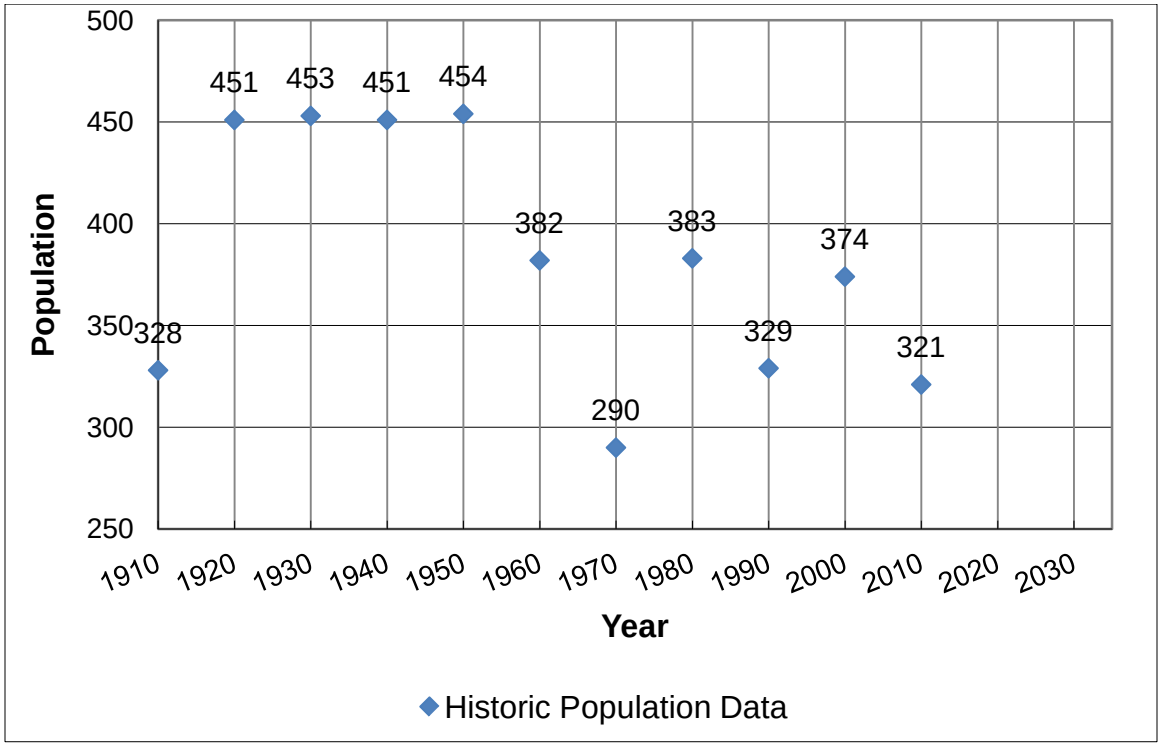


Figure 2.2: Historic Population

The possibility for a significant decline in population appears to be decreasing with the likelihood that the population will stabilize. Population growth for the design period is not expected to be significant. As with all communities, there are always efforts to entice new businesses into locating in Wakonda. Even though this possibility exists, it is not anticipated that these efforts will have a significant impact on the projected water system demand. For the purpose of this study, the 2010 population of 321 will be used for design and analysis purposes.

2.4 TOPOGRAPHY / CLIMATE

Clay County is made up of four physiographic subdivisions: the James River Lowland, James River Highland, Coteau des Prairies division of the Central Lowlands and the Missouri River Trench Division of the Great Plains. The topography of the Wakonda area can best be characterized as nearly level to undulating. Major drainages in the western area of the county are Frog Creek and Spring Creek which drain to the Vermillion River. The elevation of Wakonda is approximately 1,130 feet above mean sea level.

The area's climate is generally described as a continental climate. Winters are relatively long and cold while summers are fair and hot. Most of the precipitation occurs during the warm period of late spring and early summer. Approximately 76% of the total annual precipitation falls in April through September. Normal precipitation for the area is 25 inches annually. The average summer temperature is 74 degrees and the average winter temperature is 21 degrees.

2.5 ENVIRONMENTAL REVIEW INFORMATION

As part of the environmental assessment requirement for the facility planning process, the project sponsor is required to contact various state and federal agencies. Environmental assessment letters will be sent to the following agencies. A copy of the letter requesting comments will be included in Appendix A along with the associated comment letters and future related correspondence.

2.5.1 Historic and Archaeological Sites

Upon completion of an application for funding through one or more various funding agencies, a letter will be sent to the funding agency describing the proposed project location and construction activities as well as a general description of the existing conditions as found within the project limits. No effect on historic properties or archaeological findings is expected due to this project.

An internet search for historic properties in the area was completed on nps.gov and history.sd.gov. The historic structures shown in Figure 2.3 have been identified in Wakonda. These structures should not be affected by any proposed work by the Town of Wakonda since work will be planned in Town rights-of-way.

Figure 2.3: Historic Structures Identified

2.5.2 Floodplains and Wetlands

The US Fish and Wildlife Service, the US Army Corps of Engineers and the South Dakota Department of Game, Fish and Parks were contacted for input related to the proposed improvements. No floodplains or wetlands in the area are expected to be involved in the project. The Federal Emergency Management Agency (FEMA) website was searched for a flood hazard evaluation. The flood hazard map for Wakonda is shown in Figure 2.4.

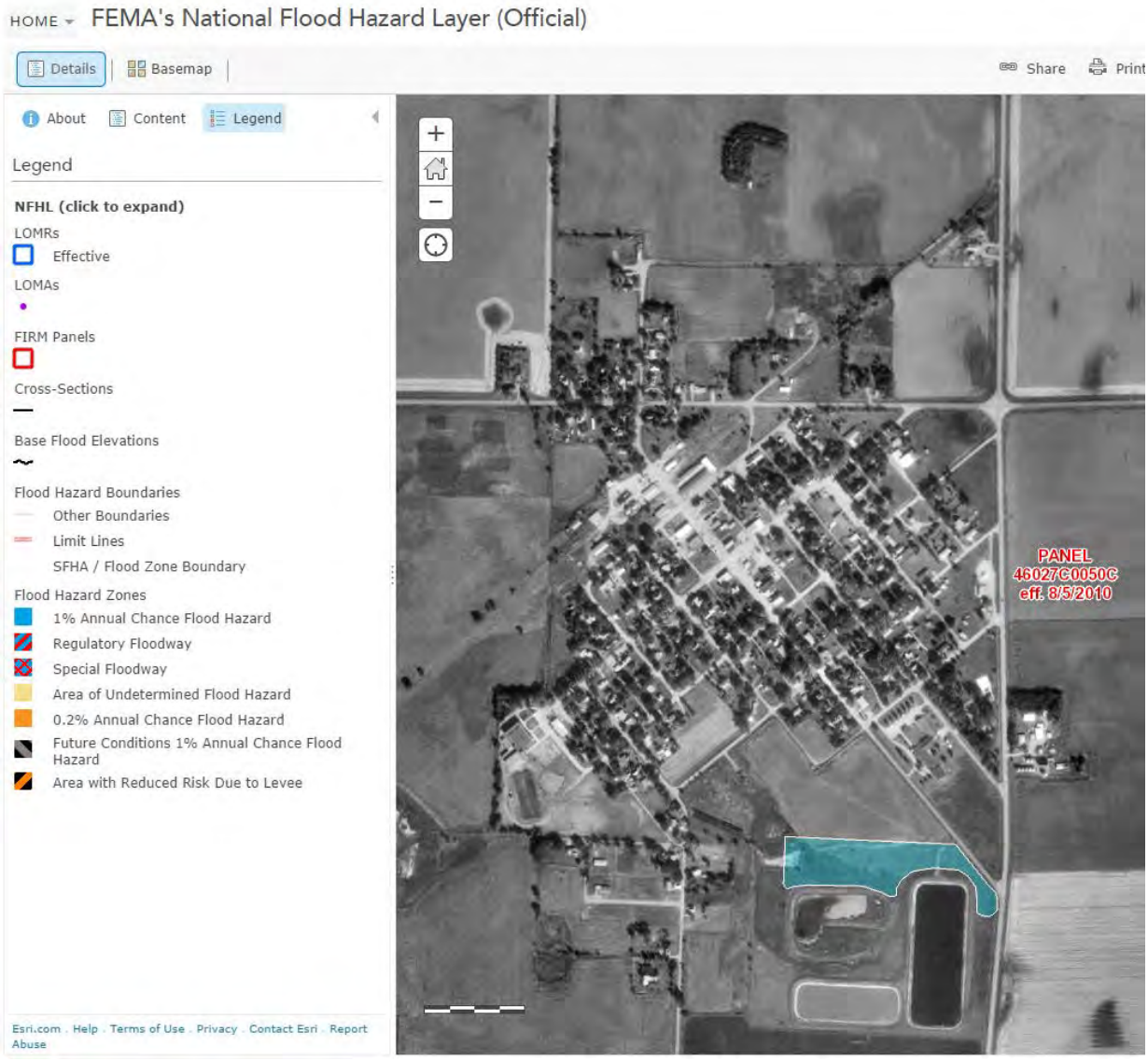


Figure 2.4: Flood Hazard Map from FEMA

The U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on wetlands. Correspondence related to these contacts will be placed in Appendix A upon receipt. A wetland map was created on the US Fish and Wildlife website for Wakonda and is shown in Figure 2.5. No impact on wetlands is expected due to this project since the work is planned in Town rights-of-way.

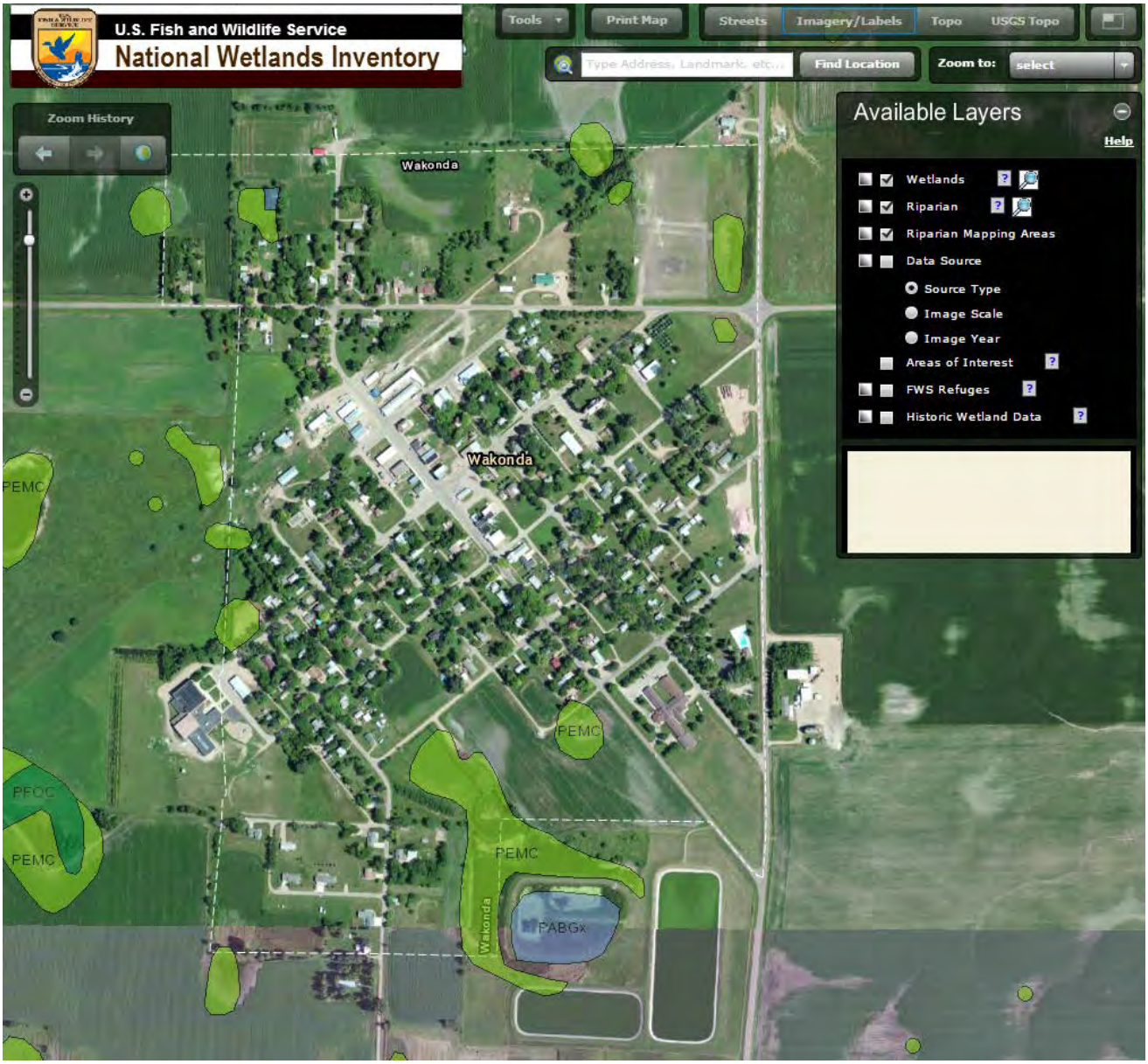


Figure 2.5: Wetland Map

2.5.3 Agricultural Lands

The U.S. Department of Agriculture State Soil Scientist was contacted for the purpose of soliciting input on the proposed improvements. No impact on agricultural lands is expected due to this project.

2.5.4 Wild and Scenic Rivers

Research indicates that there are no designated wild and scenic rivers in the area. Therefore, the proposed improvements will have no impact on this resource.

2.5.5 Water Quality and Quantity

The South Dakota Department of Environment and Natural Resources was contacted for input on the proposed improvements. No effect on water quality and quantity is expected due to the project.

2.5.6 Endangered Species and Critical Habitat

The U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on endangered species and critical habitat which might result from construction of the proposed improvements. No effect on critical habitat is expected since the project will take place in Town rights-of-way. According to the U.S. Fish and Wildlife Service website the following species are listed as threatened or endangered in the Wakonda area: Piping Plover, Least Tern, Pallid Sturgeon, Topeka Shiner, Western Prairie Fringed Orchid and Scaleshell Mussel. No impact on these or other species is expected due to this project.

2.6 DIRECT AND INDIRECT IMPACTS

Negative environmental impacts which may be expected during a project of this nature include, but are not necessarily limited to, soil erosion, noise pollution, traffic obstruction, and increased surface runoff due to trench dewatering operations. However, such impacts are temporary and will not significantly affect the environment over the long term.

Positive environmental impacts include enhanced human health and safety and more efficient delivery of municipal water. Such impacts are of long-term value to the residents of Wakonda and Clay County.

2.7 MITIGATION ADVERSE IMPACTS

Adverse impacts will be minimized to the greatest extent possible by the implementation of accepted cautionary measures. Temporary and permanent erosion control will be included in construction contracts. Appropriate permits will be secured prior to the discharge of any trench dewatering or storm waters, and protection of public health, safety and welfare will be incorporated into the specifications and contract documents. Additionally, should any permanent adverse impacts result from the project, mitigating measures will be followed to the satisfaction of the appropriate review agency.

3 EVALUATION OF EXISTING WATER SYSTEM

3.1 GENERAL INFORMATION

The Town of Wakonda currently provides water service to approximately 160 connections within the Town. Figure 3.1 shows the existing water distribution system. The Town purchases its water from Clay Rural Water Service. The water system was inspected by the South Dakota Department of Environment and Natural Resources (SD DENR) in June 2013. A copy of the water system evaluation is included in Appendix B.

The rural water point of connection is near the center of Town next to the water tower. The Town of Wakonda has a 50,000-gallon elevated steel water tank. This elevated tank provides the water pressure and storage for the Town of Wakonda. The elevated tank fills directly from the rural water connection.

The Town of Wakonda has two wells that have not been used for a long time. No further use for the wells is anticipated. The Town would like to abandon the wells and the buildings where the wells are housed.

3.2 WATER DEMAND

To evaluate the Town of Wakonda's potential to meet the needs of the future, a review of past water usage records was completed. The process used to estimate future water demand included a determination of the current average per capita demand. Records of water usage from 2009 through 2014 were utilized to create Table 3.1.

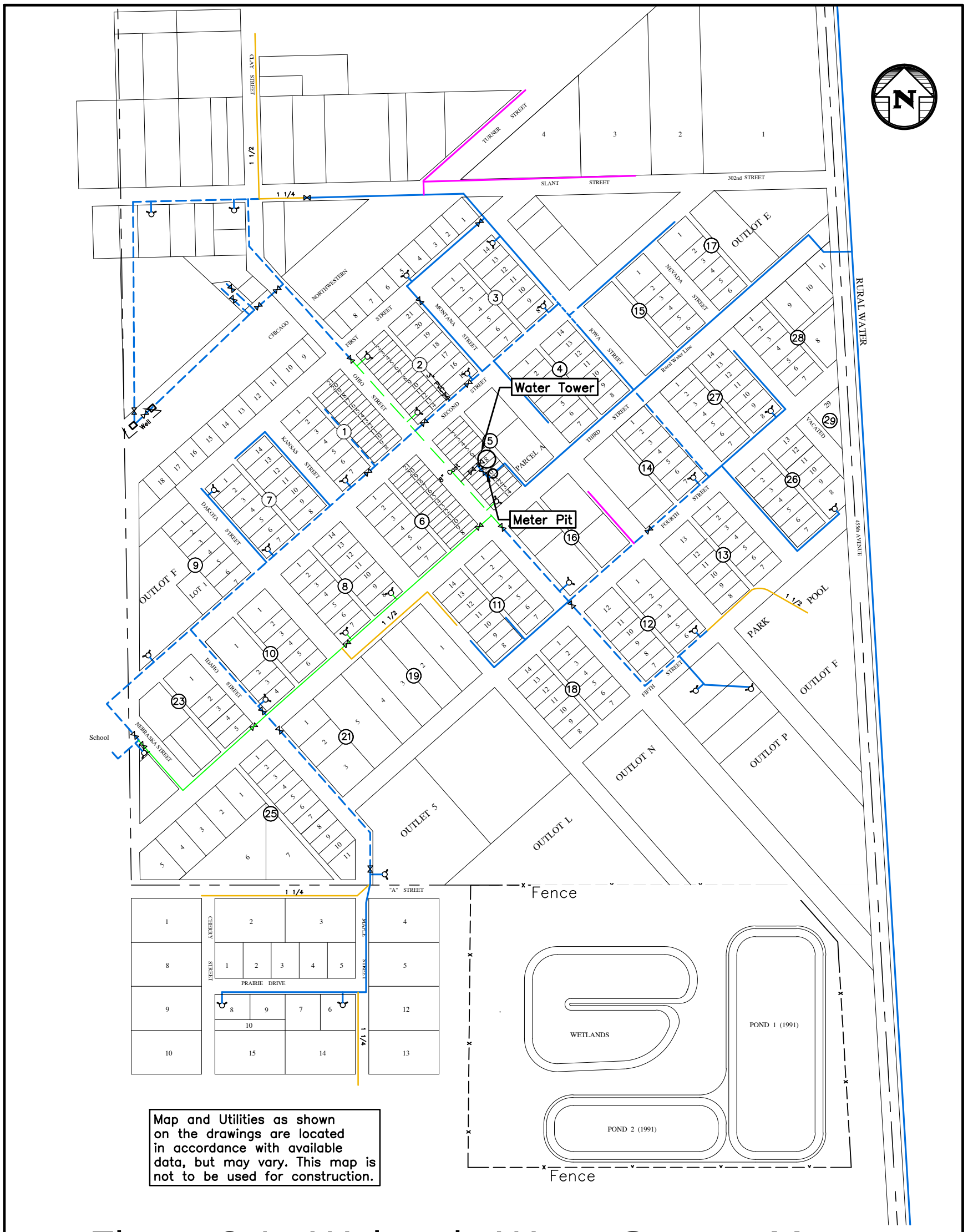


Figure 3.1: Wakonda Water System Map

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)

1 inch = 400 ft.

LEGEND

- 6" Sand Cast Water line
- 6" PVC Water Line
- 4" Sand Cast Water Line
- 4" PVC Water Line
- 2" PVC Water Line
- HDPE Water Line
- Fire Hydrant
- Gate Valve

SPN & Associates
Engineers, Planners and Surveyors
2100 North Sanborn Blvd. - P.O. Box 398 Mitchell, South Dakota 57301
Phone: (605) 996-7761 Fax: (605) 996-0015

Table 3.1: Water Use Records

Month	2009 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	740,000	635,000	14%	74	0
February	788,000	615,000	22%	88	0.17
March	689,000	567,000	18%	69	0.35
April	921,000	712,000	23%	96	1.33
May	830,000	601,000	28%	83	1.16
June	1,373,000	922,000	33%	143	3.4
July	1,052,000	794,000	25%	106	5.11
August	920,000	661,000	28%	92	2.46
September	944,000	694,000	26%	98	0.44
October	901,000	620,000	31%	91	3.75
November	645,000	762,000	-18%	67	0
December	915,000	638,000	30%	92	0.3
Total	10,718,000	8,221,000			18.47
Average Day	29,364	22,523			
Average (gpcpd)	92	70			
Average Unacc %	21.6%				

Month	2010 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	785,000	785,000	0%	79	0.35
February	777,000	657,000	15%	86	0.24
March	654,000	571,000	13%	66	1.21
April	851,000	728,000	14%	88	2.51
May	748,000	660,000	12%	75	1.83
June	1,151,000	719,000	38%	120	3.94
July	1,183,000	818,000	31%	119	5.37
August	906,000	619,000	32%	91	1.62
September	818,000	660,000	19%	85	0.52
October	734,000	686,000	7%	74	0.01
November	959,000	748,000	22%	100	0.1
December	713,000	614,000	14%	72	0.28
Total	10,279,000	8,265,000			17.98
Average Day	28,162	22,644			
Average (gpcpd)	88	71			
Average Unacc %	18.0%				

Table 3.1, Continued

Month	2011 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	849,000	653,000	23%	85	0.03
February	966,000	704,000	27%	107	0.47
March	891,000	611,000	31%	90	0.26
April	967,000	645,000	33%	100	2.25
May	939,000	758,000	19%	94	1.89
June	1,445,000	721,000	50%	150	3.58
July	1,362,000	761,000	44%	137	1.37
August	1,341,000	838,000	38%	135	4.65
September	966,000	701,000	27%	100	0.34
October	971,000	688,000	29%	98	1.36
November	1,055,000	745,000	29%	110	0.15
December	884,000	635,000	28%	89	0.22
Total	12,636,000	8,460,000			16.57
Average Day	34,619	23,178			
Average (gpcpd)	108	72			
Average Unacc %	31.7%				

Month	2012 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	1,053,000	555,000	47%	106	0.05
February	865,000	555,000	36%	93	1.44
March	832,000	675,000	19%	84	0.74
April	1,020,000	675,000	34%	106	0.04
May	975,000	614,000	37%	98	0.5
June	1,510,000	985,000	35%	157	0
July	1,672,000	1,169,000	30%	168	0.1
August	1,511,000	1,055,000	30%	152	0.31
September	1,204,000	784,000	35%	125	0.28
October	803,000	666,000	17%	81	0.26
November	800,000	626,000	22%	83	0.18
December	705,000	579,000	18%	71	0.06
Total	12,950,000	8,938,000			3.96
Average Day	35,383	24,421			
Average (gpcpd)	110	76			
Average Unacc %	30.0%				

Table 3.1, Continued

Month	2013 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	841,000	667,000	21%	85	0.06
February	836,000	671,000	20%	93	0.08
March	736,000	529,000	28%	74	0.21
April	766,000	585,000	24%	80	1.31
May	920,000	790,000	14%	92	2.59
June	973,000	623,000	36%	101	5.2
July	1,126,000	811,000	28%	113	1.48
August	1,022,000	785,000	23%	103	1.66
September	840,000	762,000	9%	87	0.57
October	797,000	582,000	27%	80	0.11
November	846,000	637,000	25%	88	0.21
December	990,000	636,000	36%	99	0
Total	10,693,000	8,078,000			13.48
Average Day	29,703	22,132			
Average (gpcpd)	93	69			
Average Unacc %	24.2%				

Month	2014 Purchased (Gal)	Billed (Gal)	Unacc. for %	Purchased (gpcpd)	Precip. (in)
January	990,000	618,000	38%	99	0.03
February	986,000	618,000	37%	110	0.12
March	832,000	491,000	41%	84	0
April	1,000,000	661,000	34%	104	1.39
May	1,010,000	698,000	31%	101	0.96
June	1,074,000	576,000	46%	112	6.01
July	1,062,000	734,000	31%	107	2.38
August	1,173,000	673,000	43%	118	3.86
September	982,000	521,000	47%	102	2.8
October	834,000	661,000	21%	84	0.96
November	831,000	571,000	31%	86	0.07
December	896,000	636,000	29%	90	1.11
Total	11,670,000	7,458,000			19.69
Average Day	32,417	20,433			
Average (gpcpd)	101	64			
Average Unacc %	35.7%				

Table 3.1, Continued

Average Water Purchased Per Year =	11,491,000	Gal
Average Water Billed Per Year =	8,236,667	Gal
Average Per Capita Usage (Based on Purchased Water) =	98.5	gpcpd
Average Per Capita Usage (Based on Billed Water) =	70.3	gpcpd
Average Percentage of Unaccounted-for Water =	28.3%	
Maximum Purchased per Month =	1,672,000	Gal
Average Day Purchased =	31,608	Gal
Average Day Billed =	22,555	Gal

The sources and methods used to develop the information presented in Table 3.1 are described by the following:

- The volume of water purchased from Clay Rural Water Service is based on meter records provided by the Town of Wakonda.
- The quantity of water billed to the users of the system per month is based on meter records provided by the Town of Wakonda.
- The percentage of unaccounted-for water is calculated by the ratio of the difference in water purchased and water billed to the water purchased.
- Monthly precipitation data was obtained from the Weather Underground website from the nearest station which is in Yankton.
- The per capita per day water usage for each month is calculated by dividing the total water purchased by the total population equivalent and the days per month.
- The average daily water purchased and billed for each year was calculated by dividing the sum of the water for each month by the days in that period.
- The per capita per day usage for each year is calculated by dividing the annual average day water purchased by the total population equivalent.
- The percentage of unaccounted-for water per year is calculated by dividing the difference between the total purchased and total billed by the total billed amount.

Based on the available water records presented in Table 3.1 the maximum water purchase occurred during July 2012 with a per capita water production of 168 gallons per capita per day (gpcpd). August 2012 has the next highest water purchase rate at 152 gpcpd. It

should be noted that above-average precipitation during the summer months typically lessens the increase in water usage just as below-normal precipitation typically magnifies the increase in water usage. The average per capita water volume purchased for the period of record was determined to be approximately 98.5 gpcpd. This water use is nearly within the generally accepted range of 100 to 125 gpcpd typical for smaller communities in South Dakota.

3.2.1 Water Loss

An analysis of the water usage data over the period of record from 2009 through 2014 indicates that the Town of Wakonda purchased an average of approximately 11.5 million gallons per year (mgy). Of this amount, approximately 8.23 mgy were billed or accounted for through household, business or Town meters. This indicates an average loss rate of 28.3 percent.

The typical reasons for losses in the system are leaks, slow or malfunctioning meters, fire fighting and water used at non-metered locations. The identified non-metered uses in the system are fire hydrant flushing, fire flows and other typical minor uses. These water uses are important; however, the water should be metered where feasible. Most of the residential water meters are approximately six to eight years old. The meters are automatically read with a drive-by radio read system.

When considering the expense of purchasing water, the financial loss of water that is unaccounted for becomes apparent. As a result, it is important that unaccounted-for water loss be limited to a level less than the generally accepted loss of 12 percent. This would allow the Town to purchase less water by approximately 1.68 million gallons [(28.3% loss - 12% loss) x 31,600 gpd average use x 365 days per year] per year. The Town pays $3.05 per 1,000 gallons. Therefore, the estimated savings by reducing the water loss rate to 12% would amount to approximately $5,740 annually.

3.3 PROJECTION OF WATER DEMAND

Future water demand projections are the basis for establishing the water distribution system capacity and storage. These projections are based on historical data of per capita water flows and population projections to determine peak day and peak hour demands to ensure that the system is capable of meeting the future demands of the Town. As shown in Section 2.3 the population of Wakonda is assumed to have stabilized. For this reason the current total population of 321 is used for determining the future water demands.

To meet the peak day water usage that may occur in the future, a peaking factor is determined. Small cities usually have a maximum day peaking factor of 2.0 to 3.0 times the annual average day usage (Mays, 2000). Our experiences have shown that towns the size of Wakonda have a peaking factor that ranges from 2 to 3.5, which is greater than typically published values because the demand characteristics of a small town have larger variations than the more steady demand of larger cities.

Clay Rural Water Service established an automatic reading system recently. Daily water records for water usage in Wakonda are only available back to November 27, 2013. In this short period to August 19, 2014, the peak day use on record is approximately 85,000 gallons. However, this period does not include significant dry periods. The peaking factor can be estimated by first determining the average day of the peak water month which is approximately 53,900 gpd (1,672,000 gallons / 31). Typically, the ratio of the average day of the peak month to the annual average day is in the range of 1.2 to 1.5 (Salvato, 1985). As shown by the historic water use, the actual ratio is approximately 1.72 (53,900 / 31,400) which is higher than the typical range. The higher than normal ratio is a good indication that the peak day to average day ratio should be on the high side of typical values.

The monthly water supply records used in this evaluation cover a relatively short period which may not be sufficient to determine the magnitude of variation between very dry and wet years. As a result, the likelihood of observing the worst-case condition is not very probable in such a short period of record. Considering the high variation in flows it

is our opinion that a relatively high peak day to average day ratio should be established. We recommend the use of 3.2 for a peak day to average day ratio which is on the high side of the typical range for small communities. The high peaking factor should account for very dry weather and high use periods. This number will be used throughout the remainder of the report for the calculation of the peak day water demand.

It must be noted at this point that an attempt has been made to determine design flow parameters as accurately as possible but if any error is to be made in the selection, it must be on the high side to ensure an adequate supply of water for the Town throughout the design period. Utilizing the projected populations from Section 2, the average day flow of 98.5 gpcpd and ratio of peak day flow to annual average day flow of 3.2, the design peak day water production rate is estimated to be 101,000 gpd (321 people x 98.5 gpcpd x 3.2). This number will be used throughout the remainder of the report for the calculation of the peak day water demand.

3.4 WATER SOURCE

The Town began using rural water in 1982. The contract with Clay Rural Water Service does not include a limit on the water supply rate. Conversations with a representative of Clay Rural Water Service indicate that the peak hour flow, which is discussed later in this report, can be supplied. However, the rural water supply can only be guaranteed at 40 psi which is lower than desired. The existing supply line from the rural water main and the meter pit do not have sufficient capacity to provide the peak hour flow rate. According to a representative of Clay Rural Water Service, the service area near Wakonda is not experiencing growth; therefore, no expansion to the rural water system is anticipated. Currently, the purchase of the water costs the Town a monthly charge of $280 and a water rate of $3.05 per thousand gallons delivered.

Rural water is provided at an underground meter pit which is owned by the Town and located near the water tower. The meter pit was installed in 1982 and is composed of painted steel. The interior of the floor has significant coating failure. The pipe and fittings also show signs of coating failure. The piping through the meter pit is composed

of two-inch diameter painted steel pipe. The small size limits the flow rate that can be provided. There is no bypass available for emergencies such as valve or meter repair.

Figure 3.2: Meter Pit

3.5 STORAGE

The Town currently has a 50,000-gallon multi-legged elevated water storage reservoir connected to the distribution system. The water tower was constructed in 1910. Water from Clay Rural Water Service is supplied directly into the distribution system to fill the water tower. According to the Utility Manager, the water tower is usually filled to approximately two feet below the overflow elevation. This provides a usable storage of approximately 44,300 gallons. The water tower has an estimated overflow elevation of 85 feet. This provides a static pressure of approximately 36 psi when full which is generally considered low.

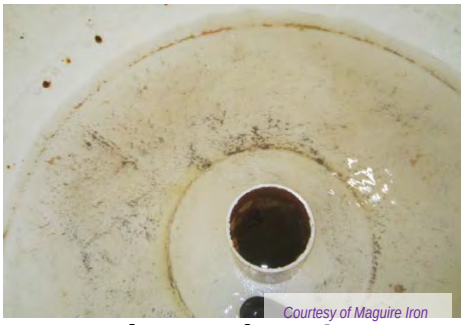
Views of the water tower are shown in the following collection of figures. The Town periodically hires a specialist to clean and inspect the water tower. The last inspection was completed by Maguire Iron on April 5, 2012.

Overall View

Exterior Bowl of Tank

Exterior of Roof

Tank Legs with Meter Pit on Left



Floor Inside Tank

Balcony of Tank

Interior of Roof

Figure 3.3: Existing Water Tower Photographs

The interior and exterior coatings are in an acceptable condition for their age; however, there are many locations that indicate coating failure. Some spots show severe rusting while others show delaminated coatings. Many of the steel seams show rust laterally along the seam, especially on the roof. The exterior finish coat appears to be failing in some locations, but the intermediate coats appear to be performing well. Both the interior and exterior coatings should be completely sandblasted and reapplied to extend the life of the structure. There are spaces between the roof and the walls of the tank where insects, birds or contaminants could enter the tank.

Water storage establishes the pressure for the distribution system; provides a means for equalizing operating pressures during high demand periods; provides emergency storage to temporarily offset the effects of downtime for pump repairs, pipeline repairs and power outages; and provides water for fire protection.

There is not a defined method for determining the volume of elevated storage for water distribution systems. Standards such as the Ten State Standards say that if fire flow is to be provided, the flow guidelines established by the International Standards Organization (ISO) should be met. Thus, at 2,000 gpm, a two-hour fire event requires 240,000 gallons for the downtown area. The Town's current storage capacity of 50,000 gallons is not considered adequate for this degree of fire protection.

Equalization and emergency storage are the other factors in determining the volume of water required or desired. Equalization storage is required to supply the varying demands throughout each day. Figure 3.4 illustrates a typical variation of water demand over a peak day. During those times that the water usage is shown to be over 100 percent of the supply rate, the system's storage must provide the additional water to meet the demands. Storage for equalization with a constant rural water supply typically ranges from 10 to 25 percent of the peak day water demand (Mays 2000). The higher end of the range is for communities with high ratios of average day to peak day water usage. Since the selected peak day to average day ratio for Wakonda is on the high side of the typical range of 2.0 to 3.5, the value of 25 percent is selected for the desired equalization storage. The projected peak day water

demand is 101,000 gallons which results in an equalization storage volume of approximately 25,300 gallons.

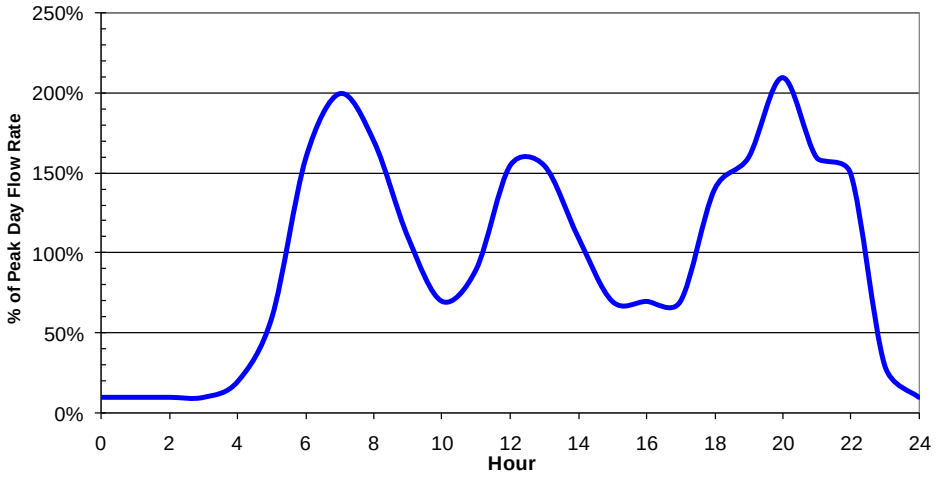


Figure 3.4: Water Demand Pattern Used in Model

Emergency storage is essentially the storage that a community feels comfortable with based on the reliability of the power supply and its water system in general. Emergency storage equal to the average day usage is commonly used for the emergency storage volume and is utilized in this report. The current average day water demand is 31,600 gpd.

The total required water storage for a community is generally considered to be the equalization storage plus the larger of fire or emergency storage (Mays 2000). The total storage generally considered as needed for Wakonda would then be 265,300 gallons (25,300 + 240,000). However, funding agencies currently do not consider fire protection an eligible expense. Therefore, the total water storage evaluated for this report is the emergency storage plus the equalization storage. The desired total storage of at least 56,900 gallons (31,600 + 25,300) is recommended. The current available storage is 50,000 gallons and is slightly less than that needed to meet the recommended storage requirements.

Although the above evaluation of the water storage is based on current design practice, an alternate criterion that is generally approved by reviewing authorities and funding agencies is to provide water storage equal to the peak day demand. The peak day water demand is

estimated to be 101,000 gpd. This sizing methodology again indicates that the storage available is inadequate.

3.6 DISTRIBUTION SYSTEM

According to available information the several types and sizes of water main used throughout the distribution system are shown previously in Figure 3.1. The Town's piping consists of cast iron, polyethylene (PE) and polyvinyl chloride (PVC). The approximate total length of each size and type of pipe in the water distribution system is listed below.

Length, Ft	Pipe Size and Type
230	8" Cast Iron
986	6" Cast Iron
1,871	6" PVC
10,065	4" Cast Iron
9,233	4" PVC
61	3" PVC
1,606	2" PVC
597	1.5" PVC
1,075	1.5" PE
1,169	1.25" PE
26,893	Total

Approximately 42 percent of the distribution system piping is composed of cast iron. Typically, the inside of a cast iron pipe will corrode and build up scale over time reducing the inside diameter and capacity of the pipe. The build-up increases the roughness of the pipe which also reduces the capacity of the pipe. The Utility Manager has confirmed by visual observation that this is the case with the pipe that has been removed from service in the past.

The cast iron pipe has generally outlived its useful life and may begin to break more frequently because the pipe generally becomes more brittle over time. The Town has been working on the replacement of the worst of the cast iron sections that seem to break frequently. There are still two sections that are known to be particularly in bad condition, one on Iowa Street between Third and Fourth Streets and one on Idaho Street between Third and A Street. These two sections amount to a total of approximately 1,150 feet. The Utility Manager has indicated that the frequency of water main breaks has not been a serious issue at

this time. However, that is expected to change as the pipe ages. The pressure throughout the distribution system is maintained at a low level which helps to prohibit water main breaks.

Five homes receive water from a small diameter service pipe on A Street. There are also five homes on Clay Street that receive water from a small diameter service pipe. The small pipes do not have the capacity necessary for multiple homes to use water at the same time. The problem is especially noticeable because the small diameter pipe has a long length which introduces significant pressure loss. The 620-foot long 1.5-inch diameter polyethylene pipe on Clay Street only has a capacity of approximately 17 gallons per minute at the low pressure available while still providing the pressure needed to flush toilets or take a shower. The 650-foot long 1 ¼-inch diameter polyethylene pipe on A Street only has a capacity of approximately 11 gallons per minute. These two sections of pipe, along with the section on the south end of Maple Street, are also known to be brittle and break frequently.

The water main in the vicinity of the two old wells is still in service. A valve at each well site is shut off to isolate the old wells from the distribution system. These valves should be removed and the water main looped to eliminate the two lengthy dead ends in this location. The two buildings where the wells are housed should be demolished and the wells properly abandoned.

The old treatment building also has water main still in service that is stopped by active valves. These valves should be removed from service and the water main capped to avoid future problems.

Wakonda's distribution system currently has approximately 10 dead ends on four and six inch diameter water mains. Fire hydrants are located at three of these dead ends. Fire hydrants allow the lines to be properly flushed to maintain water quality. Without looping and multi-directional flow of water in the distribution system, water is supplied, for the most part, through a long single pipeline. In this type of distribution system, total water usage decreases the closer one gets toward the ends of the lines. This results in decreased movement of water in the pipe and the possibility of exceptionally long retention times of the

water in various segments of the pipe. Long retention times in a pipe can have a detrimental effect on the quality of the water in the pipe such as:

- A decrease in the disinfection levels in the water;
- An increase in the potential for the formation of carcinogenic disinfection process by-products; and
- An increased potential for the formation of biological growth.

3.6.1 Hydrants and Valves

The SD Department of Environment and Natural Resources (SD DENR), which is the state regulatory agency for public water supplies, requires that fire hydrants be installed on water mains with a minimum diameter of six inches. Of the total of approximately 27 fire hydrants, five are on six-inch water main. The remaining hydrants are on smaller diameter water mains. Figure 3.1 shows the current sizes of the Town's distribution system based on available information. According to the Utility Manager there are at least five fire hydrants do not work properly.

According to the Utility Manager many of the approximately 26 main-line water valves do not work and are covered by street surfacing. Many of the water service valves also do not work. The number and locations of the non-working valves have not been identified. Additional valves are recommended to maintain water service to the users of the system when portions of the system are taken offline due to maintenance or pipe repair. The specific locations of the desired valves have not been identified at this time.

3.6.2 Hydraulic Evaluation

A hydraulic evaluation of the water system was conducted using the KY Pipe 2014 hydraulic computer model. This model utilizes the Hazen-Williams formula and commonly accepted friction factors for the pipeline material being considered to calculate head loss due to pipe friction and resulting flows and pressures. Two types of hydraulic analyses were performed with the hydraulic program to evaluate the Town of Wakonda's distribution system. The first type is a general system analysis which provides a snapshot of the system at the set parameters. The second type is a fire flow analysis which predicts the fire flow from selected fire hydrants. All analyses were utilized to obtain a representation of the existing distribution

system and to allow accurate recommendations to be made that will improve the existing conditions.

Any hydraulic evaluation can find the existing water system to be inadequate by simply making the requirements very stringent. On the other hand, generally all systems are adequate to meet the average day demands. Deficiencies in a system are typically not apparent until system demands increase to provide the peak day or peak hour flows. The reason for this is that the flow rate in a pipeline significantly affects the downstream pressures. The friction loss, or the pressure loss, in a pipe is a function of the square of the velocity. Therefore, as the flow rate and corresponding velocity in a pipe increase, the resulting friction increases exponentially. As the flow rate increases above two feet per second, the corresponding friction loss begins to climb rapidly with a velocity of three feet per second generally considered the maximum desired velocity. As a result, it is common practice to evaluate the overall system deficiencies in a distribution system based on peak hour and peak day flows.

It should be noted at this point that the hydraulic modeling provided is theoretical. The hydraulic model should not be considered completely accurate due to the complex variables involved in the calculations. The exact age or internal surface condition of the water mains is unknown which introduces a degree of error since the pipeline capacity is directly related to its interior roughness which is also related to its age.

3.6.3 Modeled Flow Rates

The total water demand for the Town is modeled by distributing demands throughout the water distribution model based on the density of housing and other connections to simulate the metered connections. Two sets of modeled system demands are created to place different loading conditions on the model:

- Peak Hour Demand

  Mays states that the peak hour to average day flow ratio typically ranges from 2.0 to 7.0:1. It is our opinion that the peak hour to average day ratio should be modeled as 6.72. This number was calculated by multiplying the highest usage in Figure 3.3 of 210 percent

by the estimated peak day to average day ratio of 3.2. Therefore, the total modeled peak hour flow rate is estimated to be 148 gpm (321 people x 98.5 gpcpd x 6.72 / 1440 minutes per day). This flow will be utilized in the general analysis with the water tower set at mid-level to evaluate the distribution system's hydraulic capacity to maintain adequate water pressure during this high-use period.

- Peak Day Demand

  The peak day demand in the models was set to approximately 101,000 gpd (321 people x 98.5 gpcpd x 3.2) or 70.3 gpm based on the estimated water use projection discussed previously.

3.6.4 Pressure Analysis

To check the water system for low-pressure problems, hydraulic models are created using the following assumptions:

- The peak hour demand is placed on the model according to Section 3.6.3.
- The operating elevation of the water tower is set to the mid-tank level.
- The rural water supply is off so the water tower supplies all of the water demand.

The SD DENR Recommended Design Criteria states in Section 8.4.2:

> *"A water distribution system shall be designed so as to provide a pressure of 20 pounds per square inch at each service outlet or connection under any or all conditions or demands that can be placed on the system. Under normal conditions, minimum pressures should be approximately 60 psi and not less than 35 psi."*

Section 7.3.1 of the Recommended Standards for Water Works by the Committee of the Great Lakes further recommends a minimum working pressure of 35 psi with a normal working pressure of 60 to 80 psi. The *AWWA Distribution System Handbook* by Mays states on page 3.8 that low operating pressures of less than 30 psi can result in annoying reductions in water flow when more than one water-using device is in service. The minimum desired pressure by many residents is 40 psi as that pressure is typically required to properly operate lawn sprinkler systems. Based on the references above, the recommended pressures for services are shown in Table 3.2.

Table 3.2: Recommended Pressures

Condition	Service Pressure Criteria (psi)
Maximum Pressure	60-80
Minimum Pressure During Peak Day	40
Minimum Pressure During Peak Hour	35
Minimum Pressure During Fire Flow	20

Figure 3.5 indicates that most of the peak operating pressures in the community are below the minimum recommended pressure of 35 psi. This coincides with the Utility Manager's indication that the pressures throughout the Town are generally low. This low pressure is due to the low elevation of the water tower.

Figure 3.5 shows in blue the expected pipeline velocities during peak flow. The highest velocity is 1.0 feet per second in the pipe that leads from the water tower. This velocity is within the recommended range and indicates sufficiently sized piping for normal distribution.

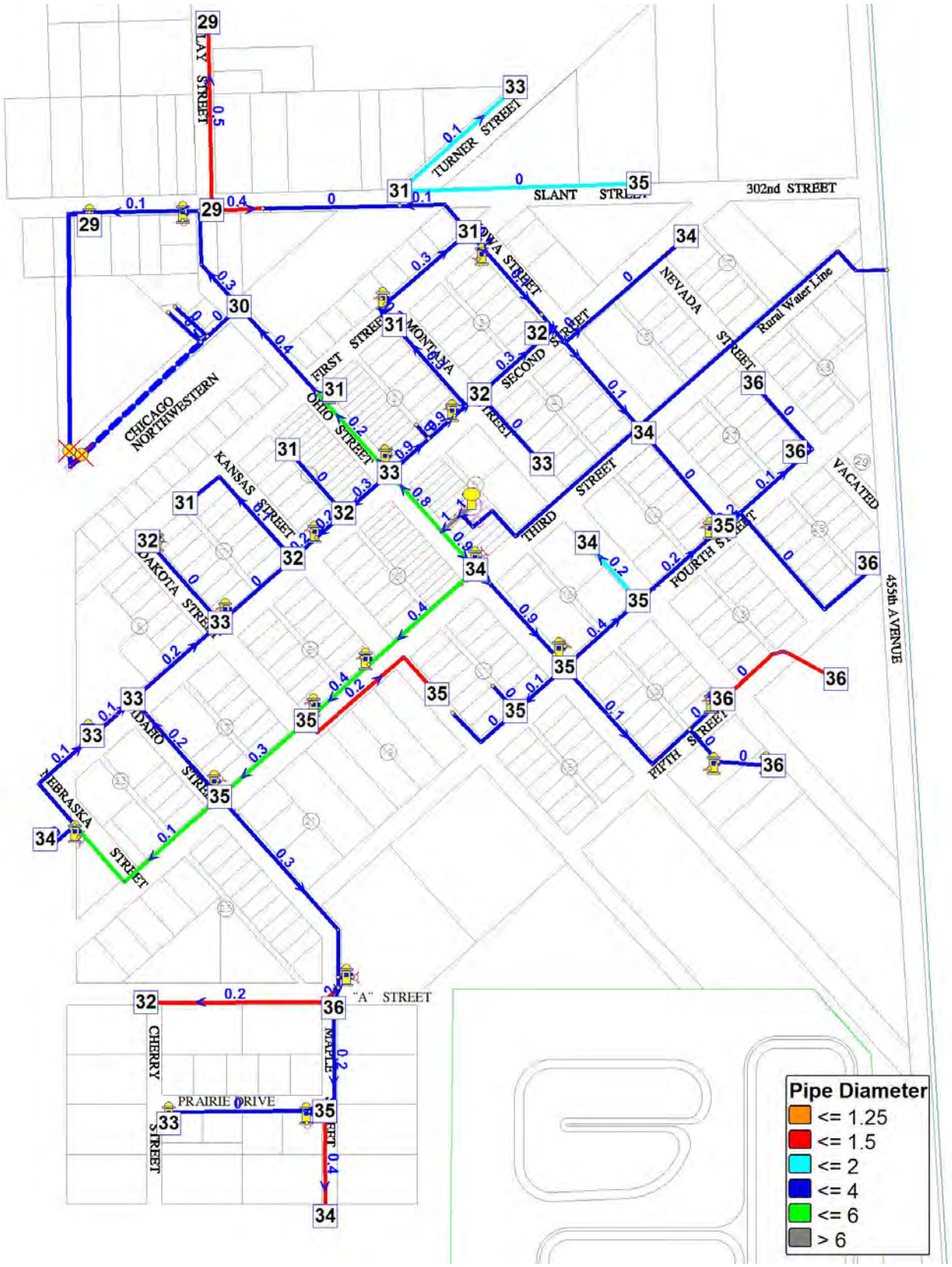


Figure 3.5: Peak Hour Pressures and Pipe Velocities

3.6.5 Fire Flow Simulation

In order to check the water system for low fire flow problems, hydraulic models are created using the following assumptions:

- The peak day demand is placed on the model according to Section 3.6.3.
- The operating level of the water tower is set to the mid-tank level.
- The rural water supply is off so the water tower supplies all of the water demand.
- The minimum residual pressure is set at 20 psi. The fire flow is limited to what flow the system can deliver while maintaining a minimum of 20 psi.

Main pipelines are to deliver the needed fire flow to each hydrant in accordance with the ISO guidelines. The ISO guidelines are based on a number of variables including size of structure, construction material, occupancy, exposure and connections to other structures. For one- and two-family dwellings not exceeding two stories in height, the following needed fire flows are required:

Distance Between Buildings	Fire Flow Requirement
Over 100 feet	500 gpm
31 to 100 feet	750 gpm
11 to 30 feet	1,000 gpm
10 feet or less	1,500 gpm

As for the business district, the needed fire flow would be variable for each structure, depending on construction and materials. For complete accuracy an inspection and analysis of each structure would be required. Rather than performing these inspections and analyses, a minimum needed fire flow of 2,000 gpm is assumed for business and school areas.

The fire flows that are estimated from the model are shown in Figure 3.6. As can be seen, all areas are served by fire flows that are less than the minimum required by ISO. The fire flows basically range from 70 gpm at the outskirts of Town to 650 gpm near the water tower. The low fire flows are due to pipe age and roughness which creates friction when water flows through the pipe. The smaller pipe sizes are also a factor that limits fire flow. In addition, the low water tower elevation limits the pressure available which also reduces the fire flow.

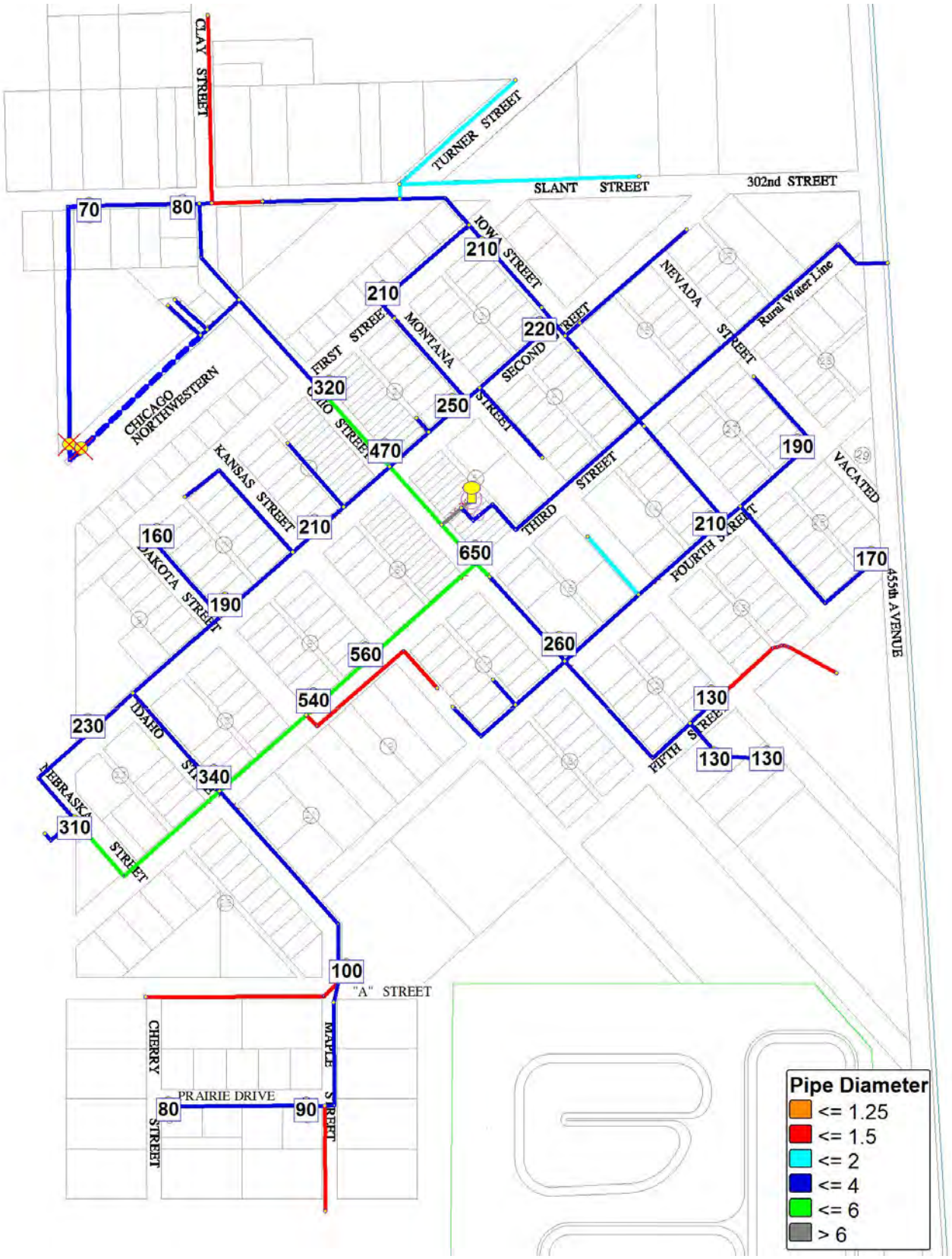


Figure 3.6: Fire Flow Analysis under Peak Day Demand

3.7 FUTURE CONDITIONS

Information related to project need and the planning area is found in Section 3.1 of this report. Specific information on population projections is found in Section 2.3. Land use is not expected to change significantly in the immediate vicinity of the Town. There is some land available for future development and based on the past growth of the community, it is viewed as sufficient to meet community needs.

Due to the importance of conserving water, money and energy, various means for reducing water usage are recommended. By using faucet aerators, reduced flush toilets, and limited flow showerheads water use can be reduced.

4 DEVELOPMENT AND EVALUATION OF ALTERNATIVES

4.1 GENERAL

The alternatives developed for the Town of Wakonda were composed to demonstrate options available to fix the identified deficiencies in the water system.

4.2 CAUTIONARY NOTES CONCERNING COST ESTIMATES

The opinions of probable cost provided with the following alternatives reflect the anticipated costs for administration, engineering design, construction, contingencies, construction observation, and other costs related to completion of the project. The costs as presented are based on an analysis and comparison of projects of similar size and scope. The actual construction and project costs will vary on an individual project basis. The actual bid cost will reflect the bidder's evaluation of construction problems, weather, soils and difficulty of work. Thus, the engineer cannot be held responsible for the accuracy of the estimates made in this report as the engineer has no control over the contractors' bid costs.

Changes in materials, equipment and energy costs, as well as availability of other construction work at the time of the bid opening, could substantially influence actual project cost. Construction costs will also vary somewhat based on the quantity of items necessary to construct the project. The quantities and costs contained in this report are preliminary estimates based on our best judgment without field measurements. Final quantities and opinions of probable cost and final construction costs must be based upon final design.

Different funding sources have different requirements for some non-construction items. Therefore, actual costs of non-construction items should be considered tentative at this time and subject to later modifications and adjustments as current situations and funding sources dictate. Further, inasmuch as the period of construction cannot be accurately predicted, the costs as presented in this report have not been adjusted to reflect projected inflation factors. Therefore, it is important that the estimate of costs as presented be reviewed and updated periodically to reflect construction cost trends.

4.3 EQUIVALENT UNIFORM ANNUAL COST

In addition to an opinion of cost for certain alternatives discussed in this section, a breakdown of the estimated equivalent uniform annual cost (EUAC) is also given. The equivalent uniform annual cost (EUAC) not only takes the capital costs into account when evaluating the options but also looks at the salvage value of the components and the expected annual operation and maintenance costs. The result is a comparison of the alternatives on an overall basis throughout a period of 20 years. As a result, the EUAC may show that the lowest capital cost alternative is not the lowest cost alternative. This situation would occur when options have a low capital cost but high operation and maintenance costs. The terms and values utilized in performing the EUAC are given in Table 4.1. The EUAC for selected alternatives is eliminated from consideration since the proposed improvements offer one viable alternative or a comparison of operating cost would be equivalent.

Table 4.1: EUAC Terminology and Values Used

Term	Definition	Value Used
Interest = I	Annual interest rate percentage	3.00-SRF
Salvage Value = SV	Value of component at end of 20-year design life	0 to 67%
Present Worth = PW	Present worth (equal to opinion of cost for that item)	Variable
Net Present Worth of Salvage Value = PW SV	Present worth of the salvage value	55.4%
Net Present Worth of Capital Costs = NPW	Present worth less the present worth of the salvage value	Variable
Net Present Worth of Annual Costs	Present worth of annual costs over the 20-year design life	1488%
Equivalent Uniform Annual Cost = EUAC	Annual cost of total present worth of capital and annual costs	6.72%
Design Period	Length of time facilities are evaluated	20 years-SRF

4.4 WATER SOURCE IMPROVEMENTS

The contract with Clay Rural Water Service currently does not include a provision for the flow rate and pressure that will be provided. It is recommended that the Town establish a contracted maximum flow rate of between 70 to 148 gpm at the maximum pressure that can be guaranteed. The size of the piping from the rural water main through town and through

the meter pit limits the flow rate and pressure currently available. Clay Rural Water Service should be requested to determine the feasibility and necessity of replacing the supply line with a larger pipe to improve pressure and flow. The existing meter pit is in need of coating repair and should have an emergency bypass.

4.4.1 Water Source Option 1: Do Nothing

The "Do Nothing" option would not address the improvements necessary for the meter pit. The coatings should be repair to extend the life of the structure. Therefore, this option is not recommended.

4.4.2 Water Source Option 2: Replace Meter Pit

One option to improve the meter pit is to replace the entire structure with a similar structure. The size of the piping, fittings and connections would be increased in the new structure to promote the peak hour flow rate. A bypass would be provided to allow continuous operation when maintenance is required on the equipment in the meter pit. The estimated costs are presented in Table 4.2.

Table 4.2: Estimated Cost for Meter Pit Replacement

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$9,000.00	$9,000.00
2	Furnish Meter Pit Complete with Fittings, Valves, Piping and Related Items	1 LS	$55,000.00	$55,000.00
3	Install Meter Pit on Concrete Pad and Provide Piping Connections	1 LS	$22,000.00	$22,000.00
4	Remove and Dispose of Existing Meter Pit	1 LS	$10,000.00	$10,000.00
			Subtotal	$96,000.00
			Contingencies	$9,600.00
			Total Construction Cost	$105,600.00
			Legal and Administration Cost	$4,200.00
			Design Engineering	$9,600.00
			Bidding Phase Engineering	$4,000.00
			Construction Engineering	$10,600.00
			Total Project Cost	$134,000.00

4.4.3 Water Source Option 3: Rehabilitate Meter Pit

Another option to address the meter pit issues is to rehabilitate the meter pit. The rusted surfaces would be ground smooth and a new coating applied. A corrosion protection system would be installed to reduce future effects of erosion. It is not practical in the space available to increase the size of the piping and fittings or to provide a bypass inside the station. Therefore, the cost evaluation includes the installation of piping, valves and fittings for an exterior bypass. The estimated costs for this option are presented in Table 4.3.

Table 4.3: Estimated Cost for Meter Pit Rehabilitation

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$2,000.00	$2,000.00
2	Grinding Surface Preparation of Floor, Piping and Fittings	1 LS	$3,000.00	$3,000.00
3	Coating Application	1 LS	$2,000.00	$2,000.00
4	Corrosion Protection System	1 LS	$8,000.00	$8,000.00
5	Bypass Piping	30 LF	$30.00	$900.00
6	Bypass Valves	2 EA	$1,000.00	$2,000.00
7	Miscelaneous Fittings and Connections	1 LS	$4,500.00	$4,500.00
			Subtotal	$22,400.00
			Contingencies	$2,200.00
			Total Construction Cost	$24,600.00
			Legal and Administration Cost	$1,000.00
			Design Engineering	$3,200.00
			Bidding Phase Engineering	$3,000.00
			Construction Engineering	$3,500.00
			Total Project Cost	$35,300.00

4.4.4 Water Source Option 4: Abandon Wells

The Town's two wells have not been used for many years and are not expected to ever be needed again. This option considers the cost which is presented in Table 4.4 to properly abandon the wells. This option also evaluates the cost to demolish the existing buildings, remove two valves and install a section of pipe to loop the water main in the area. The removal of the valves and piping to the old treatment building is also included.

Table 4.4: Estimated Cost for Abandoning Wells

Item	Description	Quantity		Unit Cost	Total Cost
1	Mobilization	1	LS	$3,000.00	$3,000.00
2	Demolish Buildings and Concrete Floors	1	LS	$10,000.00	$10,000.00
3	Remove and Dispose of Valves	4	EA	$500.00	$2,000.00
4	4" PVC Water Main	20	LF	$30.00	$600.00
5	4" Water Main 90 Degree Bend	1	EA	$500.00	$500.00
6	Connect to Existing 4" Pipe	2	EA	$900.00	$1,800.00
7	Abandon Well	2	EA	$8,000.00	$16,000.00
8	Cap Pipe	2	EA	$1,200.00	$2,400.00
				Subtotal	$36,300.00
				Contingencies (10%)	$3,700.00
				Construction Total	$40,000.00
				Legal and Administration Cost	$1,600.00
				Design Engineering	$3,500.00
				Bidding and Contract Documents	$2,000.00
				Construction Engineering	$5,000.00
				Total Project Cost	$52,100.00

4.5 WATER STORAGE IMPROVEMENTS

The existing multi-legged water tower was constructed in 1910 and has reached the end of its expected useful life. The 50,000-gallon water tower is slightly smaller than what is required to store the recommended 56,700 gallons. The low elevation of the water tower limits the pressure available throughout the Town to what is considered lower than recommended. The interior and exterior coatings have held up adequately based on their age; however, for continued service life, the coatings should be completely sandblasted and reapplied. Because of the construction method of the tank and roof, there is space between the roof and tank where contaminates can enter.

4.5.1 Water Storage Option 1: Do Nothing

In general the water tower has exceeded its useful life expectancy and should be replaced sometime in the near future. The water tower is slightly smaller than what is recommended to meet the needs of Wakonda. The rural water supply cannot provide the peak hour flow rate, because the size of the supply line and the meter pit piping is too small. Therefore, water storage is necessary. The coatings should be completely removed and reapplied for continued use of the water tower. Considering these factors, the "Do Nothing" option is not acceptable.

4.5.2 Water Storage Option 2: Water Tower Rehabilitation

This alternative considers the cost of sandblasting and recoating the inside and outside surfaces of the existing water tower. The roof of the water tower will be sealed to keep contaminants from entering the tank. The associated costs with this alternative are presented in Table 4.5. The EUAC analysis is presented to compare this alternative with the other water storage options on a total cost basis.

Table 4.5: Estimated Cost for Water Tower Rehabilitation

Item	Description	Quantity		Unit Cost	Total Cost
1	Mobilization	1	LS	$11,500.00	$11,500.00
2	Seal Non-Welded Seams	1	LS	$5,000.00	$5,000.00
3	Sandblast and Recoat Interior of Water	1	LS	$40,000.00	$40,000.00
4	Sandblast and Recoat Exterior of Water	1	LS	$70,000.00	$70,000.00
				Subtotal	$126,500.00
				Contingencies (10%)	$12,700.00
				Construction Total	$139,200.00
				Legal and Administration Cost	$6,000.00
				Design Engineering	$12,000.00
				Bidding and Contract Documents	$3,500.00
				Construction Engineering	$15,000.00
				Total Project Cost	$175,700.00

Table 4.5, Continued: Estimated Cost for Water Tower Rehabilitation

EUAC Analysis

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Mobilization	$11,500.00			$11,500.00
Seal Non-Welded Seams	$5,000.00			
Sandblast and Recoat Interior of Water Tower	$40,000.00			$40,000.00
Sandblast and Recoat Exterior of Water Tower	$70,000.00			$70,000.00
Remaining Project Costs	$49,200.00			$49,200.00
Total Construction Cost	$175,700.00	$0.00	$0.00	$170,700.00

b. Operation and Maintenance Costs

Item	Existing Annual Cost	Change in Annual Cost	NPW
Salaries and Wages	$15,900.00		$236,551.85
Water System Supplies	$4,000.00		$59,509.90
Water System Maintenance	$7,000.00		$104,142.32
Office Supplies	$4,500.00		$66,948.64
Utilities	$2,500.00		$37,193.69
Paint Water Tower	$9,100.00	-$7,420.00	$24,994.16
Rural Water Use	$37,000.00		$550,466.57
Subtotal	$80,000.00	-$7,420.00	$1,079,807.13

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$170,700.00
NPW of O & M Costs	$1,079,807.13
Total Net Present Worth	$1,250,507.13
Equivalent Uniform Annual Cost	**$84,053.72**

4.5.3 Water Storage Option 3: Water Tower

This option considers a new water tower which would be installed in the same general area as the existing water tower. The minimum recommended volume for storage is 56,700. The next typical size above the minimum recommended volume is 75,000 gallons. The costs are presented in Table 4.6 and include the typical costs of the construction of a new water tower. The EUAC analysis is presented to compare this alternative with the other water storage options on a total cost basis. New hydraulic models are shown in Figures 4.1 and 4.2 for the new water tower which will have a proposed overflow approximately 50 feet higher to

improve pressures and flow. The higher pressure available from the proposed water tower increases the pressures to an acceptable level. The fire flows also increase, but not significantly since the small diameter and corroded cast iron pipe reduce the capacity of the system.

Table 4.6: Estimated Cost for Water Tower

Item	Description	Quantity		Unit Cost	Total Cost
1	Mobilization	1	LS	$71,000.00	$71,000.00
2	75,000-Gallon Water Tower and Appurtenances	1	LS	$650,000.00	$650,000.00
3	10" PVC Water Main	250	LF	$45.00	$11,250.00
4	Control Room in Base of Water Tower	1	LS	$10,000.00	$10,000.00
5	Demolition of Existing Water Tower	1	LS	$30,000.00	$30,000.00
6	Site Work and Surfacing	1	LS	$4,000.00	$4,000.00
7	Seeding and Erosion Control	1	LS	$2,000.00	$2,000.00
				Subtotal	$778,250.00
				Contingencies (10%)	$77,900.00
				Construction Total	$856,150.00
				Legal and Administration Cost	$35,000.00
				Design Engineering	$66,000.00
				Geotechnical Engineering	$5,000.00
				Bidding and Contract Documents	$5,000.00
				Construction Engineering	$80,000.00
				Total Project Cost	$1,047,150.00

Table 4.6, Continued: Estimated Cost for Water Tower

EUAC Analysis

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Mobilization	$71,000.00			$71,000.00
75,000-Gallon Water Tower and Appurtenances	$650,000.00	$433,333.33	$239,926.16	$410,073.84
10" PVC Water Main	$11,250.00	$5,625.00	$3,114.43	$8,135.57
Control Room in Base of Water Tower	$10,000.00	$5,000.00	$2,768.38	$7,231.62
Demolition of Existing Water Tower	$30,000.00			$30,000.00
Site Work and Surfacing	$4,000.00			$4,000.00
Seeding and Erosion Control	$2,000.00			$2,000.00
Remaining Project Costs	$268,900.00			$268,900.00
Total Construction Cost	$1,047,150.00	$443,958.33	$245,808.97	$801,341.03

b. Operation and Maintenance Costs

Item	Existing Annual Cost	Change in Annual Cost	NPW
Salaries and Wages	$15,900.00		$236,551.85
Water System Supplies	$4,000.00		$59,509.90
Water System Maintenance	$7,000.00		$104,142.32
Office Supplies	$4,500.00		$66,948.64
Utilities	$2,500.00	$90.00	$38,532.66
Paint Water Tower	$9,100.00	-$7,420.00	$24,994.16
Rural Water Use	$37,000.00		$550,466.57
Subtotal	$80,000.00	-$7,330.00	$1,081,146.10

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$801,341.03
NPW of O & M Costs	$1,081,146.10
Total Net Present Worth	$1,882,487.13
Equivalent Uniform Annual Cost	**$126,532.70**

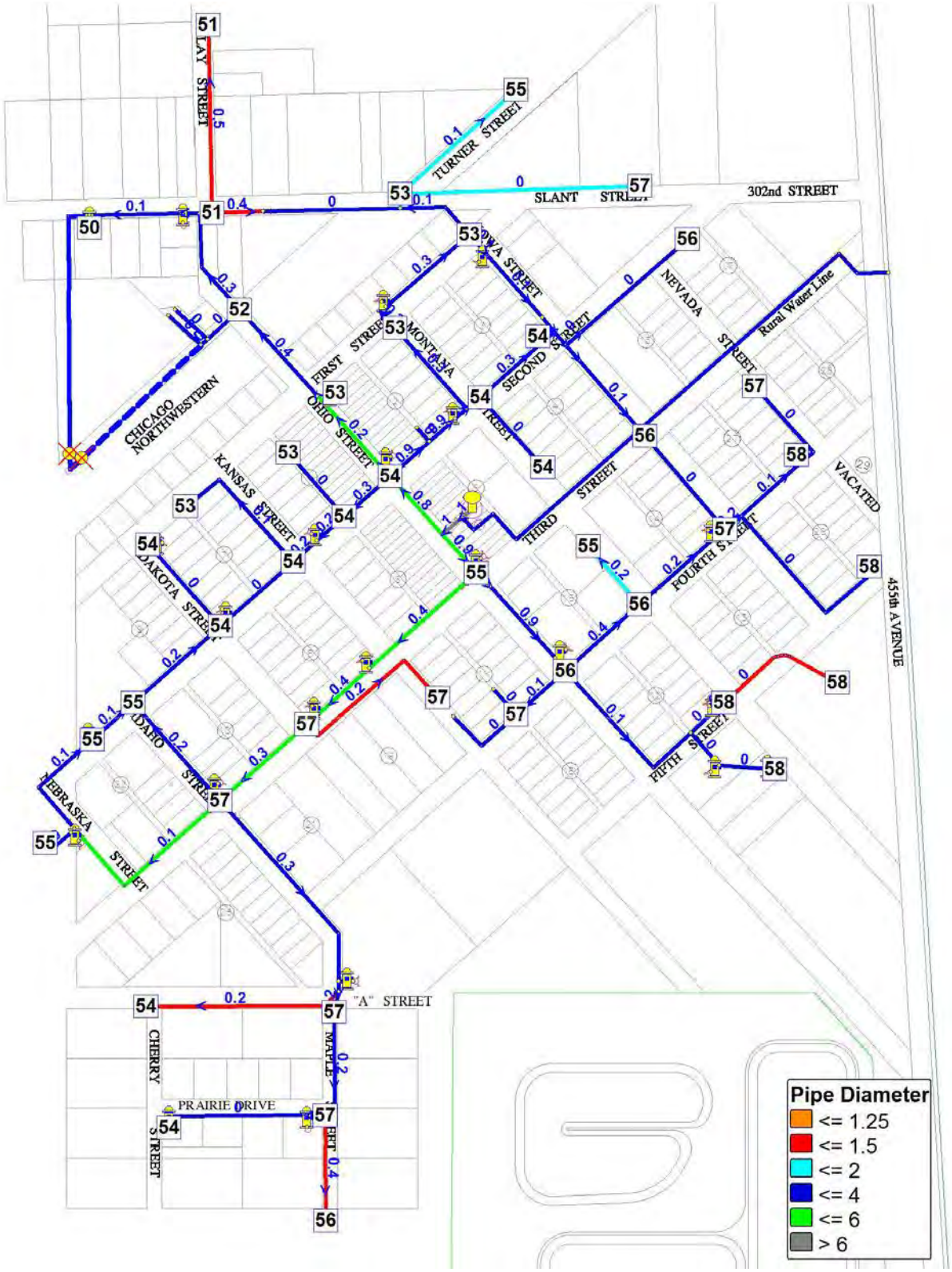


Figure 4.1: Proposed Pressures and Velocities for Water Tower

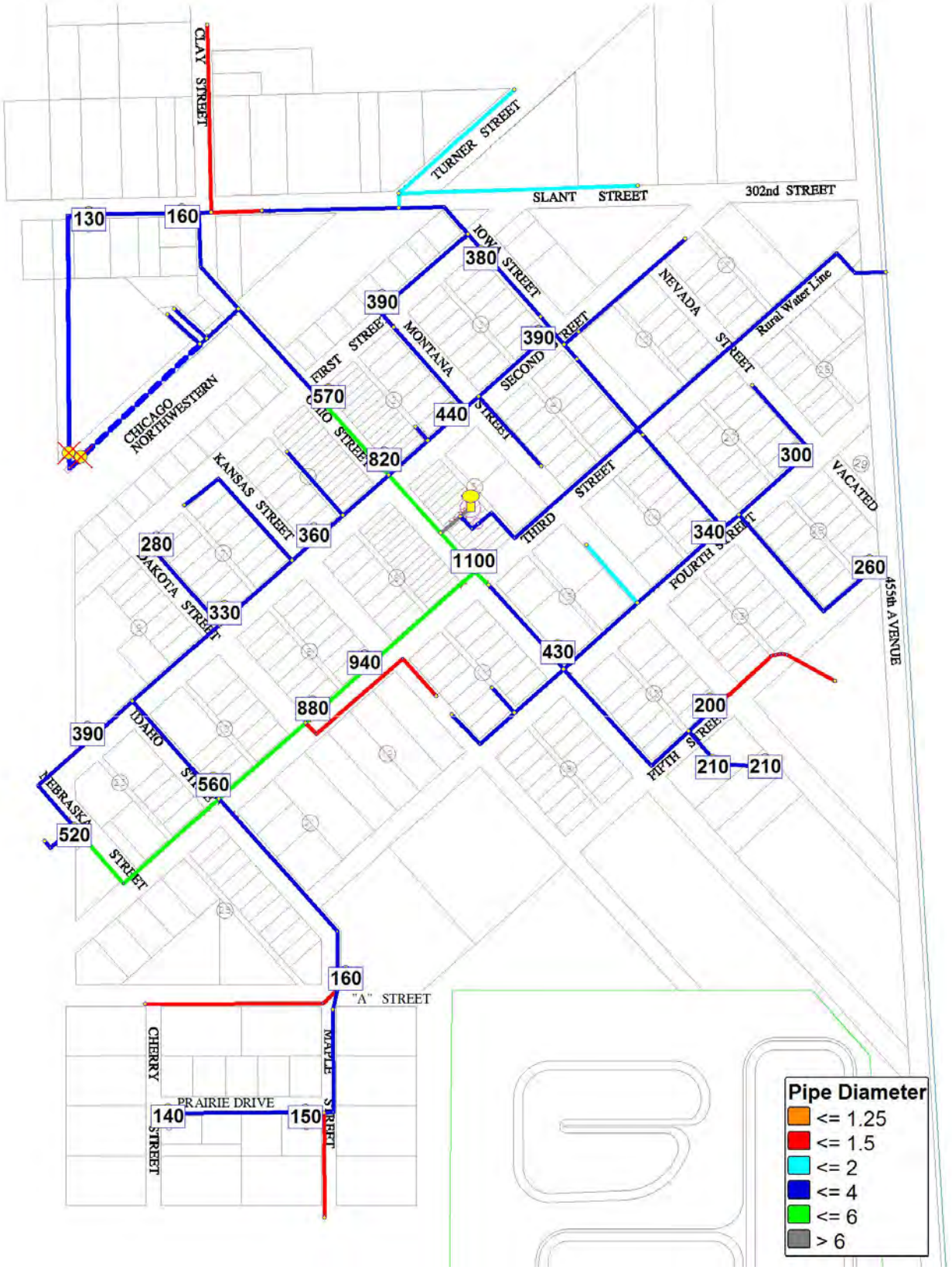


Figure 4.2: Proposed Fire Flows for Water Tower

4.5.4 Water Storage Option 4: Ground Storage with Booster Station

This option evaluates the use of a ground storage tank instead of a water tower. Typical ground storage cannot provide a pressurized supply. As a result, ground storage is often referred to as dead storage because pumping is required to use the storage. For the purpose of this evaluation a 71,000-gallon ground storage tank is evaluated.

The cost evaluation of this option includes a pumping facility to provide continuous pressure to the Town from the ground storage. A small pump would be installed sized to provide the average day flow rate. A variable frequency drive (VFD) is proposed to operate the proposed pump. The VFD would enable control of the pump's speed to provide a variable flow rate that can more closely match the flow demand from the distribution system. The VFD is also beneficial because it allows the pump to be operated no faster than the speed that is necessary. This saves on electrical costs and reduces wear on the pump. Pressure fluctuations that would be experienced with a pump cycling on and off would be reduced, if not eliminated, because the VFD will change the speed of the pump gradually.

The rural water supply would be connected directly to the Town's distribution system to reduce pumping costs when the pressure from rural water is adequate. When the rural water supply cannot meet the demand directly into the distribution system, the pumping system would automatically supplement the flow. A larger pump would be used to provide additional flow when the smaller pump cannot keep up. This pump would also be operated with a VFD.

A third pump is proposed that will increase the flow and provide more pressure during a fire flow event. The pump is operated with a larger motor and a VFD in the same manner as the previously described pumps. The larger pump will be capable of providing approximately 1,000 gpm at 40 psi. The existing distribution system piping will limit this available flow since the existing system is composed of small diameter and corroded cast iron pipe.

A control system is proposed that will enable the operation of the VFD's to be based accurately on the pressure. The control system will automatically control the pumps by

running the small pump during low demand and starting the larger pumps when the demand increases. Pressure transducers will be used to give an accurate continuous signal that is related to the pressure sensed in the system.

A standby automatic generator is proposed to give the facility the ability to operate in the case of a power outage. The generator would be installed outside in its own enclosure.

Piping, valves and fittings are proposed to provide efficient control and transporting of the water. The filling of the ground storage tank would be automatic. The new control system and piping system will allow the water in the ground storage tank to be automatically pumped and replenished to keep the water fresh.

Table 4.7 includes the cost of the proposed improvements. The EUAC analysis is also presented to compare this alternative with the other water storage options on an annual cost basis. The operation and maintenance costs due to this project would increase because of the pumping facility.

The pressures and fire flows that can be expected as a result of the improvements would be nearly identical to those of Figures 4.1 and 4.2 presented previously. Because of the higher pressure available, the pressures throughout the Town would be higher than those of the existing system. During fire flow events, all of the proposed pumps could potentially provide fire flow. Because of the restrictive existing piping, the fire flows would be limited but increased slightly over the existing system.

Table 4.7: Estimated Cost for Ground Storage

Item	Description	Quantity		Unit Cost	Total Cost
1	Mobilization	1	LS	$48,000.00	$48,000.00
2	10-Inch Buried PVC Pipe	250	LF	$45.00	$11,250.00
3	Buried Piping Connections, Valves and Fittings	1	LS	$9,000.00	$9,000.00
4	Miscellaneous Flanged Piping, Fittings, Connections, Meter and Valves	1	LS	$50,000.00	$50,000.00
5	Furnish and Install Pumps with VFD's, Control System with Pressure Sensors, Gauges and Appurtenances	1	LS	$65,000.00	$65,000.00
6	Building, Footing and Floor Slab and Related Items	1	LS	$60,000.00	$60,000.00
7	Electrical	1	LS	$30,000.00	$30,000.00
8	Automatic Stand-By Generator with Transfer Switch	1	LS	$45,000.00	$45,000.00
9	Heating and Ventilation	1	LS	$9,000.00	$9,000.00
10	Tank Foundation and Floor Slab	1	LS	$50,000.00	$50,000.00
11	71,000-Gallon Bolted Glass Lined Storage Tank	1	LS	$101,000.00	$101,000.00
12	Drain Tile System, Manhole and Piping	1	LS	$8,000.00	$8,000.00
13	6" DIP Water Main Stub-Out	1	LS	$4,000.00	$4,000.00
14	10" DIP Water Main Stub-Out	1	LS	$5,000.00	$5,000.00
15	Demolition of Existing Water Tower	1	LS	$30,000.00	$30,000.00
16	Site Work and Surfacing	1	LS	$5,000.00	$5,000.00
17	Seeding and Erosion Control	1	LS	$2,000.00	$2,000.00
				Subtotal	$532,250.00
				Contingencies (10%)	$53,300.00
				Construction Total	$585,550.00
				Legal and Administration Cost	$24,000.00
				Design Engineering	$45,000.00
				Bidding and Contract Documents	$6,000.00
				Construction Engineering	$54,000.00
				Total Project Cost	$714,550.00

Table 4.7, Continued: Estimated Cost for Ground Storage

EUAC Analysis

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Mobilization	$48,000.00		$0.00	$48,000.00
10-Inch Buried PVC Pipe	$11,250.00	$5,625.00	$3,114.43	$8,135.57
Buried Piping Connections, Valves and Fittings	$9,000.00	$4,500.00	$2,491.54	$6,508.46
Miscellaneous Flanged Piping, Fittings, Connections, Meter and Valves	$50,000.00	$25,000.00	$13,841.89	$36,158.11
Furnish and Install Pumps with VFD's, Control System with Pressure Sensors, Gauges and Appurtenances	$65,000.00		$0.00	$65,000.00
Building, Footing and Floor Slab and Related Items	$60,000.00	$40,000.00	$22,147.03	$37,852.97
Electrical	$30,000.00		$0.00	$30,000.00
Automatic Stand-By Generator with Transfer Switch	$45,000.00	$15,000.00	$8,305.14	$36,694.86
Heating and Ventilation	$9,000.00		$0.00	$9,000.00
Tank Foundation and Floor Slab	$50,000.00	$33,333.33	$18,455.86	$31,544.14
71,000-Gallon Bolted Glass Lined Storage Tank	$101,000.00	$67,333.33	$37,280.83	$63,719.17
Drain Tile System, Manhole and Piping	$8,000.00	$5,333.33	$2,952.94	$5,047.06
6" DIP Water Main Stub-Out	$4,000.00	$2,000.00	$1,107.35	$2,892.65
10" DIP Water Main Stub-Out	$5,000.00	$2,500.00	$1,384.19	$3,615.81
Demolition of Existing Water Tower	$30,000.00		$0.00	$30,000.00
Site Work and Surfacing	$5,000.00		$0.00	$5,000.00
Seeding and Erosion Control	$2,000.00	$1,200.00	$664.41	$1,335.59
Remaining Project Costs	$182,300.00		$0.00	$182,300.00
Total Construction Cost	$714,550.00	$201,825.00	$111,745.61	$602,804.39

b. Operation and Maintenance Costs

Item	Existing Annual Cost	Change in Annual Cost	NPW
Salaries and Wages	$15,900.00	$5,200.00	$313,914.72
Water System Supplies	$4,000.00		$59,509.90
Water System Maintenance	$7,000.00		$104,142.32
Pump Station Maintenance		$6,300.00	$93,728.09
Office Supplies	$4,500.00		$66,948.64
Utilities	$2,500.00	$980.24	$51,777.24
Paint Water Tower	$9,100.00	-$9,100.00	$0.00
Rural Water Use	$37,000.00		$550,466.57
Subtotal	$80,000.00	$3,380.24	$1,240,487.48

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$602,804.39
NPW of O & M Costs	$1,240,487.48
Total Net Present Worth	$1,843,291.87
Equivalent Uniform Annual Cost	**$123,898.17**

4.5.5 Water Storage Option 5: Rural Water Takeover

An alternate method of dealing with the storage deficiencies is to allow Clay Rural Water Service to take over the ownership, operation and maintenance of the water distribution system. This option would involve the Town completely eliminating the water system from its portion of responsibility. The water tower could be eliminated by CRWS expanding portions of their water system to supply sufficient flow and pressure during peak demands and making a direct connection to the water distribution system from rural water. The water distribution system improvements would need to be addressed as discussed subsequently, but could be completed by CRWS after the takeover, depending on the timing and agreements that can be made.

Preliminary discussions about this option with CRWS indicate that they would be interested in exploring this option further. No exact scope of work or details of the takeover are available at the time of writing this report.

Preliminary discussions with the Town of Wakonda indicate reluctance toward this option. First, the water system revenue source would be lost which is a concern for the Town. The Town would not have the ability to shut water off when payment for sewer fees is not made by the residents. The Town would also not have any control over setting the water rates which will most likely increase significantly due to the proposed projects. Second, the direct connection to rural water would not provide any fire flow protection. This will most likely impact insurance rates and could be disastrous under an emergency when fire flow is needed. Finally, there is concern about the different style of service that could be provided by the new management. Currently, the Town has a part-time utility manager that attends to the needs of the water system as necessary. The utility manager has done a good job with the required operation and maintenance of the system and knows the system very well. It is likely that new operating personnel would change the quality of service provided.

Because the details regarding the CRWS takeover are unknown; the Town of Wakonda is not interested in the CRWS takeover; and in the interest of saving time to produce this report, no further evaluation of this option will be made in this report.

4.6 WATER DISTRIBUTION IMPROVEMENTS

The identified deficiencies of the water distribution system are summarized below:

- The average water loss rate calculated is 28.3 percent. Approximately $5,740 could be saved per year if the loss rate was reduced to 12 percent.
- Approximately 42 percent of the distribution system piping is composed of cast iron pipe. The cast iron pipe is expected to break more frequently as it ages. The capacity of the cast iron pipe is very low due to the build-up of scale, the corrosion in the pipe and the small diameter sizes.
- Sections of the small diameter polyethylene pipe have become brittle. Two of these sections are known to be undersized.
- There are approximately 10 dead ends when considering the portion of the system made up of piping with four-inch diameter or larger. These dead ends should be looped if possible.
- Approximately seven of the dead ends do not have a fire hydrant that can be used for flushing.
- At least five of the fire hydrants do not work properly.
- Many of the main-line water valves are not working.
- The estimated pressures throughout the Town at the peak hour demand are below what is considered acceptable. However, this is due mainly to the low water tower elevation.
- The estimated fire flows are lower than those desired for insurance and fire-fighting purposes. However, the main reason for this is also due to the low water tower elevation.

4.6.1 Water Distribution Option 1: Do Nothing

The first alternative for water distribution system improvements is to do nothing. This alternative will not address any of the above identified deficiencies. As a result, the “Do Nothing” alternative is not considered as an acceptable alternative.

4.6.2 Water Distribution Option 2: Replace Cast Iron

This evaluation considers the replacement of the cast iron pipe with PVC pipe. The proposed project includes the replacement of the valves and fire hydrants that are currently on the cast iron pipe. Four additional fire hydrants are also proposed for areas where fire hydrant coverage is inadequate. Valves will be added to the system where the proposed piping intersects with existing piping to reduce the size of the system that must be shut down for emergencies. The cost estimate for the proposed improvements is shown in Table 4.8. The pipe to be replaced is shown highlighted in yellow in Figure 4.3.

The proposed PVC pipe will increase the pressures and fire flow as shown in the following figures. The pressures remain relatively low because of the low elevation of the water tower. The fire flows are increased significantly. It is also assumed that the replacement of the pipe will help reduce the amount of water loss in the system.

Table 4.8: Estimated Cost for Cast Iron Replacement

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$90,800.00	$90,800.00
2	Full Depth Asphalt Saw Cut	8,600	LF	$3.00	$25,800.00
3	Remove and Dispose of Asphalt	9,300	SY	$3.50	$32,550.00
4	Remove and Dispose of Fire Hydrant	17	EA	$250.00	$4,250.00
5	Remove and Dispose of Valve	17	EA	$150.00	$2,550.00
6	8" PVC Water Main	515	LF	$34.00	$17,510.00
7	6" PVC Water Main	10,560	LF	$30.00	$316,800.00
8	Fire Hydrant	21	EA	$3,300.00	$69,300.00
9	Fire Hydrant Lead	420	LF	$30.00	$12,600.00
10	8" Gate Valve w/Box	3	LF	$1,600.00	$4,800.00
11	6" Gate Valve w/Box	47	EA	$1,200.00	$56,400.00
12	Miscellaneous Fittings and Connections	1	LS	$73,700.00	$73,700.00
13	2" PE Service Line	30	LF	$30.00	$900.00
14	1" PE Service Line	2,610	LF	$27.00	$70,470.00
15	6"x2" Corp Stop/Service Saddle	1	EA	$400.00	$400.00
16	8"x1" Corp Stop/Service Saddle	8	EA	$300.00	$2,400.00
17	6"x1" Corp Stop/Service Saddle	71	EA	$250.00	$17,750.00
18	2" Curb Stop w/Box	1	EA	$500.00	$500.00
19	1" Curb Stop w/Box	79	EA	$275.00	$21,725.00
20	Asphalt Surface Patching	1,630	TN	$130.00	$211,900.00
21	Gravel Base Course or Surfacing	6,600	TN	$24.00	$158,400.00
22	Traffic Control	1	LS	$15,000.00	$15,000.00
23	Erosion and Siltation Control Measures	1	LS	$3,000.00	$3,000.00
24	Topsoil, Seed, Fertilize & Mulch	19,800	SY	$0.80	$15,840.00
				Subtotal	$1,225,345.00
				Contingencies	$122,500.00
				Total Construction Cost	$1,347,845.00
				Legal and Administration Cost	$54,000.00
				Design Engineering	$95,000.00
				Bidding Phase Engineering	$5,000.00
				Construction Engineering	$143,000.00
				Total Project Cost	$1,644,845.00

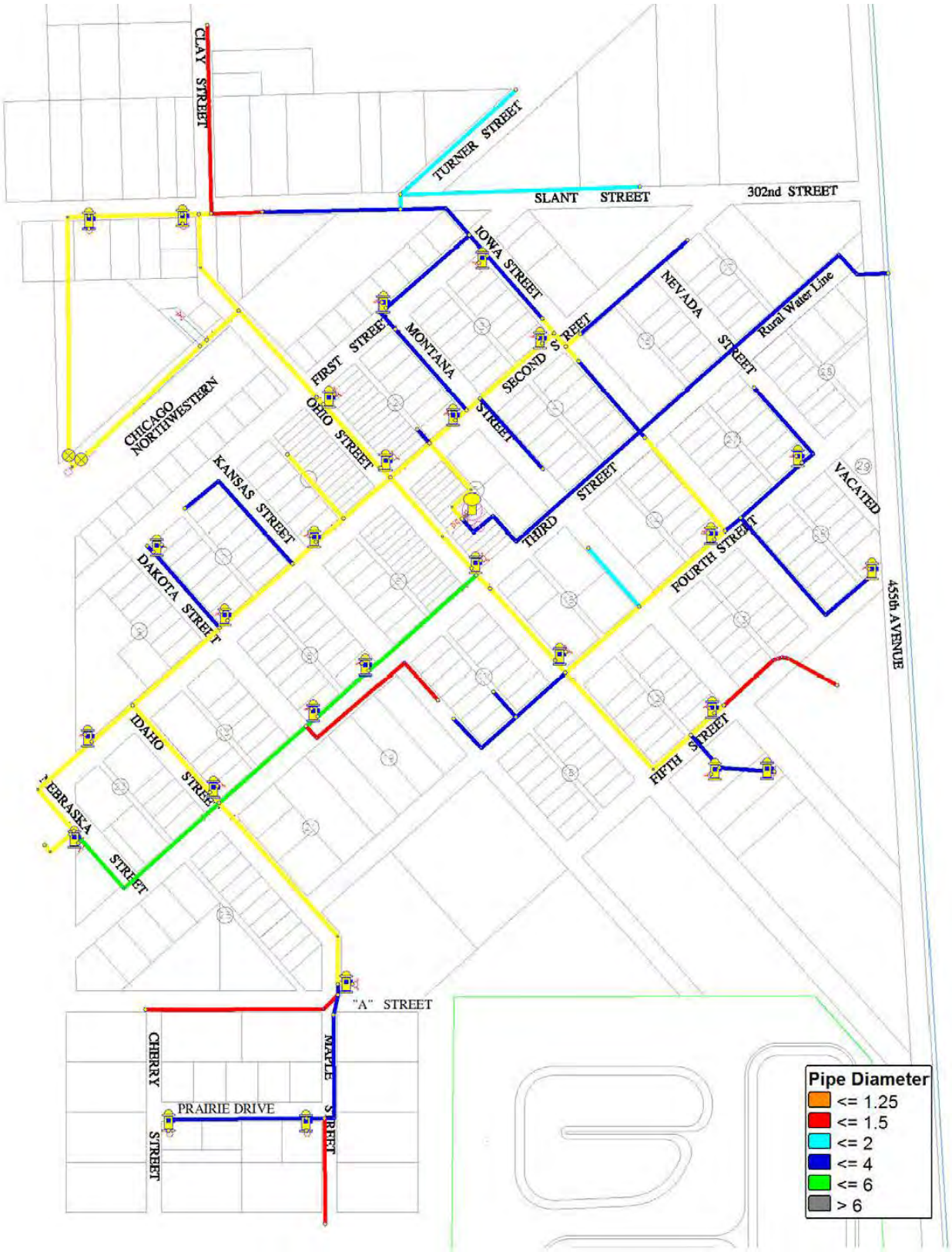


Figure 4.3: Cast Iron Pipe to Be Replaced

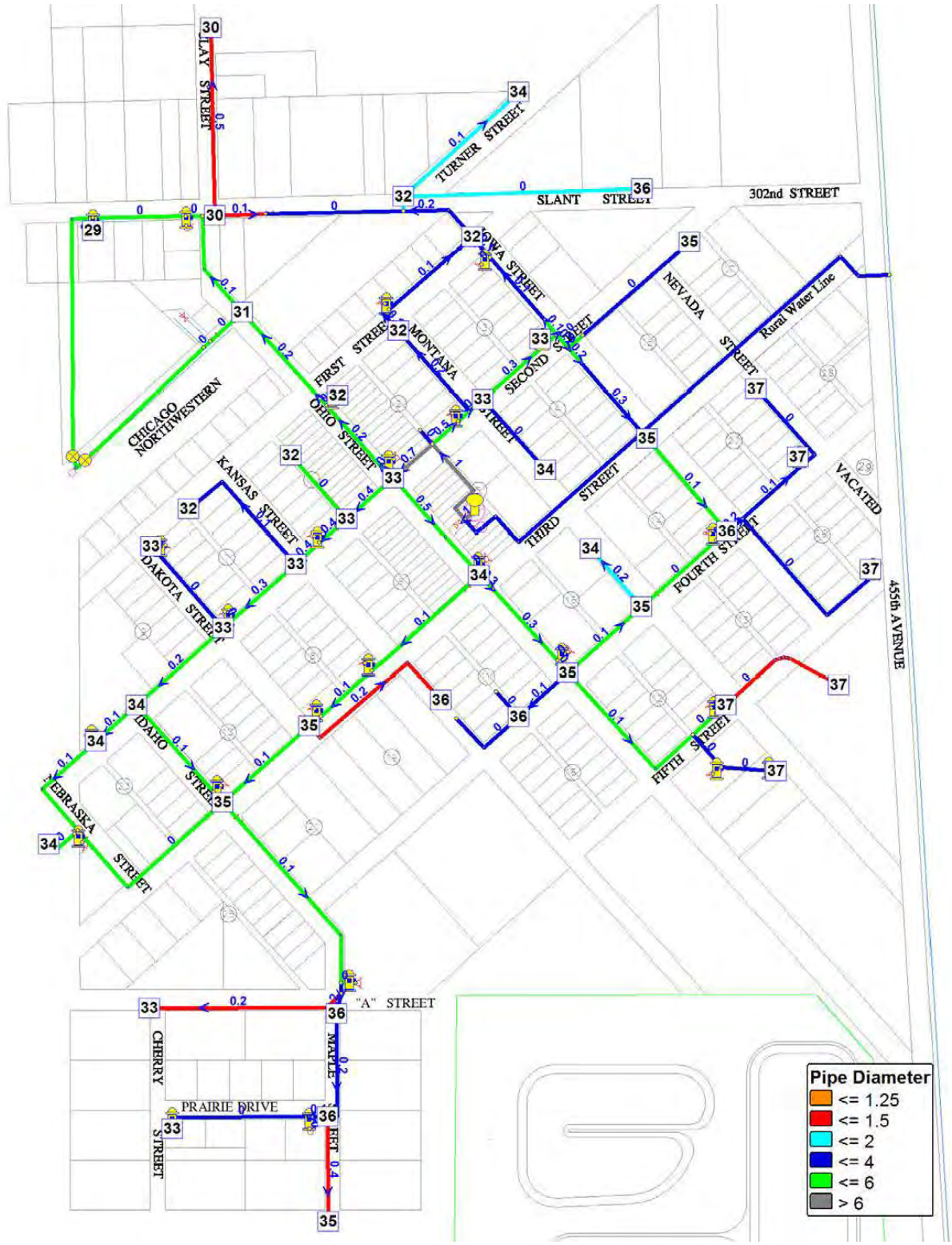


Figure 4.4: Proposed Pressures and Velocities - Cast Iron Pipe Replacement

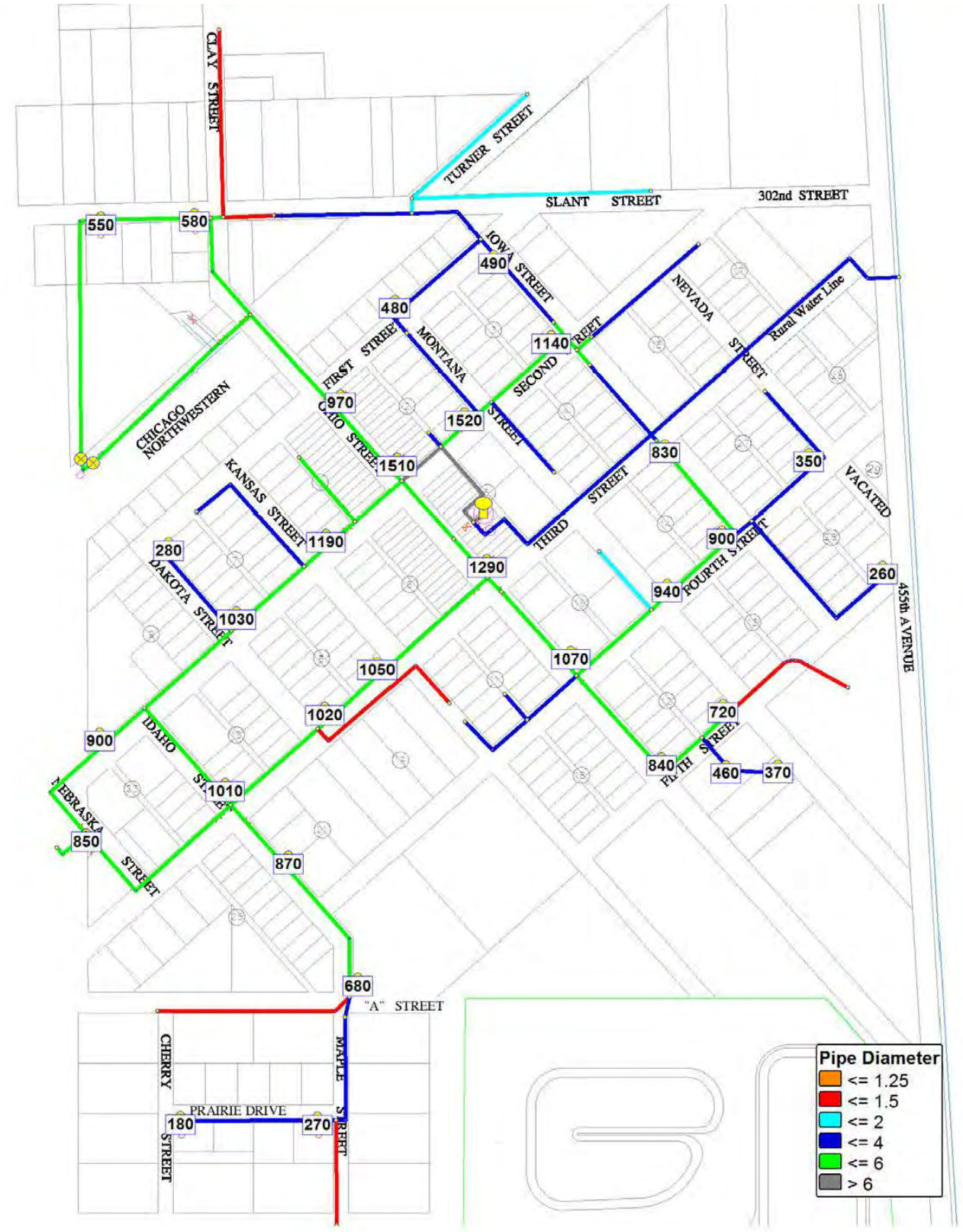


Figure 4.5: Proposed Fire Flows - Cast Iron Pipe Replacement

4.6.3 Water Distribution Option 3: Leak Detection Survey

A leak detection survey is recommended to identify and locate any possible leaks in the water distribution system. The expected cost of this work amounts to approximately $6,000. A professional firm would be hired to provide leak detection services that would include the following tasks: survey all main-line and water supply service pipes for leaks with a listening device placed on structures such as fire hydrants and valves to sense the sound made by leaks; locate leaks and provide the locations to a Town representative; estimate the flow rate of each leak; and create a detailed report of the findings of the survey and submit it to the Town.

4.6.4 Water Distribution Option 4: Looping

The purpose of this evaluation is to eliminate dead-end pipelines where practical. Table 4.9 shows the estimated costs associated with the proposed improvements. The pipes highlighted in yellow in Figure 4.6 are considered in the cost estimate for this evaluation. Six-inch PVC water main is proposed for the project. The loop piping shown eliminates entirely all but two of the dead ends that are composed of piping two inches in diameter or larger. The remaining two dead ends are not realistically able to be looped due to the location within the system. A flush hydrant is proposed for the two-inch dead end on the north side of the Town. In addition, valves will be added in selected locations where the proposed piping intersects with existing piping to allow smaller portions of the distribution system to be isolated during emergencies.

As shown in Figure 4.7, the pressures are not improved significantly. However, the benefit from improving water quality is important. The fire flows shown in Figure 4.8 are improved somewhat from those shown for the existing system.

Table 4.9: Estimated Cost for Looping

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$23,600.00	$23,600.00
2	Full Depth Asphalt Saw Cut	2,760	LF	$3.00	$8,280.00
3	Remove and Dispose of Asphalt	2,670	SY	$3.50	$9,345.00
4	6" PVC Water Main	3,120	LF	$30.00	$93,600.00
5	Flush Hydrant	1	EA	$3,300.00	$3,300.00
6	Hydrant Lead	20	LF	$20.00	$400.00
7	6" Gate Valve w/Box	13	EA	$1,200.00	$15,600.00
8	Miscellaneous Fittings and Connections	1	LS	$28,600.00	$28,600.00
12	Asphalt Surface Patching	470	TN	$140.00	$65,800.00
13	Gravel Base Course or Surfacing	2,200	TN	$24.00	$52,800.00
14	Traffic Control	1	LS	$10,000.00	$10,000.00
15	Erosion and Siltation Control Measures	1	LS	$2,000.00	$2,000.00
16	Topsoil, Seed, Fertilize & Mulch	5,200	SY	$1.00	$5,200.00
				Subtotal Construction Cost	$318,525.00
				Contingencies	$31,900.00
				Total Construction Cost	$350,425.00
				Legal and Administration Cost	$14,000.00
				Design Engineering	$26,000.00
				Bidding Phase Engineering	$5,000.00
				Construction Engineering	$39,000.00
				Total Project Cost	$434,425.00

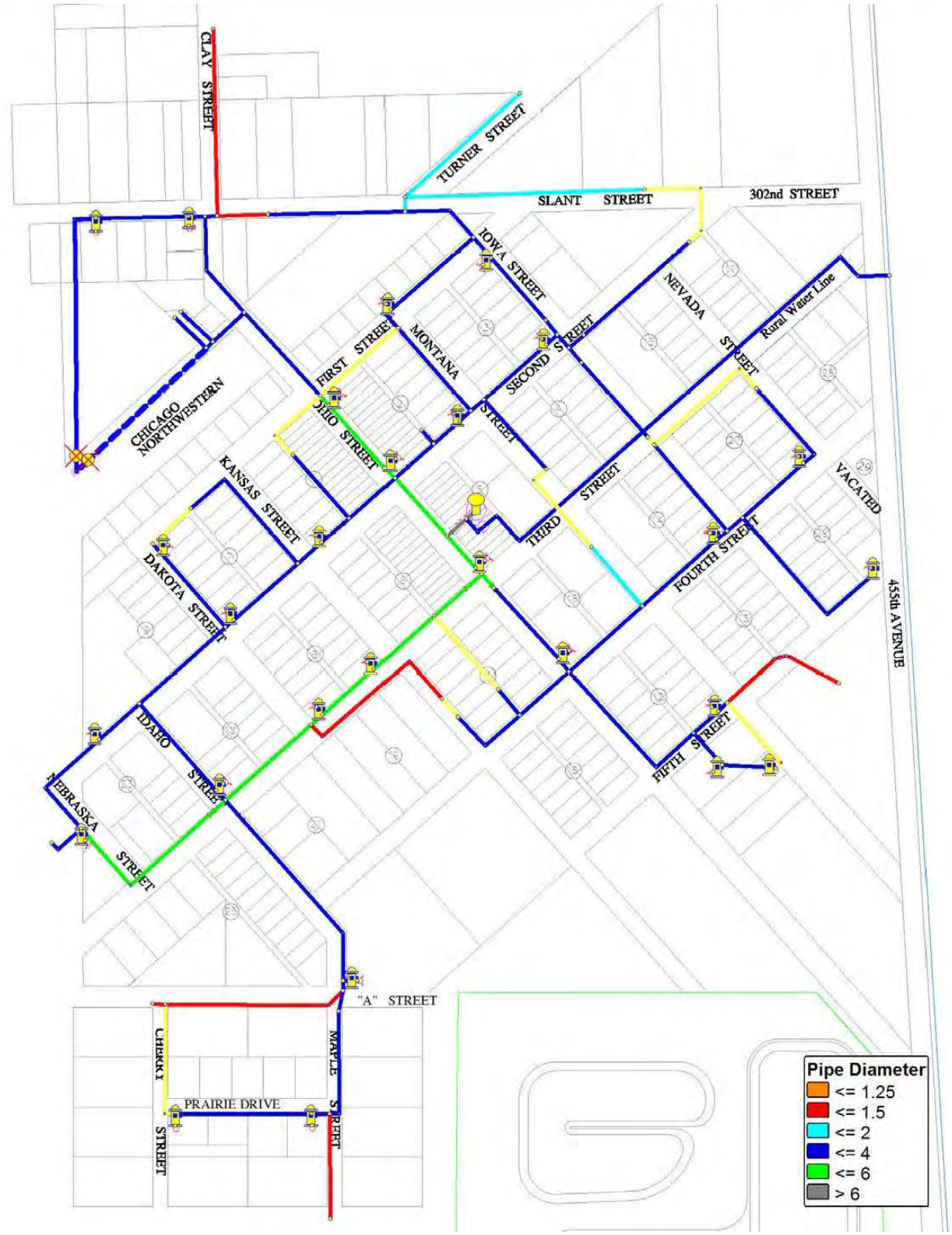


Figure 4.6: Proposed Looping Locations Shown Yellow

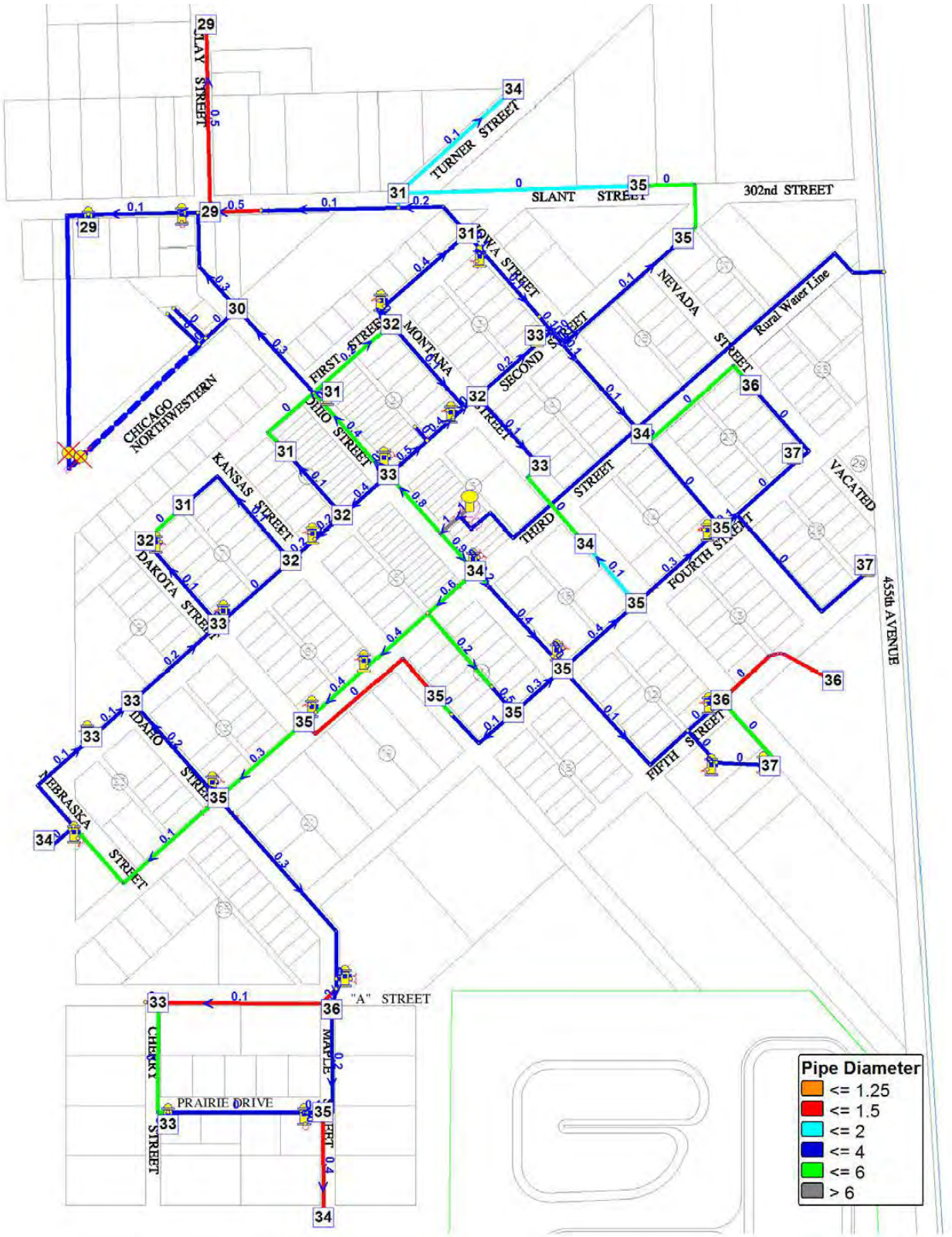


Figure 4.7: Proposed Pressures and Velocities for Looping

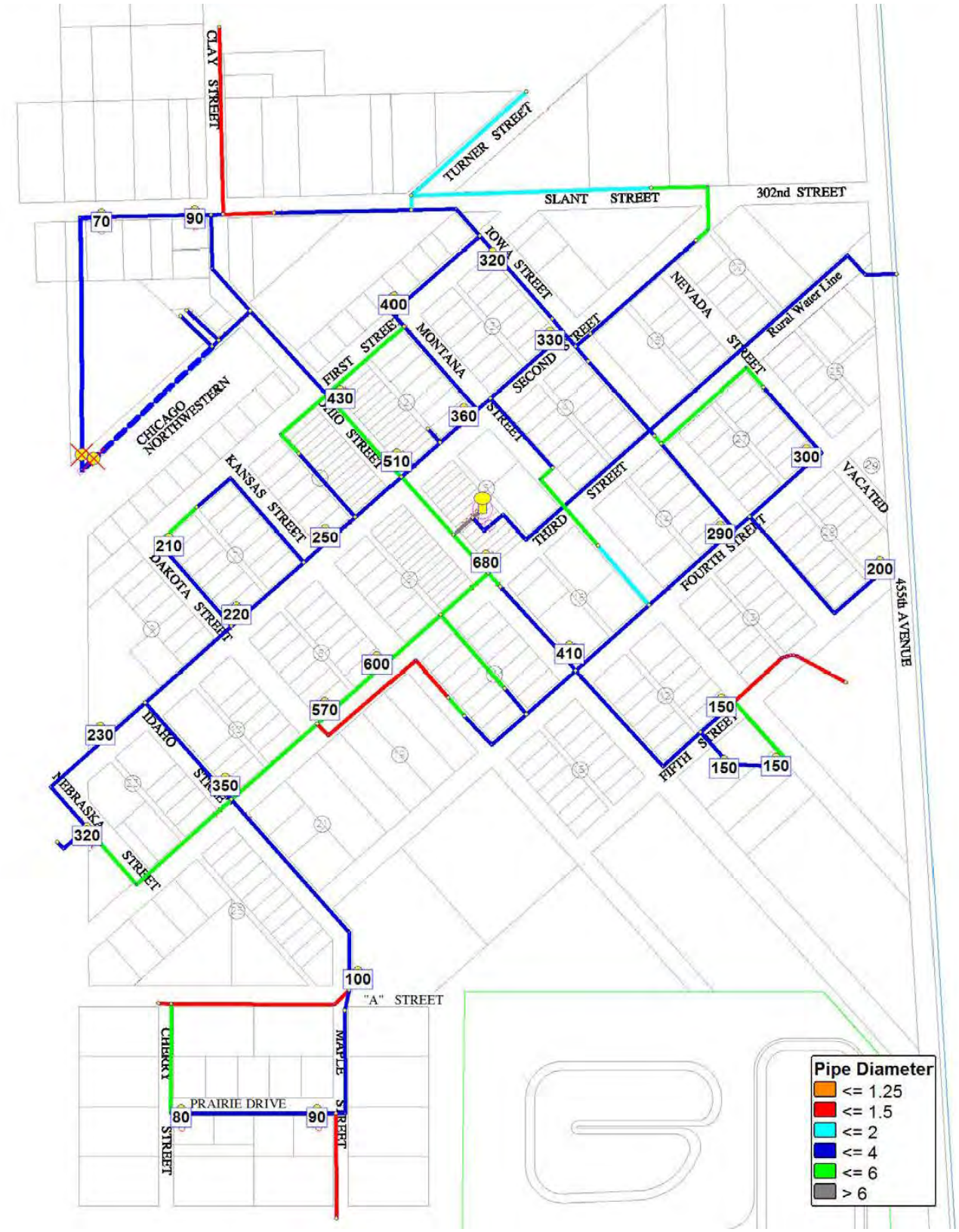


Figure 4.8: Proposed Fire Flows for Looping

4.6.5 Water Distribution Option 5: Replace Small Diameter Pipes

The small diameter water lines are not able to provide the capacity necessary to serve the multiple homes connected to each pipe. In addition, some of the small diameter piping is brittle and tends to break frequently. Table 4.10 shows the estimated costs associated with the proposed improvements. The replacement of the pipes highlighted in yellow in Figure 4.9 are considered in the cost estimate for this evaluation. Six-inch PVC water main is proposed for the project. Fire hydrants are added at the end of the dead end pipes. In addition, valves will be added in selected locations where the proposed piping intersects with existing piping to allow smaller portions of the distribution system to be isolated during emergencies.

As shown in Figures 4.10 and 4.11, the pressures and fire flows are not improved significantly. However, the benefits of the larger capacity pipelines and less frequent water main breaks are important.

Table 4.10: Estimated Cost for Small Diameter Replacement

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$16,500.00	$16,500.00
2	Full Depth Asphalt Saw Cut	1,380	LF	$3.00	$4,140.00
3	Remove and Dispose of Asphalt	1,330	SY	$3.50	$4,655.00
4	6" PVC Water Main	1,990	LF	$30.00	$59,700.00
5	Fire Hydrant	4	EA	$3,300.00	$13,200.00
6	Fire Hydrant Lead	80	LF	$30.00	$2,400.00
7	6" Gate Valve w/Box	5	EA	$1,200.00	$6,000.00
8	Miscellaneous Fittings and Connections	1	LS	$16,200.00	$16,200.00
9	1" PE Service Line	630	LF	$27.00	$17,010.00
10	6"x1" Corp Stop/Service Saddle	19	EA	$250.00	$4,750.00
11	1" Curb Stop w/Box	19	EA	$275.00	$5,225.00
12	Asphalt Surface Patching	240	TN	$140.00	$33,600.00
13	Gravel Base Course or Surfacing	1,190	TN	$24.00	$28,560.00
14	Traffic Control	1	LS	$5,000.00	$5,000.00
15	Erosion and Siltation Control Measures	1	LS	$2,000.00	$2,000.00
16	Topsoil, Seed, Fertilize & Mulch	3,400	SY	$1.00	$3,400.00
				Subtotal Construction Cost	$222,340.00
				Contingencies	$22,200.00
				Total Construction Cost	$244,540.00
				Legal and Administration Cost	$10,000.00
				Design Engineering	$19,000.00
				Bidding Phase Engineering	$5,000.00
				Construction Engineering	$29,000.00
				Total Project Cost	$307,540.00

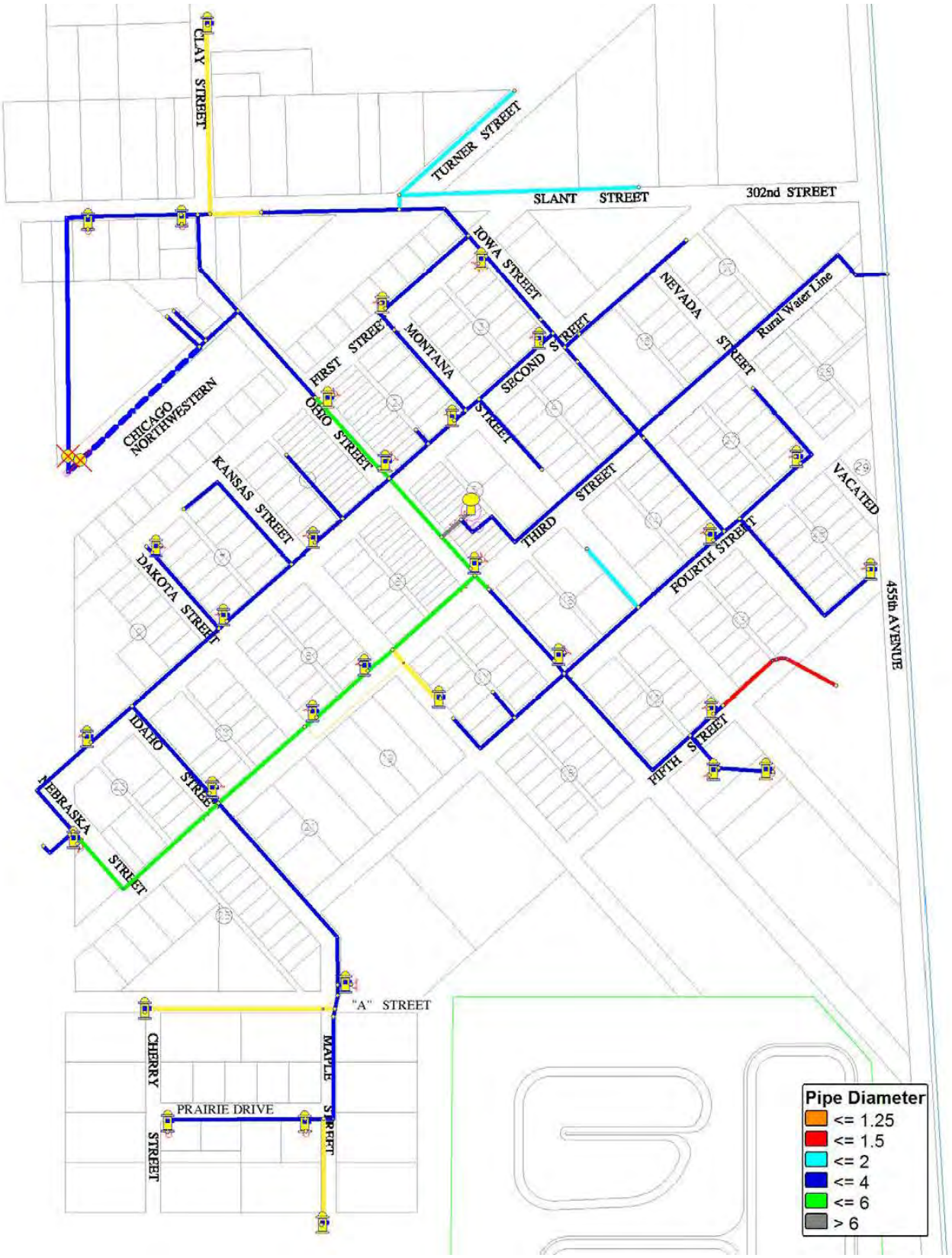


Figure 4.9: Proposed Replacement Locations Shown Yellow

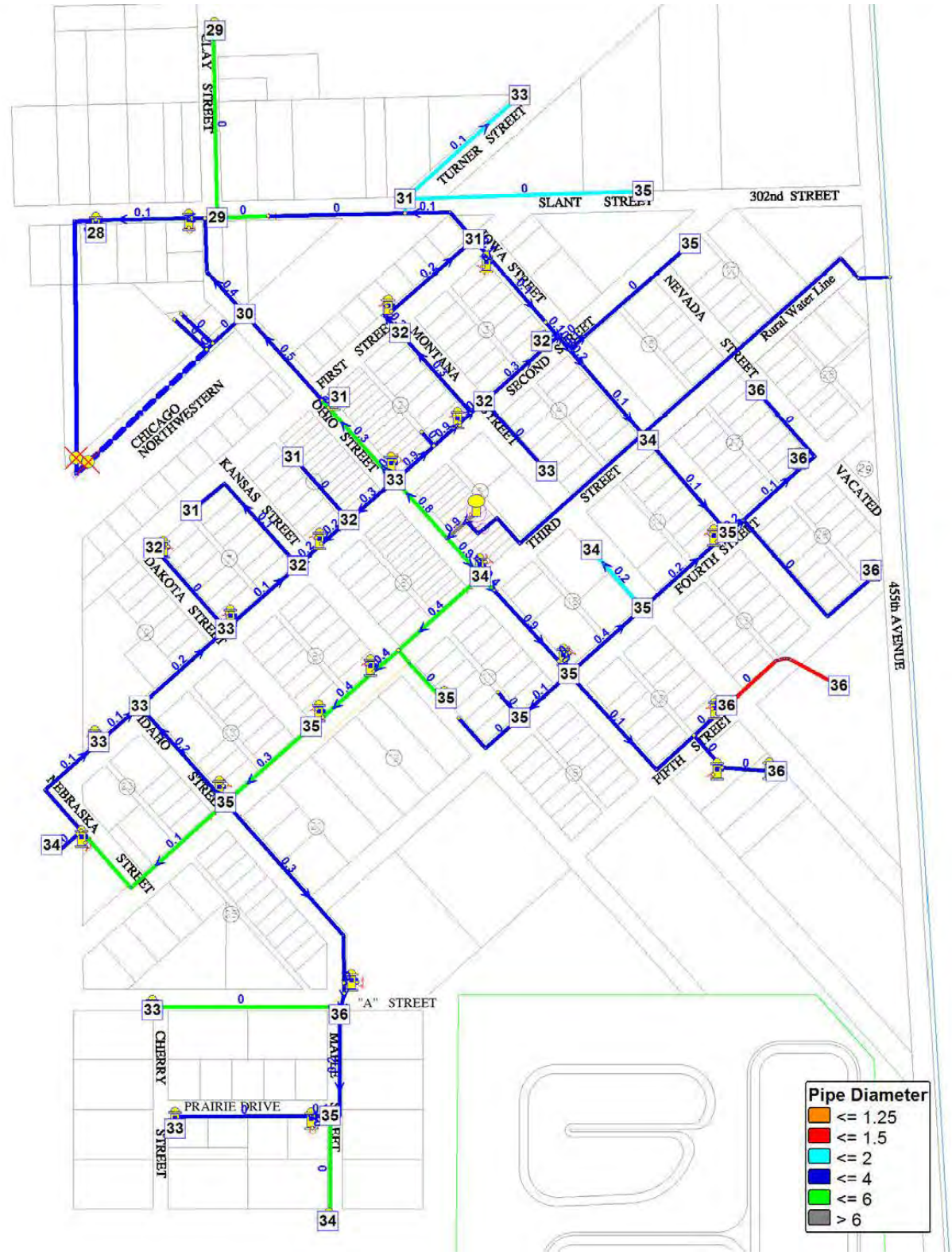


Figure 4.10: Proposed Pressures and Velocities with Proposed Replacement

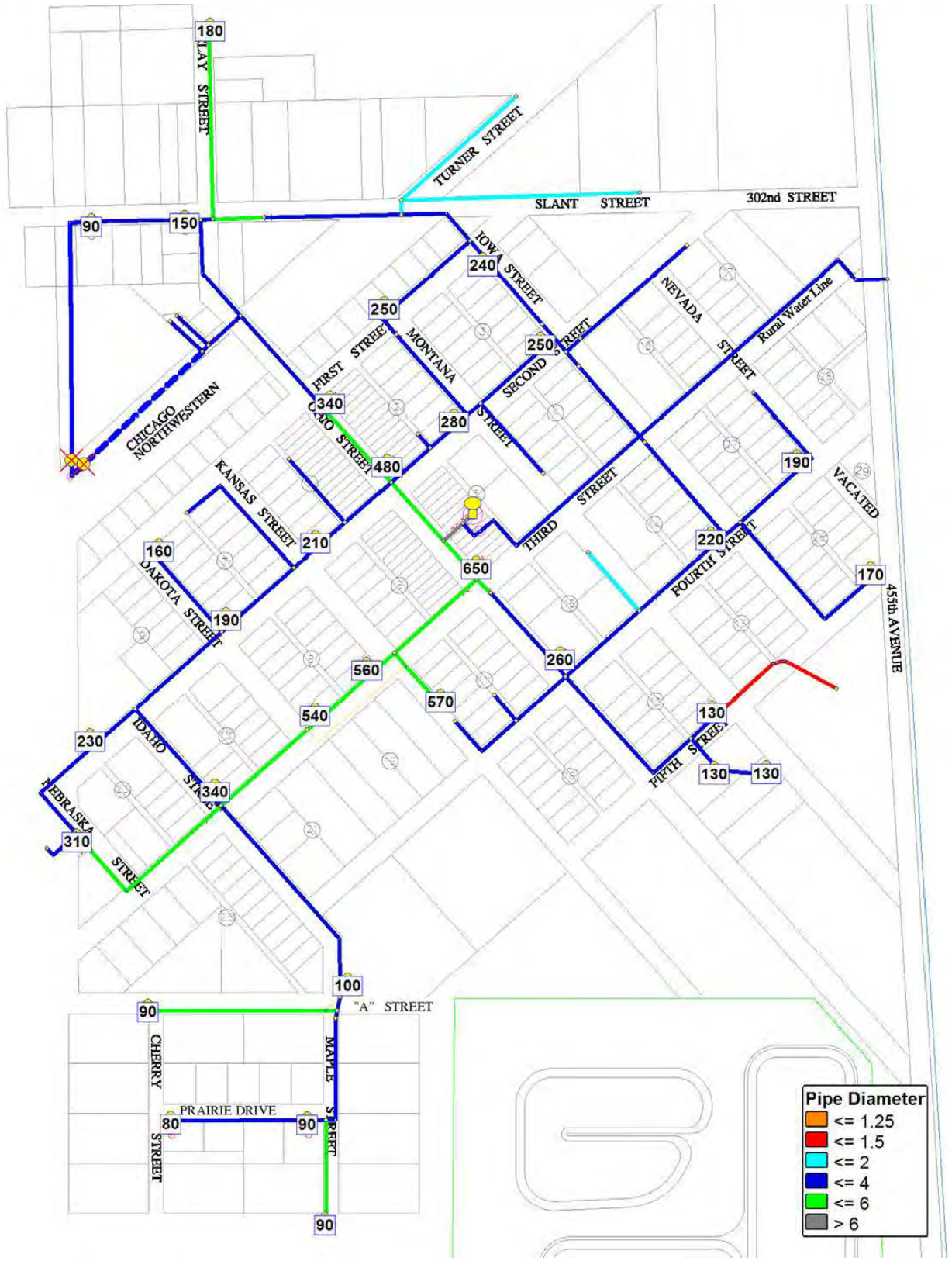


Figure 4.11: Proposed Fire Flows with Proposed Replacement

5 SELECTION OF ALTERNATIVES

A summary of the total project costs for each of the improvement alternatives discussed in Section 4 is presented below. The recommended improvements are also tabulated in Table 5.1 and discussed below.

Table 5.1: Summary of Costs

Improvement Options	Cost	EUAC	Recommended
Water Source Option 2: Replace Meter Pit	$134,000.00	NA	
Water Source Option 3: Rehabilitate Meter Pit	$35,300.00	NA	$35,300.00
Water Source Option 4: Abandon Wells	$52,100.00	NA	$52,100.00
Water Storage Option 2: Rehabilitate Water Tower	$175,700.00	$84,053.72	$175,700.00
Water Storage Option 3: Water Tower	$1,047,150.00	$126,532.70	
Water Storage Option 4: Ground Storage / Booster Station	$714,550.00	$123,898.17	
Water Distribution Option 2: Replace Cast Iron Pipe	$1,644,845.00	NA	$1,644,845.00
Water Distribution Option 3: Leak Detection Survey	$6,000.00	NA	$6,000.00
Water Distribution Option 4: Looping	$434,425.00	NA	$434,425.00
Water Distribution Option 5: Replace Small Diameter Pipe	$307,540.00	NA	$307,540.00
			$2,655,910.00

5.1 WATER SOURCE IMPROVEMENTS

Water Source Option 2 (Replace Meter Pit) is not recommended since the current meter pit should be capable of providing service for many more years. Water Source Option 3 (Rehabilitate Meter Pit) is recommended to extend the life of the structure. Water Source Option 4 (Abandon Wells) is recommended to properly remove the wells from service, loop

the water main in the area of the wells, demolish the old well houses and disconnect the piping into the old treatment building.

5.2 WATER STORAGE

Neither Water Storage Option 3 (Water Tower) or Water Storage Option 4 (Ground Storage / Booster Station) is recommended at this time. Water Storage Option 2 (Rehabilitate Water Tower) is recommended to extend the life of the structure. It is recommended that the Town focus on the water main repair as its main priority. Sometime in the future the Water Storage Option 4 (Ground Storage with Booster Station) should be considered when the maintenance of the existing water tower is no longer practical. The existing water tower should be able to provide adequate service for a many years with the Town's continued maintenance program.

5.3 WATER DISTRIBUTION

Water Distribution Option 2 (Replace Cast Iron Pipe) is recommended to improve the capacity and pressures that can be provided. The proposed work would replace the pipe that typically has an increasing frequency of water main breaks. The added fire hydrants and valves will improve the operational capability of the distribution system. Water Distribution Option 3 (Leak Detection Survey) is recommended to provide an accurate accounting of the water leaks throughout the distribution system. The leak detection survey has the potential to identify water loss that contributes to a significant loss in revenue. Water Distribution Option 4 (Looping) is recommended to improve on the water quality issues that are currently present due to the dead ends. The looped water main will also improve fire flows. Water Distribution Option 5 (Replace Small Diameter Pipe) is recommended to replace the small diameter water mains that do not have enough capacity and are becoming brittle.

5.4 DEMONSTRATION OF FINANCIAL CAPABILITY

As part of the cost analysis of the recommended improvements, the Town's ability to pay for the projects is evaluated. The total costs of the improvements are listed in Table 5.1. For the purpose of this financial evaluation, the total cost of the improvements is assumed to be eligible for a low interest loan from the State Revolving Fund Program. This, however, is subject to change due to decisions that must be made by the appropriate funding agencies.

Data used in this financial evaluation assumes that Wakonda would qualify for a loan with a 20-year loan period and an interest rate of 3.0 percent.

Table 5.2 summarizes the financial data that was supplied by the Town Finance Officer and is used to determine the proposed operational surplus or deficit of the water fund. The revenues generated from expected user fees for 2015 are listed in Table 5.2. The estimated project costs are increased by an inflation factor of three percent.

The current water fee schedule is based on water usage. The schedule of water fees is based on a $5.00 flat fee, $12.00 minimum charge and $4.25 per 1,000 gallons of water use which amounts to a charge of $38.25 for 5,000 gallons of water use. To qualify for funding the minimum water fee must be $25 for 5,000 gallons of water use per month.

The revenue for the budget year 2016 is expected to remain approximately the same. The operation and maintenance costs for the Water Fund are based on actual budget costs furnished by the Finance Officer. These costs include water purchase, salaries and all costs incurred during the year.

The short-lived asset replacement includes annual costs set aside for recoating the water tower in the future. These costs are expected to be reduced as a result of recoating the interior and exterior of the water tower.

The proposed improvements are expected to cause an insignificant change to the annual costs of operation and maintenance. However, the improvements are expected to reduce the water loss rate. This water loss rate reduction is included in Table 5.2 as cost savings in water purchases for the budget year of 2016.

The budget analysis indicates that the current revenue is adequate for current budgeting. However, this evaluation includes a significant amount of revenue due to interest. The validity and long term reliance on this revenue will have to be verified. According to available information the current revenue is inadequate to maintain a surplus when paying on

a loan for this project. The required increase in user fees will depend on the actual financing that is available. Because the financing supplied by various funding agencies is unknown at this time, multiple columns of budget information are shown in Table 5.3 based on varying grant percentages.

Table 5.2: Operation of the Water Fund

	2015 Budget	2016 Budget
Total Cost of Improvements + 3% Inflation		$2,735,587
Revenue from User Fees	+ $65,000	+ $65,000
Other Revenue (Interest)	+ $39,035	+ $39,035
Current O & M Cost - Expenses	- $70,900	- $65,160
Short-Lived Asset Replacement	- $9,100	- $1,680
Current Principal and Interest Payments	- $0	- $0
Retirement of Debt Incurred with This Project	- $0	- $183,874
Debt Reserves (10% of Loan Payment)	- $0	- $18,390
Remaining Surplus	**$24,035**	**-$165,069**
Increase of User Fee		$86.00
Number of Accounts		160
Added Revenue		$165,120
Surplus After Increase in User Fee		**$51**
Current Water Fee (5,000 gallons)	$38.25	$38.25
New Water Fee		$124.25

Table 5.3: Water Rate Analysis

	0/100 loan/grant	25/75 loan/grant	50/50 loan/grant	75/25 loan/grant	100/0 loan/grant
Annual O & M	$65,160	$65,160	$65,160	$65,160	$65,160
Amount Amortized	$0	$683,897	$1,367,794	$2,051,690	$2,735,587
Grant Amount	$2,735,587	$2,051,690	$1,367,794	$683,897	$0
Annual Payment	$0	$45,969	$91,937	$137,906	$183,874
Debt Reserves	$0	$4,597	$9,194	$13,791	$18,387
Current Debt/Asset/Other Cost	$1,680	$1,680	$1,680	$1,680	$1,680
Total Annual Costs	$66,840	$117,405	$167,971	$218,536	$269,102
Annual Revenue at Current Rate	$104,035	$104,035	$104,035	$104,035	$104,035
Surplus/Deficit After Project	$37,195	-$13,370	-$63,936	-$114,501	-$165,067
Rate Increase Due to Project	$0.00	$7.00	$33.50	$59.75	$86.00
New Water Rate	$38.25	$45.25	$71.75	$98.00	$124.25

5.5 CAPITAL FINANCING PLAN

The Town of Wakonda will make applications to state and federal resources for loan and grant assistance to complete the project during the upcoming construction season.

5.6 ENVIRONMENTAL EVALUATION

The Town of Wakonda has requested comments from concerned federal agencies. The correspondence related to these inquiries will be placed in Appendix A upon receipt.

5.7 VIEWS OF THE PUBLIC AND CONCERNED INTEREST GROUPS

The findings of this report will be presented to the Town Board. The Town will conduct a public hearing on the proposed project to meet the requirements of any applicable funding agency. Information related to the hearing will be available upon request after the completion.

5.8 DESIGN OF SELECTED PLAN

The design of the improvements to the water system will provide enhanced flexibility in operation and will be designed in accordance with the SD DENR design criteria and the

accepted principles and standards for the design of the water distribution system and water storage system.

5.9 ENVIRONMENTAL IMPACTS OF SELECTED PLAN

Environmental information gathered thus far does not indicate that any state or federal agencies will have environmental concerns related to the project or its proposed construction.

5.10 ARRANGEMENT FOR IMPLEMENTATION

This report provides information to describe the proposed project and to support the decision to proceed with the improvements as quickly as possible. Final design will be completed by the Town's consultant and approved by the DENR. Cost estimates have been prepared and are referenced elsewhere in this document. The project will be bid in accordance with state statutes that govern municipal corporations and will be constructed by the lowest responsible bidder.

The anticipated schedule for the progression of the project is as follows:

Task	Date
Facility Plan Submitted to Funding Agencies	May-2015
Environmental Review Completed	Jun-2015
Funding Agency Approval of Facility Plan	Jun-2015
Submit State Water Plan Application	Oct-2015
Submit Funding Application	Jan-2016
Final Funding Package Complete	Mar-2016
Begin Design	Mar-2016
Plans & Specifications Submitted to DENR	May-2016
Plans & Specifications Approved by DENR	Jun-2016
Advertisement for Bids	Jul-2016
Open Bids	Jul-2016
Award Bids	Aug-2016
Begin Construction	Jun-2017
Construction Complete	Dec-2017
Project Close-out	Jan-2018

5.11 LAND ACQUISITION

Land acquisition is not expected for the proposed improvements discussed in this report.

5.12 INTERAGENCY AGREEMENTS

No operating agreements with other agencies are needed as the Town of Wakonda owns, operates and maintains its municipal water system. Loan documents will have to be executed with the appropriate lender but as Wakonda is a municipal corporation, it has the legal authority to enter into such agreements. Wakonda's attorney will advise the Board on any legal matters related to this issue.

6 REFERENCES

Committee of Great Lakes – Upper Missouri River Council of State Public Health and Environmental Managers, (1997). Recommended Standards for Water Works (Albany, NY: Health Education Services), pp.

Mays, Larry W., (2000). Water Distribution Systems Handbook, (New York, NY: McGraw Hill), pp.

Soil Conservation Service, South Dakota Agricultural Experiment Station. Soil Survey of Clay County, South Dakota. South Dakota: National Cooperative Soil Survey, 2003.

South Dakota Department of Environment and Natural Resources, (May 1990). *Recommended Design Criteria Manual for Water Works,* Pierre, SD: Division of Environmental Regulation.

University of Kentucky Civil Engineering Department, (2000). Pipe 2000 Manual (Lexington, KY: University of Kentucky, Civil Engineering Software Center), pp.

Weather Underground. Precipitation Records for Yankton, SD. <www,weatherunderground.com>

Appendix A

Environmental Assessment Correspondence

Correspondence will be inserted when available.

Appendix B

SD DENR Water System Evaluation

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

June 28, 2013

Re: Wakonda (EPA ID# 0349)

THE HONORABLE BERNARD STEFFEN
CITY OF WAKONDA
PO BOX 372
WAKONDA SD 57073

Dear President Steffen:

The Department of Environment and Natural Resources (DENR) performed an on site evaluation of your drinking water system June 5, 2013. Based on the information obtained during that visit, we have some recommendations and requirements to assist you with maintaining compliance with regulations, improving operations and providing public health protection. The requirements and recommendations are as follows:

REQUIREMENTS FOR WAKONDA

1. Mike holds the required Class I Water Distribution certificate. We encourage him to continue to attend classes to maintain his certifications. Attendance at classes/training to achieve 10 contact hours every three years is required to maintain certifications. The classes put on by the South Dakota Association of Rural Water Systems are an opportunity for operators to learn new rules written by EPA, ask questions, learn necessary skills and attain needed contact hours. Contact the South Dakota Rural Water Association at PO Box 287 (203 Center Street West), Madison, SD 57042, 605-556-7219 for information on training classes. For information on the operator certification program contact Rob Kittay with the Drinking Water Program, 523 E. Capitol Avenue, Pierre, SD 57501, 605-773-4208.

2. Potable water that is flushed, discharged or that overflows into a storm sewer that drains to waters of the state is considered a point source discharge and is subject to state regulation. This includes overflows from treatment and storage systems, filter backwash and settling basins, disinfection and flushing of potable water lines, storage system disinfection and water line breaks and leak repairs. The "Water Treatment Plant General Permit" is specifically designed for this purpose.

   The permit application can be accessed and completed online at http://denr.sd.gov/des/sw/wtppermit.aspx. For additional information or to

determine if your water system needs or already holds this permit, contact DENR's Surface Water Quality Program at (605) 773-3351 or write the DENR-SWQ, 523 East Capitol Avenue, Pierre, SD 57501-3181.

3. State Plumbing Code requires a double check valve on all standard service connections. Existing plumbing connections are grandfathered in; however, if any work is done, such as installing a meter or pressure pump, it must include a double check valve. An approved backflow preventor will prevent back siphoning of potential contaminants into the water supply if a negative pressure is created.

4. Just as a reminder, the United States Fire Insurance Services does not recommend the use of water mains smaller than six inches in diameter. A pumper fire truck should never be connected to a fire hydrant served by mains less than six inches in diameter. Contamination of the water supply or damage to the distribution system could result from backsiphoning or negative pressures. To be assured of adequate fire and backsiphonage protection, all future water main installations must be six inches in diameter or larger. The Department of Environment and Natural Resources recommends installation of flushing hydrants when using less than six inch diameter mains.

5. The Ground Water Rule requires triggered monitoring after an unsafe routine bacteriological sample, as well as correction of significant deficiencies. This sampling is in addition to the repeat samples required by the Total Coliform Rule. The requirements are:

   -Identification of significant water system deficiencies during sanitary surveys;
   -Triggered source water monitoring by water systems that collect an unsafe sample during its normal bacteriological monitoring and assessment monitoring targeted toward high-risk systems;
   -Corrective action is required for any system with an identified significant deficiency or source water fecal contamination;
   -Compliance monitoring to ensure that treatment technology installed to treat drinking water reliably achieves 99.99 percent (4-log) inactivation or removal of viruses if fecal indicators are discovered.

RECOMMENDATIONS FOR WAKONDA

6. The free chlorine residual of the water should be tested a couple of times each week from different locations in the distribution system. A free chlorine residual of at least 0.3 mg/L (ppm) should be detectable in the distribution system at all times. Testing information (date, time, location and result) should be included in the operations records. This is in addition to the residual you measure and record when collecting your bacteriological samples.

7. Accurate records should be kept concerning operation and maintenance activities relating to the water and water system components. See attached quick reference guide on record keeping. Some examples of records we recommend keeping are:

- Main Break Information – when the main was installed, pipe material and size, frequency and location of breaks.
- Chlorine Residual Field Tests – date, time, location and result of test.
- Complaints and actions taken to address them.
- Valve Location/Inspection/Exercise Activities - All working valves be inspected annually, including examining the condition of the valve box, operating the valve and lubricating where required. Valve records should be kept to aid in planning, operation and maintenance and locating. Maintenance records verify the operator's ability to isolate main features and maintain fire flows.
- Main Flushing Activities - Mains should be flushed once or twice a year. Flushing will improve your water quality, reduce complaints due to taste and odor, restore the carrying capacity of the mains and help eliminate the nutrients that coliform bacteria need to grow.
- Main/Hydrant/Valve Replacement.
- All Maintenance/Security Activities.
- Paperwork/Correspondence.
- Equipment Repairs/Purchases.
- Master/Individual Meter Readings.

8. A valve inspection and exercise program should be developed. All working valves should be inspected annually and should include examining the condition of the valve box, operating the valve and lubricating where required. Manufacturers guidelines should be followed. Valve records should be kept to aid in planning, operation and maintenance, and locating. Maintenance records verify the operator's ability to isolate main features and maintain fire flows.

9. The figures provided show a 17% water loss which is quite high. We recommend if the loss exceeds 15%, the distribution system be surveyed for leaks, faulty meters and/or other problems which might contribute to that loss percentage and the utility can then begin to repair/replace those contributing factors and lessen the loss percentage.

10. When you collect a bacteria sample and are completing the submitter form, record the site number (1-5) in the 'site #' blank and the site name (house/building description or address) in the 'location info' blank. The address or building description is more descriptive than just the faucet information.

11. If there are no plans to use or maintain the old city wells, they should be properly plugged and abandoned. Please contact DENR's Water Rights Program at 773-3352 for the proper procdure.

12. SDWARN (South Dakota Water/Wastewater Agency Response Network) is a utility created and driven mutual aid/assistance program. It is a means of receiving help from and giving help to neighboring water/wastewater utilities when responding to and/or recovering from an emergency. SDWARN is an insurance policy a member utility can use when the inevitable flood, ice storm, blizzard, fire or even a human-caused event occurs and a utility needs assistance in response and recovery activities. All utilities, no matter their size, are invited to

join because all have something to offer. The WARN fact sheet provides answers to questions that you may have. To become a member of South Dakota WARN, a signed mutual aid agreement must be submitted to the steering committee chairman. The mutual aid agreement means to address the administrative and legal issues prior to an event/disaster so focus can be completely on response and recovery. I encourage you to take this idea and opportunity to your utility's governing body for consideration. Membership is not a requirement but there are benefits and advantages to membership. A fact sheet and mutual aid agreement are included for your consideration.

For technical assistance contact the Department of Environment and Natural Resources' Drinking Water Program at 523 East Capitol, Pierre, SD 57501, (605) 773-3754 or the South Dakota Rural Water Association at PO Box 287 (203 Center Street West), Madison, SD. 57042. (605) 556-7219. The West River office for the South Dakota Rural Water Association is at 1140 N. Main, Suite 5, Spearfish, SD 57783, 605-642-4031.

Representatives of your water system are invited to attend seminars and training courses sponsored by the DENR and the South Dakota Association of Rural Water Systems (SDARWS). Contact the SDARWS at 556-7219 or write them at PO Box 287 (203 Center Street West), Madison, SD. 57042.

Please acknowledge that you have received this report by indicating corrective actions taken. If you have questions or comments concerning the on-site evaluation, please call the Drinking Water Program in Pierre at 773-3754 or 1-800-438-3367.

Sincerely,

Barbara Friedeman

Barbara Friedeman
Drinking Water Program

cc: Mike Bohlmann, Utilities Manager
Celia Peterson, Finance Officer

South Dakota Department of Environment and Natural Resources

Drinking Water Program

Public Water System On-Site Evaluation Report

System Name: Wakonda EPA ID #: 0349
Address: PO Box 372
Wakonda, SD 57073-0265

County: Clay

Person Contacted: Mike Bohlmann Work phone: (605)267-3118
Address: PO Box 372 Home phone: (605)267-2538
Wakonda, SD 57073-0372 Cell phone: (605)661-2314
Fax:
E-mail: midichch@iw.net

Inspected By: Barbara Friedeman Date of Inspection: 6/5/13 (mm/dd/yy)

Type of System: (check one) X Community Water System
Non-Transient Non-Community

Population: Total Population Served: 321 System Population: 321

Number of Service Connections: 155 Susceptibility to contamination of water source: low

Sources of Water: Water data from year: 2012

Own Source(s):	NA	Total produced:	NA	% of total:	#VALUE!
Bulk Supplier:	Clay Rural Water System (0626)	Total purchased:	12,995,000	% of total:	100.0%
Contracted flow rate?:	Unlimited				
		Total Annual Use:	12,995,000		100.0%

Water Sold to: NA
(bulk connections only)

How much water can this system supply? (maximum flow rate, gpm)
What major factor limits system's ability to supply water? Lines are too small and too old and leaky.

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Is there an up-to-date map or schematic of system?
☑	☐	☐	☐	☐	2 Is the system capable of meeting demand at all times (excluding fire flow)?
☐	☐	☑	☐	☐	3 Is good housekeeping evident throughout the system?

Comments:

Water Usage

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	4 Are all customers metered?	
					5 If not, what entities are not metered?	
					6 Total gallons billed:	10754000
					7 Calculated water loss:	17.2%
yes	no	n/a	unk	note	8 Peak month and amount used	Jul-12 — 1,672,000 gallons
☑	☐	☐	☐	☐	9 Does the system track unaccounted-for water?	

Comments:

Water Sources

Town of Wakonda EPA ID: 0349

Name	Year Built	Diameter (in)	Depth (ft)	GPM	Status	ID
#1	1935	6	215		Abandoned	1
#2	1953	6	208		Abandoned	2
CLAY RWS	1982				Permanent	3

Name	Water Right #	Aquifer	Location Description	ID
#1	1892-3	CARLILE		1
#2	1892-3	CARLILE		2
CLAY RWS			Meter pit by tower.	3

yes	no	n/a	unk	note		
☐	☐	☑	☐	☐	1	Has a Source Water Protection Plan been developed? Date: _____
☐	☐	☑	☐	☐	2	Is the wellhead/pumphouse protected from unauthorized personnel?
☐	☐	☑	☐	☐	3	Are there any sources of contamination with 1/4 mile?
☐	☐	☑	☐	☐	4	Are pesticides, herbicides, fertilizers applied in the area of the well(s)?
☐	☐	☑	☐	☐	5	Is a pressure gauge provided at each source?
☐	☐	☑	☐	☐	6	Is a sample tap provided for raw water?
☐	☐	☑	☐	☐	7	Can flow be measured from each well?
☐	☐	☑	☐	☐	8	Is the well house(s) kept clean, in good repair and not used to store hazardous material?

Comments: Wells are not used at all for drinking. Pumphouses are quite rundown.

Storage

Town of Wakonda EPA ID: 0349

Description	Service Date	Location	ID
1 Elevated Steel 50000	2012	Corner of 3rd Street and Ohio Street.	4

yes	no	n/a	unk	note		
☐	☐	☑	☐	☐	1	Is the area surrounding the ground-level storage structures graded in a manner that will prevent surface water from standing within 50 feet?
☑	☐	☐	☐	☐	2	Do overflows and drains have free fall discharges which are screened and are brought down to an elevation between 12 and 24 inches above the ground?
☐	☑	☐	☐	☑	3	Do the overflows and/or drains discharge to a splash pad or drainage inlet structure that is not connected to a storm or sanitary sewer?
☑	☐	☐	☐	☐	4	Do the storage reservoirs have a watertight roof or cover and are they sloped so that water will drain?
☑	☐	☐	☐	☐	5	Are storage structures designed so that they can be isolated from the distribution system without necessitating loss of pressure in the distribution system?
☐	☑	☐	☐	☐	6	Is leakage evident at the time of inspection?
☑	☐	☐	☐	☐	7	Are the storage structures vented?
☑	☐	☐	☐	☐	8	Are vents properly protected/screened?
☑	☐	☐	☐	☐	9	Are covers and hatches locked?
☐	☑	☐	☐	☐	10	Is there separate inlet and outlet piping?
☑	☐	☐	☐	☐	11	Does the drain allow for removal of accumulated silt?
☐	☑	☐	☐	☐	12	Are there any weather related problems (freezing, etc.)?
☑	☐	☐	☐	☐	13	Is there a control system to maintain level?
☑	☐	☐	☐	☑	14	Are there high and low level alarms?
					15	Are tanks filled automatically, manually or both? Automatically
☑	☐	☐	☐	☐	16	Is there a service contract for cleaning/inspecting the tanks?
☑	☐	☐	☐	☐	17	Are the tanks disinfected after being cleaned or inspected? How?
☑	☐	☐	☐	☐	18	Are the storage structures secure from unauthorized access?
☐	☑	☐	☐	☐	19	Is the area fenced?
					20	What other steps have been taken to address security? Climb guards on tower legs.

Comments: (3)Discharges to ground. (14)Light indicator and alarm. Clay plans to install a new master meter.

Distribution System

Town of Wakonda **EPA ID: 0349**

Main sizes and types: 80% 4" and 6" cast iron and 20% 4" and 6" PVC

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Is the water system capable of providing sufficient water during maximum demand conditions (excluding fire flow) to maintain a minimum pressure of 20 psi within the system measured at the consumer's tap?
					2	What is normal operating pressure? 30's psi
☑	☐	☐	☐	☐	3	Are there areas with chronic low pressure problems?
☑	☐	☐	☐	☐	4	Is an adequate map (shows valve locations, line sizes, etc) of the distribution system maintained?
☑	☐	☐	☐	☐	5	Is there a main flushing program? If yes, how often? annually
☐	☑	☐	☐	☐	6	Are all dead-end water mains equipped with a means to flush?
☐	☑	☐	☐	☐	7	Any plans to eliminate dead-ends (via looping of mains, etc.)?
☐	☑	☐	☐	☑	8	Are valves exercised regularly? If yes, how often?
☑	☐	☐	☐	☐	9	Are there fire hydrants on mains less than 6 inches in diameter?
☑	☐	☐	☐	☐	10	Does the system disinfect after pipe repairs or new pipe installation?
☐	☑	☐	☐	☐	11	Is the location and nature of each repair documented?
☐	☑	☐	☐	☐	12	Does the system utilize a conservation program at any time?
☑	☐	☐	☐	☐	13	Is the system adequately protected from freezing?
☑	☐	☐	☐	☐	14	Are water and sewer mains separated by a horizontal distance of 10 feet or greater?
☐	☐	☑	☐	☐	15	Is there a cross connection control program?
☐	☐	☑	☐	☐	16	Are audits conducted to check for cross connections in the system?
☐	☑	☐	☐	☐	17	Are backflow preventers installed on all consumer connections?
☐	☐	☑	☐	☐	18	Is the bulk water loading station designed with back flow prevention and appropriate air gap device to prevent contamination?
☐	☑	☐	☐	☐	19	Does the system contain any pressure reducing valves?
☐	☐	☑	☐	☐	20	For systems using chloramines, can you measure a total chlorine residual level of at least 0.5 mg/l in your distribution system at all times?
☑	☐	☐	☐	☐	21	For systems using chlorine, can you measure a free chlorine residual level of at least 0.3 mg/l in your distribution system at all times?
					22	How often do you take chlorine readings in the distribution system? Once per month.

Comments (please indicate the question number): Pressure at tower is 40 psi. (8)Some valves get done annually.

Monitoring/Reporting - Distribution

Town of Wakonda **EPA ID: 0349**

yes	no	n/a	unk	note	
					1 Are the following sampling site plans up to date?
☑	☐	☐	☐	☐	- Bacteriological
☑	☐	☐	☐	☐	- Lead and copper
☑	☐	☐	☐	☐	- Disinfection By Products (DBP)
☑	☐	☐	☐	☐	2 Are microbiological sampling sites (as approved by DENR) being rotated on a monthly basis for routine sampling?
☑	☐	☐	☐	☑	3 Does the system have a waiver for asbestos sampling?
					4 Which of the following records are kept regarding the system?
yes	no	n/a	unk	note	Operational Data:
☑	☐	☐	☐	☐	Flow meter readings:
☐	☐	☑	☐	☐	Electrical usage:
☐	☐	☑	☐	☐	Chemical usage:
☐	☐	☑	☐	☐	Hour meter readings:
☑	☐	☐	☐	☐	Storage or reservoir levels:
					Sampling data:
☑	☐	☐	☐	☐	- Chlorine residual testing
☑	☐	☐	☐	☐	- Bacteriological sampling
☐	☐	☑	☐	☐	- Fluoride levels
☐	☐	☑	☐	☐	- Asbestos sampling results
☑	☐	☐	☐	☐	- Lead and Copper sampling results
☑	☐	☐	☐	☐	- DBP Monitoring
					Other: _____
					Maintenance Data:
☐	☑	☐	☐	☐	Water main repairs:
☐	☑	☐	☐	☐	Main flushing dates:
☐	☑	☐	☐	☐	Valve exercising dates:
☐	☑	☐	☐	☐	Equipment service:
					Other: _____

Testing and Testing Equipment

Test kits present at system: Hach color comparator

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	5 Are up to date reagents present?

Tests and frequency performed by operator: Free chlorine tested once per month with bacteriological sample.

Survey test results: 1.0 ppm free chlorine.

Bacteriological Monitoring

Bacteriological sampling and analysis: April 1, 2012 to April 1, 2013

A	Samples submitted:	12
B	Samples required:	One Sample Each Month.
C	Survey samples:	0
D	Safe samples:	12
E	Unsafe samples:	0
F	Repeat samples:	0

Lead and Copper Monitoring

(These values are calculated from available data. Check correspondence for verification.)

A	Date Last Tested:	August 9, 2012	
B	Samples required:	5	
C	Sampling Frequency	Triennially	
D	Date Due Next	2015	
E	Lead - 90% Level	0.65	Action Level - 15 ug/l
F	Copper 90% Level	0.02	Action Level - 1.3 mg/l

Disinfectant Residual Monitoring

Residual sampling and analysis: April 1, 2012 to April 1, 2013

A	Samples submitted:	12	
B	Samples required:	One Sample Each Month.	
C	Last Qtr Cl Residual:	0.6	mg/l
D	Running Annual Average:	0.6	mg/l
E	Date of last DBP test:	No Tests	
F	THM - Qtr Average:		ug/l
G	Haa5 - Qtr Average:		ug/l

Asbestos

A	Date of last test:	Waiver - Testing Not Required
B	Asbestos Result:	million fibers per liter

Comments (3)Asbestos waiver good through 12/31/2019.

Managerial Capacity

Town of Wakonda **EPA ID: 0349**

Certification Level of Water System: Distribution: I Treatment: NA

Certification Levels: Very Small Water System (VSWS) Water Distribution (WD) I - IV
Small Water Treatment System (SWTS) Water Treatment (WT) I - IV

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Does the water system have a governing body? (city council, housing association, district, etc.) City Council
					2	How often does the governing body meet to review water system data? Monthly
☑	☐	☐	☐	☐	3	Are all personnel that make water quality and quantity decisions certified?
☑	☐	☐	☐	☐	4	Is an operator certified at the level of the system available at all times?

Operator Name and Number	Water	Distribution	WW	Collection	Pond	SWTS	VSWS
Michael Bohlmann (1939)		I					

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	5	Do you feel you have received adequate training?
☑	☐	☐	☐	☐	6	Is the number of people adequate to operate the water system?
☐	☑	☐	☐	☐	7	Do you maintain records to document compliance (up to 10 years)?
☑	☐	☐	☐	☐	8	Does the system have a written Emergency Response Plan?
☐	☑	☐	☐	☐	9	Does the system have operations and/or maintenance manuals?
☑	☐	☐	☐	☐	10	Do you know what to do in the event of a violation?
☐	☑	☐	☐	☐	11	Have there been any MCL violations or compliance orders for the system in the last 12 months?
☐	☐	☑	☐	☐	12	If so, is there a compliance plan?
☑	☐	☐	☐	☐	13	Is someone responsible for emergency operations, communications and customer relations? Who? Mike
☐	☑	☐	☐	☐	14	Are routine operation and maintenance records kept?
☑	☐	☐	☐	☐	15	Is the system aware of all required sampling for the year?
☑	☐	☐	☐	☐	16	Does the system have current "as built" engineering drawings of the system facilities?
☐	☐	☑	☐	☐	17	Do you keep records of complaints and the actions taken to address each one?
					18	How many complaints do you receive on average each year? 0
					19	What is general nature of complaints (taste, odor, color, pressure)?
☑	☐	☐	☐	☐	20	Has the latest edition of the Consumer Confidence Report been distributed?
☑	☐	☐	☐	☐	21	Is a copy of the latest Consumer Confidence Report Available?

☐ ☑ ☐ ☐ ☐ 22 Have any changes been made since the last survey in the management, operations, personnel, budget, etc?

If so, what? _____

☐ ☑ ☐ ☐ ☐ 23 Have the recommendations from the previous survey been addressed?

Comments (please indicate the question number): _____

_____

_____

_____

_____

_____

Financial Capacity

Town of Wakonda **EPA ID: 0349**

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Does the public water system have an annual budget?
☑	☐	☐	☐	☐	2	Does the water system income exceed operating expenses (including debt service)?
☐	☑	☐	☐	☐	3	Does the water system track budget performance?
☐	☑	☐	☐	☐	4	Does the water system have audited financial statements?
☐	☑	☐	☐	☐	5	Are water revenues kept in a separate account?
☐	☑	☐	☐	☐	6	Is some of the water revenue set aside in reserve funds for future capital improvement projects?
☐	☑	☐	☐	☐	7	Is there a capital improvement long range plan (up to 5 years)?
☑	☐	☐	☐	☐	8	Are the water system rates reviewed on at least an annual basis?
☐	☑	☐	☐	☐	9	Is there a plan for rate increases?
☑	☐	☐	☐	☐	10	Is the rate structure based on metered water use?
						List rates: $12 minimum and $4.25 per 1000 gallons thereafter.
						(example: $22 minimum plus $1.75/1000 gallons)
☑	☐	☐	☐	☐	11	Are there procedures in place to handle delinquent accounts?
☐	☑	☐	☐	☐	12	Are more than 5% of your customer accounts delinquent?
☑	☐	☐	☐	☐	13	Are controls available to limit over-expenditures?
☑	☐	☐	☐	☐	14	Are there purchasing procedures?
☑	☐	☐	☐	☐	15	Does the system utilize computer software (accounting or otherwise) to maintain its financial records?

Comments (please indicate the question number):

Violations and Significant Deficiencies

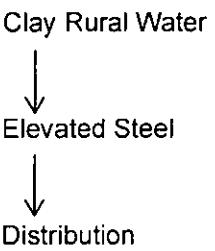
Town of Wakonda **EPA ID: 0349**

Violations From April 1, 2008 To April 1, 2013

Violation Type	Parameter	Date	Status
No Violations			

Significant Deficiency	Date Identified	Date Corrected
None		

Flow Diagram



WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: City of Britton

Project Title:	Drinking Water Improvements
Funding Requested:	$4,656,000
Total Project Cost:	$4,656,000
Project Description:	Britton is proposing to replace all 4-inch cast iron, asbestos cement, PVC and 6-inch cast iron pipes with 6-inch PVC lines and additional valves. The city is also proposing to paint and update the existing 250,000-gallon ground water and 150,000-gallon elevated storage tanks plus construct a new pump house.
Alternatives Evaluated:	The city evaluated several alternatives for each project. The "No Action" alternative was considered for each project and rejected. The storage tanks are nearing 50 years of service and the city determined they need to be painted to add additional service life and upgraded to meet OSHA standards. The current booster pumps are in poor condition and need replacing. Britton is proposing to construct a new pump house with booster pumps. The pump station would be below ground to provide easier access and maintenance. The city evaluated three alternatives for the waterline replacement. The "No Action" alternative was rejected because the existing mains and valves are undersized and in poor condition. The city also wants to add additional valves to assist in isolating smaller sections of the city when emergencies occur in the system. Alternative 2 proposes to replace all 4-inch cast iron and asbestos cement pipe with 6-inch PVC lines. Alternative 3 proposes to replace all 4-inch cast iron, asbestos cement and PVC lines and 6-inch cast iron pipes with 6-inch PVC water mains.
Implementation Schedule:	Design of the project would begin in the summer of 2016 with construction starting in the spring of 2017 and continuing through the fall of 2017.
Service Population:	1,241
Current Domestic Rate:	$31.25 per 5,000 gallons usage

Interest Rate: 3.0% Term: 30 years Security: Project Surcharge

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan Britton would have to establish a surcharge of approximately $29.67. When added to current rate of $31.25/5,000 gallons residents would be paying $60.92/5,000 gallons.

25% Funding Subsidy:	$1,164,000 subsidy with a loan of $3,492,000.
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $3,492,000 Britton would have to establish a surcharge of approximately $22.25 thereby paying a rate $53.50/5,000 gallons.

50% Funding Subsidy:	$2,328,000 subsidy with a loan of $2,328,000.
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $2,328,000 Britton would have to establish a surcharge of approximately $14.83 thereby paying a rate $46.08/5,000 gallons.

75% Funding Subsidy:	$3,492,000 subsidy with a loan of $1,164,000.
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $1,164,000 Britton would have to establish a surcharge of approximately $7.42 thereby paying a rate $38.67/5,000 gallons.

ENGINEERING REVIEW COMPLETED BY: JIM ANDERSON

FINANCIAL REVIEW COMPLETED BY: DEREK LANKFORD

Drinking Water Facilities Funding Application

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:	Proposed Funding Package	
City of Britton		
Address: 803 8th Street Britton, SD 57430	Requested Funding	$4,656,000
	Local Cash	
	Other:	
Subapplicant:	Other:	
	Other:	
DUNS Number: 46-6000062	TOTAL	$4,656,000

Project Title: Britton Drinking Water Improvements

Description:

The city is proposing to update and paint the existing 250,000 gallon storage, and constructing a new pump house with new booster pumps.

The city is also proposing to replace all 4" cast iron pipe and all cement 4" pipe with 6" PVC pipe and add additional valves to help isolate sections of the City. This will help increase water flows and allow the City to isolate sections of town when repairs are needed. Existing valves that are not working will be replaced and valves will be added to fire hydrants so servicing can be completed without disrupting service.

The City's monthly water rate for 5,000 gallons is $31.25. (Flat fee of $18.75/mo plus $2.50 per 1,000 gallons).

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Clyde Fredrickson, Mayor		December 14, 2015
Name & Title of Authorized Signatory (Typed)	Signature	Date

Professional Consultants

Application Prepared By: NECOG

Contact Person: Jennifer Sietsema

Mailing Address: 416 Production Street N., Suite 1

City, State, and Zip: Aberdeen, SD 57401

Telephone Number: 605-626-2595 Fax: 605-626-2975

Email address: jennifer@necog.org

Consulting Engineering Firm: Helms Engineering

Contact Person: Bob Babcock

Mailing Address: PO Box 111

City, State, and Zip: Aberdeen, SD 57402-0111

Telephone Number: 605-225-1212 Fax: 605-225-3189

Email address: bobb@helmsengineering.com

Legal Counsel's Firm: Bantz, Gosch, and Cremer, LLC

Contact Person: Justin Scott

Mailing Address: PO Box 970

City, State, and Zip: Aberdeen, SD 57402-0970

Telephone Number: 605-225-2232 Fax: 605-225-2497

Email address: jscott@bantzlaw.com

Bond Counsel's Firm: Meierhenry Sargent LLP

Contact Person: Todd Meierhenry

Mailing Address: 315 S. Phillips Avenue

City, State, and Zip: Sioux Falls, SD 57104

Telephone Number: 605-336-3075 Fax:

Email address: todd@meierhenrylaw.com

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel	$118,000					$118,000
D. Other						
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$334,000					$334,000
B. Project Inspection Fees	$310,900					$310,900
C. Other						
4. Construction & Improvements	$3,384,100					$3,384,100
5. Equipment						
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$4,147,000					$4,147,000
10. Contingencies	$509,000					$509,000
11. Total (Lines 9 and 10)	$4,656,000					$4,656,000
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)			
Other (Explain) DENR (DWSRF/CWFCP/WQ)		$4,656,000	March 25, 2016
Other (Explain)			
Other (Explain)			
Total		$4,656,000	$4,656,000

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: Jan 1st

Population Served Current: 1,241 2010 1,241 2000 1,328

Top three employers within 30 miles	Number of Employees	Type of Business
Horton Inc	175	Industry
Full Circle Ag	94	Fuel/Ag
Marshall County Hospital	91	medical facility

Repayment Information

Interest rate you are applying for: 3% Term: 30

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☒ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan.
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year	2003					
Purpose	Drinking Water Imp.					
Security Pledged	Surcharge					
Amount	$317,640					
Maturity Date (mmm/yyyy)	7/1/2022					
Debt Holder	First National Bank					
Debt Coverage Requirement	110%					
Avg. Annual Required Payment	$24,152					
Outstanding Balance	$117,093					

Comments:

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$262,932	$256,476	$260,000	$260,000	$260,000	$265,000
Surcharge Fees					$259,116	$259,116
Other (Explain)	$460	$662	$1,000	$1,000	$1,000	$1,000
Operating Expenses						
Personal Services	($29,780)	($35,926)	($42,236)	($44,075)	($48,000)	($52,000)
Chemical, Material & Supplies	($138,008)	($169,798)	($106,000)	($148,584)	($150,000)	($155,000)
Electric & Other Utilities	($18,715)	($11,124)	($11,300)	($6,500)	($12,000)	($12,000)
Other (Explain)		($4,222)	($58,450)	($28,500)	($30,000)	($30,000)
Operating Net Cash	$76,889	$36,068	$43,014	$33,341	$280,116	$276,116
Nonoperating Cash Flow						
Interest Revenue	$679	$1,097	$750	$750	$750	$750
Transfers In (Explain)						
Fixed Asset Purchases						
Transfers Out (Explain)						
Principal Debt Payments	($15,878)	($16,604)	($17,365)	($18,159)	($18,990)	($19,859)
Interest Debt Payments	($8,274)	($7,547)	($6,788)	($5,993)	($5,162)	($4,293)
Other (Explain)					($235,560)	($235,560)
Nonoperating Net Cash	($23,473)	($23,055)	($23,403)	($23,402)	($258,962)	($258,962)
Increase (Decrease) Cash	$53,416	$13,013	$19,611	$9,939	$21,154	$17,154
Beginning Cash Balance	$716,871	$770,287	$783,300	$802,911	$812,850	$834,005
Ending Cash Balance	$770,287	$783,300	$802,911	$812,850	$834,005	$851,159
Restricted Balance	$134,887	$146,887	$147,000	$147,000	$406,116	$406,116
Unrestricted Balance	$185,400	$186,414	$187,000	$187,000	$187,000	$187,000

Explanations

Surcharge in 2017 and 2018 are based on 683 users and a surcharge of $31.61 (683 x $31.61 x 12 months). Surcharge amount represents 110% debt coverage. Non-operating cash flow "Other" line represents annual debt payment. Restricted funds represents surcharge repayment for 2003 FNB loan and capital/equipment replacement.

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber
$6,038	Debt Payment	surcharge ordinance
$140,849.29	Capital/Equip Replacement	budget ordinance

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: [X] Incorporated Municipality or Sanitary District

or

[ ] Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic	$31.25	$31.25	601	4879
Business	$31.25	$31.25	82	4879
Other:				
Other:				

Are fees based on usage or flat rate? Usage

When is proposed fee scheduled to take effect? NA

When did the current fee take effect? January 1, 2015

What was the fee prior to the current rate? $30.75

Four Largest Customers	Type of Business	% of System Revenue
Buhls Dry Cleaners	service	1.4%
Wheatcrest Hills	nursing home	1.5%
Horton Inc.	manufacturing	0.8%
Marshall County Healthcare	Hospital	0.7%

Property Tax Information

(Complete section only if General Obligation bond is pledged to repay your loan.)

Three year valuation trend:

Year			
Assessed Valuation			

Three year levies and collection trend:

Year			
Amount Levied			
Collected			

Five Largest Taxpayers	Description	Assessed Valuation

Comments:

General Fund Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Sales Tax Information

(Complete section only if sales tax is pledged to repay your loan.)

Sales tax revenue history for the most current fifteen months:

Month/Year	Amount Collected

Comments:

Sales Tax Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Facilities Plan Checklist

Before submitting the application, please take a few moments to complete the following checklist. Addressing these items prior to submitting the application will expedite the review process.

Drinking Water Facilities Plan document can be found at http://denr.sd.gov/dfta/wwf/dwsrf/dwfunding.aspx

Checklist of SRF Facilities Plan Requirements

Have the following items been addressed?

- Submission of a Facilities Plan to the department that addresses those items found in the Water Facilities Plan document. ☒
- A public hearing held discussing the project and the use of an SRF loan to finance the project. ☒
- Minutes of the public hearing prepared and submitted to the department's engineer for inclusion into the final Facilities Plan. ☒
- The affidavit of publication of the public hearing received and submitted to the department's engineer for inclusion into the final Facilities Plan. ☒
- The four review agencies contacted and responses received for inclusion into the final Facilities Plan. ☒
- The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. ☐

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$3,921,000
Treatment	
Storage	$735,000
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$4,656,000

Clyde Fredrickson, Mayor

Name & Title of Authorized Representative

Signature of Authorized Representative

12/21/2015

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Clyde Frederickson, Mayor

Name & Title of Authorized Representative

Signature of Authorized Representative

12/21/2015

Date

☐ I am unable to certify to the above statements. Attached is my explanation

ORIGINAL

CITY OF BRITTON, SOUTH DAKOTA

RECEIVED
JAN 04 2015
Division of Financial
& Technical Assistance

Drinking Water Improvements

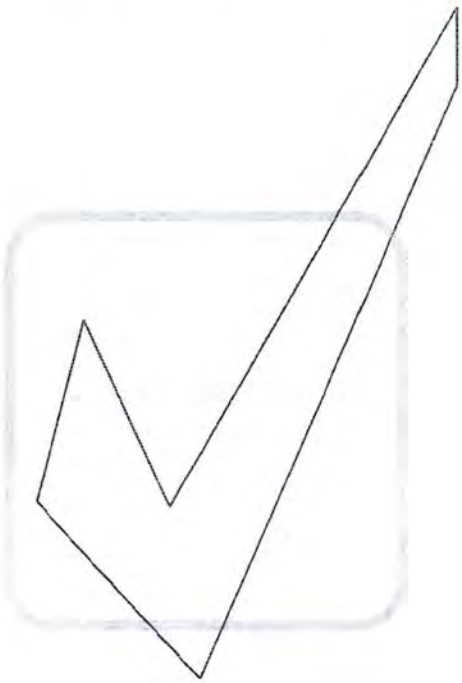
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DRINKING WATER STATE REVOLVING FUND

APPLICATION

PREPARED BY:
NORTHEST COUNCIL OF GOVERNMENTS
DECEMBER 2015

SD EForm - 0427LD V2

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: City of Britton

Prepared by: Cameron Gerken

Phone #: 605-470-0026

Date: 12-28-15

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µg/L: micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** 105,000 gal.	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:***	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:***	☐	☐	☑	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:***	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:***	☐	☐	☑	☐
Have you been able to provide adequate volumes of water during drought cycles?	☐	☐	☑	☐
Have you had to restrict usage at any time for any reason? ***Please specify:***	☐	☑	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:*** elevated & ground storage tanks	☑	☐	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.*** BDM Direct Feed	☑	☐	☐	☐
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☐ ***growing,*** ☐ ***declining, or*** ☐ ***stable.***	☐	☐	☑	☐
Does your source have additional water available for appropriation?	☐	☐	☑	☐
Do you have a water right? ***Water right permit number(s):***	☐	☑	☐	☐
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☒	☐	☐	☐
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☒	☐	☐	☐
Do you have a contract to purchase water? ***If yes, with whom?*** BDM Rural Water	☒	☐	☐	☐
Are you currently staying within your contract?	☒	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☐	☑	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☐	☑	☐	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☐	☐	☐	☐
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** _____	☐	☐	☐	☑
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** Middle James	☑	☐	☐	☐
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☑	☐	☐	☐

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☐ **Yes** ☑ **No**

(If you checked "No", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☐	☐
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☐	☐
Are repair parts available?	☐	☐	☐	☐
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:*** _____	☐	☐	☐	☐
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☐	☐
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☐	☐
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:*** _____	☐	☐	☐	☐
Do you have the capability to add coagulant before the filter?	☐	☐	☐	☐

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☐	☐	☐	☑
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** _____	☐	☐	☐	☑
Is your well(s) constructed according to current South Dakota regulations?	☐	☐	☐	☐
Do you have a source water protection plan?	☐	☐	☐	☑
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☐	☐	☐	☑

Disinfection

Do you disinfect? ☐ **Yes** ☒ **No** ***(If "No", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** _____ ***How often?*** _____ ***Disinfectant used:*** _____	☐	☐	☐	☐
Do you have back-up equipment? ***Type:*** _____	☐	☐	☐	☐
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** _____	☐	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** _____ ***Total Chlorine Residual:*** _____ (if using chloramines)	☐	☐	☐	☐

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☐
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☐

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☐	☐	☐	☐
Are chemicals used for treatment properly stored and secure?	☐	☐	☐	☐
Does the water system track chemical usage? (i.e. a sudden	☐	☐	☐	☐

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping

	Yes	No	Unknown	NA
Condition of Pumping Equipment Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** weekly	☑	☐	☐	☐
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☑	☐	☐	☐
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☑	☐	☐	☐
Standby/Emergency Power Equipment Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☑	☐	☐	☐
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☑	☐	☐	☐
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☑	☐	☐	☐

Infrastructure - Storage

	Yes	No	Unknown	NA
Storage Capacity Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:*** _____	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** 375,000 gals	☑	☐	☐	☐
Security Measures Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☑	☐	☐	☐
Are access hatches locked?	☑	☐	☐	☐
Is the tank and the immediate surrounding area fenced?	☐	☑	☐	☐
Control Systems Is there a high and low water level signal system to control the pumps?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Is there a drain valve or hydrant to allow for draining of the tank?	☑	☐	☐	☐
Tank Maintenance Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☑	☐	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☑	☐	☐	☐

Infrastructure - Distribution

	Yes	No	Unknown	NA
System Maintenance Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:*** twice a year	☑	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☑	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☑	☐	☐	☐
Are all valves exercised and lubricated periodically?	☑	☐	☐	☐
Is the system free of severe "water hammer" problems?	☑	☐	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☑	☐	☐	☐
Unaccounted-for Water Is unaccounted-for water in the water system monitored and analyzed each month? annually	☐	☑	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 14 %	☑	☐	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 65 psi	☑	☐	☐	☐
Do you have a routine leak detection and repair program?	☐	☑	☐	☐
Are all sources of supply and customers metered?	☑	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☐	☑	☐	☐
Water Quality in Distribution System Does your system have an active cross-connection control program?	☑	☐	☐	☐

Are any inspections for cross-connections performed?	☐	☑	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☑	☐	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☐	☑	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** 70%	☑	☐	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☐	☑	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☐	☑	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☐	☑	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** _____ ***Most common complaint:*** _____	☐	☑	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☐	☑	☐	☐

The Management Portion of your System

Please mark the appropriate box: *Yes, No,* or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** Distribution 1	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** Helms & Associates, Rural Water	☑	☐	☐	☐

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☑	☐	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☐	☑	☐	☐
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications?	☑	☐	☐	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☐	☑	☐	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☑	☐	☐	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☐	☑	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☐	☑	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☐	☑	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** _____	☐	☑	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☐	☑	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☑	☐	☐
Do you know what to do in the event of a violation?	☐	☑	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☑	☐	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☑	☐	☐	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☑	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☑	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** Cameron Gorton City Foreman	☑	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☑	☐	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☑	☐	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☑	☐	☐	☐
Do you have written operating procedures for both routine and emergency system operations?	☐	☑	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☑	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☑	☐	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☑	☐	☐	☐

Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☑	☐	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☑	☐	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☑	☐	☐	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☑	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☒	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☒	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** Equipment Replacement/Repair	☒	☐	☐	☐
Does the system have reserve funds available in the event of an emergency?	☒	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☐	☒	☐	☐
Do you have a process for scheduling and committing to capital projects?	☒	☐	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☒	☐	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☐	☒	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** Annually	☒	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☒	☐	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** $18.75 user fee + $2.50/1000 gal (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: NO	☐	☒	☐	☐
Does the rate structure assure proportionality among users?	☒	☐	☐	☐
Do you have procedures for billing and collection?	☒	☐	☐	☐
Is your billing collection rate greater than 95%?	☒	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☒	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☒	☐	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☒	☐	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☒	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☐	☒	☐	☐
Do you employ standardized accounting and tracking systems?	☒	☐	☐	☐
Do you track budget performance?	☒	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☒	☐	☐	☐
Are financial management recordkeeping systems organized?	☒	☐	☐	☐
Are controls exercised over expenditures?	☒	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☒	☐	☐	☐
Are there purchasing procedures?	☒	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☒	☐	☐	☐

Financial Spreadsheet

Complete the financial spreadsheet on the following page using the guidance presented on the reverse side of the form.

GUIDELINES:

This cash flow projection form provides a systematic method of estimating cash receipts, disbursements and balances. The entries listed on the form will not necessarily apply to every PWS, and some entries may not be included which would be pertinent to each PWS. It is suggested, therefore, that the form be adapted to each particular PWS, with appropriate changes in the entries as may be required.

Procedure: Most of the entries on the form are self-explanatory; however, the following suggestions are offered to simplify the procedure:

(1) First gather the audited financial statements, internally prepared statements or budgets and other information for the current year and the two prior years. Include the most recent audited financial statement with your self-assessment report.

(2) Complete the columns for the prior two years using actual data from your audited financial statements, if available, or your internally prepared financial statements. Keep in mind, for purposes of this analysis, it is important to use **cash** receipts and disbursements. ***Suggestion: Round amounts to the nearest dollar.***

(3) Complete the current year's column using the most recent budget information. Include all expenditures incurred by the utility.

(4) Complete the form using the suggestions in the partial form below for each entry. Be sure to include any expenditures resulting from planned plant improvement and estimate the impact of inflation on all expenditures.

(5) Item #1 (Beginning Cash on Hand) plus Item #3 (Total Cash Receipts) minus Item #6 (Total Cash Paid Out) should equal Item #7 (Ending Cash Position).

(6) Item #13 (Total Added to Reserves) plus Item #14 (Operating Cash) should equal Item #7 (Ending Cash Position).

(7) Item #1 (Beginning Cash on Hand) should equal Item #14 (Ending Cash Position) from the prior financial period.

(8) Items #8 & 9 are used together to determine the impact of the rate structure on the equivalent residential user. If industrial or business customers contribute a significant portion of the revenues, these amounts should be looked at separately. Consideration should be given to design a rate structure so that each

category of user pays its proportional share of the costs of operating and maintaining the PWS.

(9) Item #10 is used to determine to what extent a PWS's net operating income is able to cover its debt service requirements.

(10) Item #11 is used to determine to what extent a PWS's rate structure produces revenues sufficient to cover operating expenses.

(11) Item #14 is the operating cash balance at year end. The operating cash balance at the end of any financial period should be adequate to meet the cash requirements for a minimum of one month. If there is too little cash, additional cash may have to be injected or expenditures may have to be reduced. If there is excessive cash on hand, the money should be invested or otherwise deposited into interest bearing accounts (e.g., set up reserves for replacement or capital improvements, etc.)

Financial Spreadsheet

Applicant: City of Britton
Completed by:
Date: 12-30-2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	$770,287	$783,300	$802,911	$812,850	$833,605
2. Cash Receipts:					
a. Unmetered Water Revenue	$662	$1,000	$1,000	$1,000	$1,000
b. Metered Water Revenue	$256,476	$260,000	$260,000	$260,000	$265,000
c. Other Water Revenue					
d. Total Water Revenues (2a through 2c)	$257,138	$261,000	$261,000	$261,000	$266,000
e. Connection Fees					
f. Interest and Dividend Income	$1,097	$750	$750	$500	$500
g. Other Income					
h. Total Cash Revenues (2d through 2g)	$258,235	$261,750	$261,750	$261,500	$266,500
i. Transfers in/Additional Rev Needed					
j. Loans, Grants or other Cash					
Please specify					
3. Total Cash Receipts (2h through 2j)	$258,235	$261,750	$261,750	$261,500	$266,500
4. Total Cash Available (1+3)	$1,028,522	$1,045,050	$1,064,661	$1,074,350	$1,100,105
5. Operating Expenses					
a. Salaries and wages	$35,926	$29,075	$30,500	$37,000	$40,000
b. Employee Pensions and Benefits		$9,561	$9,975	$11,000	$12,000
c. Purchased Water	$169,798	$98,500	$143,484	$145,000	$147,000
d. Purchased Power		$6,000	$5,500	$5,500	$5,500
e. Fuel for Power Production		$2,500	$2,100	$2,000	$2,000
f. Chemicals					
g. Materials and Supplies	$11,124	$7,500	$5,000	$5,000	$5,000
h. Engineering Services					
i. Contractual Services – Other		$10,000	$5,000	$5,000	$5,000
j. Equip. Rent/Real Property		$5,000			
k. Transportation Expenses		$1,200	$1,000	$1,000	$1,000
l. Laboratory					
m. Insurance		$3,600	$3,600	$3,600	$3,600
n. Regulatory Commission Expenses					
o. Advertising		$250	$500	$400	$400
p. Miscellaneous	$4,222	$4,800	$1,000	$2,500	$2,500
q. Total Cash O&M Expenses (5a through 5p)	$221,070	$177,986	$207,659	$218,000	$224,000
r. Replacement Expenditures		$40,000	$20,000	$22,000	$25,000
s. Total OM&R Expenditures (5q+5r)	$221,070	$217,986	$227,659	$240,000	$249,000
t. Loan Principal/Capital Lease Payments	$16,604	$17,365	$18,159	$18,990	$19,859
u. Loan Interest Payments	$7,547	$6,788	$5,993	$5,162	$4,293
v. Transfers Out					
w. Capital Purchases (specify):					
x. Other					
6. Total Cash Paid Out (5s through 5x)	$245,221	$242,139	$251,811	$264,152	$273,152
7. Ending Cash Position (4 - 6)	$783,301	$802,911	$812,850	$810,198	$826,953

Financial Spreadsheet

Applicant: City of Britton
Completed by: NECOG
Date: 12/31/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts	683	683	683	683	683
9. Avg Annual User Charge Account (2d/8)	$376	$383	$383	$383	
10. Coverage Ratio (2h-5s)/(5t+5u)					
11. Operating Ratio (2d/5s)					
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve	$6,038	$6,000	$6,000	$29,556	$29,556
b. Bond Retirement Reserve				$235,560	$235,560
c. Capital Improvement Reserve	$140,849	$141,000	$141,000	$141,000	$141,000
d. Replacement Reserve					
e. Other					
13. Total Reserves (12a through 12e)					
14. Year End Operating Cash (7 – 13)					

FINANCIALS AND CURRENT YEAR BUDGET

SAM
SYSTEM FOR AWARD MANAGEMENT

Log into SAM

Status During Registration

- Getting Started
- Draft
- Work in Progress
- Submitted
- Active
- Inactive / Expired

Additional Resources

- What If My Entity Fails Registration?
- Federal Service Desk

How to Check Your Registration Status

- Find Your Registration in SAM

SAM Status Tracker

804481211 Search Reset

Search Reset

BRITTON, CITY OF

Status: Active

Your registration was activated on Dec 08, 2015. It expires on Dec 07, 2016 which is one year after you submitted it for processing.

Core Data	Assertions	Reps & Certs	POCs	Submit	Processing	Active
Completed	Not Required	Not Required	Completed	Completed	Completed	Completed

Check Your Registration Status in SAM

You can quickly check your registration status in SAM by entering your DUNS number or (N)CAGE Code. The SAM Status Tracker will show you the current status of the entity associated with that DUNS number or (N)CAGE Code, as well as tell you what steps you have left to complete based on why you are registering.

The SAM Status Tracker uses seven circles to represent the registration process: Core Data, Assertions, Reps & Certs, POCs, Submit, Processing, and Active. Visual indicators in the circles, text underneath the circles, a status message in bold above the circles and user messaging combine to give the registration status.

You will only see results for publicly searchable registration records. Federal government users must log into SAM to search for non-public records.

WWW 4

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CITY OF BRITTON
Next Year Budget-Revenue

PRGM	FUND	Account Descr	2016 Budget
FUND 1010 General Fund			
PRGM 3100 Taxes			
3100	1010	R 1010-3100-31101 Current Year	$443,704.00
3100	1010	R 1010-3100-31102 Current Year Minus 1	$0.00
3100	1010	R 1010-3100-31109 Other	$0.00
3100	1010	R 1010-3100-31300 Municipal Sales Tax	$600,000.00
3100	1010	R 1010-3100-31500 Amusement Machine License Fee	$60.00
3100	1010	R 1010-3100-31900 Tax Penalties	$0.00
PRGM 3100 Taxes			$1,043,764.00
PRGM 3200 Licenses and Permits			
3200	1010	R 1010-3200-32000 Licenses and Permits	$1,000.00
3200	1010	R 1010-3200-32001 Peddlers License	$0.00
PRGM 3200 Licenses and Permits			$1,000.00
PRGM 3310 Federal Grants			
3310	1010	R 1010-3310-33170 Airport Improvement Grant	$45,000.00
3310	1010	R 1010-3310-33176 AIP 3-46-0004-09-2010	$0.00
3310	1010	R 1010-3310-33177 AIP 10-2011 LAYOUT PLAN	$0.00
3310	1010	R 1010-3310-33178 AIP 3-46-0004-11-2013	$0.00
3310	1010	R 1010-3310-33179 Airport Land Acquisition	$207,000.00
PRGM 3310 Federal Grants			$252,000.00
PRGM 3340 State Grants			
3340	1010	R 1010-3340-33170 Airport Improvement Grant	$2,500.00
3340	1010	R 1010-3340-33179 Airport Land Acquisition	$11,500.00
3340	1010	R 1010-3340-33490 Other State Grants	$7,000.00
3340	1010	R 1010-3340-33491 AIP 09-2010	$0.00
3340	1010	R 1010-3340-33492 AIP 10-2011	$0.00
PRGM 3340 State Grants			$21,000.00
PRGM 3350 State Shared Revenue			
3350	1010	R 1010-3350-33503 Liquor Tax Reversion	$8,000.00
3350	1010	R 1010-3350-33504 Motor Vehicle Licenses (5%)	$18,000.00
3350	1010	R 1010-3350-33508 Local Govt Hwy & Bridge Fund	$42,500.00
3350	1010	R 1010-3350-33510 Bank Franchise Tax	$800.00
3350	1010	R 1010-3350-33520 Motor Veh Commercial Pro Rate	$4,000.00
PRGM 3350 State Shared Revenue			$73,300.00
PRGM 3380 County Shared Revenue			
3380	1010	R 1010-3380-33801 County Road Tax (25%)	$0.00
PRGM 3380 County Shared Revenue			$0.00
PRGM 3400 Charges for Goods and Services			
3400	1010	R 1010-3400-34000 Charges for Goods and Services	$0.00
3400	1010	R 1010-3400-34010 Street and Alley Repair	$0.00
PRGM 3400 Charges for Goods and Services			$0.00
PRGM 3410 General Governments			
3410	1010	R 1010-3410-34101 Zoning & Subdivision Fees	$1,000.00
PRGM 3410 General Governments			$1,000.00
PRGM 3440 Sanitation			
3440	1010	R 1010-3440-31300 Municipal Sales Tax	$83,232.00
3440	1010	R 1010-3440-34401 Refuse Collection Charges	$0.00
PRGM 3440 Sanitation			$83,232.00

CITY OF BRITTON
Next Year Budget-Revenue

PRGM	FUND	Account Descr	2016 Budget
PRGM 3450 Health			
3450	1010	R 1010-3450-34502 Animal Control and Shelter Fee	$0.00
PRGM 3450 Health			$0.00
PRGM 3460 Culture & Recreation			
3460	1010	R 1010-3460-34602 Swimming Pool Fees	$18,500.00
3460	1010	R 1010-3460-34603 RV Park	$1,000.00
3460	1010	R 1010-3460-34604 Concessions	$7,500.00
3460	1010	R 1010-3460-36700 Donations	$0.00
3460	1010	R 1010-3460-39000 Other Sources	$0.00
PRGM 3460 Culture & Recreation			$27,000.00
PRGM 3480 Cemetery			
3480	1010	R 1010-3480-34800 Cemetery	$500.00
3480	1010	R 1010-3480-36700 Donations	$0.00
PRGM 3480 Cemetery			$500.00
PRGM 3500 Fines and Forfeits			
3500	1010	R 1010-3500-35100 Court Fines	$0.00
PRGM 3500 Fines and Forfeits			$0.00
PRGM 3600 Miscellaneous Revenue			
3600	1010	R 1010-3600-36000 Miscellaneous Revenue	$1,000.00
PRGM 3600 Miscellaneous Revenue			$1,000.00
PRGM 3610 Investment Earnings			
3610	1010	R 1010-3610-36100 Interest	$750.00
PRGM 3610 Investment Earnings			$750.00
PRGM 3620 Rentals			
3620	1010	R 1010-3620-36200 Rentals	$11,900.00
PRGM 3620 Rentals			$11,900.00
PRGM 3630 Special Assessments			
3630	1010	R 1010-3630-36301 Principal Collected by County	$2,640.00
3630	1010	R 1010-3630-36302 Int and Pen Collected by Count	$1,147.00
3630	1010	R 1010-3630-36303 Principal Collected by Municip	$0.00
3630	1010	R 1010-3630-36304 Int and Pen Collected by Munic	$0.00
PRGM 3630 Special Assessments			$3,787.00
PRGM 3680 Liquor Operating Agreement Inc			
3680	1010	R 1010-3680-36800 Liquor Operating Agreement Inc	$62,000.00
PRGM 3680 Liquor Operating Agreement Inc			$62,000.00
PRGM 3690 Other			
3690	1010	R 1010-3690-36901 Cable TV Franchise Fee	$2,600.00
3690	1010	R 1010-3690-36902 SD Sales Tax Allowance	$90.00
3690	1010	R 1010-3690-36904 Dividend Income	$100.00
PRGM 3690 Other			$2,790.00
PRGM 3850 Airport			
3850	1010	R 1010-3850-38502 Rentals	$0.00
PRGM 3850 Airport			$0.00
PRGM 3900 Other Sources			
3900	1010	R 1010-3900-39001 WorkComp Refund	$0.00
PRGM 3900 Other Sources			$0.00
PRGM 3910 Other Financing Sources			

CITY OF BRITTON
Next Year Budget-Revenue

PRGM	FUND	Account Descr	2016 Budget
3910	1010	R 1010-3910-39103 Sale of Municipal Property	$0.00
3910	1010	R 1010-3910-39104 Comp for Loss or Damage to Cap	$0.00
PRGM 3910 Other Financing Sources			$0.00
FUND 1010 General Fund			$1,585,023.00
FUND 2110 Municipal Gross Receipts Fund			
PRGM 3100 Taxes			
3100	2110	R 2110-3100-31300 Municipal Sales Tax	$35,000.00
PRGM 3100 Taxes			$35,000.00
PRGM 3610 Investment Earnings			
3610	2110	R 2110-3610-36100 Interest	$0.00
PRGM 3610 Investment Earnings			$0.00
FUND 2110 Municipal Gross Receipts Fund			$35,000.00
FUND 2170 Revolving Loan Fund			
PRGM 3610 Investment Earnings			
3610	2170	R 2170-3610-36100 Interest	$1,000.00
PRGM 3610 Investment Earnings			$1,000.00
FUND 2170 Revolving Loan Fund			$1,000.00
FUND 4010 Cemetery Perpetual Care Fund			
PRGM 3610 Investment Earnings			
3610	4010	R 4010-3610-36100 Interest	$100.00
PRGM 3610 Investment Earnings			$100.00
FUND 4010 Cemetery Perpetual Care Fund			$100.00
FUND 4030 Britton Library Foundation			
PRGM 3610 Investment Earnings			
3610	4030	R 4030-3610-36100 Interest	$1,000.00
PRGM 3610 Investment Earnings			$1,000.00
FUND 4030 Britton Library Foundation			$1,000.00
FUND 5010 Walking Path Fund			
PRGM 3610 Investment Earnings			
3610	5010	R 5010-3610-36100 Interest	$0.00
PRGM 3610 Investment Earnings			$0.00
PRGM 3670 Contributions and Donations			
3670	5010	R 5010-3670-36700 Donations	$0.00
PRGM 3670 Contributions and Donations			$0.00
FUND 5010 Walking Path Fund			$0.00
FUND 6020 Water Fund			
PRGM 3610 Investment Earnings			
3610	6020	R 6020-3610-36100 Interest	$750.00
PRGM 3610 Investment Earnings			$750.00
PRGM 3810 Water			
3810	6020	R 6020-3810-36900 Other	$0.00
3810	6020	R 6020-3810-36904 Dividend Income	$500.00
3810	6020	R 6020-3810-38101 Metered and Flat Rate Water Sa	$260,000.00
3810	6020	R 6020-3810-38103 Sale of Supplies and Materials	$0.00
3810	6020	R 6020-3810-38104 Water Deposits	$500.00

CITY OF BRITTON
Next Year Budget-Revenue

PRGM	FUND	Account Descr	2016 Budget
3810	6020	R 6020-3810-39103 Sale of Municipal Property	$0.00
PRGM 3810 Water			$261,000.00
FUND 6020 Water Fund			$261,750.00
FUND 6040 Sewer Fund			
PRGM 3340 State Grants			
3340	6040	R 6040-3340-33499 Other State Grants	$0.00
PRGM 3340 State Grants			$0.00
PRGM 3610 Investment Earnings			
3610	6040	R 6040-3610-36100 Interest	$0.00
PRGM 3610 Investment Earnings			$0.00
PRGM 3830 Sewer			
3830	6040	R 6040-3830-31109 Other	$0.00
3830	6040	R 6040-3830-33101 Rural Development Grant	$0.00
3830	6040	R 6040-3830-33401 Clean Water Grant	$0.00
3830	6040	R 6040-3830-36904 Dividend Income	$0.00
3830	6040	R 6040-3830-38301 Sewer Charges	$150,000.00
3830	6040	R 6040-3830-38302 2012 Sewer Surcharge	$81,000.00
3830	6040	R 6040-3830-38303 2013 Sewer Surcharge	$150,000.00
3830	6040	R 6040-3830-39120 Proceeds from Loan	$0.00
3830	6040	R 6040-3830-39130 State Revolving Loan	$1,500,000.00
3830	6040	R 6040-3830-39131 Rural Development Loan	$0.00
PRGM 3830 Sewer			$1,881,000.00
PRGM 3910 Other Financing Sources			
3910	6040	R 6040-3910-39129 Other Long Term Debt Issued	$0.00
PRGM 3910 Other Financing Sources			$0.00
FUND 6040 Sewer Fund			$1,881,000.00
			$3,764,873.00

CITY OF BRITTON

Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2016 Budget
FUND 1010 General Fund			
DEPT 4111 Board, Council or Commission			
1010	4111	E 1010-4111-41100 Salary	$16,500.00
1010	4111	E 1010-4111-41200 OASI	$1,239.00
1010	4111	E 1010-4111-41400 Workmens Compensation	$0.00
1010	4111	E 1010-4111-42100 Insurance	$960.00
1010	4111	E 1010-4111-42200 Services and Fees	$1,600.00
1010	4111	E 1010-4111-42600 Supplies	$250.00
1010	4111	E 1010-4111-42700 Travel and Conference	$1,000.00
DEPT 4111 Board, Council or Commission			$21,549.00
DEPT 4113 Ordinances,Resolutions, Procee			
1010	4113	E 1010-4113-42300 Publishing	$3,000.00
DEPT 4113 Ordinances,Resolutions, Procee			$3,000.00
DEPT 4115 Contingency			
1010	4115	E 1010-4115-42900 Other	$70,000.00
DEPT 4115 Contingency			$70,000.00
DEPT 4121 Mayor			
1010	4121	E 1010-4121-41100 Salary	$3,900.00
1010	4121	E 1010-4121-41200 OASI	$298.00
1010	4121	E 1010-4121-41400 Workmens Compensation	$0.00
1010	4121	E 1010-4121-42100 Insurance	$960.00
1010	4121	E 1010-4121-42200 Services and Fees	$1,600.00
1010	4121	E 1010-4121-42600 Supplies	$1,000.00
DEPT 4121 Mayor			$7,758.00
DEPT 4130 Elections			
1010	4130	E 1010-4130-42200 Services and Fees	$380.00
1010	4130	E 1010-4130-42300 Publishing	$250.00
1010	4130	E 1010-4130-42600 Supplies	$250.00
1010	4130	E 1010-4130-42700 Travel and Conference	$350.00
DEPT 4130 Elections			$1,230.00
DEPT 4141 Legal (Attorney)			
1010	4141	E 1010-4141-42200 Services and Fees	$22,000.00
1010	4141	E 1010-4141-42600 Supplies	$100.00
DEPT 4141 Legal (Attorney)			$22,100.00
DEPT 4142 Finance Officer			
1010	4142	E 1010-4142-41100 Salary	$43,200.00
1010	4142	E 1010-4142-41200 OASI	$3,305.00
1010	4142	E 1010-4142-41300 Retirement	$2,592.00
1010	4142	E 1010-4142-41400 Workmens Compensation	$366.00
1010	4142	E 1010-4142-41500 Group Insurance	$8,632.00
1010	4142	E 1010-4142-41600 Unemployment Compensation	$76.00
1010	4142	E 1010-4142-42100 Insurance	$495.00
1010	4142	E 1010-4142-42200 Services and Fees	$3,500.00
1010	4142	E 1010-4142-42600 Supplies	$2,850.00
1010	4142	E 1010-4142-42700 Travel and Conference	$1,500.00
1010	4142	E 1010-4142-42900 Other	$250.00
1010	4142	E 1010-4142-43400 Machinery & Equipment	$2,500.00
1010	4142	E 1010-4142-43410 Computer Software	$1,000.00
DEPT 4142 Finance Officer			$70,266.00

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2016 Budget
DEPT 4147 General Financial Admin			
1010	4147	E 1010-4147-41100 Salary	$8,642.00
1010	4147	E 1010-4147-41200 OASI	$661.00
1010	4147	E 1010-4147-41300 Retirement	$519.00
1010	4147	E 1010-4147-41400 Workmens Compensation	$122.00
1010	4147	E 1010-4147-41500 Group Insurance	$2,336.00
1010	4147	E 1010-4147-41600 Unemployment Compensation	$51.00
1010	4147	E 1010-4147-42100 Insurance	$25.00
1010	4147	E 1010-4147-42200 Services and Fees	$15,000.00
1010	4147	E 1010-4147-42300 Publishing	$150.00
1010	4147	E 1010-4147-42600 Supplies	$3,800.00
1010	4147	E 1010-4147-42700 Travel and Conference	$1,500.00
1010	4147	E 1010-4147-42800 Utilities	$0.00
1010	4147	E 1010-4147-42803 Telephone	$3,450.00
1010	4147	E 1010-4147-42900 Other	$100.00
1010	4147	E 1010-4147-43400 Machinery & Equipment	$2,500.00
1010	4147	E 1010-4147-43410 Computer Software	$1,000.00
DEPT 4147 General Financial Admin			$39,856.00
DEPT 4192 General Govt Buildings			
1010	4192	E 1010-4192-41100 Salary	$0.00
1010	4192	E 1010-4192-41200 OASI	$0.00
1010	4192	E 1010-4192-41300 Retirement	$0.00
1010	4192	E 1010-4192-41400 Workmens Compensation	$0.00
1010	4192	E 1010-4192-41500 Group Insurance	$0.00
1010	4192	E 1010-4192-41600 Unemployment Compensation	$0.00
1010	4192	E 1010-4192-42100 Insurance	$960.00
1010	4192	E 1010-4192-42200 Services and Fees	$10,000.00
1010	4192	E 1010-4192-42300 Publishing	$0.00
1010	4192	E 1010-4192-42500 Repairs and Maintenance	$22,617.00
1010	4192	E 1010-4192-42600 Supplies	$3,500.00
1010	4192	E 1010-4192-42800 Utilities	$0.00
1010	4192	E 1010-4192-42801 Electricity	$4,500.00
1010	4192	E 1010-4192-42802 Heat/Propane	$3,500.00
1010	4192	E 1010-4192-42803 Telephone	$0.00
1010	4192	E 1010-4192-42804 Water	$30.00
1010	4192	E 1010-4192-42900 Other	$0.00
DEPT 4192 General Govt Buildings			$45,107.00
DEPT 4210 Law Enforcement			
1010	4210	E 1010-4210-42200 Services and Fees	$147,952.00
DEPT 4210 Law Enforcement			$147,952.00
DEPT 4227 911 Services			
1010	4227	E 1010-4227-42200 Services and Fees	$21,426.00
DEPT 4227 911 Services			$21,426.00
DEPT 4229 Volunteer Fire Dept			
1010	4229	E 1010-4229-42200 Services and Fees	$10,584.00
1010	4229	E 1010-4229-42600 Supplies	$0.00
1010	4229	E 1010-4229-42603 Gasoline/Diesel	$1,800.00
1010	4229	E 1010-4229-42800 Utilities	$0.00
1010	4229	E 1010-4229-42801 Electricity	$2,500.00
1010	4229	E 1010-4229-42802 Heat/Propane	$2,000.00
1010	4229	E 1010-4229-42804 Water	$276.00

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2016 Budget
DEPT 4229 Volunteer Fire Dept			$17,160.00
DEPT 4230 Protective Inspection (Code E)			
1010	4230	E 1010-4230-41100 Salary	$1,200.00
1010	4230	E 1010-4230-41200 OASI	$92.00
1010	4230	E 1010-4230-41300 Retirement	$72.00
1010	4230	E 1010-4230-41400 Workmens Compensation	$1,175.00
1010	4230	E 1010-4230-41500 Group Insurance	$100.00
1010	4230	E 1010-4230-41600 Unemployment Compensation	$10.00
1010	4230	E 1010-4230-42200 Services and Fees	$1,000.00
1010	4230	E 1010-4230-42300 Publishing	$250.00
1010	4230	E 1010-4230-42600 Supplies	$500.00
1010	4230	E 1010-4230-42603 Gasoline/Diesel	$100.00
1010	4230	E 1010-4230-42700 Travel and Conference	$1,000.00
1010	4230	E 1010-4230-42900 Other	$100.00
1010	4230	E 1010-4230-43410 Computer Software	$0.00
DEPT 4230 Protective Inspection (Code E)			$5,599.00
DEPT 4312 Streets and Roadways			
1010	4312	E 1010-4312-41100 Salary	$103,158.00
1010	4312	E 1010-4312-41200 OASI	$7,892.00
1010	4312	E 1010-4312-41300 Retirement	$6,189.00
1010	4312	E 1010-4312-41400 Workmens Compensation	$3,300.00
1010	4312	E 1010-4312-41500 Group Insurance	$21,676.00
1010	4312	E 1010-4312-41600 Unemployment Compensation	$180.00
1010	4312	E 1010-4312-41900 Other Personal Services	$0.00
1010	4312	E 1010-4312-42100 Insurance	$3,900.00
1010	4312	E 1010-4312-42200 Services and Fees	$2,500.00
1010	4312	E 1010-4312-42300 Publishing	$100.00
1010	4312	E 1010-4312-42500 Repairs and Maintenance	$0.00
1010	4312	E 1010-4312-42501 Chip Seal	$0.00
1010	4312	E 1010-4312-42502 Pothole Repair	$5,000.00
1010	4312	E 1010-4312-42503 Equipment Repairs	$15,000.00
1010	4312	E 1010-4312-42600 Supplies	$7,000.00
1010	4312	E 1010-4312-42602 Gravel/Sand	$10,000.00
1010	4312	E 1010-4312-42603 Gasoline/Diesel	$13,000.00
1010	4312	E 1010-4312-42700 Travel and Conference	$500.00
1010	4312	E 1010-4312-42800 Utilities	$0.00
1010	4312	E 1010-4312-42801 Electricity	$18,000.00
1010	4312	E 1010-4312-42803 Telephone	$4,000.00
1010	4312	E 1010-4312-42900 Other	$100.00
1010	4312	E 1010-4312-43303 Street Light Project	$0.00
1010	4312	E 1010-4312-43400 Machinery & Equipment	$40,000.00
DEPT 4312 Streets and Roadways			$261,495.00
DEPT 4323 Solid Waste Collection			
1010	4323	E 1010-4323-41100 Salary	$8,642.00
1010	4323	E 1010-4323-41200 OASI	$661.00
1010	4323	E 1010-4323-41300 Retirement	$519.00
1010	4323	E 1010-4323-41400 Workmens Compensation	$610.00
1010	4323	E 1010-4323-41500 Group Insurance	$2,336.00
1010	4323	E 1010-4323-41600 Unemployment Compensation	$14.00
1010	4323	E 1010-4323-42200 Services and Fees	$83,300.00
1010	4323	E 1010-4323-42300 Publishing	$75.00
1010	4323	E 1010-4323-42600 Supplies	$1,000.00

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2016 Budget
1010	4323	E 1010-4323-42900 Other	$0.00
DEPT 4323 Solid Waste Collection			$97,157.00
DEPT 4324 Rubble Site			
1010	4324	E 1010-4324-41100 Salary	$8,295.00
1010	4324	E 1010-4324-41200 OASI	$635.00
1010	4324	E 1010-4324-41300 Retirement	$233.00
1010	4324	E 1010-4324-41400 Workmens Compensation	$366.00
1010	4324	E 1010-4324-41500 Group Insurance	$250.00
1010	4324	E 1010-4324-41600 Unemployment Compensation	$10.00
1010	4324	E 1010-4324-42100 Insurance	$300.00
1010	4324	E 1010-4324-42200 Services and Fees	$150.00
1010	4324	E 1010-4324-42300 Publishing	$150.00
1010	4324	E 1010-4324-42500 Repairs and Maintenance	$50.00
1010	4324	E 1010-4324-42600 Supplies	$500.00
1010	4324	E 1010-4324-42603 Gasoline/Diesel	$600.00
1010	4324	E 1010-4324-42900 Other	$0.00
DEPT 4324 Rubble Site			$11,539.00
DEPT 4350 Airport			
1010	4350	E 1010-4350-41100 Salary	$7,500.00
1010	4350	E 1010-4350-41200 OASI	$575.00
1010	4350	E 1010-4350-41300 Retirement	$150.00
1010	4350	E 1010-4350-41400 Workmens Compensation	$245.00
1010	4350	E 1010-4350-41500 Group Insurance	$500.00
1010	4350	E 1010-4350-41600 Unemployment Compensation	$14.00
1010	4350	E 1010-4350-42100 Insurance	$1,600.00
1010	4350	E 1010-4350-42200 Services and Fees	$10,000.00
1010	4350	E 1010-4350-42201 Wildlife Assessment & Manageme	$50,000.00
1010	4350	E 1010-4350-42300 Publishing	$100.00
1010	4350	E 1010-4350-42500 Repairs and Maintenance	$250.00
1010	4350	E 1010-4350-42600 Supplies	$2,000.00
1010	4350	E 1010-4350-42603 Gasoline/Diesel	$700.00
1010	4350	E 1010-4350-42700 Travel and Conference	$750.00
1010	4350	E 1010-4350-42800 Utilities	$0.00
1010	4350	E 1010-4350-42801 Electricity	$5,000.00
1010	4350	E 1010-4350-42803 Telephone	$555.00
1010	4350	E 1010-4350-42900 Other	$100.00
1010	4350	E 1010-4350-43300 Improvement Other Than Buildin	$0.00
1010	4350	E 1010-4350-43344 Airport Land Acquisition	$230,000.00
1010	4350	E 1010-4350-43360 AIP 3-46-0004-009-2010	$0.00
1010	4350	E 1010-4350-43370 AIP 10-2011	$0.00
1010	4350	E 1010-4350-43380 AIP 3-46-0004-11-2013	$0.00
1010	4350	E 1010-4350-43400 Machinery & Equipment	$6,000.00
DEPT 4350 Airport			$316,039.00
DEPT 4370 Cemetery			
1010	4370	E 1010-4370-41100 Salary	$14,067.00
1010	4370	E 1010-4370-41200 OASI	$1,077.00
1010	4370	E 1010-4370-41300 Retirement	$120.00
1010	4370	E 1010-4370-41400 Workmens Compensation	$854.00
1010	4370	E 1010-4370-41500 Group Insurance	$300.00
1010	4370	E 1010-4370-41600 Unemployment Compensation	$25.00
1010	4370	E 1010-4370-42100 Insurance	$957.00
1010	4370	E 1010-4370-42200 Services and Fees	$450.00

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2016 Budget
1010	4370	E 1010-4370-42300 Publishing	$50.00
1010	4370	E 1010-4370-42500 Repairs and Maintenance	$500.00
1010	4370	E 1010-4370-42600 Supplies	$2,500.00
1010	4370	E 1010-4370-42603 Gasoline/Diesel	$750.00
1010	4370	E 1010-4370-42800 Utilities	$0.00
1010	4370	E 1010-4370-42801 Electricity	$540.00
1010	4370	E 1010-4370-42803 Telephone	$0.00
1010	4370	E 1010-4370-42900 Other	$0.00
1010	4370	E 1010-4370-43400 Machinery & Equipment	$0.00
DEPT 4370 Cemetery			$22,190.00
DEPT 4390 Bus Barn			
1010	4390	E 1010-4390-42100 Insurance	$425.00
1010	4390	E 1010-4390-42600 Supplies	$50.00
1010	4390	E 1010-4390-42800 Utilities	$0.00
1010	4390	E 1010-4390-42801 Electricity	$660.00
1010	4390	E 1010-4390-42802 Heat/Propane	$2,000.00
DEPT 4390 Bus Barn			$3,135.00
DEPT 4412 Animal Control			
1010	4412	E 1010-4412-41100 Salary	$2,600.00
1010	4412	E 1010-4412-41200 OASI	$199.00
1010	4412	E 1010-4412-41400 Workmens Compensation	$122.00
1010	4412	E 1010-4412-42100 Insurance	$0.00
1010	4412	E 1010-4412-42200 Services and Fees	$195.00
1010	4412	E 1010-4412-42300 Publishing	$200.00
1010	4412	E 1010-4412-42600 Supplies	$250.00
DEPT 4412 Animal Control			$3,566.00
DEPT 4413 West Nile			
1010	4413	E 1010-4413-41100 Salary	$2,100.00
1010	4413	E 1010-4413-41200 OASI	$161.00
1010	4413	E 1010-4413-41300 Retirement	$126.00
1010	4413	E 1010-4413-41500 Group Insurance	$500.00
1010	4413	E 1010-4413-41600 Unemployment Compensation	$10.00
1010	4413	E 1010-4413-42100 Insurance	$25.00
1010	4413	E 1010-4413-42200 Services and Fees	$75.00
1010	4413	E 1010-4413-42300 Publishing	$0.00
1010	4413	E 1010-4413-42600 Supplies	$0.00
1010	4413	E 1010-4413-42601 Chemicals	$14,000.00
1010	4413	E 1010-4413-42603 Gasoline/Diesel	$250.00
1010	4413	E 1010-4413-42700 Travel and Conference	$0.00
1010	4413	E 1010-4413-42900 Other	$0.00
DEPT 4413 West Nile			$17,247.00
DEPT 4512 Swim Pool			
1010	4512	E 1010-4512-41100 Salary	$64,388.00
1010	4512	E 1010-4512-41200 OASI	$4,926.00
1010	4512	E 1010-4512-41300 Retirement	$960.00
1010	4512	E 1010-4512-41400 Workmens Compensation	$1,465.00
1010	4512	E 1010-4512-41500 Group Insurance	$3,364.00
1010	4512	E 1010-4512-41600 Unemployment Compensation	$28.00
1010	4512	E 1010-4512-42100 Insurance	$4,465.00
1010	4512	E 1010-4512-42200 Services and Fees	$5,000.00
1010	4512	E 1010-4512-42300 Publishing	$500.00
1010	4512	E 1010-4512-42500 Repairs and Maintenance	$10,000.00

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2016 Budget
1010	4512	E 1010-4512-42600 Supplies	$10,000.00
1010	4512	E 1010-4512-42601 Chemicals	$15,000.00
1010	4512	E 1010-4512-42620 Merchandise for Resale	$7,000.00
1010	4512	E 1010-4512-42700 Travel and Conference	$100.00
1010	4512	E 1010-4512-42800 Utilities	$0.00
1010	4512	E 1010-4512-42801 Electricity	$4,000.00
1010	4512	E 1010-4512-42802 Heat/Propane	$12,000.00
1010	4512	E 1010-4512-42803 Telephone	$300.00
1010	4512	E 1010-4512-42804 Water	$1,415.00
1010	4512	E 1010-4512-42900 Other	$100.00
1010	4512	E 1010-4512-43400 Machinery & Equipment	$5,000.00
DEPT 4512 Swim Pool			$150,011.00
DEPT 4522 Parks			
1010	4522	E 1010-4522-41100 Salary	$15,000.00
1010	4522	E 1010-4522-41200 OASI	$1,200.00
1010	4522	E 1010-4522-41300 Retirement	$480.00
1010	4522	E 1010-4522-41400 Workmens Compensation	$732.00
1010	4522	E 1010-4522-41500 Group Insurance	$1,000.00
1010	4522	E 1010-4522-41600 Unemployment Compensation	$27.00
1010	4522	E 1010-4522-42100 Insurance	$2,233.00
1010	4522	E 1010-4522-42200 Services and Fees	$1,500.00
1010	4522	E 1010-4522-42300 Publishing	$50.00
1010	4522	E 1010-4522-42500 Repairs and Maintenance	$4,400.00
1010	4522	E 1010-4522-42503 Equipment Repairs	$0.00
1010	4522	E 1010-4522-42600 Supplies	$2,500.00
1010	4522	E 1010-4522-42603 Gasoline/Diesel	$1,100.00
1010	4522	E 1010-4522-42800 Utilities	$0.00
1010	4522	E 1010-4522-42801 Electricity	$1,320.00
1010	4522	E 1010-4522-42804 Water	$1,700.00
1010	4522	E 1010-4522-42900 Other	$100.00
1010	4522	E 1010-4522-43400 Machinery & Equipment	$0.00
DEPT 4522 Parks			$33,342.00
DEPT 4524 Forestry and Nursery			
1010	4524	E 1010-4524-41100 Salary	$3,150.00
1010	4524	E 1010-4524-41200 OASI	$241.00
1010	4524	E 1010-4524-41300 Retirement	$189.00
1010	4524	E 1010-4524-41400 Workmens Compensation	$2,560.00
1010	4524	E 1010-4524-41500 Group Insurance	$100.00
1010	4524	E 1010-4524-41600 Unemployment Compensation	$10.00
1010	4524	E 1010-4524-42100 Insurance	$957.00
1010	4524	E 1010-4524-42200 Services and Fees	$250.00
1010	4524	E 1010-4524-42300 Publishing	$200.00
1010	4524	E 1010-4524-42500 Repairs and Maintenance	$500.00
1010	4524	E 1010-4524-42600 Supplies	$2,500.00
1010	4524	E 1010-4524-42900 Other	$100.00
DEPT 4524 Forestry and Nursery			$10,757.00
DEPT 4550 Library			
1010	4550	E 1010-4550-41100 Salary	$85,267.00
1010	4550	E 1010-4550-41200 OASI	$6,686.00
1010	4550	E 1010-4550-41300 Retirement	$3,578.00
1010	4550	E 1010-4550-41400 Workmens Compensation	$125.00
1010	4550	E 1010-4550-41500 Group Insurance	$9,845.00

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FUND	DEPT	Account Descr	2016 Budget
1010	4550	E 1010-4550-41600 Unemployment Compensation	$153.00
1010	4550	E 1010-4550-42100 Insurance	$1,276.00
1010	4550	E 1010-4550-42200 Services and Fees	$3,000.00
1010	4550	E 1010-4550-42300 Publishing	$1,450.00
1010	4550	E 1010-4550-42500 Repairs and Maintenance	$5,000.00
1010	4550	E 1010-4550-42600 Supplies	$6,988.00
1010	4550	E 1010-4550-42700 Travel and Conference	$500.00
1010	4550	E 1010-4550-42800 Utilities	$0.00
1010	4550	E 1010-4550-42801 Electricity	$4,200.00
1010	4550	E 1010-4550-42802 Heat/Propane	$1,460.00
1010	4550	E 1010-4550-42803 Telephone	$2,400.00
1010	4550	E 1010-4550-42804 Water	$60.00
1010	4550	E 1010-4550-42900 Other	$750.00
1010	4550	E 1010-4550-43300 Improvement Other Than Buildin	$0.00
1010	4550	E 1010-4550-43410 Computer Software	$1,100.00
1010	4550	E 1010-4550-43420 Books	$15,000.00
DEPT 4550 Library			$148,838.00
DEPT 4650 Economic Development			
1010	4650	E 1010-4650-42900 Other	$10,000.00
DEPT 4650 Economic Development			$10,000.00
DEPT 4652 Planning and Zoning			
1010	4652	E 1010-4652-42300 Publishing	$100.00
1010	4652	E 1010-4652-42600 Supplies	$0.00
1010	4652	E 1010-4652-42900 Other	$0.00
DEPT 4652 Planning and Zoning			$100.00
DEPT 4653 Promoting the City			
1010	4653	E 1010-4653-42300 Publishing	$500.00
1010	4653	E 1010-4653-42900 Other	$7,000.00
DEPT 4653 Promoting the City			$7,500.00
DEPT 4700 Debt Service			
1010	4700	E 1010-4700-44100 Principal	$0.00
1010	4700	E 1010-4700-44200 Interest	$0.00
DEPT 4700 Debt Service			$0.00
DEPT 4990 Liquor			
1010	4990	E 1010-4990-42300 Publishing	$50.00
1010	4990	E 1010-4990-42900 Other	$50.00
DEPT 4990 Liquor			$100.00
FUND 1010 General Fund			$1,566,019.00
FUND 2110 Municipal Gross Receipts Fund			
DEPT 4653 Promoting the City			
2110	4653	E 2110-4653-42900 Other	$35,000.00
DEPT 4653 Promoting the City			$35,000.00
FUND 2110 Municipal Gross Receipts Fund			$35,000.00
FUND 2170 Revolving Loan Fund			
DEPT 4650 Economic Development			
2170	4650	E 2170-4650-42900 Other	$5,000.00
DEPT 4650 Economic Development			$5,000.00
FUND 2170 Revolving Loan Fund			$5,000.00

CITY OF BRITTON
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FUND	DEPT	Account Descr	2016 Budget
FUND 4010 Cemetery Perpetual Care Fund			
DEPT 4370 Cemetery			
4010	4370	E 4010-4370-43400 Machinery & Equipment	$4,500.00
DEPT 4370 Cemetery			$4,500.00
FUND 4010 Cemetery Perpetual Care Fund			$4,500.00
FUND 6020 Water Fund			
DEPT 4331 Water Source of Supply			
6020	4331	E 6020-4331-42800 Utilities	$143,484.00
6020	4331	E 6020-4331-42804 Water	$0.00
DEPT 4331 Water Source of Supply			$143,484.00
DEPT 4334 Water Distribution			
6020	4334	E 6020-4334-42500 Repairs and Maintenance	$0.00
6020	4334	E 6020-4334-43300 Improvement Other Than Buildin	$20,000.00
DEPT 4334 Water Distribution			$20,000.00
DEPT 4335 Water Admin & General			
6020	4335	E 6020-4335-41100 Salary	$30,500.00
6020	4335	E 6020-4335-41200 OASI	$2,333.00
6020	4335	E 6020-4335-41300 Retirement	$1,830.00
6020	4335	E 6020-4335-41400 Workmens Compensation	$244.00
6020	4335	E 6020-4335-41500 Group Insurance	$5,500.00
6020	4335	E 6020-4335-41600 Unemployment Compensation	$68.00
6020	4335	E 6020-4335-42100 Insurance	$3,600.00
6020	4335	E 6020-4335-42200 Services and Fees	$5,000.00
6020	4335	E 6020-4335-42300 Publishing	$500.00
6020	4335	E 6020-4335-42500 Repairs and Maintenance	$1,000.00
6020	4335	E 6020-4335-42600 Supplies 2500	$2,500.00
6020	4335	E 6020-4335-42603 Gasoline/Diesel 100	$100.00
6020	4335	E 6020-4335-42604 Water meters and parts 2500	$2,500.00
6020	4335	E 6020-4335-42700 Travel and Conference	$1,000.00
6020	4335	E 6020-4335-42800 Utilities ✓	$0.00
6020	4335	E 6020-4335-42801 Electricity 5500 ✓	$5,500.00
6020	4335	E 6020-4335-42802 Heat/Propane 1000 ✓	$1,000.00
6020	4335	E 6020-4335-42803 Telephone ✓	$0.00
6020	4335	E 6020-4335-42900 Other	$500.00
6020	4335	E 6020-4335-43400 Machinery & Equipment	$0.00
6020	4335	E 6020-4335-43410 Computer Software	$500.00
6020	4335	E 6020-4335-44100 Principal	$18,159.00
6020	4335	E 6020-4335-44200 Interest	$5,993.00
DEPT 4335 Water Admin & General			$88,327.00
FUND 6020 Water Fund			$251,811.00
FUND 6040 Sewer Fund			
DEPT 4325 Sewage Collection & Disposal			
6040	4325	E 6040-4325-41100 Salary	$37,099.00
6040	4325	E 6040-4325-41200 OASI	$2,838.00
6040	4325	E 6040-4325-41300 Retirement	$2,226.00
6040	4325	E 6040-4325-41400 Workmens Compensation	$854.00
6040	4325	E 6040-4325-41500 Group Insurance	$8,315.00
6040	4325	E 6040-4325-41600 Unemployment Compensation	$65.00
6040	4325	E 6040-4325-42100 Insurance	$4,000.00

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2016 Budget
6040	4325	E 6040-4325-42200 Services and Fees	$5,000.00
6040	4325	E 6040-4325-42300 Publishing	$500.00
6040	4325	E 6040-4325-42500 Repairs and Maintenance	$5,000.00
6040	4325	E 6040-4325-42600 Supplies	$5,800.00
6040	4325	E 6040-4325-42601 Chemicals	$2,000.00
6040	4325	E 6040-4325-42603 Gasoline/Diesel	$400.00
6040	4325	E 6040-4325-42700 Travel and Conference	$500.00
6040	4325	E 6040-4325-42800 Utilities	$0.00
6040	4325	E 6040-4325-42801 Electricity	$4,200.00
6040	4325	E 6040-4325-42802 Heat/Propane	$1,500.00
6040	4325	E 6040-4325-42803 Telephone	$1,500.00
6040	4325	E 6040-4325-42804 Water	$200.00
6040	4325	E 6040-4325-42900 Other	$500.00
6040	4325	E 6040-4325-43301 2012 WW Improvements	$0.00
6040	4325	E 6040-4325-43302 2013 WW Improvements	$1,500,000.00
6040	4325	E 6040-4325-43410 Computer Software	$500.00
6040	4325	E 6040-4325-44100 Principal	$0.00
6040	4325	E 6040-4325-44101 Principal-2002 Sewer Bond	$15,072.00
6040	4325	E 6040-4325-44102 Principal-2012 Sewer Bond	$33,797.00
6040	4325	E 6040-4325-44103 Principal-2013 Sewer Bond	$24,684.00
6040	4325	E 6040-4325-44104 Principal-2014 209,000 Bond	$6,984.00
6040	4325	E 6040-4325-44200 Interest	$0.00
6040	4325	E 6040-4325-44201 Interest-2002 Sewer Bond	$5,284.00
6040	4325	E 6040-4325-44202 Interest-2012 Sewer Bond	$26,059.00
6040	4325	E 6040-4325-44203 Interest-2013 Sewer Bond	$29,604.00
6040	4325	E 6040-4325-44204 Interest-2014 209,000 Bond	$1,656.00
DEPT 4325 Sewage Collection & Disposal			$1,726,137.00
FUND 6040 Sewer Fund			$1,726,137.00
			$3,588,467.00

CITY OF BRITTON

Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2015 Budget
FUND 1010 General Fund			
DEPT 4111 Board, Council or Commission			
1010	4111	E 1010-4111-41100 Salary	$14,800.00
1010	4111	E 1010-4111-41200 OASI	$1,130.00
1010	4111	E 1010-4111-42100 Insurance	$960.00
1010	4111	E 1010-4111-42200 Services and Fees	$1,600.00
1010	4111	E 1010-4111-42600 Supplies	$250.00
1010	4111	E 1010-4111-42700 Travel and Conference	$750.00
DEPT 4111 Board, Council or Commission			$19,490.00
DEPT 4113 Ordinances,Resolutions, Procee			
1010	4113	E 1010-4113-42300 Publishing	$3,000.00
DEPT 4113 Ordinances,Resolutions, Procee			$3,000.00
DEPT 4115 Contingency			
1010	4115	E 1010-4115-42900 Other	$50,000.00
DEPT 4115 Contingency			$50,000.00
DEPT 4121 Mayor			
1010	4121	E 1010-4121-41100 Salary	$3,675.00
1010	4121	E 1010-4121-41200 OASI	$280.00
1010	4121	E 1010-4121-41400 Workmens Compensation	$125.00
1010	4121	E 1010-4121-42100 Insurance	$960.00
1010	4121	E 1010-4121-42200 Services and Fees	$1,600.00
1010	4121	E 1010-4121-42600 Supplies	$1,000.00
DEPT 4121 Mayor			$7,640.00
DEPT 4130 Elections			
1010	4130	E 1010-4130-42200 Services and Fees	$380.00
1010	4130	E 1010-4130-42300 Publishing	$250.00
1010	4130	E 1010-4130-42600 Supplies	$250.00
1010	4130	E 1010-4130-42700 Travel and Conference	$100.00
DEPT 4130 Elections			$980.00
DEPT 4141 Legal (Attorney)			
1010	4141	E 1010-4141-42200 Services and Fees	$22,000.00
1010	4141	E 1010-4141-42600 Supplies	$100.00
DEPT 4141 Legal (Attorney)			$22,100.00
DEPT 4142 Finance Officer			
1010	4142	E 1010-4142-41100 Salary	$38,960.00
1010	4142	E 1010-4142-41200 OASI	$3,133.00
1010	4142	E 1010-4142-41300 Retirement	$2,458.00
1010	4142	E 1010-4142-41400 Workmens Compensation	$366.00
1010	4142	E 1010-4142-41500 Group Insurance	$4,310.00
1010	4142	E 1010-4142-41600 Unemployment Compensation	$72.00
1010	4142	E 1010-4142-42100 Insurance	$1,290.00
1010	4142	E 1010-4142-42200 Services and Fees	$3,500.00
1010	4142	E 1010-4142-42600 Supplies	$2,850.00
1010	4142	E 1010-4142-42700 Travel and Conference	$1,500.00
1010	4142	E 1010-4142-42900 Other	$250.00
1010	4142	E 1010-4142-43400 Machinery & Equipment	$2,500.00
1010	4142	E 1010-4142-43410 Computer Software	$500.00
DEPT 4142 Finance Officer			$61,689.00
DEPT 4147 General Financial Admin			

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2015 Budget
1010	4147	E 1010-4147-41100 Salary	$8,220.00
1010	4147	E 1010-4147-41200 OASI	$629.00
1010	4147	E 1010-4147-41300 Retirement	$493.00
1010	4147	E 1010-4147-41400 Workmens Compensation	$122.00
1010	4147	E 1010-4147-41500 Group Insurance	$1,077.00
1010	4147	E 1010-4147-41600 Unemployment Compensation	$51.00
1010	4147	E 1010-4147-42100 Insurance	$0.00
1010	4147	E 1010-4147-42200 Services and Fees	$12,000.00
1010	4147	E 1010-4147-42300 Publishing	$125.00
1010	4147	E 1010-4147-42600 Supplies	$3,800.00
1010	4147	E 1010-4147-42700 Travel and Conference	$1,000.00
1010	4147	E 1010-4147-42800 Utilities	$0.00
1010	4147	E 1010-4147-42803 Telephone	$3,420.00
1010	4147	E 1010-4147-42900 Other	$100.00
1010	4147	E 1010-4147-43400 Machinery & Equipment	$2,500.00
1010	4147	E 1010-4147-43410 Computer Software	$500.00
DEPT 4147 General Financial Admin			$34,037.00
DEPT 4192 General Govt Buildings			
1010	4192	E 1010-4192-41100 Salary	$0.00
1010	4192	E 1010-4192-41200 OASI	$0.00
1010	4192	E 1010-4192-41300 Retirement	$0.00
1010	4192	E 1010-4192-41400 Workmens Compensation	$0.00
1010	4192	E 1010-4192-41500 Group Insurance	$0.00
1010	4192	E 1010-4192-41600 Unemployment Compensation	$0.00
1010	4192	E 1010-4192-42100 Insurance	$960.00
1010	4192	E 1010-4192-42200 Services and Fees	$1,000.00
1010	4192	E 1010-4192-42300 Publishing	$0.00
1010	4192	E 1010-4192-42500 Repairs and Maintenance	$2,000.00
1010	4192	E 1010-4192-42600 Supplies	$0.00
1010	4192	E 1010-4192-42800 Utilities	$0.00
1010	4192	E 1010-4192-42801 Electricity	$1,800.00
1010	4192	E 1010-4192-42802 Heat/Propane	$3,500.00
1010	4192	E 1010-4192-42803 Telephone	$0.00
1010	4192	E 1010-4192-42804 Water	$30.00
DEPT 4192 General Govt Buildings			$9,290.00
DEPT 4210 Law Enforcement			
1010	4210	E 1010-4210-42200 Services and Fees	$141,754.00
DEPT 4210 Law Enforcement			$141,754.00
DEPT 4227 911 Services			
1010	4227	E 1010-4227-42200 Services and Fees	$23,782.00
DEPT 4227 911 Services			$23,782.00
DEPT 4229 Volunteer Fire Dept			
1010	4229	E 1010-4229-42200 Services and Fees	$10,080.00
1010	4229	E 1010-4229-42600 Supplies	$0.00
1010	4229	E 1010-4229-42603 Gasoline/Diesel	$1,800.00
1010	4229	E 1010-4229-42800 Utilities	$0.00
1010	4229	E 1010-4229-42801 Electricity	$2,200.00
1010	4229	E 1010-4229-42802 Heat/Propane	$2,000.00
1010	4229	E 1010-4229-42804 Water	$165.00
DEPT 4229 Volunteer Fire Dept			$16,245.00
DEPT 4230 Protective Inspection (Code E)			

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2015 Budget
1010	4230	E 1010-4230-41100 Salary	$1,000.00
1010	4230	E 1010-4230-41200 OASI	$100.00
1010	4230	E 1010-4230-41300 Retirement	$60.00
1010	4230	E 1010-4230-41400 Workmens Compensation	$1,175.00
1010	4230	E 1010-4230-41500 Group Insurance	$0.00
1010	4230	E 1010-4230-41600 Unemployment Compensation	$10.00
1010	4230	E 1010-4230-42200 Services and Fees	$1,000.00
1010	4230	E 1010-4230-42300 Publishing	$250.00
1010	4230	E 1010-4230-42600 Supplies	$500.00
1010	4230	E 1010-4230-42603 Gasoline/Diesel	$100.00
1010	4230	E 1010-4230-42700 Travel and Conference	$1,000.00
1010	4230	E 1010-4230-42900 Other	$100.00
1010	4230	E 1010-4230-43410 Computer Software	$0.00
DEPT 4230 Protective Inspection (Code E)			$5,295.00
DEPT 4312 Streets and Roadways			
1010	4312	E 1010-4312-41100 Salary	$102,700.00
1010	4312	E 1010-4312-41200 OASI	$7,850.00
1010	4312	E 1010-4312-41300 Retirement	$6,157.00
1010	4312	E 1010-4312-41400 Workmens Compensation	$3,300.00
1010	4312	E 1010-4312-41500 Group Insurance	$18,700.00
1010	4312	E 1010-4312-41600 Unemployment Compensation	$180.00
1010	4312	E 1010-4312-41900 Other Personal Services	$0.00
1010	4312	E 1010-4312-42100 Insurance	$3,850.00
1010	4312	E 1010-4312-42200 Services and Fees	$2,500.00
1010	4312	E 1010-4312-42300 Publishing	$100.00
1010	4312	E 1010-4312-42500 Repairs and Maintenance	$5,000.00
1010	4312	E 1010-4312-42501 Chip Seal	$130,000.00
1010	4312	E 1010-4312-42502 Pothole Repair	$5,000.00
1010	4312	E 1010-4312-42503 Equipment Repairs	$15,000.00
1010	4312	E 1010-4312-42600 Supplies	$7,000.00
1010	4312	E 1010-4312-42602 Gravel/Sand	$10,000.00
1010	4312	E 1010-4312-42603 Gasoline/Diesel	$13,000.00
1010	4312	E 1010-4312-42700 Travel and Conference	$500.00
1010	4312	E 1010-4312-42800 Utilities	$0.00
1010	4312	E 1010-4312-42801 Electricity	$18,000.00
1010	4312	E 1010-4312-42803 Telephone	$4,000.00
1010	4312	E 1010-4312-42900 Other	$100.00
1010	4312	E 1010-4312-43400 Machinery & Equipment	$40,000.00
DEPT 4312 Streets and Roadways			$392,937.00
DEPT 4323 Solid Waste Collection			
1010	4323	E 1010-4323-41100 Salary	$8,220.00
1010	4323	E 1010-4323-41200 OASI	$629.00
1010	4323	E 1010-4323-41300 Retirement	$493.00
1010	4323	E 1010-4323-41400 Workmens Compensation	$610.00
1010	4323	E 1010-4323-41500 Group Insurance	$1,077.00
1010	4323	E 1010-4323-41600 Unemployment Compensation	$14.00
1010	4323	E 1010-4323-42200 Services and Fees	$87,738.00
1010	4323	E 1010-4323-42300 Publishing	$75.00
1010	4323	E 1010-4323-42600 Supplies	$1,000.00
1010	4323	E 1010-4323-42900 Other	$0.00
DEPT 4323 Solid Waste Collection			$99,856.00
DEPT 4324 Rubble Site			

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2015 Budget
1010	4324	E 1010-4324-41100 Salary	$7,900.00
1010	4324	E 1010-4324-41200 OASI	$605.00
1010	4324	E 1010-4324-41300 Retirement	$173.00
1010	4324	E 1010-4324-41400 Workmens Compensation	$366.00
1010	4324	E 1010-4324-41500 Group Insurance	$0.00
1010	4324	E 1010-4324-41600 Unemployment Compensation	$10.00
1010	4324	E 1010-4324-42100 Insurance	$300.00
1010	4324	E 1010-4324-42200 Services and Fees	$150.00
1010	4324	E 1010-4324-42300 Publishing	$150.00
1010	4324	E 1010-4324-42500 Repairs and Maintenance	$50.00
1010	4324	E 1010-4324-42600 Supplies	$500.00
1010	4324	E 1010-4324-42603 Gasoline/Diesel	$250.00
1010	4324	E 1010-4324-42900 Other	$0.00
DEPT 4324 Rubble Site			$10,454.00
DEPT 4350 Airport			
1010	4350	E 1010-4350-41100 Salary	$10,200.00
1010	4350	E 1010-4350-41200 OASI	$780.00
1010	4350	E 1010-4350-41300 Retirement	$300.00
1010	4350	E 1010-4350-41400 Workmens Compensation	$245.00
1010	4350	E 1010-4350-41500 Group Insurance	$0.00
1010	4350	E 1010-4350-41600 Unemployment Compensation	$14.00
1010	4350	E 1010-4350-42100 Insurance	$1,553.00
1010	4350	E 1010-4350-42200 Services and Fees	$5,700.00
1010	4350	E 1010-4350-42300 Publishing	$100.00
1010	4350	E 1010-4350-42500 Repairs and Maintenance	$250.00
1010	4350	E 1010-4350-42600 Supplies	$700.00
1010	4350	E 1010-4350-42603 Gasoline/Diesel	$100.00
1010	4350	E 1010-4350-42700 Travel and Conference	$500.00
1010	4350	E 1010-4350-42800 Utilities	$0.00
1010	4350	E 1010-4350-42801 Electricity	$4,348.00
1010	4350	E 1010-4350-42803 Telephone	$552.00
1010	4350	E 1010-4350-42900 Other	$100.00
1010	4350	E 1010-4350-43300 Improvement Other Than Buildin	$0.00
1010	4350	E 1010-4350-43344 Airport Land Acquisition	$230,000.00
1010	4350	E 1010-4350-43360 AIP 3-46-0004-009-2010	$0.00
1010	4350	E 1010-4350-43370 AIP 10-2011	$0.00
1010	4350	E 1010-4350-43380 AIP 3-46-0004-11-2013	$0.00
1010	4350	E 1010-4350-43400 Machinery & Equipment	$150,000.00
DEPT 4350 Airport			$405,442.00
DEPT 4370 Cemetery			
1010	4370	E 1010-4370-41100 Salary	$13,000.00
1010	4370	E 1010-4370-41200 OASI	$1,000.00
1010	4370	E 1010-4370-41300 Retirement	$100.00
1010	4370	E 1010-4370-41400 Workmens Compensation	$854.00
1010	4370	E 1010-4370-41500 Group Insurance	$0.00
1010	4370	E 1010-4370-41600 Unemployment Compensation	$25.00
1010	4370	E 1010-4370-42100 Insurance	$957.00
1010	4370	E 1010-4370-42200 Services and Fees	$450.00
1010	4370	E 1010-4370-42300 Publishing	$50.00
1010	4370	E 1010-4370-42500 Repairs and Maintenance	$500.00
1010	4370	E 1010-4370-42600 Supplies	$2,500.00
1010	4370	E 1010-4370-42603 Gasoline/Diesel	$600.00
1010	4370	E 1010-4370-42800 Utilities	$0.00

CITY OF BRITTON
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FUND	DEPT	Account Descr	2015 Budget
1010	4370	E 1010-4370-42801 Electricity	$540.00
1010	4370	E 1010-4370-42803 Telephone	$0.00
1010	4370	E 1010-4370-42900 Other	$0.00
1010	4370	E 1010-4370-43400 Machinery & Equipment	$0.00
DEPT 4370 Cemetery			$20,576.00
DEPT 4390 Bus Barn			
1010	4390	E 1010-4390-42100 Insurance	$425.00
1010	4390	E 1010-4390-42600 Supplies	$50.00
1010	4390	E 1010-4390-42800 Utilities	$0.00
1010	4390	E 1010-4390-42801 Electricity	$660.00
1010	4390	E 1010-4390-42802 Heat/Propane	$1,500.00
DEPT 4390 Bus Barn			$2,635.00
DEPT 4412 Animal Control			
1010	4412	E 1010-4412-41100 Salary	$2,000.00
1010	4412	E 1010-4412-41200 OASI	$150.00
1010	4412	E 1010-4412-41400 Workmens Compensation	$122.00
1010	4412	E 1010-4412-42100 Insurance	$0.00
1010	4412	E 1010-4412-42200 Services and Fees	$195.00
1010	4412	E 1010-4412-42300 Publishing	$200.00
1010	4412	E 1010-4412-42600 Supplies	$250.00
DEPT 4412 Animal Control			$2,917.00
DEPT 4413 West Nile			
1010	4413	E 1010-4413-41100 Salary	$2,000.00
1010	4413	E 1010-4413-41200 OASI	$150.00
1010	4413	E 1010-4413-41300 Retirement	$125.00
1010	4413	E 1010-4413-41500 Group Insurance	$100.00
1010	4413	E 1010-4413-41600 Unemployment Compensation	$0.00
1010	4413	E 1010-4413-42100 Insurance	$25.00
1010	4413	E 1010-4413-42200 Services and Fees	$75.00
1010	4413	E 1010-4413-42300 Publishing	$0.00
1010	4413	E 1010-4413-42600 Supplies	$200.00
1010	4413	E 1010-4413-42601 Chemicals	$14,000.00
1010	4413	E 1010-4413-42603 Gasoline/Diesel	$100.00
1010	4413	E 1010-4413-42700 Travel and Conference	$100.00
1010	4413	E 1010-4413-42900 Other	$0.00
DEPT 4413 West Nile			$16,875.00
DEPT 4512 Swim Pool			
1010	4512	E 1010-4512-41100 Salary	$61,171.00
1010	4512	E 1010-4512-41200 OASI	$4,680.00
1010	4512	E 1010-4512-41300 Retirement	$1,026.00
1010	4512	E 1010-4512-41400 Workmens Compensation	$1,465.00
1010	4512	E 1010-4512-41500 Group Insurance	$3,117.00
1010	4512	E 1010-4512-41600 Unemployment Compensation	$30.00
1010	4512	E 1010-4512-42100 Insurance	$4,465.00
1010	4512	E 1010-4512-42200 Services and Fees	$1,900.00
1010	4512	E 1010-4512-42300 Publishing	$500.00
1010	4512	E 1010-4512-42500 Repairs and Maintenance	$10,000.00
1010	4512	E 1010-4512-42600 Supplies	$10,000.00
1010	4512	E 1010-4512-42601 Chemicals	$15,000.00
1010	4512	E 1010-4512-42620 Merchandise for Resale	$7,000.00
1010	4512	E 1010-4512-42700 Travel and Conference	$0.00
1010	4512	E 1010-4512-42800 Utilities	$0.00

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2015 Budget
1010	4512	E 1010-4512-42801 Electricity	$580.00
1010	4512	E 1010-4512-42802 Heat/Propane	$12,000.00
1010	4512	E 1010-4512-42803 Telephone	$460.00
1010	4512	E 1010-4512-42804 Water	$1,415.00
1010	4512	E 1010-4512-42900 Other	$200.00
1010	4512	E 1010-4512-43400 Machinery & Equipment	$200.00
DEPT 4512 Swim Pool			$135,209.00
DEPT 4522 Parks			
1010	4522	E 1010-4522-41100 Salary	$20,000.00
1010	4522	E 1010-4522-41200 OASI	$1,535.00
1010	4522	E 1010-4522-41300 Retirement	$400.00
1010	4522	E 1010-4522-41400 Workmens Compensation	$732.00
1010	4522	E 1010-4522-41500 Group Insurance	$0.00
1010	4522	E 1010-4522-41600 Unemployment Compensation	$27.00
1010	4522	E 1010-4522-42100 Insurance	$2,233.00
1010	4522	E 1010-4522-42200 Services and Fees	$1,000.00
1010	4522	E 1010-4522-42300 Publishing	$0.00
1010	4522	E 1010-4522-42500 Repairs and Maintenance	$4,400.00
1010	4522	E 1010-4522-42503 Equipment Repairs	$0.00
1010	4522	E 1010-4522-42600 Supplies	$5,000.00
1010	4522	E 1010-4522-42603 Gasoline/Diesel	$200.00
1010	4522	E 1010-4522-42800 Utilities	$0.00
1010	4522	E 1010-4522-42801 Electricity	$1,320.00
1010	4522	E 1010-4522-42804 Water	$1,696.00
1010	4522	E 1010-4522-42900 Other	$0.00
1010	4522	E 1010-4522-43400 Machinery & Equipment	$12,600.00
DEPT 4522 Parks			$51,143.00
DEPT 4524 Forestry and Nursery			
1010	4524	E 1010-4524-41100 Salary	$3,000.00
1010	4524	E 1010-4524-41200 OASI	$230.00
1010	4524	E 1010-4524-41300 Retirement	$150.00
1010	4524	E 1010-4524-41400 Workmens Compensation	$2,560.00
1010	4524	E 1010-4524-41500 Group Insurance	$0.00
1010	4524	E 1010-4524-41600 Unemployment Compensation	$10.00
1010	4524	E 1010-4524-42100 Insurance	$957.00
1010	4524	E 1010-4524-42200 Services and Fees	$600.00
1010	4524	E 1010-4524-42300 Publishing	$50.00
1010	4524	E 1010-4524-42500 Repairs and Maintenance	$500.00
1010	4524	E 1010-4524-42600 Supplies	$500.00
1010	4524	E 1010-4524-42900 Other	$0.00
DEPT 4524 Forestry and Nursery			$8,557.00
DEPT 4550 Library			
1010	4550	E 1010-4550-41100 Salary	$81,664.00
1010	4550	E 1010-4550-41200 OASI	$6,248.00
1010	4550	E 1010-4550-41300 Retirement	$3,590.00
1010	4550	E 1010-4550-41400 Workmens Compensation	$125.00
1010	4550	E 1010-4550-41500 Group Insurance	$8,000.00
1010	4550	E 1010-4550-41600 Unemployment Compensation	$60.00
1010	4550	E 1010-4550-42100 Insurance	$1,775.00
1010	4550	E 1010-4550-42200 Services and Fees	$3,000.00
1010	4550	E 1010-4550-42300 Publishing	$1,450.00
1010	4550	E 1010-4550-42500 Repairs and Maintenance	$2,000.00

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2015 Budget
1010	4550	E 1010-4550-42600 Supplies	$6,988.00
1010	4550	E 1010-4550-42700 Travel and Conference	$2,000.00
1010	4550	E 1010-4550-42800 Utilities	$0.00
1010	4550	E 1010-4550-42801 Electricity	$4,080.00
1010	4550	E 1010-4550-42802 Heat/Propane	$1,460.00
1010	4550	E 1010-4550-42803 Telephone	$2,400.00
1010	4550	E 1010-4550-42804 Water	$60.00
1010	4550	E 1010-4550-42900 Other	$750.00
1010	4550	E 1010-4550-43410 Computer Software	$1,100.00
1010	4550	E 1010-4550-43420 Books	$15,000.00
DEPT 4550 Library			$141,750.00
DEPT 4650 Economic Development			
1010	4650	E 1010-4650-42900 Other	$10,000.00
DEPT 4650 Economic Development			$10,000.00
DEPT 4652 Planning and Zoning			
1010	4652	E 1010-4652-42300 Publishing	$100.00
1010	4652	E 1010-4652-42600 Supplies	$0.00
1010	4652	E 1010-4652-42900 Other	$0.00
DEPT 4652 Planning and Zoning			$100.00
DEPT 4653 Promoting the City			
1010	4653	E 1010-4653-42300 Publishing	$500.00
1010	4653	E 1010-4653-42900 Other	$1,500.00
DEPT 4653 Promoting the City			$2,000.00
DEPT 4700 Debt Service			
1010	4700	E 1010-4700-44100 Principal	$0.00
1010	4700	E 1010-4700-44200 Interest	$0.00
DEPT 4700 Debt Service			$0.00
DEPT 4990 Liquor			
1010	4990	E 1010-4990-42300 Publishing	$50.00
1010	4990	E 1010-4990-42900 Other	$50.00
DEPT 4990 Liquor			$100.00
FUND 1010 General Fund			$1,695,853.00
FUND 2110 Municipal Gross Receipts Fund			
DEPT 4653 Promoting the City			
2110	4653	E 2110-4653-42900 Other	$35,000.00
DEPT 4653 Promoting the City			$35,000.00
FUND 2110 Municipal Gross Receipts Fund			$35,000.00
FUND 2170 Revolving Loan Fund			
DEPT 4650 Economic Development			
2170	4650	E 2170-4650-42900 Other	$5,000.00
DEPT 4650 Economic Development			$5,000.00
FUND 2170 Revolving Loan Fund			$5,000.00
FUND 6020 Water Fund			
DEPT 4331 Water Source of Supply			
6020	4331	E 6020-4331-42800 Utilities	$98,500.00
DEPT 4331 Water Source of Supply			$98,500.00
DEPT 4334 Water Distribution			

CITY OF BRITTON
Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2015 Budget
6020	4334	E 6020-4334-42500 Repairs and Maintenance	$0.00
6020	4334	E 6020-4334-43300 Improvement Other Than Buildin	$40,000.00
DEPT 4334 Water Distribution			$40,000.00
DEPT 4335 Water Admin & General			
6020	4335	E 6020-4335-41100 Salary	$29,075.00
6020	4335	E 6020-4335-41200 OASI	$2,224.00
6020	4335	E 6020-4335-41300 Retirement	$1,744.00
6020	4335	E 6020-4335-41400 Workmens Compensation	$244.00
6020	4335	E 6020-4335-41500 Group Insurance	$5,298.00
6020	4335	E 6020-4335-41600 Unemployment Compensation	$51.00
6020	4335	E 6020-4335-42100 Insurance 3,600	$3,600.00
6020	4335	E 6020-4335-42200 Services and Fees 10,000	$10,000.00
6020	4335	E 6020-4335-42300 Publishing 250	$250.00
6020	4335	E 6020-4335-42500 Repairs and Maintenance 5,000	$5,000.00
6020	4335	E 6020-4335-42600 Supplies 2,500	$2,500.00
6020	4335	E 6020-4335-42604 Water meters and parts 5,000	$5,000.00
6020	4335	E 6020-4335-42700 Travel and Conference 1200	$1,200.00
6020	4335	E 6020-4335-42800 Utilities 0	$0.00
6020	4335	E 6020-4335-42801 Electricity 6,000	$6,000.00
6020	4335	E 6020-4335-42802 Heat/Propane 2500	$2,500.00
6020	4335	E 6020-4335-42803 Telephone 2,800	$2,800.00
6020	4335	E 6020-4335-42900 Other 1000	$1,000.00
6020	4335	E 6020-4335-43400 Machinery & Equipment 0	$0.00
6020	4335	E 6020-4335-43410 Computer Software 1,000	$1,000.00
6020	4335	E 6020-4335-44100 Principal	$17,365.00
6020	4335	E 6020-4335-44200 Interest	$6,788.00
DEPT 4335 Water Admin & General			$103,639.00
FUND 6020 Water Fund			$242,139.00
FUND 6040 Sewer Fund			
DEPT 4325 Sewage Collection & Disposal			
6040	4325	E 6040-4325-41100 Salary	$22,233.00
6040	4325	E 6040-4325-41200 OASI	$1,701.00
6040	4325	E 6040-4325-41300 Retirement	$1,334.00
6040	4325	E 6040-4325-41400 Workmens Compensation	$854.00
6040	4325	E 6040-4325-41500 Group Insurance	$4,052.00
6040	4325	E 6040-4325-41600 Unemployment Compensation	$39.00
6040	4325	E 6040-4325-42100 Insurance	$12,000.00
6040	4325	E 6040-4325-42200 Services and Fees	$5,000.00
6040	4325	E 6040-4325-42300 Publishing	$500.00
6040	4325	E 6040-4325-42500 Repairs and Maintenance	$10,000.00
6040	4325	E 6040-4325-42600 Supplies	$5,800.00
6040	4325	E 6040-4325-42601 Chemicals	$3,000.00
6040	4325	E 6040-4325-42603 Gasoline/Diesel	$1,200.00
6040	4325	E 6040-4325-42700 Travel and Conference	$1,000.00
6040	4325	E 6040-4325-42800 Utilities	$0.00
6040	4325	E 6040-4325-42801 Electricity	$3,500.00
6040	4325	E 6040-4325-42802 Heat/Propane	$1,500.00
6040	4325	E 6040-4325-42803 Telephone	$1,500.00
6040	4325	E 6040-4325-42804 Water	$200.00
6040	4325	E 6040-4325-42900 Other	$150.00
6040	4325	E 6040-4325-43301 2012 WW Improvements	$0.00
6040	4325	E 6040-4325-43302 2013 WW Improvements	$5,740,000.00

CITY OF BRITTON

Next Year Final Budget-Expense

FUND	DEPT	Account Descr	2015 Budget
6040	4325	E 6040-4325-43410 Computer Software	$500.00
6040	4325	E 6040-4325-44100 Principal	$0.00
6040	4325	E 6040-4325-44101 Principal-2002 Sewer Bond	$14,556.00
6040	4325	E 6040-4325-44102 Principal-2012 Sewer Bond	$33,797.00
6040	4325	E 6040-4325-44103 Principal-2013 Sewer Bond	$0.00
6040	4325	E 6040-4325-44200 Interest	$0.00
6040	4325	E 6040-4325-44201 Interest-2002 Sewer Bond	$5,800.00
6040	4325	E 6040-4325-44202 Interest-2012 Sewer Bond	$59,855.00
6040	4325	E 6040-4325-44203 Interest-2013 Sewer Bond	$0.00
DEPT 4325 Sewage Collection & Disposal			$5,930,071.00
FUND 6040 Sewer Fund			$5,930,071.00
			$7,908,063.00

CITY OF BRITTON
NEXT YEAR REVENUE BUDGET

FUND Abbrev	Account Descr	None Amt	2013 Amt	2014 Budget	2015 Budget	Diff From Current
FUND 1010 General Fund						
PRGM 3100 Taxes						
General	R 1010-3100-31101 Current Year	$359,978.37	$386,055.50	$414,847.00	$377,137.00	-$37,710.00
General	R 1010-3100-31102 Current Year Minus 1	$1,397.55	$2,002.89	$5,000.00	$0.00	-$5,000.00
General	R 1010-3100-31109 Other	$1,200.46	$2,311.50	$500.00	$0.00	-$500.00
General	R 1010-3100-31300 Municipal Sales Tax	$649,501.66	$702,263.79	$500,000.00	$600,000.00	$100,000.00
General	R 1010-3100-31500 Amusement Machine License Fee	$60.00	$60.00	$180.00	$60.00	-$120.00
General	R 1010-3100-31900 Tax Penalties	$1,015.34	$198.91	$150.00	$100.00	-$50.00
PRGM 3100 Taxes		$1,013,153.38	$1,092,892.59	$920,677.00	$977,297.00	$56,620.00
PRGM 3200 Licenses and Permits						
General	R 1010-3200-32000 Licenses and Permits	$1,249.00	$1,058.00	$1,200.00	$1,000.00	-$200.00
PRGM 3200 Licenses and Permits		$1,249.00	$1,058.00	$1,200.00	$1,000.00	-$200.00
PRGM 3310 Federal Grants						
General	R 1010-3310-33170 Airport Improvement Grant	$0.00	$0.00	$0.00	$0.00	$0.00
General	R 1010-3310-33176 AIP 3-46-0004-09-2010	$19,101.28	$94,778.49	$0.00	$0.00	$0.00
General	R 1010-3310-33177 AIP 10-2011 LAYOUT PLAN	$24,824.31	$10,609.14	$190,000.00	$0.00	-$190,000.00
General	R 1010-3310-33178 AIP 3-46-0004-11-2013	$0.00	$21,718.23	$0.00	$207,000.00	$207,000.00
PRGM 3310 Federal Grants		$43,925.59	$127,105.86	$190,000.00	$207,000.00	$17,000.00
PRGM 3340 State Grants						
General	R 1010-3340-33490 Other State Grants	$0.00	$0.00	$0.00	$161,500.00	$161,500.00
General	R 1010-3340-33491 AIP 09-2010	$2,069.22	$0.00	$0.00	$0.00	$0.00
General	R 1010-3340-33492 AIP 10-2011	$783.93	$0.00	$4,000.00	$0.00	-$4,000.00
PRGM 3340 State Grants		$2,853.15	$0.00	$4,000.00	$161,500.00	$157,500.00
PRGM 3350 State Shared Revenue						
General	R 1010-3350-33503 Liquor Tax Reversion	$8,839.92	$9,292.13	$8,000.00	$8,000.00	$0.00
General	R 1010-3350-33504 Motor Vehicle Licenses (5%)	$14,926.60	$16,953.00	$14,000.00	$15,000.00	$1,000.00
General	R 1010-3350-33508 Local Govt Hwy & Bridge Fund	$40,471.17	$40,417.06	$35,000.00	$40,000.00	$5,000.00
General	R 1010-3350-33510 Bank Franchise Tax	$768.08	$4,018.56	$4,000.00	$800.00	-$3,200.00
General	R 1010-3350-33520 Motor Veh Commercial Pro Rate	$7,119.37	$1,408.58	$6,000.00	$2,000.00	-$4,000.00
PRGM 3350 State Shared Revenue		$72,125.14	$72,089.33	$67,000.00	$65,800.00	-$1,200.00
PRGM 3380 County Shared Revenue						
General	R 1010-3380-33801 County Road Tax (25%)	$687.50	$687.50	$1,375.00	$687.50	-$687.50
PRGM 3380 County Shared Revenue		$687.50	$687.50	$1,375.00	$687.50	-$687.50
PRGM 3400 Charges for Goods and Services						
General	R 1010-3400-34000 Charges for Goods and Services	$0.00	$355.00	$300.00	$0.00	-$300.00

CITY OF BRITTON
NEXT YEAR REVENUE BUDGET

FUND Abbrev	Account Descr	None Amt	2013 Amt	2014 Budget	2015 Budget	Diff From Current
General	R 1010-3400-34010 Street and Alley Repair	$0.00	$0.00	$0.00	$0.00	$0.00
PRGM 3400 Charges for Goods and Services		$0.00	$355.00	$300.00	$0.00	-$300.00
PRGM 3410 General Governments						
General	R 1010-3410-34101 Zoning & Subdivision Fees	$1,040.00	$920.00	$750.00	$750.00	$0.00
PRGM 3410 General Governments		$1,040.00	$920.00	$750.00	$750.00	$0.00
PRGM 3440 Sanitation						
General	R 1010-3440-31300 Municipal Sales Tax	$0.00	$0.00	$0.00	$0.00	$0.00
General	R 1010-3440-34401 Refuse Collection Charges	$82,326.18	$98,615.24	$97,104.00	$97,000.00	-$104.00
PRGM 3440 Sanitation		$82,326.18	$98,615.24	$97,104.00	$97,000.00	-$104.00
PRGM 3450 Health						
General	R 1010-3450-34502 Animal Control and Shelter Fee	$0.00	$109.90	$0.00	$0.00	$0.00
PRGM 3450 Health		$0.00	$109.90	$0.00	$0.00	$0.00
PRGM 3460 Culture & Recreation						
General	R 1010-3460-34602 Swimming Pool Fees	$18,900.22	$20,236.47	$18,000.00	$18,000.00	$0.00
General	R 1010-3460-34603 RV Park	$1,396.01	$1,114.13	$500.00	$1,000.00	$500.00
General	R 1010-3460-34604 Concessions	$6,864.86	$9,352.02	$7,000.00	$7,000.00	$0.00
General	R 1010-3460-36700 Donations	$50.00	$0.00	$0.00	$0.00	$0.00
General	R 1010-3460-39000 Other Sources	$0.00	$0.00	$0.00	$0.00	$0.00
PRGM 3460 Culture & Recreation		$27,211.09	$30,702.62	$25,500.00	$26,000.00	$500.00
PRGM 3480 Cemetery						
General	R 1010-3480-34800 Cemetery	$1,100.00	$300.00	$300.00	$300.00	$0.00
General	R 1010-3480-36700 Donations	$100.00	$0.00	$0.00	$0.00	$0.00
PRGM 3480 Cemetery		$1,200.00	$300.00	$300.00	$300.00	$0.00
PRGM 3500 Fines and Forfeits						
General	R 1010-3500-35100 Court Fines	$0.00	$66.00	$0.00	$0.00	$0.00
PRGM 3500 Fines and Forfeits		$0.00	$66.00	$0.00	$0.00	$0.00
PRGM 3600 Miscellaneous Revenue						
General	R 1010-3600-36000 Miscellaneous Revenue	$10,781.41	$1,350.93	$1,000.00	$1,000.00	$0.00
PRGM 3600 Miscellaneous Revenue		$10,781.41	$1,350.93	$1,000.00	$1,000.00	$0.00
PRGM 3610 Investment Earnings						
General	R 1010-3610-36100 Interest	$475.92	$140.21	$150.00	$1,000.00	$850.00
PRGM 3610 Investment Earnings		$475.92	$140.21	$150.00	$1,000.00	$850.00
PRGM 3620 Rentals						
General	R 1010-3620-36200 Rentals	$8,048.39	$9,800.00	$9,800.00	$9,800.00	$0.00

CITY OF BRITTON
NEXT YEAR REVENUE BUDGET

FUND Abbrev	Account Descr	None Amt	2013 Amt	2014 Budget	2015 Budget	Diff From Current
PRGM 3620 Rentals		$8,048.39	$9,800.00	$9,800.00	$9,800.00	$0.00
PRGM 3630 Special Assessments						
General	R 1010-3630-36301 Principal Collected by County	$1,466.17	$1,752.70	$1,752.00	$2,266.00	$514.00
General	R 1010-3630-36302 Int and Pen Collected by Count	$757.62	$1,859.75	$1,859.00	$1,646.00	-$213.00
General	R 1010-3630-36303 Principal Collected by Municip	$0.00	$0.00	$0.00	$0.00	$0.00
General	R 1010-3630-36304 Int and Pen Collected by Munic	$685.64	$0.00	$0.00	$0.00	$0.00
PRGM 3630 Special Assessments		$2,909.43	$3,612.45	$3,611.00	$3,912.00	$301.00
PRGM 3680 Liquor Operating Agreement Inc						
General	R 1010-3680-36800 Liquor Operating Agreement Inc	$57,433.65	$62,348.29	$55,000.00	$60,000.00	$5,000.00
PRGM 3680 Liquor Operating Agreement Inc		$57,433.65	$62,348.29	$55,000.00	$60,000.00	$5,000.00
PRGM 3690 Other						
General	R 1010-3690-36901 Cable TV Franchise Fee	$1,930.29	$2,771.35	$2,600.00	$2,600.00	$0.00
General	R 1010-3690-36902 SD Sales Tax Allowance	$0.00	$0.00	$0.00	$0.00	$0.00
General	R 1010-3690-36904 Dividend Income	$1,277.25	$451.17	$100.00	$500.00	$400.00
PRGM 3690 Other		$3,207.54	$3,222.52	$2,700.00	$3,100.00	$400.00
PRGM 3850 Airport						
General	R 1010-3850-38502 Rentals	$12,370.23	$11,959.00	$11,959.00	$5,000.00	-$6,959.00
PRGM 3850 Airport		$12,370.23	$11,959.00	$11,959.00	$5,000.00	-$6,959.00
PRGM 3900 Other Sources						
General	R 1010-3900-39001 WorkComp Refund	$7,482.00	$5,259.00	$5,000.00	$0.00	-$5,000.00
PRGM 3900 Other Sources		$7,482.00	$5,259.00	$5,000.00	$0.00	-$5,000.00
PRGM 3910 Other Financing Sources						
General	R 1010-3910-39103 Sale of Municipal Property	$4,647.16	$27,970.28	$0.00	$0.00	$0.00
PRGM 3910 Other Financing Sources		$4,647.16	$27,970.28	$0.00	$0.00	$0.00
FUND 1010 General Fund		$1,353,126.76	$1,550,564.72	$1,397,426.00	$1,621,146.50	$223,720.50
FUND 2110 Municipal Gross Receipts Fund						
PRGM 3100 Taxes						
	R 2110-3100-31300 Municipal Sales Tax	$39,149.64	$41,044.01	$35,000.00	$35,000.00	$0.00
PRGM 3100 Taxes		$39,149.64	$41,044.01	$35,000.00	$35,000.00	$0.00
PRGM 3610 Investment Earnings						
	R 2110-3610-36100 Interest	$0.00	$0.00	$0.00	$0.00	$0.00
PRGM 3610 Investment Earnings		$0.00	$0.00	$0.00	$0.00	$0.00
FUND 2110 Municipal Gross Receipts Fund		$39,149.64	$41,044.01	$35,000.00	$35,000.00	$0.00

CITY OF BRITTON
NEXT YEAR REVENUE BUDGET

FUND Abbrev	Account Descr	None Amt	2013 Amt	2014 Budget	2015 Budget	Diff From Current
FUND 2170 Revolving Loan Fund						
PRGM 3610 Investment Earnings						
RLF	R 2170-3610-36100 Interest	$1,258.81	$1,351.09	$1,000.00	$1,000.00	$0.00
PRGM 3610 Investment Earnings		$1,258.81	$1,351.09	$1,000.00	$1,000.00	$0.00
FUND 2170 Revolving Loan Fund		$1,258.81	$1,351.09	$1,000.00	$1,000.00	$0.00
FUND 4010 Cemetery Perpetual Care Fund						
PRGM 3610 Investment Earnings						
Perp Care	R 4010-3610-36100 Interest	$111.17	$114.05	$100.00	$75.00	-$25.00
PRGM 3610 Investment Earnings		$111.17	$114.05	$100.00	$75.00	-$25.00
FUND 4010 Cemetery Perpetual Care Fund		$111.17	$114.05	$100.00	$75.00	-$25.00
FUND 4030 Britton Library Foundation						
PRGM 3610 Investment Earnings						
	R 4030-3610-36100 Interest	$0.00	$313.34	$0.00	$313.00	$313.00
PRGM 3610 Investment Earnings		$0.00	$313.34	$0.00	$313.00	$313.00
FUND 4030 Britton Library Foundation		$0.00	$313.34	$0.00	$313.00	$313.00
FUND 5010 Walking Path Fund						
PRGM 3670 Contributions and Donations						
NO DESCR	R 5010-3670-36700 Donations	$0.00	$0.00	$0.00	$0.00	$0.00
PRGM 3670 Contributions and Donations		$0.00	$0.00	$0.00	$0.00	$0.00
FUND 5010 Walking Path Fund		$0.00	$0.00	$0.00	$0.00	$0.00
FUND 6020 Water Fund						
PRGM 3610 Investment Earnings						
Water	R 6020-3610-36100 Interest	$688.36	$679.48	$650.00	$750.00	$100.00
PRGM 3610 Investment Earnings		$688.36	$679.48	$650.00	$750.00	$100.00
PRGM 3810 Water						
Water	R 6020-3810-36900 Other	$90.00	-$250.29	$0.00	$0.00	$0.00
Water	R 6020-3810-36904 Dividend Income	$43.08	$490.79	$0.00	$0.00	$0.00
Water	R 6020-3810-38101 Metered and Flat Rate Water Sa	$262,824.78	$262,931.63	$244,500.00	$260,000.00	$15,500.00
Water	R 6020-3810-38103 Sale of Supplies and Materials	$0.00	$29.34	$0.00	$0.00	$0.00
Water	R 6020-3810-38104 Water Deposits	$0.00	$0.00	$0.00	$0.00	$0.00
Water	R 6020-3810-39103 Sale of Municipal Property	$0.00	$188.68	$0.00	$0.00	$0.00
PRGM 3810 Water		$262,957.86	$263,390.15	$244,500.00	$260,000.00	$15,500.00

CITY OF BRITTON
NEXT YEAR REVENUE BUDGET

FUND Abbrev	Account Descr	None Amt	2013 Amt	2014 Budget	2015 Budget	Diff From Current
FUND 6020 Water Fund		$263,646.22	$264,069.63	$245,150.00	$260,750.00	$15,600.00
FUND 6040 Sewer Fund						
PRGM 3340 State Grants						
Sewer	R 6040-3340-33499 Other State Grants	$0.00	$0.00	$0.00	$0.00	$0.00
PRGM 3340 State Grants		$0.00	$0.00	$0.00	$0.00	$0.00
PRGM 3610 Investment Earnings						
Sewer	R 6040-3610-36100 Interest	$274.95	$182.96	$150.00	$0.00	-$150.00
PRGM 3610 Investment Earnings		$274.95	$182.96	$150.00	$0.00	-$150.00
PRGM 3830 Sewer						
Sewer	R 6040-3830-31109 Other	$0.00	$0.00	$0.00	$0.00	$0.00
Sewer	R 6040-3830-33101 Rural Development Grant	$0.00	$0.00	$0.00	$425,000.00	$425,000.00
Sewer	R 6040-3830-33401 Clean Water Grant	$0.00	$0.00	$0.00	$1,500,000.00	$1,500,000.00
Sewer	R 6040-3830-36904 Dividend Income	$46.45	$96.87	$0.00	$0.00	$0.00
Sewer	R 6040-3830-38301 Sewer Charges	$170,117.38	$150,117.09	$118,404.00	$125,000.00	$6,596.00
Sewer	R 6040-3830-38302 2012 Sewer Surcharge	$42,381.04	$83,998.01	$80,496.00	$81,000.00	$504.00
Sewer	R 6040-3830-38303 2013 Sewer Surcharge	$0.00	$40,356.06	$152,100.00	$100,000.00	-$52,100.00
Sewer	R 6040-3830-39120 Proceeds from Loan	$0.00	$243,541.00	$0.00	$0.00	$0.00
Sewer	R 6040-3830-39130 State Revolving Loan	$0.00	$0.00	$0.00	$2,500,000.00	$2,500,000.00
Sewer	R 6040-3830-39131 Rural Development Loan	$0.00	$0.00	$0.00	$1,315,000.00	$1,315,000.00
PRGM 3830 Sewer		$212,544.87	$518,109.03	$351,000.00	$6,046,000.00	$5,695,000.00
PRGM 3910 Other Financing Sources						
Sewer	R 6040-3910-39129 Other Long Term Debt Issued	$0.00	$0.00	$0.00	$0.00	$0.00
PRGM 3910 Other Financing Sources		$0.00	$0.00	$0.00	$0.00	$0.00
FUND 6040 Sewer Fund		$212,819.82	$518,291.99	$351,150.00	$6,046,000.00	$5,694,850.00
		$1,870,112.42	$2,375,748.83	$2,029,826.00	$7,964,284.50	$5,934,458.50

((Not [Act Type Name]="Expenditure"))

City of Britton
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EideBailly

CPAs & BUSINESS ADVISORS

Independent Auditor's Report

The City Council
City of Britton
Britton , South Dakota

Report on the Financial Statements
We have audited the accompanying financial statements of the governmental activities, the business-type activities and each major fund of the City of Britton as of December 31, 2014, and for the fiscal year then ended and the related notes to the financial statements, which collectively comprise the City's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with the basis described in Note 1; this includes determining that the other comprehensive basis of accounting is an acceptable basis for the preparation of the financial statements in the circumstance. Management is also responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards,* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Summary of Opinions

Opinion Unit	Type of Opinion
Governmental Activities	Unmodified
Business-Type Activities	Unmodified
Aggregate Discretely Presented Component Units	Adverse
General Fund	Unmodified
Liquor, Lodging, and Dining Gross Receipts Tax Fund	Unmodified
Revolving Loan Fund	Unmodified
Library Fines Fund	Unmodified
Cemetery Perpetual Care Fund	Unmodified
Library Foundation Fund	Unmodified
Water Fund	Unmodified
Sewer Fund	Unmodified

Basis for Adverse Opinion on the Aggregate Discretely Presented Component Unit
The financial statements do not include financial data for the City's legally separate component unit. Accounting principles generally accepted in the United States of America require the financial data for the component unit to be reported with the financial data of the City's primary government unless the City also issues financial statements for the financial reporting entity that include the financial data for its component unit. The City has not issued such reporting entity financial statements. The amount by which this departure would affect the assets, net position, revenues and expenditures of the aggregate discretely presented component unit is not reasonably determinable.

Adverse Opinion on the Aggregate Discretely Presented Component Unit
In our opinion, because of the omission of the discretely presented component units, as described in the "Basis for Adverse Opinion on the Aggregate discretely Presented Component Unit" paragraph, the financial statements referred to above do not present fairly, in conformity with accounting principles generally accepted in the United States of America, the financial position of the aggregate discretely presented component unit of the City as of December 31, 2014, or the changes in financial position thereof for the year then ended.

Unmodified Opinions
Further, in our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position - modified cash basis - of the governmental activities, the business-type activities, and each major fund of the City of Britton as of December 31, 2014, and the respective changes in financial position - modified cash basis and, where applicable, cash flows - modified cash basis thereof and for the year then ended in conformity with the basis of accounting described in Note 1.

Basis of Accounting
We draw attention to Note 1 of the financial statement, which describes the basis of accounting. The financial statements are prepared using accounting principles prescribed or permitted by the South Dakota Department of Legislative Audit, which practices differ from accounting principles generally accepted in the United States of America. Our opinions are not modified with respect to this matter.

Other Matters

Other Information
Our audit was conducted for the purpose of forming opinions on the financial statements that collectively compromise the City's financial statements. The listing of municipal officers, budgetary comparison and changes in notes and bonds payable are presented for purposes of additional analysis and are not a required part of the financial statements. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by U.S. Office of Management and Budget Circular *A-133, Audits of States, Local Governments, and Non-Profit Organization,* and is also not a required part of the financial statements. Because of the significance of the matter discussed above, it is inappropriate to and we do not express an opinion on the supplementary information referred to above.

Other Reporting Required by *Government Auditing Standards*
In accordance with *Government Auditing Standards*, we have also issued our report dated June 24, 2015 on our consideration of the City of Britton's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance.

Eide Bailly LLP

Aberdeen, South Dakota
June 24, 2015

City of Britton
Statement of Net Position–Modified Cash Basis
December 31, 2014

	Primary Government		
	Governmental Activities	Business-Type Activities	Total
Assets			
Cash and cash equivalents	$ 1,826,865	$ 930,229	$ 2,757,094
Investments	-	450,000	450,000
Restricted assets:			
Cash and cash equivalents	55,542	293,211	348,753
Investments	226,660	-	226,660
	$ 2,109,067	$ 1,673,440	$ 3,782,507
Net Position			
Restricted for:			
Debt service purposes	$ -	$ 26,090	$ 26,090
Permanently restricted purposes	54,216	-	54,216
Library	67,852	-	67,852
Revolving loans fund	621,322	-	621,322
Equipment repair or replacement	-	267,121	267,121
Other purposes	51,665		51,665
Unrestricted	1,314,012	1,380,229	2,694,241
	$ 2,109,067	$ 1,673,440	$ 3,782,507

See Notes to Financial Statements

City of Britton
Statement of Activities–Modified Cash Basis
Year Ended December 31, 2014

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants, Contributions, and Loan Proceeds	Net Revenue (Expense) and Changes in Net Position: Primary Government: Governmental Activities	Net Revenue (Expense) and Changes in Net Position: Primary Government: Business-Type Activities	Net Revenue (Expense) and Changes in Net Position: Primary Government: Total
Primary Government							
Governmental activities:							
General government	$ 155,251	$ 17,894	$ -	$ -	$ (137,357)	$ -	$ (137,357)
Public safety	137,341	39	-	8,318	(128,984)	-	(128,984)
Public works	620,644	97,640	69,755	115,289	(337,960)	-	(337,960)
Health and welfare	25,347	81	-	-	(25,266)	-	(25,266)
Culture and recreation	344,157	28,877	-	-	(315,280)	-	(315,280)
Conservation and development	51,009	-	-	-	(51,009)	-	(51,009)
Other	67	-	-	-	(67)	-	(67)
Total governmental activities	1,333,816	144,531	69,755	123,607	(995,923)	-	(995,923)
Business-type activities:							
Water	245,221	256,476	-	-	-	11,255	11,255
Sewer	1,819,614	396,644	630,603	-	-	(792,367)	(792,367)
Total business-type activities	2,064,835	653,120	630,603	-	-	(781,112)	(781,112)
Total primary government	$ 3,398,651	$ 797,651	$ 700,358	$ 123,607	(995,923)	(781,112)	(1,777,035)
General Revenues							
Taxes:							
Property taxes					398,136	-	398,136
Sales taxes					706,202	-	706,202
State shared revenues					9,663	-	9,663
Unrestricted investment earnings					3,935	1,242	5,177
Debt issued					-	1,057,608	1,057,608
Miscellaneous revenue					20,337	1,236	21,573
Other general revenue					64,028	-	64,028
Total general revenues					1,202,301	1,060,086	2,262,387
Change in Net Position					206,378	278,974	485,352
Net Position - Beginning					1,902,689	1,394,466	3,297,155
Net Position - Ending					$ 2,109,067	$ 1,673,440	$ 3,782,507

See Notes to Financial Statements

City of Britton
Balance Sheet–Modified Cash Basis–Governmental Funds
December 31, 2014

	General Fund	Liquor, Lodging and Dining Gross Receipts Tax Fund	Revolving Loan Fund	Library Fines Fund	Cemetery Perpetual Care Fund	Library Foundation Fund	Total Governmental Funds
Assets							
Cash and cash equivalents	$ 1,314,012	$ 51,665	$ 454,662	$ 6,526	$ -	$ -	$ 1,826,865
Restricted cash and cash equivalents	-	-	-	-	54,216	1,326	55,542
Restricted investments	-	-	166,660	-	-	60,000	226,660
	$ 1,314,012	$ 51,665	$ 621,322	$ 6,526	$ 54,216	$ 61,326	$ 2,109,067
Fund Balances							
263 Nonspendable for:							
Perpetual care cemetery	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ 50,000
264 Restricted for							
Perpetual care	-	-	-	-	4,216	-	4,216
Library purposes	-	-	-	6,526	-	61,326	67,852
Economic development	-	-	617,322	-	-	-	617,322
Other purposes	-	51,665	-	-	-	-	51,665
266 Assigned for:							
Subsequent year budget	47,844	-	4,000	-	-	-	51,844
Capital outlay accumulations	133,246	-	-	-	-	-	133,246
267 Unassigned	1,132,922	-	-	-	-	-	1,132,922
	$ 1,314,012	$ 51,665	$ 621,322	$ 6,526	$ 54,216	$ 61,326	$ 2,109,067

See Notes to Financial Statements

	General Fund	Liquor, Lodging and Dining Gross Receipts Tax Fund	Revolving Loan Fund	Library Fines Fund	Cemetery Perpetual Care Fund	Library Foundation Fund	Total Governmental Funds
Revenues							
310 Taxes							
311 General property taxes	$ 398,076	$ -	$ -	$ -	$ -	$ -	$ 398,076
313 General sales and use taxes	669,900	36,302	-	-	-	-	706,202
315 Amusement taxes	60	-	-	-	-	-	60
Total taxes	1,068,036	36,302	-	-	-	-	1,104,338
320 Licenses and permits	965	-	-	-	-	-	965
330 Intergovernmental revenue							
331 Federal grants	99,871	-	-	-	-	-	99,871
334 State grants	11,156	-	-	-	-	-	11,156
335 State shared revenue							
335.01 Bank franchise tax	480	-	-	-	-	-	480
335.02 Motor vehicle commercial prorate	4,655	-	-	-	-	-	4,655
335.03 Liquor tax reversion	9,183	-	-	-	-	-	9,183
335.04 Motor vehicle licenses (5%)	19,132	-	-	-	-	-	19,132
335.08 Local government highway and bridge fund	45,968	-	-	-	-	-	45,968
Total intergovernmental revenue	190,445	-	-	-	-	-	190,445
340 Charges for goods and services							
341 General government	1,145	-	-	-	-	-	1,145
344 Sanitation	96,825	-	-	-	-	-	96,825
345 Health	81	-	-	-	-	-	81
346 Culture and recreation	28,877	-	-	-	-	-	28,877
348 Cemetery	815	-	-	-	-	-	815
Total charges for good and services	127,743	-	-	-	-	-	127,743
350 Fines and forfeits							
351 Court fines and costs	39	-	-	-	-	-	39
Total fines and forfeits	39	-	-	-	-	-	39

	General Fund	Liquor, Lodging and Dining Gross Receipts Tax Fund	Revolving Loan Fund	Library Fines Fund	Cemetery Perpetual Care Fund	Library Foundation Fund	Total Governmental Funds
360 Miscellaneous revenue							
361 Investment earnings	1,520	-	1,344	-	58	1,013	3,935
362 Rentals	15,784	-	-	-	-	-	15,784
363 Special assessments	4,262	-	-	-	-	-	4,262
367 Contributions and donations from private sources	-	-	-	8,318	-	-	8,318
368 Liquor operating agreement income	64,028	-	-	-	-	-	64,028
369 Other	20,337	-	-	-	-	-	20,337
Total miscellaneous revenue	105,931	-	1,344	8,318	58	1,013	116,664
Total revenues	1,493,159	36,302	1,344	8,318	58	1,013	1,540,194
Expenditures							
410 General government							
411 Legislative	20,992	-	-	-	-	-	20,992
412 Executive	5,411	-	-	-	-	-	5,411
413 Elections	367	-	-	-	-	-	367
414 Financial administration	99,106	-	-	-	-	-	99,106
419 Other	29,375	-	-	-	-	-	29,375
Total general government	155,251	-	-	-	-	-	155,251
420 Public safety							
421 Police	98,024	-	-	-	-	-	98,024
422 Fire	33,164	-	-	-	-	-	33,164
423 Protective inspection	6,153	-	-	-	-	-	6,153
Total public safety	137,341	-	-	-	-	-	137,341
430 Public works							
431 Highways and streets	227,321	-	-	-	-	-	227,321
432 Sanitation	102,967	-	-	-	-	-	102,967
435 Airport	27,759	-	-	-	-	-	27,759
437 Cemetaries	22,222	-	-	-	-	-	22,222
439 Transit	2,333	-	-	-	-	-	2,333
Total public works	382,602	-	-	-	-	-	382,602

	General Fund	Liquor, Lodging and Dining Gross Receipts Tax Fund	Revolving Loan Fund	Library Fines Fund	Cemetery Perpetual Care Fund	Library Foundation Fund	Total Governmental Funds
440 Health and welfare							
441 Health	25,347	-	-	-	-	-	25,347
Total health and welfare	25,347	-	-	-	-	-	25,347
450 Culture and recreation							
451 Recreation	128,310	-	-	-	-	-	128,310
452 Parks	45,538	-	-	-	-	-	45,538
455 Libraries	126,748	-	-	6,205	-	-	132,953
Total culture and recreation	300,596	-	-	6,205	-	-	306,801
460 Conservation and development							
465 Economic development and assistance (industrial development)	15,543	30,466	5,000	-	-	-	51,009
Total conservation and development	15,543	30,466	5,000	-	-	-	51,009
485 Capital outlay	275,398	-	-	-	-	-	275,398
490 Miscellaneous							
492 Other	67	-	-	-	-	-	67
Total miscellaneous	67	-	-	-	-	-	67
Total expenditures	1,292,145	30,466	5,000	6,205	-	-	1,333,816
Net Change in Fund Balance	201,014	5,836	(3,656)	2,113	58	1,013	206,378
Fund Balance - Beginning	1,112,998	45,829	624,978	4,413	54,158	60,313	1,902,689
Fund Balance - Ending	$ 1,314,012	$ 51,665	$ 621,322	$ 6,526	$ 54,216	$ 61,326	$ 2,109,067

See Notes to Financial Statements

City of Britton
Statement of Net Position–Modified Cash Basis–Proprietary Funds
December 31, 2014

	Enterprise Funds		
	Water Fund	Sewer Fund	Totals
Assets			
Current Assets			
Cash and cash equivalents	$ 186,414	$ 743,815	$ 930,229
Investments	450,000	-	450,000
Total current assets	636,414	743,815	1,380,229
Noncurrent Assets			
107.1 Restricted deposits for:			
Debt repayment	146,887	146,324	293,211
Total noncurrent assets	146,887	146,324	293,211
	$ 783,301	$ 890,139	$ 1,673,440
Net Position			
253.20 Restricted net position for:			
253.21 Revenue bond debt service	$ 6,038	$ 20,052	$ 26,090
253.26 Equipment repair and/or replacement	140,849	126,272	267,121
253.90 Unrestricted	636,414	743,815	1,380,229
	$ 783,301	$ 890,139	$ 1,673,440

City of Britton

Statement of Revenues, Expenses and Changes in Fund Net Position–Modified Cash Basis–Proprietary Funds
Year Ended December 31, 2014

	Enterprise Funds		
	Water Fund	Sewer Fund	Totals
Operating Revenue			
Charges for goods and services	$ 256,476	$ 396,644	$ 653,120
369 Miscellaneous	662	574	1,236
Total operating revenue	257,138	397,218	654,356
Operating Expenses			
410 Personal services	35,926	40,072	75,998
420 Other current expense	169,798	32,127	201,925
426.2 Materials	11,124	6,915	18,039
430 Capital assets	4,222	1,644,680	1,648,902
Total operating expenses	221,070	1,723,794	1,944,864
Operating Income (Loss)	36,068	(1,326,576)	(1,290,508)
Nonoperating Revenue (Expense)			
330 Operating Grants	-	630,603	630,603
361 Investment earnings	1,097	145	1,242
429 Proceeds from loan	-	1,057,608	1,057,608
441 Prinicipal	(16,604)	(36,397)	(53,001)
470 Interest expense and fiscal charges	(7,547)	(59,423)	(66,970)
Total nonoperating revenue (expense)	(23,054)	1,592,536	1,569,482
Net Change in Fund Balance	13,014	265,960	278,974
Net Position - Beginning	770,287	624,179	1,394,466
Net Position - Ending	$ 783,301	$ 890,139	$ 1,673,440

See Notes to Financial Statements

City of Britton
Statement of Cash Flows–Modified Cash Basis–Proprietary Funds
Year Ended December 31, 2014

	Enterprise Funds		
	Water Fund	Sewer Fund	Totals
Cash Flows from Operating Activities			
Receipt from customers	$ 257,138	$ 397,218	$ 654,356
Payments to suppliers	(180,922)	(39,042)	(219,964)
Payments to employees	(35,926)	(40,072)	(75,998)
Net Cash from Operating Activities	40,290	318,104	358,394
Cash Flows used for Capital and Related Financing Activities			
Proceeds from capital debt	-	1,057,608	1,057,608
Operating Grants	-	630,603	630,603
Purchase of capital assets	(4,222)	(1,644,680)	(1,648,902)
Principal paid on capital debt	(16,604)	(36,397)	(53,001)
Interest paid on capital debt	(7,547)	(59,423)	(66,970)
Net Cash used for Capital and Related Financing Activities	(28,373)	(52,289)	(80,662)
Cash Flows from Investing Activities			
Interest earnings	1,097	145	1,242
Net Cash from Investing Activities	1,097	145	1,242
Net Change in Cash and Cash Equivalents	13,014	265,960	278,974
Cash and Cash Equivalents - Beginning	320,287	624,179	944,466
Cash and Cash Equivalents - Ending	$ 333,301	$ 890,139	$ 1,223,440
Cash and Cash Equivalents Consist of:			
Cash and cash equivalents	$ 186,414	$ 743,815	$ 930,229
Restricted deposits	146,887	146,324	293,211
	$ 333,301	$ 890,139	$ 1,223,440
Reconciliation of Operating Income (Loss) to Net Cash from Operating Activities			
Operating income (loss)	$ 36,068	$ (1,326,576)	$ (1,290,508)
Adjustments to reconcile operating income (loss) to net cash from operating activities:			
Purchase of capital assets	4,222	1,644,680	1,648,902
Net Cash from Operating Activities	$ 40,290	$ 318,104	$ 358,394

See Notes to Financial Statements

Note 1 - Summary of Significant Accounting Policies

As discussed further in Note 1.C, the financial statements are presented on a modified cash basis of accounting. The modified cash basis of accounting differs from accounting principles generally accepted in the United States of America (GAAP). Generally accepted accounting principles include all relevant Governmental Accounting Standards Board (GASB) pronouncements.

A. Financial Reporting Entity

The reporting entity of the City of Britton (the City), consists of the primary government (which includes all of the funds, organizations, institutions, agencies, departments and offices that make up the legal entity, those organizations for which the primary government is financially accountable; and other organizations for which the nature and significance of their relationship with the primary government are such that their exclusion would cause the City's financial statements to be misleading or incomplete.

The reporting entity is comprised of the primary government, City of Britton, and one component unit, The Housing and Redevelopment Commission.

The Housing and Redevelopment Commission of the City of Britton (commission) is a component unit of the City of Britton. The five members of the Commission are appointed by the Mayor with the approval of the Governing Body for five-year, staggered terms. The Commission elects its own chairperson and recruits and employs its own management personnel and other workers. The Governing Board, though, retains the statutory authority to approve or deny or otherwise modify the commission's plans to construct a housing unit, or to issue debt, which gives the Governing Board the ability to impose its will on the commission. Due to the financial statements of this entity being excluded from the City's financial statements, the opinion of the auditor's report has been modified.

The City's activities are presented using a modified cash basis of accounting while the component unit uses generally accepted accounting principles (GAAP). Based on the variance in the basis of accounting, the City has elected to present only the primary government activities. The component unit's financial statements are available upon request from The Housing and Redevelopment Commission of the City of Britton.

B. Basis of Presentation

Government-Wide Financial Statements

The statement of net position and statement of activities display information about the City as a whole. They include all funds of the City. The statements distinguish between governmental and business-type activities. Governmental activities generally are financed through taxes, intergovernmental revenues and other non-exchange revenues. Business-type activities are financed in whole or in part by fees charged to external parties for goods or services.

The statement of activities presents a comparison between direct expenses and program revenues for each segment of the business-type activities of the City and for each function of the City's governmental activities. Direct expenses are those that are specifically associated with a program or function and; therefore, are clearly identifiable to a particular function. Program revenues include (a) charges paid by recipients of goods and services offered by the programs and (b) grants and contributions that are restricted to meeting the operational or capital requirements of a particular program. Revenues that are not classified as program revenues, including all taxes, are presented as general revenues.

Fund Financial Statements

Fund financial statements of the City are organized into funds, each of which is considered to be a separate accounting entity. Each fund is accounted for by providing a separate set of self-balancing accounts that constitute its assets, liabilities, fund equity, revenues and expenditures/expenses. Funds are organized into two major categories: governmental and proprietary. An emphasis is placed on major funds within the governmental and proprietary categories. A fund is considered major if it is the primary operating fund of the City or it meets the following criteria:

1. Total assets, liabilities, revenues or expenditures/expenses of the individual governmental or enterprise fund are at least 10% of the corresponding total for all funds of that category or type, and
2. Total assets, liabilities, revenues or expenditures/expenses of the individual governmental or enterprise fund are at least 5% of the corresponding total for all governmental and enterprise funds combined, or
3. Management has elected to classify one or more governmental or enterprise funds as major for consistency in reporting from year to year or because of public interest in the fund's operations.

The funds of the City of Britton are described below:

Governmental Funds

General Fund – The General Fund is the general operating fund of the City. It is used to account for all financial resources except those required to be accounted for in another fund. The General Fund is always considered to be a major fund.

Special Revenue Funds – Special revenue funds are used to account for the proceeds of specific revenue sources (other than trusts for individuals, private organizations, or other governments or for major capital projects) that are legally restricted to expenditures for specified purposes.

- Liquor, Lodging and Dining Gross Receipts Tax Fund – To account for an additional one percent sales tax on the gross receipts of lodging, alcoholic beverages, prepared food and admissions which tax shall be used for the purpose of land acquisition, architectural fees, constructions costs, payments for civic center, auditorium or athletic facilities buildings including the promotion of advertising of the city (SDCL 10-52A-2). This is a major fund.
- Revolving Loan Fund – To account for resources loaned to businesses to be repaid over a period of time and, resources used to collateralize business loans. This is a major fund.
- Library Fines Fund – To account for library related fines, similar charges, and donations to be used for library purposes. This is a major fund.

Permanent Funds – Permanent funds are used to report resources that are legally restricted to the extent that only earnings, and not principal, may be used for purposes that support the City's programs, that is for the benefit of the City's and its citizenry.

- Cemetery Perpetual Care Fund – To account for the payments received for perpetual care of cemeteries which is permanently set aside and for which only the income from the trust fund investments is used for the care and maintenance of the cemetery. (SDCL 9-32-18) This is a major fund.
- Library Foundation Fund – To account for the library endowment placed with the South Dakota Community Foundation and related investment earnings established by the library board. This is a major fund.

Proprietary Funds

Enterprise Funds – Enterprise funds are used to account for operations (a) that are financed and operated in a manner similar to private business enterprises, where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability or other purposes.

The City reports the following enterprise funds:

Water Fund - Financed primarily by user charges, this fund accounts for the construction and operation of the municipal waterworks system and related facilities. (SDCL 9-47-1) This is a major fund.

Sewer Fund - Financed primarily by user charges, this fund accounts for the construction and operation of the municipal sanitary sewer system and related facilities. (SDCL 9-48-2) This is a major fund.

Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the City's enterprise funds are charges to customers for sales and services. Operating expenses for enterprise funds include the cost of sales and services, and administrative expenses. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

C. Measurement Focus and Basis of Accounting

Measurement focus is a term used to describe "how" transactions are recorded within the various financial statements. Basis of accounting refers to "when" revenues and expenditures or expenses are recognized in the accounts and reported in the financial statements, regardless of the measurement focus.

Measurement Focus

In the government-wide statement of net position and statement of activities, both governmental and business-type activities are presented using the economic resources measurement focus, applied within the limitations of the modified cash basis of accounting as defined below.

In the fund financial statements, the "current financial resources" measurement focus or the economic resources" measurement focus is applied within the limitations of the modified cash basis of accounting.

Basis of Accounting

In the government-wide statement of net position and statement of activities and the fund financial statements, governmental and business-type activities are presented using a modified cash basis of accounting.

The modified cash basis of accounting involves the measurement of cash and cash equivalents and changes in cash and cash equivalents resulting from cash receipt and disbursement transactions. Under the cash basis of accounting, the statement of financial position reports only cash and cash equivalents (those investments with terms to maturity of 90 days (three months) or less at the date of acquisition). Under the modified cash basis of accounting, transactions are recorded in the accounts when cash and/or cash equivalents are received or disbursed and assets and liabilities are recognized to the extent that cash has been received or disbursed. The only modification to the cash basis of accounting implemented by the City in these financial statements is the recording of long-term investments in certificates of deposit (those with maturities more than 90-days (three months) from the date of acquisition) acquired with cash assets at cost and inter-fund advances and borrowings arising from the use of a pooled cash account.

As a result of the use of this modified cash basis of accounting, certain assets and their related revenues (such as accounts receivable and revenue for billed or provided services not yet collected) and certain liabilities and their related expenses (such as accounts payable and expenses for goods or services received but not yet paid and accrued expenses and liabilities) are not recorded in these financial statements.

If the City applied USGAAP, the fund financial statements for governmental funds would use the modified accrual basis of accounting, while the fund financial statements for proprietary fund types would use the accrual basis of accounting. All government-wide financial statements would be presented on the accrual basis of accounting.

D. Deposits and Investments

For the purpose of financial reporting, "cash and cash equivalents" includes all demand and savings accounts and certificates of deposit or short-term investments with a term to maturity at date of acquisition of three months or less. Investments in open-end mutual fund shares or similar investments in external investment pools are also considered to be cash equivalents.

Investments classified in the financial statements consist entirely of certificates of deposit whose term to maturity at date of acquisition exceeds three months and/or those types of investment authorized by South Dakota Codified Laws (SDCL) 4-5-6. Under the modified cash basis of accounting, investments are carried at cost.

E. Interfund Eliminations and Reclassifications

Government-Wide Financial Statements

In the process of aggregating data for the government-wide financial statements, some amounts reported as interfund activity and balances in the fund financial statements have been eliminated or reclassified, as follows:

- The City's interfund receivables and payables were eliminated as of December 31, 2014.
- The City did not have internal service fund activity which required elimination as of December 31, 2014.

F. Capital Assets

Under the modified cash basis of accounting, capital assets are expensed when the cash transaction occurs.

G. Long-Term Liabilities

Under the modified cash basis of accounting, cash proceeds from long-term debt issuances are recorded as a receipt, while payments to creditors to reduce long-term debts are recorded as a cost of the program which benefits from the financing. Allocations are made where appropriate. Interest costs are not allocated, but are reported as a separate program cost category.

Long-term debts arising from cash transactions of governmental funds are not reported as liabilities in the fund financial statements. Instead, the debt proceeds are reported as other financing sources and payments of principal and interest are reported as expenditures. Under the modified cash basis, the accounting for long-term debts of proprietary funds is the same in the fund financial statements as it is in the government-wide financial statements.

H. Program Revenues

In the government-wide statement of activities, reported program revenues derive directly from the program itself or from parties other than the City's taxpayers or citizenry, as a whole. Program revenues are classified into three categories, as follows:

1. Charges for Services – These arise from charges to customers, applicants or others who purchase, use or directly benefit from the goods, services or privileges provided or are otherwise directly affected by the services.
2. Program-Specific Operating Grants and Contributions – These arise from mandatory and voluntary non-exchange transactions with other governments, organizations or individuals that are restricted for use in a particular program.
3. Program-Specific Capital Grants and Contributions – These arise from mandatory and voluntary non-exchange transactions with other governments, organizations or individuals that are restricted for the acquisition of capital assets for use in a particular program.

I. Proprietary Funds Revenue and Expense Classifications

In the proprietary fund's statement of revenues, expenses and changes in fund net position, revenues and expenses are classified in a manner consistent with how they are classified in the statement of cash flows. That is, transactions for which related cash flows are reported as capital and related financing activities, noncapital financing activities, or investing activities are not reported as components of operating revenues or expenses.

J. Cash and Cash Equivalents

The City pools the cash resources of its funds for cash management purposes. The Water Fund and Sewer Fund essentially have access to the entire amount of their cash resources on demand. Accordingly, each proprietary fund's equity in the cash management pool is considered to be cash and cash equivalents.

K. Equity Classifications

Government-Wide Statements

Equity is classified as net position and is comprised of three components, invested in capital assets, net of related debt; restricted net position; and unrestricted net position. Because capital assets are not reported by the City under the modified cash basis of accounting, only the following components are displayed:

1. Restricted Net Position – Consists of net position with constraints placed on their use either by (a) external groups such as creditors, grantors, contributors or laws and regulations of other governments; or (b) law through constitutional provisions or enabling legislation.
2. Unrestricted Net Position – All other net position that do not meet the definition of "restricted".

Fund Financial Statements

Governmental fund equity is classified as fund balance, and may distinguish between nonspendable, restricted, committed, assigned and unassigned components. Proprietary fund equity is classified the same as in the government-wide financial statements.

L. Application of Net Position

The City uses restricted/committed amounts first when both restricted and unrestricted net position is available unless there are legal documents/contracts that prohibit doing this, such as grant agreements requiring dollar for dollar spending. Additionally, the government would first use committed, then assigned, and lastly unassigned amounts of unrestricted net position when expenditures are made.

M. Fund Balance Classification Policies and Procedures

The City has implemented GASB Statement No. 54, *Fund Balance Reporting and Governmental Fund Type Definitions*. This statement provides more clearly defined fund balance categories to make the nature and extent of the constraints placed on a government's fund balances more transparent. The following classifications describe the relative strength of the spending constraints:

- Nonspendable Fund Balance - Amounts that are not in nonspendable form (such as inventory) or are required to be maintained intact.
- Restricted Fund Balance - Amounts constrained to specific purposes by their providers (such as grantors, bondholders, and higher levels of government), through constitutional provisions, or by enabling legislation.
- Committed Fund Balance - Amounts constrained to specific purposes by the City itself, using its highest level of decision-making authority (i.e., City Council). To be reported as committed, amounts cannot be used for any other purpose unless the City takes the same highest level action to remove or change the constraint.
- Assigned Fund Balance - Amounts the City intends to use for a specific purpose. Intent can be expressed by the City Council or by an official or body to which the City Council delegates the authority.
- Unassigned Fund Balance - Amounts that are available for any purpose. Positive amounts are reported only in the General Fund.

The City Council establishes (and modifies or rescinds) fund balance commitments by passage of an ordinance. An assigned fund balance is established by City Council through adoption of a resolution designating a fund balance is intended for a specific purpose (such as the purchase of fixed assets, construction, debt service, or for other purposes).

The City does not have a formal minimum fund balance policy.

The purpose of each major special revenue fund and revenue source is listed below:

Major Special Revenue Fund	Revenue Source
Liquor, Lodging, and Dining Gross Receipts Tax Fund	Sales taxes
Revolving Loan Fund	Interest
Library Fund	Donations

N. Rounding

Computer generated rounding variances exist in the basic financial statements and supplementary information. The variances result from values being entered with cents rather than as whole numbers.

Note 2 - Deposits and Investments

The City follows the practice of aggregating the cash assets of various funds to maximize cash management efficiency and returns. Various restrictions on deposits and investments are imposed by statutes. These restrictions are summarized below:

Deposits

The City's cash deposits are made in qualified public depositories as defined by SDCL 4-6A-1, 9-22-6, 9-22-6.1 and 9-22-6.2, and may be in the form of demand or time deposits.

Qualified depositories are required by SDCL 4-6A-3 to maintain at all times, segregated from their other assets, eligible collateral having a value equal to at least 100% of the public deposit accounts which exceed deposit insurance such as the FDIC and NCUA. In lieu of pledging eligible securities, a qualified public depository may furnish irrevocable standby letters of credit issued by Federal Home Loan Banks accompanied by written evidence of that bank's public debt rating which may not be less than "AA" or a qualified public depository may furnish a corporate surety bond of a corporation authorized to do business in South Dakota.

Custodial Credit Risk – Deposits – The risk that, in the event of a depository failure, the City's deposits may not be returned to it. The City does not have a deposit policy for custodial credit risk. As of December 31, 2014, the City maintained their deposits in in-state financial institutions which were properly collateralized in accordance with SDCL 4-6A-3.

The actual bank balances at December 31, 2014 are as follows:

	Bank Balance
Insured (FDIC/NCUA)	$ 541,421
Uninsured, collateral jointly held by State's/City's agent in the name of the State and the pledging financial institution	3,351,130
	$ 3,892,551

The City's carrying amount of deposits at December 31, 2014 is as follows:

Cash and cash equivalents	$ 3,105,847
Investments	676,660
	$ 3,782,507

Investments

In general, SDCL 4-5-6 permits City funds to be invested in (a) securities of the United States and securities guaranteed by the United States government either directly or indirectly including, without limitation, United States treasury bills, notes, bonds and other obligations issued or directly or indirectly guaranteed by the United States government, or otherwise directly or indirectly backed by the full faith and credit of the United States government; provided that, for other than permanent, trust, retirement, building and depreciation reserve funds, such securities shall either mature within eighteen months from the date of purchase or be redeemable at the option of the holder within eighteen months from the date of purchase; or (b) repurchase agreements fully collateralized by securities described in (a) and meeting the requirements of § 4-5-9, if the repurchase agreements are entered into only with those primary reporting dealers that report to the Federal Reserve Bank of New York and with the one hundred largest United States commercial banks, as measured by domestic deposits; or (c) in shares of an open-end, no-load fund administered by an investment company registered under the Federal Investment Company Act of 1940 whose shares are registered under the Federal Securities Act of 1933 and whose only investments are in securities described in (a) and repurchase agreements described in (b).

Interest Rate Risk – The City does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates. As of December 31, 2014, all of the City's investments consist of certificates of deposit which have maturities of less than one year.

Credit Risk – State law limits eligible investments for the Municipality, as discussed above. The City has no further investment policy that would further limit its investment choices.

Assignment of Investment Income - State law allows income from deposits and investments to be credited to either the General Fund or the fund making the investment. The City's policy is to credit all income from investments to the fund making the investment, except for interest generated by the Cemetery Perpetual Care Fund, which must be credited to the General Fund, and used only for maintenance of the municipal cemetery, as required by SDCL 9-32-18.

Under the modified cash basis of accounting, investments are stated at cost.

Note 3 - Property Taxes

Property taxes are levied on or before October 1, of the year preceding the start of the fiscal year. They attach as an enforceable lien on property and become due and payable as of January 1, the first day of the fiscal year. Taxes are payable in two installments on or before April 30 and October 31 of the fiscal year.

The City is permitted by several state statutes to levy varying amounts of taxes per $1,000 of taxable valuation on taxable real property in the City.

Note 4 - Water Supply Contract

The City entered into a 40 year agreement with B.D.M. Rural Water Systems, Inc. to provide water to the City. A monthly minimum in the amount of $3,419 is paid by the city to B.D.M. Rural Water Systems, Inc. along with a charge of $1.50 for the first two million gallons used and a charge of $1.25 per thousand gallons in excess of two million gallons of water consumed. The monthly service charge represents a contribution by the City to aid B.D.M. Rural Water Systems, Inc. in the construction of the facilities necessary to provide water to the City. The City will not acquire ownership of any of these water facilities through these payments. Payments are made from the City's Water Fund.

The following are the minimum payments on this agreement:

Year Ending June 30,	Amount
2015	$ 41,033
2016	41,033
2017	41,033
2018	41,033
2019	41,033
2020-2024	205,166
2025-2029	205,166
2030-2034	205,166
2035-2039	205,166
2040	41,033

Note 5 - Retirement Plan

All employees, except for part-time employees, participate in the South Dakota Retirement System (SDRS), a cost-sharing, multiple employer public employee retirement system established to provide retirement benefits for employees of the State of South Dakota and its political subdivisions. The SDRS provides retirement, disability and survivor benefits. The right to receive retirement benefits vests after three years of credited service. Authority for establishing, administering and amending plan provisions are found in South Dakota Codified Law 3-12. The SDRS issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained by writing to the SDRS, P.O. Box 1098, Pierre, SD 57501-1098 or by calling (605) 773-3731.

General employees are required by state statute to contribute 6% of their salary to the plan, while public safety and judicial employees contribute at 8% and 9%, respectively. State statute also requires the employer to contribute an amount equal to the employee's contribution. The City's share of contributions to the SDRS for the fiscal years ended December 31, 2014, 2013, and 2012 were $17,146, $16,232, and $16,429, respectively, equal to the required contributions each year.

Note 6 - Significant Contingencies - Litigation

At December 31, 2014, the City was not involved in any litigation that would be material to the financial statements.

Note 7 - Restricted Net Position

The following table shows the net position restricted for other purposes as shown on the statement of net position:

Fund	Restricted By	Amount
Revolving Loan Fund	Contractual	$ 621,322
Library Foundation Fund	Contractual	61,326
Water Fund	Contractual	146,887
Sewer Fund	Contractual	146,324
Cemetery purposes	State Law	54,216
Library Fund	State Law	6,526

Note 8 - Risk Management

The City is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. During the period ended December 31, 2014, the City managed its risks as follows:

Employee Health Insurance

The City purchases health insurance for its employees from a commercial insurance carrier. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

Liability Insurance

The City joined the South Dakota Public Assurance Alliance (SDPAA), a public entity risk pool currently operating as a common risk management and insurance program for South Dakota local government entities. The objective of the SDPAA is to administer and provide risk management services and risk sharing facilities to the members and to defend and protect the members against liability, to advise members on loss control guidelines and procedures, and provide them with risk management services, loss control and risk reduction information and to obtain lower costs for that coverage. The City's responsibility is to promptly report to and cooperate with the SDPAA to resolve any incident which could result in a claim being made by or against the City. The City pays an annual premium, to provide liability coverage detailed below, under a claims-made policy and the premiums are accrued based on the ultimate cost of the experience to date of the SDPAA member, based on their exposure or type of coverage. The City pays an annual premium to the pool to provide coverage generally for general liability, official's liability, automobile liability, law enforcement liability, and physical damage, property and, boiler and machinery. The City purchases airport bodily injury and property damage liability insurance and surety bond coverage from a commercial insurance carrier.

The agreement with the SDPAA provides that the above coverages will be provided to various limits depending on the area of liability coverage. Member premiums are used by the pool for payment of claims and to pay for reinsurance for claims in excess of $250,000 for property coverage and $500,000 for liability coverage to the upper limit. A portion of the member premiums are also allocated to a cumulative reserve fund. The City would be eligible to receive a refund for a percentage of the amount allocated to the cumulative reserve fund on the following basis:

First Full Year	50%
Second Full Year	60%
Third Full Year	70%
Fourth Full Year	80%
Fifth Full Year	90%
Sixth Full Year and Thereafter	100%

As of December 31, 2014, the City has vested balance in the cumulative reserve fund of $28,628.

The agreement with the South Dakota Public Assurance Alliance provides for various coverage limits. The City carries various deductibles for different types of coverage. The City does not carry additional insurance to cover claims in excess of the upper limit. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

Worker's Compensation

The City joined the South Dakota Municipal League Worker's Compensation Fund (Fund), a public entity risk pool currently operating as a common risk management and insurance program for South Dakota local government entities. The objective of the fund is to formulate, develop, and administer, on behalf of the member organizations, a program of worker's compensation coverage, to obtain lower costs for that coverage, and to develop a comprehensive loss control program. The City's responsibility is to initiate and maintain a safety program to give its employees safe and sanitary working conditions and to promptly report to and cooperate with the Fund to resolve any worker's compensation claims. The City pays an annual premium, to provide worker's compensation coverage for its employees, under a self-funded program and the premiums are accrued based on the ultimate cost of the experience to date of the Fund members. Coverage limits are set by state statute. The pool pays the first $650,000 of any claim per individual. The pool has reinsurance which covers up to statutory limits in addition to a separate combined employer liability limit of $2,000,000 per incident.

The City does not carry additional insurance to cover claims in excess of the upper limit. Settled claims resulting from these risks have not exceeded the liability coverage over the past three years.

Unemployment Benefits

The City provides coverage for unemployment benefits by paying into the Unemployment Compensation Fund established by state law and managed by the State of South Dakota.

Note 9 - Pledged Assets

As of December 31, 2014, the City had pledged three certificates of deposit totaling $166,660 from the Revolving Loan Fund as business loan guarantees to lenders. The value of certificates of deposit pledged range from $14,410 to $125,250 on loans totaling $1,018,758 for three separate businesses. The City has the risk of loss in the event of default on the loan by the borrower(s).

Note 10 - Commitments

The City has a project in progress to replace sewer system pipes. The project is being funded through federal and state funding from state revolving funds, rural development and consolidated water grant program. The City has entered into a contract with J & J Earthworks in the amount of $5,110,857 for construction; a contract with Helm's & Associates for engineering services in the amount of $768,770, Administrative fee to NECOG in the amount of $12,500, legal fees totaling $41,194 and contingency totaling $558,679 for a total project cost of $6,492,000. As of December 31, 2014, the City has entered into a loan with the use of State Revolving Funds in the amount of $2,500,000 and two USDA Rural Development loans in the amounts of $1,315,000 and $209,000. The City has been approved for a USDA Rural Development grant in the amount of $968,000, Water Quality grant in the amount of $500,000 and consolidated grant for $1,000,000. The total amount expended as of December 31, 2014 is $1,681,607.

City of Britton
Schedule of Changes in Notes and Bonds Payable
Year Ended December 31, 2014

Governmental activities	Notes and Bonds Payable 1/1/2014	Add New Debt	Less Debt Retired	Notes and Bonds Payable 12/31/2014
Enterprise Notes and Bonds Payable				
Water revenue bonds	$ 173,889	$ -	$ (16,604)	$ 157,285
Sewer revenue bonds	185,177	-	(14,059)	171,118
Sewer revenue bonds - 2012	896,125	1,610	(16,523)	881,212
Sewer revenue bonds - 2013	-	1,056,005	(5,818)	1,050,187
	$ 1,255,191	$ 1,057,615	$ (53,004)	$ 2,259,802

City of Britton
Budgetary Comparison Schedule–General Fund
Year Ended December 31, 2014

	Budgeted Amounts		Actual	Variance with Final Budget Positive
	Original	Final	Amounts	(Negative)
Revenues				
310 Taxes				
311 General property taxes	$ 417,602	$ 417,602	$ 398,076	$ (19,526)
313 General sales and use taxes	500,000	523,290	669,900	146,610
315 Amusement	180	180	60	(120)
319 Penalties and interest on delinquent taxes	150	150	-	(150)
Total taxes	917,932	941,222	1,068,036	126,814
320 Licenses and permits	1,200	1,200	965	(235)
330 Intergovernmetal revenue				
331 Federal grants	190,000	219,919	99,871	(120,048)
334 State grants	4,000	15,156	11,156	(4,000)
335 State shared revenue				
335.01 Bank franshise tax	4,000	4,000	480	(3,520)
335.02 Motor vehicle commerical prorate	6,000	6,000	19,132	13,132
335.03 Liquor tax reversion	8,000	8,000	9,183	1,183
335.04 Motor vehicle licenses (5%)	14,000	14,000	4,655	(9,345)
335.08 Local government highway and bridge fund	35,000	35,000	45,968	10,968
338 County shared revenue				
338.01 County road tax (25%)	1,375	1,375	-	(1,375)
Total intergovernmental revenue	262,375	303,450	190,445	(113,005)
340 Charges for good and services				
341 General government	1,050	1,050	1,145	95
344 Sanitation	97,104	97,104	96,825	(279)
345 Health	-	-	81	81
346 Culture and recreation	25,500	25,500	28,877	3,377
348 Cemetery	300	300	815	515
Total charges for goods and services	123,954	123,954	127,743	3,789
350 Fines and forfeits				
351 Court fines and costs	-	-	39	39
Total fines and forfeits	-	-	39	39
360 Miscellaneous revenue				
361 Investment earnings	150	150	1,520	1,370
362 Rentals	21,759	21,759	15,784	(5,975)
363 Special assessments	3,611	3,611	4,262	651
368 Liquor operating agreement income	55,000	55,000	64,028	9,028
369 Other	8,700	8,700	20,337	11,637
Total miscellaneous revenue	89,220	89,220	105,931	16,711
Total revenues	1,394,681	1,459,046	1,493,159	34,113

	Budgeted Amounts		Actual	Variance with Final Budget Positive
	Original	Final	Amounts	(Negative)
Expenditures				
410 General government				
411 Legislative	21,650	22,087	20,992	1,095
411.5 Contingency	46,509	46,509		
Amount transferred	-	(42,224)	-	4,285
412 Executive	6,980	6,980	5,411	1,569
413 Elections	980	980	367	613
414 Financial administration	103,705	103,705	99,106	4,599
419 Other	17,500	29,500	29,375	125
Total general government	197,324	167,537	155,251	12,286
420 Public safety				
421 Police	155,075	155,075	98,024	57,051
422 Fire	15,250	15,250	33,164	(17,914)
423 Protective inspection	4,195	7,195	6,153	1,042
Total public safety	174,520	177,520	137,341	40,179
430 Public works				
431 Highways and streets	292,425	292,425	239,847	52,578
432 Sanitation	105,720	107,220	102,967	4,253
435 Airport	216,425	246,344	253,276	(6,932)
437 Cemetery	19,475	22,212	22,222	(10)
439 Transit	2,875	2,875	2,333	542
Total public works	636,920	671,076	620,645	50,431
440 Health and welfare				
441 Health	10,525	26,231	25,347	884
Total health and welfare	10,525	26,231	25,347	884
450 Culture and recreation				
451 Recreation	128,675	151,965	150,492	1,473
452 Parks	65,417	65,417	45,538	19,879
455 Library	135,000	141,000	141,921	(921)
Total culture and recreation	329,092	358,382	337,951	20,431
460 Conservation and development				
465 Economic development	9,200	21,200	15,543	5,657
Total conservation and development	9,200	21,200	15,543	5,657
470 Debt service	11,000	11,000	-	11,000
490 Miscellaneous:				
499 Liquor operating agreements	100	100	67	33
Total miscellaneous	100	100	67	33
Total expenditures	1,368,681	1,433,046	1,292,145	140,901

City of Britton

Budgetary Comparison Schedule–Liquor, Lodging and Dining Gross Receipts Tax Fund
Year Ended December 31, 2014

	Budgeted Amounts		Actual Amounts (Budgetary Basis)	Variance with Final Budget Positive (Negative)
	Original	Final		
Revenues				
310 Taxes				
313 General sales and use taxes	$ 35,000	$ 35,000	$ 36,302	$ 1,302
Expenditures				
460 Conservation and development:				
465 Economic development and assistance (industrial development)	31,000	31,000	30,466	534
Total expenditures	31,000	31,000	30,466	534
Net Change in Fund Balance	4,000	4,000	5,836	1,836
Fund Balance - Beginning	45,828	45,828	45,829	-
Fund Balance - Ending	$ 49,828	$ 49,828	$ 51,665	$ 1,836

City of Britton
Budgetary Comparison Schedule–Revolving Loan Fund
Year Ended December 31, 2014

	Budgeted Amounts		Actual Amounts (Budgetary Basis)	Variance with Final Budget Positive (Negative)
	Original	Final		
Revenues				
360 Miscellaneous revenue				
361 Investment earnings	$ 1,000	$ 1,000	$ 1,344	$ 344
Expenditures				
460 Conservation and development:				
465 Economic development and assistance (industrial development)	5,000	5,000	5,000	-
Total expenditures	5,000	5,000	5,000	-
Net Change in Fund Balance	(4,000)	(4,000)	(3,656)	344
Fund Balance - Beginning	624,978	624,978	624,978	-
Fund Balance - Ending	$ 620,978	$ 620,978	$ 621,322	$ 344

City of Britton
Budgetary Comparison Schedule–Library Fines Fund
Year Ended December 31, 2014

	Budgeted Amounts		Actual Amounts (Budgetary Basis)	Variance with Final Budget Positive (Negative)
	Original	Final		
Revenues				
360 Miscellaneous revenue				
367 Contributions and donations from private sources	$ -	$ -	$ 8,318	$ 8,318
Expenditures				
455 Libraries	25,000	25,000	6,205	18,795
Net Change in Fund Balance	(25,000)	(25,000)	2,113	27,113
Net Position - Beginning	4,413	4,413	4,413	-
Fund Balance - Ending	$ (20,587)	$ (20,587)	$ 6,526	$ 27,113

Note 1 - Budgets and Budgetary Accounting

The City follows these procedures in establishing the budgetary data reflected in the financial statements:

1. At the first regular Board meeting in September of each year or within ten days thereafter, the City Commission introduces the annual appropriation ordinance for the ensuing fiscal year.

2. After adoption by the City Commission, the operating budget is legally binding and actual expenditures for each purpose cannot exceed the amounts budgeted, except as indicated in Number 4.

3. A line item for contingencies may be included in the annual budget. Such a line item may not exceed 5% of the total municipal budget and may be transferred by resolution of the City Commission to any other budget category that is deemed insufficient during the year.

4. If it is determined during the year that sufficient amounts have not been budgeted, state statute allows the adoption of supplemental budgets.

5. Unexpended appropriations lapse at year end unless encumbered by resolution of the City Commission.

   Encumbrance accounting, under which purchase orders, contracts and other commitments for the expenditure of monies are recorded in order to reserve that portion of the applicable appropriation, is employed as an extension of formal budgetary integration in the General Fund, special revenue funds and capital projects funds.

   The City did not encumber any amounts at December 31, 2014.

6. Formal budgetary integration is employed as a management control device during the year for the General Fund and special revenue funds. Formal budgetary integration is not employed for debt service funds because effective budgetary control is alternatively achieved through general obligation bond indenture provisions.

7. Budgets for the General Fund and Special Revenue Funds are adopted on a basis consistent with a modified cash basis of accounting.

Note 2 - Modified Cash Basis/Budgetary Accounting Basis Differences

The financial statements prepared on the modified cash basis of accounting present capital outlay expenditure information in a separate category of expenditures. Under the budgetary basis of accounting, capital outlay expenditures are reported within the function to which they relate. For example, the purchase of a new fire truck would be reported as a capital outlay expenditure on the governmental funds statement of revenues, expenditures and changes in fund balances, however; in the budgetary schedule, the purchase of a fire truck would be reported as an expenditure of the Public Safety/Fire Department function of government, along with all other current Fire Department related expenditures.

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Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

The City Council
City of Britton
Britton, South Dakota

We have audited in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States the financial statements of the governmental activities, the business-type activities, and each major fund, of City of Britton, South Dakota as of and for the year ended December 31, 2014, and the related notes to the financial statements, which collectively comprise the City of Britton's basic financial statements and have issued our report thereon dated June 24, 2015. Our report was an adverse opinion because the statements included only the primary government and not the City's legally separate component unit. The statements were prepared on the modified cash basis of accounting, which is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the City's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the City's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the City's internal control.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control over financial reporting that might be material weaknesses or significant deficiencies and; therefore, material weaknesses and significant deficiencies may exist that were not identified. However, as described in the accompanying schedule of findings and questioned costs, we identified certain deficiencies in internal control that we consider to be material weaknesses.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the City's financial statements will not be prevented, or detected and corrected on a timely basis. We consider the deficiencies described in the accompanying schedule of findings to be material weakness – 2014-A and 2014-B.

A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the City's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards.*

City of Britton's Responses to Findings

The City's responses to the findings identified in our audit are described in the accompanying schedule of findings. The City's responses were not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on them.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the City's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the City's internal control and compliance. Accordingly, this communication is not suitable for any other purpose. However, as required by South Dakota Codified Law 4-11-11, this report is a matter of public record and its distribution is not limited.

Eide Bailly LLP

Aberdeen, South Dakota
June 24, 2015

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Independent Auditor's Report on Compliance for Each Major Federal Program; Report on Internal Control Over Compliance Required by OMB Circular A-133

The City Council
City of Britton
Britton, South Dakota

Report on Compliance for Each Major Federal Program

We have audited the City of Britton's compliance with the types of compliance requirements described in the *OMB Circular A-133 Compliance Supplement* that could have a direct and material effect on each of the City's major federal programs for the year ended December 31, 2014. The City's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility
Management is responsible for compliance with the requirements of laws, regulations, contracts and grants applicable to its federal programs.

Auditor's Responsibility
Our responsibility is to express an opinion on the compliance for each of City's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*. Those standards and OMB Circular A-133 require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the City's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the City's compliance.

Opinion on Each Major Federal Program
In our opinion, the City complied, in all material respects, with the compliance requirements referred to above that could have a direct and material effect of each of its major federal programs for the year ended December 31, 2014.

Report on Internal Control over Compliance

Management of the City is responsible for establishing and maintaining effective internal control over compliance with the compliance requirements referred to above. In planning and performing our audit of compliance, we considered the City's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in circumstances for the purpose of expressing an opinion on compliance, and to test and report on internal control over compliance for each major federal program and to test and report on internal control over compliance in accordance with OMB Circular A-133, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the City's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. *A material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a compliance requirement will not be prevented, or detected and corrected, on a timely basis. *A significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of OMB Circular A-133. Accordingly, this report is not suitable for any other purpose.

Eide Bailly LLP

Aberdeen, South Dakota
June 24, 2015

Note 1 - Basis of Presentation

The accompanying schedule of federal expenditures of federal awards includes the federal grant and loan activity of the City and is presented on the modified cash basis of accounting. The information in this schedule is presented in accordance with the requirements of OMB Circular A-133, *Audits of States, Local Governments and Non-Profit Organizations.*

Note 2 - Significant Accounting Policies

Governmental fund types account for the City of Britton's federal grant activity. Therefore, expenditures in the schedule of expenditures of federal awards are recognized on the modified accrual basis – when they become a demand on current available financial resources. The City of Britton's summary of significant accounting policies is presented in Note 1 in the City of Britton's basic financial statements.

Section I – Summary of Auditor's Results

FINANCIAL STATEMENTS

Type of auditor's report issued	Adverse
Internal control over financial reporting:	
Material weaknesses identified	Yes
Significant deficiencies identified not considered to be material weaknesses	No
Noncompliance material to financial statements noted?	No

FEDERAL AWARDS

Internal control over major programs:	
Material weakness(es) identified?	No
Significant deficiencies identified not considered to be material weaknesses	None reported
Type of auditor's report issued on compliance for major programs	Unmodified
Any audit findings disclosed that are required to be reported in accordance with section 510(a) of OMB Circular A-133:	No

Identification of major programs:

Name of Federal Program	CFDA Number
Rural Development Loans	10.760

Dollar threshold used to distinguish between type A and type B programs:	$ 300,000
Auditee qualified as low-risk auditee?	No

Section II – Findings Related to the Financial Statements

2014-A Lack of Segregation of Duties

Material Weakness

Criteria: A good system of internal controls contemplates an adequate segregation of duties so that no one individual handles a transaction from its inception to its completion.

Condition: City of Britton has a limited number of office personnel, and accordingly, does not have adequate internal accounting controls in revenue, expenditures, and payroll functions because of a lack of segregation of duties.

Cause: The City has an insufficient number of staff to adequately separate duties.

Effect: This condition increases the risk of fraud or errors that might occur in the financial reporting process and not be detected.

Recommendation: Although it is recognized that number of office staff may not be large enough to permit adequate segregation of duties in all respects, it is important that management and those charged with governance be aware of this condition. We recommend that the City Council exercise adequate oversight of the accounting function.

Management Response and Corrective Action Plan

Management Response: Management accepts the risk associated with lack of segregation of duties in the City.

Explanation of Disagreement: No disagreement noted

Official Responsible for Ensuring Corrective Action Plan: Marie Marlow, Finance Officer

Planned Completion for Correction Action: Ongoing

Plan to Monitor Completion of Corrective Action: Ongoing

2014-B Material Adjusting Journal Entries

Material Weakness

Criteria: A system of internal accounting control contemplates accurate recording and presentation of amounts and disclosures in the financial statements.

Condition: During the course of our engagement, we proposed material audit adjustments to the City's recorded account balances, which if not recorded, would have resulted in a material misstatement of the City's financial statements.

Cause: The City does not have an adequate internal accounting control system to identify all relevant and material adjustments necessary to ensure that financial statements are in accordance with generally accepted accounting principles.

Effect: The lack of internal accounting control could result in the City's interim financial information being materially misstated.

Recommendation: We recommend training specific to governmental accounting principles so that staff is able to ensure financial statements are materially correct. In addition, a thorough review of the transactions and balances in each fund should take place prior to the beginning of the audit to ensure that generally accepted accounting principles have been followed for each fund type, especially for transaction types infrequent in occurrence.

Management Response and Corrective Action Plan

Management Response: Management accepts the risk associated with lack of segregation of duties in the City.

Explanation of Disagreement: No disagreement noted

Official Responsible for Ensuring Corrective Action Plan: Marie Marlow, Finance Officer

Planned Completion for Correction Action: Ongoing

Plan to Monitor Completion of Corrective Action: Ongoing

Findings Relating to the Financial Statements

Preparation of Financial Statements – Finding 2013-1

Status: This prior year finding has been resolved.

Lack of Segregation of Duties – Finding 2013-2

Status: This prior year finding has been restated as 2014-A.

Compliance with South Dakota Codified Law – Finding 2013-4

Status: This finding has been resolved in the current year.

Findings Related to Federal Awards

None

City of Britton
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December 31, 2013

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Independent Auditor's Report

The City Council
City of Britton
Britton , South Dakota

Report on the Financial Statements
We have audited the accompanying financial statements of the governmental activities, the business-type activities and each major fund of the City of Britton as of December 31, 2013, and for the fiscal year then ended and the related notes to the financial statements, which collectively comprise the City's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Audit Standards,* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Summary of Opinions

Opinion Unit	Type of Opinion
Governmental Activities	Unmodified
Business-Type Activities	Unmodified
Aggregate Discretely Presented Component Units	Adverse
General Fund	Unmodified
Liquor, Lodging, and Dining Gross Receipts Tax Fund	Unmodified
Revolving Loan Fund	Unmodified
Library Fines Fund	Unmodified
Cemetery Perpetual Care Fund	Unmodified
Library Foundation Fund	Unmodified
Water Fund	Unmodified
Sewer Fund	Unmodified

Basis for Adverse Opinion on the Aggregate Discretely Presented Component Unit
The financial statements do not include financial data for the City's legally separate component unit. Accounting principles generally accepted in the United States of America require the financial data for the component unit to be reported with the financial data of the City's primary government unless the City also issues financial statements for the financial reporting entity that include the financial data for its component unit. The City has not issued such reporting entity financial statements. The amount by which this departure would affect the assets, net position, revenues and expenditures of the aggregate discretely presented component unit is not reasonably determinable.

Adverse Opinion on the Aggregate Discretely Presented Component Unit
In our opinion, because of the omission of the discretely presented component units, as described in the "Basis for Adverse Opinion on the Aggregate discretely Presented Component Unit" paragraph, the financial statements referred to above do not present fairly, in conformity with accounting principles generally accepted in the United States of America, the financial position of the aggregate discretely presented component unit of the City as of December 31, 2013, or the changes in financial position thereof for the year then ended.

Unmodified Opinions
Further, in our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position - modified cash basis - of the governmental activities, the business-type activities, and each major fund of the City of Britton as of December 31, 2013, and the respective changes in financial position - modified cash basis and, where applicable, cash flows - modified cash basis thereof and for the year then ended in conformity with the basis of accounting described in Note 1.

Basis of Accounting

We draw attention to Note 12 of the financial statements, which describes the basis of accounting. As described in Note 12 in 2013 the City adopted a policy of preparing it financial statements on the modified cash basis of accounting, which is a basis of accounting other than accounting principles generally accepted in the United States of America. The financial statements for 2012 have been retrospectively adjusted to reflect the modified cash basis of accounting adopted in 2013. Our opinion is not modified with respect to that matter.

Other Matters

Other Information
Our audit was conducted for the purpose of forming opinions on the financial statements that collectively compromise the City's financial statements. The listing of municipal officers, budgetary comparison and long-term debt schedule are presented for purposes of additional analysis and are not a required part of the financial statements.

The budgetary comparison and changes in notes and bonds payable schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects, in relation to the financial statements as a whole.

The listing of municipal officers has not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on it.

Other Reporting Required by *Government Auditing Standards*
In accordance with *Government Auditing Standards*, we have also issued our report dated July 3, 2014 on our consideration of the City of Britton's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance.

Eide Bailly LLP

Aberdeen, South Dakota
July 3, 2014

City of Britton
Statement of Net Position–Modified Cash Basis
December 31, 2013

	Primary Government		
	Governmental Activities	Business-Type Activities	Total
Assets			
Cash and cash equivalents	$ 1,157,317	$ 524,074	$ 1,681,391
Investments	450,000	450,000	900,000
Restricted assets:			
Cash and cash equivalents	54,471	420,392	474,863
Investments	240,900	-	240,900
	$ 1,902,688	$ 1,394,466	$ 3,297,154
Net Position			
Restricted for:			
Debt service purposes	$ -	$ 11,127	$ 11,127
Permanently restricted purposes	54,158	-	54,158
Library	64,726	-	64,726
Revolving loans fund	624,978	-	624,978
Equipment repair or replacement	-	243,121	243,121
Unrestricted	1,158,826	1,140,218	2,299,044
	$ 1,902,688	$ 1,394,466	$ 3,297,154

City of Britton
Statement of Activities–Modified Cash Basis
Year Ended December 31, 2013

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants, Contributions, and Loan Proceeds	Net Revenue (Expense) and Changes in Net Position: Primary Government: Governmental Activities	Net Revenue (Expense) and Changes in Net Position: Primary Government: Business-Type Activities	Net Revenue (Expense) and Changes in Net Position: Primary Government: Total
Primary Government							
Governmental activities:							
General government	$ 153,088	$ 24,092	$ -	$ -	$ (128,996)	$ -	$ (128,996)
Public safety	155,347	67	-	7,826	(147,454)	-	(147,454)
Public works	448,898	98,915	59,467	130,718	(159,798)	-	(159,798)
Health and welfare	5,976	110	-	-	(5,866)	-	(5,866)
Culture and recreation	290,030	30,703	-	-	(259,327)	-	(259,327)
Conservation and development	47,903	-	-	-	(47,903)	-	(47,903)
Debt service	10,733	-	-	-	(10,733)	-	(10,733)
Other	1,410	-	-	-	(1,410)	-	(1,410)
Total governmental activities	1,113,385	153,887	59,467	138,544	(761,487)	-	(761,487)
Business-type activities:							
Water	210,655	262,932	-	-	-	52,277	52,277
Sewer	363,901	274,471	-	-	-	(89,430)	(89,430)
Total business-type activities	574,556	537,403	-	-	-	(37,153)	(37,153)
Total primary government	$ 1,687,941	$ 691,290	$ 59,467	$ 138,544	(761,487)	(37,153)	(798,640)
General Revenues							
Taxes:							
Property taxes					390,629	-	390,629
Sales taxes					743,308	-	743,308
State shared revenues					13,311	-	13,311
Unrestricted investment earnings					1,918	862	2,780
Debt issued					-	243,541	243,541
Miscellaneous revenue					9,832	557	10,389
Other general revenue					62,348	-	62,348
Special items (sale of capital assets)					27,970	-	27,970
Total general revenues					1,249,316	244,960	1,494,276
Change in Net Position					487,829	207,807	695,636
Net Position - Beginning, as previously stated					8,200,567	2,454,776	10,655,343
Adjustments:							
Change in accounting principle					(6,785,708)	(1,268,117)	(8,053,825)
Fund Balance - Beginning, as restated					1,414,859	1,186,659	2,601,518
Net Position - Ending					$ 1,902,688	$ 1,394,466	$ 3,297,154

See Notes to Financial Statements

City of Britton
Balance Sheet–Modified Cash Basis–Governmental Funds
December 31, 2013

	General Fund	Liquor, Lodging and Dining Gross Receipts Tax Fund	Revolving Loan Fund	Library Fines Fund	Cemetery Perpetual Care Fund	Library Foundation Fund	Total Governmental Funds
Assets							
Cash and cash equivalents	$ 712,998	$ 45,828	$ 394,078	$ 4,413	$ -	$ -	$ 1,157,317
Restricted cash and cash equivalents	-	-	-	-	54,158	313	54,471
Restricted investments	-	-	180,900	-	-	60,000	240,900
Investments	400,000	-	50,000	-	-	-	450,000
	$ 1,112,998	$ 45,828	$ 624,978	$ 4,413	$ 54,158	$ 60,313	$ 1,902,688
Fund Balances							
263 Nonspendable for:							
Perpetual care cemetery	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ 50,000
264 Restricted for							
Perpetual care	-	-	-	-	4,158	-	4,158
Library purposes	-	-	-	4,413	-	60,313	64,726
Economic development	-	-	620,978	-	-	-	620,978
266 Assigned for:							
Subsequent year budget	-	6,000	4,000	-	-	-	10,000
Capital outlay accumulations	133,246	-	-	-	-	-	133,246
267 Unassigned	979,752	39,828	-	-	-	-	1,019,580
	$ 1,112,998	$ 45,828	$ 624,978	$ 4,413	$ 54,158	$ 60,313	$ 1,902,688

See Notes to Financial Statements

City of Britton

Statement of Revenues, Expenditures and Changes in Fund Balances–Modified Cash Basis–Governmental Funds

Year Ended December 31, 2013

	General Fund	Liquor, Lodging and Dining Gross Receipts Tax Fund	Revolving Loan Fund	Library Fines Fund	Cemetery Perpetual Care Fund	Library Foundation Fund	Total Governmental Funds
Revenues							
310 Taxes							
311 General property taxes	$ 390,370	$ -	$ -	$ -	$ -	$ -	$ 390,370
313 General sales and use taxes	702,264	41,044	-	-	-	-	743,308
315 Amusement taxes	60	-	-	-	-	-	60
319 Penalties and interest on delinquent taxes	199	-	-	-	-	-	199
Total taxes	1,092,893	41,044	-	-	-	-	1,133,937
320 Licenses and permits	1,058	-	-	-	-	-	1,058
330 Intergovernmental revenue							
331 Federal grants	127,106	-	-	-	-	-	127,106
335 State shared revenue							
335.01 Bank franchise tax	4,019	-	-	-	-	-	4,019
335.02 Motor vehicle commercial prorate	16,953	-	-	-	-	-	16,953
335.03 Liquor tax reversion	9,292	-	-	-	-	-	9,292
335.04 Motor vehicle licenses (5%)	1,409	-	-	-	-	-	1,409
335.08 Local government highway and bridge fund	40,417	-	-	-	-	-	40,417
338 County shared revenue							
338.01 County road tax (25%)	688	-	-	-	-	-	688
Total intergovernmental revenue	199,884	-	-	-	-	-	199,884
340 Charges for goods and services							
341 General government	1,275	-	-	-	-	-	1,275
344 Sanitation	98,615	-	-	-	-	-	98,615
345 Health	110	-	-	-	-	-	110
346 Culture and recreation	30,703	-	-	-	-	-	30,703
348 Cemetery	300	-	-	-	-	-	300
Total charges for good and services	131,003	-	-	-	-	-	131,003
350 Fines and forfeits							
351 Court fines and costs	67	-	-	-	-	-	67
Total fines and forfeits	67	-	-	-	-	-	67

See Notes to Financial Statements

	General Fund	Liquor, Lodging and Dining Gross Receipts Tax Fund	Revolving Loan Fund	Library Fines Fund	Cemetery Perpetual Care Fund	Library Foundation Fund	Total Governmental Funds
360 Miscellaneous revenue							
361 Investment earnings	140	-	1,351	-	114	313	1,918
362 Rentals	21,759	-	-	-	-	-	21,759
363 Special assessments	3,612	-	-	-	-	-	3,612
367 Contributions and donations from private sources	-	-	-	7,826	-	-	7,826
368 Liquor operating agreement income	62,348	-	-	-	-	-	62,348
369 Other	9,832	-	-	-	-	-	9,832
Total miscellaneous revenue	97,691	-	1,351	7,826	114	313	107,295
Total revenues	1,522,596	41,044	1,351	7,826	114	313	1,573,244
Expenditures							
410 General government							
411 Legislative	18,448	-	-	-	-	-	18,448
412 Executive	5,303	-	-	-	-	-	5,303
413 Elections	2,823	-	-	-	-	-	2,823
414 Financial administration	95,957	-	-	-	-	-	95,957
419 Other	30,557	-	-	-	-	-	30,557
Total general government	153,088	-	-	-	-	-	153,088
420 Public safety							
421 Police	140,175	-	-	-	-	-	140,175
422 Fire	12,702	-	-	-	-	-	12,702
423 Protective inspection	2,470	-	-	-	-	-	2,470
Total public safety	155,347	-	-	-	-	-	155,347
430 Public works							
431 Highways and streets	216,618	-	-	-	-	-	216,618
432 Sanitation	107,181	-	-	-	-	-	107,181
435 Airport	20,627	-	-	-	-	-	20,627
437 Cemetaries	20,484	-	-	-	-	-	20,484
439 Transit	2,370	-	-	-	-	-	2,370
Total public works	367,280	-	-	-	-	-	367,280

City of Britton

Statement of Revenues, Expenditures and Changes in Fund Balances–Modified Cash Basis–Governmental Funds

Year Ended December 31, 2013

	General Fund	Liquor, Lodging and Dining Gross Receipts Tax Fund	Revolving Loan Fund	Library Fines Fund	Cemetery Perpetual Care Fund	Library Foundation Fund	Total Governmental Funds
440 Health and welfare							
441 Health	5,976	-	-	-	-	-	5,976
Total health and welfare	5,976	-	-	-	-	-	5,976
450 Culture and recreation							
451 Recreation	102,840	-	-	-	-	-	102,840
452 Parks	48,728	-	-	-	-	-	48,728
455 Libraries	120,221	-	-	5,503	-	-	125,724
Total culture and recreation	271,789	-	-	5,503	-	-	277,292
460 Conservation and development							
465 Economic development and assistance (industrial development)	11,967	30,936	5,000	-	-	-	47,903
Total conservation and development	11,967	30,936	5,000	-	-	-	47,903
470 Debt service	10,733	-	-	-	-	-	10,733
485 Capital outlay	94,356	-	-	-	-	-	94,356
490 Miscellaneous							
492 Other	1,410	-	-	-	-	-	1,410
Total miscellaneous	1,410	-	-	-	-	-	1,410
Total expenditures	1,071,946	30,936	5,000	5,503	-	-	1,113,385
Other Financing Sources (Uses)							
391.01 Transfers in	-	-	16,000	-	-	60,000	76,000
391.03 Sale of municipal property	27,970	-	-	-	-	-	27,970
511 Transfers out	(6,000)	(10,000)	-	(60,000)	-	-	(76,000)
Total other financing sources (uses)	21,970	(10,000)	16,000	(60,000)	-	60,000	27,970
Net Change in Fund Balance	472,620	108	12,351	(57,677)	114	60,313	487,829
Net Position - Beginning, as previously stated	806,746	(21,022)	714,627	62,090	54,044	-	1,616,485
Adjustments:							
Change in accounting principle	(166,368)	66,742	(102,000)	-	-	-	(201,626)
Fund Balance - Beginning, as restated	640,378	45,720	612,627	62,090	54,044	-	1,414,859
Fund Balance - Ending	$ 1,112,998	$ 45,828	$ 624,978	$ 4,413	$ 54,158	$ 60,313	$ 1,902,688

See Notes to Financial Statements

City of Britton
Statement of Net Position–Modified Cash Basis–Proprietary Funds
December 31, 2013

	Enterprise Funds		
	Water Fund	Sewer Fund	Totals
Assets			
Current Assets			
Cash and cash equivalents	$ 185,400	$ 338,674	$ 524,074
Investments	450,000	-	450,000
Total current assets	635,400	338,674	974,074
Noncurrent Assets			
107.1 Restricted deposits for:			
Debt repayment	134,887	285,505	420,392
Total noncurrent assets	134,887	285,505	420,392
	$ 770,287	$ 624,179	$ 1,394,466
Net Position			
253.20 Restricted net position for:			
253.21 Revenue bond debt service	$ 6,038	$ 5,089	$ 11,127
253.26 Equipment repair and/or replacement	128,849	114,272	243,121
253.90 Unrestricted	635,400	504,818	1,140,218
Total net position	770,287	624,179	1,394,466
	$ 770,287	$ 624,179	$ 1,394,466

City of Britton

Statement of Revenues, Expenses and Changes in Fund Net Position–Modified Cash Basis–Proprietary Funds
Year Ended December 31, 2013

	Enterprise Funds		
	Water Fund	Sewer Fund	Totals
Operating Revenue			
Charges for goods and services	$ 262,932	$ 274,471	$ 537,403
369 Miscellaneous	460	97	557
Total operating revenue	263,392	274,568	537,960
Operating Expenses			
410 Personal services	29,780	33,069	62,849
420 Other current expense	138,008	76,606	214,614
426.2 Materials	18,715	123,866	142,581
430 Capital assets	-	110,006	110,006
Total operating expenses	186,503	343,547	530,050
Operating Income	76,889	(68,979)	7,910
Nonoperating Revenue (Expense)			
361 Investment earnings	679	183	862
429 Proceeds from loan	-	243,541	243,541
441 Prinicipal	(15,878)	(13,575)	(29,453)
470 Interest expense and fiscal charges	(8,274)	(6,779)	(15,053)
Total nonoperating revenue (expense)	(23,473)	223,370	199,897
Net Change in Fund Balance	53,416	154,391	207,807
Net Position - Beginning, as previously stated	1,007,422	1,447,354	2,454,776
Adjustments:			
Change in accounting principle	(290,551)	(977,566)	(1,268,117)
Fund Balance - Beginning, as restated	716,871	469,788	1,186,659
Fund Balance - Ending	$ 770,287	$ 624,179	$ 1,394,466

See Notes to Financial Statements

City of Britton

Statement of Cash Flows–Modified Cash Basis–Proprietary Funds

Year Ended December 31, 2013

	Enterprise Funds		
	Water Fund	Sewer Fund	Totals
Cash Flows from Operating Activities			
Receipt from customers	$ 260,332	$ 274,568	$ 534,900
Receipts from interfund services provided	3,060	-	3,060
Payments to suppliers	(156,723)	(200,472)	(357,195)
Payments to employees	(29,780)	(33,069)	(62,849)
Net Cash from Operating Activities	76,889	41,027	117,916
Cash Flows from (used for) Capital and Related Financing Activities			
Proceeds from capital debt	-	243,541	243,541
Purchase of capital assets	-	(110,006)	(110,006)
Principal paid on capital debt	(15,878)	(13,575)	(29,453)
Interest paid on capital debt	(8,274)	(6,779)	(15,053)
Net Cash from (used for) Capital and Related Financing Activities	(24,152)	113,181	89,029
Cash Flows from (used for) Investing Activities			
Purchase of investments	(200,000)	-	(200,000)
Interest earnings	678	182	860
Net Cash from (used for) Investing Activities	(199,322)	182	(199,140)
Net Change in Cash and Cash Equivalents	(146,585)	154,390	7,805
Cash and Cash Equivalents - Beginning	466,872	469,789	936,661
Cash and Cash Equivalents - Ending	$ 320,287	$ 624,179	$ 944,466
Cash and Cash Equivalents Consist of:			
Cash and cash equivalents	$ 185,400	$ 338,674	$ 524,074
Restricted deposits	134,887	285,505	420,392
	$ 320,287	$ 624,179	$ 944,466
Reconciliation of Operating Income (Loss) to Net Cash from Operating Activities			
Operating income (loss)	$ 76,889	$ (68,979)	$ 7,910
Adjustments to reconcile operating income (loss) to net cash from operating activities:			
Purchase of capital assets	-	110,006	110,006
Net Cash from Operating Activities	$ 76,889	$ 41,027	$ 117,916

See Notes to Financial Statements

Note 1 - Summary of Significant Accounting Policies

As discussed further in Note 1.C, the financial statements are presented on a modified cash basis of accounting. The modified cash basis of accounting differs from accounting principles generally accepted in the United States of America (GAAP). Generally accepted accounting principles include all relevant Governmental Accounting Standards Board (GASB) pronouncements.

A. Financial Reporting Entity

The reporting entity of the City of Britton (the City), consists of the primary government (which includes all of the funds, organizations, institutions, agencies, departments and offices that make up the legal entity, those organizations for which the primary government is financially accountable; and other organizations for which the nature and significance of their relationship with the primary government are such that their exclusion would cause the City's financial statements to be misleading or incomplete.

The reporting entity is comprised of the primary government, City of Britton, and one component unit, The Housing and Redevelopment Commission.

The Housing and Redevelopment Commission of the City of Britton (commission) is a component unit of the City of Britton. The five members of the Commission are appointed by the Mayor with the approval of the Governing Body for five-year, staggered terms. The Commission elects its own chairperson and recruits and employs its own management personnel and other workers. The Governing Board, though, retains the statutory authority to approve or deny or otherwise modify the commission's plans to construct a housing unit, or to issue debt, which gives the Governing Board the ability to impose its will on the commission.

The City's activities are presented using a modified cash basis of accounting while the component unit uses generally accepted accounting principles (GAAP). Based on the variance in the basis of accounting, the City has elected to present only the primary government activities. The component unit's financial statements are available upon request from The Housing and Redevelopment Commission of the City of Britton.

B. Basis of Presentation

Government-Wide Financial Statements

The statement of net position and statement of activities display information about the City as a whole. They include all funds of the City. The statements distinguish between governmental and business-type activities. Governmental activities generally are financed through taxes, intergovernmental revenues and other non-exchange revenues. Business-type activities are financed in whole or in part by fees charged to external parties for goods or services.

The statement of activities presents a comparison between direct expenses and program revenues for each segment of the business-type activities of the City and for each function of the City's governmental activities. Direct expenses are those that are specifically associated with a program or function and; therefore, are clearly identifiable to a particular function. Program revenues include (a) charges paid by recipients of goods and services offered by the programs and (b) grants and contributions that are restricted to meeting the operational or capital requirements of a particular program. Revenues that are not classified as program revenues, including all taxes, are presented as general revenues.

Fund Financial Statements

Fund financial statements of the City are organized into funds, each of which is considered to be a separate accounting entity. Each fund is accounted for by providing a separate set of self-balancing accounts that constitute its assets, liabilities, fund equity, revenues and expenditures/expenses. Funds are organized into two major categories: governmental and proprietary. An emphasis is placed on major funds within the governmental and proprietary categories. A fund is considered major if it is the primary operating fund of the City or it meets the following criteria:

1. Total assets, liabilities, revenues or expenditures/expenses of the individual governmental or enterprise fund are at least 10% of the corresponding total for all funds of that category or type, and
2. Total assets, liabilities, revenues or expenditures/expenses of the individual governmental or enterprise fund are at least 5% of the corresponding total for all governmental and enterprise funds combined, or
3. Management has elected to classify one or more governmental or enterprise funds as major for consistency in reporting from year to year or because of public interest in the fund's operations.

The funds of the City of Britton are described below:

Governmental Funds

General Fund – The General Fund is the general operating fund of the City. It is used to account for all financial resources except those required to be accounted for in another fund. The General Fund is always considered to be a major fund.

Special Revenue Funds – Special revenue funds are used to account for the proceeds of specific revenue sources (other than trusts for individuals, private organizations, or other governments or for major capital projects) that are legally restricted to expenditures for specified purposes.

- Liquor, Lodging and Dining Gross Receipts Tax Fund – To account for an additional one percent sales tax on the gross receipts of lodging, alcoholic beverages, prepared food and admissions which tax shall be used for the purpose of land acquisition, architectural fees, constructions costs, payments for civic center, auditorium or athletic facilities buildings including the promotion of advertising of the city (SDCL 10-52A-2). This is a major fund.
- Revolving Loan Fund – To account for resources loaned to businesses to be repaid over a period of time and, resources used to collateralize business loans. This is a major fund.
- Library Fines Fund – To account for library related fines, similar charges, and donations to be used for library purposes. This is a major fund.

Permanent Funds – Permanent funds are used to report resources that are legally restricted to the extent that only earnings, and not principal, may be used for purposes that support the City's programs, that is for the benefit of the City's and its citizenry.

- Cemetery Perpetual Care Fund – To account for the payments received for perpetual care of cemeteries which is permanently set aside and for which only the income from the trust fund investments is used for the care and maintenance of the cemetery. (SDCL 9-32-18) This is a major fund.
- Library Foundation Fund – To account for the library endowment placed with the South Dakota Community Foundation and related investment earnings established by the library board. This is a major fund.

Proprietary Funds

Enterprise Funds – Enterprise funds are used to account for operations (a) that are financed and operated in a manner similar to private business enterprises, where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability or other purposes.

The City reports the following enterprise funds:

Water Fund - Financed primarily by user charges, this fund accounts for the construction and operation of the municipal waterworks system and related facilities. (SDCL 9-47-1) This is a major fund.

Sewer Fund - Financed primarily by user charges, this fund accounts for the construction and operation of the municipal sanitary sewer system and related facilities. (SDCL 9-48-2) This is a major fund.

Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the City's enterprise funds are charges to customers for sales and services. Operating expenses for enterprise funds include the cost of sales and services, and administrative expenses. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

C. Measurement Focus and Basis of Accounting

Measurement focus is a term used to describe "how" transactions are recorded within the various financial statements. Basis of accounting refers to "when" revenues and expenditures or expenses are recognized in the accounts and reported in the financial statements, regardless of the measurement focus.

In the current year, the board approved a change in basis of accounting from the accrual basis to modified cash basis. See Note 12 for additional information about this conversion. The modified cash basis used for financial reporting, which is a basis of accounting other than USGAAP. Under USGAAP, transactions are recorded in the accounts when revenues are earned and liabilities are incurred. Under the modified cash basis, transactions are recorded when cash is received or disbursed.

Measurement Focus

In the government-wide statement of net position and statement of activities, both governmental and business-type activities are presented using the economic resources measurement focus, applied within the limitations of the modified cash basis of accounting as defined below.

In the fund financial statements, the "current financial resources" measurement focus or the economic resources" measurement focus is applied within the limitations of the modified cash basis of accounting.

Basis of Accounting

In the government-wide statement of net position and statement of activities and the fund financial statements, governmental and business-type activities are presented using a modified cash basis of accounting.

The modified cash basis of accounting involves the measurement of cash and cash equivalents and changes in cash and cash equivalents resulting from cash receipt and disbursement transactions. Under the cash basis of accounting, the statement of financial position reports only cash and cash equivalents (those investments with terms to maturity of 90 days (three months) or less at the date of acquisition). Under the modified cash basis of accounting, transactions are recorded in the accounts when cash and/or cash equivalents are received or disbursed and assets and liabilities are recognized to the extent that cash has been received or disbursed. The only modification to the cash basis of accounting implemented by the City in these financial statements is the recording of long-term investments in certificates of deposit (those with maturities more than 90-days (three months) from the date of acquisition) acquired with cash assets at cost and inter-fund advances and borrowings arising from the use of a pooled cash account.

As a result of the use of this modified cash basis of accounting, certain assets and their related revenues (such as accounts receivable and revenue for billed or provided services not yet collected) and certain liabilities and their related expenses (such as accounts payable and expenses for goods or services received but not yet paid and accrued expenses and liabilities) are not recorded in these financial statements.

If the City applied USGAAP, the fund financial statements for governmental funds would use the modified accrual basis of accounting, while the fund financial statements for proprietary fund types would use the accrual basis of accounting. All government-wide financial statements would be presented on the accrual basis of accounting.

D. Deposits and Investments

For the purpose of financial reporting, "cash and cash equivalents" includes all demand and savings accounts and certificates of deposit or short-term investments with a term to maturity at date of acquisition of three months or less. Investments in open-end mutual fund shares or similar investments in external investment pools are also considered to be cash equivalents.

Investments classified in the financial statements consist entirely of certificates of deposit whose term to maturity at date of acquisition exceeds three months and/or those types of investment authorized by South Dakota Codified Laws (SDCL) 4-5-6. Under the modified cash basis of accounting, investments are carried at cost.

E. Interfund Eliminations and Reclassifications

Government-Wide Financial Statements

In the process of aggregating data for the government-wide financial statements, some amounts reported as interfund activity and balances in the fund financial statements have been eliminated or reclassified, as follows:

- The City's interfund receivables and payables were eliminated as of December 31, 2013.
- The City did not have internal service fund activity which required elimination as of December 31, 2013.

F. Capital Assets

Under the modified cash basis of accounting, capital assets are expensed when the cash transaction occurs.

G. Long-Term Liabilities

Under the modified cash basis of accounting, cash proceeds from long-term debt issuances are recorded as a receipt, while payments to creditors to reduce long-term debts are recorded as a cost of the program which benefits from the financing. Allocations are made where appropriate. Interest costs are not allocated, but are reported as a separate program cost category.

Long-term debts arising from cash transactions of governmental funds are not reported as liabilities in the fund financial statements. Instead, the debt proceeds are reported as other financing sources and payments of principal and interest are reported as expenditures. Under the modified cash basis, the accounting for long-term debts of proprietary funds is the same in the fund financial statements as it is in the government-wide financial statements.

H. Program Revenues

In the government-wide statement of activities, reported program revenues derive directly from the program itself or from parties other than the City's taxpayers or citizenry, as a whole. Program revenues are classified into three categories, as follows:

1. Charges for Services – These arise from charges to customers, applicants or others who purchase, use or directly benefit from the goods, services or privileges provided or are otherwise directly affected by the services.
2. Program-Specific Operating Grants and Contributions – These arise from mandatory and voluntary non-exchange transactions with other governments, organizations or individuals that are restricted for use in a particular program.
3. Program-Specific Capital Grants and Contributions – These arise from mandatory and voluntary non-exchange transactions with other governments, organizations or individuals that are restricted for the acquisition of capital assets for use in a particular program.

I. Proprietary Funds Revenue and Expense Classifications

In the proprietary fund's statement of revenues, expenses and changes in fund net position, revenues and expenses are classified in a manner consistent with how they are classified in the statement of cash flows. That is, transactions for which related cash flows are reported as capital and related financing activities, noncapital financing activities, or investing activities are not reported as components of operating revenues or expenses.

J. Cash and Cash Equivalents

The City pools the cash resources of its funds for cash management purposes. The Water Fund and Sewer Fund essentially have access to the entire amount of their cash resources on demand. Accordingly, each proprietary fund's equity in the cash management pool is considered to be cash and cash equivalents.

K. Equity Classifications

Government-Wide Statements

Equity is classified as net position and is comprised of three components, invested in capital assets, net of related debt; restricted net position; and unrestricted net position. Because capital assets are not reported by the City under the modified cash basis of accounting, only the following components are displayed:

1. Restricted Net Position – Consists of net position with constraints placed on their use either by (a) external groups such as creditors, grantors, contributors or laws and regulations of other governments; or (b) law through constitutional provisions or enabling legislation.
2. Unrestricted Net Position – All other net position that do not meet the definition of "restricted".

Fund Financial Statements

Governmental fund equity is classified as fund balance, and may distinguish between nonspendable, restricted, committed, assigned and unassigned components. Proprietary fund equity is classified the same as in the government-wide financial statements.

L. Application of Net Position

The City uses restricted/committed amounts first when both restricted and unrestricted net position is available unless there are legal documents/contracts that prohibit doing this, such as grant agreements requiring dollar for dollar spending. Additionally, the government would first use committed, then assigned, and lastly unassigned amounts of unrestricted net position when expenditures are made.

M. Fund Balance Classification Policies and Procedures

The City has implemented GASB Statement No. 54, *Fund Balance Reporting and Governmental Fund Type Definitions*. This statement provides more clearly defined fund balance categories to make the nature and extent of the constraints placed on a government's fund balances more transparent. The following classifications describe the relative strength of the spending constraints:

- Nonspendable Fund Balance - Amounts that are not in nonspendable form (such as inventory) or are required to be maintained intact.
- Restricted Fund Balance - Amounts constrained to specific purposes by their providers (such as grantors, bondholders, and higher levels of government), through constitutional provisions, or by enabling legislation.
- Committed Fund Balance - Amounts constrained to specific purposes by the City itself, using its highest level of decision-making authority (i.e., City Council). To be reported as committed, amounts cannot be used for any other purpose unless the City takes the same highest level action to remove or change the constraint.

- Assigned Fund Balance - Amounts the City intends to use for a specific purpose. Intent can be expressed by the City Council or by an official or body to which the City Council delegates the authority.
- Unassigned Fund Balance - Amounts that are available for any purpose. Positive amounts are reported only in the General Fund.

The City Council establishes (and modifies or rescinds) fund balance commitments by passage of an ordinance. An assigned fund balance is established by City Council through adoption of a resolution designating a fund balance is intended for a specific purpose (such as the purchase of fixed assets, construction, debt service, or for other purposes).

The City does not have a formal minimum fund balance policy.

The purpose of each major special revenue fund and revenue source is listed below:

Major Special Revenue Fund	Revenue Source
Liquor, Lodging, and Dining Gross Receipts Tax Fund	Sales taxes
Revolving Loan Fund	Sales taxes
Library Fund	Donations

N. Rounding

Computer generated rounding variances exist in the basic financial statements and supplementary information. The variances result from values being entered with cents rather than as whole numbers.

Note 2 - Deposits and Investments

The City follows the practice of aggregating the cash assets of various funds to maximize cash management efficiency and returns. Various restrictions on deposits and investments are imposed by statutes. These restrictions are summarized below:

Deposits

The City's cash deposits are made in qualified public depositories as defined by SDCL 4-6A-1, 9-22-6, 9-22-6.1 and 9-22-6.2, and may be in the form of demand or time deposits.

Qualified depositories are required by SDCL 4-6A-3 to maintain at all times, segregated from their other assets, eligible collateral having a value equal to at least 100% of the public deposit accounts which exceed deposit insurance such as the FDIC and NCUA. In lieu of pledging eligible securities, a qualified public depository may furnish irrevocable standby letters of credit issued by Federal Home Loan Banks accompanied by written evidence of that bank's public debt rating which may not be less than "AA" or a qualified public depository may furnish a corporate surety bond of a corporation authorized to do business in South Dakota.

Custodial Credit Risk – Deposits – The risk that, in the event of a depository failure, the City's deposits may not be returned to it. The City does not have a deposit policy for custodial credit risk. As of December 31, 2013, the City maintained their deposits in in-state financial institutions which were properly collateralized in accordance with SDCL 4-6A-3.

The actual bank balances at December 31, 2013 are as follows:

	Bank Balance
Insured (FDIC/NCUA)	$ 555,650
Uninsured, collateral jointly held by State's/City's agent in the name of the State and the pledging financial institution	2,741,889
	$ 3,297,539

The City's carrying amount of deposits at December 31, 2013 is as follows:

Cash and cash equivalents	$ 2,156,254
Investments	1,140,900
	$ 3,297,154

Investments

In general, SDCL 4-5-6 permits City funds to be invested in (a) securities of the United States and securities guaranteed by the United States government either directly or indirectly including, without limitation, United States treasury bills, notes, bonds and other obligations issued or directly or indirectly guaranteed by the United States government, or otherwise directly or indirectly backed by the full faith and credit of the United States government; provided that, for other than permanent, trust, retirement, building and depreciation reserve funds, such securities shall either mature within eighteen months from the date of purchase or be redeemable at the option of the holder within eighteen months from the date of purchase; or (b) repurchase agreements fully collateralized by securities described in (a) and meeting the requirements of § 4-5-9, if the repurchase agreements are entered into only with those primary reporting dealers that report to the Federal Reserve Bank of New York and with the one hundred largest United States commercial banks, as measured by domestic deposits; or (c) in shares of an open-end, no-load fund administered by an investment company registered under the Federal Investment Company Act of 1940 whose shares are registered under the Federal Securities Act of 1933 and whose only investments are in securities described in (a) and repurchase agreements described in (b).

Interest Rate Risk – The City does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates. As of December 31, 2013, all of the City's investments consist of certificates of deposit which have maturities of less than one year.

Credit Risk – State law limits eligible investments for the Municipality, as discussed above. The City has no further investment policy that would further limit its investment choices.

Assignment of Investment Income - State law allows income from deposits and investments to be credited to either the General Fund or the fund making the investment. The City's policy is to credit all income from investments to the fund making the investment, except for interest generated by the Cemetery Perpetual Care Fund, which must be credited to the General Fund, and used only for maintenance of the municipal cemetery, as required by SDCL 9-32-18.

Under the modified cash basis of accounting, investments are stated at cost.

Note 3 - Property Taxes

Property taxes are levied on or before October 1, of the year preceding the start of the fiscal year. They attach as an enforceable lien on property and become due and payable as of January 1, the first day of the fiscal year. Taxes are payable in two installments on or before April 30 and October 31 of the fiscal year.

The City is permitted by several state statutes to levy varying amounts of taxes per $1,000 of taxable valuation on taxable real property in the City.

Note 4 - Water Supply Contract

The City entered into a 40 year agreement with B.D.M. Rural Water Systems, Inc. to provide water to the City. A monthly minimum in the amount of $3,419 is paid by the city to B.D.M. Rural Water Systems, Inc. along with a charge of $1.50 for the first two million gallons used and a charge of $1.25 per thousand gallons in excess of two million gallons of water consumed. The monthly service charge represents a contribution by the city to aid B.D.M. Rural Water Systems, Inc. in the construction of the facilities necessary to provide water to the City. The City will not acquire ownership of any of these water facilities through these payments. Payments are made from the City's Water Fund.

The following are the minimum payments on this agreement:

Year Ending June 30,	Amount
2014	$ 41,033
2015	41,033
2016	41,033
2017	41,033
2018	41,033
2019-2023	205,166
2024-2028	205,166
2029-2033	205,166
2034-2038	205,166
2039-2040	82,066

Note 5 - Retirement Plan

All employees, except for part-time employees, participate in the South Dakota Retirement System (SDRS), a cost-sharing, multiple employer public employee retirement system established to provide retirement benefits for employees of the State of South Dakota and its political subdivisions. The SDRS provides retirement, disability and survivor benefits. The right to receive retirement benefits vests after three years of credited service. Authority for establishing, administering and amending plan provisions are found in South Dakota Codified Law 3-12. The SDRS issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained by writing to the SDRS, P.O. Box 1098, Pierre, SD 57501-1098 or by calling (605) 773-3731.

General employees are required by state statute to contribute 6% of their salary to the plan, while public safety and judicial employees contribute at 8% and 9%, respectively. State statute also requires the employer to contribute an amount equal to the employee's contribution. The City's share of contributions to the SDRS for the fiscal years ended December 31, 2013, 2012 and 2011 were $16,232, $16,429 and $ $14,906, respectively, equal to the required contributions each year.

Note 6 - Significant Contingencies - Litigation

At December 31, 2013, the City was not involved in any litigation that would be material to the financial statements.

Note 7 - Restricted Net Position

The following table shows the net position restricted for other purposes as shown on the statement of net position:

Fund	Restricted By	Amount
Revolving Loan Fund	Contractual	$ 624,978
Library Foundation Fund	Contractual	60,313
Water Fund	Contractual	134,887
Sewer Fund	Contractual	119,361
Cemetery purposes	State Law	54,158
Library Fund	State Law	4,413

Note 8 - Risk Management

The City is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. During the period ended December 31, 2013, the City managed its risks as follows:

Employee Health Insurance

The City purchases health insurance for its employees from a commercial insurance carrier. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

Liability Insurance

The City joined the South Dakota Public Assurance Alliance (SDPAA), a public entity risk pool currently operating as a common risk management and insurance program for South Dakota local government entities. The objective of the SDPAA is to administer and provide risk management services and risk sharing facilities to the members and to defend and protect the members against liability, to advise members on loss control guidelines and procedures, and provide them with risk management services, loss control and risk reduction information and to obtain lower costs for that coverage. The City's responsibility is to promptly report to and cooperate with the SDPAA to resolve any incident which could result in a claim being made by or against the City. The City pays an annual premium, to provide liability coverage detailed below, under a claims-made policy and the premiums are accrued based on the ultimate cost of the experience to date of the SDPAA member, based on their exposure or type of coverage. The City pays an annual premium to the pool to provide coverage generally for general liability, official's liability, automobile liability, law enforcement liability, and physical damage, property and, boiler and machinery. The City purchases airport bodily injury and property damage liability insurance and surety bond coverage from a commercial insurance carrier.

The agreement with the SDPAA provides that the above coverages will be provided to various limits depending on the area of liability coverage. Member premiums are used by the pool for payment of claims and to pay for reinsurance for claims in excess of $250,000 for property coverage and $500,000 for liability coverage to the upper limit. A portion of the member premiums are also allocated to a cumulative reserve fund. The City would be eligible to receive a refund for a percentage of the amount allocated to the cumulative reserve fund on the following basis:

First Full Year	50%
Second Full Year	60%
Third Full Year	70%
Fourth Full Year	80%
Fifth Full Year	90%
Sixth Full Year and Thereafter	100%

As of December 31, 2013, the City has vested balance in the cumulative reserve fund of $28,628.

The agreement with the South Dakota Public Assurance Alliance provides for various coverage limits. The City carries various deductibles for different types of coverage. The City does not carry additional insurance to cover claims in excess of the upper limit. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

Worker's Compensation

The Municipality joined the South Dakota Municipal League Worker's Compensation Fund (Fund), a public entity risk pool currently operating as a common risk management and insurance program for South Dakota local government entities. The objective of the Fund is to formulate, develop, and administer, on behalf of the member organizations, a program of worker's compensation coverage, to obtain lower costs for that coverage, and to develop a comprehensive loss control program. The City's responsibility is to initiate and maintain a safety program to give its employees safe and sanitary working conditions and to promptly report to and cooperate with the Fund to resolve any worker's compensation claims. The City pays an annual premium, to provide worker's compensation coverage for its employees, under a self-funded program and the premiums are accrued based on the ultimate cost of the experience to date of the Fund members. Coverage limits are set by state statute. The pool pays the first $650,000 of any claim per individual. The pool has reinsurance which covers up to statutory limits in addition to a separate combined employer liability limit of $2,000,000 per incident.

The City does not carry additional insurance to cover claims in excess of the upper limit. Settled claims resulting from these risks have not exceeded the liability coverage over the past three years.

Unemployment Benefits

The City provides coverage for unemployment benefits by paying into the Unemployment Compensation Fund established by state law and managed by the State of South Dakota.

Note 9 - Pledged Assets

As of December 31, 2013, the City had pledged three certificates of deposit totaling $171,900 from the Revolving Loan Fund as business loan guarantees to lenders. The value of certificates of deposit pledged range from $19,650 to $125,250 on loans totaling $1,430,754 for three separate businesses. The City has the risk of loss in the event of default on the loan by the borrower(s).

Note 10 - Interfund Transfers

Advances from/to other funds consist of the following at December 31, 2013:

	General Fund	Liquor, Lodging and Dining Gross Receipts Tax Fund	Library Fines Fund
Transfers from:			
Major Funds:			
Revolving loan fund	$ 6,000	$ 10,000	$ -
Library fines fund	-	-	60,000

Note 11 - Commitments

Subsequent to year-end, the City began a project to replace sewer system pipes. This project will be funded through federal and state funding from state revolving funds, rural development, and consolidated water grant program. The total amount of the project will be approximately $5,740,644. As December 31, 2013 the City has entered into a loan with the use of State Revolving Funds in the amount of $2,500,000. The balance will be financed with loans and grants.

The City has also been awarded a $216,000 grant from the US Department of Transportation for airport improvement. The City has entered into a contract for construction to L&L Earthworks in the amount of $174,719 and has entered into a contract with Helms & Associates for engineering services for a maximum amount of $58,427.

Note 12 - Implementation of New Basis of Accounting

In March 2014, the City Council approved a change in basis of accounting from accrual basis of accounting to a modified cash basis of accounting starting with the reporting period fiscal year 2013. The retroactive application of the account policy has resulted in a cumulative adjustment to the opening balance as a decrease of net position as of January 1, 2013 of $6,785,708 for the governmental net position on the government-wide financial statements, $1,268,117 for the enterprise net position on the government wide financial statements, $166,368 for the general fund net position on the governmental fund financial statements, $102,000 for the revolving loan fund net position on the governmental fund financial statements, $290,551 for the water fund on the proprietary financial statements, $977,566 for the sewer fund on the proprietary financial statements, and increase of $66,742 for the liquor, lodging, and dining gross receipts tax fund on the governmental financial statements to account for asset and liability items which are now considered revenues and expenses.

City of Britton
Schedule of Changes in Notes and Bonds Payable
Year Ended December 31, 2013

Governmental activities	Notes and Bonds Payable 1/1/2013	Add New Debt	Less Debt Retired	Notes and Bonds Payable 12/31/2013
Governmental Long-Term Debt				
Installment purchases	$ 10,278	$ -	$ (10,278)	$ -
Enterprise Notes and Bonds Payable				
Water revenue bonds	189,767	-	(15,878)	173,889
Sewer revenue bonds	198,752	-	(13,575)	185,177
Sewer revenue bonds - 2012	652,584	243,541	-	896,125
	$ 1,051,381	$ 243,541	$ (39,731)	$ 1,255,191

City of Britton
Budgetary Comparison Schedule–General Fund
Year Ended December 31, 2013

	Budgeted Amounts		Actual	Variance with Final Budget Positive
	Original	Final	Amounts	(Negative)
Revenues				
310 Taxes				
311 General property taxes	$ 394,369	$ 394,369	$ 390,370	$ (3,999)
313 General sales and use taxes	500,000	500,000	702,264	202,264
315 Amusement	-	-	60	60
319 Penalties and interest on	180	180	-	(180)
delinquent taxes	500	500	199	(301)
Total taxes	895,049	895,049	1,092,893	197,844
320 Licenses and permits	1,000	1,000	1,058	58
330 Intergovernmetal revenue				
331 Federal grants	190,000	190,000	127,106	(62,894)
334 State grants	6,000	6,000	-	(6,000)
335 State shared revenue				
335.01 Bank franshise tax	1,000	1,000	4,019	3,019
335.02 Motor vehicle commerical prorate	3,600	3,600	16,953	13,353
335.03 Liquor tax reversion	8,000	8,000	9,292	1,292
335.04 Motor vehicle licenses (5%)	10,000	10,000	1,409	(8,591)
335.08 Local government highway and bridge fund	30,000	30,000	40,417	10,417
338 County shared revenue				
338.01 County road tax (25%)	1,375	1,375	688	(687)
Total intergovernmental revenue	249,975	249,975	199,884	(50,091)
340 Charges for good and services				
341 General government	1,500	1,500	1,275	(225)
344 Sanitation	97,104	97,104	98,615	1,511
345 Health	-	-	110	110
346 Culture and recreation	24,000	24,000	30,703	6,703
348 Cemetery	1,000	1,000	300	(700)
Total charges for goods and services	123,604	123,604	131,003	7,399
350 Fines and forfeits				
351 Court fines and costs	-	-	67	67
Total fines and forfeits	-	-	67	67
360 Miscellaneous revenue				
361 Investment earnings	500	500	140	(360)
362 Rentals	18,159	18,159	21,759	3,600
363 Special assessments	3,587	3,587	3,612	25
368 Liquor operating agreement income	55,000	55,000	62,348	7,348
369 Other	6,900	6,900	9,832	2,932
Total miscellaneous revenue	84,146	84,146	97,691	13,545
Total revenues	1,353,774	1,353,774	1,522,596	168,822

City of Britton
Budgetary Comparison Schedule–General Fund
Year Ended December 31, 2013

	Budgeted Amounts		Actual	Variance with Final Budget Positive
	Original	Final	Amounts	(Negative)
Expenditures				
410 General government				
411 Legislative	19,974	19,974	18,448	1,526
411.5 Contingency	39,744	39,744		
Amount transferred	-	(38,220)	-	1,524
412 Executive	6,180	6,180	5,303	877
413 Elections	830	2,825	2,823	2
414 Financial administration	96,000	98,975	95,957	3,018
419 Other	17,261	33,261	30,557	2,704
Total general government	179,989	162,739	153,088	9,651
420 Public safety				
421 Police	140,175	140,175	140,175	-
422 Fire	14,716	14,716	12,702	2,014
423 Protective inspection	5,589	5,589	2,470	3,119
Total public safety	160,480	160,480	155,347	5,133
430 Public works				
431 Highways and streets	345,818	345,818	256,450	89,368
432 Sanitation	134,256	134,506	107,181	27,325
435 Airport	211,162	211,162	62,413	148,749
437 Cemetery	15,000	21,500	20,484	1,016
439 Transit	2,669	2,669	2,370	299
Total public works	708,905	715,655	448,898	266,757
440 Health and welfare				
441 Health	20,635	20,635	5,976	14,659
Total health and welfare	20,635	20,635	5,976	14,659
450 Culture and recreation				
452 Parks	174,392	174,392	151,568	22,824
455 Library	130,918	130,918	132,959	(2,041)
Total culture and recreation	305,310	305,310	284,527	20,783
460 Conservation and development				
465 Economic development	9,300	19,800	11,967	7,833
Total conservation and development	9,300	19,800	11,967	7,833
470 Debt service	10,747	10,747	10,733	14
490 Miscellaneous:				
492 Other	-	-	1,410	(1,410)
499 Liquor operating agreements	100	100	-	100
Total miscellaneous	100	100	1,410	(1,310)
Total expenditures	1,395,466	1,395,466	1,071,946	323,520

	Budgeted Amounts		Actual	Variance with Final Budget Positive
	Original	Final	Amounts	(Negative)
Other Financing Sources (Uses)				
391.03 Sale of municipal property	-	-	27,970	27,970
511 Transfer out	(7,000)	(7,000)	(6,000)	1,000
Total other financing sources (uses)	(7,000)	(7,000)	21,970	28,970
Net Change in Fund Balance	(48,692)	(48,692)	472,620	521,312
Net Position - Beginning, as previously stated	806,746	806,746	806,746	-
Adjustments:				
Change in accounting principle	(166,368)	(166,368)	(166,368)	-
Fund Balance - Beginning as restated	640,378	640,378	640,378	-
Fund Balance - Ending	$ 591,686	$ 591,686	$ 1,112,998	$ 521,312

City of Britton

Budgetary Comparison Schedule–Liquor, Lodging and Dining Gross Receipts Tax Fund

Year Ended December 31, 2013

	Budgeted Amounts		Actual Amounts (Budgetary Basis)	Variance with Final Budget Positive (Negative)
	Original	Final		
Revenues				
310 Taxes				
313 General sales and use taxes	$ 35,000	$ 35,000	$ 41,044	$ 6,044
Expenditures				
460 Conservation and development:				
465 Economic development and assistance (industrial development)	31,000	31,000	30,936	64
Other Financing Sources (Uses)				
511 Transfers out	(10,000)	(10,000)	(10,000)	-
Total other financing sources (uses)	(10,000)	(10,000)	(10,000)	-
Net Change in Fund Balance	(6,000)	(6,000)	108	6,108
Net Position - Beginning, as previously stated	(21,022)	(21,022)	(21,022)	-
Adjustments:				
Change in accounting principle	66,742	66,742	66,742	-
Fund Balance - Beginning, as restated	45,720	45,720	45,720	-
Fund Balance - Ending	$ 39,720	$ 39,720	$ 45,828	$ 6,108

City of Britton
Budgetary Comparison Schedule–Revolving Loan Fund
Year Ended December 31, 2013

	Budgeted Amounts		Actual Amounts (Budgetary Basis)	Variance with Final Budget Positive (Negative)
	Original	Final		
Revenues				
360 Miscellaneous revenue				
361 Investment earnings	$ 1,000	$ 1,000	$ 1,351	$ 351
Expenditures				
460 Conservation and development:				
465 Economic development and assistance (industrial development)	5,000	5,000	5,000	-
Other Financing Sources (Uses)				
391.01 Transfers in	16,000	16,000	16,000	-
Net Change in Fund Balance	12,000	12,000	12,351	351
Net Position - Beginning, as previously stated	714,627	714,627	714,627	-
Adjustments:				
Change in accounting principle	(102,000)	(102,000)	(102,000)	-
Fund Balance - Beginning, as restated	612,627	612,627	612,627	-
Fund Balance - Ending	$ 624,627	$ 624,627	$ 624,978	$ 351

City of Britton
Budgetary Comparison Schedule–Library Fines Fund
Year Ended December 31, 2013

	Budgeted Amounts		Actual Amounts (Budgetary Basis)	Variance with Final Budget Positive (Negative)
	Original	Final		
Revenues				
360 Miscellaneous revenue				
367 Contributions and donations from private sources	$ -	$ 20,000	$ 7,826	$ (12,174)
Expenditures				
455 Libraries	-	20,000	5,503	14,497
Other Financing Sources (Uses)				
511 Transfers out	-	(60,000)	(60,000)	-
Net Change in Fund Balance	-	(60,000)	(57,677)	2,323
Net Position - Beginning	62,090	62,090	62,090	-
Fund Balance - Ending	$ 62,090	$ 2,090	$ 4,413	$ 2,323

Note 1 - Budgets and Budgetary Accounting

The City follows these procedures in establishing the budgetary data reflected in the financial statements:

1. At the first regular Board meeting in September of each year or within ten days thereafter, the City Commission introduces the annual appropriation ordinance for the ensuing fiscal year.

2. After adoption by the City Commission, the operating budget is legally binding and actual expenditures for each purpose cannot exceed the amounts budgeted, except as indicated in Number 4.

3. A line item for contingencies may be included in the annual budget. Such a line item may not exceed 5% of the total municipal budget and may be transferred by resolution of the City Commission to any other budget category that is deemed insufficient during the year.

4. If it is determined during the year that sufficient amounts have not been budgeted, state statute allows the adoption of supplemental budgets.

5. Unexpended appropriations lapse at year end unless encumbered by resolution of the City Commission.

   Encumbrance accounting, under which purchase orders, contracts and other commitments for the expenditure of monies are recorded in order to reserve that portion of the applicable appropriation, is employed as an extension of formal budgetary integration in the General Fund, special revenue funds and capital projects funds.

   The City did not encumber any amounts at December 31, 2013.

6. Formal budgetary integration is employed as a management control device during the year for the General Fund and special revenue funds. Formal budgetary integration is not employed for debt service funds because effective budgetary control is alternatively achieved through general obligation bond indenture provisions.

7. Budgets for the General Fund and Special Revenue Funds are adopted on a basis consistent with a modified cash basis of accounting.

Note 2 - Modified Cash Basis/Budgetary Accounting Basis Differences

The financial statements prepared on the modified cash basis of accounting present capital outlay expenditure information in a separate category of expenditures. Under the budgetary basis of accounting, capital outlay expenditures are reported within the function to which they relate. For example, the purchase of a new fire truck would be reported as a capital outlay expenditure on the governmental funds statement of revenues, expenditures and changes in fund balances, however; in the budgetary schedule, the purchase of a fire truck would be reported as an expenditure of the Public Safety/Fire Department function of government, along with all other current Fire Department related expenditures.

EideBailly

CPAs & BUSINESS ADVISORS

Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

The City Council
City of Britton
Britton, South Dakota

We have audited in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States the financial statements of the governmental activities, the business-type activities, and each major fund, of City of Britton, South Dakota as of and for the year ended December 31, 2013, and the related notes to the financial statements, which collectively comprise the City of Britton's basic financial statements and have issued our report thereon dated July 3, 2014. Our report was qualified because the statements included only the primary government and not the City's legally separate component unit. The statements were prepared on the modified cash basis of accounting, which is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the City's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the City's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the City's internal control.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control over financial reporting that might be material weaknesses or significant deficiencies and; therefore, material weaknesses and significant deficiencies may exist that were not identified. However, as described in the accompanying schedule of findings and questioned costs, we identified certain deficiencies in internal control that we consider to be material weaknesses.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the City's financial statements will not be prevented, or detected and corrected on a timely basis. We consider the deficiencies described in the accompanying schedule of findings to be material weakness – 2013-A, and 2013-B.

A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the City's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Audit Standards.*

City of Britton's Responses to Findings

The City's responses to the findings identified in our audit are described in the accompanying schedule of findings. The City's responses were not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on them.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose. However, as required by South Dakota Codified Law 4-11-11, this report is a matter of public record and its distribution is not limited.

Eide Bailly LLP

Aberdeen, South Dakota
July 3, 2014

Section II – Findings Related to the Financial Statements

Finding 2013-A - Financial Statements, Related Footnotes, and Significant Journal Entries are Prepared by the Auditor

Material Weakness

Criteria: An organization's internal control structure should provide for the recording of all necessary material adjustments and the preparation of financial statements and footnotes in accordance with generally accepted accounting principles.

Condition: The City does not have an internal control system designed to provide for the preparation of the financial statements including required footnotes and disclosures, including all necessary material audit adjustments to the City's financial statements. During the course of our engagement, we were requested to draft the financial statements and accompanying notes to those financial statements and we proposed material audit adjustments to the City's recorded account balances.

Cause: The City does not have adequate staff trained to prepare the financial statements and the related footnotes disclosures.

Effect: The preparation of financial statements as a part of the audit engagement may result in financial statements and related information included in financial statement disclosures not being available for management purposes as timely as it would be if prepared by City personnel. The need for proposed audit adjustments indicates that the Company's interim financial information may not be materially correct, which may affect decisions made by management during the course of the year.

Recommendation: It is the responsibility of management and those charged with governance to make the decision whether to accept the degree of risk associated with this condition because of cost or other considerations.

Management Response and Corrective Action Plan

Management Response: Management did provide an electronic version of the annual report submitted to the South Dakota Department of Legislative Audit and discussed audit recommendations with auditor. Management accepts the risk associated with preparation of the final audited financial statements by the independent auditor.

Explanation of Disagreement: No disagreement noted

Official Responsible for Ensuring Corrective Action Plan: Marie Marlow, Finance Officer

Planned Completion for Correction Action: Ongoing

Plan to Monitor Completion of Corrective Action: Ongoing

2013-B Lack of Segregation of Duties

Material Weakness

Criteria: A good system of internal controls contemplates an adequate segregation of duties so that no one individual handles a transaction from its inception to its completion.

Condition: City of Britton has a limited number of office personnel, and accordingly, does not have adequate internal accounting controls in revenue, expenditures, and payroll functions because of a lack of segregation of duties.

Cause: The City has an insufficient number of staff to adequately separate duties.

Effect: This condition increases the risk of fraud or errors that might occur in the financial reporting process and not be detected.

Recommendation: Although it is recognized that number of office staff may not be large enough to permit adequate segregation of duties in all respects, it is important that management and those charged with governance be aware of this condition. We recommend that the City Council exercise adequate oversight of the accounting function.

Management Response and Corrective Action Plan

Management Response: Management accepts the risk associated with lack of segregation of duties in the City.

Explanation of Disagreement: No disagreement noted

Official Responsible for Ensuring Corrective Action Plan: Marie Marlow, Finance Officer

Planned Completion for Correction Action: Ongoing

Plan to Monitor Completion of Corrective Action: Ongoing

Findings Relating to the Financial Statements

Preparation of Financial Statements – Finding 2012-1

Status: This prior year finding has been restated as 2013-A.

Lack of Segregation of Duties – Finding 2012-1

Status: This prior year finding has been restated as 2013-B.

Compliance with South Dakota Codified Law – Finding 2012-3

Status: This finding has been resolved in the current year.

RATE INFORMATION

RESOLUTION TO SET WATER, RATES: Freeman introduced the following resolution and moved its adoption:

RESOLUTION TO SET WATER RATES FOR 2015

Whereas BDM Rural Water will be increasing their water rate effective January 2015;

THEREFORE be it resolved by the Britton City Council for Britton, South Dakota, to set water rates as follows:

Water User Fee - $18.75 + 2.50 per 1,000 gallons of water used

And be it further resolved that this water rate will go into effect January 1, 2015.

Dated this 8th day of December 2015

Beck seconded the resolution, all members present voted aye and the Mayor declared the resolution duly adopted.

_____
Clyde Fredrickson, Mayor

ATTEST: _____
Marie Marlow, Finance Officer

AUTHORIZING RESOLUTION

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the City of Britton has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to replacing all of distribution lines and improving storage; and

WHEREAS, the City has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the City and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the City as follows:

1. The City hereby approves the submission of an Application for financial assistance in an amount not to exceed $4,896,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Mayor and/or Board President are hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Mayor and/or Board President are hereby designated as the authorized representatives of the City to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at City of Britton, South Dakota, this 14th day of December 2015.

APPROVED:

Mayor
City of Britton

(Seal)
Attest: Marie Marlow
City Finance Officer

AMORTIZATION SCHEDULE

AMORTIZATION SCHEDULE

Principal	Loan Date	Maturity	Loan No	Call / Coll	Account	Officer	Initials
$317,640.23		07-01-2022					

References in the shaded area are for Lender's use only and do not limit the applicability of this document to any particular loan or item.
Any item above containing "***" has been omitted due to text length limitations.

Borrower: City of Britton- Drinking Water SRF#1
PO Box 91
Britton , SD 57430-0091

Lender: THE FIRST NATIONAL BANK IN SIOUX FALLS
AS TRUSTEE FOR SOUTH DAKOTA DEPARTMENT
OF ENVIRONMENT AND NATURAL RESOURCES
PIERRE, SD 57501

Disbursement Date:
Interest Rate: 4.500

Repayment Schedule: Installment
Calculation Method: 30/360 U.S. Rule

Payment Number	Payment Date	Payment Amount	Interest Paid **	Principal Paid	Remaining Balance
1	01-01-2003	6,037.94	833.80	5,204.14	312,436.09
2	04-01-2003	6,037.94	3,514.91	2,523.03	309,913.06
3	07-01-2003	6,037.94	3,486.52	2,551.42	307,361.64
4	10-01-2003	6,037.94	3,457.82	2,580.12	304,781.52
2003 TOTALS:		24,151.76	11,293.05	12,858.71	
5	01-01-2004	6,037.94	3,428.79	2,609.15	302,172.37
6	04-01-2004	6,037.94	3,399.44	2,638.50	299,533.87
7	07-01-2004	6,037.94	3,369.75	2,668.19	296,865.68
8	10-01-2004	6,037.94	3,339.74	2,698.20	294,167.48
2004 TOTALS:		24,151.76	13,537.72	10,614.04	
9	01-01-2005	6,037.94	3,309.39	2,728.55	291,438.93
10	04-01-2005	6,037.94	3,278.69	2,759.25	288,679.68
11	07-01-2005	6,037.94	3,247.64	2,790.30	285,889.38
12	10-01-2005	6,037.94	3,216.26	2,821.68	283,067.70
2005 TOTALS:		24,151.76	13,051.98	11,099.78	
13	01-01-2006	6,037.94	3,184.51	2,853.43	280,214.27
14	04-01-2006	6,037.94	3,152.41	2,885.53	277,328.74
15	07-01-2006	6,037.94	3,119.95	2,917.99	274,410.75
16	10-01-2006	6,037.94	3,087.12	2,950.82	271,459.93
2006 TOTALS:		24,151.76	12,543.99	11,607.77	
17	01-01-2007	6,037.94	3,053.92	2,984.02	268,475.91
18	04-01-2007	6,037.94	3,020.36	3,017.58	265,458.33
19	07-01-2007	6,037.94	2,986.40	3,051.54	262,406.79
20	10-01-2007	6,037.94	2,952.08	3,085.86	259,320.93
2007 TOTALS:		24,151.76	12,012.76	12,139.00	
21	01-01-2008	6,037.94	2,917.36	3,120.58	256,200.35
22	04-01-2008	6,037.94	2,882.25	3,155.69	253,044.66
23	07-01-2008	6,037.94	2,846.76	3,191.18	249,853.48
24	10-01-2008	6,037.94	2,810.85	3,227.09	246,626.39
2008 TOTALS:		24,151.76	11,457.22	12,694.54	
25	01-01-2009	6,037.94	2,774.54	3,263.40	243,362.99
26	04-01-2009	6,037.94	2,737.84	3,300.10	240,062.89
27	07-01-2009	6,037.94	2,700.71	3,337.23	236,725.66
28	10-01-2009	6,037.94	2,663.16	3,374.78	233,350.88
2009 TOTALS:		24,151.76	10,876.25	13,275.51	
29	01-01-2010	6,037.94	2,625.20	3,412.74	229,938.14
30	04-01-2010	6,037.94	2,586.80	3,451.14	226,487.00
31	07-01-2010	6,037.94	2,547.98	3,489.96	222,997.04
32	10-01-2010	6,037.94	2,508.72	3,529.22	219,467.82
2010 TOTALS:		24,151.76	10,268.70	13,883.06	
33	01-01-2011	6,037.94	2,469.01	3,568.93	215,898.89
34	04-01-2011	6,037.94	2,428.86	3,609.08	212,289.81
35	07-01-2011	6,037.94	2,388.26	3,649.68	208,640.13
36	10-01-2011	6,037.94	2,347.20	3,690.74	204,949.39
2011 TOTALS:		24,151.76	9,633.33	14,518.43	
37	01-01-2012	6,037.94	2,305.68	3,732.26	201,217.13
38	04-01-2012	6,037.94	2,263.70	3,774.24	197,442.89
39	07-01-2012	6,037.94	2,221.23	3,816.71	193,626.18

** INTEREST PAID also includes Administrative Surcharge amounts.

AMORTIZATION SCHEDULE
(Continued)

40	10-01-2012	6,037.94	2,178.29	3,859.65	189,781.53
2012 TOTALS:		**24,151.76**	**8,968.90**	**15,182.86**	
41	01-01-2013	6,037.94	2,134.88	3,903.06	185,863.47
42	04-01-2013	6,037.94	2,090.96	3,946.98	181,916.49
43	07-01-2013	6,037.94	2,046.56	3,991.38	177,925.11
44	10-01-2013	6,037.94	2,001.66	4,036.28	173,888.83
2013 TOTALS:		**24,151.76**	**8,274.06**	**15,877.70**	
45	01-01-2014	6,037.94	1,956.25	4,081.69	169,807.14
46	04-01-2014	6,037.94	1,910.33	4,127.61	165,679.53
47	07-01-2014	6,037.94	1,863.89	4,174.05	161,505.48
48	10-01-2014	6,037.94	1,816.94	4,221.00	157,284.48
2014 TOTALS:		**24,151.76**	**7,547.41**	**16,604.35**	
49	01-01-2015	6,037.94	1,769.45	4,268.49	153,015.99
50	04-01-2015	6,037.94	1,721.43	4,316.51	148,699.48
51	07-01-2015	6,037.94	1,672.87	4,365.07	144,334.41
52	10-01-2015	6,037.94	1,623.76	4,414.18	139,920.23
2015 TOTALS:		**24,151.76**	**6,787.51**	**17,364.25**	
53	01-01-2016	6,037.94	1,574.10	4,463.84	135,456.39
54	04-01-2016	6,037.94	1,523.89	4,514.05	130,942.34
55	07-01-2016	6,037.94	1,473.10	4,564.84	126,377.50
56	10-01-2016	6,037.94	1,421.75	4,616.19	121,761.31
2016 TOTALS:		**24,151.76**	**5,992.84**	**18,158.92**	
57	01-01-2017	6,037.94	1,369.81	4,668.13	117,093.18
58	04-01-2017	6,037.94	1,317.30	4,720.64	112,372.54
59	07-01-2017	6,037.94	1,264.19	4,773.75	107,598.79
60	10-01-2017	6,037.94	1,210.49	4,827.45	102,771.34
2017 TOTALS:		**24,151.76**	**5,161.79**	**18,989.97**	
61	01-01-2018	6,037.94	1,156.18	4,881.76	97,889.58
62	04-01-2018	6,037.94	1,101.25	4,936.69	92,952.89
63	07-01-2018	6,037.94	1,045.72	4,992.22	87,960.67
64	10-01-2018	6,037.94	989.56	5,048.38	82,912.29
2018 TOTALS:		**24,151.76**	**4,292.71**	**19,859.05**	
65	01-01-2019	6,037.94	932.76	5,105.18	77,807.11
66	04-01-2019	6,037.94	875.33	5,162.61	72,644.50
67	07-01-2019	6,037.94	817.25	5,220.69	67,423.81
68	10-01-2019	6,037.94	758.52	5,279.42	62,144.39
2019 TOTALS:		**24,151.76**	**3,383.86**	**20,767.90**	
69	01-01-2020	6,037.94	699.13	5,338.81	56,805.58
70	04-01-2020	6,037.94	639.06	5,398.88	51,406.70
71	07-01-2020	6,037.94	578.33	5,459.61	45,947.09
72	10-01-2020	6,037.94	516.90	5,521.04	40,426.05
2020 TOTALS:		**24,151.76**	**2,433.42**	**21,718.34**	
73	01-01-2021	6,037.94	454.79	5,583.15	34,842.90
74	04-01-2021	6,037.94	391.99	5,645.95	29,196.95
75	07-01-2021	6,037.94	328.46	5,709.48	23,487.47
76	10-01-2021	6,037.94	264.24	5,773.70	17,713.77
2021 TOTALS:		**24,151.76**	**1,439.48**	**22,712.28**	
77	01-01-2022	6,037.94	199.28	5,838.66	11,875.11
78	04-01-2022	6,037.94	133.59	5,904.35	5,970.76
79	07-01-2022	6,037.94	67.18	5,970.76	0.00
2022 TOTALS:		**18,113.82**	**400.05**	**17,713.77**	
TOTALS:		**476,997.26**	**159,357.03**	**317,640.23**	

NOTICE: This is an estimated loan amortization schedule. Actual amounts may vary if payments are made on different dates or in different amounts.

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AFFIDAVIT OF PUBLICATION

FACILITY PLAN

FOR THE

WATER SYSTEM IMPROVEMENTS

BRITTON, SOUTH DAKOTA

JUNE 2015

HELMS # A-5772

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

By: _____
Brandon D. Smid, P.E.

Registration Number: 11937

Date: 6-1-2015

Helms & ASSOCIATES
CIVIL ENGINEERS & LAND SURVEYORS
P.O. Box 111
Aberdeen, South Dakota 57402

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1 INTRODUCTION

1.1 PURPOSE

The City of Britton has contracted with the engineering firm of Helms and Associates (Helms) to complete an investigation of its existing water distribution systems. The intent of the study is to identify and quantify problems that exist within this system.

The results of the completed investigation are presented in this Facility Plan. The Facility Plan contains the information on which the City Board of Britton can base cost-effective decisions relating to the necessary improvements to its water distribution system. The City Board will, after appropriate public input, determine the best options to make any needed improvements that are identified in the Facility Plan.

Loan and grant funding will undoubtedly be desired to make any of the improvements that are recommended herein. This Facility Plan will be a valuable tool for the community to pursue the funding necessary in its efforts to make needed public improvements.

1.2 WATER SCOPE OF WORK

The scope of work for this Water Evaluation and Study includes:

1) Completion of an analysis of requirements of governmental authorities having jurisdiction to approve the design of the project and participation in consultations with such authorities.
2) Completion of an analysis of the existing water distribution system relating to quantity and quality, compliance with existing and proposed drinking water standards, water losses in the system, identification of system age, evaluation of current water pressures and fire flow capacities and evaluation of current and future needs.
3) Completion of a general economic analysis and comparison of various alternatives.
4) Preparation of a written report, with maps and sketches, setting forth the findings and recommendations of the Preliminary Study, providing Britton with ten (10) copies of said report and meeting with Britton to review said report.

5) Assistance in the presentation of the findings and recommendations of the Preliminary Study at not more than one (1) public hearing.

1.3 AUTHORIZATION

The firm of Helms and Associates was authorized as per a Letter of Agreement dated September 9, 2013, by the governing body of the City of Britton to proceed with the evaluation of the City of Britton's water systems. The following report presents the findings and conclusions resulting from the authorized study.

2 COMMUNITY DESCRIPTION

2.1 GENERAL INFORMATION

The City of Britton is located in central Marshall County, South Dakota, at the intersection of South Dakota State Highway 10 and State Highway 27 as indicated in Figure 2.1-1.

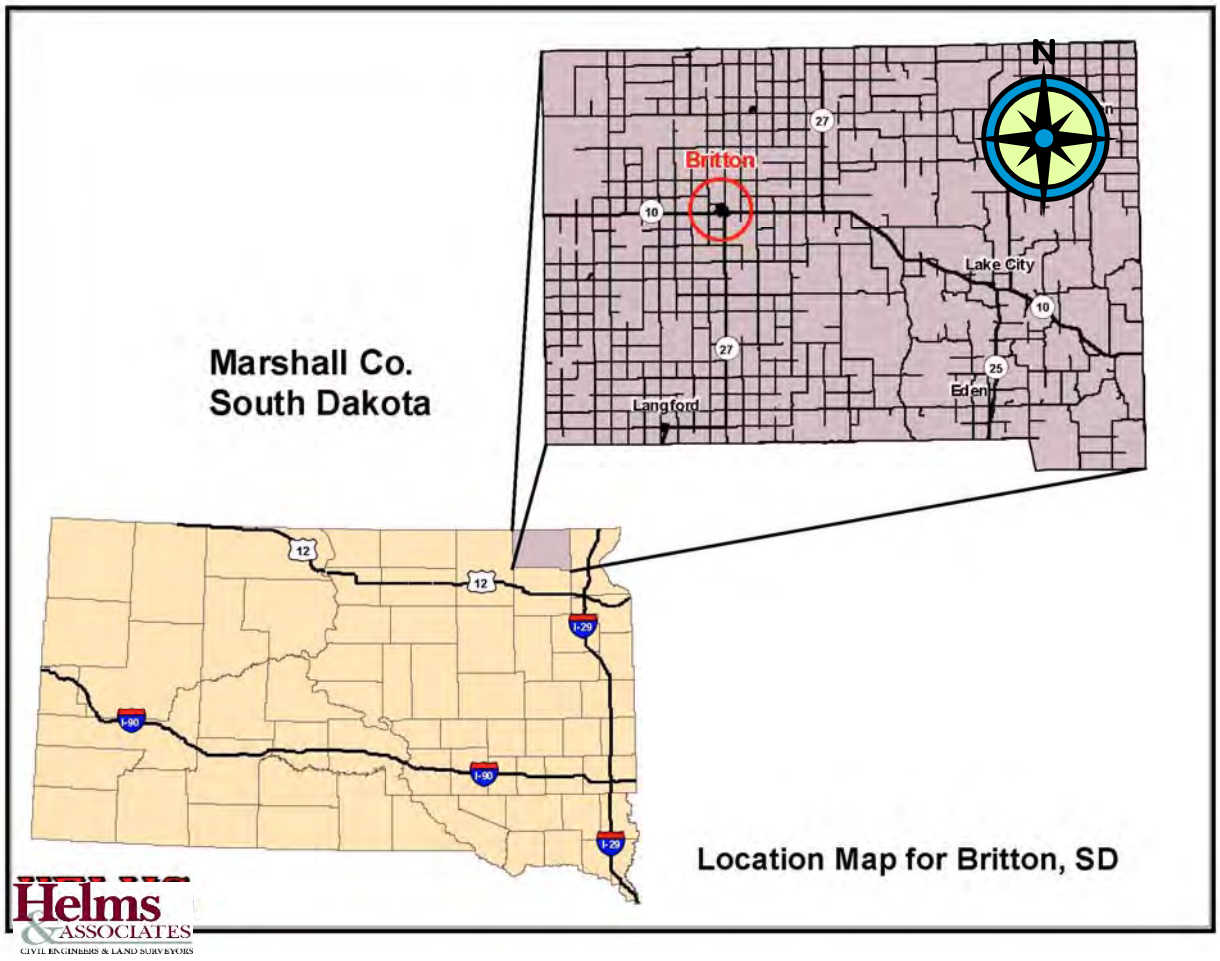

Figure 2.1-1 - Location Map of the City of Britton

The City of Britton is classified as a second class city, based on population. The City's government consists of a council of six members and a Mayor. A full-time Public Works Director is employed by the City Council. This individual oversees the necessary public utility maintenance within the community. The city also has a full-time finance officer to assist the council with financial matters.

Marshall County is located in northeastern South Dakota. Farming is the main source of income in the county. Britton is a typical rural community that serves the surrounding agricultural area as a retail trade center. Other communities located within the county include Eden, Langford, Lake City, Amherst and Veblen.

2.2 POPULATION CHARACTERISTICS

Britton's population is 1,241 according to the 2010 census. The most recent Census Bureau data available at the time of this report indicated that Britton's median age was 48.6 years as compared to the state's median age of 36.9. At the time census data was gathered, 27.5% of its population was the age of 65 and over. In comparison, the state's population that is 65 and over is 14.3%.

Data from the 2000 census indicates that the community's median household income of $31,148 was about $4,134 lower than the state's median household income of $35,282. At the time the census data was gathered, about 5.7 percent of the families living in the community had incomes at or below the poverty level while 10.4 percent of the families living in Marshall County fell into this category. In comparison, the state's poverty level was 11.5%.

2.3 POPULATION PROJECTIONS

Figure 2.3-1 indicates Census Bureau population data from 1910 to 2010 and the projected population for the community through the year 2040. As shown by the historical data, the population has fluctuated in the past. Current population estimations by the City indicate that the population has stabilized since 2010. No significant population growth is expected in the near future.

As with all communities of similar size, there are always efforts to entice new industrial and commercial enterprises into locating in Britton. Even though this possibility exists, it is not anticipated that these would have a significant impact on the projected water demands. As a result, the existing population of 1,241 will be used for the analysis of the current system and for the design purposes.

Table 2.3-1 - Historic and Projected Population

Year	Population	Year	Population
1910	901	1980	1,590
1920	1,105	1990	1,394
1930	1,312	2000	1,328
1940	1,500	2010	1,241
1950	1,430	2020 (Est.)	1,179
1960	1,442	2030 (Est.)	1,144
1970	1,465	2040 (Est.)	1,132

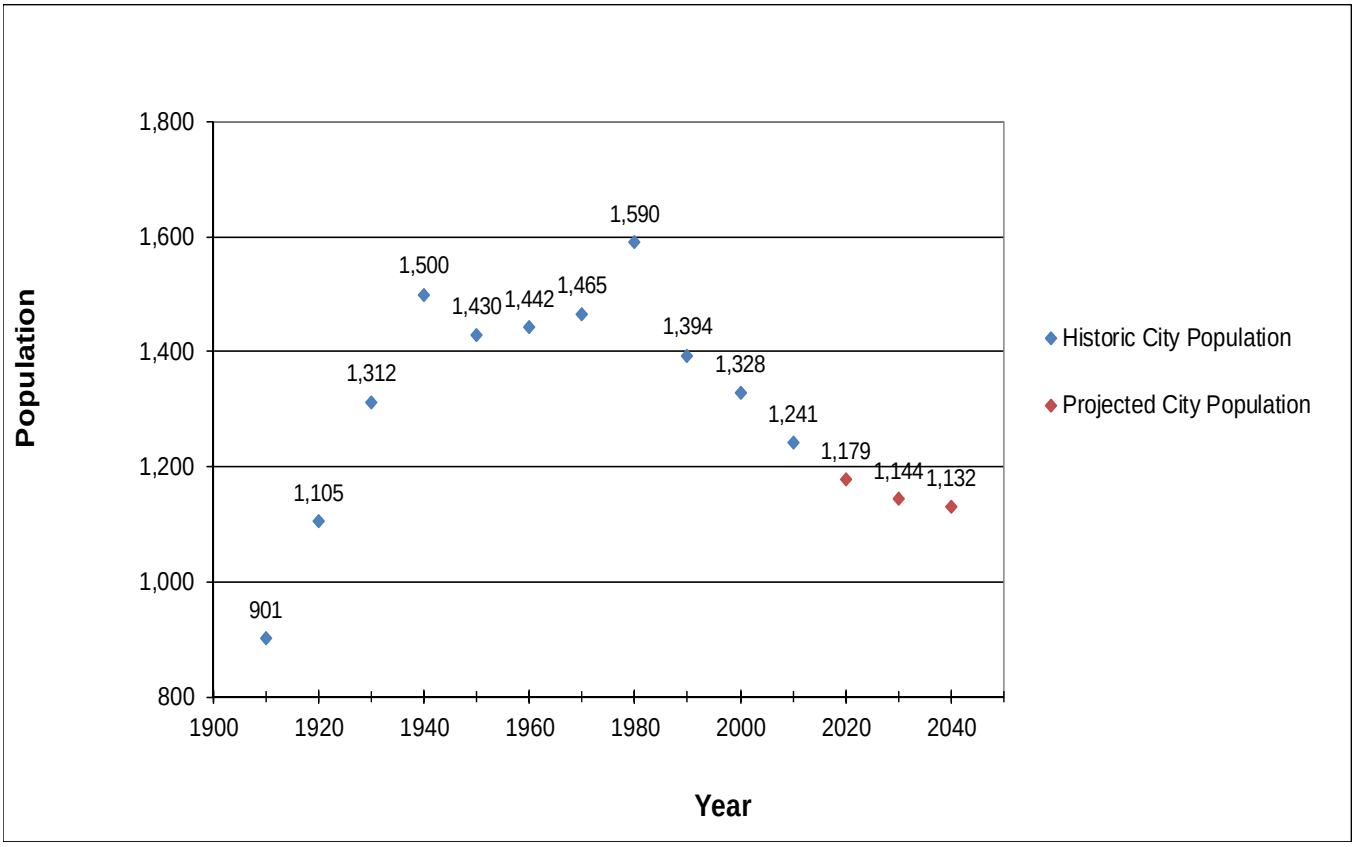

Figure 2.3-1 - Historic and Projected Population

2.4 TOPOGRAPHY / CLIMATE

Marshall County has an area of about 543,000 acres. The county is at the northern extremity of the Coteau des Prairies, a highland plateau shaped like a flatiron. The elevation at Britton is approximately 1,352 feet.

The area's climate is generally described as a continental climate. Winters are relatively long and cold while summers are fair and hot. Most of the precipitation occurs during the warm period of late spring and early summer. Normal precipitation for the area is 20.68 inches annually.

2.5 ENVIRONMENTAL REVIEW INFORMATION

As part of the environmental assessment requirement for the facility planning process, the project sponsor is required to contact various state and federal agencies. Environmental assessment letters have been sent to the following agencies: South Dakota Department of Environment and Natural Resources, United States Department of Interior Fish and Wildlife Service, US Army Corps of Engineers, Natural Resources Conservation Service, South Dakota Department of Game, Fish, and Parks. It is expected that no adverse environmental impacts will occur due to construction taking place on previously disturbed areas.

2.5.1.1 Floodplains and Wetlands

The US Fish and Wildlife Service, the US Army Corps of Engineers and the South Dakota Department of Game, Fish and Parks were contacted for input related to the proposed improvements. No floodplains or wetlands in the area are expected to be involved in the project. Correspondences from the US Fish and Wildlife Service, the US Army Corps of Engineers along with the South Dakota Game Fish and Parks are located in Appendix A.

2.5.1.2 Flood Hazard Evaluation

The U.S. Army Corps of Engineers was contacted for the purpose of soliciting input on the proposed improvements. The U.S. Army Corps of Engineers concluded that there will not be a flood hazard concern. Correspondence is located in Appendix A.

2.5.1.3 Floodplain Construction Permits

The U.S. Army Corps of Engineers was contacted for the purpose of soliciting its review and comments related to the possible need for permits authorized under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. The U.S. Army Corps of Engineers concluded that there will not be a need for permits authorized under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act.

2.5.1.4 Wetlands

The U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on wetlands. Correspondence has been received and is included in Appendix A. The U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks have found that this project will have no significant potential impact on wetlands.

2.5.1.5 Agricultural Lands

The U.S. Department of Agriculture State Soil Scientist was contacted for the purpose of soliciting input on the proposed improvements. We have received correspondence from the NRCS and is included in Appendix A. The U.S. Department of Agricultural State Soil Scientist found that this project will have no significant negative impacts.

2.5.1.6 Wild and Scenic Rivers

The U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted in regards to “Wild and Scenic Rivers” in the area. After their review, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks have found that this project will have no significant potential impact on “Wild and Scenic Rivers”. Correspondence has been received and is included in Appendix A.

2.5.2 Fish and Wildlife Protection

2.5.2.1 Endangered Species

The U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on endangered species which might result from construction of the proposed improvements. Correspondence has been received and is included in Appendix A. After their review, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks have found that this project will have no significant impact on fish and wildlife resources.

2.5.2.2 Critical Habitat

The U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on critical wildlife habitats which might result from construction of the proposed improvements. Correspondence has been received and is included in Appendix A. After their review, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks have found that this project will have no significant impact on fish and wildlife resources.

2.5.3 Water Quality and Quantity

The South Dakota Department of Environment and Natural Resources was contacted for the purpose of soliciting review and comments related to potential impact on water quality and quantity that could result from the proposed project. Correspondence has been received and is included in Appendix A. After their review, the South Dakota Department of Environment and Natural Resources has found that this project will have no significant impact on the water quality.

2.5.4 Historic and Archaeological Sites

The South Dakota Archeological Research Center was contacted for the purpose of conducting a records search for any potential historic and archaeological sites in the area impacted by the proposed project. Correspondence has been received and is included in Appendix A. Based on the records search information, there doesn't appear to be any historic sites that would be

impacted by this project. However, this needs to be forwarded onto the State Historical Preservation Office by the funding agency for concurrence.

2.6 DIRECT AND INDIRECT IMPACTS

Negative environmental impacts which may be expected during a project of this nature include, but are not necessarily limited to, soil erosion, noise pollution, traffic obstruction, and increased surface runoff due to trench dewatering operations. However, such impacts are temporary and will not significantly affect the environment over the long term.

Positive environmental impacts include enhanced human health and safety and more efficient delivery of municipal water. Such impacts are of long-term value to the residents of Britton and Marshall County.

2.7 MITIGATION ADVERSE IMPACTS

Adverse impacts will be minimized to the greatest extent possible by the implementation of accepted cautionary measures. Temporary and permanent erosion control will be included in construction contracts. Appropriate permits will be secured prior to the discharge of any trench dewatering or storm waters, and protection of public health, safety and welfare will be incorporated into the specifications and contract documents. Additionally, should any permanent adverse impacts result from the project, mitigating measures will be followed to the satisfaction of the appropriate review agency.

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3 EVALUATION OF EXISTING WATER SYSTEM

3.1 GENERAL INFORMATION

The City of Britton currently provides water service to approximately 650 water services in the community. Of the 650 services, 5 of these services provided by the City are commercial. The City of Britton currently purchases 100% of its domestic water demand from Brown Day Marshall (BDM) Rural Water. Figure 3.1.1 shows the existing water distribution system.

The system has been updated throughout the years but some older lines are still in service. According to available information there are several types and sizes of water main used throughout the distribution system. The approximate total length of each size and type of pipe in the water distribution system is listed below in Table 3.1-1.

Table 3.1-1 – Pipe Sizes and Length

Watermain Diameter (in)	Pipe Type	Total Length of Watermain (ft)	Total Diameter - Length (in-ft)	Total Diameter - Length (in-mile)
4	Cast Iron	7,036	28,144	5.3
4	Asbestos Cement	9,700	38,800	7.3
4	PVC	3,714	14,856	2.8
6	Cast Iron	426	2,556	0.5
6	PVC	32,731	196,386	37.2
8	PVC	18,109	144,872	27.4
10	PVC	8,947	89,470	16.9
Totals		**80,663**	**515,084**	**97.6**

The City has experienced a few breaks in the system over the past years. Repairs have been made with newer PVC piping. The approximate location of the current system is shown in Figure 3.1-1 and Figure 3.1-2. The modeled pressures, pipe velocities, and flows are provided in Figure 3.6.4-1 and Figure 3.6.4-2.

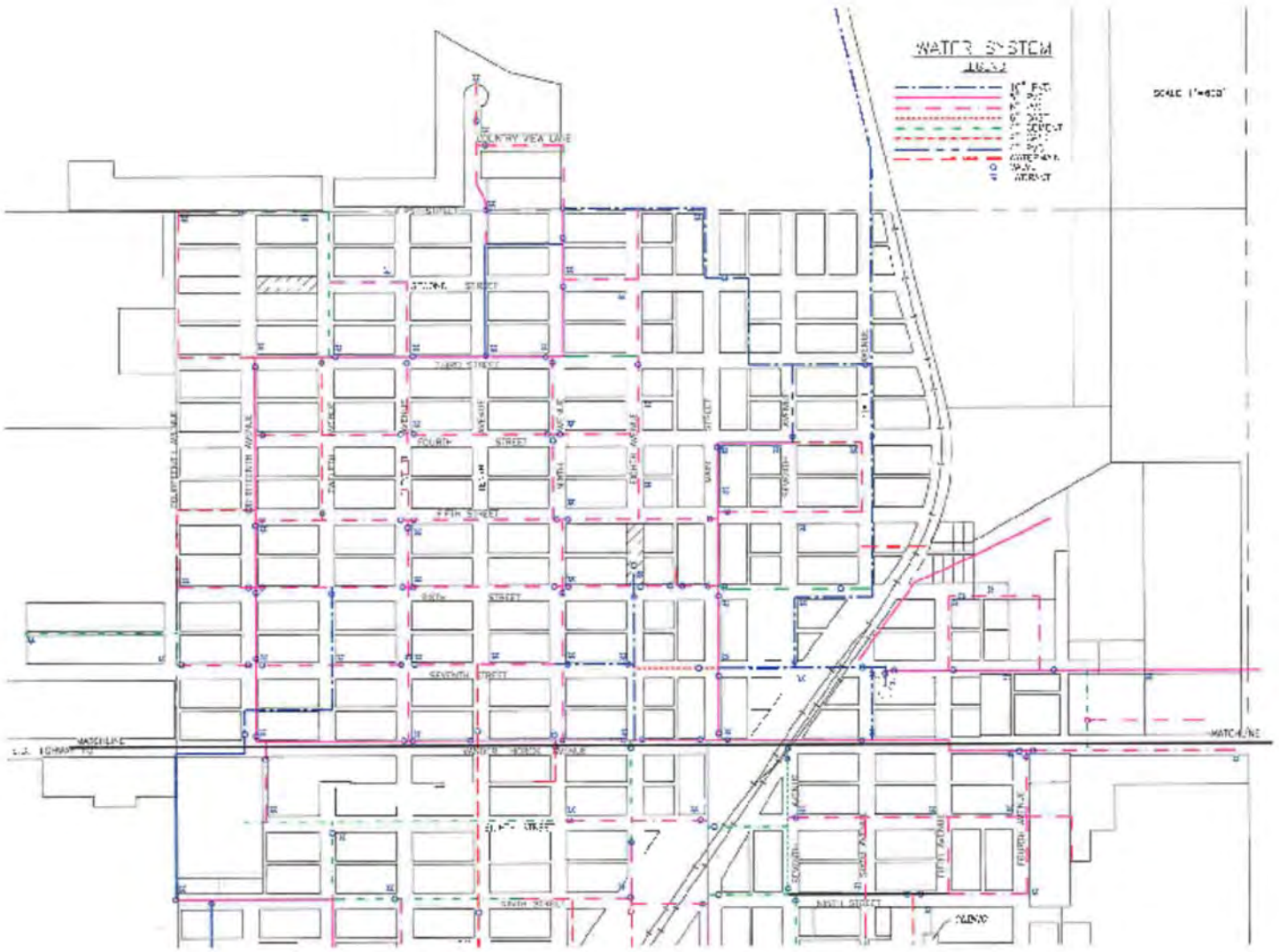

Figure 3.1-1 - Existing Water System, North Side of City

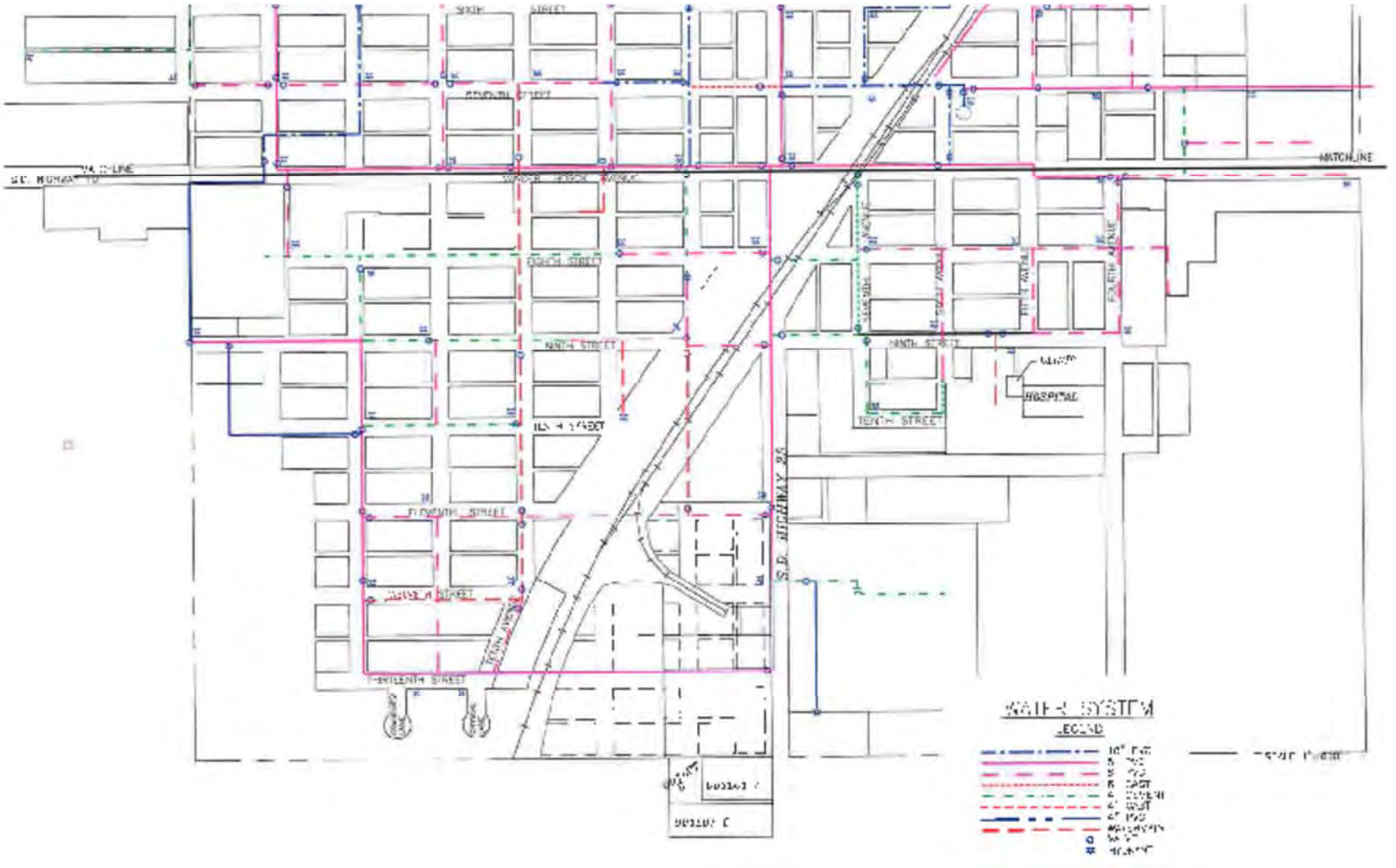

Figure 3.1-2 Existing Water System, South Side of City

3.2 WATER DEMAND

To evaluate the City of Britton's potential to meet the needs of the future, a review of past water usage records was completed. The process used to estimate future water demand included a determination of the current average per capita demand combined with a projection of the future population. Records of water usage from January 2011 through May 2014 were obtained and utilized to create Table 3.2-1.

The sources and methods used to develop the information presented in Table 3.2-1 are described by the following:

- Water purchased per month is based on data provided by the City of Britton.
- Water usage billed per month is based on data provided by the City of Britton.
- The percentage of unaccounted-for water per month and year is calculated by dividing the difference between the water purchased and the water billed.
- Monthly precipitation data for 2011-2014 is from the National Climatic Data Center Britton, SD Station.
- Per capita per day (pcpd) usage for each month is calculated by dividing the water purchased by the population and the days per month.
- The daily water purchased and billed for each year was calculated by dividing the sum of the water for each month by the days in that period.

Table 3.2-1 indicates that the billed per capita water usage ranges from 64 gpcpd during March 2013 to 138 gpcpd during August 2013. The average per capita water usage based on billed water data for the period of January 2011 through April 2014 was determined to be approximately 90 gpcpd which is a little above average for communities in South Dakota. For the purpose of this report 90 gpcpd will be utilized as the average per capita per day water usage. The higher than average 90 gpcpd is likely due to commercial users such as Buhl's of Britton (dry cleaners), Wheatcrest Hills, Horton Industries, South Leewood Apartments and Spruce Court.

Table 3.2-1 indicates that the water loss in the system averages 18%. The City should try to keep the water loss below the generally accepted standard of 15%. The typical reasons for losses in the system are leaks, slow or malfunctioning meters, fire-fighting and water used at non-metered locations. According to City Officials there are no unmetered connections within the City of Britton. The City bills residents monthly. The City of Britton currently uses Badger Water Meters which the city would like to upgrade to digital water meters.

Table 3.2-1 - Water Analysis from January 2011 to June 2014

Average Water Purchased Per Year	47,992,000	Gal
Average Water Sold to Britton Residents Per Year	40,586,729	Gal
Average Per Capita Usage (Based on Purchased Water)	106	gpcpd
Average Per Capita Usage (Based on Sold Water to Residents)	90	gpcpd
Average Per Capita Usage for Dec, Jan, Feb (Based on Purchased Water)	87	gpcpd
Average Day (Based on Purchased Water)	103	gpd
Average Percentage of Unaccounted-for Water	18%	
Maximum Supplied per Month	6,106,000	gal
Average Day Purchased	131,485	gal
Average Day Sold to Residents	111,197	gal

Table 3.2-2 - Water Purchased per Capita from January 2011 – May 2014

	2011				2012				2013				2014			
Month	Purchased (Gal)	Sold (Gal)	Billed (gpcpd)	Precip. (in)	Purchased (Gal)	Sold (Gal)	Billed (gpcpd)	Precip. (in)	Purchased (Gal)	Sold (Gal)	Billed (gpcpd)	Precip. (in)	Purchased (Gal)	Sold (Gal)	Billed (gpcpd)	Precip. (in)
January	3,204,000	2,933,979	76	2.14	3,457,000	2,755,832	72	0.39	3,212,000	2,767,070	72	0.77	3,710,000	2,800,339	73	1.44
February	3,013,000	2,915,747	84	0.59	3,077,000	2,775,996	77		2,888,000	2,853,418	82	1.77	2,827,000	2,760,365	79	0.05
March	3,320,000	2,908,798	76	1.43	3,510,000	2,594,999	67	0.69	3,292,000	2,447,336	64	0.44	3,527,000	3,129,702	81	0.61
April	3,252,000	2,773,040	74	2.00	3,448,000	2,977,807	80	4.22	3,365,000	2,880,492	77	1.90	3,252,000	2,712,721	73	2.57
May	4,020,000	2,873,335	75	3.10	5,256,000	2,944,271	77	0.74	4,389,000	2,924,062	76	2.88	4,060,000	3,786,163	102	1.58
June	4,408,000	3,856,724	104	2.94	5,593,000	3,914,410	105	3.11	4,445,000	3,676,749	99	6.53				
July	4,685,000	3,736,485	97	9.92	6,106,000	4,815,941	125	2.34	5,327,000	3,984,998	104	0.98				
August	4,709,000	3,776,751	98	2.09	5,168,000	4,454,847	116	1.04	6,037,000	5,302,599	138	0.50				
September	4,432,000	3,725,365	100	0.67	4,513,000	3,976,741	107	0.23	4,332,000	4,024,554	108	2.84				
October	4,170,000	3,296,650	86	1.15	3,601,000	3,410,490	89	2.66	3,680,000	3,030,736	79	4.22				
November	3,494,000	3,197,660	86		3,231,000	3,054,745	82	0.17	3,396,000	3,006,280	81	0.33				
December	3,415,000	2,780,325	72	0.24	3,408,000	2,664,815	69	0.38	3,123,000	2,800,339	73	1.04				
Hydrants & Leaks		1,065,000				1,399,300				481,500						
Total	46,122,000	39,839,859			50,368,000	41,740,194			47,486,000	40,180,133			17,376,000	15,189,290		
Average Day	126,362	109,150			137,995	114,357			130,099	110,083			144,800	126,577		
Average (gpcpd)	102	88			111	92			105	89			93	81		
Average (gpcpd) Dec, Jan, Feb	86	77			89	73			83	75			89	76		
Average Unacc %	16%				21%				18%				14%			

3.3 PROJECTION OF WATER DEMAND

Future water demand projections are the basis for establishing the water distribution system capacity and storage. These projections are based on historical data of per capita water flows and population projections to determine peak day and peak hour demands to ensure that the system is capable of meeting the future demands of the City. As shown in Section 2.3, the population of Britton is expected to stabilize at its current population. For this reason the current population is used for determining the future water demands and as discussed in Section 3.2. An average demand of 90 gpcpd will be utilized and 20% added for water loss in the system.

To meet the peak day water usage that may occur in the future, a peaking factor is generally determined. Smaller cities have a greater fluctuation than larger cities, but these fluctuations generally occur over a shorter period of time. As can be seen in Table 3.2-1, the water use in a City such as Britton that does have a significant commercial or industrial user is also dependent on the climate because of the amount of lawn watering. Our experience has shown that the ratio of average daily usage to peak day usage ranges from 2.0 to 3.0 average daily water usage for communities in South Dakota. It is our opinion that the peaking factor for the peak day water demand should not be less than 2.5 times the average day to cover lawn watering and other summertime uses. This number can be justified by taking the average day of the peak water month of July 2012 which is approximately 196,968 gpd. Knowing that the variance within the peak month is likely to be on the order of 1.25 to 1, an estimated peak day of 246,210 (196,968 x 1.25) gpd is calculated. Dividing 246,210 gpd by an average day of 111,197 gpd (billed average day for study period) results in a peak day to average day ratio of 2.2 to 1. Since this data is limited at best, utilizing the slightly higher value of 2.5 times the average day water usage is justified in our opinion. This number will be used throughout the remainder of the report. The result is a peak day water demand of 335,070 gpd (1241 people X 90 gpcpd X 2.5 X 1.20 (water loss)).

It must be noted at this point that an attempt has been made to determine design flow parameters as accurately as possible. If any error is to be made in the selection, it must be on the high side to ensure an adequate supply of water for the City throughout the design period.

3.4 WATER SOURCES

3.4.1 BDM Rural Water Systems

The City of Britton is under contract with Brown Day Marshall Rural Water System, Inc. (BDM) to supply water not to exceed 350 gpm. During the peak day water demand an average of 232 gpm would be needed to sustain the City of Britton. The rate is therefore sufficient to meet their needs.

The purchase of the current demand rate of water from BDM is charged to the City at a water rate of $2.00 per thousand gallons delivered by BDM. This amount includes repairs, chemicals, utilities, and capital costs of the system.

The City of Britton currently has Water Right Number 3915-3 for a well located in the NW ¼ of the SW ¼ of Section 36 T128N, R57W for municipal use. The location of the well is near White Lake which is located approximately 7.25 miles North East of Britton. The City of Britton also has Water Rights Number 1489-3 to take water from White Lake for municipal use. Both water sources from the White Lake area would require a transmission line to the City of Britton and then treatment of the water as it is high in minerals.

3.5 STORAGE

The City currently has one 250,000-gallon ground storage tank. It is assumed that the ground storage tank was built in 1970. The ground storage tank is used to fill a 150,000 gallon elevated storage tank. The elevated storage tank was built in 1976. The elevated storage tank functions properly but has required some maintenance, which the City of Britton has completed. The elevated storage tank was measured and is 126 feet from the ground to the bottom of the tank. The tanks diameter is 24 feet, which makes the top of the water tower 150 feet in total height.

Midco Diving and Marine Services, Inc. completed an inspection/maintenance of the elevated storage reservoir in May of 2011. After the inspection, Midco reported that “the overall condition of the tank appears to be good, consistent with a reservoir of this age and type.” They did recommend 8 hours of epoxy repair for coating failure and corrosion modules of the interior floor and wall or total blast and recoat. The City had this repair work completed. A copy of the Midco Diving and Marine Services, Inc. Report of Procedures and Findings From the Cleaning and Inspection of the Pedestal Tank City of Britton, SD is attached in Appendix E.

Water storage establishes the pressure(s) for the distribution system, provides a means for equalizing operating pressures during high demand periods, provides emergency storage to temporarily offset the effects of downtime for pump repairs, pipeline repairs and power outages and provides fire protection.

There is not a defined method for determining the volume of elevated storage for water distribution systems. Standards such as the Ten State Standards say that if fire flow is to be provided, the flow guidelines established by the International Standards Organization (ISO) should be met. Thus, at 1,500 gpm, a two-hour fire event requires 180,000 gallons for the Downtown area.

Equalization and emergency storage are the other factors in determining the volume of water required or desired. Equalization storage is required to supply the varying demands throughout each day. Figure 3.5-1 illustrates a typical variation of water demand over a peak day. During those times that the water usage is shown to be over 100% of the supply rate, the system's storage must provide the additional water to meet the demands. In the AWWA Distribution System Handbook by Larry Mays, Mays states that storage for equalization with constant rate pumps typically ranges from 10% to 25% of the peak day water demand. The higher end of the range is for communities with high ratios of average day to peak day water usage. Since the selected peak day to average day ratio for Britton is at the middle of the typical range of 2.0 to 3.0, the mid-point of the required range of equalization storage, or 17.5%, is selected for the desired equalization storage. The projected peak day water demand is 335,070 gallons and results in an equalization storage volume of approximately 58,637 gallons (335,070 gpd x .175).

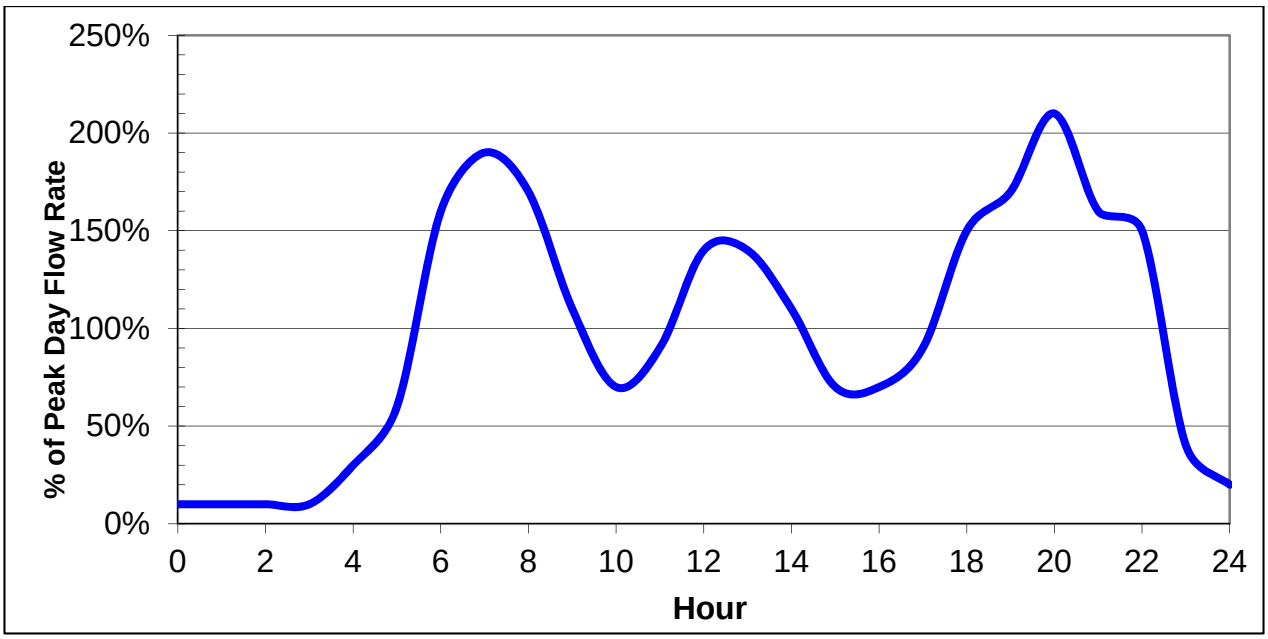

Figure 3.5-1 - Water Demand Pattern Used in Model

Emergency storage is essentially the storage that a community feels comfortable with based on the reliability of the power supply and its water system in general. Emergency storage equal to two days of the average day usage is commonly used for the emergency storage volume and is utilized in this report. The current average day water demand is 131,485 gallons. The emergency storage capacity is 268,056 (2 * 1241 people * 90 gpcpd * 1.20 (water loss)).

The total required water storage for a community is generally considered to be the peak day storage plus the larger of fire or emergency storage (Mays 2000). The total storage generally considered as needed for a community would then be 603,126 gallons (335,070 + 268,056); however, the funding agencies currently don't consider fire protection as an eligible expense. Therefore, the total water storage evaluated for this report is double the average daily use (emergency storage) plus the equalization storage. The City of Britton should currently have storage of at least 326,693 (268,056 + 58,637) gallons of water. Currently the City of Britton has adequate storage of 400,000 (250,000 ground storage tank + 150,000 elevated storage tank) gallons of water.

3.6 DISTRIBUTION SYSTEM

Currently, the existing system is known to have at least eighteen dead ends. Without looping and multi-directional flow of water in the distribution system, for the most part, water is supplied, through a long single pipeline. In this type of distribution system, total water usage decreases the

closer one gets toward the end of the lines. This results in decreased movement of water in the pipe and the possibility of exceptionally long retention times in various segments of the pipe. Long retention times in a pipe can have a detrimental effect on the quality of the water in the pipe these include:

A decrease in the disinfection levels in the water,

An increase in the potential for the formation of carcinogenic disinfection process by-products, and

An increased potential for the formation of biological growth.

The distribution system is composed of a variety of pipes mostly PVC piping, Cast Iron and Asbestos Cement Pipe (ACP). The Cast Iron pipe is old and likely brittle. Typically, the inside of the Cast Iron pipe will corrode over time reducing the inside diameter and capacity of the pipe. AC Pipe has a number of health and safety issues if the asbestos fibers become dislodged. Asbestos has been linked to lung disease as well as lung cancer. When these pipes have a break, the fibers are being released into the water and provide an immediate health risk to the community. Currently the City of Britton is unable to use the current valves to isolate sections of the City. The City would like to add additional valves to isolate sections of town for emergency repairs. Some of the existing valves may need to be replaced.

Approximately five of the dead ends do not have a fire hydrant at the end of the line. Fire hydrants allow the lines to be properly flushed to maintain water quality. The City flushes the water mains twice a year, once in the spring and again in the fall.

3.6.1 Hydrants

The SD Department of Environment and Natural Resources (SD DENR), which is the state regulatory agency for public water supplies, requires that fire hydrants be served by water mains with a minimum diameter of six inches. The system has approximately 85 hydrants that are flushed twice a year. Figure 3.1-1 shows the current main sizes of the City's distribution system.

3.6.2 Hydraulic Evaluation

A hydraulic evaluation of the water system was conducted by the KYPipe 2010 hydraulic computer model. This model utilizes the Hazen-Williams formula and commonly accepted friction factors for the pipeline material being considered to calculate head loss due to pipe friction and resulting flows

and pressures. Two types of hydraulic analyses were performed with the KYPipe 2010 program to evaluate the City of Britton's distribution system. The two types of hydraulic analyses are a general system analysis which provides a snapshot of the system at the set parameters and fire flow analysis. All analyses were utilized to obtain a complete picture of the existing distribution system and to allow proper recommendations to be made that will improve the existing conditions.

Any hydraulic evaluation can find the existing water system to be inadequate by simply making the requirements very stringent. In the same manner, generally all systems are adequate to meet the average day demands. Deficiencies in a system are typically not apparent until system demands increase to provide the peak day and peak hour flows. The reason for this is that the flow rate in a pipeline significantly affects the downstream pressures. The friction loss, or the pressure loss, in a pipe is a function of the square of the velocity. Therefore, as the flow rate and corresponding velocity in a pipe increase, the resulting friction increases exponentially. As the flow rate increases above two feet per second, the corresponding friction loss begins to climb rapidly with a velocity of five feet per second (generally considered the maximum desired flow rate). As a result, it is common practice to evaluate the overall system deficiencies in a distribution system based on peak hour and peak day flows.

3.6.3 Modeled Flow Rates

The total water demand for the City consists of two main components. First, the non-residential use is modeled by distributing demands that represent the City's high water users such as commercial users like Buhl's of Britton, Wheatcrest Hills, Horton, Inc., South Leewood Apartments and Spruce Court and others throughout the water distribution model. The other component consists of a residential flow rate which is modeled at each metered connection. Two sets of modeled system demands are created to place different loading conditions on the model:

- Peak Hour Demand

  Mays states that the peak hour to average day flow ratio typically ranges from 2.0 to 7.0:1. It is our opinion that the peak hour to average day ratio should be modeled as 3.0. This number was obtained by taking the highest usage in Table 3.2-1 of 200% and multiplying that by peak day and dividing it by the minutes in a day and the average usage (2.0 x 196,968 / 1440 / 90). It must be noted at this point that an attempt has been made to determine design flow parameters as accurately as possible but if any error is to be made in the selection, it must be on the high

side to ensure an adequate supply of water for the City throughout the design period, therefore the peak hour to average day ratio will be modeled as 5.0 to 1. Typically, the water demand in a system is concentrated over 16 hours in the day since water use is minimized during the night. Therefore, based on the current average day per capita pumped usage of 90 gpcpd, a 16-hour pumping day and the total population of 1,241 the total modeled peak hour flow rate is estimated to be 582 gpm (90 x 1,241 x 5.0 / 16 / 60). This flow will be utilized in the general analysis with the water tower set at mid-level to evaluate the distribution system's hydraulic capacity to maintain adequate water pressure during this high-use period.

- Peak Day Demand

  The peak day demand in the models was set to approximately 349 gpm (335,070 [from section 3.5] / 16 / 60) based on the current population, per capita usage, estimated peaking factor and a 16-hour day. An estimated variation of the peak day's usage over the course of the day including the peak hour is utilized in the extended period simulation to evaluate the system's overall hydraulic capacity.

3.6.4 Pressure Analysis

To check the water system for low-pressure problems, hydraulic models are created with the following assumptions made:

- The peak hour demand is placed on the model according to Section 3.6.2
- The operating elevation of the water tower is set to the mid-tank level which is approximately an elevation of 1,510 feet above mean sea level. The base elevation of the tank is assumed to be 1,498 feet above mean sea level.

SD DENR Recommended Design Criteria states in Section 8.4.2:

> *"A water distribution system shall be designed so as to provide a pressure of 20 pounds per square inch at each service outlet or connection under any or all conditions or demands that can be placed on the system. Under normal conditions, minimum pressures should be approximately 60 psi and not less than 35 psi."*

Section 7.3.1 of the Recommended Standards for Water Works by the Committee of the Great Lakes further recommends a minimum working pressure of 35 psi with a normal working pressure of 60 to 80 psi. The AWWA Distribution System Handbook by Mays states on page 3.8 that low

operating pressures of less than 30 psi can result in annoying reductions in water flow when more than one water-using device is in service. The new minimum desired by many residents is 40 psi as that pressure is typically required to properly operate lawn sprinkler systems. Based on the references above, the recommended pressures for services are shown in Table 3.6.4-1.

Table 3.6.4-1 - Recommended Pressures

Condition	Service Pressure Criteria (psi)
Maximum Pressure	60-80
Minimum Pressure During Peak Day	40
Minimum Pressure During Peak Hour	40
Minimum Pressure During Fire Flow	20

To check the water system for low-pressure problems, a high demand is simulated. The basis for the model in Figure 3.6.4-1 is that each meter is using an average of 0.90 gpm (582 gpm / 650 connections) plus individual node demand of 3.5 gpm for Buhl's of Britton, 2.6 gpm for Wheatcrest Hills, 2.5 gpm for Horton's Inc., 1 gpm for South Leewood Apartments, and 0.8 gpm for Spruce Court. See Figure 3.6.4-1 for the existing fire flows and pressures under peak hour demands.

The primary reason for the low fire flows on the South Side of the City is the four inch cast iron and four inch AC pipe that is in place. The height of the tower provides a static pressure of 67 psi. However, there are significant flow losses in the system due to the piping.

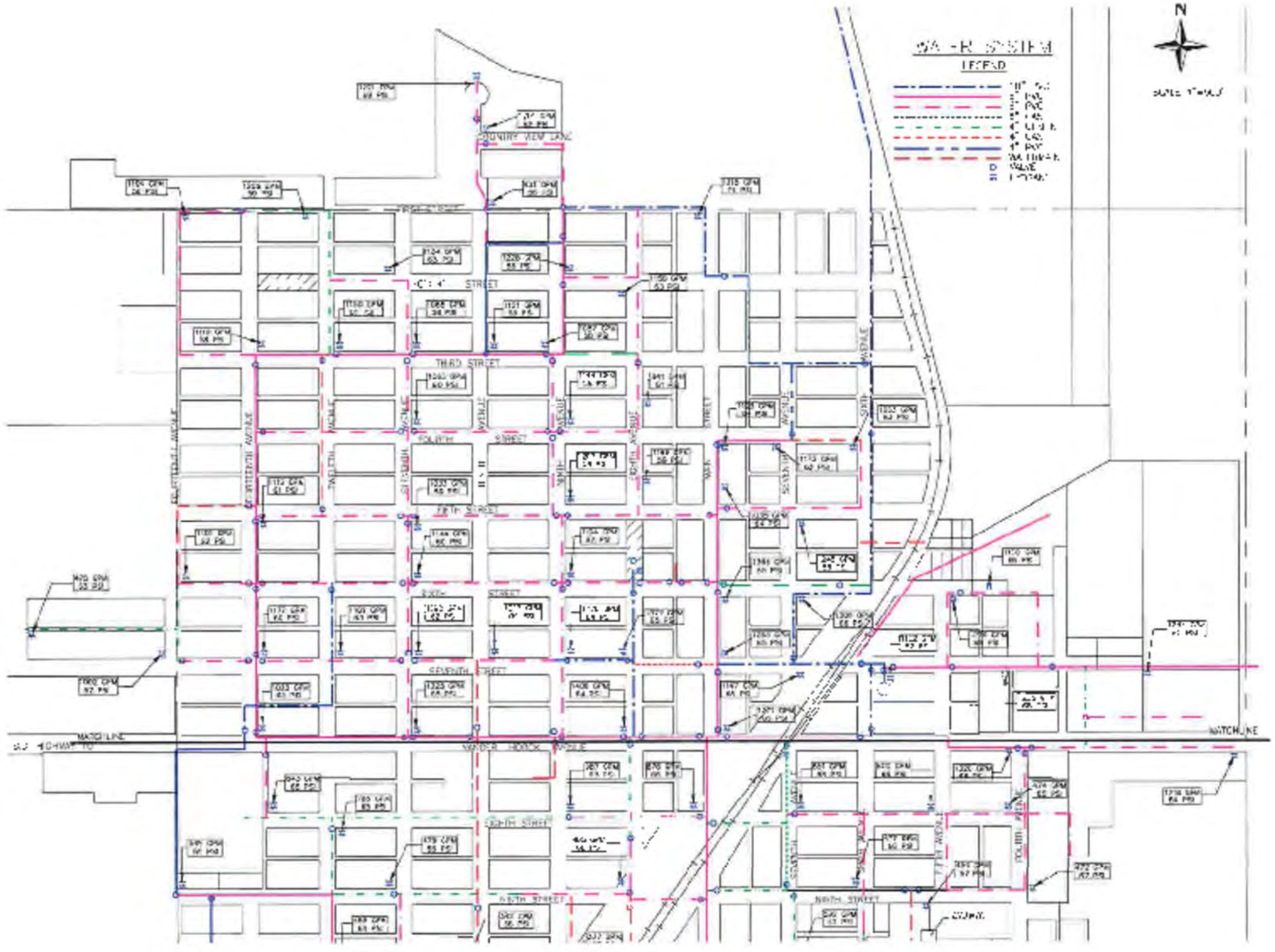

Figure 3.6.4-1 – Existing Fire Flows and Pressures under Peak Hour Demand, North Side

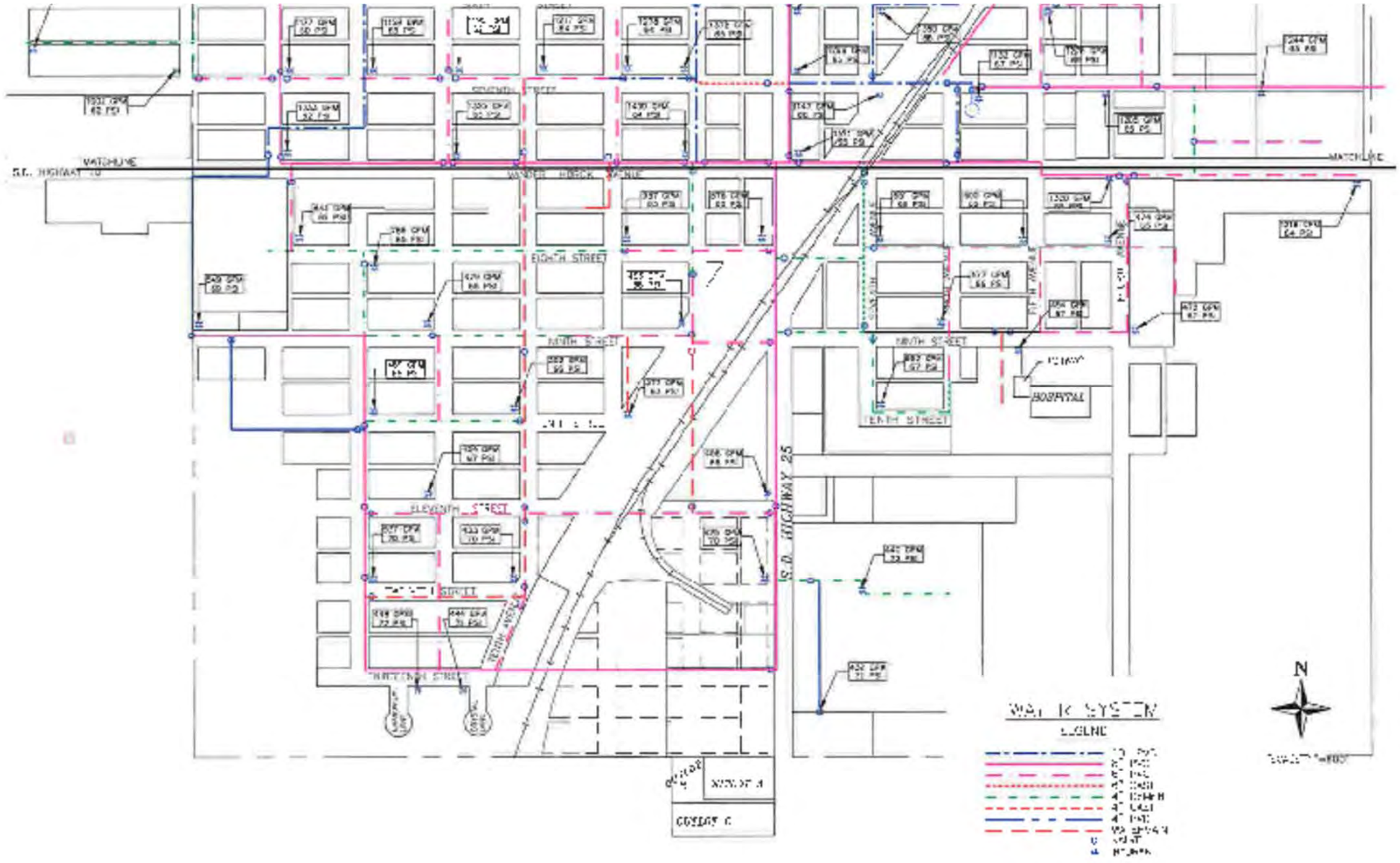

Figure 3.6.4-2 Existing Fire Flows and Pressures Under Peak Hour Demand, South Side

3.6.5 Fire Flow Simulation

In order to check the water system for low flow problems, hydraulic models are created with the following assumptions made:

- The peak day demand of 0.54 gallons per meter (349 gpm / 650 connections plus individual node demand of 3.5 gpm for Buhl's of Britton, 2.6 gpm for Wheatcrest Hills, 2.5 gpm for Horton's Inc., 1.0 gpm for South Leewood Apartments, and 0.8 gpm for Spruce Court) is placed in the model according to Section 3.6.2.
- The peak hour demand of 0.90 gallons per meter (582 gpm / 650 connections plus individual node demand of 3.5 gpm for Buhl's of Britton, 2.6 gpm for Wheatcrest Hills, 2.5 gpm for Horton's Inc., 1 gpm for South Leewood Apartments, and 0.8 gpm for Spruce Court) is placed in the model according to Section 3.6.2.
- The operating level of the tower is set to the mid-tank level.
- The minimum residual pressure is set at 20 psi.

Main pipelines are to deliver the needed fire flow to each hydrant in accordance with the ISO guidelines. The ISO guidelines are based on a number of variables including size of structure, construction material, occupancy, exposure and connections to other structures. For one- and two-family dwellings not exceeding two stories in height, the following needed fire flows are required:

Distance Between Buildings	Fire Flow Requirement
Over 100 feet	500 gpm
31 to 100 feet	750 gpm
11 to 30 feet	1,000 gpm
10 feet or less	1,500 gpm

As for the business district, the needed fire flow would be variable for each structure and an inspection and analysis of each structure would be required. Rather than performing these inspections and analyses, a minimum needed fire flow of 1,500 gpm is sought for business and school areas.

As can be seen in the fire flow analyses shown in the figure 3.6.4-1, the flows are below 500 gpm (the minimum by ISO) at a great majority of hydrants on the south side of the City. The low flow can be expected with the large amount of 4 inch cast iron and asbestoses cement pipe still in use

throughout the system. Over time, the inside of the cast iron will corrode and the inside diameter will decrease significantly.

3.7 FUTURE CONDITIONS

Without some system improvements, the City will continue to repair broken lines and have major water losses in the system. This could possibly overwhelm the BDM Water system to the point of failure within the City of Britton. The City needs to make improvements to prevent a water shortage or complete failure in the future.

Specific information on population projections is found in Section 2.3. Land use is not expected to change significantly in the immediate vicinity of the City. Currently there are no immediate plans for additional community growth; however there is some land available for future development and based on the past growth of the community. It is viewed as sufficient to meet community needs.

Due to the importance of conserving water, money and energy, various means for reducing water usage are recommended. By using faucet aerators, reduced flush toilets, and limited flow showerheads, water use can be reduced. However, these improvements would be wasted unless the water system is improved.

4 DEVELOPMENT AND EVALUATION OF WATER ALTERNATIVES

4.1 GENERAL

The alternatives developed for the City of Britton were composed to demonstrate some options available to fix the identified deficiencies in the water system.

4.2 CAUTIONARY NOTES CONCERNING COST ESTIMATES

The opinions of probable cost provided with the following alternatives reflect the anticipated costs for administration, engineering design, construction, contingencies, construction observation, and other costs related to completion of the project. The costs as presented are based on an analysis and comparison of projects of similar size and scope. The actual construction and project costs will vary on an individual project basis. The actual bid cost will reflect the bidder's evaluation of construction problems, weather, soils and difficulty of work. Thus, the engineer cannot be held responsible for the accuracy of the estimates made in this report as the engineer has no control over the contractors' bid costs.

Changes in materials, equipment and energy costs, as well as availability of other construction work at the time of the bid opening, could substantially influence actual project cost. Construction costs will also vary somewhat based on the quantity of items necessary to construct the project. The quantities and costs contained in this report are preliminary estimates based on our best judgment without field measurements. Final quantities and opinions of probable cost and final construction costs must be based upon final design.

Different funding sources have different requirements for some non-construction items. Therefore, actual costs of non-construction items should be considered tentative at this time and subject to later modifications and adjustments as current situations and funding sources dictate. Further, in as much as the period of construction cannot be accurately predicted, the costs as presented in this report have not been adjusted to reflect projected inflation factors. Therefore, it is important that the estimate of costs as presented be reviewed and updated periodically to reflect construction cost trends.

4.3 EQUIVALENT UNIFORM ANNUAL COST

The alternatives relating to Britton's water system that were evaluated are described in the following sections. In addition to an opinion of cost for each alternative discussed in this section, a breakdown of the estimated equivalent uniform annual cost (EUAC) is also given. The EUAC not only takes the capital costs into account when evaluating the options but also looks at the salvage value of the components and the expected annual operation and maintenance costs. Rural Development has published guidance under Bulletin 1780-3 to analyze life cycle costs:

"Present Worth (life cycle) cost analysis (an engineering economics technique to evaluate present and future costs for comparison of alternatives) should be completed to compare the feasible alternatives. All of the items from the cost estimate should be included in the analysis. The "real" federal discount rate from Appendix C of OMB Circular A-94 should be used for determining the present worth of the uniform series of O & M values (in today's dollars) and the salvage value. This rate may be found at: www.whitehouse.gov/omb/circulars/a094/a94_appx-c.html."

The result is a comparison of the alternatives will be on an overall basis throughout a design life of 40 years. As a result, the EUAC may show that the lowest capital cost alternative is not the lowest cost alternative. This situation would occur when options have a low capital cost but high operation and maintenance costs. The terms and values utilized in performing the EUAC are given in Table 4.3.1.

Table 4.3-1 - Equivalent Uniform Annual Cost Terminology and Values Used

Term	Definition	Value Used
Interest = I	Annual interest rate	0.80%
Salvage Value = SV	Value of component at end of 20-year design life	0% or 50%
Present Worth = PW	Present worth (equal to opinion of cost for that item)	Variable
Net Present Worth of Salvage Value = PWSV	Present worth of salvage value	85.3%
Net Present Worth of Capital Costs = NPW	Present worth less the present worth of the salvage value	Variable
Net Present Worth of Annual Costs	Present worth of annual costs over the 20-year design life	1840%
Equivalent Uniform Annual Costs = EUAC	Annual cost of total present worth of capital and annual costs	5.43%
Design Life	Length of time facilities are projected to operate and/or meet design parameters	20 years

4.4 WATER SOURCE

Currently the City of Britton gets all of their water from BDM Rural Water System, Inc.(BDM.) BDM has supplied the City since 1983 when the City of Britton entered into an agreement with BDM Rural Water. BDM currently meets the demands of the City and should be able to meet the demands of Britton well into the future.

4.4.1 Water Source Alternative 1: Do Nothing

The first alternative for water source system improvements is to do nothing. This alternative is considered an acceptable alternative as BDM Rural Water Systems, Inc., has been adequately supplying the City of Britton with quality water at an acceptable rate. BDM Rural Water Systems, Inc., also has the ability to meet the needs of Britton in the future. As a result, the “Do Nothing” alternative is considered as an acceptable alternative.

4.4.2 Water Source Alternative 2: Construct New Well

This alternative for water source is to construct a new well. Currently the City of Britton does not have a well for municipal consumption. The City of Britton does have the water rights for three wells which are out of the City Limits. The water quality of the wells is poor and treatment of the

water would be required to be useable for consumption. Due to the high cost of treating this water, and piping to get the water to the City, this alternative was not further investigated.

4.5 WATER STORAGE

The City of Britton currently has a 150,000 gallon Elevated Water Reservoir. The Elevated Water Reservoir was built in 1976. The tower is 100' tall and has a 24' bowl. The tower has received regular maintenance and is in average condition for its age. The City also has a 250,000 gallon Ground Water Storage Tank that was built in 1970. The Ground Water Storage Tank supplies the Elevated Water Reservoir. Together the City has the ability to store 400,000 gallons of water.

4.5.1 Water Storage Alternative 1: Do Nothing

The first Water Storage Alternative that was considered is the "Do Nothing" alternative. This alternative is an acceptable alternative because although both storage tanks are nearing 50 years of service, both are in good condition and are working properly. As a result, the "Do Nothing" alternative is considered as an acceptable alternative.

4.5.2 Water Storage Alternative 2: Update and Paint the existing 250,000-Gallon Ground Storage Tank and Construct a New Pump House with Booster Pumps

Water Storage Alternative 2 recommends updating and painting the existing 250,000 Gallon Ground Storage Tank and constructing a new pump house with booster pumps. This Ground Storage Tank is showing signs of repair in the paint. This option would include updating the railing along the top of the tank, constructing new railing up to the frost free vent, updating the frost free vent and replacing the hatch to meet current regulations.

A new booster pump station would undoubtedly be desired if this alternative was chosen. One of the current booster pumps is in poor condition and needs to be replaced. The other pump is approximately 2 years old. This alternative considers a below-ground style booster station. This style of booster station would be detached from Ground Storage Tank to provide easier access and maintenance. A duel-pump system would be desired to reduce stress on a single pump and to provide back-up pumping in case of failure. The booster station should utilize variable frequency drives (VFD's) to start the pumps. VFD's would prevent any potential water hammer because the VFD would slowly ramp the pumps to full speed and slowly ramp the pumps down to shut off.

Water hammer is caused by an instantaneous surge of water which can put undesired stresses on the distribution system. A VFD would also lower pumping costs because it may not be necessary to run the pump at full speed depending on the water demand. In addition, VFD's tend to extend the life of the pump because of the gradual starting and stopping of the pumps.

Tables 4.5.2-1 and 4.5.2-2 provide the estimated costs of this alternate and the equivalent uniform annual costs for the alternative.

Table 4.5.2-1 - Cost Estimate for Storage Alternative 2

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$26,000.00	$26,000.00
2	Paint 250,000-Gallon Ground Storage Tank	1	LS	$105,000.00	$105,000.00
3	OSHA Updates	1	LS	$20,000.00	$20,000.00
4	Booster Pump Station	1	LS	$125,000.00	$125,000.00
5	Electrical and Control Wiring	1	LS	$30,000.00	$30,000.00
6	6" PVC Watermain	100	LF	$25.00	$2,500.00
7	10" DIP Water Main	100	LF	$55.00	$5,500.00
8	6" Gate Valve W/Box	2	Each	$1,200.00	$2,400.00
9	10" Gate Valve W/Box	2	Each	$1,750.00	$3,500.00
10	Fire Hydrant	1	Each	$2,625.00	$2,625.00
11	Chain Link Fencing	500	LF	$30.00	$15,000.00
12	Seeding, Fertilizing and Mulching	1,000	SqYd	$2.50	$2,500.00
	Construction Subtotal				$340,025.00
	Contingencies (15%)				$52,000.00
	Construction Total				**$392,025.00**
	Design Engineering				$40,800.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$20,000.00
	Administration & Legal				$8,000.00
	Total Project Cost				**$466,325.00**

Table 4.5.2-2 - EUAC for Storage Alternative 2

Item Description	Cost	SV	PW SV	NPW
Mobilization	$26,000.00	$0.00	$0.00	$26,000.00
Paint 250,000-Gallon Ground Storage Tank	$105,000.00	$52,500.00	$44,766.04	$60,233.96
OSHA Updates	$20,000.00	$0.00	$0.00	$20,000.00
Booster Pump Station	$125,000.00	$62,500.00	$53,292.90	$71,707.10
Electrical and Control Wiring	$30,000.00	$0.00	$0.00	$30,000.00
6" PVC Watermain	$2,500.00	$1,250.00	$1,065.86	$1,434.14
10" DIP Water Main	$5,500.00	$2,750.00	$2,344.89	$3,155.11
6" Gate Valve W/Box	$2,400.00	$1,200.00	$1,023.22	$1,376.78
10" Gate Valve W/Box	$3,500.00	$1,750.00	$1,492.20	$2,007.80
Fire Hydrant	$2,625.00	$1,312.50	$1,119.15	$1,505.85
Chain Link Fencing	$15,000.00	$0.00	$0.00	$15,000.00
Seeding, Fertilizing and Mulching	$2,500.00	$0.00	$0.00	$2,500.00
Capital Costs	$126,300.00	$0.00	$0.00	$126,300.00
Total Construction Cost	$466,325.00	$123,262.50	$105,104.26	$361,220.74
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$2,000.00			$36,828.39
Utilities	$2,500.00			$46,035.49
Miscellaneous	$3,000.00			$55,242.58
Subtotal	$7,500.00			$138,106.46
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$361,220.74
NPW of O & M Costs				$138,106.46
Total Net Present Worth				**$499,327.20**
Equivalent Uniform Annual Cost				**$27,116.43**

4.5.3 Water Storage Alternative 3: Paint the Existing Elevated Storage Tank

Water Storage Alternative 3 recommends painting the existing Elevated Storage Tank. The existing Elevated Storage Tank is in good condition for it age, but is need of a new exterior coating. The existing Elevated Storage Tank does provide the pressures needed throughout the City of Britton. This Alternative will also provide for Chain Link Fence to be added around the existing Elevated Storage Tank. The following Tables 4.5.3-1 and 4.5.3-2 provide the estimated costs of this alternative and the equivalent uniform annual costs for the alternative.

Table 4.5.3-1 - Cost Estimate for Storage Alternative 3

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$15,000.00	$15,000.00
2	Paint Elevated Storage Tank	1	LS	$150,000.00	$150,000.00
3	OSHA Updates	1	LS	$10,000.00	$10,000.00
4	Chain Link Fencing	500	LF	$30.00	$15,000.00
5	Seeding, Fertilizing and Mulching	1,000	SqYd	$2.50	$2,500.00
	Construction Subtotal				$192,500.00
	Contingencies (15%)				$29,000.00
	Construction Total				**$221,500.00**
	Design Engineering				$23,700.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$12,600.00
	Administration & Legal				$5,000.00
	Total Project Cost				**$268,300.00**

Table 4.5.3-2 - EUAC for Storage Alternative 3

Item Description	Cost	SV	PW SV	NPW
Mobilization	$15,000.00	$0.00	$0.00	$15,000.00
Paint Elevated Storage Tank	$150,000.00	$75,000.00	$127,902.97	$22,097.03
OSHA Updates	$10,000.00	$0.00	$0.00	$10,000.00
Chain Link Fencing	$15,000.00	$0.00	$0.00	$15,000.00
Seeding, Fertilizing and Mulching	$2,500.00	$0.00	$0.00	$2,500.00
Capital Costs	$75,800.00	$0.00	$0.00	$75,800.00
Total Construction Cost	$268,300.00	$75,000.00	$127,902.97	$140,397.03
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$1,500.00			$27,621.29
Utilities	$500.00			$9,207.10
Miscellaneous	$3,000.00			$55,242.58
Subtotal	$5,000.00			$92,070.97
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$140,397.03
NPW of O & M Costs				$92,070.97
Total Net Present Worth				**$232,468.01**
Equivalent Uniform Annual Cost				**$12,624.39**

4.6 WATER DISTRIBUTION

The negative characteristics of Britton's water distribution system are summarized below:

The south side of the City (newer development) has low fire flows.

Most of the valves in the City have not been exercised properly and may not be operable.

Some valves that were broken had the stems removed and buried. The state of these valves (open or closed) is unknown.

The water losses are estimated at 20% above the standard level of 15%;

Some of the water lines in the City are old and brittle.

The alternatives for water main replacement does not include the installation of meters for the homes.

4.6.1 Water Distribution Alternative 1: Do Nothing

The first alternative for water distribution system improvements is to do nothing. This alternative will not help address any of the negative characteristics of the system. As a result, the "Do Nothing" alternative is not considered as an acceptable alternative.

4.6.2 Water Distribution Alternative 2: Replace all 4" Cast Iron Pipes and 4" Asbestos Cement Pipes with 6" PVC

Water Distribution Alternative 2 recommends that all of the existing 4" Cast Iron and 4" Asbestos Cement pipe be replaced with 6" PVC lines. The majority of the 4" Cast Iron pipes are in the South West Section of Britton. The City has been experiencing many breaks over the years with the current Cast Iron pipe. The frequency of the breaks is only expected to increase in the future. This would be a larger diameter system operated by the City and would provide fire protection. In turn, residents should see a decrease in their homeowners insurance. This Alternative will also consider placement of additional valves to replace defective valves and to isolate smaller sections of Britton. This Alternative will also add valves to isolate fire hydrants to meet the current DENR requirements. The current valve system makes it difficult to isolate small sections of Britton. The City of Britton has had to shut down the whole Town to repair a water line. By adding valves, the entire City of Britton would not be without water. Tables 4.6.2-1 and 4.6.2-2 provide the estimated costs of this alternate and the equivalent uniform annual costs for the alternative. This alternative would also replace some of the fire hydrants on the current system. Figure 4.6.2-1 provides a proposed layout of the water system. Figures 4.6.2-1 and 4.6.2-2 provide the modeled watermain

layout and Figures 4.6.2-3 and 4.6.2-4 provide the results for the fire flows and pressures of the system using the existing elevated storage tank.

Table 4.6.2-1 - Cost Estimate for Distribution Alternative 2

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$168,000.00	$168,000.00
2	Mill and Salvage of Existing Asphalt	22,890	SqYd	$3.25	$74,392.50
3	6" PVC Water Main	17,165	Ft	$22.00	$377,630.00
4	Fire Hydrants	19	Each	$2,625.00	$49,875.00
5	6" PVC Fire Hydrant Lead	380	Ft	$24.00	$9,120.00
6	Connect to Exisiting Water Main	20	Each	$300.00	$6,000.00
7	6" MJ DIP Gate Valve w/Box	47	Each	$1,200.00	$56,400.00
8	6" MJ DIP Tee	29	Each	$450.00	$13,050.00
9	6" 90° MJ DIP Bend	4	Each	$300.00	$1,200.00
10	Bore & Case Watermain Under Highway/Rail Road with 12" Casing Pipe	350	Ft	$300.00	$105,000.00
11	Connect to Existing Service	108	Each	$150.00	$16,200.00
12	1" Corp Stop/Service Saddle	108	Each	$175.00	$18,900.00
13	1" Curb Stop w/Box	108	Each	$200.00	$21,600.00
14	1" HDPE Service Line	3,570	Ft	$15.00	$53,550.00
15	Place Salvaged Asphalt	3,090	Ton	$10.00	$30,900.00
16	Asphalt Surfacing (4")	3,560	Ton	$185.00	$658,600.00
17	Gravel Base Course (10")	12,880	Ton	$22.00	$283,360.00
18	Gravel Surfacing	9,630	Ton	$20.00	$192,600.00
19	Granular Bedding, Material	5,360	Ton	$12.00	$64,320.00
20	Topsoil, Seed, Fertilize & Mulch	3.4	Acres	$1,500.00	$5,100.00
21	Curb and Gutter	1,270	Ft	$21.50	$27,305.00
22	Sidewalk	300	SqYd	$18.00	$5,400.00
23	PCC Pavement Repair/Valley Gutter	100	SqYd	$45.00	$4,500.00
24	Remove & Salvage Existing Valves	30	Each	$100.00	$3,000.00
25	Contaminated Soils	200	CY	$100.00	$20,000.00
	Construction Subtotal				$2,266,002.50
	Contingencies (15%)				$340,000.00
	Construction Total				**$2,606,002.50**
	Design Engineering				$208,500.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$229,400.00
	Administration & Legal				$94,000.00
	Total Project Cost				**$3,143,402.50**

Table 4.6.2-2 - EUAC for Distribution Alternative 2

Item Description	Cost	SV	PW SV	NPW
Mobilization	$168,000.00	$0.00	$0.00	$168,000.00
Mill and Salvage of Existing Asphalt	$74,392.50	$37,196.25	$31,716.74	$42,675.76
6" PVC Water Main	$377,630.00	$188,815.00	$160,999.99	$216,630.01
Fire Hydrants	$49,875.00	$24,937.50	$21,263.87	$28,611.13
6" PVC Fire Hydrant Lead	$9,120.00	$4,560.00	$3,888.25	$5,231.75
Connect to Exisiting Water Main	$6,000.00	$0.00	$0.00	$6,000.00
6" MJ DIP Gate Valve w/Box	$56,400.00	$28,200.00	$24,045.76	$32,354.24
6" MJ DIP Tee	$13,050.00	$6,525.00	$5,563.78	$7,486.22
6" 90° MJ DIP Bend	$1,200.00	$600.00	$511.61	$688.39
Bore & Case Watermain Under Highway/Rail Road with 12" Casing Pipe	$105,000.00	$52,500.00	$44,766.04	$60,233.96
Connect to Existing Service	$16,200.00	$0.00	$0.00	$16,200.00
1" Corp Stop/Service Saddle	$18,900.00	$9,450.00	$8,057.89	$10,842.11
1" Curb Stop w/Box	$21,600.00	$10,800.00	$9,209.01	$12,390.99
1" HDPE Service Line	$53,550.00	$26,775.00	$22,830.68	$30,719.32
Place Salvaged Asphalt	$30,900.00	$0.00	$0.00	$30,900.00
Asphalt Surfacing (4")	$658,600.00	$0.00	$0.00	$658,600.00
Gravel Base Course (10")	$283,360.00	$0.00	$0.00	$283,360.00
Gravel Surfacing	$192,600.00	$0.00	$0.00	$192,600.00
Granular Bedding, Material	$64,320.00	$0.00	$0.00	$64,320.00
Topsoil, Seed, Fertilize & Mulch	$5,100.00	$0.00	$0.00	$5,100.00
Curb and Gutter	$27,305.00	$0.00	$0.00	$27,305.00
Sidewalk	$5,400.00	$0.00	$0.00	$5,400.00
PCC Pavement Repair/Valley Gutter	$4,500.00	$0.00	$0.00	$4,500.00
Remove & Salvage Existing Valves	$3,000.00	$1,500.00	$1,279.03	$1,720.97
Contaminated Soils	$20,000.00	$0.00	$0.00	$20,000.00
Capital Costs	$877,400.00	$438,700.00	$374,073.54	$503,326.46
Total Construction Cost	$3,143,402.50	$1,571,701.25	$708,206.19	$2,435,196.31
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$1,500.00			$27,621.29
Materials	$500.00			$9,207.10
Miscellaneous	$1,000.00			$18,414.19
Subtotal	$3,000.00			$55,242.58
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$2,435,196.31
NPW of O & M Costs				$55,242.58
Total Net Present Worth				**$2,490,438.90**
Equivalent Uniform Annual Cost				**$135,245.60**

Figure 4.6.2-1 – Proposed Alternative 2: 6” Water main Layout, North Side

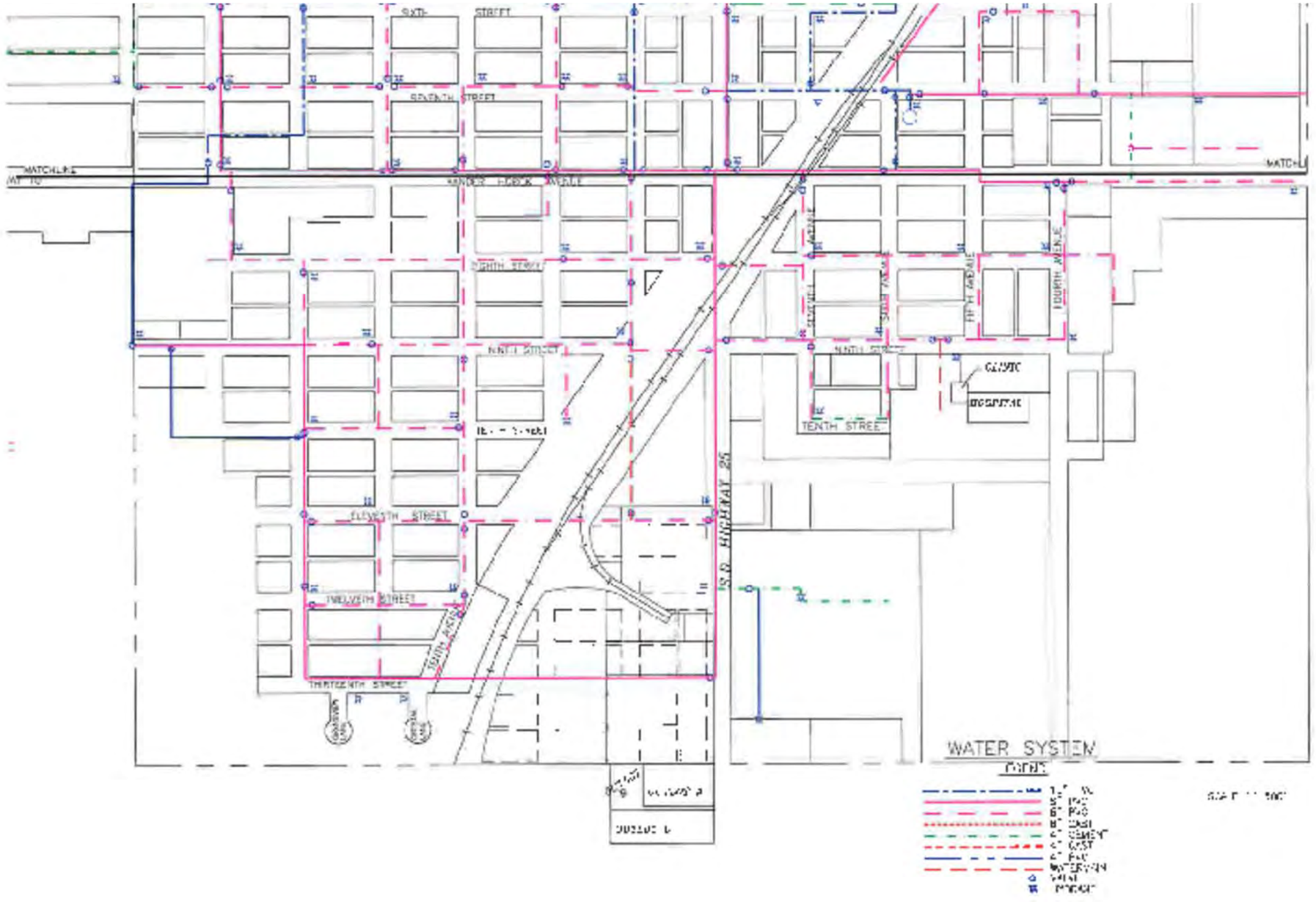

Figure 4.6.2-2 Proposed Alternative 2 6” Watermain Layout, South Side

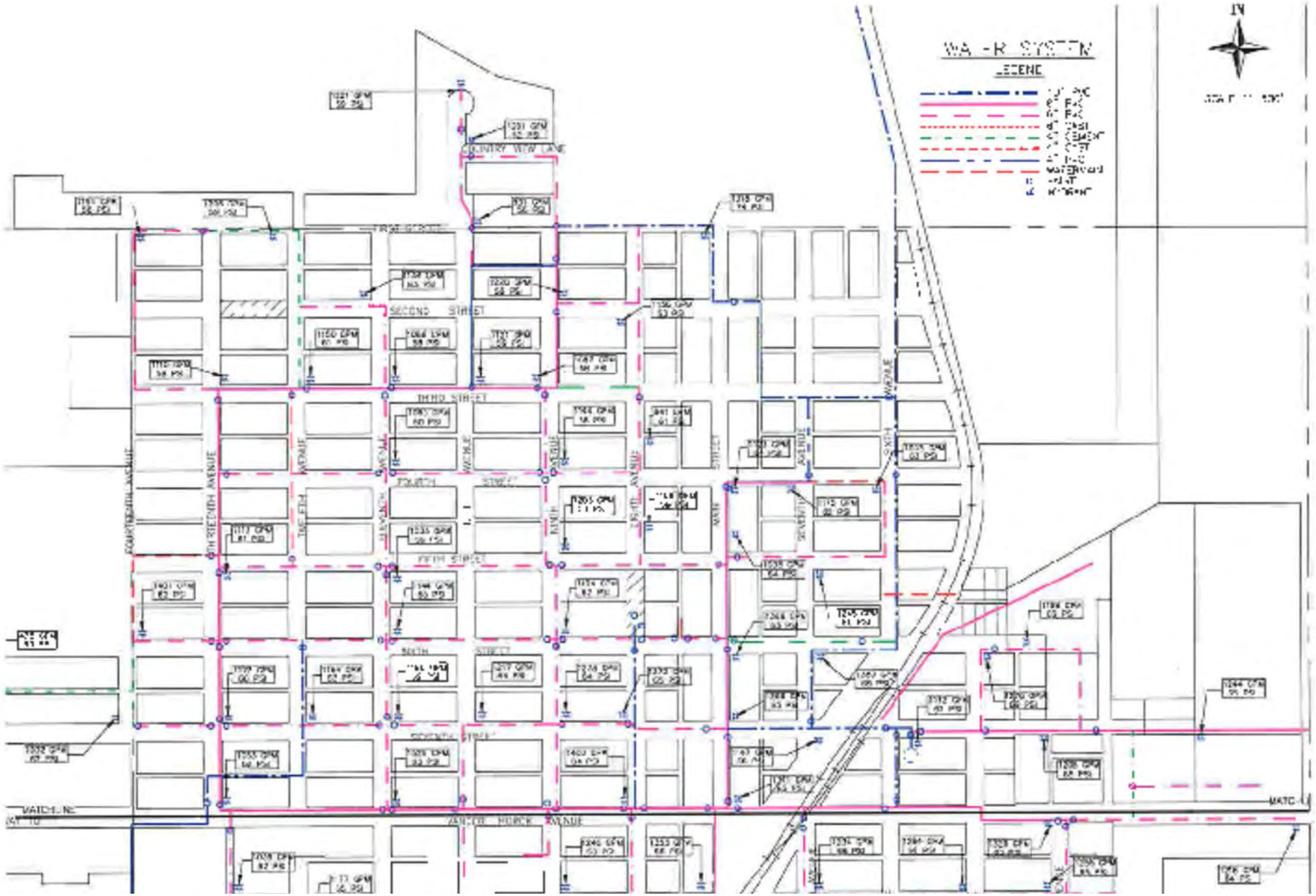

Figure 4.6.2-3 Proposed Alternative 2, Fire Flows and Pressures, North Side

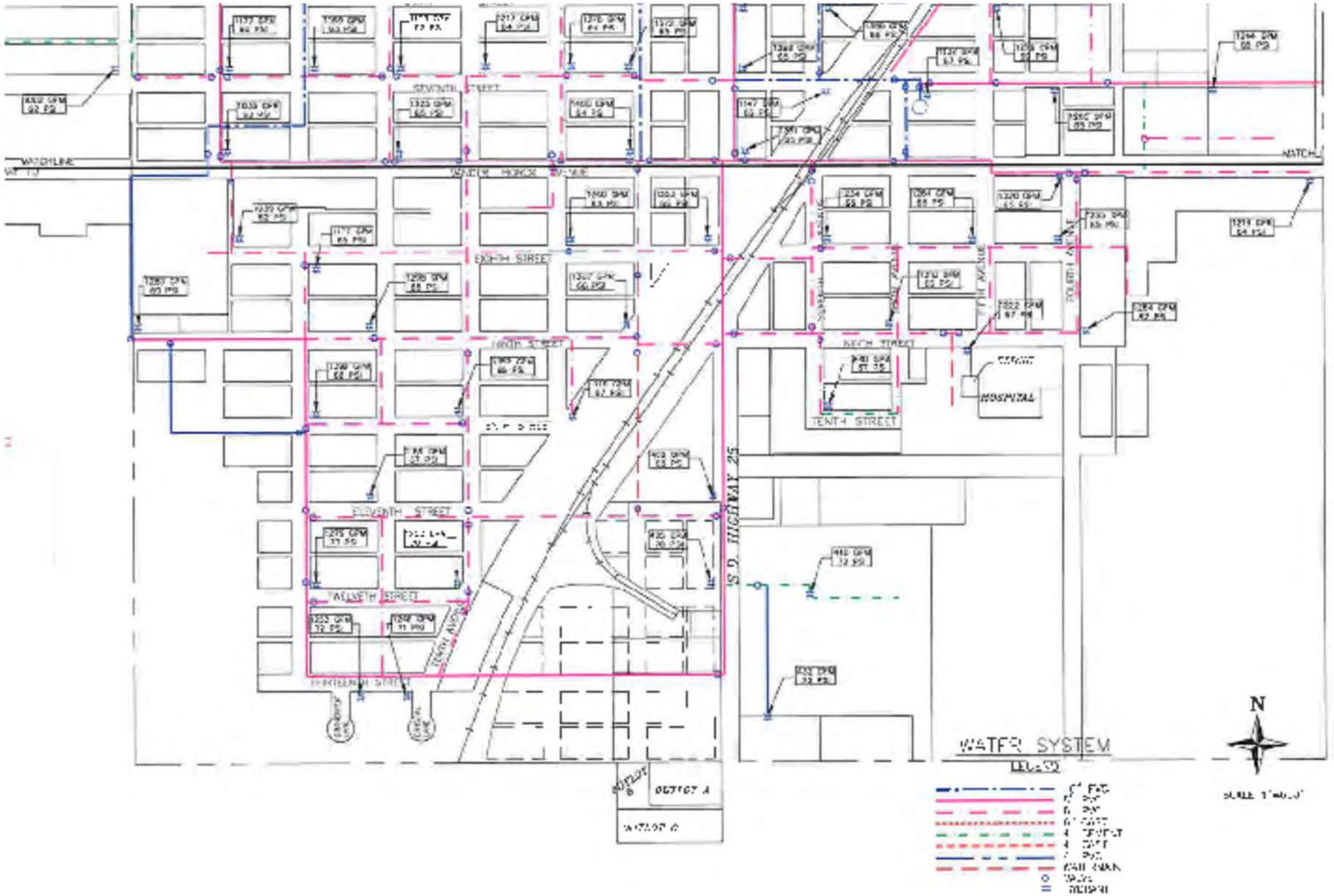

Figure 4.6.2-4 Proposed Alternative 2, Fire Flows and Pressures, South Side

4.6.3 Water Distribution Alternative 3: Replace all 4” Cast Iron Pipe, Asbestos Cement Pipes, PVC and 6” Cast Iron Pipe with 6” PVC

Water Distribution Alternative 3 recommends replacement of all 4”CIP, AC and PVC and 6” Cast Iron Pipes with 6” PVC Piping and additional valves. The removal of the Cast Iron Pipes will increase the fire flows as the pipe diameter will increase. Additional placement of valves will be used to isolate smaller sections of Britton in case of maintenance emergencies. Additional valves will be placed to isolate fire hydrants in case of required hydrant maintenance. This alternative will also replace fire hydrants on the current system.

Tables 4.6.3-1 and 4.6.3-2 provide the estimated costs of this alternate and the equivalent uniform annual costs for the alternative. Figure 4.6.3-1 provides a proposed layout of the water system. Figures 4.6.3-2 provide the modeled results for the system using the elevated storage tank.

Table 4.6.3-1 –Cost Estimate for Distribution Alternative 3

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$212,000.00	$212,000.00
2	Mill and Salvage Existing Asphalt	27,870	SqYd	$3.25	$90,577.50
3	6" PVC Water Main	20,900	Ft	$22.00	$459,800.00
4	Fire Hydrants	29	Each	$2,625.00	$76,125.00
5	6" PVC Fire Hydrant Lead	580	Ft	$24.00	$13,920.00
6	Connect to Existing Water Main	30	Each	$300.00	$9,000.00
7	6" MJ DIP Gate Valve w/Box	61	Each	$1,200.00	$73,200.00
8	6" MJ DIP Tee	43	Each	$450.00	$19,350.00
9	6" 90° MJ DIP Bend	9	Each	$350.00	$3,150.00
10	Bore & Case Watermain Under Highway/Rail Road with 12" Casing Pipe	350.0	Ft	$300.00	$105,000.00
11	Connect to Existing Service	148.0	Each	$150.00	$22,200.00
12	1" Corp Stop w/Service Saddle	148	Each	$250.00	$37,000.00
13	1" Curb Stop w/Box	148	Each	$225.00	$33,300.00
14	1" HDPE Service Line	4,890	Ft	$15.00	$73,350.00
15	Place Salvaged Asphalt	5,020.0	Ton	$10.00	$50,200.00
16	Asphalt Surfacing (4")	6,480.0	Ton	$185.00	$1,198,800.00
17	Gravel Base Course (10")	6,970.0	Ton	$22.00	$153,340.00
18	Gravel Surfacing	2,790.0	Ton	$20.00	$55,800.00
19	Granular Bedding, Material	6,500	Ton	$12.00	$78,000.00
20	Topsoil, Seed, Fertilize & Mulch	6.8	Acres	$1,500.00	$10,200.00
21	Curb and Gutter	1,770.0	Ft	$21.50	$38,055.00
22	Sidewalk	420.0	SqYd	$18.00	$7,560.00
23	PCC Pavement Repair/Valley Gutter	140.0	SqYd	$45.00	$6,300.00
24	Remove & Salvage Existing Valves	50.0	Each	$100.00	$5,000.00
25	Contaminated Soils	200.0	CuYd	$100.00	$20,000.00
	Construction Subtotal				$2,851,227.50
	Contingencies (15%)				$428,000.00
	Construction Total				**$3,279,227.50**
	Design Engineering				$253,000.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$278,300.00
	Administration & Legal				$105,000.00
	Total Project Cost				**$3,921,027.50**

Table 4.6.3-2 - EUAC for Distribution Alternative 3

Item Description	Cost	SV	PW SV	NPW
Mobilization	$212,000.00	$0.00	$0.00	$212,000.00
Mill and Salvage Existing Asphalt	$90,577.50	$45,288.75	$38,617.10	$51,960.40
6" PVC Water Main	$459,800.00	$229,900.00	$196,032.61	$263,767.39
Fire Hydrants	$76,125.00	$38,062.50	$32,455.38	$43,669.62
6" PVC Fire Hydrant Lead	$13,920.00	$6,960.00	$5,934.70	$7,985.30
Connect to Existing Water Main	$9,000.00	$0.00	$0.00	$9,000.00
6" MJ DIP Gate Valve w/Box	$73,200.00	$36,600.00	$31,208.32	$41,991.68
6" MJ DIP Tee	$19,350.00	$9,675.00	$8,249.74	$11,100.26
6" 90° MJ DIP Bend	$3,150.00	$1,575.00	$1,342.98	$1,807.02
Bore & Case Watermain Under Hig	$105,000.00	$52,500.00	$44,766.04	$60,233.96
Connect to Existing Service	$22,200.00	$0.00	$0.00	$22,200.00
1" Corp Stop w/Service Saddle	$37,000.00	$18,500.00	$15,774.70	$21,225.30
1" Curb Stop w/Box	$33,300.00	$16,650.00	$14,197.23	$19,102.77
1" HDPE Service Line	$73,350.00	$36,675.00	$31,272.28	$42,077.72
Place Salvaged Asphalt	$50,200.00	$0.00	$0.00	$50,200.00
Asphalt Surfacing (4")	$1,198,800.00	$0.00	$0.00	$1,198,800.00
Gravel Base Course (10")	$153,340.00	$0.00	$0.00	$153,340.00
Gravel Surfacing	$55,800.00	$0.00	$0.00	$55,800.00
Granular Bedding, Material	$78,000.00	$0.00	$0.00	$78,000.00
Topsoil, Seed, Fertilize & Mulch	$10,200.00	$0.00	$0.00	$10,200.00
Curb and Gutter	$38,055.00	$0.00	$0.00	$38,055.00
Sidewalk	$7,560.00	$0.00	$0.00	$7,560.00
PCC Pavement Repair/Valley Gutte	$6,300.00	$0.00	$0.00	$6,300.00
Remove & Salvage Existing Valves	$5,000.00	$2,500.00	$2,131.72	$2,868.28
Contaminated Soils	$20,000.00	$0.00	$0.00	$20,000.00
Capital Costs	$1,069,800.00	$534,900.00	$456,101.98	$613,698.02
Total Construction Cost	$3,921,027.50	$1,029,786.25	$878,084.77	$3,042,942.73
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$1,500.00			$27,621.29
Materials	$500.00			$9,207.10
Miscellaneous	$1,000.00			$18,414.19
Subtotal	$3,000.00			$55,242.58
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$3,042,942.73
NPW of O & M Costs				$55,242.58
Total Net Present Worth				**$3,098,185.31**
Equivalent Uniform Annual Cost				**$168,249.84**

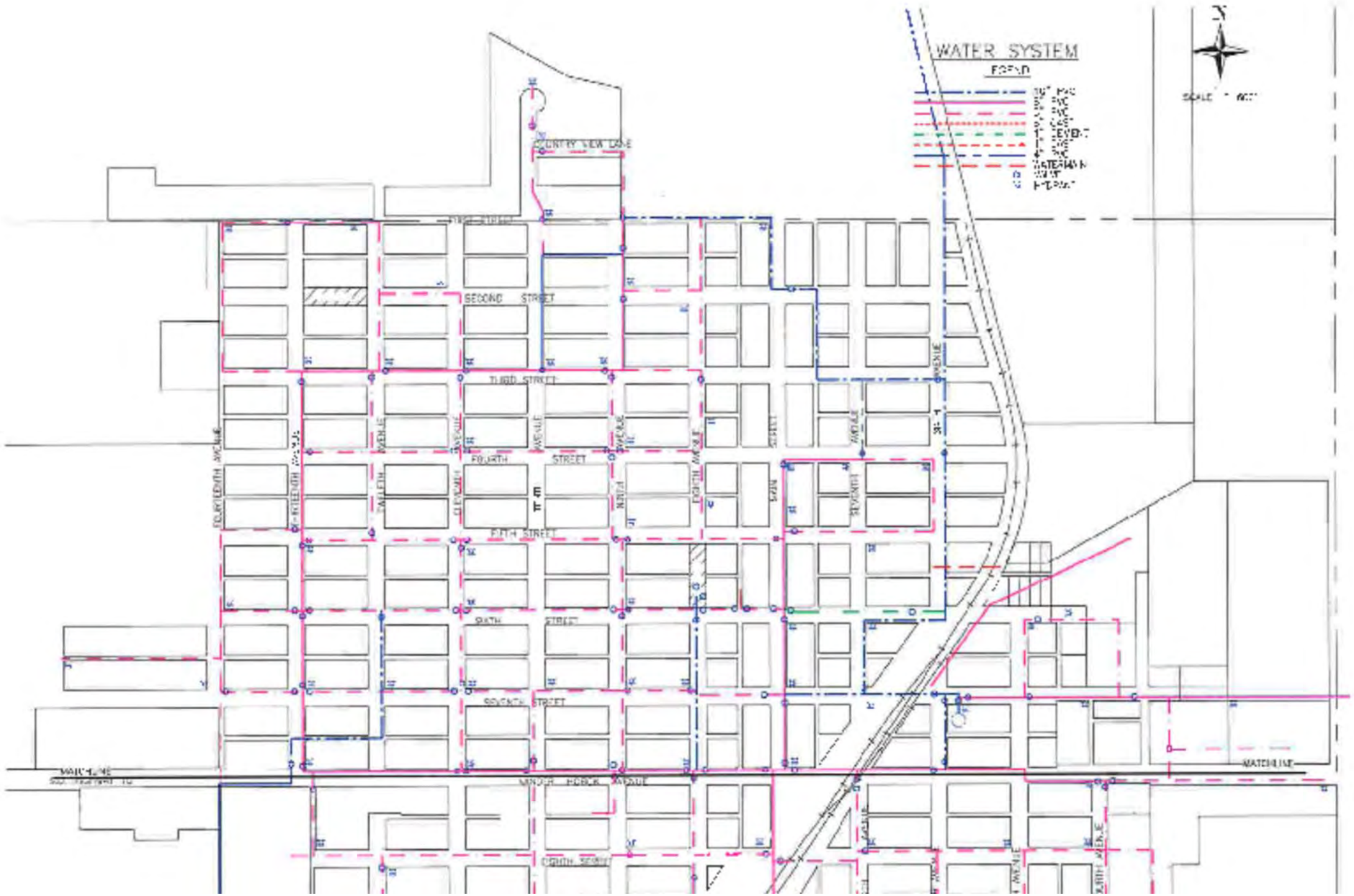

Figure 4.6.3-1 Proposed Layout Alternative 3, 6” PVC System, Remove all 4” Pipes, North Side

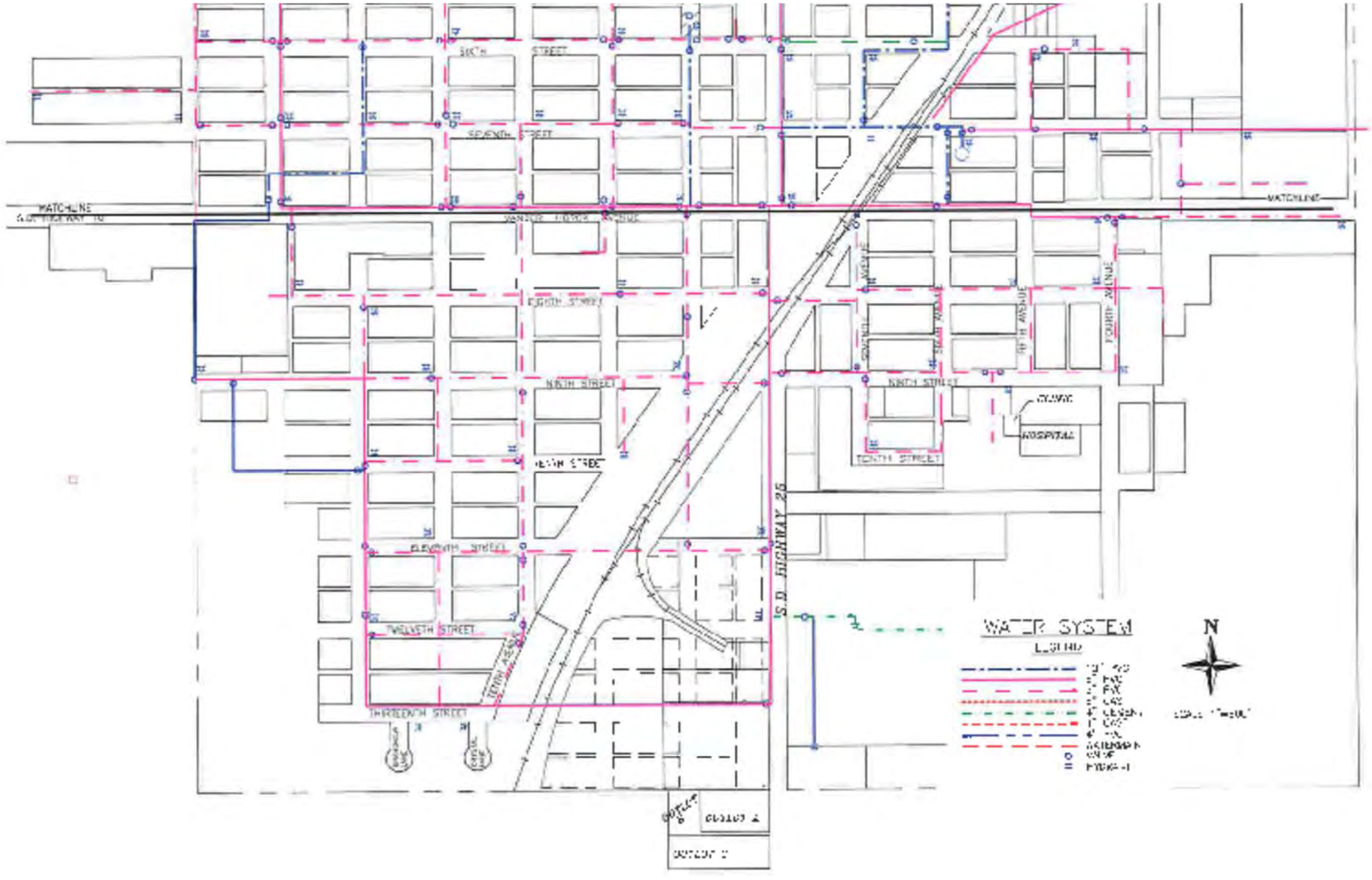

Figure 4.6.3-2 Proposed Layout Alternative 3, 6” PVC System, Remove all 4” Pipes, South Side

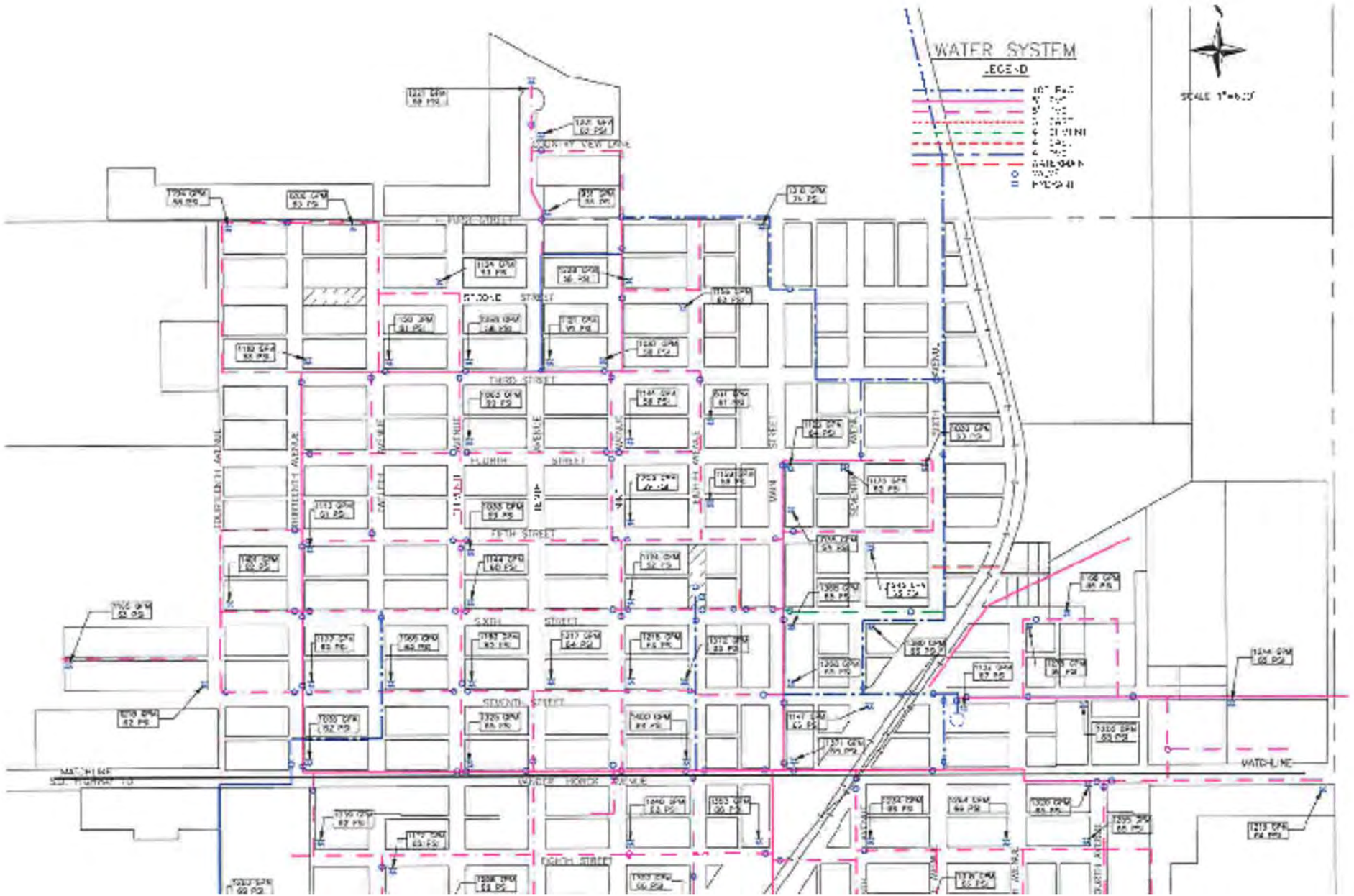

Figure 4.6.3-3 Proposed Alternative 3, Fire Flows and Pressures 6" PVC Remove All 4" Pipe, North Side

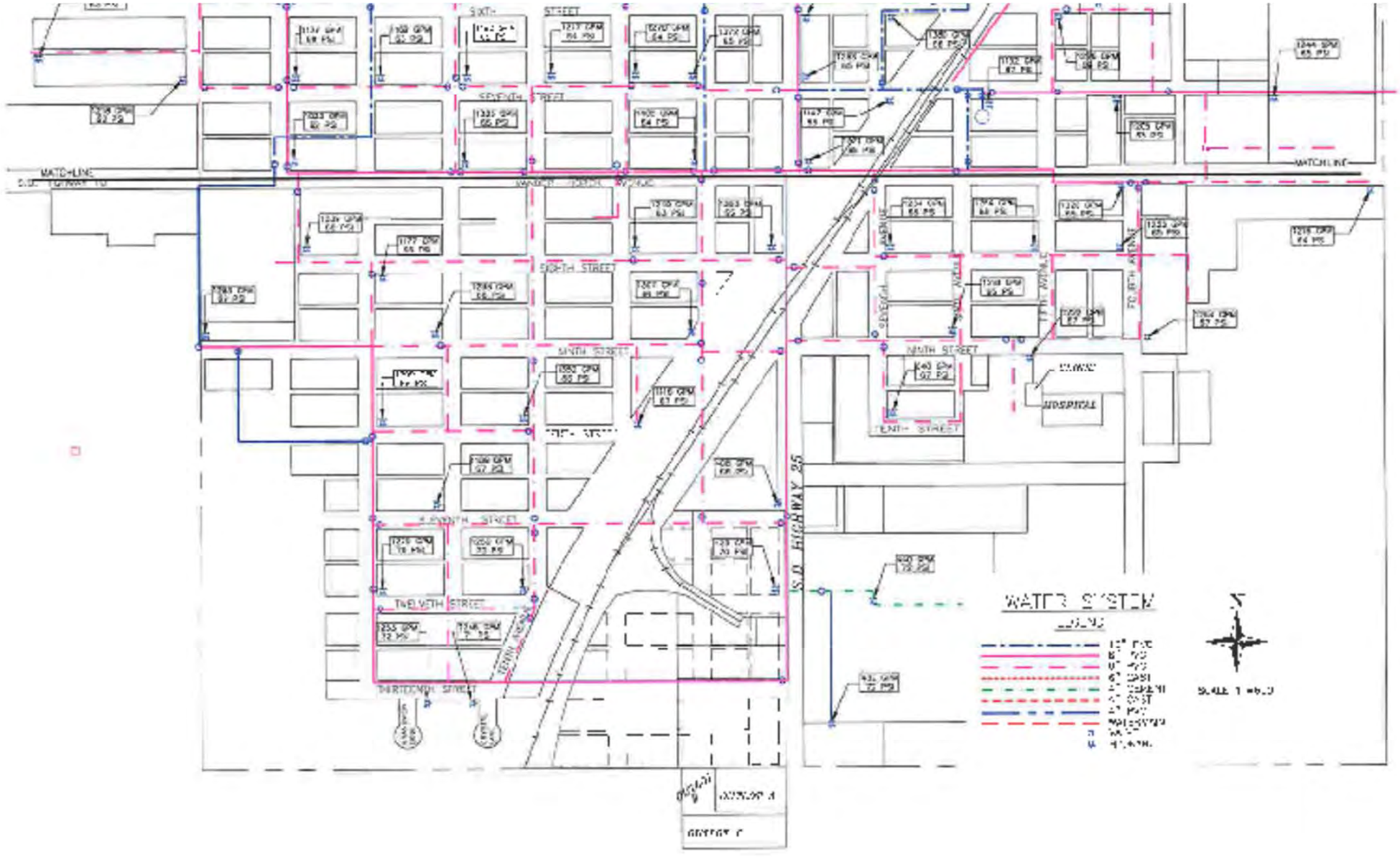

Figure 4.6.3-4 Proposed Alternative 3, Fire Flows and Pressures, 6” PVC Remove All 4” Pipe, South Side

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5 SELECTION OF WATER ALTERNATIVES

5.1 WATER SOURCE

Water Source Alternative 1 (Do Nothing) is a viable option because BDM Rural Water Systems, Inc. currently supplies the City. BDM Rural Water has adequately supplied the City with quality water at an acceptable rate in years past and can supply the City of Britton in the future.

Table 5.1-1 – Summary of Water Source Alternatives

Water Source Alternatives	Total Costs	EUAC
Alternative 1: Do Nothing	$0.00	$0.00
Alternative 2: Install Additional Well for Town	Not Evaluated	Not Evaluated

5.2 WATER STORAGE

Water Storage Alternative 1 (Do Nothing) is not recommended. It will not correct the minor storage tank issues concerning safety and paint deterioration issues on the Ground Storage Tank. This alternative also will not address the paint deterioration on the Elevated Storage Tank for the City of Britton.

Water Storage Alternative 2 (Paint the 250,000 Gallon Water Tank & New Booster Pump House) for $466,325.00 is recommended. This Alternative will increase safety on the Ground Water Storage Tank and give the Ground Storage Tank a new exterior coating. This Alternative will also provide the City of Britton with a new Booster Pump House.

Water Storage Alternative 3 (Paint 150,000 Gallon Elevated Storage Tank) for $268,300.00 is also recommended. This Alternative will give the existing Elevated Storage Tank a new exterior coating and improve security by adding a fence.

Table 5.2-1 – Summary of Water Storage Alternatives

Alternative 1: Do Nothing	$0.00	$0.00
Alternative 2: Paint 250,000 Gallon Ground Storage Tank & New Booster Pump House	$466,325.00	$27,116.43
Alternative 3: Paint Existing 150,000 Gallon Elevated Storage Tank	$268,300.00	$12,624.39

5.3 WATER DISTRIBUTION

Water Distribution Alternative 1 (Do Nothing) is not recommended, because it will not address any of the negative characteristics of the system.

Water Distribution Alternative 2 (Replace all 4" Cast Iron Pipes and 4" Asbestos Cement Pipes with 6" PVC and add valves). This alternative will increase the fire flows in the South West section of Britton, and will also make it easier to isolate smaller sections of Britton in case of emergency repairs. This alternative will also replace the known existing valves that are not working properly and add valves to the fire hydrants so servicing can be completed without disrupting water service. With a total project cost of $3,277,214.00 is not recommended, as this option will not correct all of the current issues with the distribution system.

Water Distribution Alternative 3 (Replace all 4" Cast Iron Pipe, Asbestos Cement Pipes, PVC and 6" Cast Iron Pipe with 6" PVC and add additional valves to help isolate sections of Britton). This alternative will help in isolating sections of Britton it will increase the water flows in the South West part of Town. This alternative will also remove the 4" water lines in other sections of Town. This alternative will also replace the known existing valves that are not working properly and add valves to the fire hydrants so servicing can be completed without disrupting water service. These improvements will help correct the current issues with the water distribution system. With a total project cost of $4,160,767.50 is recommended.

Table 5.3-1 – Summary of Water Distribution Alternatives

Water Distribution Alternatives	Total Costs	EUAC
Alternative 1: Do Nothing	$0.00	$0.00
Alternative 2: Replace all 4" Cast Iron Pipes and 4" Asbestos Cement Pipes with 6" PVC and add valves	$3,143,402.50	$135,245.60
Alternative 3: Replace all 4" Cast Iron Pipe, Asbestos Cement Pipes, PVC and 6" Cast Iron Pipe with 6" PVC and add additional valves	$3,921,027.50	$168,249.84

5.4 EVALUATION OF ALTERNATIVES

The short lived asset replacement value was obtained from Table 5.4-3. This table indicates how much the City needs to budget annually in order to replace the needed items. The short lived assets will include the booster pumps and maintenance on the Ground Water Storage Tank and the Elevated Water Tank.

Based on the City's desire for their water system, the following alternatives are evaluated for the City of Britton. The first table, Table 5.4-1will be the alternatives analyzed and the second table, Table 5.4-2 will be the impact on user rates based on 100% loan and 50% loan/grant.

Financial data supplied by the City of Britton was used to determine the current operational status of the funds. The current water rate is $18.25 flat rate per month plus $2.50 per 1,000 gallons used. So for example, if a household uses 5,000 gallons for a month their monthly charge would be $30.75 ($18.25 + 5,000/1,000 * $2.50).

The impact on user fees utilizes an interest rate of 2.75% for a 40 year period. This is assuming Rural Development (RD) financing for the project. If other funding is secured, these costs will change depending on interest rate and term.

The operation and maintenance cost is expected to decrease with the proposed improvements. Tables 5.4-3 provide the O&M costs associated with each alternative.

The evaluation provided in Tables 5.4-2 & 5.4-3 is for the City to install OSHA updates on the Ground Water Storage Tank and Paint the Ground Water Storage Tank and Elevated Water Tank. Also, the 4" and 6" Cast Iron Pipes will be replaced with 6" PVC water mains and additional valves would be added throughout the city to replace broken valve.

Table 5.4-1 - Option 1: Recommendation for Water System Upgrades (Paint Water Tower, Paint Ground Storage Tank Replace Booster Pumps, 6" Mains)

Selection of Improvements	Total Costs	EUAC
Do Nothing	$0.00	$0.00
Paint 250,000 Gallon Ground Storage Tank & New Booster Pump House	$466,325.00	$27,116.43
Paint Existing 150,000 Gallon Elevated Storage Tank	$268,300.00	$12,624.39
Replace all 4" Cast Iron Pipe, Asbestos Cement Pipes, PVC and 6" Cast Iron Pipe with 6" PVC and add additional valves	$3,921,027.50	$168,249.84
Total Costs of Alternatives	**$4,655,652.50**	**$207,990.66**

Table 5.4-2 – Option 1: Impact on User Fees (Painted Ground Storage Tank, Paint Water Tower, Place 6" Mains)

	No Grant	50% Grant
Gross Revenue from Water Fees	$110,850.00	$110,850.00
Water Purchase	$95,984.00	$95,984.00
Proposed O & M Cost	$15,500.00	$15,500.00
Retirement of Current Debt	$0.00	$0.00
Short Lived Asset Replacement	$1,500.00	$1,500.00
Net Income	**-$2,134.00**	**-$2,134.00**
Retirement of Debt Incurred with This Project	$193,356.30	$96,678.15
Amount to Be Set Aside for Debt Reserves	$19,335.63	$9,667.81
Remaining Surplus/Deficit After Project	**-$214,825.93**	**-$108,479.96**
Increase of Water Charge	$27.54	$13.91
Number of Accounts	650	650
Added Revenue	$214,825.93	$108,479.96
Surplus After Increase in Water Charge	**$0.00**	**$0.00**

Table 5.4-3 – Short Lived Assets

Expenses	Year							
	2015	2016	2017	2018	2019	2020	2021	2022
Booster Pumps	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Annual Total to Be Budgeted	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$1,500**
Expenses	**Year**							
	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Booster Pumps	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Annual Total to Be Budgeted	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$1,500**

Table 5.4-4 – Operation and Maintenance Costs

Expenses	Year										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Ground Water Tank Painting	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500
Water Tower Painting	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500
Annual Total to Be Budgeted	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**
Expenses	**Year**										
	2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Booster Pumps	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500
Ground Water Tank Painting	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500
Annual Total to Be Budgeted	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**

5.5 IMPACT ON USER FEES

A summary of the alternatives, project costs, and potential user fees is given in Table 5.5-1, based on the needs of the community.

Table 5.5-1 - Summary Alternative Costs and Associated User Fees

Alternatives	Project Cost	Monthly Rate (No Grant)	Monthly Rate (50% Grant)
Impact on User Fees (Painted Ground Storage Tank, Water Tower, Place 6" PVC with Additional Vavles)	$4,655,652.50	$58.29	$44.66

As the summary shows, the water rates would be required to increase. This would result in an increase of $14.61 per month if 50% grant funding is obtained. Table 5.5-2 breaks down different grant/loan combinations and show how the water rates will be affected for the selected alternative.

Table 5.5-2 - Water Rate Analysis

Funding Percentages	10/90	20/80	30/70	40/60	50/50	60/40	70/30	80/20
grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan
Annual O & M	$15,500	$15,500	$15,500	$15,500	$15,500	$15,500	$15,500	$15,500
Grant Amount	$465,565	$931,131	$1,396,696	$1,862,261	$2,327,826	$2,793,392	$3,258,957	$3,724,522
Loan Amount	$4,190,087	$3,724,522	$3,258,957	$2,793,392	$2,327,826	$1,862,261	$1,396,696	$931,131
Annual Loan Payment	$174,021	$154,685	$135,349	$116,014	$96,678	$77,343	$58,007	$38,671
Debt Reserves	$17,402	$15,469	$13,535	$11,601	$9,668	$7,734	$5,801	$3,867
Short Lived Asset Replacement	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Total Annual Costs	$208,423	$187,154	$165,884	$144,615	$123,346	$102,077	$80,808	$59,538
Annual Revenue	$14,866	$14,866	$14,866	$14,866	$14,866	$14,866	$14,866	$14,866
Surplus/Deficit After Project	-$193,557	-$172,288	-$151,018	-$129,749	-$108,480	-$87,211	-$65,942	-$44,672
Minimum Water Rate Increase	$24.81	$22.09	$19.36	$16.63	$13.91	$11.18	$8.45	$5.73
Current Water Rate	$30.75	$30.75	$30.75	$30.75	$30.75	$30.75	$30.75	$30.75
New Water Rate	$55.56	$52.84	$50.11	$47.38	$44.66	$41.93	$39.20	$36.48

The actual rates will be dependent upon the actual grant and loan funding that would be obtained.

5.6 CAPITAL FINANCING PLAN

The City of Britton will make applications to state and federal resources for loan and grant assistance to begin the project during the 2016 construction season.

5.7 ENVIRONMENTAL EVALUATION

The City of Britton has requested comments from concerned federal agencies. The correspondence related to these inquiries is included in Appendix A.

5.8 VIEWS OF THE PUBLIC AND CONCERNED INTEREST GROUPS

The City of Britton is planning to conduct a public hearing on the proposed project. Information related to the hearing will be submitted after it is conducted.

6 SELECTED PLAN, DESCRIPTION AND IMPLEMENTATION ARRANGEMENTS FOR WATER IMPROVEMENTS

6.1 JUSTIFICATION AND DESCRIPTION OF SELECTED PLAN

Option 1 includes new paint on the Ground Storage Tank and Elevated Storage Tank, OSHA improvements to the Ground Water Storage Tank and replace all 4” and 6” Cast Iron pipes with 6” PVC water main. This option will improve the current systems deficiencies and complete needed maintenance to the Ground Storage Tank and Elevated Storage Tank.

6.2 DESIGN OF SELECTED PLAN

The design of the improvements to the water system will provide enhanced flexibility in operation and will be designed in accordance with the SD DENR design criteria and the accepted principles and standards for the design of the water distribution system.

6.3 ARRANGEMENT FOR IMPLEMENTATION

This report provides information to describe the proposed project and to support the Council’s decision to proceed with the selected options as quickly as possible. Final design will be completed by the City of Britton’s consultant and approved by the Department of Environment and Natural Resources, as it is definitely a “work of significance”. Cost estimates have been prepared and are referenced elsewhere in this document.

The project will be bid in accordance with state statutes that govern municipal corporations and will be constructed by the lowest responsible bidder.

Table 6.3-1 - Proposed Schedule

Facility Plan Submitted to Funding Agencies	June 30, 2015
Environmental Review Completed	August 28, 2015
Funding Agency Approval of Facility Plan	August 28, 2015
Final Funding Package Complete	November 26, 2015
Begin Design	December 10, 2015
Plans & Specifications Submitted to DENR	April 7, 2016
Plans & Specifications Approved by DENR	May 5, 2016
Advertisement for Bids	May 19, 2016
Open Bids	June 2, 2016
Award Bids	June 16, 2016
Begin Construction	July 10, 2016
Construction Complete	November 24, 2016
Project Close-out	December 29, 2016

6.4 LAND ACQUISITION

If the City would decide to pursue the necessary upgrades on the Ground Water Storage Tank, Elevated Storage Tank and placement of 6" PVC water mains, the new water mains would be located in existing City property that has been previously disturbed. No land acquisition would be required for the water system improvements, as all work will be completed in existing street rights-of-way or in easements that have already been or will be obtained. The land is within the areas already submitted in with the environmental letters. It is assumed that an Archeological Survey would be required on any potential new sites.

6.5 INTERAGENCY AGREEMENTS

No operating agreements with other agencies are needed as the City of Britton owns, operates and maintains its municipal water system. Loan documents will have to be executed with the appropriate lender, but as Britton is a municipal corporation, it has the legal authority to enter into such agreements. Britton's attorney will advise the Council on any legal matters related to this issue.

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7 FINANCING OPTIONS

7.1 GENERAL

Financing any major construction project is difficult for a community that has limited resources. "Routine" community needs such as the improvements to streets, equipment replacement, correction of drainage problems, and solid waste issues cannot be neglected. These needs must be met and projects relating to addressing them must continue to be financed.

These "routine" types of projects frequently consume all or nearly all available community financial resources just to maintain an acceptable level of service. Consequently, to finance major capital improvement projects, other methods of obtaining capital must be investigated.

7.2 PAY-AS-YOU-GO

For small communities, the most common method of financing needed improvements is the "pay-as-you-go" method. This method obtains revenue from general taxation, fees, service charges, special funds and/or special assessments. The advantages of this method are:

1) No interest payments; and
2) Greater budget flexibility.

Disadvantages of this method are:

1) Inequities between age groups (older citizens pay for a share of the project and younger citizens who may not have paid any of the costs realize greater benefits simply because of greater life spans);
2) Difficulty in generating large amounts of capital that is often required for large scale capital improvements; and
3) Large scale capital improvements often cannot be constructed efficiently by phased construction.

7.3 RESERVE FUNDS

A variation of the “pay-as-you-go” method is using reserve fund financing. Communities using this method accumulate funds in advance for construction of needed capital improvements. This accumulation may be the result of surplus operating funds that are allowed to remain in the operating budget from year to year. These funds are often “earmarked” for a specific purpose. It may also be revenues from a certain percentage of the water or sewer rate that are specifically placed in a depreciation account. Financing projects in this manner is often attractive to communities.

This method can have its drawbacks. The most obvious drawback is that the fund has to have been established for some time to allow it to generate sufficient capital for a project that is needed today. Also, good management is required to ensure that the investment pays an adequate return. If the interest generated on the investment is not greater than the inflation rate, then gains in the accumulation of the fund may be lost to inflation.

7.4 SALES TAXES

Sales taxes can also be used to finance capital improvements. State statutes allow a City to dedicate sales tax revenues to capital improvement construction. A long-range plan can be developed to allow capital improvements to be constructed in phases. As revenue is generated each year, a segment of the overall plan is constructed. This method of constructing capital improvement projects is being used successfully by many communities.

7.5 BONDS

Another method of generating revenue for capital improvements is through the sale of bonds on the private bond market. Three different types of bonds are frequently used to finance capital improvement projects. Each has different requirements and will need the involvement of the City’s Attorney. The three types are General Obligation (GO), revenue and special assessment.

7.6 GENERAL OBLIGATION BONDS

General Obligation bonds always require a bond election with a 60% majority because General Obligation bonds pledge the taxing authority of the City to repay the bond. As they are backed by the taxing authority of the City, General Obligation bonds frequently offer a lower interest rate than revenue bonds.

7.7 REVENUE BONDS

Revenue bonds, which pledge revenues (that is, user fees) generated from the project, are often sold to finance capital improvement projects. They, like special assessment bonds, do not require a bond election but with any action of a governmental body, the enabling ordinance that must be approved by the board can be referred. Sales tax revenues can be and are frequently used to repay both revenue and general obligation bonds.

7.8 SPECIAL ASSESSMENT BONDS

Special assessment bonds have a limited payback period. Assessment for principal and interest repayment are levied against and collected from adjacent property owners over a given period of years. The special assessments are collected with property tax payments. Street improvements are frequently financed through the use of special assessment bonds.

7.9 LEASE-PURCHASE

Local financial institutions are becoming interested in financing community improvements through lease-purchase programs. This interest appears to be the result of recently passed federal legislation that provides tax advantages to financial institutions that participate in community improvement efforts. Lease-purchase plans can also use sales tax revenues to provide the vehicle for repayment.

7.10 OTHER SOURCES OF FINANCING

All of the previously discussed methods of financing rely on 100% local funding. Often it is difficult, if not impossible, for a community to finance projects with 100% local funding. Fortunately, there are other resources and programs available that can be used in conjunction

with local funding to assist communities in financing projects such as the one being considered by the City.

7.11 FEDERALLY FUNDED LOANS / GRANTS

Federal agencies such as the US Department of Agriculture's Rural Development / Rural Utility Service (RD / RUS) has both grant and loan funds available for financing community improvements. RD / RUS requires a preliminary engineering report and pre-application, along with certain other information, before it can invite a community to submit a full application for project funding.

While the RD / RUS is the primary federal agency that funds local projects, there are other federal agencies that do assist local communities under "special" circumstances. These agencies include, but are not limited to, the Federal Emergency Management Agency (FEMA), the Economic Development Administration (EDA) and the US Department of Housing and Urban Development (HUD). However, these federal agencies normally do not become involved in funding local projects unless there has been a declared disaster or a major economic development activity is imminent.

7.12 STATE FINANCED LOANS / GRANTS

The State of South Dakota has several programs that can provide financial assistance for community facility improvements. The programs are operated through various departments of state government. Some are financed with 100% state resources, some use a combination of state and federal funds and some are federal "pass-through" funds.

7.13 DENR PROGRAMS

The Department of Environment and Natural Resources (DENR) has a low interest loan and grant program known as the Consolidated Water Facilities Construction Program (CWFCP). This program was established in 1986 by combining several existing grant and loan programs. It is funded entirely with state financing and is designed to provide financial assistance through grants and loans for water and wastewater projects throughout the state.

DENR also operates the State Revolving Fund (SRF) loan program. It began in 1987 as a result of amendments to the Federal Clean Water Act. This program was designed to replace the EPA, the federal construction grants program. EPA had, for a number of years, provided grants directly to communities to construct and/or rehabilitate wastewater treatment and collection systems. The funding from the construction grants program has been made available to the state. The federal funds are to be used in combination with state funds to create a revolving loan program that will be self-perpetuating. SRF funds are targeted specifically to wastewater treatment and collection systems, storm drain systems and other construction activities that will improve surface and groundwater quality.

7.14 GOED PROGRAM

The Governor's Office of Economic Development (GOED) administers the Community Development Block Grant (CDBG) program. This program utilizes the US Department of Housing and Urban Development (HUD) small cities program funding. CDBG funds may be used for a variety of community development activities, including water and sewer system renovations and rehabilitation. The emphasis of this program is to provide benefits for low and moderate income people. Information supplied by GOED indicates that most communities can probably qualify for funds from this program; however, an income survey may be necessary.

7.15 SUMMARY OF FUNDING OPTIONS

No existing program will provide a 100% grant to finance a project. Most of the programs (both state and federal) require or strongly recommend that the applicant provide some local funding. Low interest loans and grant offers are frequently "packaged" with available local funds to completely finance capital improvement project activities. DENR also has minimum rate requirements that must be met by a community for it to be eligible for grant funding under the CWFCP. The department is recommending that the minimum rate for municipal water be $25.00 per month for 5,000 gallons of water used. If a community does not have its rates at or above this level, it will not be eligible for grant assistance from the consolidated program. Currently, Britton's water rate for 5,000 gallons is $30.75 per month. This level makes them eligible for grant assistance.

7.16 FUNDING RECOMMENDATIONS

Given the cost of construction of a project of this scope and the limited amount of local finances available, it is recommended that the community should:

1. Make application to place this project on the State Water Facilities Plan.
2. Evaluate its own financial resources, rate structure and various funding sources available to construct capital improvement projects to see if rate increases or other funding options may be used to finance all or part of the proposed project.
3. Complete applications for financial assistance to programs such as the CWFCP, CDBG Program, and/or USDA's Rural Development / Rural Utility Service Water and Sewer Program when the project is approved for the State Water Facilities Plan.

The process of completing applications for financial assistance could begin when an application to the State Water Facilities Plan is submitted. Early application for financial assistance could speed the process of obtaining financing for project construction as obtaining financing can be a lengthy process.

References

Committee of Great Lakes – Upper Missouri River Council of State Public Health and Environmental Managers, (1997). Recommended Standards for Water Works (Albany, NY: Health Education Services), pp.

Mays, Larry W., (2000). Water Distribution Systems Handbook, (New York, NY: McGraw Hill), pp.

Soil Conservation Service, South Dakota Agricultural Experiment Station. Soil Survey of Codington County, South Dakota. South Dakota: National Cooperative Soil Survey, 1966.

South Dakota Department of Environment and Natural Resources, (May 1990). *Recommended Design Criteria Manual for Water Works,* Pierre, SD: Division of Environmental Regulation.

Appendix A: Environmental Comment Letters

Appendix B: Correspondence from BDM Rural Water System, Inc Water

Appendix C: Drinking Water Project Eligibility and Priority Point Self-Assessment

Appendix D: SD-DENR 2013 Drinking Water Report

Appendix E: Midco Diving & Marine Report

DEPARTMENT OF GAME, FISH, AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

July 31, 2014

Mr. Brandon Smid
Helms & Associates
221 Brown Co. Hwy. 19
PO Box 111
Aberdeen, SD 57402-0111

RE: Britton – Water Study
A-5772

Dear Mr. Smid:

This letter is in response to your request for information regarding environmental impacts resulting from proposed improvements to the water system in the City of Britton, South Dakota.

At this time, the project described will have no impacts on fish and wildlife resources. However, if the project design changes or if new information becomes available, please submit the changes for review.

If you have any other questions, please feel free to contact me at 605.773.6208.

Sincerely,

Leslie Murphy

Leslie Murphy
Senior Biologist

RECEIVED
AUG 06 2014
HELMS & ASSOCIATES

Helms & ASSOCIATES
CIVIL ENGINEERS & LAND SURVEYORS

221 BROWN CO. HWY. #19
ABERDEEN, SD 57402-0111

PHONE (605) 225-1212
TOLL FREE 1-888-378-4394
FAX (605) 225-3189

RECEIVED
JUL 30 2014
U.S. FISH & WILDLIFE SERVICE

July 29, 2014

Mr. Donald Gober, Field Supervisor
United States Department of Interior
Fish and Wildlife Service
420 S. Garfield Avenue
Pierre, SD 57501-5408

RECEIVED
AUG 05 2014
HELMS & ASSOCIATES

Re: City of Britton Water Study
A-5772

Dear Mr. Gober,

The City of Britton located in Marshall County, SD is looking to make much needed improvements to their water system.

The potential work could include replacement of the water tower, booster pumps, watermains, valves or various other water distribution items. All work will be completed in the ROW for existing roads, streets, and alley ways, in areas where excavation for utilities have previously taken place.

We are requesting your comments concerning environmental impacts from the possible improvements to these water facilities. Please find the enclosed map showing the area being looked at for improvement and possible disturbance.

The work performed will be funded with State and Federal funding. The agencies tapped may include, Rural Development, Community Development Block Grants, EPA, State Revolving Funds and other South Dakota loan and grant funds.

If you have any questions, please contact our office. Your prompt response would be greatly appreciated.

Sincerely,
Helms and Associates

Brandon D. Smid, P.E.
Helms & Assoc.

W/Enclosure

This constitutes a report of the Department of The Interior prepared in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). We have reviewed and have NO OBJECTION to this proposed project.

8/1/14
Date

Scott Larson
Field Supervisor

USDA

United States Department of Agriculture

August 6, 2014

Mr. Brandon D. Smid, P.E.
Helms & Associates
221 Brown County, Hwy #19
P.O. Box 111
Aberdeen, South Dakota 57402-0111

RE: City of Britton Water Study
A-5772

Dear Mr. Smid:

Thank you for the opportunity to provide comments on the above project. This project will have no effect on prime or important farmland.

The Natural Resources Conservation Service (NRCS) would advise the applicant to consult with the local NRCS and Farm Service Agency offices regarding any United States Department of Agriculture easements or contracts in the project areas that may be affected.

If you have any questions, please contact Jeff Hemenway, Soil Scientist, at (605) 352-1256.

Sincerely,

JEFFREY HEMENWAY
Acting State Soil Scientist

RECEIVED
AUG 07 2014
HELMS & ASSOCIATES

Natural Resources Conservation Service
200 Fourth Street SW, Room 203, Huron, SD 57350
Voice: 605.352.1200 Fax: 855.256.2565
An Equal Opportunity Provider and Employer

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

REPLY TO
ATTENTION OF

August 12, 2014

Planning, Programs, and Project Management Division

RECEIVED
AUG 20 2014
HELMS & ASSOC

Mr. Brandon Smid
Helms & Associates
221 Brown County Hwy. # 19
P.O. Box 111
Aberdeen, South Dakota 57402

Dear Mr. Smid:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated July 29, 2014 (received August 1, 2014) regarding the environmental review of proposed improvements to a wastewater system (Project No. A-5772) located in Britton, South Dakota in Marshall County. We offer the following comments for your consideration:

Your plans should be coordinated with the state water quality office in which the project is located to ensure compliance with federal and state water quality standards and regulations mandated by the Clean Water Act and administered by the U.S. Environmental Protection Agency. Please coordinate with the South Dakota Department of Environment & Natural Resources concerning state water quality programs.

If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks regarding fish and wildlife resources. In addition, the South Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

If the proposed waterline construction crosses the floodplains of small drainageways and streams, flood-related problems should not occur if the lines are buried far enough below the beds of drainageways and streams to prevent exposure due to streambed erosion during periods of high floodflows. Any aboveground construction subject to flood damage, such as pump houses, should either be placed above, or flood proofed to, a level above the 100-year flood elevation.

Since the proposed project does not appear to be located within Corps owned or operated lands, your plans should be submitted to the local floodplain administer for review and approval prior to construction. It should be ensured that the proposed project is in compliance with floodplain management criteria of Marshall County and the State of South Dakota. In addition, please coordinate with the following floodplain management office:

South Dakota Division of Emergency Management
Attention: Mr. Marc Macy
118 W. Capitol Avenue
Pierre, South Dakota 57501
Telephone: 605-773-3231
Fax: 605-773-3580
Email: marc.macy@state.sd.us

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (http://www.nwo.usace.army.mil/Missions/RegulatoryProgram.aspx) to determine if this project requires a 404 permit. For a detailed review of permit requirements, preliminary and final project plans should be sent to:

U.S. Army Corps of Engineers
Pierre Regulatory Office
Attention: Mr. Steve Naylor, CENWO-OD-R-SD
28563 Powerhouse Road, Room 120
Pierre, South Dakota 57501

If you have any questions, please contact Ms. Amanda Ciurej of my staff at (402) 995-2897 or amanda.k.ciurej@uascae.army.mil and reference PD# 6490 in the subject line.

Sincerely,

Eric A. Laux
Chief, Environmental Resources and Missouri River Recovery Program Plan Formulation Section

Helms & ASSOCIATES
CIVIL ENGINEERS & LAND SURVEYORS

221 BROWN CO. HWY. #19
PO BOX 111
ABERDEEN, SD 57402-0111

PHONE (605) 225-1212
TOLL FREE 1-888-378-4394
FAX (605) 225-3189

AIR QUALITY DETERMINATION
It appears, based on the information, that the project will have little or no impact on the air quality in this area. This project is approved.
Approved By: Brad Schulz
Date: 9/15/2014
(605) 773-6038 Fax: (605) 773-5286
South Dakota Department of Environment And Natural Resources

July 29, 2014

Mr. John Miller
Department of Environment and Natural Resources
Surface Water Program
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501

RECEIVED
JUL 30 2014
SURFACE WATER PROGRAM

Re: City of Britton Water Study
A-5772

Dear Mr. Miller,

The City of Britton, located in Marshall County, SD is looking to make much needed improvements to their water system.

The potential work could include replacement of the water tower, booster pumps, watermains, valves or various other water distribution items. All work will be completed in the ROW for existing roads, streets, and alley ways, in areas where excavation for utilities have previously taken place.

We are requesting your comments concerning environmental impacts from the possible improvements to these water facilities. Please find the enclosed map showing the area being looked at for improvement and possible disturbance.

The work performed will be funded with State and Federal funding. The agencies tapped may include, Rural Development, Community Development Block Grants, EPA, State Revolving Funds and other South Dakota loan and grant funds.

If you have any questions, please contact our office. Your prompt response would be greatly appreciated.

RECEIVED
SEP 17 2014
HELMS & ASSOCIATES

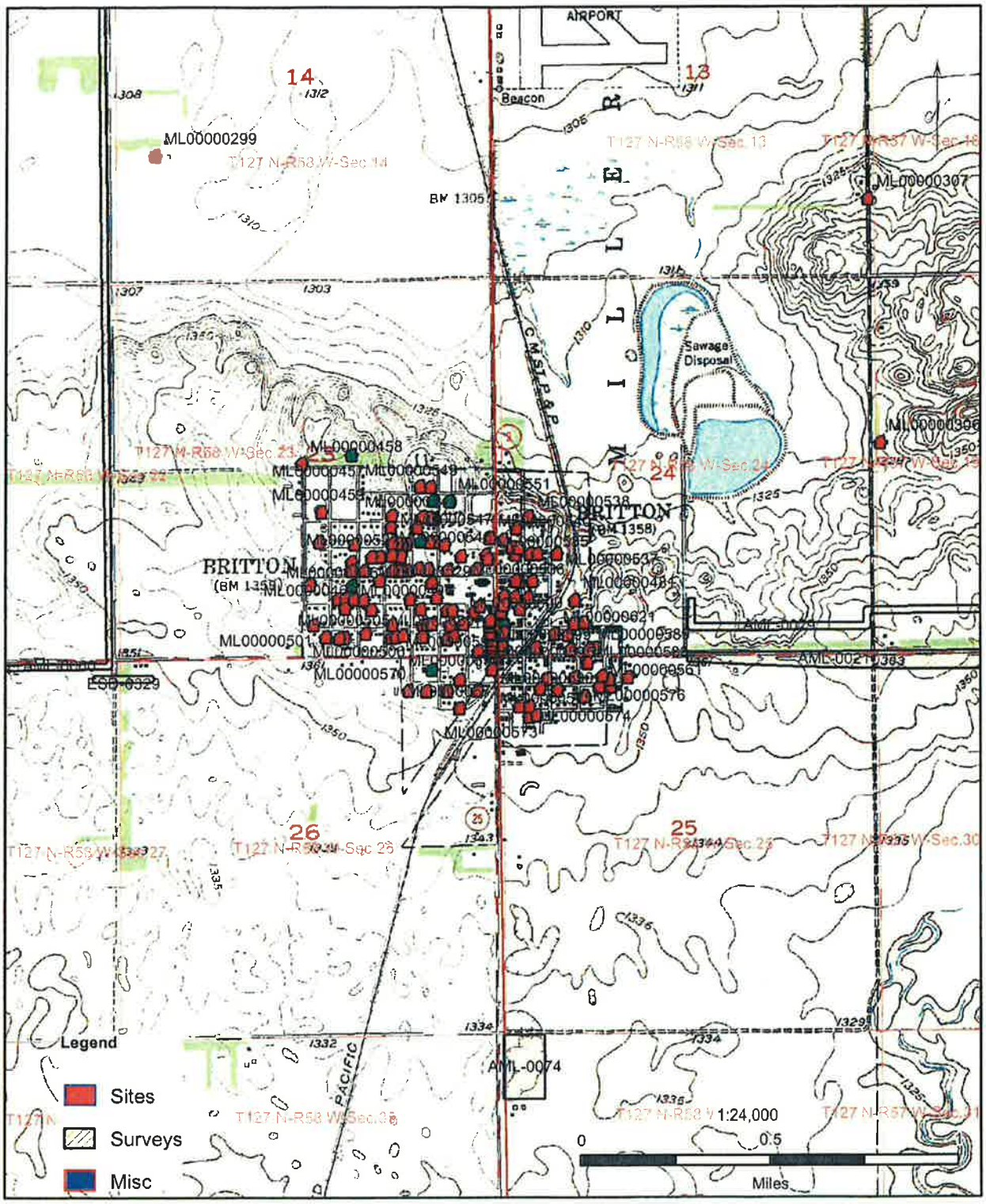
Sincerely,
Helms and Associates

Brandon D. Smid, P.E.
Helms & Assoc.

W/Enclosure

SURFACE WATER QUALITY DETERMINATION
It appears, based on the information provided, that this project will have little or no impact on the surface water quality in this area. This project is approved.
Approved By: John Miller
Date: 8-26-2014
(605) 773-3351 FAX - (605) 773-5236
SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

South Dakota Archaeological Research Center
GIS Database



City of Britton Water Study
08/04/2014
Warning! This data is preliminary and not intended for public use or display!

S15-60	City of Britton Water Study		08/04/2014
Project	**Description**		**DOE**
Site			
39ML2007	Chicago, Milwaukee, St. P & P RR		NR Eligible
Structures			
SHPOID	**PropertyName**	**Date**	**DOE**
ML00000003	Marshall Field	1948	Not Eligible
ML00000006	Marshall County Courthouse	1908	NR Eligible
ML00000014	Britton Carnegie Library	1921	NR Eligible
ML00000457	House	c. 1925	NR Eligible
ML00000458	House	c. 1910	Not Eligible
ML00000459	House	c. 1925	Not Eligible
ML00000460	House	c. 1900	Not Eligible
ML00000461	House	c. 1910	Not Eligible
ML00000462	House	c. 1900	Not Eligible
ML00000463	House	c. 1910	Not Eligible
ML00000464	House	c. 1900	Not Eligible
ML00000465	House	c. 1940	Not Eligible
ML00000466	House	c. 1940	Not Eligible
ML00000467	House	c. 1940	Not Eligible
ML00000468	House	c. 1940	Not Eligible
ML00000469	House	c. 1910	Not Eligible
ML00000470	House	c. 1915	Not Eligible
ML00000471	House	c. 1915	Not Eligible
ML00000472	Gospel Tabernacle	1946	Not Eligible
ML00000473	House	c. 1920	Not Eligible
ML00000474	House	c. 1900	Not Eligible
ML00000475	House	c. 1950	Not Eligible
ML00000476	House	c. 1920	Not Eligible
ML00000477	Masonic Temple	c. 1910	Not Eligible
ML00000478	House	c. 1900	Not Eligible
ML00000479	House	c. 1920	Not Eligible
ML00000480	House	c. 1900	Not Eligible
ML00000481	House	c. 1900	Not Eligible
ML00000482	House	c. 1900	Not Eligible
ML00000483	House	c. 1890	Not Eligible
ML00000484	House	c. 1950	Not Eligible
ML00000485	House	c. 1900	Not Eligible
ML00000486	House	c. 1930	Not Eligible
ML00000487	First Lutheran Church	c. 1950	Not Eligible
ML00000488	House	c. 1900	Not Eligible
ML00000489	House	c. 1920	Not Eligible
ML00000490	House	c. 1915	Not Eligible
ML00000491	House	c. 1900	Not Eligible
ML00000492	House	c. 1950	Not Eligible

ML00000493	House	c. 1900	Not Eligible
ML00000494	House	c. 1930	Not Eligible
ML00000495	House	c. 1915	Not Eligible
ML00000496	House	c. 1915	NR Eligible
ML00000498	House	c. 1940	Not Eligible
ML00000499	House	c. 1950	Not Eligible
ML00000500	House	c. 1925	Not Eligible
ML00000501	House	c. 1950	Not Eligible
ML00000502	House	c. 1915	Not Eligible
ML00000503	House	c. 1910	Not Eligible
ML00000504	House	c. 1890	Not Eligible
ML00000505	House	c. 1910	Not Eligible
ML00000506	House	c. 1900	Not Eligible
ML00000507	House	c. 1910	Not Eligible
ML00000508	House	c. 1910	Not Eligible
ML00000509	House	c. 1930	Not Eligible
ML00000510	House	c. 1920	Not Eligible
ML00000511	House	c. 1890	Not Eligible
ML00000512	House	c. 1890	Not Eligible
ML00000513	House	c. 1920	Not Eligible
ML00000514	House	c. 1925	Not Eligible
ML00000515	Britton Clinic and Hospital	1928	NR Eligible
ML00000516	Farmers Coop Grain Company	c. 1950	Not Eligible
ML00000517	House	c. 1915	Not Eligible
ML00000518	House	c. 1925	Not Eligible
ML00000519	House	c. 1920	NR Eligible
ML00000520	House	c. 1910	Not Eligible
ML00000521	House	c. 1940	Not Eligible
ML00000522	House	c. 1925	Not Eligible
ML00000523	House	c. 1920	Not Eligible
ML00000524	House	c. 1920	Not Eligible
ML00000525	House	c. 1900	Not Eligible
ML00000526	House	c. 1900	Not Eligible
ML00000527	House	c. 1920	Not Eligible
ML00000528	House	c. 1915	Not Eligible
ML00000529	House	c. 1925	Not Eligible
ML00000530	House	c. 1925	Not Eligible
ML00000531	House	c. 1925	Not Eligible
ML00000532	House	c. 1950	Not Eligible
ML00000533	House	c. 1920	Not Eligible
ML00000534	House	c. 1900	Not Eligible
ML00000535	House	c. 1910	Not Eligible
ML00000536	House	c. 1900	Not Eligible
ML00000537	House	c. 1900	Not Eligible
ML00000538	House	c. 1910	Not Eligible
ML00000539	House	c. 1910	Not Eligible
ML00000540	House	c. 1940	Not Eligible

ML00000541	House	c. 1920	Not Eligible
ML00000542	House	c. 1950	Not Eligible
ML00000543	House	c. 1930	Not Eligible
ML00000544	House	c. 1940	Not Eligible
ML00000545	House	c. 1910	Not Eligible
ML00000546	House	c. 1930	Not Eligible
ML00000547	House	c. 1890	Not Eligible
ML00000548	House	c. 1930	Not Eligible
ML00000549	House	c. 1925	Not Eligible
ML00000550	House	1906	NR Eligible
ML00000551	House	c. 1920	NR Eligible
ML00000553	House	c. 1915	Not Eligible
ML00000554	House	c. 1900	Not Eligible
ML00000555	House	c. 1925	Not Eligible
ML00000556	House	c. 1940	Not Eligible
ML00000557	House	c. 1900	Not Eligible
ML00000558	House	c. 1900	Not Eligible
ML00000559	House	c. 1900	Not Eligible
ML00000560	House	c. 1930	Not Eligible
ML00000561	House	c. 1920	Not Eligible
ML00000562	House	c. 1890	Not Eligible
ML00000563	House	c. 1910	Not Eligible
ML00000564	House	c. 1900	Not Eligible
ML00000565	House	c. 1910	Not Eligible
ML00000566	Warehouse	c. 1930	Not Eligible
ML00000567	House	c. 1900	Not Eligible
ML00000568	House	c. 1890	Not Eligible
ML00000569	House	c. 1930	Not Eligible
ML00000570	House	c. 1925	Not Eligible
ML00000571	House	c. 1890	Not Eligible
ML00000572	House	c. 1900	Not Eligible
ML00000573	House	c. 1910	Not Eligible
ML00000574	House	c. 1900	Not Eligible
ML00000575	House	c. 1930	Not Eligible
ML00000576	House	c. 1910	Not Eligible
ML00000577	Commercial Building	c. 1940	Not Eligible
ML00000578	Commercial Building	c. 1935	Not Eligible
ML00000579	Commercial Building	c. 1930	Not Eligible
ML00000580	Strand Theatre	1915	NR Eligible
ML00000581	Commercial Building	c. 1940	Not Eligible
ML00000582	Commercial Building	c. 1940	Not Eligible
ML00000583	Commercial Building	c. 1900	Not Eligible
ML00000584	Commercial Building	c. 1930	Not Eligible
ML00000585	House	c. 1900	Not Eligible
ML00000586	Commercial Building	c. 1940	Not Eligible
ML00000587	House	c. 1925	Not Eligible
ML00000588	House	c. 1910	Not Eligible

ML00000589	House	c. 1900	Not Eligible
ML00000590	Commercial Building	c. 1890	Not Eligible
ML00000591	Commercial Building	c. 1915	Not Eligible
ML00000592	Commercial Building	c. 1915	Not Eligible
ML00000593	Commercial Building	c. 1920	Not Eligible
ML00000594	Dakins Building	c. 1920	Not Eligible
ML00000595	Commercial Building	c. 1920	Not Eligible
ML00000596	Commercial Building	c. 1890	Not Eligible
ML00000597	Commercial Building	c. 1910	Not Eligible
ML00000598	Commercial Building	c. 1940	Not Eligible
ML00000599	Commercial Building	c. 1930	Not Eligible
ML00000600	Commercial Building	c. 1890	Not Eligible
ML00000621	Britton Water Tower	1975	Not Eligible

One Mile

Surveys	**Description**	**Year**
AML-0021	Williams	1998
AML-0029	Downing	2002
AML-0060	Downing	2009
AML-0074	Byrne	2013
ESD-0329	Downing	2004

Structures

SHPOID	**PropertyName**	**Date**	**DOE**
ML00000299	Kadoun Farmstead		Not Eligible
ML00000306	Johnson House		Not Eligible
ML00000307	Anderson Farmstead		Not Eligible

BROWN
DAY
MARSHALL
Rural Water System, Inc.

P.O. Box 49
705 7th Street
Britton, South Dakota 57430
Phone 605-448-5417

October 27, 2014

City of Britton
803 8th St.
Britton, SD 57430

Dear Britton City Council,

This letter is to inform you that due to increased costs to operate and maintain our system, BDM Rural Water System, Inc. is raising its water rates. Water usage will be billed to your system at the rate of $2.00 per thousand (1,000) gallons. This will take effect with the January 2015 billing.

straight across

1.50 1st 2,000,000
1.25 thereafter

This rate increase was approved at the BDM Board of Director regular monthly meeting held September 30, 2014. The rate increase is the first for the system since 1987.

If you have any questions or concerns, please feel free to give me a call.

Thank you.

Sincerely,

David C. Wade

David C. Wade
General Manager

1.50 1st 2,000,000gal
1.25 ↑ 2,000,000

WATER SUPPLY CONTRACT

This contract for the sale and purchase of water is entered into between B.D.M. RURAL WATER SYSTEM, INC., a South Dakota corporation, hereinafter referred to as "Association", and the CITY OF BRITTON, a South Dakota municipal corporation, hereinafter referred to as "City".

WITNESSETH

Whereas, the Association has been organized and established under the provisions of Ch. 47-22 (SDCL) for the purpose of constructing and operating a rural water distribution system currently serving water users and municipalities in the counties of Brown, Day and Marshall.

Whereas, City owns and operates a water distribution system which serves residents of the City and various businesses.

Whereas, City intends to purchase water from Association for distribution to its customers.

Whereas, on the 26th day of December, 2000, the City Council passed a Resolution authorizing the Mayor of the City to enter into a Contract with B.D.M. Rural Water System, Inc. for purchase of potable water, a copy of which is attached hereto as Exhibit "A" and by this reference made a part hereof as if fully set forth herein, and

Whereas, it is the intention of the Association to approve and ratify this Contract, and the terms contained herein, upon approval by the State of South Dakota and/or Rural Utility Service of the United States Department of Agriculture, as stated in paragraph C.6. herein;

Now therefore, in consideration of the foregoing and the mutual agreements hereinafter set forth,

A. **The Association Agrees**:

1. **Quality and Quantity**. To furnish City, at the point/points of delivery hereinafter specified during the term of this contract, or any renewal or extension thereof, potable treated water meeting applicable primary water quality standards of the United States Environmental Protection Agency in such quantity as may be required by City, not to exceed 350 gallons per minute. The rate of flow set forth in this paragraph may be

adjusted by the Association to reflect additional developments or demand by the City not contemplated by this agreement. Notwithstanding the foregoing limitations agreed to herein, in the event Association is capable of and does, in fact, furnish City with quantities of water exceeding those limits contained herein, such action will not be deemed to be a waiver of said limitations.

2. **Emergency Failures**. Emergency failures of pressure or supply due to main supply line breaks, power failures, flood, fire, and the use of water to fight fire, earthquakes or other catastrophes and other unplanned water use demands will excuse Association from the requirements of paragraph A.1. above for such reasonable periods of time as may be necessary to restore service. The Association agrees to exercise its good faith best efforts to resume service as soon as possible.

3. **Metering Equipment**. To furnish, install, operate, and maintain, at its own expense at the point of delivery, the necessary metering equipment, including a meter house or pit, and required devices of standard type for properly measuring the quantity of water delivered to City.

4. **Calibrations and Adjustments**.

(a) If City believes its meter(s) reading to be in error, it will present its claim, in writing, at the Association's office before said bill is delinquent (not later than the tenth (10th) day of the month). Such claim, if made after the bill has become delinquent, will not be effective in preventing discontinuance of service, as hereinafter provided. City must pay said bill under protest and said payment shall not prejudice its claim of error. The estimated amount of the bill which is in dispute will be placed in an interest bearing account and will be held in such account until the claim is resolved as set forth below.

(b) Upon presenting its claim of error in a meter reading, the meter will be calibrated at City's request, upon payment of the actual cost of the calibration; provided, however, that if the meter is found to over-register beyond two percent (2%) of the correct volume, no charge to City will be made.

(c) Any adjustments of City's bill, in the event of over registering of a meter as shown by calibration, shall

not affect payment by the City of the minimum bill as set forth in paragraph B.1. below.

5. **Billing**. If requested by the City, the Association agrees to prepare and distribute individual water bills to City's customers in a form consistent with the Association's bills to its own members, however, City may specify the schedule or categories of such bills. The water rates or charges on the bills shall be established by the City. The responsibility, however, for collecting such bills shall be upon the City and such other entities as it empowers. The City and/or its designated entities shall also be responsible for furnishing the meter readings for its customers beyond the Association's main meter or meter at the point of delivery. The timing of billing to be prepared and distributed pursuant to this paragraph shall be coordinated with the bills to be paid by the City pursuant to paragraphs B.1. and B.2. below. City agrees to pay to Association in addition to all other payments required by this Agreement an amount sufficient to compensate the Association for its costs incurred in preparing and distributing the City's billing, including additional administrative costs. The amount of this payment will need to be negotiated between the parties subsequent to this agreement.

B. **City Agrees**:

1. **Minimum Bill**. The City agrees to pay the Association a monthly sum called "minimum bill". The amount of the minimum bill shall be determined by the proportionate capital costs associated with the construction or acquisition of facilities and equipment to provide water to City and pipeline. The Association anticipates additional wells, treatment plant expenses and a new water pipeline to connect to the City at the location of City's existing water storage facilities. The estimated minimum shall be Three Thousand Seven Hundred and Fifty Dollars ($3,750.00) per month including debt service amounts. This amount is estimated based upon anticipated construction and equipment costs and is premised upon the Association receiving a minimum of 50% grant toward the costs associated with the delivery of water to the City. The actual minimum as per this agreement will be attached to this agreement as an addendum. The date that the monthly minimum payment pursuant to this paragraph is due shall be subsequently agreed upon by the parties to take in account the billing cycle adopted by the City as set forth in paragraph A.5. above.

3/4/94

The following additional conditions shall apply:

(a) Upon ten (10) days written notice, the City may request in writing the opportunity to review Association's records relating to the construction and acquisition costs upon which the minimum bill is premised in order to evaluate or verify the allocation of such costs to the facilities and equipment used to serve City's customers.

(b) Association reserves the right to adjust the minimum bill pursuant to this paragraph to reflect additions or deletions to City's distribution system as a result of development or growth in the locations served. The minimum bill may also be adjusted to reflect any refinancing or debt restructuring by the Association. Association agrees to notify City in writing 20 days prior to such adjustments. The City may, upon 10 days written notice, review Association's records relating to any adjustments in the minimum billing pursuant to this subparagraph.

(c) City reserves the right to provide prepayment to Association to apply to the capital costs in order to reduce the minimum bill provided for herein.

2. **Water Rate**. City also agrees to pay Association a monthly sum called "water rate". The exact amount of the water rate shall be based upon each one thousand (1,000) gallons of water consumed during the preceding month. The water rate shall be premised upon estimated costs associated with operation and maintenance of the system. The following is a non-exclusive list of the costs to be factored in the water rate:

(a) repairs/maintenance
(b) chemicals
(c) utilities
(d) clerical
(e) administrative
(f) depreciation/replacement
(g) labor
(a) capital costs due to changes or modifications in government regulations and standards with respect to water quality.

The initial water rate is One Dollar and Fifty Cents ($1.50) per thousand gallons for the first two million gallons furnished and at the rate of One Dollar and Twenty-five Cents ($1.25) per thousand gallons for all gallons furnished in excess of two million gallons. Association agrees not to consider any additional factors in establishing City's water rate not considered in establishing the water rate of other similarly situated bulk users. Association does, however, reserve the right to include such additional factors that are inherent or particular to the City's water use locations or users. The City shall also be responsible for all the cost of furnishing water to customers along the waterline to be constructed which the City may be required to furnish water at no costs. These obligations may have been created pursuant to agreements with landowners associated with the construction etc. of the City's existing waterlines.

3. **Delinquent Bills**. The sums due under paragraph "B" above, if not paid by the date established by the parties, shall be declared delinquent, and service may thereafter be discontinued by Association after service of one (1) written notice to the City. All bills not paid ten (10) days after the established due date of each month shall be subject to a two percent (2%) per month late charge.

4. **Representative**. City agrees to appoint a representative who will coordinate communications and activities of the various agencies participating in the project and represent the City at meetings or in matters relating to this agreement.

5. **Permission to Cross Lands**. City does hereby grant permission for the Association and its employees, agents, contractors, and representatives to enter upon or across lands of the City and other lands which are covered by signed Easements in the form attached hereto as Exhibit "B" for the purpose of carrying out the project to completion and to inspect and repair the Association's system and to install, check and remove meters.

6. **Easements**. City does hereby grant, without charge to the Association, all easements, and/or rights-of-way across lands under its jurisdiction required for the construction of Association facilities and agrees to assist the Association in obtaining additional easements and/or rights-of-way, if needed, for the completion of construction. City agrees to assign to Association

all existing easements necessary to construct the new waterline contemplated by this agreement. This agreement is specifically conditioned upon Association being able to use existing easements and/or obtaining new easements if necessary.

7. **List of Customers/Updating of Lists**. In order that the Association can track and plan for future water demands and connections under this agreement and make the adjustments to the bills pursuant to paragraphs B.1 and 2., the City agrees to furnish a complete list of users or potential users to be served by the City pursuant to this agreement. The City agrees to inform Association in advance of any future housing or other developments which may require connection to the City's distribution system. If requested by Association, the City will supply Association a copy of the plans for such development so that the Association can determine if the system can accommodate the proposed connections. Association is not required by this agreement to serve these proposed connections and may agree to serve such proposed connections on such terms and conditions as the Association and City may agree.

C. **It is Further Mutually Agreed Between Association and City As Follows**:

1. The construction of the water supply distribution system by the Association may be being financed in part by a loan and grant (or a loan insured by) the United States of America, acting through Rural Utility Service of the United States Department of Agriculture, and a portion of such loan or grant by Rural Utility Service may include funds for the sole purpose of benefitting the users of the City in accordance with Rural Utility Service Instruction 1942.364(b). This amount has been included in the calculation of the minimum bill pursuant to paragraph B.1 above. Therefore, future adjustments in the water rates must be calculated without using interest or debt service costs in the rate adjustment formula. It is further agreed the water rates herein stated may be changed by the Association but that any future increase in rates affecting the City shall be based on changes in costs of production and delivery of water. The minimum bill provided for in paragraph B. 1 above is premised upon anticipated capital and debt service costs which have been proportionately and fairly assessed to the facilities necessary to furnish water for bulk use and individual homes pursuant to this agreement. If the anticipated capital costs change or are modified due only to debt service cost changes pursuant to

refinancing opportunities and additions or expansions within the City's distribution system not contemplated at the time of this agreement, then the minimum bill may be adjusted up or down to reflect these changes pursuant to paragraph B.1 above.

2. City understands and agrees and hereby holds Association harmless from any and all liability, expressed or implied, arising out of or in connection to personal or property damages or injuries occasioned by fire within the City's distribution system(s). In respect thereto, City understands and agrees that Association does not warrant or guarantee in any manner sufficient quantities of water to meet City's fire fighting needs.

3. City understands and agrees that City is responsible for all services, maintenance, and repair of City's distribution system extending from point of hookup with Association's system. City hereby holds Association harmless from any and all liability, expressed or implied, arising out of or occasioned from personal or property damage resulting from the City's operation, maintenance, and repair of City's own distribution system. The point of hookup is at the curb stop or isolation valve prior to the water meter.

4. Association will, at all times, operate and maintain its system in an efficient manner and will use good faith and best efforts to furnish City with the quantities of water contracted hereunder by the City. Temporary or partial failures to deliver water shall be remedied with all possible dispatch. In the event of an extended shortage of water, or if the supply of water available to Association is otherwise diminished over an extended period of time, the supply of water to City shall be reduced or diminished in the same ratio or proportion as the supply to other Association customers is reduced or diminished.

5. City agrees to cooperate with Association in obtaining all permits and certificates which are required to construct, operate and maintain the water system pursuant to this Agreement.

6. The construction of the water supply distribution system by Association may be financed, in part, by a loan from (or a loan insured by) the United States of America, acting through Rural Utility Service of the United States Department of Agriculture, and the provisions contained herein are conditioned

upon the approval, in writing, of the State Director for South Dakota of Rural Utility Service. Similarly, any modification of the provisions of this Contract, including any change in the schedule of rates to be charged by Association for the delivery of water, shall be conditioned upon the prior approval, in writing, of the State Director for South Dakota of Rural Utility Service.

7. The interest of the Association under this contract may be assigned to the United States of America, acting through Rural Utility Service of the Department of Agriculture, as collateral security for any loan made to finance construction, extension, repair or maintenance of the Association's water supply system.

8. It is mutually agreed and understood by the parties hereto that this contract shall be self renewing subject only to modifications or adjustments authorized herein including, but not limited to, annual adjustments of water rates, if any, contained in an addendum attached hereto and made a part hereof. In respect thereto, it is mutually understood and agreed that the provisions, terms and conditions as set forth in the Addendum relative to water rates are subject to modification, based upon a demonstrable increase or decrease in the costs of performance.

9. That in the event of any occurrence rendering Association incapable of performing under this contract, any successor of the Association, whether the result of legal process, assignment, or otherwise, shall succeed to the rights of Association hereunder.

10. The City shall remain legally responsible for all claims which may be made by existing water customers or beneficiaries of the existing waterline owned, maintained and operated by the City from White Lake to the City if such are not served by the newly constructed line or lines pursuant to this agreement or do not become members of the Association on an individual basis.

11. That this contract shall extend for a term of forty (40) years from the date of initial delivery of water as shown on the first bill submitted by the Association to the City and thereafter may be renewed or extended for such term, or terms, as may be agreed upon by the Association and City.

12. If any term, provision or condition of this agreement,

or any application thereof, should be held by a court of competent jurisdiction to be invalid, void or unenforceable, all provisions and conditions of this agreement and all applications thereof not held invalid, void or unenforceable shall continue in full force and effect and shall in no way be affected, impaired or invalidated thereby.

13. When the term "Association" or "City" is used in this Agreement, it also includes its agents, employees, officers and directors.

14. The headings of each provision of this agreement are for reference purposes only and shall in no way restrict or otherwise modify the terms of this agreement. Only the text of each provision shall be construed to be the terms and conditions of this agreement.

In Witness Whereof, the parties hereto, acting under authority of their acting governing bodies, have caused this contract to be duly executed in three counterparts, each which shall constitute an original.

B.D.M. RURAL WATER SYSTEM, INC.

By _____
Scott Christenson
Chairman of the Board of Directors

Date: 8/30/02

Attest:

_____
Jason Medhaug
Secretary of Association

(SEAL)

CITY OF BRITTON

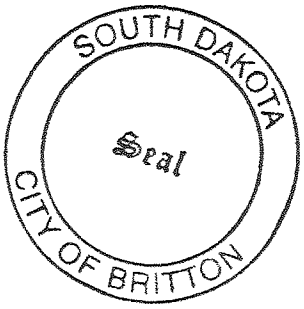
By _____
Jason A. Campbell
Its Mayor

Date: 7/26/02

Attest:

Marie Marlow

Marie Marlow
Finance Officer



This Contract is approved on behalf of Rural Development on this _____ day of _____, 2002.

_____
State Director of Rural Development
United States Department of
Agriculture

COPY

Pursuant to due call and notice thereof the Britton City Council met in regular session at City Hall on Tuesday, December 26, 2000 at 7:30 p.m. Present were Aldermen Teveldal, Maxwell, Binger, Ellingson, Olson and Nelson. Mayor Campbell presided. Foreman Hedge, Bob Babcock, Roger Cease, John Kraft, David Wade, Larry Barrett and Dennis Mattson attended.

AGENDA: Library was added to the agenda. Maxwell moved, Teveldal seconded to approve the agenda. All members voted aye. Motion carried.

INSURANCE: Maxwell moved, Teveldal seconded to accept the insurance and worker's compensation quote from South Dakota Public Assurance Alliance in the amount of $34,785.00. All members voted aye. Motion carried.

WATER SOURCE: Teveldal moved, Maxwell seconded to give a firm commitment to BDM Rural Water System to hook up to their water system with a new transmission line at an approximate cost of $909,000. Teveldal, Maxwell, Nelson, Ellingson, and Olson voted aye. Binger voted nay. Motion carried 5-1.

2001 SALARIES: Nelson moved, Ellingson moved to approve a 4% increase for regular full-time and regular part-time City and Library employees. All members voted aye. Motion carried. A complete listing of salaries will be printed in the January 8, 2001 minutes.

TRAVEL TRAILERS: It was decided to discuss the travel trailer ordinance when we work in the city ordinances.

AUDIT PROPOSAL: Teveldal moved, Maxwell seconded to accept a proposal from Ronald Schur to audit fiscal years 1999-2000. Proposal is not to exceed $7,500. All members voted aye. Motion carried.

CLAIMS PAYABLES: Maxwell moved, Olson seconded to approve payment of the claims payables listed. All members voted aye. Motion carried.

Baker & Taylor (lib books) - 57.12, Better Homes & Gardens (2 yr sub) - 19.00, Business Forms & Forms (W-2's) - 48.04, Four Seasons Cooperative(fuel) - 376.69, Elan (water, lib) - 96.31, Hawkins Water Treatment (chem) - 2,074.61, HESC(random drug test) - 42.50, One Call Systems (1 locate) - .70, Otter Tail (10th ave sewer lift) - 3.50, Postmaster (postage) - 77.36, R.E. Huffman (office sup) - 85.86, SD Dept of Health (water tests) - 300.00, Sommers, Rick

(legal fees) - 21.49, The Britton Journal (sup & pub) - 193.70, Weber Body Shop (repair door) - 40.00, Wolf, Sonia (lib books & sup) - 11.87.

OTHER BUSINESS: Questions concerning the library building were reviewed.

ADJOURNMENT: There being no further business, Nelson moved, Binger seconded the meeting adjourn. All members voted aye. Motion carried.

Marie Marlow
Marie Marlow, Finance Officer

APPROVED: Jason Campbell
Jason Campbell, Mayor

SOUTH DAKOTA
Seal
CITY OF BRITTON

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

WATERTOWN OFFICE
2001 9TH AVENUE SW, SUITE 500
WATERTOWN, SOUTH DAKOTA 57201-4038

www.state.sd.us/denr

December 20, 2011

The Honorable David Kleinberg
Mayor of Britton
PO Box 91
Britton SD 57430-0091

Re: Britton Public Water System On-Site Evaluation (EPA ID# 0388)

Dear Mayor Kleinberg:

Enclosed are the results of the on-site evaluation performed by the Department of Environment and Natural Resources (DENR) on November 29, 2011. Requirements and recommendations are provided to assist you with maintaining compliance with state and federal regulations, improving operations, and providing public health protection. Please acknowledge that you have received this report by indicating corrective actions taken.

Representatives of your water system are invited to attend seminars and training courses sponsored by the DENR and the South Dakota Rural Water Association. For further information, contact Jim Zeck at (605) 556-7219 or write the South Dakota Rural Water Association at 203 Center St. W. or PO Box 287, Madison, SD 57042-2834.

If you have questions or comments concerning this on-site evaluation, please call me at (605) 882-5112.

Sincerely,

Mike Pederson
Drinking Water Program

cc:
Roger Cease, Public Works Director; Britton
Marie Marlow, Finance Officer; Britton
DENR/Drinking Water Program, Pierre

Enclosures

Water Tower 100ft plus 20ft bowl

Recommendations for Britton Public Water System

1. Your water system contains asbestos concrete (AC) pipe. If more than 160 square feet of AC pipe becomes friable, a certified asbestos worker must do the replacement or repair of the main. The asbestos in AC pipe can become friable if it is crushed or pulverized, or by making cuts in the pipe with a saw. For more information on handling asbestos, contact the Waste Management Program at (605) 773-5315 or write the Department of Environment and Natural Resources, 523 E. Capitol Avenue, Pierre, SD 57501-3181.

2. A cross connection is any arrangement of pipes, fittings, fixtures or devices that connect a nonpotable water supply to a potable water supply. Waterworks officials should survey their customer's distribution systems for cross connections on a continuing basis and should provide a satisfactory program for the elimination and prevention of cross connections.

3. Water systems must be on alert for unusual activities around water system appurtenances and take additional steps (safety barrier) to ensure the safety and integrity of the water. If a public water system discovers something suspicious has occurred they should contact their local law enforcement and the Department of Environment and Natural Resources (1-800-438-3367 or 1-800-GET-DENR).

   An example of a safety barrier would be a sturdy fence around the elevated tank would make access to it more difficult for someone intending to cause damage.

4. Potable water flushed into a storm sewer that drains to waters of the state is considered a point source discharge subject to state regulation. A Temporary Discharge Permit is required for these activities. An application is available online at (www.state.sd.us/denr/DES/surfacewater/surface.htm). For additional information and assistance, contact DENR Surface Water Quality Program at (605) 773-3351 or write the Department of Environment and Natural Resources, Joe Foss Building, Pierre, SD 57501-3181.

5. Any public water system could be the target of terrorist activities or, more likely, acts of vandalism making protection of the water system components a vital part of providing safe water for consumers. The vulnerabilities of your water system should be identified and appropriate steps taken to improve security. Then an emergency response plan that addresses the vulnerabilities identified in the assessment should be written. Links to a vulnerability assessment document (entitled "Security Vulnerability Self-Assessment Guide for Small Drinking Water Systems") and EPA's

emergency response plan guidance (entitled "Emergency Response Plan Guidance for Small and Medium Community Water Systems") and can be found at the Department of Environment and Natural Resource's website www.state.sd.us/denr/des/drinking/dwsecurity.htm. Your emergency response plan should address natural disasters like a tornado or flood as well as intentional acts of vandalism or terrorism. Although a vulnerability assessment and emergency response plan are not required for this water system, we highly recommend performing these very important tasks.

Report and Recommendations Prepared by:

Mike Pederson
DENR/Watertown Office
Ph. (605) 882-5112

South Dakota Department of Environment and Natural Resources
Drinking Water Program
Public Water System On-Site Evaluation Report

System Name: Britton EPA ID #: 0388
Address: PO Box 91
Britton, SD 57430-0091

County: Marshall

Person Contacted: Larry Barrett Work phone: (605) 448-5721
Address: PO Box 91 Home phone:
Britton, SD 57430-0091 Cell phone: (605) 237-1850
Fax: (605) 448-5392
E-mail: brittonshop@hotmail.com

Inspected By: Mike Pederson Date of Inspection: 11/29/11 (mm/dd/yy)

Type of System: (check one) X Community Water System
Non-Transient Non-Community

Population: Total Population Served: 1,241 System Population: 1,241

Number of Service Connections: 650 Susceptibility to contamination of water source: low

Sources of Water: Water data from year:
Own Source(s): Total produced: % of total: 0%
Bulk Supplier: Brown-Day-Marshall RWS (0882) Total purchased: 47,273,000 % of total: 100.0%
Contracted flow rate?: 165 gpm
Total Annual Use: 47,273,000 100.0%

Water Sold to: N/A
(bulk connections only)

How much water can this system supply? 165 gpm (maximum flow rate, gpm)
What major factor limits system's ability to supply water? None

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Is there an up-to-date map or schematic of system?
☑	☐	☐	☐	☐	2 Is the system capable of meeting demand at all times (excluding fire flow)?
☐	☐	☑	☐	☐	3 Is good housekeeping evident throughout the system?

Comments: Also met with Roger Cease-Public Works Director; Cameron Gerken and Dwayne Furman-Operators

Water Usage

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	4 Are all customers metered?	
					5 If not, what entities are not metered?	
					6 Total gallons billed:	41384022
					7 Calculated water loss:	12.5%
yes	no	n/a	unk	note	8 Peak month and amount used	August 5,235,000 gallons
☑	☐	☐	☐	☐	9 Does the system track unaccounted-for water?	

Comments:

Water Sources

City of Britton EPA ID: 0388

Name	Year Built	Diameter (in)	Depth (ft)	GPM	Status	ID
#1	1974	12	250	500	Abandoned	1
WHITE LAKE	0	0	0	0	Abandoned	2
BDM RURAL WATER	2002				Permanent	6

Name	Water Right #	Aquifer	Location Description	ID
#1	3915-3	PRAIRIE COTEAU AQ		1
WHITE LAKE		WHITE LAKE		2
BDM RURAL WATER				6

yes	no	n/a	unk	note		
☐	☐	☑	☐	☐	1	Has a Source Water Protection Plan been developed? Date: _____
☐	☐	☑	☐	☐	2	Is the wellhead/pumphouse protected from unauthorized personnel?
☐	☐	☑	☐	☐	3	Are there any sources of contamination with 1/4 mile?
☐	☐	☑	☐	☐	4	Are pesticides, herbicides, fertilizers applied in the area of the well(s)?
☐	☐	☑	☐	☐	5	Is a pressure gauge provided at each source?
☐	☐	☑	☐	☐	6	Is a sample tap provided for raw water?
☐	☐	☑	☐	☐	7	Can flow be measured from each well?
☐	☐	☑	☐	☐	8	Is the well house(s) kept clean, in good repair and not used to store hazardous material?

Comments: _____

Storage

City of Britton EPA ID: 0388

Description	Service Date	Location	ID
1 Ground Steel 250000	May 2011	7th St. and 7th Ave	4
1 Elevated Steel 150000	May 2011	7th St and 7th Ave	5

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Is the area surrounding the ground-level storage structures graded in a manner that will prevent surface water from standing within 50 feet?
☑	☐	☐	☐	☐	2	Do overflows and drains have free fall discharges which are screened and are brought down to an elevation between 12 and 24 inches above the ground?
☑	☐	☐	☐	☐	3	Do the overflows and/or drains discharge to a splash pad or drainage inlet structure that is not connected to a storm or sanitary sewer?
☑	☐	☐	☐	☐	4	Do the storage reservoirs have a watertight roof or cover and are they sloped so that water will drain?
☑	☐	☐	☐	☐	5	Are storage structures designed so that they can be isolated from the distribution system without necessitating loss of pressure in the distribution system?
☐	☑	☐	☐	☐	6	Is leakage evident at the time of inspection?
☑	☐	☐	☐	☐	7	Are the storage structures vented?
☑	☐	☐	☐	☐	8	Are vents properly protected/screened?
☑	☐	☐	☐	☐	9	Are covers and hatches locked?
☑	☑	☐	☐	☐	10	Is there separate inlet and outlet piping?
☑	☐	☐	☐	☐	11	Does the drain allow for removal of accumulated silt?
☐	☑	☐	☐	☐	12	Are there any weather related problems (freezing, etc.)?
☑	☐	☐	☐	☐	13	Is there a control system to maintain level?
☑	☐	☐	☐	☐	14	Are there high and low level alarms?
					15	Are tanks filled automatically, manually or both? Both
☑	☐	☐	☐	☐	16	Is there a service contract for cleaning/inspecting the tanks?
☑	☐	☐	☐	☐	17	Are the tanks disinfected after being cleaned or inspected? How? Superchlorinated
☑	☐	☐	☐	☐	18	Are the storage structures secure from unauthorized access?
☐	☑	☐	☐	☐	19	Is the area fenced?
					20	What other steps have been taken to address security?

Comments:

Distribution System

City of Britton EPA ID: 0388

Main sizes and types: 4", 6", 8", 12" PVC and AC

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Is the water system capable of providing sufficient water during maximum demand conditions (excluding fire flow) to maintain a minimum pressure of 20 psi within the system measured at the consumer's tap?
					2	What is normal operating pressure? 60 psi
☐	☑	☐	☐	☐	3	Are there areas with chronic low pressure problems?
☑	☐	☐	☐	☐	4	Is an adequate map (shows valve locations, line sizes, etc) of the distribution system maintained?
☑	☐	☐	☐	☐	5	Is there a main flushing program? If yes, how often? Twice/Yr
☐	☐	☑	☐	☑	6	Are all dead-end water mains equipped with a means to flush?
☐	☐	☑	☐	☐	7	Any plans to eliminate dead-ends (via looping of mains, etc.)?
☑	☐	☐	☐	☐	8	Are valves exercised regularly? If yes, how often? Yearly
☐	☑	☐	☐	☐	9	Are there fire hydrants on mains less than 6 inches in diameter?
☑	☐	☐	☐	☐	10	Does the system disinfect after pipe repairs or new pipe installation?
☑	☐	☐	☐	☐	11	Is the location and nature of each repair documented?
☐	☑	☐	☐	☐	12	Does the system utilize a conservation program at any time?
☑	☐	☐	☐	☐	13	Is the system adequately protected from freezing?
☑	☐	☐	☐	☐	14	Are water and sewer mains separated by a horizontal distance of 10 feet or greater?
☐	☑	☐	☐	☐	15	Is there a cross connection control program?
☐	☑	☐	☐	☐	16	Are audits conducted to check for cross connections in the system?
☐	☑	☐	☐	☐	17	Are backflow preventers installed on all consumer connections?
☐	☐	☑	☐	☐	18	Is the bulk water loading station designed with back flow prevention and appropriate air gap device to prevent contamination?
☐	☑	☐	☐	☐	19	Does the system contain any pressure reducing valves?
☐	☐	☑	☐	☐	20	For systems using chloramines, can you measure a total chlorine residual level of at least 0.5 mg/l in your distribution system at all times?
☑	☐	☐	☐	☐	21	For systems using chlorine, can you measure a free chlorine residual level of at least 0.3 mg/l in your distribution system at all times?
					22	How often do you take chlorine readings in the distribution system? Monthly

Comments (please indicate the question number): Note 6. No Deadends

Monitoring/Reporting - Distribution

City of Britton EPA ID: 0388

yes	no	n/a	unk	note	
					1 Are the following sampling site plans up to date?
☑	☐	☐	☐	☐	- Bacteriological
☑	☐	☐	☐	☐	- Lead and copper
☑	☐	☐	☐	☐	- Disinfection By Products (DBP)
☑	☐	☐	☐	☐	2 Are microbiological sampling sites (as approved by DENR) being rotated on a monthly basis for routine sampling?
☑	☐	☐	☐	☐	3 Does the system have a waiver for asbestos sampling?
					4 Which of the following records are kept regarding the system?
yes	no	n/a	unk	note	Operational Data:
☐	☐	☑	☐	☐	Flow meter readings:
☐	☐	☑	☐	☐	Electrical usage:
☐	☐	☑	☐	☐	Chemical usage:
☐	☐	☑	☐	☐	Hour meter readings:
☑	☐	☐	☐	☐	Storage or reservoir levels:
					Sampling data:
☑	☐	☐	☐	☐	- Chlorine residual testing
☑	☐	☐	☐	☐	- Bacteriological sampling
☐	☐	☑	☐	☐	- Fluoride levels
☐	☐	☑	☐	☐	- Asbestos sampling results
☑	☐	☐	☐	☐	- Lead and Copper sampling results
☑	☐	☐	☐	☐	- DBP Monitoring
					Other: _____
					Maintenance Data:
☑	☐	☐	☐	☐	Water main repairs:
☑	☐	☐	☐	☐	Main flushing dates:
☑	☐	☐	☐	☐	Valve exercising dates:
☐	☐	☑	☐	☐	Equipment service:
					Other: _____

Testing and Testing Equipment

Test kits present at system: Color Q DPD Test Kit

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	5 Are up to date reagents present?

Tests and frequency performed by operator: Chlorine/Monthly

Survey test results: No Tests Taken

Bacteriological Monitoring

Bacteriological sampling and analysis: October 1, 2010 to October 1, 2011

A	Samples submitted:	24
B	Samples required:	Two Samples Each Month.
C	Survey samples:	0
D	Safe samples:	24
E	Unsafe samples:	0
F	Repeat samples:	0

Lead and Copper Monitoring

(These values are calculated from available data. Check correspondence for verification.)

A	Date Last Tested:	September 22, 2009	
B	Samples required:	10	
C	Sampling Frequency	Triennially	
D	Date Due Next	2012	
E	Lead - 90% Level	3.7	Action Level - 15 ug/l
F	Copper 90% Level	0.14	Action Level - 1.3 mg/l

Disinfectant Residual Monitoring

Residual sampling and analysis: 07/01/11 to 09/01/11

A	Samples taken:	6	
B	Samples required:	6	(same as TCR)
C	Residual measured:	Free chlorine:	mg/L
		Chloramines:	mg/L
D	RAA Residual:	0.39 mg/l	

Comments:

Managerial Capacity

City of Britton EPA ID: 0388

Certification Level of Water System: Distribution: I Treatment: 0

Certification Levels: Very Small Water System (VSWS) Water Distribution (WD) I - IV
Small Water Treatment System (SWTS) Water Treatment (WT) I - IV

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Does the water system have a governing body? (city council, housing association, district, etc.) City Council
					2	How often does the governing body meet to review water system data? Monthly
☑	☐	☐	☐	☐	3	Are all personnel that make water quality and quantity decisions certified?
☑	☐	☐	☐	☐	4	Is an operator certified at the level of the system available at all times?

Operator Name and Number	Water	Distribution	WW	Collection	Pond	SWTS	VSWS
Larry Barrett (1435)		I		I	I		
Cameron Gerken (2826)		I			I		

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	5	Do you feel you have received adequate training?
☑	☐	☐	☐	☐	6	Is the number of people adequate to operate the water system?
☑	☐	☐	☐	☐	7	Do you maintain records to document compliance (up to 10 years)?
☐	☑	☐	☐	☐	8	Does the system have a written Emergency Response Plan?
☐	☐	☑	☐	☐	9	Does the system have operations and/or maintenance manuals?
☑	☐	☐	☐	☐	10	Do you know what to do in the event of a violation?
☑	☐	☐	☐	☐	11	Have there been any MCL violations or compliance orders for the system in the last 12 months?
☐	☐	☑	☐	☐	12	If so, is there a compliance plan?
☑	☐	☐	☐	☐	13	Is someone responsible for emergency operations, communications and customer relations? Who? Mayor David Kleinberg
☑	☐	☐	☐	☐	14	Are routine operation and maintenance records kept?
☑	☐	☐	☐	☐	15	Is the system aware of all required sampling for the year?
☑	☐	☐	☐	☐	16	Does the system have current "as built" engineering drawings of the system facilities?
☑	☐	☐	☐	☐	17	Do you keep records of complaints and the actions taken to address each one?
					18	How many complaints do you receive on average each year? 0
					19	What is general nature of complaints (taste, odor, color, pressure)? N/A
☑	☐	☐	☐	☐	20	Has the latest edition of the Consumer Confidence Report been distributed?
☑	☐	☐	☐	☐	21	Is a copy of the latest Consumer Confidence Report Available?
☑	☐	☐	☐	☐	22	Have any changes been made since the last survey in the management, operations, personnel, budget, etc?

If so, what? New Operators-Larry Barrett & Cameron Gerken

☑ ☐ ☐ ☐ ☐ 23 Have the recommendations from the previous survey been addressed?

Comments (please indicate the question number):

Financial Capacity

City of Britton EPA ID: 0388

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Does the public water system have an annual budget?
☑	☐	☐	☐	☐	2 Does the water system income exceed operating expenses (including debt service)?
☑	☐	☐	☐	☐	3 Does the water system track budget performance?
☑	☐	☐	☐	☐	4 Does the water system have audited financial statements?
☑	☐	☐	☐	☐	5 Are water revenues kept in a separate account?
☑	☐	☐	☐	☐	6 Is some of the water revenue set aside in reserve funds for future capital improvement projects?
☑	☐	☐	☐	☐	7 Is there a capital improvement long range plan (up to 5 years)?
☑	☐	☐	☐	☐	8 Are the water system rates reviewed on at least an annual basis?
☑	☐	☐	☐	☐	9 Is there a plan for rate increases?
☑	☐	☐	☐	☐	10 Is the rate structure based on metered water use?
					List rates: $18 Minimum plus $2.50/1000 (example: $22 minimum plus $1.75/1000 gallons)
☑	☐	☐	☐	☐	11 Are there procedures in place to handle delinquent accounts?
☐	☑	☐	☐	☐	12 Are more than 5% of your customer accounts delinquent?
☑	☐	☐	☐	☐	13 Are controls available to limit over-expenditures?
☑	☐	☐	☐	☐	14 Are there purchasing procedures?
☑	☐	☐	☐	☐	15 Does the system utilize computer software (accounting or otherwise) to maintain its financial records?

Comments (please indicate the question number): _____

Violations

City of Britton EPA ID: 0388

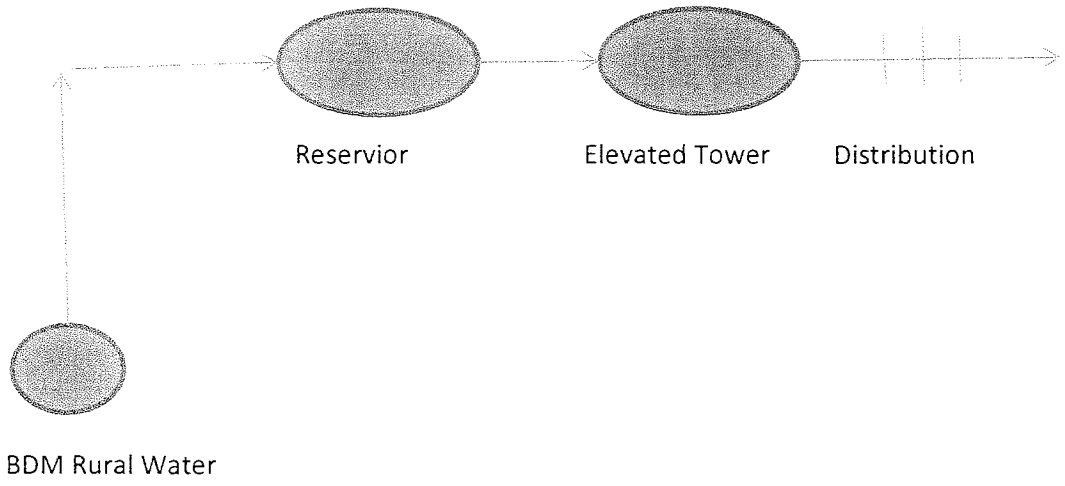
Violations From October 1, 2008 To October 1, 2011

Violation Type	Parameter	Date	Duration (Months)
Lack of Certified Operator	Certified Operator	01/15/2011	
Routine Sample Monitoring Violation	Total Coliform Bacteria	10/01/2008	

Drawing/Flow Schematic

City of Britton EPA ID: 0388

Note: Use Excel to draw schematic of water system



DEPARTMENT OF ENVIRONMENT and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

March 12, 2014

Ms. Marie Marlow
City of Britton
803 8th Street
Britton, SD 57430
SENT VIA EMAIL ONLY TO cityhall@venturecomm.net AND brittonshop@hotmail.com

RE: Annual Drinking Water Report for City of Britton (EPA ID 0388)

Dear Ms. Marlow:

It is time again for all community public water systems to issue the annual ***Drinking Water Report*** to their customers. The intent of this requirement is to ensure that consumers using your system know about the quality of their drinking water. Your water is supplied by Brown-Day-Marshall RWS (0882) and information about their drinking water is included in this report. Each community public water system must make the drinking water report available to its individual customers by **July 1, 2014** for water quality data collected during or prior to calendar year 2013.

The Department of Environment and Natural Resources (DENR) is supplying all community water systems in South Dakota an example drinking water report tailored to each system. **Check the information in the attached report for accuracy and make changes as required. Distribute the report to your customers, and send a copy to DENR with the certification form as soon as possible but no later than July 1, 2014.** If you determine the attached report is correct and all required information is included you can use DENR's report to distribute to your customers. Be sure to indicate that you are using DENR's report by marking the check box on the certification form. ***By marking the check box, your system will not be required to submit a copy of the report to DENR.***

Electronic versions of your 2013 Drinking Water Report has been sent to the finance officer and the utility manager. An Adobe PDF copy of the report can also be found online at http://denr.sd.gov/des/dw/sysinfo.aspx . If you have questions concerning the content or distribution of the drinking water report, please contact me at (605)773-6576.

Sincerely,

Mitchel Williams

Mitchel Williams
Drinking Water Program

cy: Larry Barrett, Utility Manager

Instructions for Report Delivery and Recordkeeping

The City of Britton public water system must distribute the report and the Department of Environment and Natural Resources must receive a copy of your report no later than July 1, 2014.

Your community water system qualifies for a waiver. Rather than distribute a copy of the report to each of your customers, you should do the following:

1. Publish the Drinking Water Report annually in one or more local newspapers serving the areas in which the your customers are located.

2. Inform your customers that the report will not be mailed either in the newspapers in which the reports are published or by other means approved by DENR.

3. Make copies of the Drinking Water Report available upon request.

A good faith effort must be made to reach all of your consumers. Your water system must make the report available upon request and keep it on file for three years. The Department of Environment and Natural Resources must receive a copy of your report no later than July 1, 2014. **Complete the following form and return it to us after you distribute the drinking water report to your customers.**

2013
Annual Drinking Water Report
Certification of Distribution
City of Britton

I certify that the information contained in the drinking water report for the City of Britton is true and correct based upon my best information, knowledge, or belief and that the report has been distributed as required and a good faith effort has been made to reach all consumers. The City of Britton public water system has returned a copy of the drinking water report to the Department of Environment and Natural Resources and will make the report available upon request for three years.

_____

Signature of Authorized Representative Date

☐ **I have checked the accuracy of the Drinking Water Report sent by DENR and have determined that it is complete and accurate. I am using DENR's report to distribute to my customers, therefore I am not required to return a copy to DENR.**

EPA ID No: 0388

You can contact us by calling
(605)448-5721 or write us at
803 8th Street
Britton SD 57430

City of Britton

2013 Drinking Water Report

It's your tap water!

EPA ID: 0388

Water Quality

Last year, the City of Britton monitored your drinking water for possible contaminants. This brochure is a snapshot of the quality of the water that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies.

Water Source

We serve more than 1,241 customers an average of 130,000 gallons of water per day. Our water is groundwater that we purchase from another water system. The state has performed an assessment of our source water and they have determined that the relative susceptibility rating for the Britton public water supply system is low.

For more information about your water and information on opportunities to participate in public meetings, call (605)448-5721 and ask for Marie Marlow.

Additional Information

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- *Radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants can be obtained by calling the Environment Protection Agency's Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Britton public water supply system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at *http://www.epa.gov/safewater/lead*.

Detected Contaminants

The attached table lists all the drinking water contaminants that we detected during the 2013 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2013 The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

The City of Britton public water system purchases 100% of their water from Brown-Day-Marshall RWS (0882).

2013 Table of Detected Contaminants For Britton (EPA ID 0388)

Terms and abbreviations used in this table:

** Maximum Contaminant Level Goal(MCLG): the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.*

** Maximum Contaminant Level(MCL): the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.*

** Action Level(AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. For Lead and Copper, 90% of the samples must be below the AL.*

** Treatment Technique(TT): A required process intended to reduce the level of a contaminant in drinking water. For turbidity, 95% of samples must be less than 0.3 NTU*

Units:

**MFL: million fibers per liter*

**pCi/l: picocuries per liter(a measure of radioactivity)*

**ppt: parts per trillion, or nanograms per liter*

**mrem/year: millirems per year(a measure of radiation absorbed by the body)*

**ppm: parts per million, or milligrams per liter(mg/l)*

**ppq: parts per quadrillion, or picograms per liter*

**NTU: Nephelometric Turbidity Units*

**ppb: parts per billion, or micrograms per liter(ug/l)*

**pspm: positive samples per month*

Substance	90% Level	Test Sites > Action Level	Date Tested	Highest Level Allowed (AL)	Ideal Goal	Units	Major Source of Contaminant
Copper	0.2	0	09/25/12	AL=1.3	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	2	0	09/25/12	AL=15	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits.

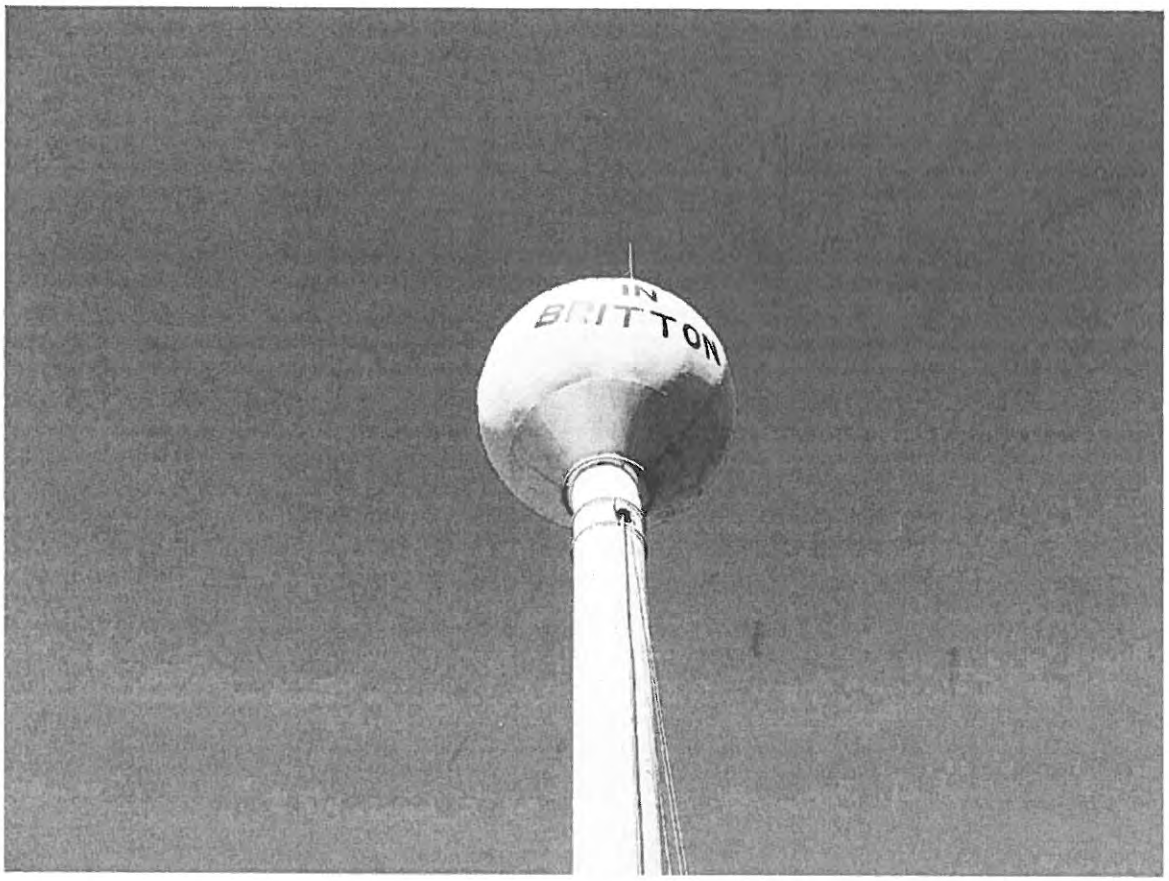
Substance	Highest Level Detected	Range	Date Tested	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Units	Major Source of Contaminant
Barium *	0.014		07/23/13	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium *	4.7		07/23/13	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride *	1.27	0.90 - 1.27	05/21/13	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids	8.36	7.71 - 8.36	09/26/13	60	0	ppb	By-product of drinking water chlorination.
Haloacetic Acids *	12.5	3.30 - 12.5	09/07/11	60	0	ppb	By-product of drinking water chlorination.
Nitrite (as Nitrogen) *	0.03		08/20/13	1	1	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium *	0.7		07/23/13	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Total trihalomethanes	4.24	4.16 - 4.24	09/26/13	80	0	ppb	By-product of drinking water chlorination.
Total trihalomethanes *	4.90	1.09 - 4.90	09/07/11	80	0	ppb	By-product of drinking water chlorination.

Please direct questions regarding this information to Mr Larry Barrett with the Britton public water system at (605)448-5721.

*** Brown-Day-Marshall RWS (0882) test result.**

Midco
Diving & Marine Services, Inc.

Report of Procedures and Findings From the Cleaning and Inspection of the Pedestal Tank City of Britton, SD



By
Midco Diving & Marine Services, Inc.

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Midco
Diving & Marine Services, Inc.

July 29, 2011

City of Britton
Attn: Roger Cease
803 8th Street
Britton, SD 57430

INTRODUCTION

Following is a summary of a visual and video inspection of the Pedestal Tank for City of Britton, SD. This inspection was undertaken on May 13, 2011 by Midco Diving & Marine Services, Inc., of Rapid City, SD. The findings of this inspection report are a supplement to the inspection video and worksheets, which are found under the same cover.

The Reservoir, which is the subject of this report, appears to be of conventional design and construction.

METHODOLOGY

The reservoir was inspected by a surface-supplied commercial air diver. The diver was equipped with real-time high-resolution color video and a halogen lighting system as well as live voice communication between the inspecting diver and the surface team. All procedures were carried-out in accordance with Midco Diving's *Standards and Procedures*. Prior to entering your reservoir the diver and equipment were disinfected with a 200 parts per million chlorine solution per ANSI/AWWA C652-02 standards.

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PEDESTAL TANK FINDINGS

EXTERIOR FINDINGS

Upon visual inspection of the exterior of the structure, the reservoir appears to be in good condition.

INTERIOR FINDINGS

Upon visual inspection of the structure above and below the water line, the overall condition of the tank appears to be good, consistent with a reservoir of this age and type. The following findings were noted:

1. ¼" layer of sediment was removed during the cleaning process

2. Coating failure and corrosion nodules on interior floor and wall

DISCLAIMER

Midco Diving & Marine Services, Inc. does not provide consulting engineering services, nor do we employ licensed Professional Engineers. The findings contained herein were neither prepared or reviewed by a licensed engineer, but are based on the visual examination, experience and training of the inspecting diver and dive support crew.

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City of Britton

JOB NUMBER:	**05131101**
UTILITY:	**City of Britton**
DATE:	**May 13, 2011**
MANAGER:	**Roger Cease**
ADDRESS:	**803 8th Street** **Britton, SD 57430**

DIVE TEAM LEADER:	**Derrick Clauson**
Reservoir:	**Pedestal**
Gallons:	**150,000**
Water Depth:	**24 feet**
Construction:	**Steel Welded**

Recommendations:

1. **Clean and Inspect every 2-3 years**
2. **Approx. 8 hours of epoxy repair to coating failure and corrosion nodules of the interior floor and wall or total blast and recoat**

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Diving & Marine Services, Inc.

N/A -not applicable
Excellent (Ex) - like new condition, no repairs needed.
Good -Cosmetic only problems, repairs if wanted.
Fair- Minor problems, repairs needed, not immediate.
Poor-Major problems, structural or like, immediate repairs needed.

Component	Condition					Comments
	NA	Ex.	Good	Fair	Poor	
Site Security			X			
Gate	X					
Fence	X					
Locks			X			
Alarm	X					
Reservoir Exterior			X			
Coating			X			
Foundation			X			
Cleanliness			X			
Seams/Joints			X			
Exterior Roof			X			
Coating			X			
Cleanliness			X			
Seams/Joints			X			
Exterior Ladder			X			
Coating	X					
Caged	X					
Safety Climb			X			
Roof Vents			X			
Coating			X			
Screen			X			
Side Vents	X					
Coating	X					
Screen	X					
Exterior Telemetry	X					
Coating	X					
Functioning	X					

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Component	Condition					Comments
	NA	Ex.	Good	Fair	Poor	
Manual Level Indicator	X					
Tag	X					
Cable	X					
Indicator	X					
Pulleys	X					
Base	X					
Man Entries			X			
Coating			X			
Gasket			X			
Exterior Inlet	X					Size: N/A
Coating	X					
Valve	X					
Exterior Outlet	X					Size: N/A
Coating	X					
Valve	X					
Exterior Drain/Scour	X					
Coating	X					
Valve	X					
Exterior Water Tap	X					Size: N/A
Coating	X					
Valve	X					
Exterior Overflow			X			
Coating			X			
Stand-offs			X			
Screen			X			
Entry Hatch			X			Size: 22" diameter
Weather Stripping	X					
Coating			X			
Hinges			X			
Lock			X			
Safety Railing	X					

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Component	Condition					Comments
	NA	Ex.	Good	Fair	Poor	
Interior Ladder	X					
Caged	X					
Safety Climb	X					
Telemetry Sensor	X					
Functioning	X					
Float	X					Size: N/A
Guide Wires	X					
Interior Floor			X			
Coating				X		Corrosion nodules and coating failure
Sediment			X			Depth: ¼"
Seams/Joints				X		
Interior Walls			X			
Coating				X		Corrosion nodules and coating failure
Seams/Joints			X			
Interior Ceiling			X			
Coating			X			
Rafters			X			
Interior Man Entries			X			
Coating			X			
Gasket			X			
Support Columns			X			# of Columns: 1 center tube
Coating				X		Laminate failure
Base			X			
Top			X			
Cathodic Protection	X					
Anodes	X					
Wires	X					
Sacrificial Anodes	X					% left: N/A

Component	Condition					Comments
	NA	Ex.	Good	Fair	Poor	
Interior Overflow Pipe			X			
Coating				X		Corrosion nodules and laminate failure
Top/Cap			X			
Connections/Flange			X			
Interior Inlet			X			Common pipe
Coating			X			
Riser			X			
Interior Outlet			X			Common pipe
Coating			X			
Riser			X			
Interior Drain/Scour	X					
Coating	X					
Riser	X					
Interior Water Tap	X					Size: N/A
Coating	X					
Valve	X					

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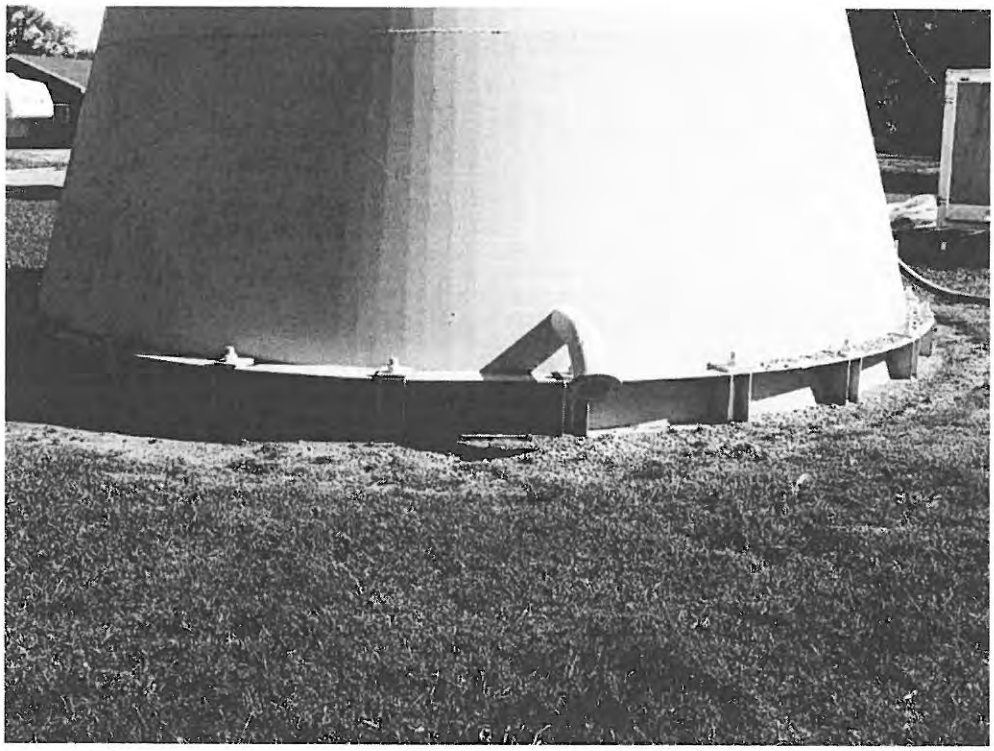
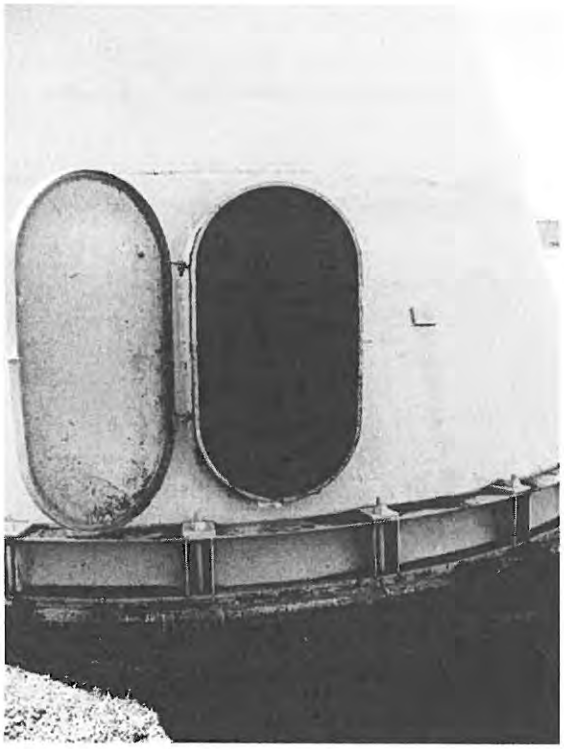


Foundation



Man Entry

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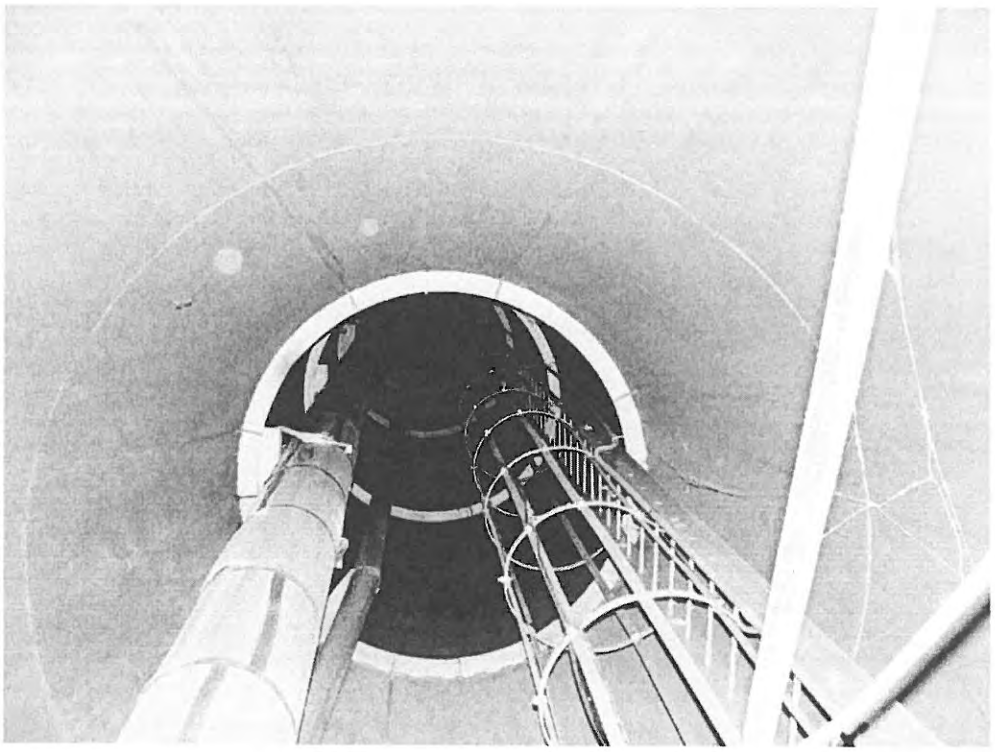
Ladder



Ladder, Exterior Plumbing

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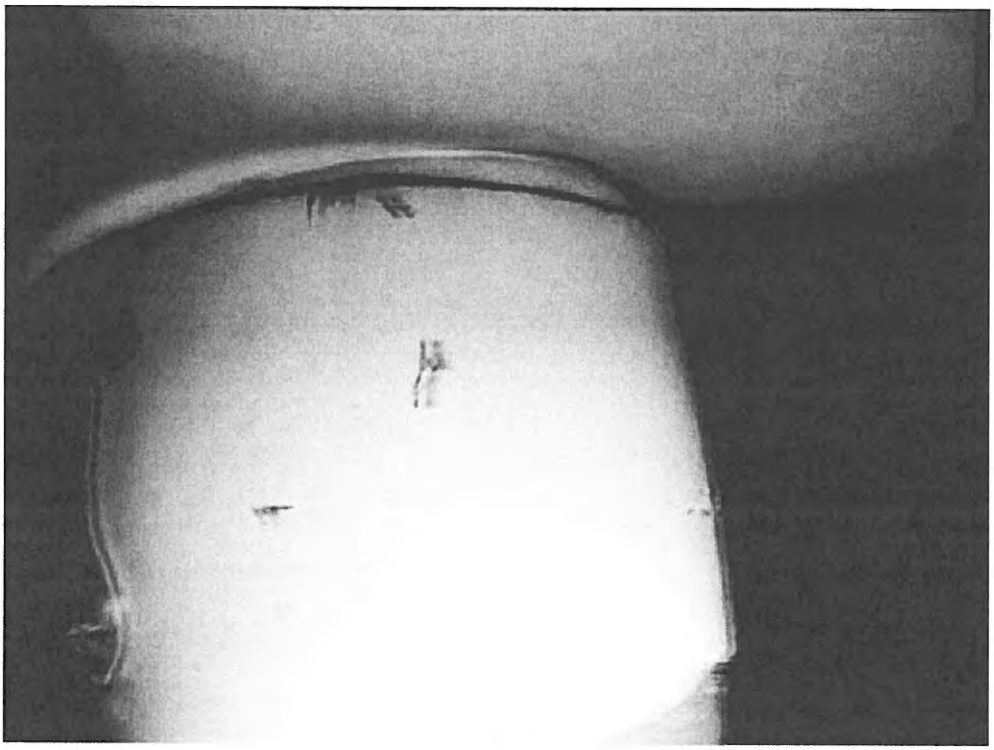
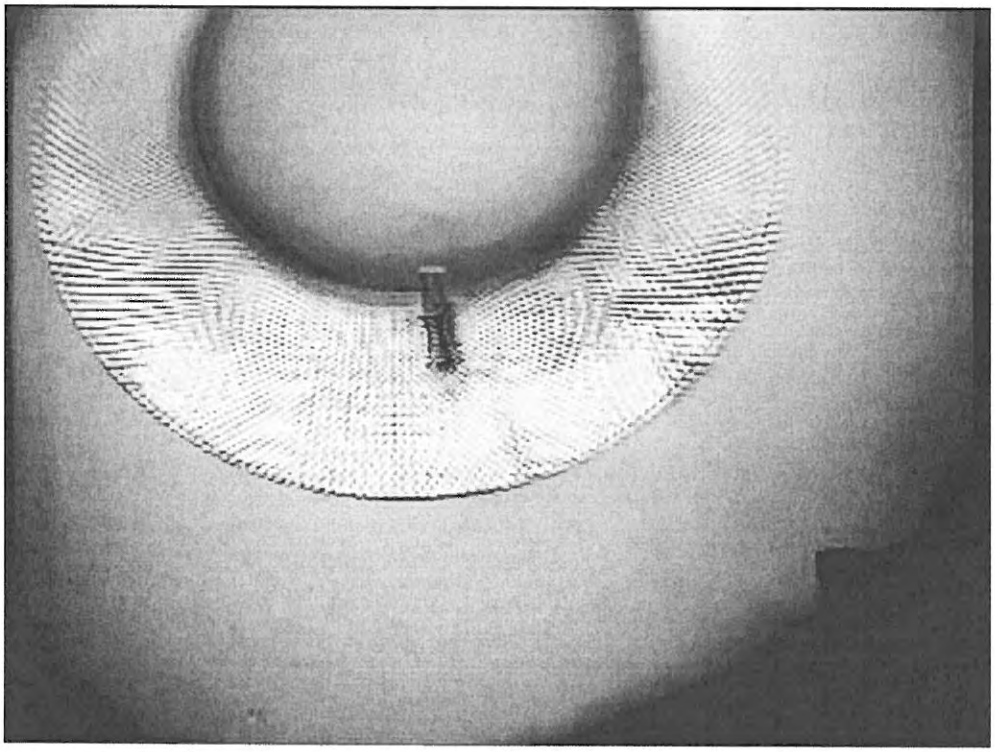


Center Tube



Vent

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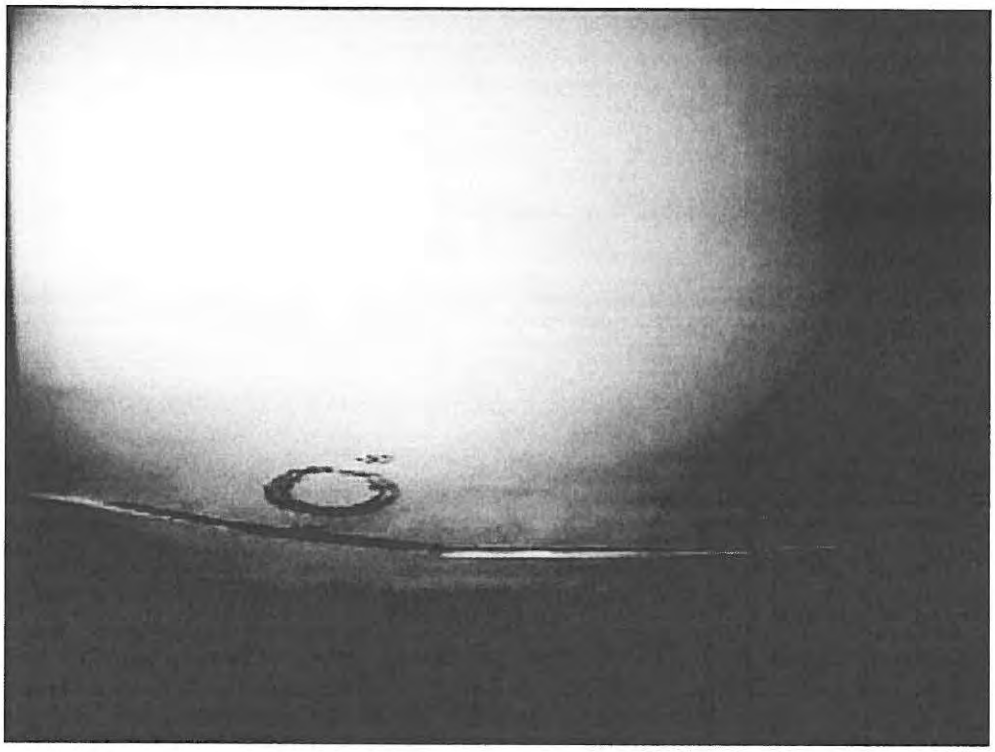
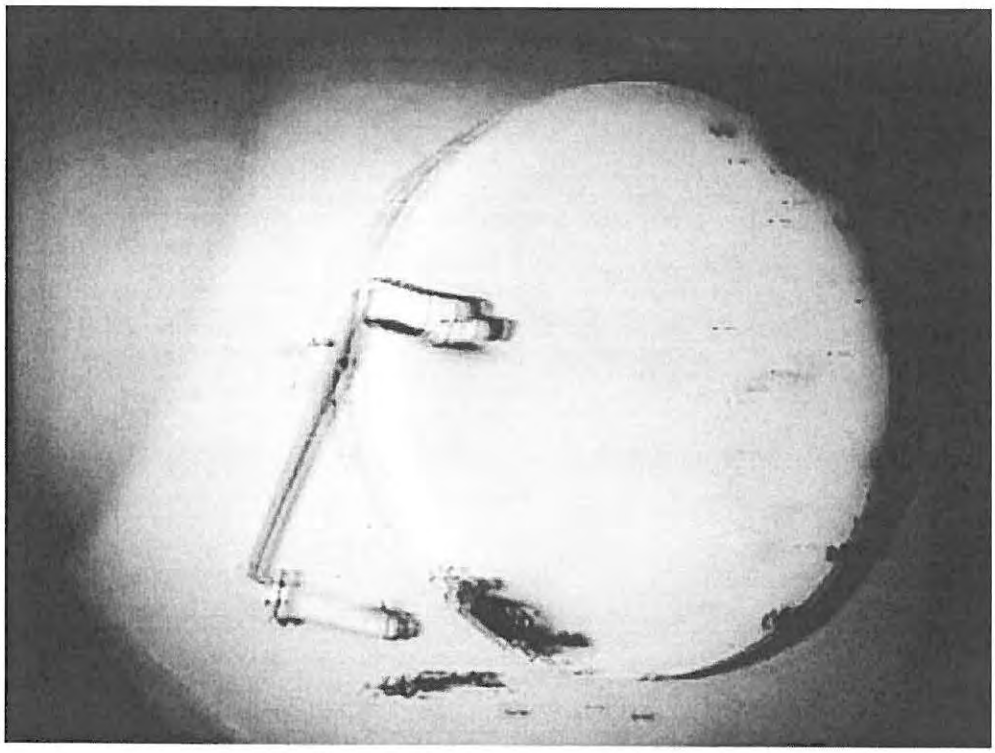


Ceiling



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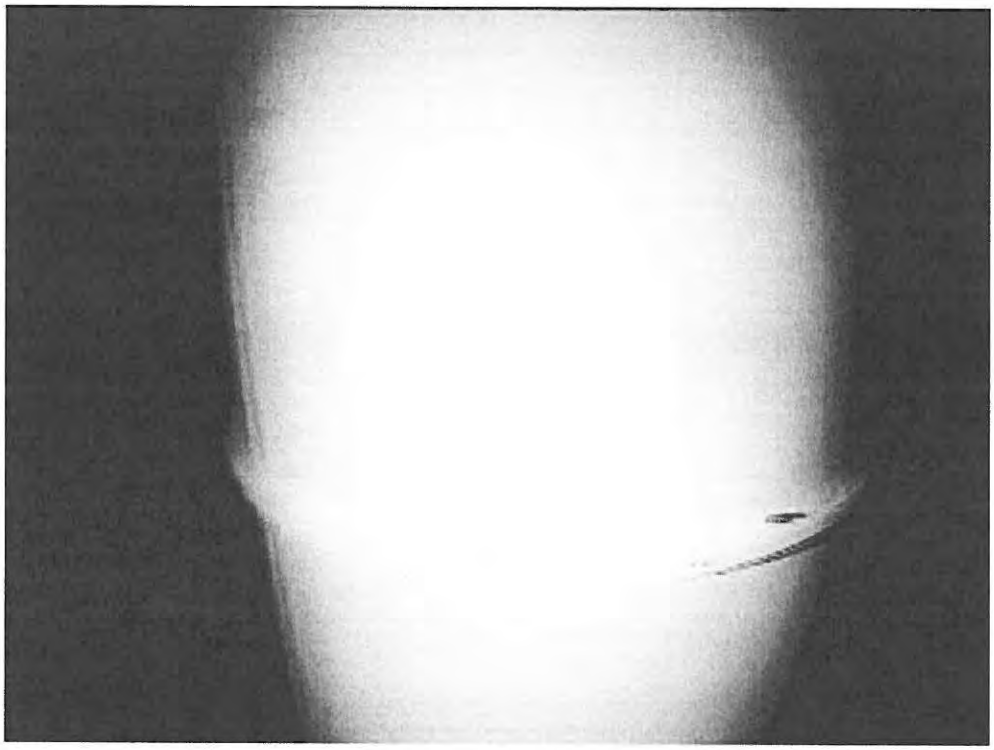
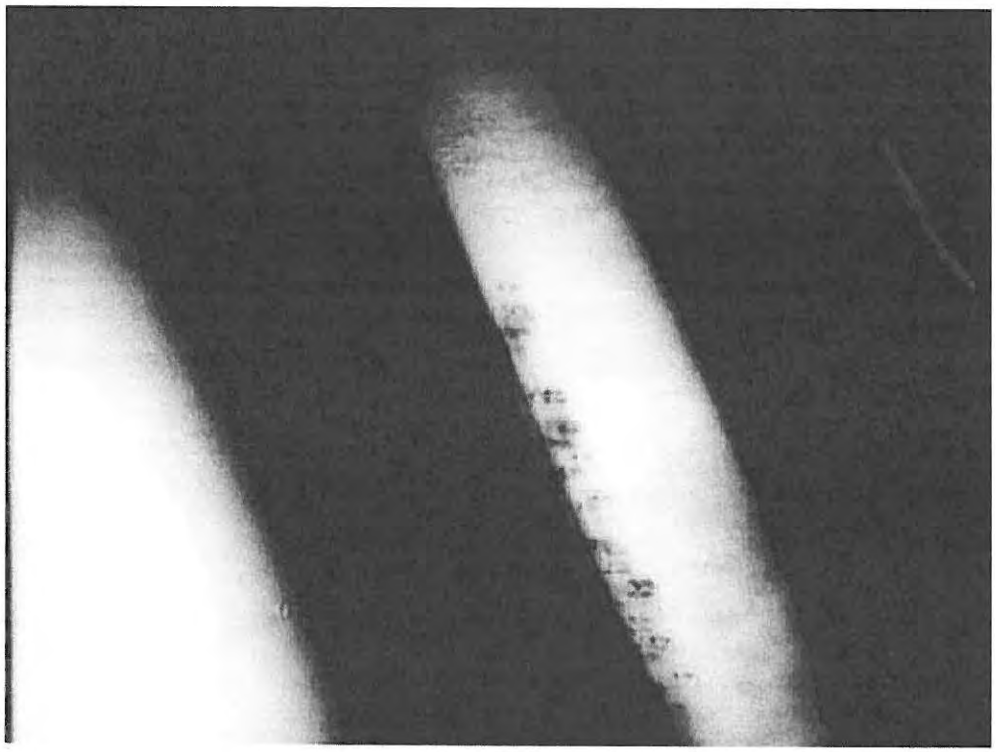


Center Tube



Overflow

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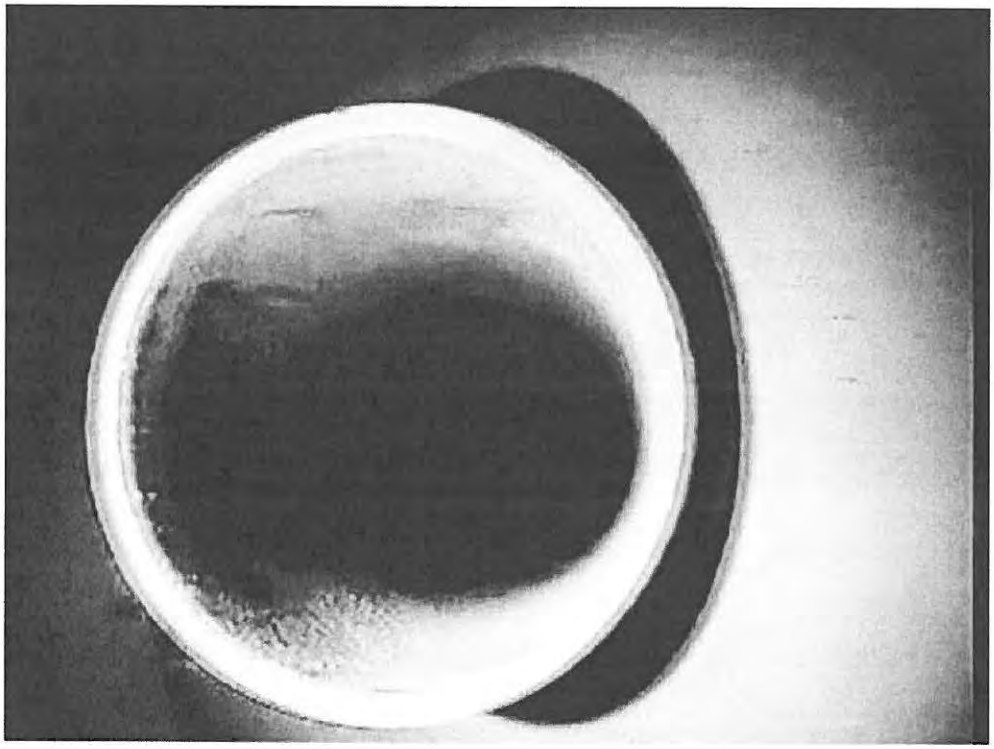
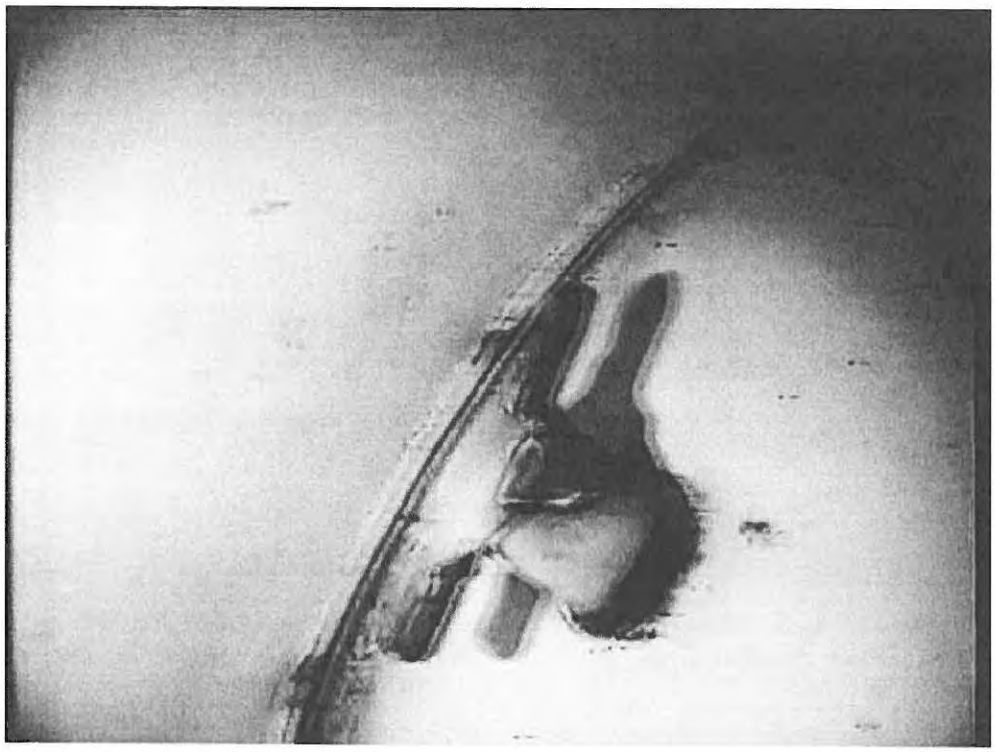


Interior Plumbing



Interior Plumbing

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www.midcodiving.com
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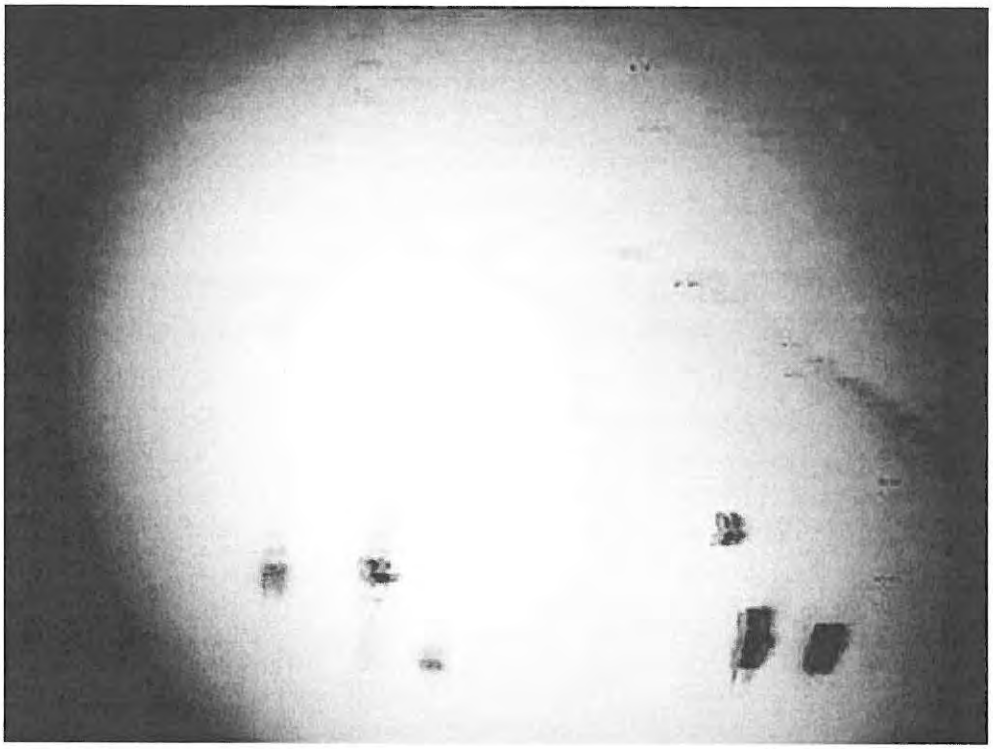
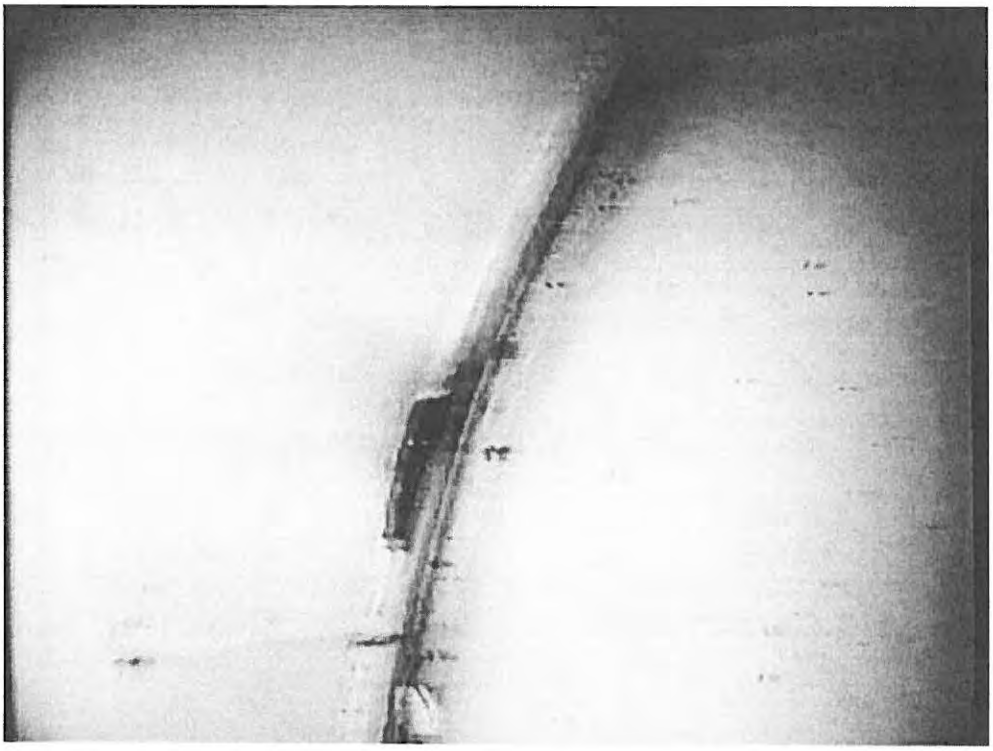


Wall



Floor to Wall

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Home Office P.O. Box 513 Rapid City, South Dakota 57709 605-791-3030
Regional Office P.O. Box 7396 Loveland, Colorado 80537 970-744-2097

ADDENDUM NUMBER ONE TO THE FACILITY PLAN

For The

WATER SYSTEM

IN

BRITTON, SOUTH DAKOTA

PROJECT# A-5772

DECEMBER, 2015

Helms & ASSOCIATES
CIVIL ENGINEERS & LAND SURVEYORS

221 Brown County Hwy 19
P.O. Box 111
Aberdeen, SD 57402

Phone: (605) 225-1212 Fax: (605) 225-3189
Email: operations@helmsengineering.com

Addendum Number 0ne to the Facility Plan

For the

Water Facility Plan

In

Britton, SD

Project Number: A-5772

December, 2015

I hereby certify that this report
Was prepared by me or under my direct
Supervision and that I am a duly Registered
Professional Engineer under the laws of the
State of South Dakota

By: _____
Bob J. Babcock
Helms and Associates

Registration Number: 4812

Introduction

The purpose of Addendum Number One is to update the Facility Plan in the following areas:

The City of Britton currently has a Sewer Improvement project that has affected the amount of pipe that would need to be replaced on the future water project. The sewer project has replaced approximately 1,350 feet of 4" Asbestos Cement Water Main. This would also reduce the number of services, valves, fire hydrants and other items related to the water main.

1. Table 3.1-1 on page 11 has been updated.
2. Table 4.6.2-1 on page 39 has been updated.
3. Table 4.6.2-2 on page 40 has been updated.
4. Table 4.6.3-1 on page 46 has been updated.
5. Table 4.6.3-2 on page 47 has been updated.
6. Table(s) 5.4-1 & 5.4-2 on page 56 has been updated.
7. Table 5.5-1 on page 58 has been updated, along with the increase per month for 50% grant has been updated.
8. Table 5.5-2 on page 59 has been updated.

The following changes are hereby made to the Facility Plan dated June 2015.

3 EVALUATION OF EXISTING WATER SYSTEM

3.1 GENERAL INFORMATION

The City of Britton currently provides water service to approximately 650 water services in the community. Of the 650 services, 5 of these services provided by the City are commercial. The City of Britton currently purchases 100% of its domestic water demand from Brown Day Marshall (BDM) Rural Water. Figure 3.1.1 shows the existing water distribution system.

The system has been updated throughout the years but some older lines are still in service. According to available information there are several types and sizes of water main used throughout the distribution system. The approximate total length of each size and type of pipe in the water distribution system is listed below in Table 3.1-1.

Table 3.1-1 – Pipe Sizes and Length

Watermain Diameter (in)	Pipe Type	Total Length of Watermain (ft)	Total Diameter - Length (in-ft)	Total Diameter - Length (in-mile)
4	Cast Iron	7,036	28,144	5.3
4	Asbestos Cement	9,700	38,800	7.3
4	PVC	3,714	14,856	2.8
6	Cast Iron	426	2,556	0.5
6	PVC	32,731	196,386	37.2
8	PVC	18,109	144,872	27.4
10	PVC	8,947	89,470	16.9
Totals		**80,663**	**515,084**	**97.6**

The City has experienced a few breaks in the system over the past years. Repairs have been made with newer PVC piping. The approximate location of the current system is shown in Figure 3.1-1 and Figure 3.1-2. The modeled pressures, pipe velocities, and flows are provided in Figure 3.6.4-1 and Figure 3.6.4-2.

Table 4.6.2-1 - Cost Estimate for Distribution Alternative 2

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$168,000.00	$168,000.00
2	Mill and Salvage of Existing Asphalt	22,890	SqYd	$3.25	$74,392.50
3	6" PVC Water Main	17,165	Ft	$22.00	$377,630.00
4	Fire Hydrants	19	Each	$2,625.00	$49,875.00
5	6" PVC Fire Hydrant Lead	380	Ft	$24.00	$9,120.00
6	Connect to Exisiting Water Main	20	Each	$300.00	$6,000.00
7	6" MJ DIP Gate Valve w/Box	47	Each	$1,200.00	$56,400.00
8	6" MJ DIP Tee	29	Each	$450.00	$13,050.00
9	6" 90° MJ DIP Bend	4	Each	$300.00	$1,200.00
10	Bore & Case Watermain Under Highway/Rail Road with 12" Casing Pipe	350	Ft	$300.00	$105,000.00
11	Connect to Existing Service	108	Each	$150.00	$16,200.00
12	1" Corp Stop/Service Saddle	108	Each	$175.00	$18,900.00
13	1" Curb Stop w/Box	108	Each	$200.00	$21,600.00
14	1" HDPE Service Line	3,570	Ft	$15.00	$53,550.00
15	Place Salvaged Asphalt	3,090	Ton	$10.00	$30,900.00
16	Asphalt Surfacing (4")	3,560	Ton	$185.00	$658,600.00
17	Gravel Base Course (10")	12,880	Ton	$22.00	$283,360.00
18	Gravel Surfacing	9,630	Ton	$20.00	$192,600.00
19	Granular Bedding, Material	5,360	Ton	$12.00	$64,320.00
20	Topsoil, Seed, Fertilize & Mulch	3.4	Acres	$1,500.00	$5,100.00
21	Curb and Gutter	1,270	Ft	$21.50	$27,305.00
22	Sidewalk	300	SqYd	$18.00	$5,400.00
23	PCC Pavement Repair/Valley Gutter	100	SqYd	$45.00	$4,500.00
24	Remove & Salvage Existing Valves	30	Each	$100.00	$3,000.00
25	Contaminated Soils	200	CY	$100.00	$20,000.00
	Construction Subtotal				$2,266,002.50
	Contingencies (15%)				$340,000.00
	Construction Total				**$2,606,002.50**
	Design Engineering				$208,500.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$229,400.00
	Administration & Legal				$94,000.00
	Total Project Cost				**$3,143,402.50**

Table 4.6.2-2 - EUAC for Distribution Alternative 2

Item Description	Cost	SV	PW SV	NPW
Mobilization	$175,000.00	$0.00	$0.00	$175,000.00
Mill and Salvage of Existing Asphalt	$80,210.00	$40,105.00	$34,196.99	$46,013.01
6" PVC Water Main	$407,264.00	$203,632.00	$173,634.25	$233,629.75
Fire Hydrants	$52,500.00	$26,250.00	$22,383.02	$30,116.98
6" PVC Fire Hydrant Lead	$9,600.00	$4,800.00	$4,092.89	$5,507.11
Connect to Exisiting Water Main	$6,000.00	$0.00	$0.00	$6,000.00
6" MJ DIP Gate Valve w/Box	$60,000.00	$30,000.00	$25,580.59	$34,419.41
6" MJ DIP Tee	$13,500.00	$6,750.00	$5,755.63	$7,744.37
6" 90° MJ DIP Bend	$1,500.00	$750.00	$639.51	$860.49
Bore & Case Watermain Under Highway/Rail Road with 12" Casing Pipe	$105,000.00	$52,500.00	$44,766.04	$60,233.96
Connect to Existing Service	$18,000.00	$0.00	$0.00	$18,000.00
1" Corp Stop/Service Saddle	$21,000.00	$10,500.00	$8,953.21	$12,046.79
1" Curb Stop w/Box	$24,000.00	$12,000.00	$10,232.24	$13,767.76
1" HDPE Service Line	$59,400.00	$29,700.00	$25,324.79	$34,075.21
Place Salvaged Asphalt	$33,300.00	$0.00	$0.00	$33,300.00
Asphalt Surfacing (4")	$658,600.00	$0.00	$0.00	$658,600.00
Gravel Base Course (10")	$305,360.00	$0.00	$0.00	$305,360.00
Gravel Surfacing	$192,600.00	$0.00	$0.00	$192,600.00
Granular Bedding, Material	$69,480.00	$0.00	$0.00	$69,480.00
Topsoil, Seed, Fertilize & Mulch	$5,100.00	$0.00	$0.00	$5,100.00
Curb and Gutter	$30,100.00	$0.00	$0.00	$30,100.00
Sidewalk	$7,200.00	$0.00	$0.00	$7,200.00
PCC Pavement Repair/Valley Gutter	$4,500.00	$0.00	$0.00	$4,500.00
Remove & Salvage Existing Valves	$3,000.00	$1,500.00	$1,279.03	$1,720.97
Contaminated Soils	$20,000.00	$0.00	$0.00	$20,000.00
Capital Costs	$915,000.00	$457,500.00	$390,104.05	$524,895.95
Total Construction Cost	$3,277,214.00	$1,638,607.00	$746,942.24	$2,530,271.76
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$1,500.00			$27,621.29
Materials	$500.00			$9,207.10
Miscellaneous	$1,000.00			$18,414.19
Subtotal	$3,000.00			$55,242.58
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$2,530,271.76
NPW of O & M Costs				$55,242.58
Total Net Present Worth				**$2,585,514.35**
Equivalent Uniform Annual Cost				**$140,408.77**

Table 4.6.3-1 –Cost Estimate for Distribution Alternative 3

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$212,000.00	$212,000.00
2	Mill and Salvage Existing Asphalt	27,870	SqYd	$3.25	$90,577.50
3	6" PVC Water Main	20,900	Ft	$22.00	$459,800.00
4	Fire Hydrants	29	Each	$2,625.00	$76,125.00
5	6" PVC Fire Hydrant Lead	580	Ft	$24.00	$13,920.00
6	Connect to Existing Water Main	30	Each	$300.00	$9,000.00
7	6" MJ DIP Gate Valve w/Box	61	Each	$1,200.00	$73,200.00
8	6" MJ DIP Tee	43	Each	$450.00	$19,350.00
9	6" 90° MJ DIP Bend	9	Each	$350.00	$3,150.00
10	Bore & Case Watermain Under Highway/Rail Road with 12" Casing Pipe	350.0	Ft	$300.00	$105,000.00
11	Connect to Existing Service	148.0	Each	$150.00	$22,200.00
12	1" Corp Stop w/Service Saddle	148	Each	$250.00	$37,000.00
13	1" Curb Stop w/Box	148	Each	$225.00	$33,300.00
14	1" HDPE Service Line	4,890	Ft	$15.00	$73,350.00
15	Place Salvaged Asphalt	5,020.0	Ton	$10.00	$50,200.00
16	Asphalt Surfacing (4")	6,480.0	Ton	$185.00	$1,198,800.00
17	Gravel Base Course (10")	6,970.0	Ton	$22.00	$153,340.00
18	Gravel Surfacing	2,790.0	Ton	$20.00	$55,800.00
19	Granular Bedding, Material	6,500	Ton	$12.00	$78,000.00
20	Topsoil, Seed, Fertilize & Mulch	6.8	Acres	$1,500.00	$10,200.00
21	Curb and Gutter	1,770.0	Ft	$21.50	$38,055.00
22	Sidewalk	420.0	SqYd	$18.00	$7,560.00
23	PCC Pavement Repair/Valley Gutter	140.0	SqYd	$45.00	$6,300.00
24	Remove & Salvage Existing Valves	50.0	Each	$100.00	$5,000.00
25	Contaminated Soils	200.0	CuYd	$100.00	$20,000.00
	Construction Subtotal				$2,851,227.50
	Contingencies (15%)				$428,000.00
	Construction Total				**$3,279,227.50**
	Design Engineering				$253,000.00
	Bidding and Contract Documents				$5,500.00
	Construction Engineering				$278,300.00
	Administration & Legal				$105,000.00
	Total Project Cost				**$3,921,027.50**

Table 4.6.3-2 - EUAC for Distribution Alternative 3

Item Description	Cost	SV	PW SV	NPW
Mobilization	$212,000.00	$0.00	$0.00	$212,000.00
Mill and Salvage Existing Asphalt	$90,577.50	$45,288.75	$38,617.10	$51,960.40
6" PVC Water Main	$459,800.00	$229,900.00	$196,032.61	$263,767.39
Fire Hydrants	$76,125.00	$38,062.50	$32,455.38	$43,669.62
6" PVC Fire Hydrant Lead	$13,920.00	$6,960.00	$5,934.70	$7,985.30
Connect to Existing Water Main	$9,000.00	$0.00	$0.00	$9,000.00
6" MJ DIP Gate Valve w/Box	$73,200.00	$36,600.00	$31,208.32	$41,991.68
6" MJ DIP Tee	$19,350.00	$9,675.00	$8,249.74	$11,100.26
6" 90° MJ DIP Bend	$3,150.00	$1,575.00	$1,342.98	$1,807.02
Bore & Case Watermain Under Hig	$105,000.00	$52,500.00	$44,766.04	$60,233.96
Connect to Existing Service	$22,200.00	$0.00	$0.00	$22,200.00
1" Corp Stop w/Service Saddle	$37,000.00	$18,500.00	$15,774.70	$21,225.30
1" Curb Stop w/Box	$33,300.00	$16,650.00	$14,197.23	$19,102.77
1" HDPE Service Line	$73,350.00	$36,675.00	$31,272.28	$42,077.72
Place Salvaged Asphalt	$50,200.00	$0.00	$0.00	$50,200.00
Asphalt Surfacing (4")	$1,198,800.00	$0.00	$0.00	$1,198,800.00
Gravel Base Course (10")	$153,340.00	$0.00	$0.00	$153,340.00
Gravel Surfacing	$55,800.00	$0.00	$0.00	$55,800.00
Granular Bedding, Material	$78,000.00	$0.00	$0.00	$78,000.00
Topsoil, Seed, Fertilize & Mulch	$10,200.00	$0.00	$0.00	$10,200.00
Curb and Gutter	$38,055.00	$0.00	$0.00	$38,055.00
Sidewalk	$7,560.00	$0.00	$0.00	$7,560.00
PCC Pavement Repair/Valley Gutte	$6,300.00	$0.00	$0.00	$6,300.00
Remove & Salvage Existing Valves	$5,000.00	$2,500.00	$2,131.72	$2,868.28
Contaminated Soils	$20,000.00	$0.00	$0.00	$20,000.00
Capital Costs	$1,069,800.00	$534,900.00	$456,101.98	$613,698.02
Total Construction Cost	$3,921,027.50	$1,029,786.25	$878,084.77	$3,042,942.73
B. Operation and Maintenance Costs for Proposed Construction				
Item	**Annual Cost**			**NPW**
Labor	$1,500.00			$27,621.29
Materials	$500.00			$9,207.10
Miscellaneous	$1,000.00			$18,414.19
Subtotal	$3,000.00			$55,242.58
C. Equivalent Uniform Annual Cost				
NPW Construction Cost				$3,042,942.73
NPW of O & M Costs				$55,242.58
Total Net Present Worth				**$3,098,185.31**
Equivalent Uniform Annual Cost				**$168,249.84**

The evaluation provided in Tables 5.4-2 & 5.4-3 is for the City to install OSHA updates on the Ground Water Storage Tank and Paint the Ground Water Storage Tank and Elevated Water Tank. Also, the 4" and 6" Cast Iron Pipes will be replaced with 6" PVC water mains and additional valves would be added throughout the city to replace broken valve.

Table 5.4-1 - Option 1: Recommendation for Water System Upgrades (Paint Water Tower, Paint Ground Storage Tank Replace Booster Pumps, 6" Mains)

Selection of Improvements	Total Costs	EUAC
Do Nothing	$0.00	$0.00
Paint 250,000 Gallon Ground Storage Tank & New Booster Pump House	$466,325.00	$27,116.43
Paint Existing 150,000 Gallon Elevated Storage Tank	$268,300.00	$12,624.39
Replace all 4" Cast Iron Pipe, Asbestos Cement Pipes, PVC and 6" Cast Iron Pipe with 6" PVC and add additional valves	$3,921,027.50	$168,249.84
Total Costs of Alternatives	**$4,655,652.50**	**$207,990.66**

Table 5.4-2 – Option 1: Impact on User Fees (Painted Ground Storage Tank, Paint Water Tower, Place 6" Mains)

	No Grant	50% Grant
Gross Revenue from Water Fees	$110,850.00	$110,850.00
Water Purchase	$95,984.00	$95,984.00
Proposed O & M Cost	$15,500.00	$15,500.00
Retirement of Current Debt	$0.00	$0.00
Short Lived Asset Replacement	$1,500.00	$1,500.00
Net Income	**-$2,134.00**	**-$2,134.00**
Retirement of Debt Incurred with This Project	$193,356.30	$96,678.15
Amount to Be Set Aside for Debt Reserves	$19,335.63	$9,667.81
Remaining Surplus/Deficit After Project	**-$214,825.93**	**-$108,479.96**
Increase of Water Charge	$27.54	$13.91
Number of Accounts	650	650
Added Revenue	$214,825.93	$108,479.96
Surplus After Increase in Water Charge	**$0.00**	**$0.00**

5.5 IMPACT ON USER FEES

A summary of the alternatives, project costs, and potential user fees is given in Table 5.5-1, based on the needs of the community.

Table 5.5-1 - Summary Alternative Costs and Associated User Fees

Alternatives	Project Cost	Monthly Rate (No Grant)	Monthly Rate (50% Grant)
Impact on User Fees (Painted Ground Storage Tank, Water Tower, Place 6" PVC with Additional Vavles)	$4,655,652.50	$58.29	$44.66

As the summary shows, the water rates would be required to increase. This would result in an increase of $13.91 per month if 50% grant funding is obtained. Table 5.5-2 breaks down different grant/loan combinations and show how the water rates will be affected for the selected alternative.

Table 5.5-2 - Water Rate Analysis

Funding Percentages	10/90	20/80	30/70	40/60	50/50	60/40	70/30	80/20
grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan	grant/loan
Annual O & M	$15,500	$15,500	$15,500	$15,500	$15,500	$15,500	$15,500	$15,500
Grant Amount	$465,565	$931,131	$1,396,696	$1,862,261	$2,327,826	$2,793,392	$3,258,957	$3,724,522
Loan Amount	$4,190,087	$3,724,522	$3,258,957	$2,793,392	$2,327,826	$1,862,261	$1,396,696	$931,131
Annual Loan Payment	$174,021	$154,685	$135,349	$116,014	$96,678	$77,343	$58,007	$38,671
Debt Reserves	$17,402	$15,469	$13,535	$11,601	$9,668	$7,734	$5,801	$3,867
Short Lived Asset Replacement	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Total Annual Costs	$208,423	$187,154	$165,884	$144,615	$123,346	$102,077	$80,808	$59,538
Annual Revenue	$14,866	$14,866	$14,866	$14,866	$14,866	$14,866	$14,866	$14,866
Surplus/Deficit After Project	-$193,557	-$172,288	-$151,018	-$129,749	-$108,480	-$87,211	-$65,942	-$44,672
Minimum Water Rate Increase	$24.81	$22.09	$19.36	$16.63	$13.91	$11.18	$8.45	$5.73
Current Water Rate	$30.75	$30.75	$30.75	$30.75	$30.75	$30.75	$30.75	$30.75
New Water Rate	$55.56	$52.84	$50.11	$47.38	$44.66	$41.93	$39.20	$36.48

The actual rates will be dependent upon the actual grant and loan funding that would be obtained.

Figure 3.1-1 – Existing Water System, North Side of City

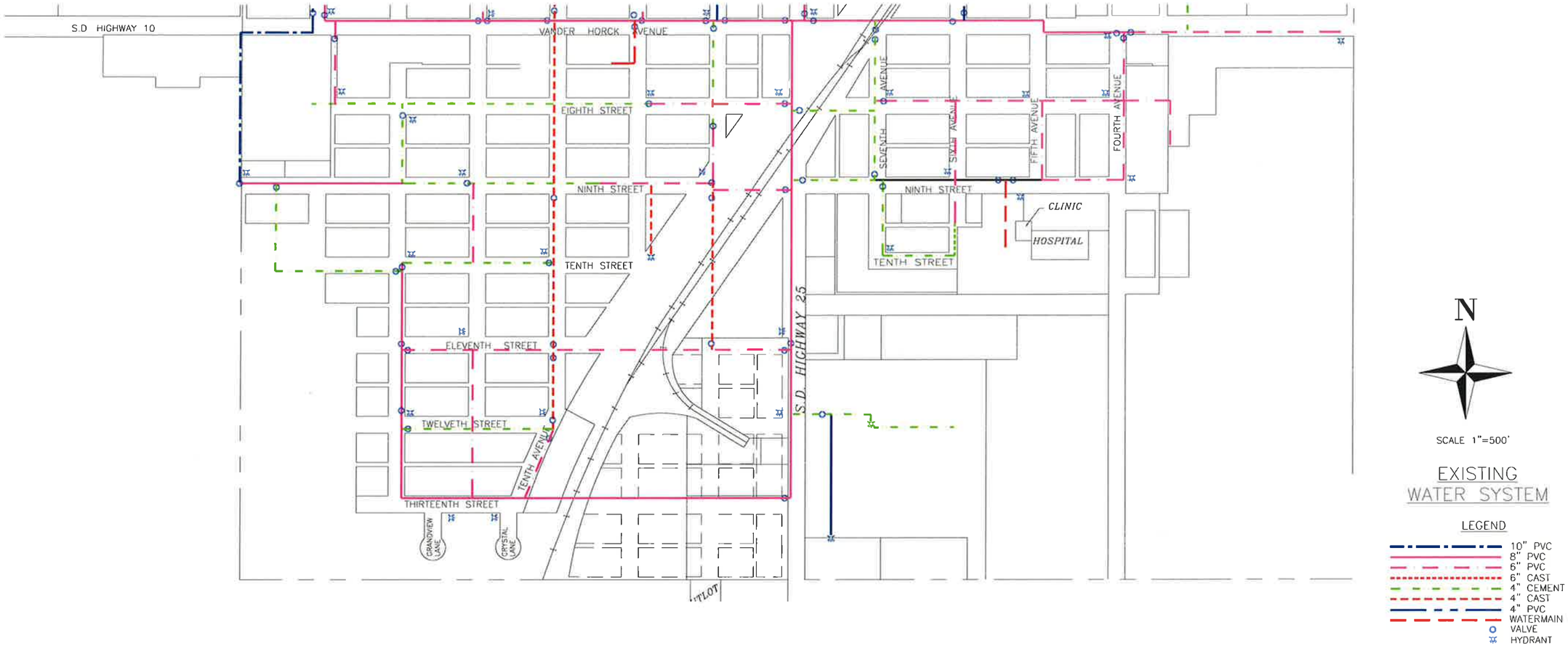


Figure 3.1-2 Existing Water System, South Side of City

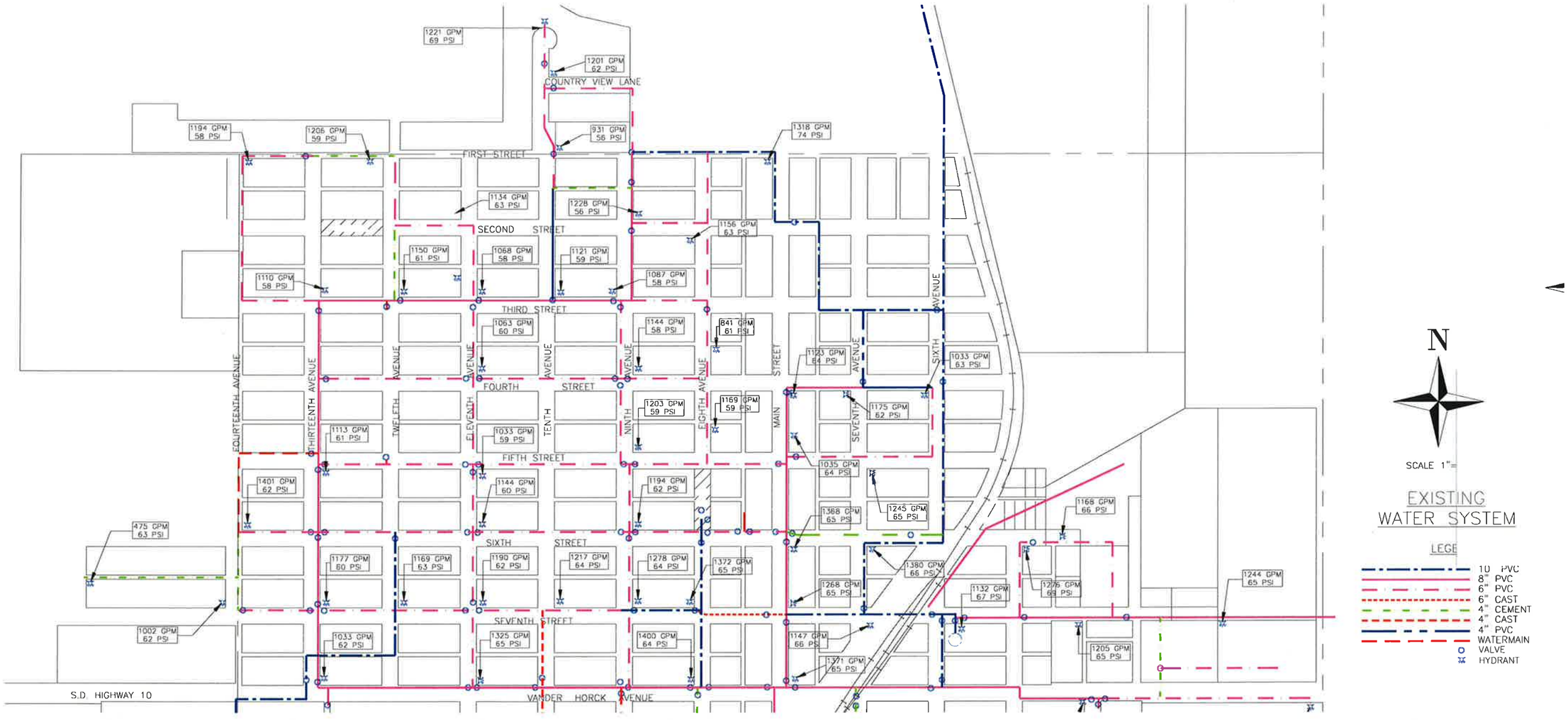


Figure 3.6.4-1 – Existing Fire Flows and Pressures under Peak Hour Demand, North Side

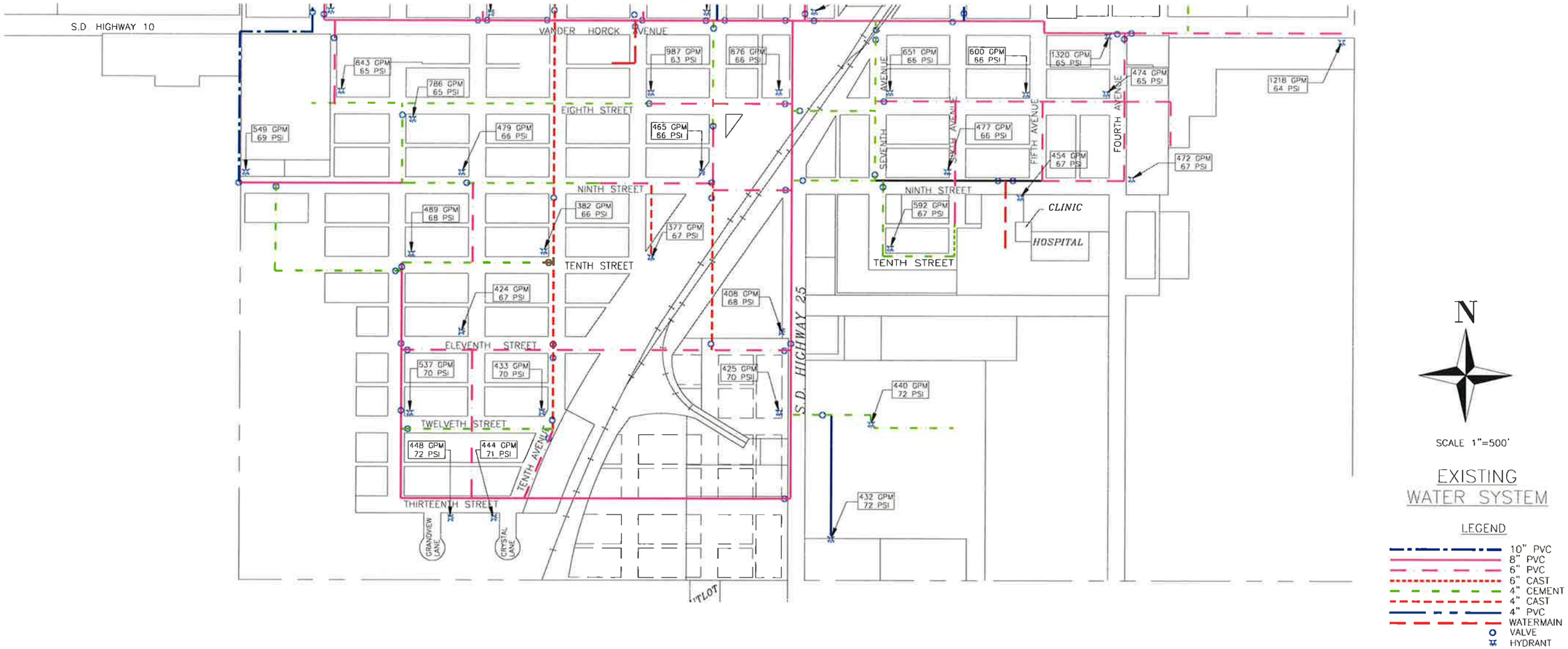


Figure 3.6.4-2 Existing Fire Flows and Pressures Under Peak Hour Demand, South Side

Figure 4.6.2-1 Proposed Alternative 2: 6" Watermain Layour, North Side

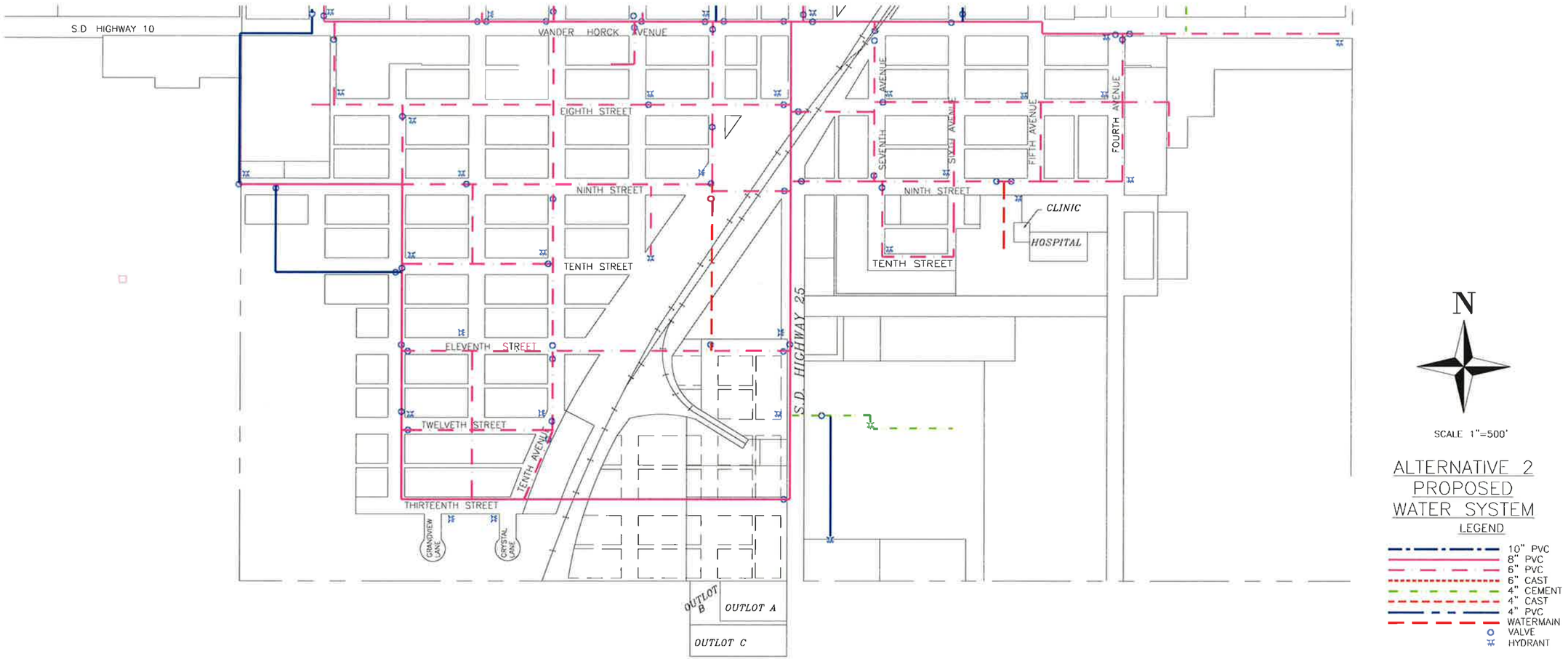


Figure 4.6.2-2 Proposed Alternative 2: 6" Watermain Layout, South Side

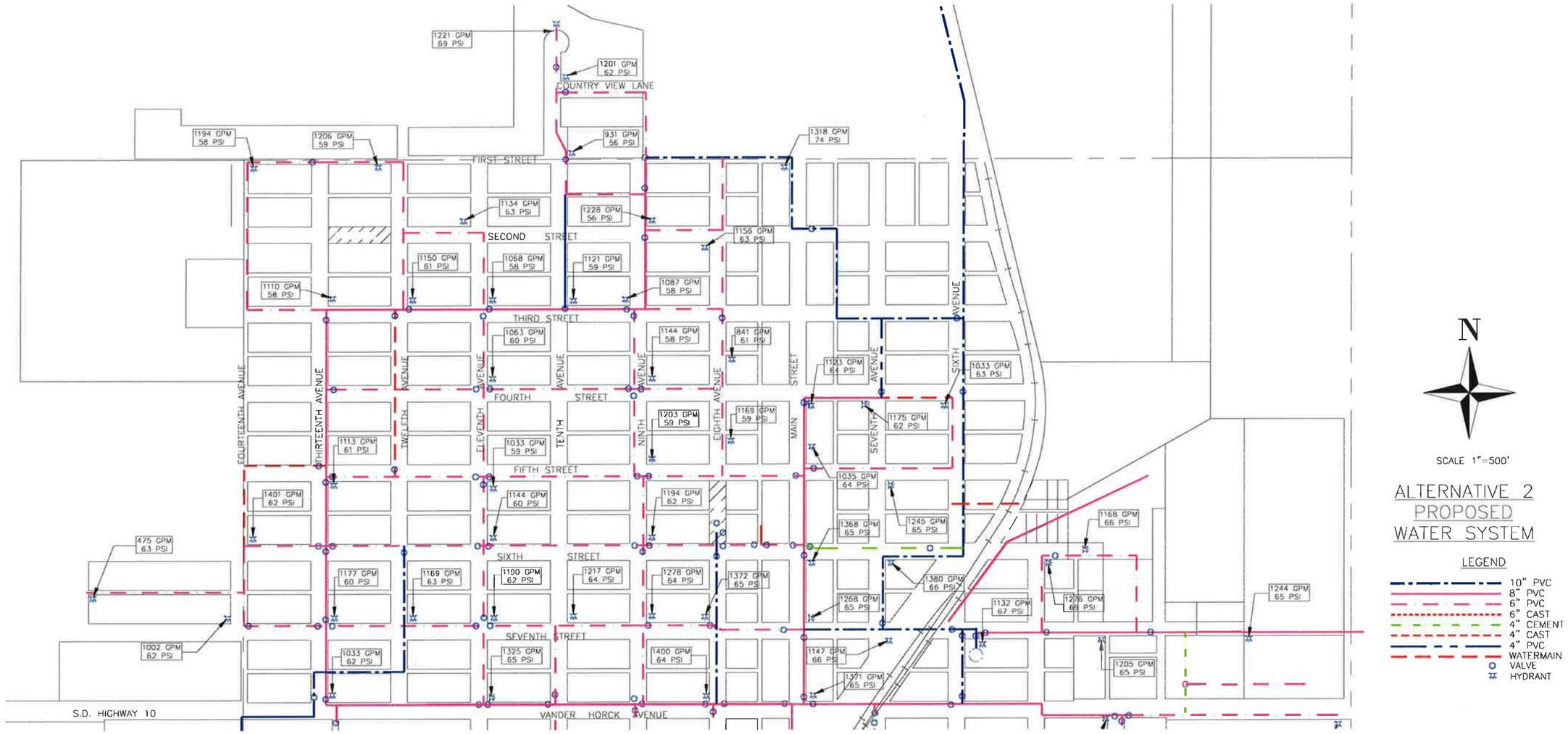


Figure 4.6.2-3 Proposed Alternative 2, Fire Flows and Pressures, North Side

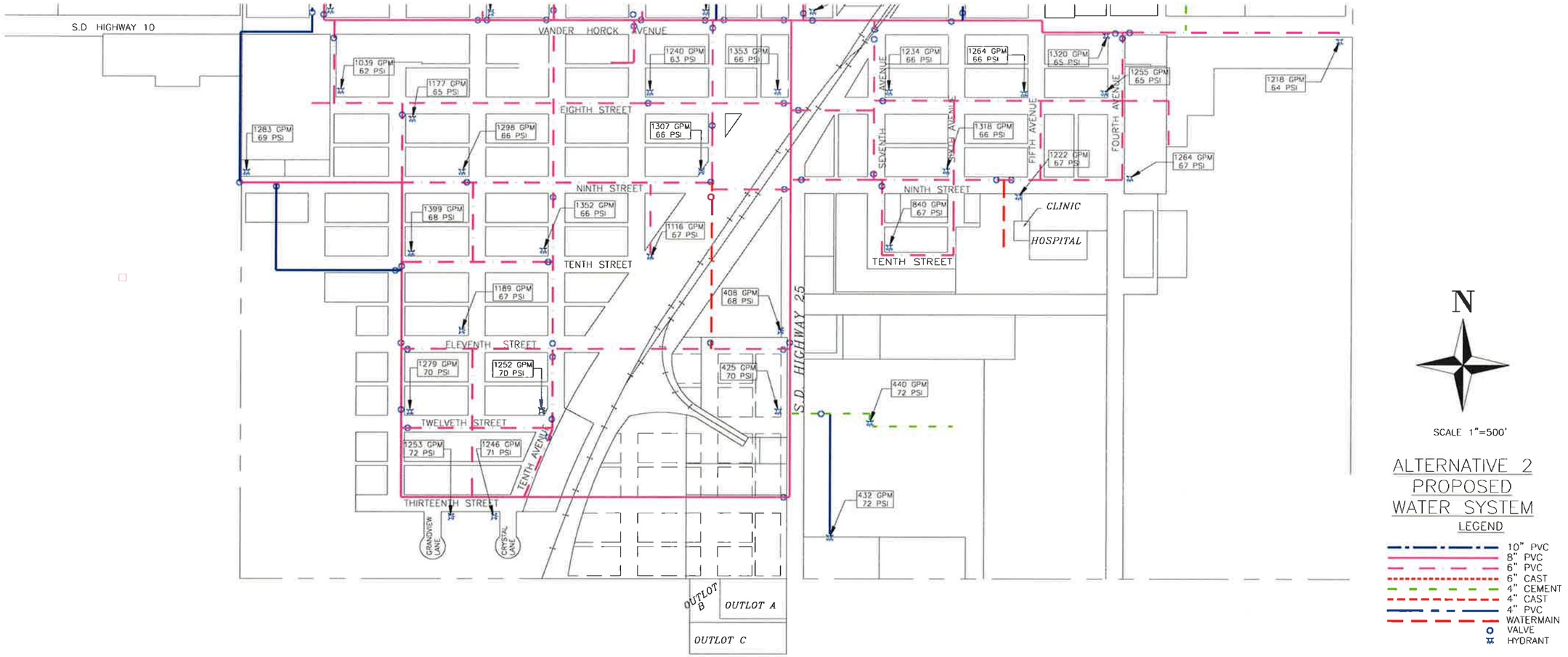


Figure 4.6.2-4 Proposed Alternative 2, Fire Flows and Pressures, South Side

Figure 4.6.3-1 Proposed Layout Alternative 3, 6" PVC System, Remove all 4" Pipe, North Side

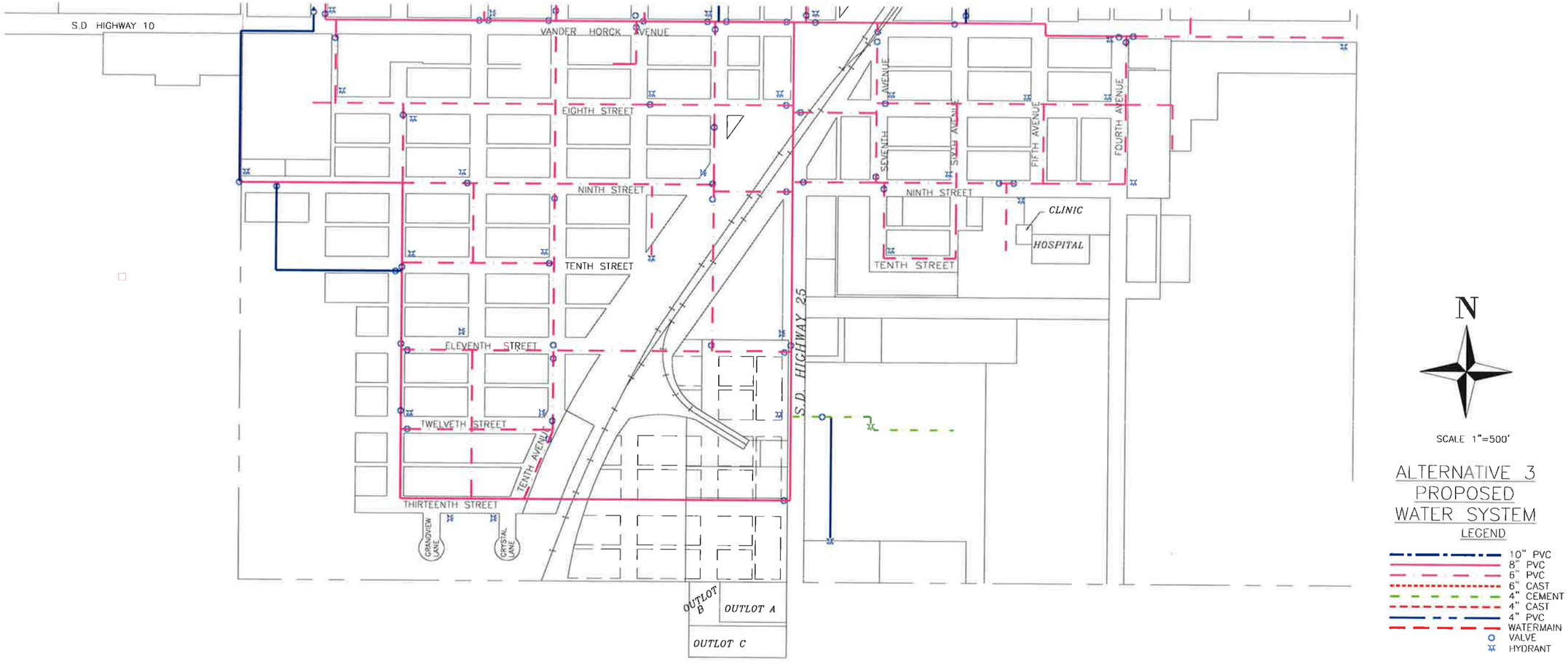


Figure 4.6.3-2 Proposed Layout Alternative 3, 6" PVC System, Remove all 4" Pipe, South Side

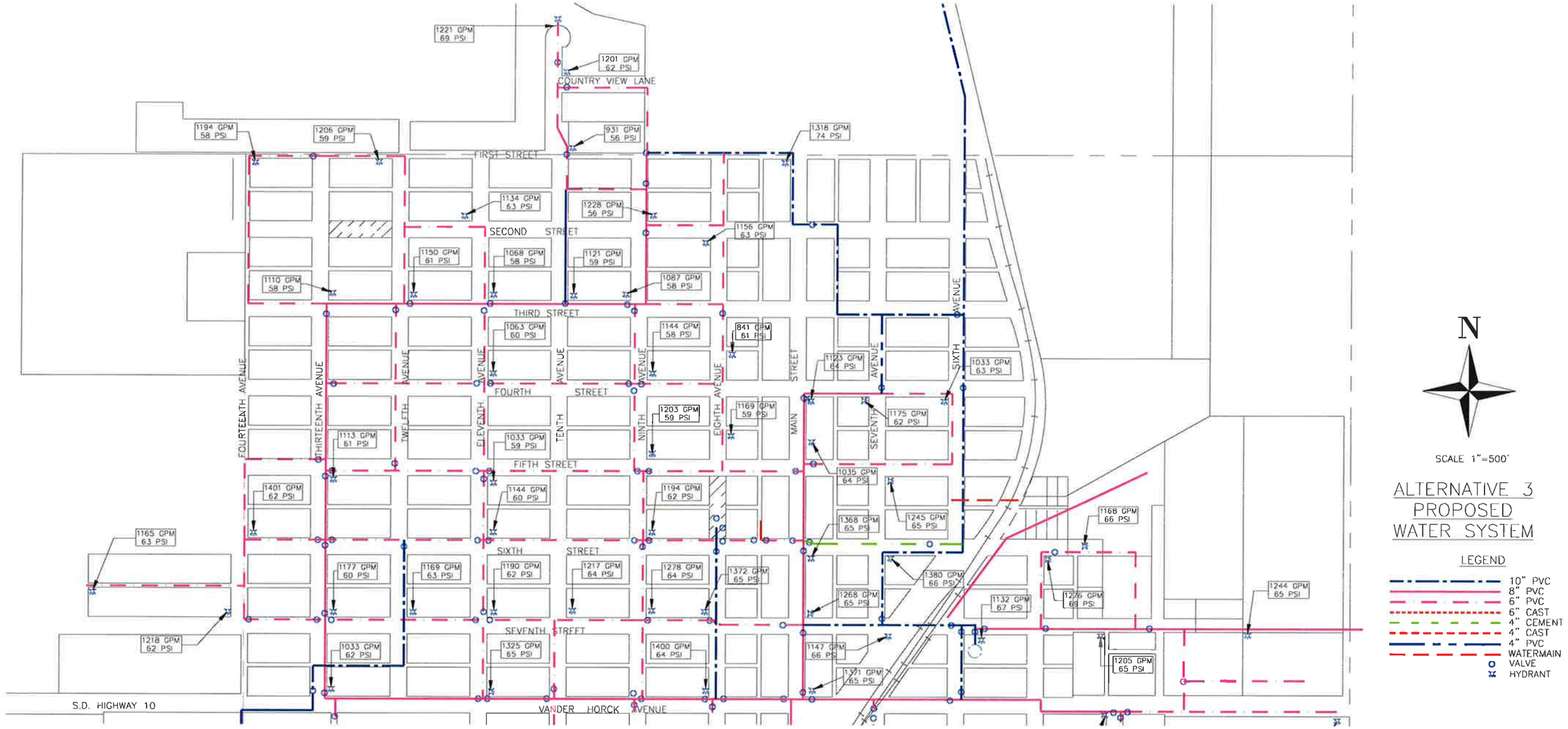


Figure 4.6.3-3 Proposed Alternative 3, Fire Flows and Pressures 6" PVC Remove All 4" Pipe, North Side

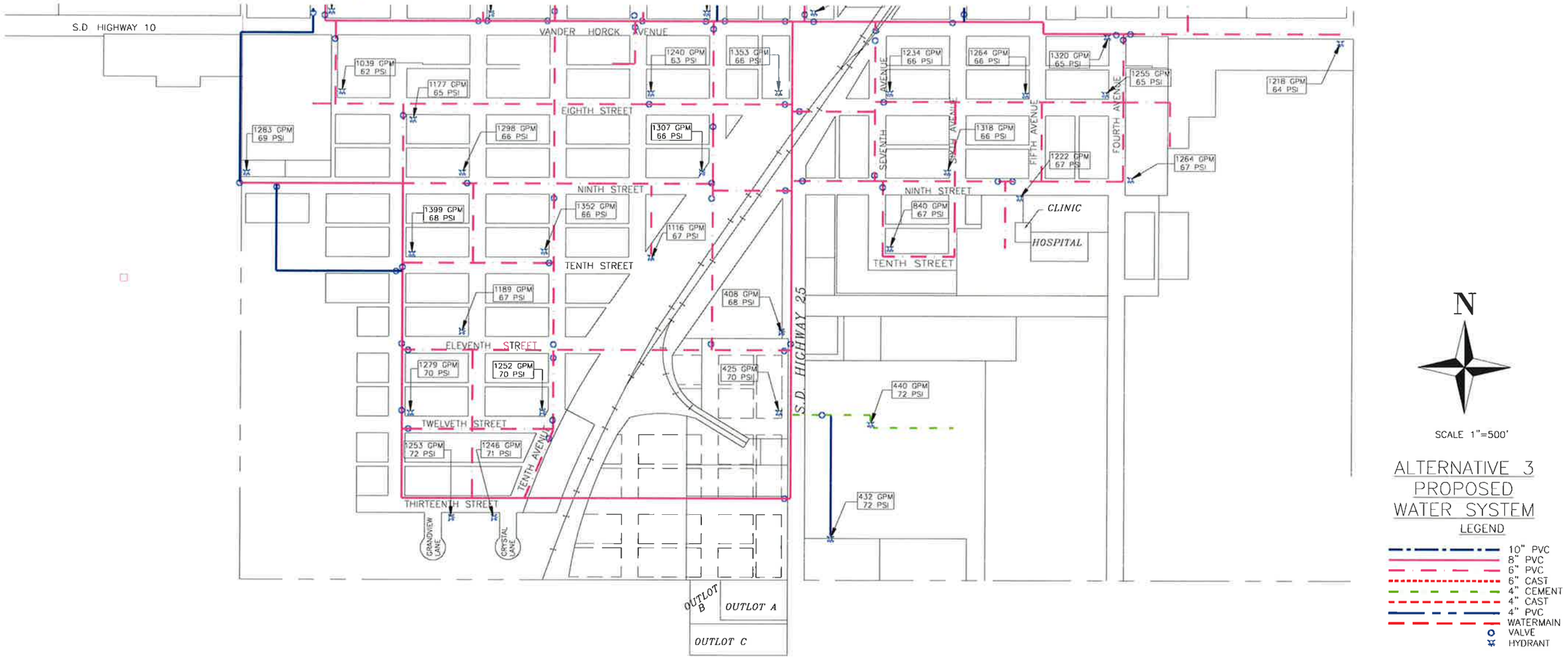


Figure 4.6.3-4 Proposed Alternative 3, Fire Flows and Pressures, 6" PVC Remove All 4" Pipe, South Side

WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: Brookings Deuel Rural Water System

Project Title:	Automatic Meter Reading System Installation Project
Funding Requested:	$250,000
Total Project Cost:	$250,000
Project Description:	The project includes installation of a meter data transmission unit on existing water meters. These will store and transmit meter readings to the Brookings Deuel office using the existing cellular network.
Alternatives Evaluated:	The No Action alternative was evaluated and rejected due to the issues with manually reading the meters. Three manufacturer's systems were evaluated and the Badger AMI System was determined to be the best fit for the Brookings Deuel system.
Implementation Schedule:	Brookings Deuel anticipates purchasing the units and beginning installation in 2016 with a project completion in 2017.
Service Population:	8,500
Current Domestic Rate:	$55.40 per 7,000 gallons usage

Interest Rate: 2.25% Term: 10 years Security: System Revenue

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If funding is provided as all loan, Brookings Deuel Rural Water System would have 1,406% coverage based on the current rate of $55.40/7,000 gallons.

50% Funding Subsidy:	$125,000 subsidy with a loan of $125,000.
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $125,000 Brookings Deuel Rural Water System would have 2,812% coverage based on the current rate of $55.40/7,000 gallons.

Engineering Review Completed By: Eric Meintsma

Financial Review Completed By: Derek Lankford

Drinking Water Facilities Funding Application

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:
Brookings Deuel Rural Water System

Address:
47602 SD Highway 28
Toronto, SD 57268

Subapplicant:

DUNS Number:

RECEIVED
DEC 31 2015
Division of Financial & Technical Assistance

Proposed Funding Package

Requested Funding	$250,000
Local Cash	0
Other:	
Other:	
Other:	
TOTAL	$250,000

Project Title: Automatic Meter Reading System Installation

Description:

Brookings Deuel Rural Water System (BDRWS) is considering improvements to their current metering system. Automatic Meter Reading (AMR) devices will be installed at each service with a Badger Beacon Cellular network. The AMR system allows usage data to be automatically recorded, transmitted, and stored for easy online access by the utility and the user. AMR systems greatly increase the ease and accuracy of measuring water use. The increased frequency of meter reading and transmission can help identify service line leaks and abnormal usage patterns, therefore reducing the water demand on the utility and preventing an unidentified leak from causing a spike in the user's bill. The instantaneous usage data also allows the utility to more easily analyze patterns to determine which areas of the system may require improvement. BDRWS plans to use a SRF loan to pay for the project. The loan will be repaid over a ten year period by increasing the minimum monthly fee for each of about 2,600 metered users by $2. The monthly utility rate for farms and rural residences is a minimum of $33 + $3.20/1,000 gal and $2.75/1,000 gal over 20,000 gal.

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Gene Wilts - General Manager	Gene P. Wilts	12-17-15
Name & Title of Authorized Signatory (Typed)	Signature	Date

Professional Consultants

Application Prepared By: Brookings-Deuel Rural Water System

Contact Person: Gene Wilts, Manager

Mailing Address: PO Box 340

City, State, and Zip: Toronto, SD 57268

Telephone Number: (605) 794-4201 Fax: (605) 794-4061

Email address: bdrws@itctel.com

Consulting Engineering Firm: DGR Engineering

Contact Person: Patrick Deering

Mailing Address: 1302 South Union Street

City, State, and Zip: Rock Rapids, IA 51246

Telephone Number: (712) 472-2531 Fax: (712) 472-2710

Email address: patrick.deering@dgr.com

Legal Counsel's Firm: Gass Law

Contact Person: Jared Gass, Attorney

Mailing Address: 212 5th Avenue

City, State, and Zip: Brookings, SD 57006

Telephone Number: (605) 692-4277 Fax: (888) 688-4378

Email address: jared@gasslawoffice.com

Bond Counsel's Firm: _____

Contact Person: _____

Mailing Address: _____

City, State, and Zip: _____

Telephone Number: _____ Fax: _____

Email address: _____

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel						
D. Other						
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$4,000					$4,000
B. Project Inspection Fees						
C. Other						
4. Construction & Improvements						
5. Equipment	$246,000					$246,000
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$250,000					$250,000
10. Contingencies						
11. Total (Lines 9 and 10)	$250,000					$250,000
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)0			
Other (Explain) Drinking Water SRF		$250,000	March 31, 2016
Other (Explain)			
Other (Explain)			
Total		$250,000	$250,000

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: January 1st

Population Served Current: 8,500 2010 8,000 2000 6,570

Top three employers within 30 miles	Number of Employees	Type of Business
South Dakota State University	2,103	Public University
Daktronics, Inc.	1,655	Electronic Signage Manufacturer
3M	800	Medical Supplies Manufacturer

Repayment Information

Interest rate you are applying for: 2.25% Term: 10

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☐ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan.
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$2,077,164	$2,018,926	$1,995,000	$2,044,875	$2,095,997	$2,148,397
Surcharge Fees						
Other (Explain)	$160,606	$217,311	$123,500	$126,588	$129,753	$132,997
Operating Expenses						
Personal Services	($471,752)	($529,106)	($521,000)	($534,025)	($547,376)	($561,060)
Chemical, Material & Supplies	($128,571)	($152,481)	($129,109)	($132,337)	($135,645)	($139,036)
Electric & Other Utilities	($136,592)	($164,246)	($143,000)	($146,575)	($150,239)	($153,995)
Other (Explain)	($532,651)	($484,898)	($419,271)	($429,753)	($440,497)	($451,509)
Operating Net Cash	$968,204	$905,506	$906,120	$928,773	$951,993	$975,794
Nonoperating Cash Flow						
Interest Revenue	$12,981	$13,887	$14,000	$14,350	$14,709	$15,077
Transfers In (Explain)						
Fixed Asset Purchases						
Transfers Out (Explain)						
Principal Debt Payments	($276,894)	($288,161)	($297,100)	($331,127)	($314,637)	($151,214)
Interest Debt Payments	($205,440)	($194,173)	($185,234)	($179,059)	($167,493)	($156,575)
Other (Explain)						
Nonoperating Net Cash	($469,353)	($468,447)	($468,334)	($495,836)	($467,421)	($292,712)
Increase (Decrease) Cash	$498,851	$437,059	$437,786	$432,937	$484,572	$683,082
Beginning Cash Balance	$225,058	$723,909	$1,160,968	$1,598,754	$2,031,691	$2,516,263
Ending Cash Balance	$723,909	$1,160,968	$1,598,754	$2,031,691	$2,516,263	$3,199,345
Restricted Balance						
Unrestricted Balance						

Explanations

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: ☐ Incorporated Municipality or Sanitary District

or

☒ Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic & Pasture	$33.00	$33.00	1,955	
~~Business~~ Leased Community	$16.00	$16.00	424	
Other: Bulk Community	$23.00	$23.00	122	
Other:				

Are fees based on usage or flat rate? Usage - $3.20 per 1,000 gallons for Domestic

When is proposed fee scheduled to take effect? NA

When did the current fee take effect? July 1, 2015

What was the fee prior to the current rate? $31 minimum plus $3.10/1000 gal

Four Largest Customers	Type of Business	% of System Revenue

Property Tax Information

(Complete section only if General Obligation bond is pledged to repay your loan.)

Three year valuation trend:

Year	_____	_____	_____
Assessed Valuation	_____	_____	_____

Three year levies and collection trend:

Year	_____	_____	_____
Amount Levied	_____	_____	_____
Collected	_____	_____	_____

Five Largest Taxpayers	Description	Assessed Valuation
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Comments:

General Fund Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Sales Tax Information

(Complete section only if sales tax is pledged to repay your loan.)

Sales tax revenue history for the most current fifteen months:

Month/Year	Amount Collected

Comments:

Sales Tax Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Facilities Plan Checklist

Before submitting the application, please take a few moments to complete the following checklist. Addressing these items prior to submitting the application will expedite the review process.

Drinking Water Facilities Plan document can be found at http://denr.sd.gov/dfta/wwf/dwsrf/dwfunding.aspx

Checklist of SRF Facilities Plan Requirements

Have the following items been addressed?

- Submission of a Facilities Plan to the department that addresses those items found in the Water Facilities Plan document. [x]
- A public hearing held discussing the project and the use of an SRF loan to finance the project. [ ]
- Minutes of the public hearing prepared and submitted to the department's engineer for inclusion into the final Facilities Plan. [ ]
- The affidavit of publication of the public hearing received and submitted to the department's engineer for inclusion into the final Facilities Plan. [ ]
- The four review agencies contacted and responses received for inclusion into the final Facilities Plan. [ ]
- The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. [ ]

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$250,000
Treatment	
Storage	
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$250,000

Gene Wilts - General Manager

Name & Title of Authorized Representative

Gene P. Wilts

Signature of Authorized Representative

12-17-15

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

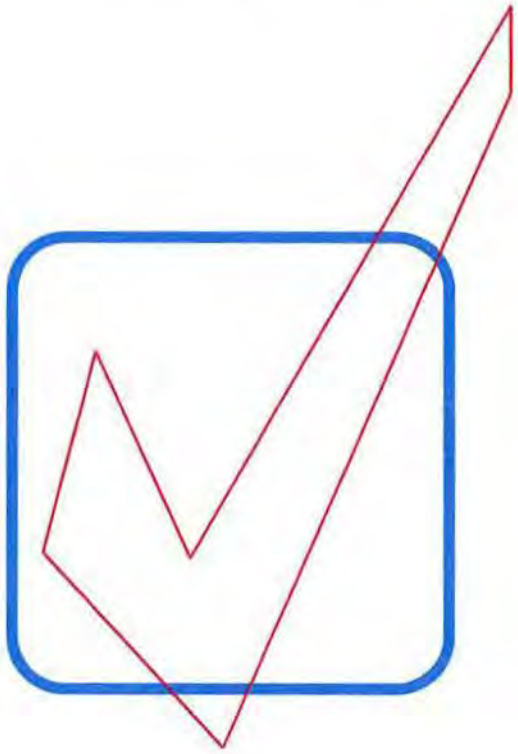
Gene Wilts / General Manager
Name & Title of Authorized Representative

Gene P. Wilts
Signature of Authorized Representative

12-17-15
Date

☐ I am unable to certify to the above statements. Attached is my explanation

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: Brookings Deuel Rural Water System

Prepared by: Gene Wilts, General Manager

PO Box 340

Toronto, SD 57268

Phone #: (605) 794-4201

Date: 12-17-15

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µ***g/L:*** micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** 1,595,000 gal.	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 3,100,000 gal.	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 3,800,000 gal.	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 19% higher	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** 16 hours	☑	☐	☐	☐
Have you been able to provide adequate volumes of water during drought cycles?	☑	☐	☐	☐
Have you had to restrict usage at any time for any reason? ***Please specify:***	☑	☐	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:***	☐	☑	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.***	☐	☑	☐	☐
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☑ ***growing,*** ☐ ***declining, or*** ☐ ***stable.***	☑	☐	☐	☐
Does your source have additional water available for appropriation?	☑	☐	☐	☐
Do you have a water right? ***Water right permit number(s):***	☑	☐	☐	☐
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☑	☐	☐	☐
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☑	☐	☐	☐
Do you have a contract to purchase water? ***If yes, with whom?*** Joint Wellfield Inc.	☑	☐	☐	☐
Are you currently staying within your contract?	☑	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☑	☐	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☑	☐	☐	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☑	☐	☐	☐
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** 60'-150'	☑	☐	☐	☐
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** Big Sioux, Coteau,Pleistocene	☑	☐	☐	☐
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☑	☐	☐	☐

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☐ **Yes** ☑ **No**

(If you checked "No", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☐	☑
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☐	☑
Are repair parts available?	☐	☐	☐	☑
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:***	☐	☐	☐	☑
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☐	☑
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☐	☑
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:***	☐	☐	☐	☑
Do you have the capability to add coagulant before the filter?	☐	☐	☐	☑

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☑	☐	☐	☐
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** 1976-2006	☑	☐	☐	☐
Is your well(s) constructed according to current South Dakota regulations?	☑	☐	☐	☐
Do you have a source water protection plan?	☑	☐	☐	☐
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☑	☐	☐	☐

Disinfection

Do you disinfect? ☑ **Yes** ☐ **No** ***(If "No", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** vacuum heads and injector ***How often?*** _____ ***Disinfectant used:*** chlorine	☑	☐	☐	☐
Do you have back-up equipment? ***Type:*** vacuum heads and injector	☑	☐	☐	☐
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** 10 hours	☑	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** 1.2 mg/. ***Total Chlorine Residual:*** _____ (if using chloramines)	☑	☐	☐	☐

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☑
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☑

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☑	☐	☐	☐
Are chemicals used for treatment properly stored and secure?	☑	☐	☐	☐
Does the water system track chemical usage? (i.e. a sudden	☑	☐	☐	☐

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping

Condition of Pumping Equipment	**Yes**	**No**	**Unknown**	**NA**
Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** annually	☑	☐	☐	☐
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☑	☐	☐	☐
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☑	☐	☐	☐
Standby/Emergency Power Equipment	**Yes**	**No**	**Unknown**	**NA**
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☑	☐	☐	☐
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☑	☐	☐	☐
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☑	☐	☐	☐

Infrastructure - Storage

Storage Capacity	**Yes**	**No**	**Unknown**	**NA**
Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:*** _____	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** _____	☐	☐	☐	☑
Security Measures	**Yes**	**No**	**Unknown**	**NA**
Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☑	☐	☐	☐
Are access hatches locked?	☑	☐	☐	☐
Is the tank and the immediate surrounding area fenced?	☐	☑	☐	☐
Control Systems				
Is there a high and low water level signal system to control the pumps?	☑	☐	☐	☐

Is there a drain valve or hydrant to allow for draining of the tank?	☑	☐	☐	☐
Tank Maintenance	**Yes**	**No**	**Unknown**	**NA**
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☑	☐	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☑	☐	☐	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:*** semi-annually	☑	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☑	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☑	☐	☐	☐
Are all valves exercised and lubricated periodically?	☐	☑	☐	☐
Is the system free of severe "water hammer" problems?	☑	☐	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☑	☐	☐	☐
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month?	☑	☐	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 14 %	☑	☐	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 50-150 psi	☐	☑	☐	☐
Do you have a routine leak detection and repair program?	☑	☐	☐	☐
Are all sources of supply and customers metered?	☑	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☑	☐	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☑	☐	☐	☐

Are any inspections for cross-connections performed?	☐	☑	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☑	☐	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☐	☐	☐	☑
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** 30%	☐	☑	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☑	☐	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☑	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☑	☐	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** 20 ***Most common complaint:*** Class II Water Treatment	☑	☐	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☑	☐	☐	☐

The Management Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** Class II Water Treatment, Class II Water Distribution	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** South Dakota Rural Water, Engineer (DGR)	☑	☐	☐	☐

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☑	☐	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☑	☐	☐	☐
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications?	☑	☐	☐	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☑	☐	☐	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☑	☐	☐	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☑	☐	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☑	☐	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☑	☐	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** 10 years	☑	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☐	☑	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☑	☐	☐
Do you know what to do in the event of a violation?	☑	☐	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☑	☐	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☐	☑	☐	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☑	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☑	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** Gene Wilts/General Manager	☑	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☑	☐	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☑	☐	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☑	☐	☐	☐
Do you have written operating procedures for both routine and emergency system operations?	☑	☐	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☑	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☐	☑	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☑	☐	☐	☐

Maintenance	Yes	No	Unknown	NA
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☑	☐	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☑	☐	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☑	☐	☐	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☑	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☑	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☑	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** Depr. Res. For Cap.Impr., Tank Maintenance,	☑	☐	☐	☐
Does the system have reserve funds available in the event of an emergency?	☑	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☐	☑	☐	☐
Do you have a process for scheduling and committing to capital projects?	☑	☐	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☐	☐	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☐	☐	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** annually	☑	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☐	☑	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** $33 minimum plus $$3.20/1000 (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: over 20,000 gallons $2.75/1000	☑	☐	☐	☐
Does the rate structure assure proportionality among users?	☑	☐	☐	☐
Do you have procedures for billing and collection?	☑	☐	☐	☐
Is your billing collection rate greater than 95%?	☑	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☑	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☑	☐	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☑	☐	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☑	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☐	☑	☐	☐
Do you employ standardized accounting and tracking systems?	☑	☐	☐	☐
Do you track budget performance?	☑	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☑	☐	☐	☐
Are financial management recordkeeping systems organized?	☑	☐	☐	☐
Are controls exercised over expenditures?	☑	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☑	☐	☐	☐
Are there purchasing procedures?	☑	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☐	☑	☐	☐

Financial Spreadsheet

Complete the financial spreadsheet on the following page using the guidance presented on the reverse side of the form.

GUIDELINES:

This cash flow projection form provides a systematic method of estimating cash receipts, disbursements and balances. The entries listed on the form will not necessarily apply to every PWS, and some entries may not be included which would be pertinent to each PWS. It is suggested, therefore, that the form be adapted to each particular PWS, with appropriate changes in the entries as may be required.

Procedure: Most of the entries on the form are self-explanatory; however, the following suggestions are offered to simplify the procedure:

(1) First gather the audited financial statements, internally prepared statements or budgets and other information for the current year and the two prior years. Include the most recent audited financial statement with your self-assessment report.

(2) Complete the columns for the prior two years using actual data from your audited financial statements, if available, or your internally prepared financial statements. Keep in mind, for purposes of this analysis, it is important to use **cash** receipts and disbursements. ***Suggestion: Round amounts to the nearest dollar.***

(3) Complete the current year's column using the most recent budget information. Include all expenditures incurred by the utility.

(4) Complete the form using the suggestions in the partial form below for each entry. Be sure to include any expenditures resulting from planned plant improvement and estimate the impact of inflation on all expenditures.

(5) Item #1 (Beginning Cash on Hand) plus Item #3 (Total Cash Receipts) minus Item #6 (Total Cash Paid Out) should equal Item #7 (Ending Cash Position).

(6) Item #13 (Total Added to Reserves) plus Item #14 (Operating Cash) should equal Item #7 (Ending Cash Position).

(7) Item #1 (Beginning Cash on Hand) should equal Item #14 (Ending Cash Position) from the prior financial period.

(8) Items #8 & 9 are used together to determine the impact of the rate structure on the equivalent residential user. If industrial or business customers contribute a significant portion of the revenues, these amounts should be looked at separately. Consideration should be given to design a rate structure so that each

category of user pays its proportional share of the costs of operating and maintaining the PWS.

(9) Item #10 is used to determine to what extent a PWS's net operating income is able to cover its debt service requirements.

(10) Item #11 is used to determine to what extent a PWS's rate structure produces revenues sufficient to cover operating expenses.

(11) Item #14 is the operating cash balance at year end. The operating cash balance at the end of any financial period should be adequate to meet the cash requirements for a minimum of one month. If there is too little cash, additional cash may have to be injected or expenditures may have to be reduced. If there is excessive cash on hand, the money should be invested or otherwise deposited into interest bearing accounts (e.g., set up reserves for replacement or capital improvements, etc.)

Financial Spreadsheet

Applicant: Brookings-Deuel Rural Water System, Inc.
Completed by:
Date:

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	$723,909	$1,160,968	$1,598,754	$2,031,691	$2,516,261
2. Cash Receipts:					
a. Unmetered Water Revenue					
b. Metered Water Revenue	$2,018,926	$1,995,000	$2,044,875	$2,095,997	$2,148,397
c. Other Water Revenue					
d. Total Water Revenues (2a through 2c)	$2,018,926	$1,995,000	$2,044,875	$2,095,997	$2,148,397
e. Connection Fees	$155,481	$60,000	$61,500	$63,038	$64,614
f. Interest and Dividend Income	$13,887	$14,000	$14,350	$14,709	$15,077
g. Other Income	$61,830	$63,500	$65,088	$66,715	$68,383
h. Total Cash Revenues (2d through 2g)	$2,250,124	$2,132,500	$2,185,813	$2,240,459	$2,296,471
i. Transfers in/Additional Rev Needed					
j. Loans, Grants or other Cash					
Please specify					
3. Total Cash Receipts (2h through 2j)	$2,250,124	$2,132,500	$2,185,813	$2,240,459	$2,296,471
4. Total Cash Available (1+3)	$2,974,033	$3,293,468	$3,784,567	$4,272,150	$4,812,732
5. Operating Expenses					
a. Salaries and wages	$390,613	$382,000	$391,550	$401,339	$411,372
b. Employee Pensions and Benefits	$138,493	$139,000	$142,475	$146,037	$149,688
c. Purchased Water	$226,449	$140,000	$143,500	$147,088	$150,765
d. Purchased Power	$164,246	$143,000	$146,575	$150,239	$153,995
e. Fuel for Power Production	$0	$0	$0	$0	$0
f. Chemicals	$10,960	$11,500	$11,788	$12,083	$12,385
g. Materials and Supplies	$141,521	$117,600	$120,540	$123,554	$126,643
h. Engineering Services	$37,588	$17,600	$18,040	$18,491	$18,953
i. Contractual Services – Other	$19,989	$20,080	$20,582	$21,097	$21,624
j. Equip. Rent/Real Property	$0	$0	$0	$0	$0
k. Transportation Expenses	$48,152	$44,750	$45,869	$47,016	$48,191
l. Laboratory	$4,925	$5,600	$5,740	$5,884	$6,031
m. Insurance	$26,294	$24,000	$24,600	$25,215	$25,845
n. Regulatory Commission Expenses	$0	$0	$0	$0	$0
o. Advertising	$7,342	$7,000	$7,175	$7,354	$7,538
p. Miscellaneous	$114,159	$160,250	$164,256	$168,362	$172,571
q. Total Cash O&M Expenses (5a through 5p)	$1,330,731	$1,212,380	$1,242,690	$1,273,759	$1,305,601
r. Replacement Expenditures	$0	$0			
s. Total OM&R Expenditures (5q+5r)	$1,330,731	$1,212,380	$1,242,690	$1,273,759	$1,305,601
t. Loan Principal/Capital Lease Payments	$288,161	$297,100	$331,127	$314,637	$151,214
u. Loan Interest Payments	$194,173	$185,234	$179,059	$167,493	$156,575
v. Transfers Out					
w. Capital Purchases (specify):					
x. Other					
6. Total Cash Paid Out (5s through 5x)	$1,813,065	$1,694,714	$1,752,876	$1,755,889	$1,613,390
7. Ending Cash Position (4 - 6)	$1,160,968	$1,598,754	$2,031,691	$2,516,261	$3,199,342

Financial Spreadsheet

Applicant: Brookings-Deuel Rural Water System, Inc.
Completed by: _____
Date: _____

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts	2,536	2,550	2,575	2,600	2,625
9. Avg Annual User Charge Account (2d/8)					
10. Coverage Ratio (2h-5s)/(5t+5u)					
11. Operating Ratio (2d/5s)					
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve	$482,334	$482,334	$510,186	$482,130	$307,789
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other	$567,726	$587,367	$588,867	$590,367	$591,867
13. Total Reserves (12a through 12e)					
14. Year End Operating Cash (7 – 13)					

4 Year Projections	Last Year Actual	Current Year Budget	Year 2 Projected	Year 3 Projected	Year 4 Projected
1. Beginning Cash on Hand	For the prior period and the current year budget, use the actual cash balance. For all other years, cash on hand should equal item #14 from previous period.				
2. Cash Receipts:					
a. Unmetered Water Revenue	All cash received/estimated for water supplied to residential, commercial, industrial and public customers where the customer charge is not based on quantity, i.e., its based on diameter of service pipe, room, foot of frontage or other type units.				
b. Metered Water Revenue	all cash received/estimated for water supplied to residential, commercial, industrial and public customers where the charge is based on quantity of water delivered.				
c. Other Water Revenue	Other cash received/estimated from sale of water, e.g., sales for irrigation, sales for resale, inter- municipal sales, advalorem taxes (OM&R portion) etc.				
d. Total Water Revenues (2a through 2c)	**Self-explanatory**				
e. Connection Fees	All cash received/estimated for connection of customer service during the year.				
f. Interest and Dividend Income	All cash received/estimated on interest income from securities, loans, notes, etc., whether the securities are carried as investments or included in sinking or reserve accounts.				
g. Other Income	Other revenues collected/estimated during the period (e.g., disconnection or change in service fees, Profit on materials billed to customers, servicing of customer lines, late payment fees, rents, sales of assets, advalorem taxes (infrastructure portion) etc.).				
h. Total Cash Revenues (2d through 2g)	**Self-explanatory**				
i. Transfers in/Additional Rev Needed	Includes transfers from other funds w/i the municipality or can be used as a "plug" figure when determining the additional cash needed to cover cash needs.				
j. Loans, Grants or other Cash Injection	Includes loans or grants from financial institutions, inter-municipal loans, state or federal sources.				
3. Total Cash Receipts (2h through 2j)	**Self-explanatory**				
4. Total Cash Available (1+3)	**Self-explanatory**				
5. Operating Expenses	Use actual amounts paid when completing the prior year. Estimate the amounts for projected years based on prior year amounts, trends and other known variables (including those related to needs identified in the self-assessment.				
a. Salaries and wages	Cash expenditures made/estimated for salaries, bonuses and other consideration for work related to the O&M of the facility, including administration, and compensation for officers, directors, etc.				
b. Employee Pensions and Benefits	Paid vacations, paid sick leave, health insurance, unemployment insurance, pension plan, etc.				
c. Purchased Water	Amounts paid/estimated for cost of water purchased for resale.				
d. Purchased Power	Amounts paid/estimated for all electrical power for the utility.				
e. Fuel for Power Production	Amounts paid/estimated for fuel purchased for the production of power to operate pumps, etc.				
f. Chemicals	Amounts paid/estimated for chemicals used in the treatment and distribution.				
g. Materials and Supplies	Amounts paid/estimated for materials and supplies used for O&M of the PWS other than those under contractual services.				
h. Contractual Services - Engineering	Amounts paid/estimated to outside engineers to perform ongoing engineering work for the facility.				
i. Contractual Services - Other	Amounts paid/estimated for costs of outside accounting, legal, managerial, and other services.				
j. Rental of Equipment/Real Property	Amounts paid/estimated for costs associated w/the rental of equipment, buildings and real property.				
k. Transportation Expenses	Amounts paid/estimated for automobile, truck, equipment, and other vehicle use and maintenance.				
l. Laboratory	Self-explanatory				
m. Insurance	Amounts paid/estimated for vehicle, liability, workers' compensation and other insurance.				
n. Regulatory Commission Expenses	Amounts paid/estimated for rate cases and other activities with a regulatory commission				
o. Advertising	Amounts paid/estimated for informational, instructional and other advertising.				
p. Miscellaneous	Amounts paid/estimated for all expenses not included elsewhere (e.g. permit fees, training, etc.).				
q. Total Cash O&M Expenses (5a through 5p)	**Total of lines 5a through 5p.**				
r. Replacement Expenditures	Amounts paid/estimated for replacement of equipment to maintain system integrity.				
s. Total OM&R Expenditures (5q+r)					
t. Loan Principal/Capital Lease Payments	Include cash payments made/estimated for principal on all loans, including vehicle and equipment purchases on time payments and capital lease payments.				
u. Loan Interest Payments	Self-explanatory				

v. Transfers Out	Include cash transfers made/estimated to funds or entities outside the PWS.
w. Capital Purchases (specify):	Amount of cash outlays/estimates for items such as equipment, building, vehicle purchases, and leasehold improvements that were not a part of the initial design of the PWS infrastructure.
6. Total Cash Paid Out (5s through 5x)	Self-explanatory
7. Ending Cash Position (4 – 6)	Self-explanatory
8. Number of Customer Accounts	Use most recent system data or expected increases.
9. Ave User Charge per Customer (2d/8)	Self-explanatory
10. Coverage Ratio (2h-5s)/(5t+5u)	Measure of the sufficiency of net operating profit to cover the debt service requirements of the system. A bond covenant might require this to meet or exceed certain limits (e.g. 1.25)
11. Operating Ratio (2d/5s)	Measure of whether operating revenues are sufficient to cover OM&R expenses. An operating ratio of 1.0 is the bare Minimum for a self-supporting facility. With debt service requirements, the operating ratio would have to be higher.
12. Additions to Reserve Funds for the Year:	Do not include depreciation as a reserve unless there is actually a "depreciation' reserve that has cash set-aside for future expansion. **Include only amounts that are added to the reserve funds for the year (i.e., do not include accrued interest on CDs).**
a. Debt Service Reserve	Funds specifically set-aside to meet debt service requirements or requirements set forth in a loan Convenant/bond indenture.
b. Bond Retirement Reserve	Funds specifically set aside to retire debt as it is scheduled.
c. Capital Improvement Reserve	Funds specifically set aside to meet long-term objectives for major facility expansion, improvement and/or the construction of a new facility.
d. Replacement Reserve	Funds specifically set aside for the future replacement of equipment needed to maintain the integrity of the facility over its useful life.
e. Other	Other cash set-aside for reserve.
13. Total Added to Reserves (12a through 12e)	**Total of lines 12a through 12e.**
14. Year End Operating Cash (7-13)	**All non-reserved cash.**

Capacity Requirements for New Drinking Water System

Certificate of Approval: Obtaining a certificate of approval for a new drinking water system is required by law. More importantly, a certificate of approval shows that the drinking water system has gone through the planning process. Planning is critical for all new, as well as existing, water systems. A system that lacks technical, managerial, or financial capacity will have problems complying with all of the requirements of the 1996 Safe Drinking Water Act amendments. Since new water systems are required to complete the planning process, this will help ensure that these systems have adequate capacity and that the public will be provided with safe drinking water.

Who needs a certificate of approval?

All new community and nontransient noncommunity water systems that begin operation after October 1, 1999, are required to obtain a certificate of approval from the Department of Environment and Natural Resources (DENR) before beginning operation.

This includes water systems that do not meet the definition of community or nontransient noncommunity water system (NTNC) at start-up, but are designed to one day meet that definition. For example, a developer plats out 30 lots for homes in the development, but when the water system begins operation, there are only four homes connected to the system. Obviously, the intent is for this water system to one day be large enough to qualify as a public water system; therefore, the developer must meet all the new water system requirements.

Any system that has infrastructure in place before October 1, 1999, and then becomes a new community or NTNC water system only by the addition of new users is not required to obtain a certificate of approval.

What is the process for obtaining a certificate of approval?

DENR recommends that you apply as soon as possible to receive approval of the required documents in a timely manner. Approval may be delayed if more information is needed by the department during the review process. The following are minimum guidelines for certificate approval.

- Submit the New Water System Application and business plan no later than *90 days* before you anticipate beginning operation.
- Submit plans and specifications no later than *30 days* before the anticipated bid-letting and contract award date.
- Submit the operations and maintenance manual as soon as practicable before system start-up

Drinking Water Facilities Funding
Application Instructions

Note: This application is for Drinking Water State Revolving Fund Program and Consolidated Water Facilities Construction Program funding. This application is for drinking water projects only.

Application Cover Page (page 1)

Applicant. Name, mailing address and phone number of the entity sponsoring the project. Sub applicant is an organization who is submitting the application on behalf of an entity.

DUNS Number. The Data Universal Numbering System (DUNS) number is a nine-digit number, issued by D&B, assigned to each business location in the D&B database, having a unique, separate, and distinct operation for the purpose of identifying them. To applicant must submit documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

Proposed Funding Package. Include the amount and type of funds requested, the amount of local funds being provided, including direct public or private contributions, loans, federal funds, and water development district grants. Multi-year or phased projects should enter only the costs associated with activities for which assistance is being requested.

Project Title/Description. Provide a one line title for the project and a brief narrative describing the project. Be specific, providing the feet or miles of pipe, treatment process being utilized, capacity of the storage tanks, and so forth. Include the current monthly drinking water rate. If the rate is not a flat rate, compute the monthly rate at 5,000 gallons for municipalities or sanitary districts and at 7,000 gallons for all other water systems. Additionally, indicate whether a reserve fund has been established for the drinking water utility.

Certification. An official of the sponsoring entity, who has been authorized by resolution of the governing body to submit the application, must read and sign the application.

Professional Contacts (page 2)

Application Prepared By: Identify the entity, the individual that helped prepare the application, and the other contact information requested in case questions arise about the application.

Consulting Engineering Firm: Identify the engineering firm retained by the sponsor, the engineer's name, and the other contact information requested in case questions arise about the application.

Legal Counsel's Firm: Identify the law firm retained by the sponsor, the attorney's name, and the other contact information requested in case questions arise about the application.

Bond Counsel's Firm: This section is required only if the applicant is a political subdivision. Identify the bond counsel firm retained by the sponsor, the attorney's name, and the other contact information requested in case questions arise about the application.

Budget Sheet (page 3)

Note: Multi-year projects should enter only budget costs associated with activities for which financial assistance is being requested.

Line 1.A - Amount needed for personal services related to loan management and clerical duties.

Line 1.B - Amount needed for travel including vehicle rental.

Line 1.C - All legal fees associated with this project including bond counsel fees.

Line 1.D - Amount needed for other administration expenses, including an independent financial audit, publishing, meetings, and any other expenses expected for project administration, including planning district contracts.

Line 2 - Amounts directly associated with the acquisition of land, existing structures, and related rights_of_way.

Line 3.A - Fees for engineering bidding and design services.

Line 3.B - Fees for engineering construction inspection and audit of construction and related programs.

Line 3.C- Amounts for other technical services, such as surveys, O&M manual preparation, tests, and borings not included in Line 3.A or 3.B.

Line 4 - Amounts for the actual construction of, addition to, or restoration of a facility. Also include in this category the amounts of project improvements, such as roads, access restrictions, new trenches, landscaping, and run-off control measures.

Line 5 - Amount needed for purchase or rent equipment required for the project.

Line 6 - Amount of contracts (excluding legal, engineering, and construction) associated with the project, including sampling and laboratory services.

Lines 7 & 8 - Identify amounts for items not specifically mentioned above.

Line 9 - Sum of Lines 1 through 8.

Line 10 - Estimated amount for contingencies. Contingencies may not exceed 10% of the amount on Line 9.

Line 11 - Sum of Lines 9 and 10.

Line 12 - Funding percentage of total project costs.

Proposed Method of Financing (page 4)

Indicate the source of the secured/unsecured share of funding. If funds have been secured, indicate the amount in the "secured" column. If funds are unsecured at time of application, indicate the amount of the unsecured funds and the date funds are anticipated to be secured in the "unsecured" column. Include any remarks regarding funding in a separate narrative. Total the secured and unsecured funding amounts at the bottom of the table.

Other Funds to be Borrowed (page 4)

Provide the amount, rate, and term of other funds to be borrowed to help finance the project. Include the amount of the annual debt service and security pledged towards loan repayment. For "other," explain the source of funds along with the above mentioned items. Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information (page 5)

The following information will be used to evaluate the applicant's capacity to provide local funds for the project and the continuing operation, maintenance, and replacement of the system.

Fiscal Year - The month and date your fiscal year begins.

Population Served - Fill in population data. Estimate current year if necessary.

List the top three employers in a 30 mile radius of your service area. Also list the number of employees at the facility and the type of business.

Repayment Information (page 5)

Identify the specific rate and term of the loan for which the sponsor is applying. If the applicant is a political subdivision, specify the security pledged to repay the loan.

Documents That Must Be Submitted With The Application (page 5)

Provide a copy of the most recent audited or unaudited financial statements to include specific accounting for the utility affected by the project. If certain funds are reported in separate documents, include all reports concerning fiscal operations of the entity. If different funds are accounted for by differing fiscal years, make this notation. If the audit for the most recent year is not available, list the reason.

Provide a copy of the current year's budget, if approved by the governing board. Also include amortization schedules for all existing debt secured by proposed revenue pledged.

Provide a copy of the existing or any proposed user charge ordinance or resolution currently governing the utility department.

Provide a copy of the resolution of authorized signatory for the person or persons signing the loan agreement and payment requests. The resolution must also include the maximum loan amount requested and description of proposed project.

Submit documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database (https://www.sam.gov).

Submit the Facilities Plan, Cultural Resources Effects Assessment Summary, and Capacity Assessment Worksheets.

For Non-profit entities submit a copy of the organization's By-laws, Articles of Incorporation, and Certificate of Good Standing from the Secretary of State.

Drinking Water Fund Debt Information (page 6)

Provide the information requested in the table for each obligation pledged towards repayment. Include all required debt information requested in the table to assure an appropriate review of the applicant's finances.

Drinking Water Fund Cash Flow Information (page 7)

Note: Enter negative numbers for cash out activities.

Complete the Utility Cash Flow table. Obtain prior years information from previous utility audits. The Current Year column should contain information from the system's current year budget and expenditures. The Future Year column should contain anticipated cash flow information for the utility's next three full fiscal years of operation.

Provide the total balance for each restricted account or activity. Utilize the explanation section below to describe numbers inputted in the "other" sections and any other pertinent information.

(page 8)

Restricted Funds Breakdown: Provide a the balances for each restricted account or activity, identify the activity to be completed with the funding, and specify the method used to restrict the funds (*i.e.* governing board resolution, board motion, by-laws, etc.).

Drinking Water Fees: Check whether the sponsor is an incorporated municipality, sanitary district or other system. Municipalities and Sanitary Districts provide rate information based on 5,000 gallons (670 cubic feet) per month. All Other Systems provide rates based on 7,000 gallons (935 cubic feet) per month.

Fill in the current monthly rate being charged to domestic and business users to include individual households and farmsteads. If fees are billed quarterly, calculate the monthly rate. Include the proposed new monthly rate. Complete the information for the total number of domestic and business hookups which will be served system wide. Provide the current average monthly usage by business, domestic, and other customers and specify either gallons or cubic feet. If there is a special rate being charged for users other than business and domestic hookups, provide information about that rate, the number of customers for which the rate applies, and the user's average usage.

Indicate whether fees are calculated on the amount used or on a flat rate.

Furnish dates for when the current rate was adopted, when the proposed fee schedule will take effect, and what the rate was prior to the current rate.

Provide the four largest customers, the type of business, and the percentage of system revenues.

Property Tax Information (page 9)

Note: Fill out this section only if a general obligation bond is being pledged towards repayment of the loan.

The property tax information will be used to evaluate the applicant's ability to repay the loan. The purpose of this section is to evaluate a borrower's tax base and customers in order to assess the condition of the community.

Provide the assessed valuation and full and true valuation for the current and last two years.

Provide the amount levied and collected for the most recent three years for which data is available. Indicate any penalties, interest charged, or late payments.

List the five largest taxpayers within the system's service area and describe the type of property involved and the assessed valuation.

General Fund Debt Information (page 10)

Note: Fill out this section only if a general obligation bond is being pledged towards repayment of the loan.

Provide the information requested in the table for each obligation pledged towards repayment. Include all required debt information requested in the table to assure an appropriate review of the applicant's finances.

Sales Tax Information (page 11)

Note: Fill out this section only if a sales tax is being pledged towards repayment of the loan.

The sales tax information will be used to evaluate the applicant's ability to repay the loan. Provide the amount of sales tax collections by month for each of the last fifteen months.

Sales Tax Debt Information (page 12)

Note: Fill out this section only if a sales tax is being pledged towards repayment of the loan.

Provide the information requested in the table for each obligation to which sales tax has been pledged towards repayment.

Facilities Plan Checklist (page 13)

The Facilities Plan Checklist is provided for your convenience. Please review the checklist and make sure that the required steps have been taken to ensure that an adequate Facilities Plan has been prepared.

Drinking Water Facilities Plan document can be found at http://denr.sd.gov/dfta/wwf/dwsrf/dwfunding.aspx

Certification of Drinking Water Needs Categories (page 14)

Form is self-explanatory.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters (page 15)

Under Executive Order 12549, an individual or organization debarred or excluded from participation in federal assistance or benefit programs may not receive any assistance award under a federal program, or a sub-agreement thereunder for $25,000 or more.

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or sub-agreement participant thereunder must certify to or provide an explanation why they cannot. For further details, see 40 CFR 32.510, Participants' responsibilities.

Capacity Assessment Worksheets (pages 16 - 37)

All applicants must complete the Capacity Assessment for the Drinking Water Program to determine the applicant's technical, managerial, and financial capacity to operate its system.

For more information please contact the Drinking Water Program at (605) 773-3754.

RECEIVED
DEC 14 2015
Division of Financial
& Technical Assistance

Letter of Transmittal

DGR ENGINEERING

TO: Eric Meintsma, PE
Natural Resource Engineering Specialist
Dept. Of Environment & Natural Resources
Water Resources Assistance Program
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

DATE: December 11, 2015

RE: Drinking Water SRF Application Brookings Deuel Rural Water System – Automatic Meter Reading System Installation

DGR PROJECT NO.: 800209

We are sending you attached:

Copies	Description
1	Cultural Resources Effects Assessment Summary
1	Location Map of AMR System Installation
1	Brookings Deuel Rural Water Distribution System Map

THESE ARE TRANSMITTED as checked below:

[ ] For approval
[ ] For your information/file
[ ] As requested
[x] For review and comment
[ ] For your signature
[ ] _____

REMARKS:

Eric,

Attached is the Cultural Resources Effects Assessment Summary. Please review and provide comment as per the requirements of the Drinking Water SRF loan application.

Thank you,

DGR Engineering

By _____
Peter C. Baudhuin, EI

DGR Engineering — 1302 South Union Street — P.O. Box 511 — Rock Rapids, IA 51246
phone: 712.472.2531 — fax: 712.472.2710 — dgr.com

RESOLUTION NO. 1-2016

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, Brookings Deuel Rural Water System, a nonprofit corporation organized and existing under the laws of the State of South Dakota (the "Corporation"), has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to Automatic Meter Reading System Installation (the "Project"); and

WHEREAS, the Corporation has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the Corporation and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the Corporation as follows:

1. The Corporation hereby approves the submission of an Application for financial assistance in an amount not to exceed $250,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. Gene Wilts, General Manager is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. Gene Wilts, General Manager is hereby designated as the authorized representative of the Corporation to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at Toronto, South Dakota, this 19 day of January 2016

APPROVED:

BY: [signature]
Chairman (Title)

(Seal)

Attest: [signature]
Secretary (Title)

Affidavit of Publication

STATE OF SOUTH DAKOTA, County of Hamlin, ss

LeeAnne Dufek of said County and State being first duly sworn, on her oath says: that The Estelline Journal is a weekly newspaper of general circulation, printed and published in Estelline in said County and State by LeeAnne Dufek, that the said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said for fifty consecutive weeks prior to the publication of the notice herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; and has been such newspaper during the time hereinafter mentioned; and that I, LeeAnne Dufek, the undersigned, am publisher of said newspaper, in charge of the advertising department thereof and have personal knowledge of all facts stated in this affidavit and that the advertisement headed:

Brookings-Deuel RWS Notice of Hearing

A printed copy of which is hereto attached, was printed and published in the regular and entire issue of said newspaper and not in supplement, once each week for 1 successive weeks, the first publication made on the 6th day of Jan., 2016, and the last publication on the 6th day of Jan., 2016.

The 1st publication made on the 6th day of Jan. 2016.
The 2nd publication made on the ____ day of _____2016.
The 3rd publication made on the ____ day of _____ 2016.
The 4th publication made on the ____ day of _____ 2016.
The 5th publication made on the ____ day of _____ 2016.
The 6th publication made on the ____ day of _____ 2016.
The 7th publication made on the ____ day of _____ 2016.

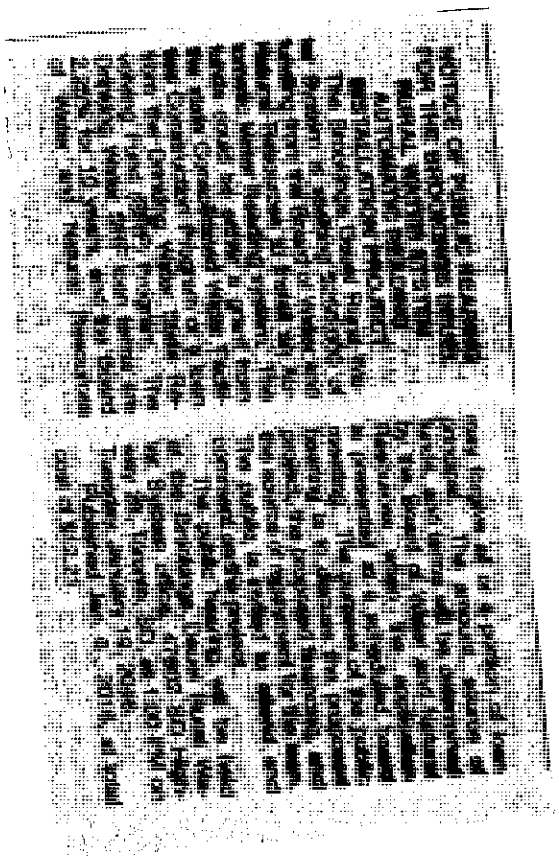
The full amount of the fees for the publication of the annexed notice is $ 12.21 and insures solely to the benefit of said publisher; that no agreement or understanding for division thereof has been made with any person and that no part thereof has been agreed to be paid to any person whomsoever.

LeeAnne Dufek

Subscribed and sworn before me this 28 day of Jan, 2016.

Notary Public

My commission expires **My Commission Expires September 12, 2017**



AFFIDAVIT OF PUBLICATION

Buffalo Ridge Newspapers, LLC
Publishers of the

Hendricks Pioneer

202 South Main Street
PO Box 5
Hendricks, MN 56136

STATE OF MINNESOTA
COUNTY OF LINCOLN

Chuck R. Hunt, being first duly sworn, on oath states as follows:

1) I am the publisher of the *Hendricks Pioneer*. I have personal knowledge of the facts stated in this Affidavit, which is made pursuant to Minnesota Statutes §331A.07.

2) The newspaper has complied with all of the requirements to constitute a qualified newspaper under Minnesota law, including those requirements found in Minnesota Statutes §331A.02.

3) The dates of the month and the year and day of the week upon which the attached public notice was published in the newspaper are as follows:

Wednesday, the 6th day of January 20 16

Wednesday, the _____ day of _____ 20 ____

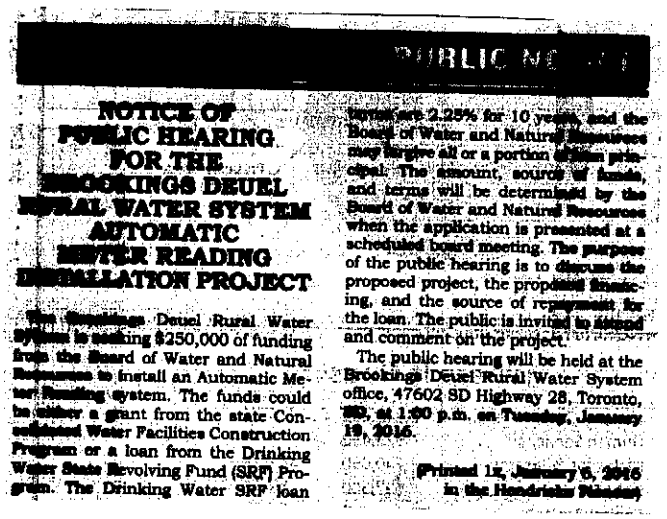
Wednesday, the _____ day of _____ 20 ____

4) The publisher's lowest classified rate paid by commercial users for comparable space, as determined pursuant to §331A.06, is as follows: $8.60 per column inch.

5) Mortgage Foreclosure Notices. Pursuant to Minnesota Statutes §580.033 relating to the publication of mortgage foreclosure notices: The newspaper's known office of issue is located in Lincoln County. The newspaper complies with the conditions described in §580.033. subd. 1, clause (1) or (2). If the newspaper's known office of issue is located in a county adjoining the county where the mortgaged premises or some part of the mortgaged premises described in the notice are located, a substantial portion of the newspaper's circulation is in the latter county.

FURTHER YOUR AFFIANT SAITH NOT.

Charles R. Hunt
[*Signature*]



PUBLIC NO

NOTICE OF PUBLIC HEARING FOR THE BROOKINGS DEUEL RURAL WATER SYSTEM AUTOMATIC METER READING INSTALLATION PROJECT

The Brookings Deuel Rural Water system is seeking $250,000 of funding from the Board of Water and Natural Resources to install an Automatic Meter Reading system. The funds could be either a grant from the state Conditional Water Facilities Construction Program or a loan from the Drinking Water State Revolving Fund (SRF) Program. The Drinking Water SRF loan terms are 2.25% for 10 years, and the Board of Water and Natural Resources may forgive all or a portion of the principal. The amount, source of funds, and terms will be determined by the Board of Water and Natural Resources when the application is presented at a scheduled board meeting. The purpose of the public hearing is to discuss the proposed project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

The public hearing will be held at the Brookings Deuel Rural Water System office, 47602 SD Highway 28, Toronto, SD, at 1:00 p.m. on Tuesday, January 19, 2016.

(Printed 1t, January 6, 2016 in the Hendricks Pioneer)

Subscribed and sworn to before me on this

6th day of January 20 16.

S. Laurie Snyder
Notary Public

SHIRLEY LAURIE SNYDER
Notary Public-Minnesota
My Commission Expires Jan 31, 2020

MINUTES OF REGULAR MEETING OF BOARD OF DIRECTORS OF BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
Tuesday, February 17, 2015 – 1:00 p.m.

The Regular Meeting of the Board of Directors of BROOKINGS-DEUEL RURAL WATER SYSTEM, INC., was held at the BROOKINGS-DEUEL office near Toronto, South Dakota, commencing at 1:00 p.m. on Tuesday, February 17, 2015. All Directors were present. Also present were General Manager, Gene Wilts, and Attorney, Jared Gass.

Chairman Doug Feten presided over the meeting. Attorney Gass acted as recorded for the meeting.

AGENDA
The chairman called for any additions or deletions to the proposed agenda. None were offered. Approval of the agenda was moved by Rogness, seconded by Haber. The motion carried.

MINUTES
The minutes of the January 20, 2015 meeting of the Board of Directors were reviewed as printed. Approval of the minutes as written was moved by Johnson, seconded by Kjenstad. The motion carried.

TREASURER'S REPORT
Manager Wilts reviewed the various financial reports included in the Director packet. After an opportunity for questions and discussion among the Board, approval of the Treasurer's Report was moved by Brandenburger, seconded by Lenning. The motion carried.

APPROVAL OF BILLS
Manager Wilts reviewed the list of disbursements and bills with explanations as to various items. After an opportunity for questions and discussion, approval of the monthly bills and disbursements was moved by Haber, seconded by Rogness. The motion carried.

RATE INCREASE
Manager Wilts reviewed information contained in the Board packet regarding a rate increase. Wilts reviewed in detail the rate analysis handout and explained its function to the Board and how the rate analysis should be used to determine an appropriate rate increase. In addition to increased operating costs, Wilts advised that consideration must also be given to implementing an automated meter reading system in the future. Also, for the system to borrow money from the state revolving fund, the rates need to be above a certain threshold.

Manager Wilts reviewed various rate increase options and explained to the Board how each option may affect various customer groups. Manager Wilts also noted that the last rate increase was in 2011.

Following a thorough discussion regarding how a rate increase would impact the system's customers and affect the system as a whole, it was moved by Haber, seconded by Rogness that the system rates be increased pursuant to option 2 as set forth in the handout contained in the Director packet. The motion carried.

SYSTEM TOUR
Discussion was had regarding the System tour scheduled for March 24, 2015.

MANAGER'S REPORT

Manager Wilts reviewed his written report contained in the Board packet concerning various informational topics.

ADJOURNMENT

Chairman Feten noted that the next regular meeting of the Board of Directors is scheduled for Thursday, March 19, 2015 at 7:30 p.m. There being no further business to come before the meeting, the Chairman declared the meeting adjourned.

Scott Brandenburger
Secretary

Laurie TeGantvoort

From: Gene Wilts2 <bdrws@itctel.com>
Sent: Tuesday, February 02, 2016 11:22 AM
To: bdrwsacct@itctel.com
Subject: FW: Registration Activated for Brookings Deuel Rural Wat / 180920035 / 7JPT2

-----Original Message-----
From: samadmin@sam.gov [mailto:samadmin@sam.gov]
Sent: Tuesday, January 26, 2016 9:51 AM
To: bdrws@itctel.com
Cc: bdrws@itctel.com
Subject: Registration Activated for Brookings Deuel Rural Wat / 180920035 / 7JPT2

This email was sent by an automated administrator. Please do not reply to this message.

Dear Gene Wilts,

Congratulations! The registration for Brookings Deuel Rural Wat / 180920035 / 7JPT2 is now active in the U.S. federal government's System for Award Management (SAM). If you did not provide a CAGE code during the registration process, one has been assigned and is provided above.
You are now eligible for contracts, assistance awards, and to do business with the federal government as determined by your Entity's profile. Important: The Periodic Update Requirement Date for the registration is 24-JAN-17. You must renew the registration by this date to remain active.
In addition, you may continue to invite additional users by following the below steps:

* Login to SAM using a valid Username and Password
* Select "Manage Entity Users" from the left-hand navigation menu
* Select "Invite User" from the left-hand navigation menu
* Select the desired Entity
* Provide invitee's email address
* Assign Role(s) to be associated with the user account
* Click Submit

All invitees will receive an email message from SAM with instructions on how to complete the process.

For assistance, please contact the Federal Service Desk at www.fsd.gov or by telephone at 866-606-8220 (toll free) or at 334-206-7828 (internationally).

Thank you,
The System for Award Management (SAM) Administrator ${EMAIL_URL_TO_SAM_HOMEPAGE}

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

MINUTES OF REGULAR MEETING OF BOARD OF DIRECTORS OF BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
Tuesday, January 19, 2016 – 1:00 p.m.

The Regular Meeting of the Board of Directors of BROOKINGS-DEUEL RURAL WATER SYSTEM, INC., was held at the BROOKINGS-DEUEL office near Toronto, South Dakota, commencing at 1:00 p.m. on Tuesday, January 19, 2016. All Directors were present. Also present were General Manager, Gene Wilts, and Attorney, Jared Gass.

Chairman Doug Feten presided over the meeting. Attorney Gass acted as recorder for the meeting.

Prior to the Regular Board Meeting, Chairman Doug Feten called the public hearing regarding the SRF Loan into session. Notice of the public hearing was advertised in the local newspapers throughout the System. At the public hearing, discussion was had regarding the primary need for SRF loan funds to implement an AMR System throughout the System. Manager Wilts reviewed various AMR alternatives evaluated. He also reviewed the procedures necessary to implement AMR's system wide. The expected amount of money to be borrowed is $250,000 on a ten year note with SRF at 2.25% interest. Wilts then advised that water rates have already been increased in anticipation of the AMR project. No additional rate increases are expected to be necessary to complete the project. Chairman Feten then declared the public meeting adjourned and began the Regular Meeting of the Board of Directors.

AGENDA
The chairman called for any additions or corrections to the proposed agenda. None were offered. Approval of the agenda as written was moved by Johnson, seconded by Kjenstad. The motion carried.

MINUTES
The minutes of the December 15, 2015 meeting of the Board of Directors were reviewed as printed. Approval of the minutes as written was moved by Haber, seconded by Rogness. The motion carried.

TREASURER'S REPORT
Manager Wilts reviewed the various financial reports contained in the Director packet. After a time for questions and discussion, approval of the Treasurer's Report was moved by Lenning, seconded by Brandenburger. The motion carried.

APPROVAL OF BILLS
Manager Wilts reviewed the list of monthly disbursements and bills contained in the Director packet providing explanations as to particular items. Following an opportunity for questions and discussion, approval of the monthly disbursements and bills was moved by Haber, seconded by Johnson. The motion carried.

SRF LOAN RESOLUTION
Manager Wilts distributed to the Board a proposed resolution to be adopted authorizing the System to formally apply for financial assistance in an amount not to exceed $250,000 with the South Dakota Board of Water and Natural Resources for the AMR project. After a time for questions and discussion, approval of the resolution as written and presented to the Board was moved by Johnson, seconded by Rogness. The motion carried.

ANNUAL MEETING DATE

Dates were discussed for the 2016 Annual Meeting. It was the general consensus among the Board that the Annual Meeting will be held in White, SD with the primary date of April 5, 2016. April 12, 2016 was chosen as an alternate date. It was moved by Johnson, seconded by Kjenstad. The motion carried.

ANNUAL WRITE-OFFS

Manager Wilts presented the Board with a document containing 12 System accounts with balances due. Steps to collect on the accounts have been taken but have not resulted in collection. Wilts recommended to the Board that the accounts be charged off as bad debt. Following an opportunity for questions and discussion, it was moved by Rogness, seconded by Brandenburger that the accounts be written off as bad debt. The motion carried.

MANAGER'S SALARY REVIEW

It was moved by Kjenstad, seconded by Johnson to enter Executive Session. The motion carried. Manager Wilts left the meeting at this time. Discussion was had in Executive Session regarding various personnel matters. At the conclusion of Executive Session, the Chairman declared Executive Session over. Regular session convening, it was moved Johnson, seconded by Haber to increase Manager Wilt's salary by 3.06%. Manager Wilts rejoined the meeting.

COBANK CUSTOMER MEETING

Discussion was had regarding those members planning to attend the CoBank Customer Meeting scheduled for February 25-26 in Omaha, NE. It was moved by Brandenburger, seconded by Rogness, that those Board members and staff that are able to attend be allowed so to do. The motion carried.

MANAGER'S REPORT

Manager Wilts reviewed his written report contained in the Director Packet concerning various informational topics. During the manager's report, there was also a general discussion among those Board members that attended the Annual Technical Conference.

ADJOURNMENT

There being no further business to come before the Board, the Chairman advised that the next regular meeting will be held on February 16, 2016 at 7:30 p.m. Chairman Feten declared the meeting adjourned.

Scott Brandenburger
Secretary

BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
STATEMENT OF GRANTS AND EQUITY
FOR THE YEAR ENDED DECEMBER 31, 2014

	Grants	Memberships				
December 31, 2014	Federal Grants	Aid to Construction Service Lines	Expansion Project Fee	Retained Earnings (Deficit)	Total Membership Equity (Deficit)	Total Grants And Equity
Balance, January 1, 2014	$ 1,499,695.48	$ 3,561,213.07	$ 94,597.50	$ 3,577,819.68	$ 7,233,630.25	$ 8,733,325.73
Depreciation applicable to grants and good intention and hookup fees	(73,475.76)					(73,475.76)
Good intention and hookup fees		155,481.52			155,481.52	155,481.52
Change in net assets excluding above items				156,734.20	156,734.20	156,734.20
Balance, December 31, 2014	$ 1,426,219.72	$ 3,716,694.59	$ 94,597.50	$ 3,577,819.68	$ 7,389,111.77	$ 8,972,065.69

BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
SCHEDULE OF OPERATING EXPENSES
FOR THE YEARS ENDED DECEMBER 31, 2014 AND 2013

	2014	2013
Source of Supply		
Labor costs	$ 9,414.50	$ 7,575.11
Purchased water	226,448.92	236,149.12
Transportation	1,790.77	2,122.57
Chemicals	10,960.51	14,353.08
Water testing	4,924.71	4,831.99
Generator fuel	1,309.15	1,389.33
	254,848.56	**266,421.20**
Pumping and Storage		
Labor costs	58,068.08	59,231.06
Purchased power	142,824.08	136,592.89
Transportation	13,400.17	14,842.69
Maintenance and repairs	18,401.58	35,926.94
Outside services	17,909.49	19,853.34
	250,603.40	**266,446.92**
Distribution		
Labor costs	74,373.24	62,980.55
Supplies	60,018.93	49,662.38
Transportation	14,297.70	16,060.86
Excavation/location	30,521.59	30,214.62
Damage claims	2,250.00	1,550.00
Safety program	4,431.07	3,994.84
	185,892.53	**164,463.25**
Metering		
Labor costs	51,017.60	38,014.11
Transportation	10,062.61	8,079.90
Supplies	17,968.13	28,630.70
	79,048.34	**74,724.71**
Consumer Accounts		
Labor costs	86,518.82	79,513.04
Transportation	4,873.86	6,167.09
Supplies	14,610.93	12,256.72
Uncollectible accounts	-	-
Dispatcher service	2,080.00	2,080.00
	108,083.61	**100,016.85**
General and Administration	**462,793.03**	**397,493.27**
Plant Depreciation	**592,982.53**	**589,652.62**
Total Operating Expenses	**$ 1,934,252.00**	**$ 1,859,218.82**

BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
SCHEDULE OF GENERAL AND ADMINISTRATIVE EXPENSES
FOR THE YEARS ENDED DECEMBER 31, 2014 AND 2013

	2014	2013
Depreciation	$ 10,537.44	$ 10,735.77
Labor costs	83,257.68	78,221.45
Employee insurance	94,325.65	82,293.34
Office supplies and expense	9,571.04	9,045.33
Transportation	3,726.49	5,037.03
General insurance	26,293.75	28,451.00
Directors' fees	27,963.57	26,007.52
Pension plan	44,167.67	37,917.89
Training and meetings	49,354.03	31,573.68
Dues and memberships	12,585.96	12,415.97
Professional fees	37,588.23	15,327.43
Utilities and telephone	21,421.61	17,753.31
Advertising and promotion	7,342.29	7,485.76
Postage	5,735.96	6,564.84
Annual meeting	6,227.35	7,848.75
Taxes, licenses, and fees	5,453.32	4,802.81
Lease and maintenance contract	1,744.72	1,999.38
Newsletters and calendars	3,466.67	4,015.47
Uniforms	2,148.35	2,524.59
Communications	170.15	1,109.14
Publications	217.06	90.26
Computer service and supply	6,705.98	3,956.55
Security Service - Telemetry	788.06	316.00
Scholarships	2,000.00	2,000.00
TOTAL	**$ 462,793.03**	**$ 397,493.27**

BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
SCHEDULE OF EXPENSES BY FUNCTION
FOR THE YEAR ENDED DECEMBER 31, 2014
(WITH PARTIAL COMPARATIVE FOR THE YEAR ENDED DECEMBER 31, 2013)

	2014								
	Source of Supply	Pumping and Storage	Distributions	Metering	Customer Accounts	General and Administrative	Plant	Total	2013
Depreciation	$ -	$ -	$ -	$ -	$ -	$ 10,537.44	$ 592,982.53	$ 603,519.97	$ 600,388.39
Labor Costs	9,414.50	58,068.08	74,373.24	51,017.60	86,518.82	83,257.68		362,649.92	325,535.32
Purchased Water	226,448.92							226,448.92	236,149.12
Purchased Power		142,824.08						142,824.08	136,592.89
Employee Insurance						94,325.65		94,325.65	82,293.34
Supplies			60,018.93	17,968.13	14,610.93	9,571.04		102,169.03	99,595.13
Transportation	1,790.77	13,400.17	14,297.70	10,062.61	4,873.86	3,726.49		48,151.60	52,310.14
General Insurance						26,293.75		26,293.75	28,451.00
Directors' Fees						27,963.57		27,963.57	26,007.52
Pension Plan						44,167.67		44,167.67	37,917.89
Maintenance and Repairs		18,401.58						18,401.58	35,926.94
Training and Meetings						49,354.03		49,354.03	31,573.68
Excavation/Location			30,521.59					30,521.59	30,214.62
Dues and Memberships						12,585.96		12,585.96	12,415.97
Professional Fees						37,588.23		37,588.23	15,327.43
Utilities and Telephone						21,421.61		21,421.61	17,753.31
Chemicals	10,960.51							10,960.51	14,353.08
Advertising and Promotion						7,342.29		7,342.29	7,485.76
Outside Services		17,909.49						17,909.49	19,853.34
Postage						5,735.96		5,735.96	6,564.84
Water Testing	4,924.71							4,924.71	4,831.99
Annual Meeting						6,227.35		6,227.35	7,848.75
Taxes, Licenses, and Fees						5,453.32		5,453.32	4,802.81
Damage Claims			2,250.00					2,250.00	1,550.00
Lease and Maintenance Contracts						1,744.72		1,744.72	1,999.38
Newsletter and Calendars						3,466.67		3,466.67	4,015.47
Safety Program			4,431.07					4,431.07	3,994.84
Uniforms						2,148.35		2,148.35	2,524.59
Generator Fuel	1,309.15							1,309.15	1,389.33
Uncollectible Accounts					-			-	-
Communication						170.15		170.15	1,109.14
Dispatcher Service					2,080.00			2,080.00	2,080.00
Publications						217.06		217.06	90.26
Computer Service and Supply						6,705.98		6,705.98	3,956.55
Security Service - Telemetry						788.06		788.06	316.00
Miscellaneous						2,000.00		2,000.00	2,000.00
	$ 254,848.56	$ 250,603.40	$ 185,892.53	$ 79,048.34	$ 108,083.61	$ 462,793.03	$ 592,982.53	$ 1,934,252.00	$ 1,859,218.82

BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
SCHEDULE OF PATRONAGE EQUITIES
FOR THE YEAR ENDED DECEMBER 31, 2014

	Balance January 1, 2014	Patronage Dividends	Less Cash Received	Balance December 31, 2013
HD Electric Cooperative	$ 84,004.34	$ 8,089.28	$ 2,902.38	$ 89,191.24
Sioux Valley Empire Electric	45,921.27	4,034.83	2,633.13	47,322.97
ITC	10,841.06	3,010.40	1,237.43	12,614.03
Deuel County Cenex	11,128.74	938.45	375.39	11,691.80
CoBank	1,000.00	5,896.82	4,422.62	2,474.20
Estelline Community Oil	146.64	-	-	146.64
	$ 153,042.05	$ 21,969.78	$ 11,570.95	$ 163,440.88

BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
TRADE RECEIVABLES AGING
FOR THE YEARS ENDED DECEMBER 31, 2014 AND 2013

	2014		2013	
	Amount	Percent	Amount	Percent
Current	$ 100,057.73	97.6%	$ 99,235.41	99.4%
31-60 Days	1,755.95	1.7%	852.55	0.6%
61-90 Days	156.00	0.2%	1,462.18	0.0%
Over 90 Days	577.60	0.6%	256.30	0.0%
TOTAL	**$ 102,547.28**	**100.0%**	**$ 101,806.44**	**100.0%**

BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
SCHEDULE OF CHANGES IN PROPERTY, PLANT, AND EQUIPMENT
FOR THE YEAR ENDED DECEMBER 31, 2014

Description	Balance 01/01/14	Additions	Retirements	Balance 12/31/14
Land	$ 347,033.10	$ -	$ -	$ 347,033.10
JWF Land	72,709.73	-	-	72,709.73
Buildings and Improvements	5,883,847.10	46,484.65	18,667.31	5,911,664.44
Distribution System	13,439,331.04	225,365.49	-	13,664,696.53
JWF Distribution System	866,468.07	-	-	866,468.07
Communication Tower	247,789.24	-	-	247,789.24
Machinery and Equipment	177,809.25	30,986.14	14,308.32	194,487.07
Transportation Equipment	227,735.02	22,510.50	16,641.32	233,604.20
Office Furniture and Fixtures	57,656.50	-	-	57,656.50
	$ 21,320,379.05	**$ 325,346.78**	**$ 49,616.95**	**$ 21,596,108.88**

BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
WATER SYSTEM OFFICIALS
DECEMBER 31, 2014

Board Members	Office	Term Expiration
Douglas Feten	Chairman	2015
Clark Rogness	Vice-Chairman	2017
Scott Brandenburger	Secretary	2015
Harold Haber	Treasurer	2016
Troy Lenning	Director	2016
Gary Johnson	Director	2017
Neal Kjenstad	Director	2015

Attorney
Jared Gass

Manager
Gene Wilts

Budget 2015 - Members Income/Expenses	2010	2011	2012	2013	2014 10 + 2	2015 Budget
REVENUE						
Farm	$ 1,434,303	$ 1,496,263	$ 1,697,330	$ 1,686,674	$ 1,653,523	$ 1,650,000
Bruce	$ 26,839	$ 28,754	$ 32,112	$ 31,077	$ 31,357	$ 31,000
Astoria	$ 20,092	$ 19,606	$ 20,588	$ 19,182	$ 18,444	$ 18,000
Elkton	$ 31,515	$ 33,172	$ 37,370	$ 36,295	$ 38,354	$ 37,500
Brandt	$ 13,333	$ 14,667	$ 15,061	$ 14,707	$ 15,066	$ 15,000
White	$ 31,101	$ 34,197	$ 32,733	$ 27,488	$ 26,629	$ 26,500
Toronto	$ 30,388	$ 32,233	$ 35,844	$ 32,651	$ 34,508	$ 34,000
Gary	$ 14,668	$ 14,973	$ 17,152	$ 15,313	$ 15,472	$ 15,000
Lincoln Pipestone			$ -	$ 86,145	$ 86,000	$ 55,000
Revillo	$ 15,644	$ 16,751	$ 18,089	$ 18,342	$ 18,528	$ 18,000
Clear Lake	$ 78,648	$ 89,054	$ 88,960	$ 87,069	$ 96,434	$ 92,000
Material	$ 10,417	$ 1,163	$ 2,281	$ 22,222	$ 2,846	$ 3,000
Hookup fees	$ 41,936	$ 49,785	$ 216,047	$ 95,469	$ 154,000	$ 60,000
Misc. Services	$ 67,729	$ 63,759	$ 60,386	$ 65,137	$ 63,137	$ 63,500
TOTAL REVENUE	$ 1,816,613	$ 1,894,377	$ 2,273,953	$ 2,237,771	$ 2,254,299	$ 2,118,500
O & M EXPENSES						
Source	$ 141,799	$ 133,533	$ 160,860	$ 266,421	$ 156,192	$ 169,100
Pumping	$ 207,334	$ 222,718	$ 254,231	$ 266,447	$ 248,711	$ 266,700
Distribution	$ 136,435	$ 147,190	$ 170,749	$ 164,463	$ 192,636	$ 174,200
Metering	$ 85,837	$ 82,967	$ 73,362	$ 74,725	$ 75,577	$ 80,750
Acct./Collection	$ 88,106	$ 92,073	$ 96,017	$ 100,017	$ 107,643	$ 111,430
Administrative	$ 357,917	$ 346,405	$ 372,124	$ 386,757	$ 425,360	$ 410,200
Depreciation	$ 551,618	$ 585,482	$ 577,464	$ 600,388	$ 597,332	$ 600,000
TOTAL OPERATING EXPENSE	$ 1,569,046	$ 1,610,368	$ 1,704,807	$ 1,859,218	$ 1,803,451	$ 1,812,380
OPERATING MARGIN	$ 247,567	$ 284,009	$ 569,146	$ 378,553	$ 450,848	$ 306,120
Interest income	$ 28,076	$ 19,687	$ 13,966	$ 12,981	$ 13,045	$ 14,000
interest expense	$ 292,890	$ 235,325	$ 231,250	$ 194,770	$ 187,853	$ 185,234
NET - From Operations	$ (17,247)	$ 68,371	$ 351,862	$ 196,764	$ 276,040	$ 134,886
Add - Non - Cash Depreciation	$ 551,618	$ 585,482	$ 577,464	$ 600,388	$ 597,332	$ 600,000
Cash Available	$ 534,371	$ 653,853	$ 929,326	$ 797,152	$ 873,372	$ 734,886
Principal Pay	$ 224,925	$ 236,664	$ 258,496	$ 276,895	$ 294,481	$ 297,100
Total Debt Paid (Prin.& Int.) all	$ 499,737	$ 486,846	$ 486,846	$ 482,334	$ 482,334	$ 482,334
NET CASH AVAILABLE	$ 309,446	$ 417,189	$ 670,830	$ 520,257	$ 578,891	$ 437,786
Members/connections	2,436	2,453	2,507	2,541	2,540	2,550
Gallons Sold	399,611	408,982	465,500	501,783	495,420	480,000
Labor Projects	$ 54,934	$ 44,774	$ 135,509	$ 114,152	$ 145,366	
Labor Capitalized (W.O.)	$ 10,091	$ 4,426	$ 9,528	$ 4,389	$ 9,091	
TOTAL LABOR CAPITALIZED	$ 65,025	$ 49,200	$ 145,037	$ 118,541	$ 154,457	

pa[redacted]2	2010	2011	2012	2013	2014 10+2	2015 Budget
Source						
Labor/Fringe	$ 1,526	$ 4,456	$ 6,290	$ 7,575	$ 9,266	$ 8,500
Transportation	$ 346	$ 1,299	$ 1,854	$ 2,123	$ 2,190	$ 2,200
Purchased Water JWF	$ 123,267	$ 221,895	$ 133,080	$ 236,149	$ 128,000	$ 140,000
Fuel Generator - CL	$ 459	$ 777	$ 353	$ 950	$ 900	$ 900
Water Treatment CLWTP	$ 11,884	$ 12,702	$ 12,271	$ 14,353	$ 10,940	$ 11,500
Water Treatment Res. B	$ 995	$ 305	$ 978	$ 439	$ -	
Fuel Generator - Res B	$ 153	$ 512	$ 445	$ -	$ 395	$ 400
Testing Expense	$ 1,928	$ 1,638	$ 5,588	$ 4,832	$ 4,500	$ 5,600
Total	$ 140,558	$ 243,584	$ 160,859	$ 266,421	$ 156,192	$ 169,100
Pumping / Storage						
Labor /Fringe	$ 56,640	$ 58,210	$ 61,900	$ 59,231	$ 59,860	$ 62,000
Transportation	$ 11,495	$ 16,265	$ 15,321	$ 14,843	$ 13,696	$ 13,700
Utilities/Plants	$ 107,454	$ 113,819	$ 122,701	$ 136,593	$ 139,000	$ 143,000
Repairs/Maintence	$ 16,710	$ 20,190	$ 38,187	$ 35,927	$ 18,780	$ 30,000
Outside Services	$ 15,034	$ 14,234	$ 16,120	$ 19,853	$ 17,376	$ 18,000
Total	$ 207,333	$ 222,718	$ 254,229	$ 266,447	$ 248,711	$ 266,700
Distribution Expense						
Labor/Fringe	$ 51,330	$ 54,804	$ 49,502	$ 62,981	$ 75,611	$ 67,000
T[redacted]nsportation	$ 9,516	$ 13,239	$ 11,969	$ 16,061	$ 15,064	$ 15,100
S[redacted]lies	$ 34,951	$ 30,500	$ 55,509	$ 49,662	$ 60,204	$ 55,000
Excavation Expense	$ 14,798	$ 12,646	$ 4,158	$ 6,111	$ 13,598	$ 6,000
Backhoe Diesel Fuel	$ 4,082	$ 5,971	$ 5,548	$ 5,781	$ 6,590	$ 6,600
Distribution - Towns	$ 14,560	$ 20,983	$ 30,815	$ 16,207	$ 11,890	$ 15,000
Leak / Damage Expense	$ 3,810	$ 1,835	$ 1,585	$ 1,550	$ 2,352	$ 2,000
Safety Expense	$ 887	$ 4,028	$ 9,415	$ 3,995	$ 4,710	$ 5,000
One Call Locate	$ 2,501	$ 3,184	$ 2,247	$ 2,115	$ 2,617	$ 2,500
Total	$ 136,435	$ 147,190	$ 170,748	$ 164,463	$ 192,636	$ 174,200
Metering						
Labor/Fringe	$ 47,463	$ 43,561	$ 42,850	$ 38,014	$ 49,050	$ 50,750
Transportation	$ 10,385	$ 9,388	$ 8,946	$ 8,080	$ 9,941	$ 10,000
Supplies	$ 27,988	$ 30,018	$ 21,566	$ 28,631	$ 16,586	$ 20,000
Total	$ 85,836	$ 82,967	$ 73,362	$ 74,725	$ 75,577	$ 80,750
Customer Accts						
Labor/Fringe	$ 71,128	$ 73,963	$ 77,461	$ 79,513	$ 86,177	$ 89,250
Collections	$ 5,711	$ 5,687	$ 4,797	$ 6,167	$ 4,639	$ 5,000
Billing Supplies	$ 2,553	$ 2,644	$ 2,640	$ 3,417	$ 4,704	$ 4,700
Card Fees	$ 6,635	$ 7,962	$ 9,039	$ 8,840	$ 10,043	$ 10,400
Dispatcher	$ 2,080	$ 2,080	$ 2,080	$ 2,080	$ 2,080	$ 2,080
Total	$ 88,107	$ 92,336	$ 96,017	$ 100,017	$ 107,643	$ 111,430
[redacted]**l Operating Expense**	$ 658,269	$ 788,795	$ 755,215	$ 872,073	$ 780,759	$ 802,180
Cost per 1000g Sold	$ 1.65	$ 1.93	$ 1.62	$ 1.74	$ 1.58	$ 1.67

page 3	2010	2011	2012	2013	2014	2015
Administrative/General					**10+2**	**Budget**
Utilities	$ 11,068	$ 11,859	$ 11,610	$ 12,304	$ 13,015	$ 13,500
Cell Phones	$ 3,689	$ 3,807	$ 4,403	$ 5,449	$ 4,836	$ 5,000
Postage	$ 6,407	$ 7,472	$ 6,462	$ 6,565	$ 5,508	$ 6,000
Maintence Contracts	$ 1,707	$ 1,405	$ 1,489	$ 1,999	$ 1,657	$ 1,800
Communication Expense	$ 192	$ 818	$ 954	$ 1,109	$ 194	$ 1,200
Mngmnt Meeting/Travel	$ 4,041	$ 6,152	$ 7,723	$ 9,063	$ 9,000	$ 7,500
Management Labor/Fringe	$ 65,283	$ 67,219	$ 69,334	$ 78,221	$ 76,282	$ 79,500
Transportation	$ 3,793	$ 3,882	$ 4,884	$ 5,037	$ 3,529	$ 3,750
Training-Employees	$ 2,904	$ 8,120	$ 4,955	$ 8,183	$ 15,000	$ 12,000
Directors per Diem	$ 22,300	$ 20,625	$ 22,825	$ 20,650	$ 19,920	$ 20,000
Directors Mileage/Expense	$ 5,027	$ 4,655	$ 5,474	$ 5,358	$ 4,148	$ 5,000
Directors State/Nat'l	$ 9,909	$ 10,855	$ 22,966	$ 14,328	$ 19,000	$ 17,000
Directors D& O	$ 2,688	$ 3,226	$ 2,700	$ 2,700	$ 2,700	$ 2,700
Annual Meeting	$ 4,849	$ 5,649	$ 5,717	$ 7,849	$ 6,227	$ 6,000
Advertising P/R	$ 12,297	$ 6,232	$ 6,504	$ 7,486	$ 6,922	$ 7,000
Dues/Memberships	$ 14,988	$ 14,514	$ 15,444	$ 12,416	$ 11,620	$ 12,000
Newsletters	$ 2,058	$ 2,215	$ 2,140	$ 4,015	$ 3,468	$ 3,600
Scholarships	$ 2,000	$ 2,500	$ 1,000	$ 2,000	$ 2,000	$ 2,000
Subscriptions	$ 182	$ 215	$ 154	$ 91	$ 260	$ 250
Insurance Medical	$ 66,542	$ 74,641	$ 66,394	$ 74,978	$ 83,209	$ 82,000
Office Expense	$ 7,602	$ 6,106	$ 8,269	$ 9,045	$ 9,217	$ 9,300
System Property Ins.	$ 20,606	$ 21,450	$ 21,514	$ 25,751	$ 23,432	$ 24,000
Retirement Employee	$ 35,155	$ 33,340	$ 36,329	$ 37,918	$ 43,436	$ 45,000
Employee Insurance Deductibles	$ 19,857	$ 7,018	$ 16,905	$ 7,315	$ 7,298	$ 12,000
Professional - Engineering	$ 1,290	$ 1,548	$ -		$ 22,000	$ 2,500
Professional - Legal	$ 8,794	$ 7,716	$ 8,392	$ 9,243	$ 8,743	$ 9,000
Professional - Audit	$ 6,085	$ 6,084	$ 6,084	$ 6,084	$ 6,773	$ 6,100
Licenses	$ 719	$ 2,053	$ 1,903	$ 1,857	$ 2,036	$ 2,100
Sales Use Tax	$ 2,565	$ 2,533	$ 4,131	$ 2,946	$ 3,500	$ 3,500
Uniforms Employees	$ 1,712	$ 377	$ 2,094	$ 2,525	$ 2,377	$ 2,400
Computer Service	$ 2,619	$ 3,341	$ 2,423	$ 3,956	$ 7,105	$ 5,500
Telemetry - Security	$ 869	$ 852	$ 948	$ 316	$ 946	$ 1,000
Total Administrative	$ 349,797	$ 348,479	$ 372,124	$ 386,757	$ 425,360	$ 410,200
Total Expenses	$ 1,008,066	$ 1,137,274	$ 1,127,339	$ 1,258,830	$ 1,206,119	$ 1,212,380
Depreciation	$ 559,738	$ 585,481	$ 577,464	$ 600,388	$ 597,332	$ 600,000
Total All Expenses	$ 1,567,804	$ 1,722,755	$ 1,704,803	$ 1,859,218	$ 1,803,451	$ 1,812,380
Income less Expenses-NET	$ 248,809	$ 171,622	$ 569,150	$ 378,553	$ 450,848	$ 306,120
Cost per Member						
Administrative	$ 143.59	$ 142.06	$ 148.43	$ 152.21	$ 167.46	$ 160.86
Total Expenses	$ 413.82	$ 463.63	$ 449.68	$ 495.41	$ 474.85	$ 475.44

LOAN AND RESERVE REQUIREMENTS - 2015

LOANS - Long Term	Original Loan	Rate	Ann. Pay	Principal	Interest	1-1-2015 Bal.	Term	Reserve
SRF #1 JWF Project	$1,002,464	3.25%	**$52,437**	$25,623	$26,814	$834,585	30 Years	
SRF #2 Distribution	$1,750,000	3.25%	**$91,907**	$43,833	$48,074	$1,495,539	30 Years	
R-D Distribution	$1,651,000	4.125%	**$85,392**	$22,284	$63,108	$1,513,803	40 Years	$85,392
First Bank and Trust	$1,771,002	3.35%	**$201,298**	$183,208	$18,090	$540,017	7 Years	
CoBank-1993 Project	$866,000	4.60%	**$51,300**	$22,152	$29,148	$610,069	40 Years	$51,300
Total Long Term Debt Payment	**$7,040,466**		**$482,334**	**$297,100**	**$185,234**	**$4,994,013**		**$136,692**

Reserve Required	Required 2008	Required 2009	Required 2010	Required 2011	Required 2012	Required 2013	Required 2014	Required 2015
CoBank	$55,812	$55,812	$55,812	$55,812	$55,812	$55,812	$51,300	$51,300
RD Project-2006	$85,392	$85,392	$85,392	$85,392	$85,392	$85,392	$85,392	$85,392
Total Reserves	$141,204	$141,204	$141,204	$141,204	$141,204	$141,204	$136,692	$136,692
Restricted Asset Accts.								
Debt Reserve	$141,204	$141,204	$141,204	$ 141,204	$141,204	$141,204	$136,692	$136,692
Annual Debt Paymnt.	$481,143	$498,282	$499,737	$486,846	$486,846	$482,334	$482,334	$482,334
Depreciation Reserve	$238,844	$255,155	$275,500	$278,000	$283,000	$293,654	$298,666	$300,000
Lease Towns	$15,970	$15,969	$18,169	$21,217	$ 23,834	$21,877	$22,193	$24,500
Scholarships	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Capital Improvement	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000
Special Maintence	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000
Water Tower Main.			$16,000	$16,000	$16,000	$43,075	$58,175	$74,175
Total Restricted	$929,161	$962,610	$1,002,610	$995,267	$1,002,884	$1,034,144	$1,050,060	$1,069,701

2015 WORK PLAN

OPERATING BUDGET	2014	2015
Income - sales	$ 2,254,299	$ 2,118,500
Operating Expense (includes depreciation)	$ 1,803,451	$ 1,812,380
Gross Margin	$ 450,848	$ 306,120
Interest Income	$ 13,045	$ 14,000
Depreciation	$ 597,332	$ 600,000
Available Funds	$ 1,061,225	$ 920,120
Debt Payments (all)	$ 482,334	$ 482,334
Net Funds from Operations	**$ 578,891**	**$ 437,786**

2015 Projects O & M Projects	Estimate $
Meter Changeouts	$ 43,000
Pickup-2	$ 47,000
Phase Tank Control Panel	$ 3,000
Clear Lake #3 VFD	$ 8,000
Backhoe	$ 45,000
Backhoe Trailer	$ 15,000
Altamont Roof	$ 2,800
Plant Meters	$ 12,000
Phase Tank VFD	$ 3,500
Copier	$ 12,000
Line Locator	$ 3,000
GPS - Trimble	$ 20,000
Total Projects	**$ 214,300**

Funds Required	2014	2015
Scholarship Fund	$ 2,000	$ 2,000
R-D and CoBank	$ 136,692	$ 136,692
Lease Towns Reserve	$ 22,193	$ 24,500
Deprec. Reserve(1/2)	$ 298,666	$ 300,000
Annual Debt	$ 482,334	$ 482,334
Water Tower Maintenance	$ 58,175	$ 74,175
Total Reserve Required	**$ 1,000,060**	**$ 1,019,701**

	2014	2015
Cash on Hand 1/1	$ 1,475,000	$ 1,700,000
Reserve Required	$ (1,000,060)	$ (1,019,701)
Special Maintence	$ (25,000)	$ (25,000)
Capital Improvement	$ (25,000)	$ (25,000)
Committed Funds Total	$ (1,050,060)	$ (1,069,701)
Unobligated Funds	**$ 424,940**	**$ 630,299**

Funds Available	2014	2015
Unobligated Funds	$ 424,940	$ 630,299
Net Funds from Operations	$ 578,891	$ 437,786
Total Funds Available	$ 1,003,831	$ 1,068,085
Project Summary Total	$ 198,500	$ 214,300
Funds Available	**$ 805,331**	**$ 853,785**

BROOKINGS-DEUEL RURAL WATER SYSTEM

PASTURE TAP RATE SCHEDULE

EFFECTIVE JULY 1, 2015

GALLONS USED	AMOUNT	GALLONS USED	AMOUNT
0	$33.00	31,000	$118.25
1,000	$35.75	32,000	$121.00
2,000	$38.50	33,000	$123.75
3,000	$41.25	34,000	$126.50
4,000	$44.00	35,000	$129.25
5,000	$46.75	36,000	$132.00
6,000	$49.50	37,000	$134.75
7,000	$52.25	38,000	$137.50
8,000	$55.00	39,000	$140.25
9,000	$57.75	40,000	$143.00
10,000	$60.50	41,000	$145.75
11,000	$63.25	42,000	$148.50
12,000	$66.00	43,000	$151.25
13,000	$68.75	44,000	$154.00
14,000	$71.50	45,000	$156.75
15,000	$74.25	46,000	$159.50
16,000	$77.00	47,000	$162.25
17,000	$79.75	48,000	$165.00
18,000	$82.50	49,000	$167.75
19,000	$85.25	50,000	$170.50
20,000	$88.00	51,000	$173.25
21,000	$90.75	52,000	$176.00
22,000	$93.50	53,000	$178.75
23,000	$96.25	54,000	$181.50
24,000	$99.00	55,000	$184.75
25,000	$101.75	56,000	$187.00
26,000	$104.50	57,000	$189.75
27,000	$107.25	58,000	$192.50
28,000	$110.00	59,000	$195.25
29,000	$112.75	60,000	$198.00
30,000	$115.50	61,000	$200.75

Add $2.75 for each additional 1,000 gallons.

BROOKINGS-DEUEL RURAL WATER SYSTEM

LEASED FACILITIES RATE SCHEDULE

EFFECTIVE JULY 1, 2015

GALLONS USED	AMOUNT	GALLONS USED	AMOUNT
0	$16.00	31,000	$110.25
1,000	$19.20	32,000	$113.00
2,000	$22.40	33,000	$115.75
3,000	$25.60	34,000	$118.50
4,000	$28.80	35,000	$121.25
5,000	$32.00	36,000	$124.00
6,000	$35.20	37,000	$126.75
7,000	$38.40	38,000	$129.50
8,000	$41.60	39,000	$132.25
9,000	$44.80	40,000	$135.00
10,000	$48.00	41,000	$137.75
11,000	$51.20	42,000	$140.50
12,000	$54.40	43,000	$143.25
13,000	$57.60	44,000	$146.00
14,000	$60.80	45,000	$148.75
15,000	$64.00	46,000	$151.50
16,000	$67.20	47,000	$154.25
17,000	$70.40	48,000	$157.00
18,000	$73.60	49,000	$159.75
19,000	$76.80	50,000	$162.50
20,000	$80.00	51,000	$165.25
21,000	$82.75	52,000	$168.00
22,000	$85.50	53,000	$170.75
23,000	$88.25	54,000	$173.50
24,000	$91.00	55,000	$176.25
25,000	$93.75	56,000	$179.00
26,000	$96.50	57,000	$181.75
27,000	$99.25	58,000	$184.50
28,000	$102.00	59,000	$187.25
29,000	$104.75	60,000	$190.00
30,000	$107.50	61,000	$192.75

Add $2.75 for each additional 1,000 gallons.

BROOKINGS-DEUEL RURAL WATER SYSTEM

FARM, RURAL RESIDENCE RATE SCHEDULE

EFFECTIVE JULY 1, 2015

GALLONS USED	AMOUNT	GALLONS USED	AMOUNT
0	$33.00	31,000	$127.25
1,000	$36.20	32,000	$130.00
2,000	$39.40	33,000	$132.75
3,000	$42.60	34,000	$135.50
4,000	$45.80	35,000	$138.25
5,000	$49.00	36,000	$141.00
6,000	$52.20	37,000	$143.75
7,000	$55.40	38,000	$146.50
8,000	$58.60	39,000	$149.25
9,000	$61.80	40,000	$152.00
10,000	$65.00	41,000	$154.75
11,000	$68.20	42,000	$157.50
12,000	$71.40	43,000	$160.25
13,000	$74.60	44,000	$163.00
14,000	$77.80	45,000	$165.75
15,000	$81.00	46,000	$168.50
16,000	$84.20	47,000	$171.25
17,000	$87.40	48,000	$174.00
18,000	$90.60	49,000	$176.75
19,000	$93.80	50,000	$179.50
20,000	$97.00	51,000	$182.25
21,000	$99.75	52,000	$185.00
22,000	$102.50	53,000	$187.75
23,000	$105.25	54,000	$190.50
24,000	$108.00	55,000	$193.25
25,000	$110.75	56,000	$196.00
26,000	$113.50	57,000	$198.75
27,000	$116.25	58,000	$201.50
28,000	$119.00	59,000	$204.25
29,000	$121.75	60,000	$207.00
30,000	$124.50	61,000	$209.75

Add $2.75 for each additional 1,000 gallons.

BROOKINGS-DEUEL RURAL WATER SYSTEM

ALTAMONT, GOODWIN, LABOLT RATE SCHEDULE

EFFECTIVE JULY 1, 2015

GALLONS USED	AMOUNT	GALLONS USED	AMOUNT
0	$23.00	31,000	$117.25
1,000	$26.20	32,000	$120.00
2,000	$29.40	33,000	$122.75
3,000	$32.60	34,000	$125.50
4,000	$35.80	35,000	$128.25
5,000	$39.00	36,000	$131.00
6,000	$42.20	37,000	$133.75
7,000	$45.40	38,000	$136.50
8,000	$48.60	39,000	$139.25
9,000	$51.80	40,000	$142.00
10,000	$55.00	41,000	$144.75
11,000	$58.20	42,000	$147.50
12,000	$61.40	43,000	$150.25
13,000	$64.60	44,000	$153.00
14,000	$67.80	45,000	$155.75
15,000	$71.00	46,000	$158.50
16,000	$74.20	47,000	$161.25
17,000	$77.40	48,000	$164.00
18,000	$80.60	49,000	$166.75
19,000	$83.80	50,000	$169.50
20,000	$87.00	51,000	$172.25
21,000	$89.75	52,000	$175.00
22,000	$92.50	53,000	$177.75
23,000	$95.25	54,000	$180.50
24,000	$98.00	55,000	$183.25
25,000	$100.75	56,000	$186.00
26,000	$103.50	57,000	$188.75
27,000	$106.25	58,000	$191.50
28,000	$109.00	59,000	$194.25
29,000	$111.75	60,000	$197.00
30,000	$114.50	61,000	$199.75

Add $2.75 for each additional 1,000 gallons.

2015 Enter Filing Year

Secretary of State Office
500 E Capitol Ave
Pierre, SD 57501
(605)773-4845

ANNUAL REPORT

DOMESTIC NONPROFIT

Please Type or Print Clearly In Ink

FILING FEE: $10.00 Make check payable to SECRETARY OF STATE

FILE DATE 2/16/2015
RECEIPT NO 272599

1. Corporate Name and Address:
NS005522
BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.
47602 SD HWY 28
TORONTO, SD 57268-5717

2. The jurisdiction under whose law it is formed SOUTH DAKOTA

3. The address of the principal executive office (business address).

47602 SD HWY 28	TORONTO	SD	57268-5717
Street Address	City	State	ZIP+4
PO BOX 340	TORONTO	SD	57268
Mailing Address	City	State	ZIP+4

4. The name of the South Dakota Registered Agent

Agent Name: GENE WILTS

47602 SD HWY 28	TORONTO	SD	57268-5717
Street Address or Rural Route Box Number in This State and	City	State	ZIP+4
Mailing Address in This State, if Different from Street Address	City	State	ZIP+4

5. The names and business addresses of its principal officers and directors. Please place a check mark next to the name if the principal officer serves as a director. South Dakota Law requires at least three director.

X	DOUGLAS FETEN	47485 185TH STREET	CLEAR LAKE	SD	57226
	President	Street Address	City	State	ZIP+4
X	CLARK ROGNESS	48264 192ND STREET	ASTORIA	SD	57213
	Vice President	Street Address	City	State	ZIP+4
X	SCOTT BRANDENBURGER	47641 170TH STREET	CLEAR LAKE	SD	57226
	Secretary	Street Address	City	State	ZIP+4
X	HAROLD HABER	20476 481ST AVENUE	WHITE	SD	57276
	Treasurer	Street Address	City	State	ZIP+4
X	TROY LENNING	47236 193RD STREET	TORONTO	SD	57268
	Director	Street Address	City	State	ZIP+4
X	GARY JOHNSON	20663 468TH AVENUE	BROOKINGS	SD	57006
	Director	Street Address	City	State	ZIP+4
X	NEAL KJENSTAD	18819 480TH AVENUE	BRANDT	SD	57218
	Director	Street Address	City	State	ZIP+4

No person may execute this report knowing it is false in any material aspect. Any violation is subject to a civil penalty.
By signing this form you agree to have both the fee and the form processed electronically.

Dated 02/16/2015

Signature Accepted Electronically
(Signature of an Authorized Person)

GENE P WILTS
(Printed Name)

2/16/2015 9:43:16 AM

BY-LAWS
OF
BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.

ARTICLE I.

General Purposes

This association shall be known as the BROOKINGS-DEUEL RURAL WATER SYSTEM, INC., incorporated under the laws of the State of South Dakota.

The purposes for which the Corporation is formed and the powers which it may exercise are set forth in the Articles of Incorporation of the Corporation.

ARTICLE II.

Name and Location

Section 1. The name of the Corporation is the BROOKINGS-DEUEL RURAL WATER SYSTEM, INC.

Section 2. The principal office and place of business of this Corporation shall be located at the company headquarters two (2) miles west of Toronto, South Dakota, but the Corporation may maintain offices and places of business at other places within or without the State as the Board of Directors may determine from time to time.

ARTICLE III.

Seal of the Corporation

Section 1. The seal of the Corporation shall have inscribed thereon the name of the Corporation.

Section 2. The Secretary shall have custody of the seal.

Section 3. The impression of the seal shall be made on all papers and documents requiring the signature of an executive officer of the Corporation.

(Current with changes as of February 24, 1998.)

ARTICLE IV.

Fiscal Year

The fiscal year of the Corporation shall begin the 1st day of January in each year and end on the 31st day of December in each year.

ARTICLE V.

Governing Body

This Corporation shall be governed by a Board of Directors consisting of seven (7) members to be elected by the members of the Corporation from time to time and in such manner as is hereinafter provided. Such Board shall meet immediately after the adjournment of the membership meeting and organize by electing a President, Vice-President, Secretary and Treasurer from their own number, or as soon thereafter as is reasonably practicable.

ARTICLE VI.

Membership and Certificates

Section 1. Membership in the Corporation shall consist of those persons, firms, associations, corporations or bodies politic owning, controlling or occupying land situated within the area to be served by the water system of the Corporation and reasonably accessible thereto, who have made application for membership in the Corporation, and who have agreed to pay such fees as shall be required by the Corporation, from time to time, and enter into such agreements with the Corporation for the purchase of water for domestic use as are required by the Corporation from time to time.

Section 2. A person, firm, association, corporation or body politic may become a member of BROOKINGS-DEUEL RURAL WATER SYSTEM, INC., by:

a. Making a written application for membership therein.

b. Agreeing to purchase from the Corporation water for domestic use.

c. Agreeing to comply with and be bound by the Articles of Incorporation and By-Laws of the Corporation and any rules and regulations adopted by the Board of Directors; and

d. Paying such hook-up, connection or other fees as shall be established by the Board of Directors from time to time; provided, however, that no person, firm, association, corporation or body politic shall become a

member unless and until he or it has been accepted for membership by the Board of Directors. No member may hold more than one (1) membership in the Corporation; and no membership in the Corporation shall be transferable except as provided in these By-Laws.

Section 3. No person, firm, association, corporation or body politic shall otherwise be entitled to membership in this Corporation unless the water hook-up and meter of said person, firm, association or corporation shall be located within the State of South Dakota.

ARTICLE VII.

Membership Certificates

Section 1. Membership in the Corporation shall be evidenced by enrolling the name of the member on the membership list maintained by the Corporation at the Corporation headquarters.

Section 2. Transfers of membership shall be made only upon the books of the Corporation, only to persons eligible to become members and only with the approval of the Board of Directors and only when the member transferring is free from indebtedness to the Corporation.

Section 3. No member of this Corporation shall be entitled to more than one (1) vote at meetings of the members. Every member, upon becoming a member of this Corporation, agrees to sign such Agreement for the purchase of water from the Corporation as may, from time to time, be provided and required by the Corporation, and shall pay therefor such rates as shall from time to time be fixed by the Board of Directors; provided, however, that the Board of Directors may limit the amount of water which the Corporation shall be required to furnish any one member. Each member shall pay the Corporation such minimum amount per month, regardless of the amount of water consumed, as shall be fixed by the Board of Directors from time to time. Each member shall also pay all amounts owed by him to the Corporation as and when the same shall become due and payable.

Section 4. In case of the death of a member or if a member ceases to be eligible to hold membership as provided herein, or willfully fails to comply with these By-Laws and other requirements, or willfully obstructs the purposes and proper activities of the Corporation, the Corporation, through the Board of Directors, may elect to terminate his membership. Any member whose membership is so terminated for a cause other than that of ceasing to be eligible, may appeal from the action of the Board of Directors to a vote of the members at the next regular meeting of the members or special meeting of the members called for such purpose.

Section 5. A membership held in the name of a husband or a wife shall entitle either to exercise the voting privilege of said membership, but not both. Said membership would also

qualify either the husband or the wife as a member for the purpose of running for the office of Director, but not both. When a membership is held by a partnership, corporation, or association, the voting privilege may be exercised by a duly acknowledged voting delegate of said partnership, corporation or association.

ARTICLE VIII.

Meetings of Members

Section 1. Annual Meeting. The Annual Meeting of the members of this Corporation shall be held during the months of March, April, May and June of each year on the date selected by the Board of Directors. The date, time and place shall be designated in the Notice of the Meeting. It shall be the responsibility of the Board of Directors to make adequate plans and preparations for the Annual Meeting. Failure to hold the Annual Meeting at the designated time shall not work a forfeiture or dissolution of the Corporation.

Section 2. Special Meetings. Special Meetings of the members may be called by resolution of the Board of Directors or upon a written request signed by any four (4) Directors, by the President, or by ten percent (10%) or more of all of the members and it shall thereupon be the duty of the Secretary to cause Notice of such meeting to be given as hereinafter provided. Special Meetings of the members must be held within sixty (60) days from the date of receipt of special request therefor and shall be held at such time and at such place as shall be determined by the Board of Directors.

Section 3. Notice. Notice of meetings of members of the Corporation shall be given by Notice mailed to each member of record directed to the address shown upon the books of the Corporation at least ten (10) days prior to the meeting. Such Notice shall state the nature, time, place and purpose of the meeting, but no failure or irregularity of Notice of any annual meeting, regularly held, shall affect any proceedings taken thereat.

Section 4. Quorum. As long as the total number of members does not exceed one thousand (1,000), two and five-tenths percent (2.5%) of the total number of members, present in person, shall constitute a quorum. In case the total number of members shall exceed one thousand (1,000), twenty-five (25) members, present in person, shall constitute a quorum. If less than a quorum is present at any meeting, a majority of those present in person may adjourn the meeting from time to time without further notice.

Section 5. Vote. Each member shall be entitled to one (1) vote. All questions shall be decided by a vote of a majority of the members voting thereon in person, except as otherwise provided by law, the Articles of Incorporation or these By-Laws. Voting by proxy shall not be permitted.

ARTICLE IX.

Directors

Section 1. General Powers. The business and affairs of the Corporation shall be managed by a Board of seven (7) Directors which shall exercise all of the powers of the Corporation except such as are by law, the Articles of Incorporation or these By-Laws conferred upon or reserved to the members.

Section 2. Election and Tenure of Office. The Board of Directors shall hold office for their terms or until their successors shall have been appointed or elected and shall have qualified. The terms of Directors shall be for three (3) years. The terms shall be staggered so that terms of Directors from Districts No. 4, 6 and 7 shall expire in 1997; the terms of Directors from Districts No. 2 and 3 shall expire in 1998; and the terms of Directors from Districts No. 1 and 5 shall expire in the next year. At each annual meeting, Directors shall be elected to succeed those Directors whose terms have expired, to serve for a term of three (3) years or until their successors shall have been elected and shall have qualified.

Section 4. Voting Districts. The territory served or to be served by the Corporation shall be divided by the Board of Directors into seven (7) districts in such a way as to give geographic and equitable representation to all members. Each district shall be represented by one (1) Director. The seven (7) districts shall be as follows:

District No. 1 shall be made up of Medary, Brookings, Sterling and Oakwood Townships.

District No. 2 shall be made up of Afton, Sherman, Aurora, Richland, Trenton, Parnell and Elkton Townships in Brookings County, and Spring Creek and Ward Townships in Moody County.

District No. 3 shall be made up of Eureka, Argo, Blom and Grange Townships.

District No. 4 shall be made up of Goodwin, Altamont, Havana, Clear Lake, Hidewood and Brandt Townships.

District No. 5 shall be made up of Oak Lake, Lake Hendricks and Scandinavia Townships.

District No. 6 shall be made up of Glenwood, Herrick and Norden Townships.

District No. 7 shall be made up of Rome, Portland, Lowe, Antelope Valley, Georgia and Adams Townships.

Municipalities or members located in municipalities within the above described Districts

shall be considered as members from within those particular Districts.

Section 5. Nomination and Election of Directors. Whenever a vacancy in a Director position shall exist by virtue of a Director's term expiring, any member in good standing of this Corporation and residing within the District in which the vacancy occurs, may become a candidate for the office of Director for such vacancy by filing at the Corporation Headquarters at least thirty (30) days prior to the date of the Annual Meeting, a Nominating Petition setting forth the name of the person so nominated for the office of Director and signed by at least ten (10) members in good standing who also reside within the Director District in which the vacancy exists. No nominations shall be received from the floor at the Annual Meeting. At the Annual Meeting, the members present and voting shall select, by secret written ballot, a Director to fill the expired Director term in that District. Each member present and voting shall be entitled to a vote for one (1) Director nominee for each vacancy in each District. The Director candidate receiving the most votes in each District for which an election is held shall be declared to be the elected Director of the Corporation from that particular District. In the event there are no more Director nominees than there are vacancies, the Director candidates may be elected by voice vote at the Annual Meeting.

Section 6. Vacancies. If the office of Director or officers shall become vacant for any cause, the remaining Directors may choose a successor, who shall serve to the next Regular or Special Meeting of the members when the vacancy shall be filled. The Director or office so named shall serve to the next Regular or Special Meeting of the members when the vacancy shall be filled.

ARTICLE X.

Meetings of Directors

Section 1. Regular Meetings. A Regular Meeting of the Board of Directors may be held without notice immediately after and at the same place as the Annual Meetings of the members. A Regular Meeting of the Board of Directors shall also be held monthly at such time and place as the Board of Directors may provide by resolution. Such regular monthly meeting may be held without Notice, other than such resolution fixing the time and place thereof.

Section 2. Special Meetings. Special meetings of the Board of Directors may be called by the President or by any three (3) Directors and it shall thereupon be the duty of the Secretary to cause Notice of such meeting to be given as hereinafter provided. The President or the Directors calling the meeting shall fix the time and place for the holding of the meeting.

Section 3. Written notice of the time, place and purpose of any Special Meeting of the Board of Directors shall be delivered to each Director not less than five (5) days previous thereto, either personally or by mail, by or at the direction of the Secretary or upon a default in

duty by the Secretary, by the President or the Directors calling the meeting. If mailed, such Notice shall be deemed to be delivered when deposited in the United States Mail addressed to the Director, at his address, as it appears on the records of the Corporation, with postage thereon fully prepaid.

Section 4. Four (4) members of the Board shall constitute a quorum for conducting business; provided, however, that if less than four (4) of the Directors are present at such meeting, a majority of the Directors present may adjourn the meeting from time to time; and provided, further, that the Secretary shall notify any absent Directors of the time and place of such adjourned meeting. The act of the majority of the Directors present at a meeting which a quorum is present shall be the act of the Board of Directors.

ARTICLE XI.

Officers

Section 1. The officers of the Corporation shall be a President, Vice-President, Secretary, Treasurer and such other officers as may be determined by the Board of Directors from time to time. The offices of Secretary and Treasurer may be held by the same person.

Section 2. The officers shall be elected by ballot annually by and from the Board of Directors at the meeting of the Board of Directors held immediately after the Annual Meeting of the members. If the election of officers shall not be held at such meeting, such election shall be held as soon thereafter as conveniently may be. Each officer shall hold office until the first meeting of the Board of Directors following the next succeeding Annual Meeting of the members or until his successor shall have been elected and shall have qualified. A vacancy in any office shall be filled by the Board of Directors for the unexpired portion of the term.

Section 3. Any officer or agent elected or appointed by the Board of Directors may be removed by the Board of Directors whenever, in its judgment, the best interests of the Corporation will be served thereby.

ARTICLE XII.

Duties of Officers

Section 1. President. The President shall:

a. Be the principal executive officer of the Corporation and, unless otherwise determined by the members or the Board of Directors, shall preside at all meetings of the members and the Board of Directors.

b. Sign, with the Secretary, Certificates of Membership, the issue of which shall have been authorized by the Board of Directors, and may sign any deeds, mortgages, deeds of trust, notes, bonds, contracts or other instruments authorized by the Board of Directors to be executed, except in cases in which the signing and execution thereof shall be expressly delegated by the Board of Directors or by these By-Laws to some other officer or agent of the Corporation, or shall be required by law to be otherwise signed or executed.

c. In general, perform all duties incident to the office of President and such other duties as may be prescribed by the Board of Directors from time to time.

Section 2. Vice-President. In the absence of the President, or in the event of his inability or refusal to act, the Vice-President shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all of the restrictions upon the President. The Vice-President shall also perform such other duties as, from time to time, may be assigned to him by the Board of Directors.

Section 3. Secretary. The Secretary shall be responsible for:

a. Keeping the Minutes of the meetings of the members of the Board of Directors in one (1) or more books provided for that purpose.

b. Arranging for all notices to be given in accordance with the By-Laws or as is required by law.

c. The safekeeping of the Corporate records and of the seal of the Corporation and affixing the seal of the Corporation to all documents, the execution of which on behalf of the Corporation under its seal is duly authorized in accordance with the provisions of these By-Laws.

d. Arranging for a complete copy of the Articles of Incorporation and By-Laws of the Corporation containing all amendments thereto to be maintained at the Corporation's principal office.

e. Signing with the President, legal documents authorized by the Board of Directors, unless the signing of such documents has been delegated to other officers, agents or employed personnel.

f. Keeping a register of the names and post office addresses of all members to be kept up to date.

g. Performing such other duties as are assigned to him by the Board of Directors.

Section 4. Treasurer. The Treasurer shall be responsible for:

a. Custody of all funds and securities of the Corporation.

b. The receipt of and issuance of receipts for all monies due and payable to the Corporation, and the deposit of all such monies in the name of the Corporation in such bank, or banks as are selected by the Board of Directors.

c. Reviewing the annual financial audit of the Corporation's financial and accounting records and making any necessary recommendations to the Board of Directors.

d. The general performance of all the duties incident to the office of Treasurer and such other duties as are assigned to him by the Board of Directors.

Section 5. The Treasurer and any other officer or agent of the Corporation charged with the responsibility for the custody of any of its funds or property shall give bond in such sum with such surety as the Board of Directors shall determine. The Board of Directors, in its discretion, may require any other officer, agent or employee of the Corporation to give bond in such amount and with such surety as it shall determine. The expense of such bond shall be a legal obligation of the Corporation.

ARTICLE XIII.

Board of Directors - Duties

Section 1. The Board of Directors, subject to the restrictions of the law, the Articles of Incorporation, and By-Laws, shall exercise all of the power of the Corporation; and, without prejudice to or limitation upon their general powers, it is hereby expressly provided that the Board of Directors shall have, and are given, full power and authority to perform the duties and functions hereinafter set forth, to-wit:

a. To pass upon the qualifications of members and to cause to be issued appropriate Certificates of Membership.

b. To select and appoint all officers, agents or employees of the Corporation or remove such agents or employees of the Corporation for just cause, prescribe such duties and designate such powers as

may be consistent with these By-Laws, fix their compensation and pay for faithful services.

c. To borrow from any source, money, goods or services and to make and issue notes and other negotiable and transferable instruments, mortgages, deeds of trust and trust agreements and to do every act and thing necessary to effectuate the same.

d. To prescribe, adopt and amend, from time to time, such equitable uniform rules and regulations as they, in their discretion, may deem essential or convenient for the conduct of the business and affairs of the Corporation and the guidance and control of its officers and employees, and to prescribe adequate penalties for the breach thereof.

e. To order, at least once each year, within ninety (90) days after the close of the business year, an audit of the books and accounts of the Corporation by a certified public accountant. The report prepared by such certified public accountant shall be submitted to the members of the Corporation at their Annual Meeting.

f. To fix the charges to be paid by each member for services rendered by the Corporation to him, the time of payment and the manner of collection.

g. To require all officers, agents and employees charged with responsibility for the custody of any of the funds of the Corporation to give adequate bonds, the cost thereof to be paid by the Corporation, and it shall be mandatory upon the Directors to so require.

h. To select one (1) or more banks to act as depositories of the funds of the Corporation and to determine the manner of receiving, depositing and disbursing the funds of the Corporation and the form of checks and the person or persons signing such checks and the form thereof at will.

ARTICLE XIV.

Non-Profit Operation

Section 1. The Corporation shall, at all times, be operated on a non-profit basis for the mutual benefit of its members. No interest or dividend shall be paid or payable by the Corporation on any capital furnished by its members.

Section 2. The Corporation will install, maintain, and operate a main distribution water pipeline or lines from the source of the water supply to its qualified members and patrons under such policies, rules and regulations as shall be adopted by the Board of Directors from time to time.

Section 3. The Board of Directors shall, from time to time, make such rules, regulations, policies and directives as shall be necessary for the efficient operation of a rural water system and shall generally be responsible for the efficient operation of said system.

Section 4. In the event of dissolution, the Board of Directors shall first pay lawful debts and liabilities of the Corporation. Any remaining assets shall be transferred to any other or several non-profit like organizations or political subdivisions having one (1) or more purposes in common with this Corporation. If no such organization can be reasonably found, the remaining assets shall be distributed to the members and former members in proportion to the business they may have done with the Corporation. The Corporation shall make a reasonable effort to locate former members but shall not be obligated to include in the distribution former members who cannot be located.

ARTICLE XV.

Miscellaneous

Section 1. Membership in Other Organizations. The Corporation shall not become a member of or purchase stock in any other organization without an affirmative vote of the members at a duly held meeting, the Notice of which shall specify that action is to be taken upon such proposed membership or stock purchased; provided, however, that the Corporation may, upon the authorization of the Board of Directors, purchase stock in or become a member of any Corporation or organization organized on a non-profit basis for the purpose of engaging in or furthering the cause of rural water systems, or of any other organization, when in the opinion of the Board of Directors, such membership will promote the interests of the Corporation.

Section 2. Waiver of Notice. Any member or Director may waive in writing any Notice of a meeting required to be given by these By-Laws, either before or after such meeting. The attendance of a member or Director at any meeting shall constitute a Waiver of Notice of such meeting by such member or Director, except in case a member or Director shall attend a meeting for the express purpose of objecting to the transaction or any business on the grounds that the meeting was not lawfully called or convened.

Section 3. Policies, Rules and Regulations. The Board of Directors shall have the power to make and adopt such policies, rules and regulations, not inconsistent with law, the Articles of Incorporation or these By-Laws, as it may deem advisable for the management of the business and affairs of the Corporation.

Section 4. Unless otherwise provided in these By-Laws, the rules of parliamentary procedure as provided in "Roberts Rules of Order" shall govern the conduct of all meetings of the Board of Directors and meetings of members of the Corporation.

ARTICLE XVI.

Amendments

These By-Laws may be repealed or amended from time to time by a majority vote of the Board of Directors present at any Regular or Special Meeting thereof, provided that Notice of said proposed amendment or repeal is mailed to each Director at least ten (10) days prior to the meeting at which said amendment or repeal is to be considered. The Notice shall designate the general nature, purpose and effect of the proposed amendment or repeal.

FACILITIES PLAN

FOR

AUTOMATIC METER READING PROJECT

BROOKINGS DEUEL RURAL WATER SYSTEM

TORONTO, SOUTH DAKOTA

December 2015

DGR Project No. 800209

FACILITIES PLAN

FOR

BROOKINGS DEUEL RURAL WATER SYSTEM
TORONTO, SOUTH DAKOTA

AUTOMATIC METER READING PROJECT

December 2015

I hereby certify that this plan, specification or report was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

By_____
Patrick G. Deering, P.E.

South Dakota License No. 9071

Date_____

DGR Project No. 800209

DGR Engineering

Rock Rapids, IA (712) 472-2531 • Sioux Falls, SD (605) 339-4157 • Sioux City, IA (712) 266-1554 • Ankeny, IA (515) 963-3488

FACILITIES PLAN

FOR

BROOKINGS DEUEL RURAL WATER SYSTEM
AUTOMATIC METER READING PROJECT

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FACILITIES PLAN

FOR

BROOKINGS DEUEL RURAL WATER SYSTEM
AUTOMATIC METER READING PROJECT

I. INTRODUCTION

The Brookings Deuel Rural Water System (BDRWS) is an established regional water supply system in east central South Dakota. Operational since 1974, BDRWS was constructed to provide potable water service to farms in an area where adequate water supply had historically been a problem. Today, the system has grown to serve a population of 8,500 including rural residences, farms, and small municipalities.

Automatic Meter Reading (AMR) systems greatly increase the ease and accuracy of measuring water use. The increased frequency of meter reading and transmission can help identify service line leaks and abnormal usage patterns, therefore reducing the water demand on the utility and preventing an unidentified leak from causing a spike in the user's bill. The instantaneous usage data also allows the utility to more easily analyze patterns to determine which areas of the system may require improvement.

BDRWS has elected to install a Badger Beacon Cellular AMR System which uses a cellular network to transmit water use data. A transmitter will be installed at each of 2,600 user meters. BDRWS intends to fund the project with a $250,000 Drinking Water SRF loan which will be paid back over ten years by increasing each user's base monthly rate by $2.00.

II. ENVIRONMENTAL REVIEW

The environment will only be impacted positively by the AMR system installation. BDRWS will be able to detect and address leaks in the water system earlier than they currently can which will reduce the total amount of water lost due to leaks. This factor qualifies the AMR system installation as a Green Project under the water efficiency category.

The project will require no disturbance of soils, eliminating the risk of damaging natural, cultural, or archaeological resources. No mitigation of adverse effects to the environment is required.

III. EXISTING CONDITIONS

The Brookings Deuel Rural Water System serves about 2,600 meters in Brookings and Deuel Counties. This customer base includes about 1,828 farms or rural household meters, 127 pasture taps, 546 leased town users, 4 bulk municipal users, 18 bulk individual users, and 10 bulk dairy/colony users. The system is supplied from three different well fields at Clear Lake, Bruce, and Elkton with nearby treatment facilities. The distribution system consists of over 1,200 miles of pipe.

Currently, most BDRWS users self-read their meters and record and submit the usage data on cards every month. This reading and recording method is subject to reading error or meter tampering. This method also requires the utility to spend time processing the usage data before it can be analyzed. Monthly data is not frequent enough to be useful for early leak detection or daily water usage pattern analysis.

BDRWS keeps records of the amount of gross water loss from the system every year. Table 3.1 provides the amount of water lost as a percentage of the water that is treated.

Table 3.1: Water loss 2014 & 2015

Water Lost in 2014	17%
Water Lost to date in 2015	19%

IV. DEVELOPMENT OF ALTERNATIVES

The primary need for this project is to reduce water losses and to reduce potential costs of lost water to the utility and the user. The new system will also eliminate the need for the users to read their own meters and increase the ease of processing and recording usage data for the utility.

Four alternatives were evaluated. The first three alternatives include replacing the manual meter reading system with an AMR system. The fourth alternative involves no action and leaves the current system as it is.

A. Sensus FlexNet System

The Sensus FlexNet System uses a one-way radio network to transmit water usage data to a database where it can be stored and managed. Meter readers and radio transceivers are installed at each service where data are read hourly and sent to mounted receiver stations. The meter readers can also be programmed to monitor continuous flows over a period of time to alert the utility to leak conditions. Data

are transmitted daily from each receiver station to the Regional Network Interface for database storage. Using Sensus Meter Data Manager Software, the utility and the users can access the usage data. This system has a 20-year design life, based on the manufacturer's warranty.

A propagation study of the Brookings Deuel Rural Water System was performed to analyze the number of receiver stations that would be required. Using nine stations mounted on various BDRWS and municipal tanks, 93% of the meters could be read using the Sensus FlexNet system.

B. Mueller MegaNET System

The Mueller MegaNET system also uses a radio network to relay data. Meter Transmission Units (MTUs) are installed at each meter to transmit hourly read water usage data to collectors at strategic locations around the distribution system. The MTUs operate at a higher power and lower frequency than other systems which allow them to transmit data further, potentially reducing the number of collector stations required. The collectors transmit water usage data to the utility base station database every five hours. The usage data can be accessed by users and the utility via the internet. Software is used to analyze data for potential leak identification and water usage tracking. This system has a 20-year design life, based on the manufacturer's warranty.

A propagation study of the Brookings Deuel Rural Water System was performed to analyze the number of collector stations that would be required. The study showed that ten stations mounted on new or existing towers throughout the BDRWS would be required.

C. Badger AMI System

The Badger Beacon Cellular AMR System uses a cellular network to transmit water usage data. A Beacon cellular transmitter is installed at each meter to read and transmit data via a cellular tower to a database. Software allows users and the utility to access water usage data for usage tracking and leak analysis. This system has a 10-year design life.

No propagation study was performed for the Badger AMI system, but AMR service is available anywhere that cellular telephone service is available. There is a $0.89 service charge per transmitter per month associated with piggybacking on the cellular system.

D. No Action

The final alternative is to keep the existing system in place. Customers would continue to self-read their meters and submit water usage data every month. Risk of misreading or meter tampering would remain. Revenue for lost water would continue to be lost.

V. SELECTED PLAN, IMPACT TO USER FEES, AND IMPLEMENTATION

A. Selected Plan:

BDRWS has selected the Badger AMI System as their desired alternative. This system has the lowest initial implementation cost because it has the lowest cost of installation for each meter transmitter unit and it requires no additional infrastructure. The Badger system uses cellular towers to transmit the usage data, eliminating cost for initial infrastructure installation and maintenance.

B. Impact to User Fees:

The Badger AMI System is estimated to cost about $250,000 to implement and install data transmitters for 2,600 users. A $2 increase in the minimum monthly user fee was implemented beginning July 2015 in anticipation of this project. With the rate increase, the cost for 7,000 gallons of water is $55.40 for farms and rural residences.

C. Implementation Schedule:

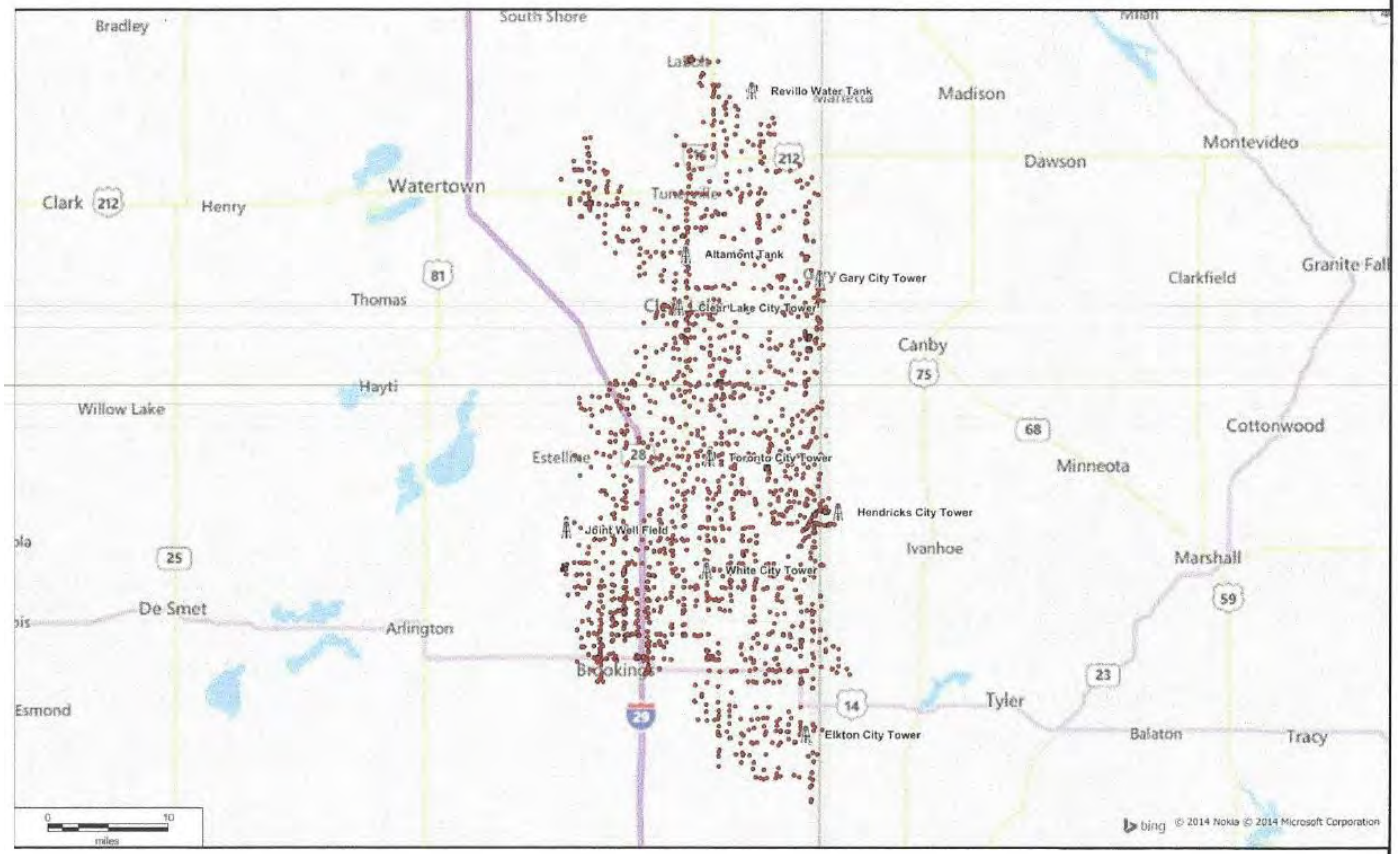
BDRWS plans to install the AMR system using current operating staff. It is expected that implementation will take 12 months from the receipt of funding and will be completed continuously rather than installing a portion of the AMR system each year.

APPENDIX A
COST ESTIMATE

Supplier	Transmitter Cost	Tower Antenna Cost	Software/Training Cost	Yearly O&M
Sensus Flexnet	$ 299,000.00	$ 180,000.00	$ 26,100.00	$ 21,900.00
Mueller Meganet	$ 316,160.00	$ 81,513.83	$ 68,842.00	$ 8,750.00
Badger AMI	$ 237,900.00	$ --	$ 6,300.00	$ 28,836.00

Notes: 1) Estimates do not include sales tax
2) Tower installation costs are not included in cost estimates, estimated to be $12,000 per tower
3) Transmitter cost is based on 2,600 new transmitters to be installed

APPENDIX B
PROPOGATION STUDIES



FlexNet Design

Basestation and Meter Locations

Brookings Deuel RWS Inc.
Toronto, SD

RF Engineer: Eric Campbell
Date: 10/24/2014
Version: 1

FSK: 13
Meter Type: Water
Meter Location: Outdoor

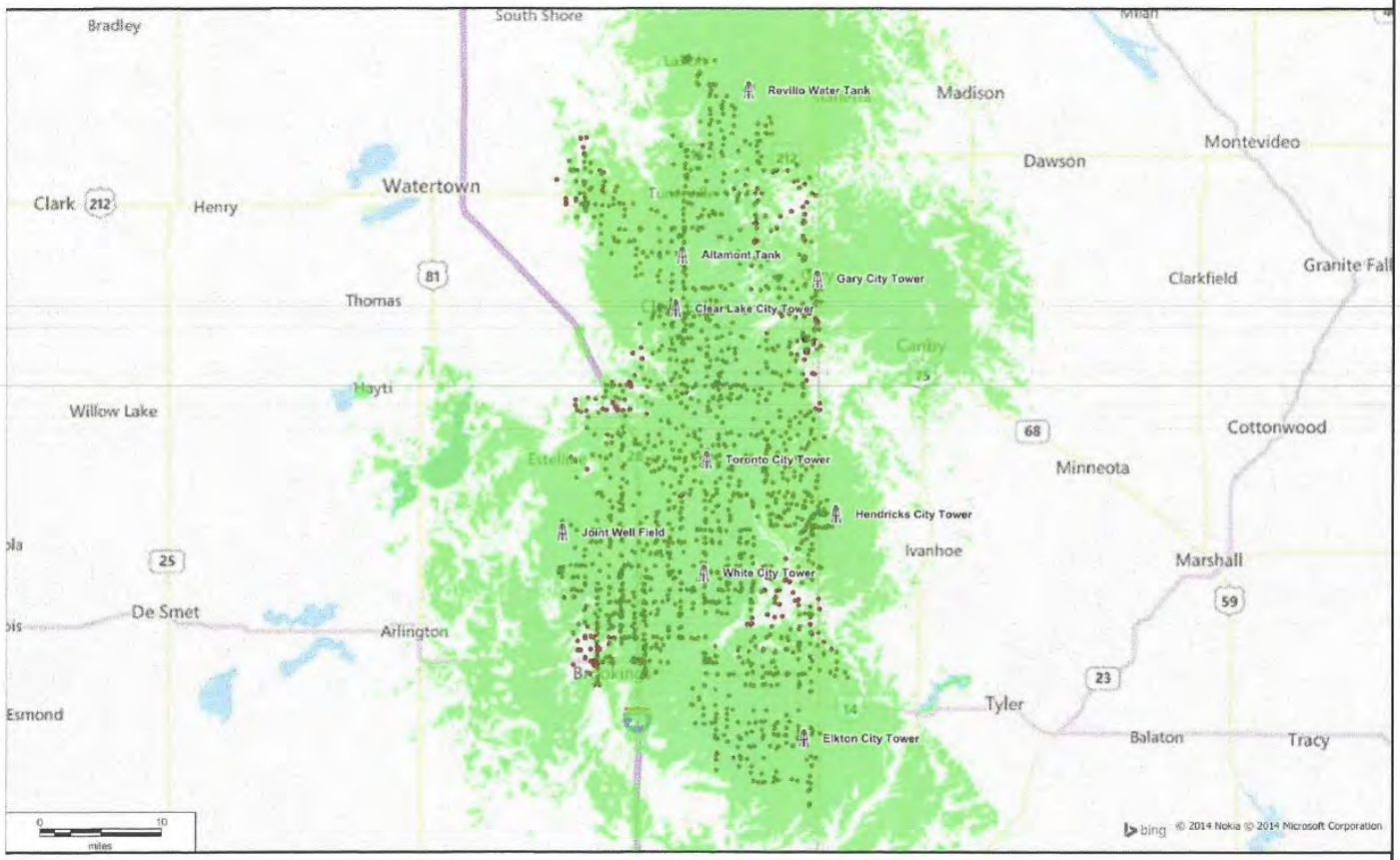
LEGEND:

- Base Station
- Meter

This propagation study is based on actual information provided by the utility pertaining to meter type, meter location, potential antennae height on structure, structure height, and structure location. Any changes, deletions and/or additions that are not provided to the design engineers during the creation of this design may result in a study that does not correlate to actual field conditions.

For all tower mounted antennas, a minimum antenna standoff of 3' is required from the tower.

sensus



FlexNet Design

Propagation Analysis

Brookings Deuel RWS Inc.

Toronto, SD

RF Engineer: Eric Campbell
Date: 10/24/2014
Version: 1

Site Names:
-Altamont Tank
-Clear lake Tower
-Elkton City Tower
-Gary City Tower
-Hendricks City Tower
-Joint Well Field
-Revillo Water Tank
-Toronto City Tower
-White City Tower

Coverage Threshold: > -116 dBm

FSK: 13
Meter Type: Water
Meter Location: Outdoor

Attenuation applied due to meter location: 0 db

Category	Meters
Covered	2,573
Not Covered	202
Meters Read @ Contract RS Rate	2,534
Total Meters Analyzed	2,775

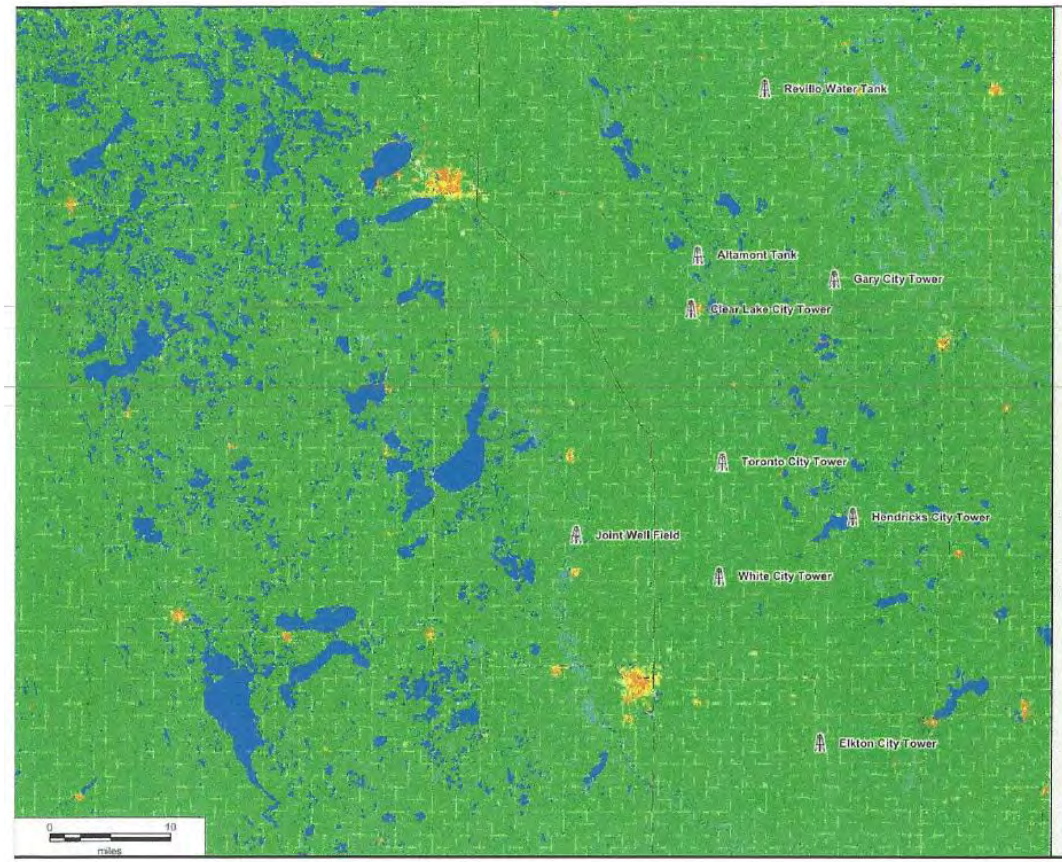
LEGEND:

- Base Station
- Coverage (≥ -116 dBm)
- Meter Location

This propagation study is based on actual information provided by the utility pertaining to meter type, meter location, potential antennae height on structure, structure height, and structure location. Any changes, deletions and/or additions that are not provided to the design engineers during the creation of this design may result in a study that does not correlate to actual field conditions.

For all tower mounted antennas, a minimum antenna standoff of 3' is required from the tower.

sensus



FlexNet Design

Basestation and Cluster

Brookings Deuel RWS Inc.
Toronto, SD

RF Engineer: Eric Campbell
Date: 10/24/2014
Version: 1

FSK: 13
Meter Type: Water
Meter Location: Outdoor

LEGEND:

- Base Station
- High Density Urban
- Commercial - Industrial
- Suburban Few Trees
- Suburban With Trees
- Airports
- Major Transportation
- Open
- Grass - Agriculture
- Forest
- Wetland
- Inland Water
- Sea Water

SENSUS

This propagation study is based on actual information provided by the utility pertaining to meter type, meter location, potential antennae height on structure, structure height, and structure location. Any changes, deletions and/or additions that are not provided to the design engineers during the creation of this design may result in a study that does not correlate to actual field conditions.

For all tower mounted antennas, a minimum antenna standoff of 3' is required from the tower.

Customer Name:	Brookings Deuel RWS Inc	**Date Completed:**	10/24/2014	**RF Engineer:**	Eric Campbell	
City/State or Country:	Toronto, SD	**Meter Type:**	Water	**Version:**	1	
Number of Meters Analyzed:	2,775	**Smart Point Location:**	Outdoor	**FSK and Attenuation Value:**	13 FSK with 0db Attenuation	

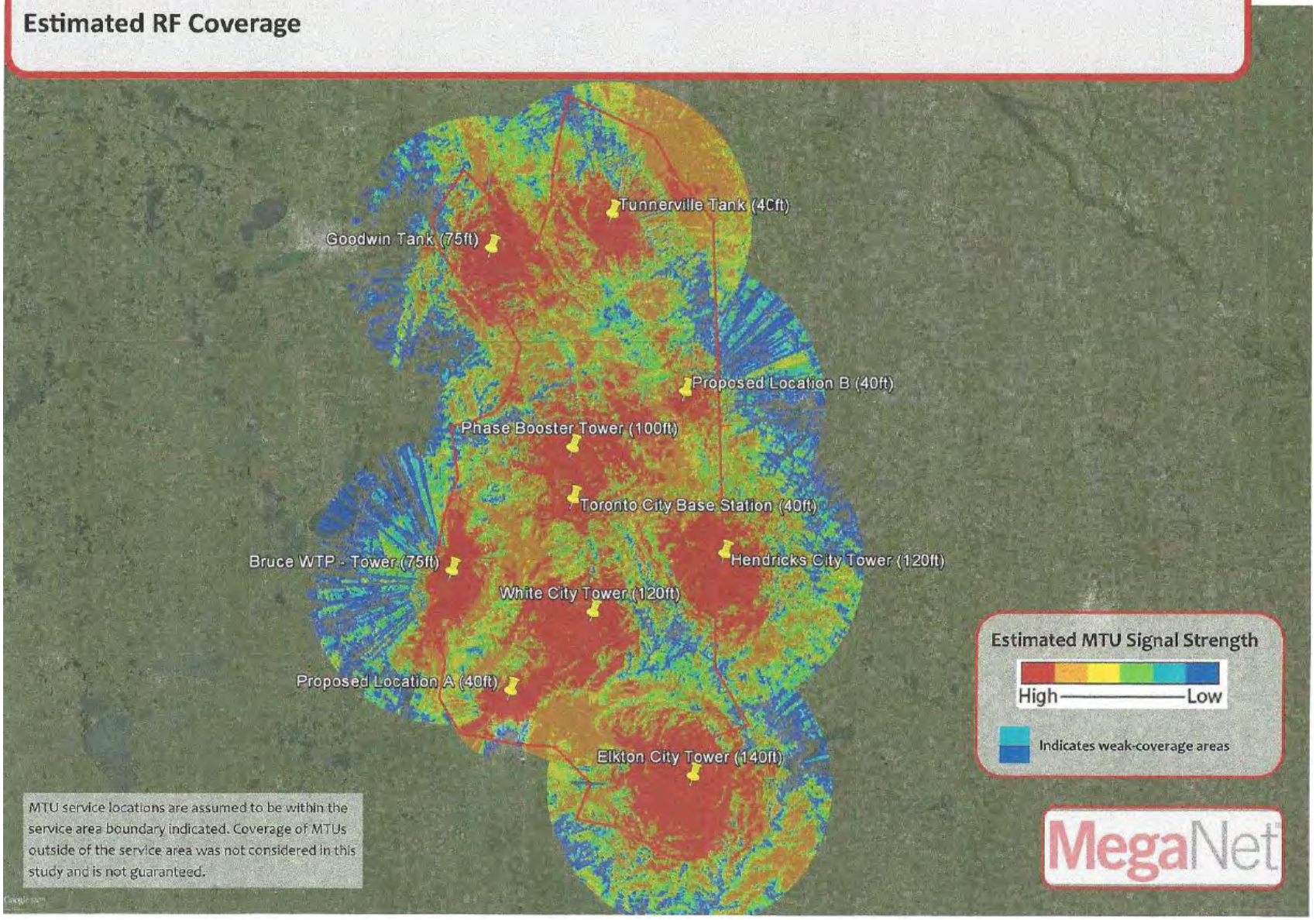
BTS Name	Latitude	Longitude	Total Structure Height (ft)	Proposed Antenna Centerline (ft)	Base Antenna Type	Base Antenna 3dB Beamwidth (deg)	Base Antenna Azimuth (deg)	Base Antenna Tilt (deg -Down, +Up)	Preferred Antenna Installation Azimuth (direction)	Covered Meters (>-118 dBm)	Uncovered Meters (<-118 dBm)	The meter counts indicated for the individual sites are cumulative in nature, and coverage overlap is involved.
Altamont Tank	44.818644	-96.685198	60	60	BCD-87010-EDIN-25	Omni	Omni	0	Top of Tank	652	2,123	
Clear Lake City Tower	44.754308	-96.696713	120	120	BCD-87010-EDIN-25	Omni	Omni	0	Top of Tank	681	2,094	
Elkton City Tower	44.237126	-96.477632	140	140	BCD-87010-EDIN-25	Omni	Omni	0	Top of Tank	338	2,437	
Gary City Tower	44.790212	-96.456431	105	105	WPA-800120-6CF-EDIN-0	120	190	0	Top of Tank	189	2,586	
Hendricks City Tower	44.506905	-96.424573	120	120	WPA-800120-6CF-EDIN-0	120	270	0	Top of Tank	590	2,185	
Joint Well Field	44.484822	-96.888808	40	40	WPA-800120-6CF-EDIN-0	120	90	0	Top of Tank	319	2,456	
Revillo Water Tank	45.016413	-96.574531	105	105	BCD-87010-EDIN-25	Omni	Omni	0	Top of Tank	215	2,560	
Toronto City Tower	44.572171	-96.642983	112	112	BCD-87010-EDIN-25	Omni	Omni	0	Top of Tank	1,289	1,486	
White City Tower	44.435474	-96.648584	120	120	BCD-87010-EDIN-25	Omni	Omni	0	Top of Tank	749	2,026	

Best Server Coverage	>> Best Server Coverage is the Composite Coverage for all sites proposed >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	2,573	202
Meters Read @ Contract RIS Rate		2,534	

Notes:
Please be sure panel antennas have a 360 degree line of sight as they are designed to cover meters outside the main beam.

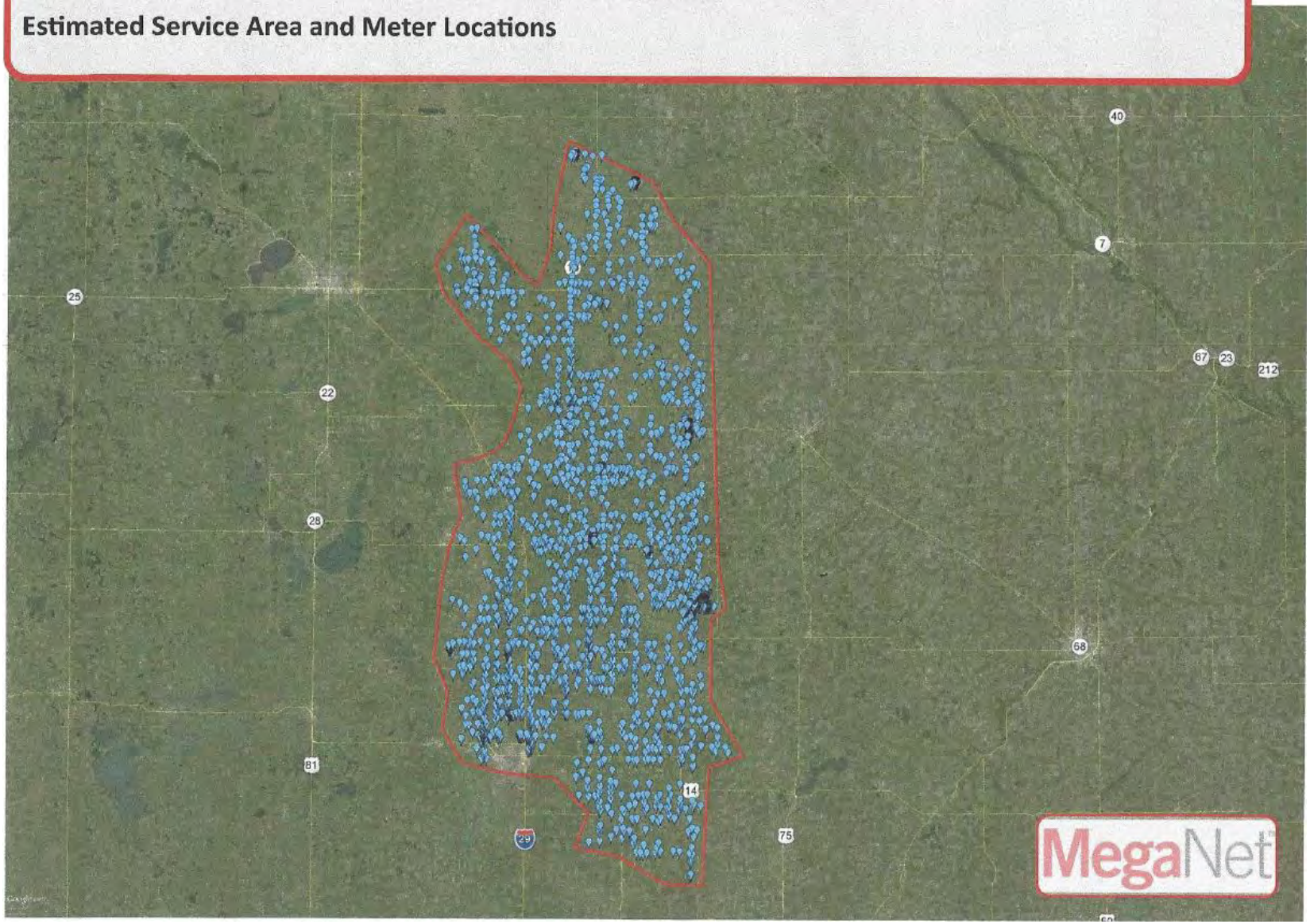
Brookings-Deuel, SD - MegaNet RF Propagation Study

Estimated RF Coverage



Brookings-Deuel, SD - MegaNet RF Propagation Study

Estimated Service Area and Meter Locations



Brookings-Deuel, SD - MegaNet RF Propagation Study

Study Details - 3/23/2015

Data Sources:

- U.S. Geological Survey
  - NLCD 2006 clutter data (30m resolution)
  - NED terrain data (1 arc second resolution)
- Site Information:
  - Locations of potential vertical assets, utility office and meter locations were provided by the customer.

Assumptions:

- The MegaNet Base Station will be located at the Utility Office.
- MTUs will be installed above ground on poles with a minimum height of 3ft.
- Potential vertical assets selected for the study will need to be confirmed for a final system propagation study.
- Antenna installation height estimates (relative to ground) at vertical assets:
  - Toronto City (Base Station) - 40ft
  - Tunnerville Tank - 40ft
  - Goodwin Tank - 75ft
  - Proposed Location A - 40ft
  - Phase Booster Tower - 100ft
  - Bruce WTP - Tower - 75ft
  - Hendricks City Tower - 120ft
  - White City Tower - 120ft
  - Proposed Location B - 40ft
  - Elkton City Tower - 140ft

Mueller SYSTEMS

APPENDIX C
PUBLIC HEARING DOCUMENTS

APPENDIX D
ENVIRONMENTAL REVIEW LETTERS

DEPARTMENT OF ENVIRONMENT and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

December 14, 2015

State Historic Preservation Center
Department of Education and Cultural Affairs
900 Governors Drive
Pierre, South Dakota 57501-2217

Attn: Ms. Amy Rubingh
Review and Compliance Archaeologist

RE: Brookings-Deuel Rural Water System
Automatic Water Meter Reading Device Installation Project

Dear Ms. Rubingh:

The Department of Environment and Natural Resources (DENR) received a project description and supporting documentation for the above referenced project proposed by the Brookings-Deuel Rural Water System. Brookings-Deuel is applying for a State Revolving Fund loan to fund the project.

I have reviewed the project description and the information provided by Brookings-Deuel. I concur with the finding of "No Historic Properties Affected" on the enclosed Cultural Resources Effects Assessment Summary sheet. Please reply with the State Historical Preservation Office determination of effect for this project.

Sincerely,

Eric Meintsma
Natural Resources Engineer IV
Water and Waste Funding Program

Enclosure

cc: Brookings-Deuel RWS, Toronto, SD
DGR Engineering, Rock Rapids, IA ✓

DEPARTMENT OF GAME, FISH, AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

December 15, 2015

Mr. Peter Baudhuin
DGR & Associates Co.
1302 South Union Street
PO Box 511
Rock Rapids, IA 51246

RE: Brookings-Deuel Rural Water System
Automatic Meter Reading System Installation
DGR Project No. 800209

Dear Mr. Baudhuin:

The South Dakota Department of Game, Fish and Parks, Division of Wildlife, has reviewed the above referenced project involving improvements to the Brookings-Deuel Rural Water System in eastern central South Dakota.

The project as described will have no impacts on fish and wildlife resources. If the project design changes or if new information becomes available, please submit the project for further review.

Thank you for the opportunity to comment on this proposed project. If you have any questions, please contact me at (605) 773-6208.

Sincerely,

Leslie Murphy
Senior Biologist

WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: Town of Chancellor

Project Title:	Water Meter Replacement Project
Funding Requested:	$180,415
Total Project Cost:	$180,415
Project Description:	This project will replace 131 existing water meters that are over 20 years old with an automatic meter reading system.
Alternatives Evaluated:	No other alternatives were evaluated. However, a do nothing alternative would not address the replacement of the 20-year old water meters.
Implementation Schedule:	Chancellor anticipates bidding the project in July 2016 with a project completion date of October 2016.
Service Population:	263
Current Domestic Rate:	$37.00 per 5000 gallons usage

Interest Rate: 2.25% Term: 10 years Security: Project Surcharge

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan town of Chancellor would have to establish a surcharge of approximately $15.30. When added to current rate of $37.00/5,000 gallons residents would be paying $52.30/5,000 gallons.

25% Funding Subsidy:	$45,000 subsidy with a loan of $135,000.
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $135,000 the town of Chancellor would have to establish a surcharge of approximately $11.50 thereby paying a rate $48.50/5,000 gallons.

50% Funding Subsidy:	$90,000 subsidy with a loan of $90,000.
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $90,000 the town of Chancellor would have to establish a surcharge of approximately $7.70 thereby paying a rate $44.70/5,000 gallons.

75% Funding Subsidy:	$135,000 subsidy with a loan of $45,000.
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $45,000 the town of Chancellor would have to establish a surcharge of approximately $3.90 thereby paying a rate $40.90/5,000 gallons.

ENGINEERING REVIEW COMPLETED BY: NICK NELSON

FINANCIAL REVIEW COMPLETED BY: JON PESCHONG

SECOG
SOUTH EASTERN COUNCIL OF GOVERNMENTS
SOUTH DAKOTA

December 28, 2015

RECEIVED
DEC 31 2015
Division of Financial
& Technical Assistance

Mike Perkovich
SD-DENR
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

Dear Mr. Perkovich:

Enclosed, please find the Drinking Water State Revolving Loan Funding Application for the Town of Chancellor's Water Meter Replacement Project. Included with the general application are the following appendices:

Appendix A – Supplemental Signed Application Forms including the Certification of Drinking Water Needs Categories, Certification Regarding Debarment, Suspension, and Other Responsibility Matters.
Appendix B – Signed Application Resolution
Appendix C – Capacity Assessment Worksheets
Appendix D – Capacity Assessment Financial Spreadsheet
Appendix E – User Rate Ordinance
Appendix F – Amortization of Existing Drinking Water Debt
Appendix G – 2014 Unaudited Financial Statements
Appendix H – 2015 Budget
Appendix I – 2016 Budget
Appendix J – Documentation of an Active Registration in the SAM Database
Appendix K – Public Hearing Notice, Sign-in Sheets, & Unofficial Minutes (Official minutes will be sent after they are approved during the January council meeting)

The Facility Plan will be sent directly to DENR by Stockwell Engineers.

Sincerely,

Kristen Benidt
GIS Technician/Planner

Enclosures

Cc: Town of Chancellor
Mitch Mergen, Stockwell Engineers

500 N. Western Ave. Suite 100 • Sioux Falls, SD 57104
Phone: 605.367.5390 • Fax: 605.367.5394
Website: www.secog.org • E-mail: gis@secog.org

Drinking Water Facilities Funding Application

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:	Proposed Funding Package	
Town of Chancellor		
Address: PO Box 106 Chancellor, SD 57015-0106	Requested Funding	$180,415
	Local Cash	
	Other:	
Subapplicant:	Other:	
DUNS Number: 079134857	Other:	
	TOTAL	$180,415

Project Title: Water Meter Replacement Project

Description:

The Town of Chancellor proposes to convert approximately 131 existing water meters to an automatic meter reading system. The existing water meters are over 20 years old. All meters require a complete replacement. The Town also proposes to purchase the required computer system and software associated with the new meters. The proposed water metering system will allow the Town to more efficiently gather water usage data and improve the overall accuracy of the data collected.

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Dennis Wieker, Town Board President — Name & Title of Authorized Signatory (Typed)

Signature — Date: 12-14-15

Professional Consultants

Application Prepared By: South Eastern Council of Governments

Contact Person: Kristen Benidt

Mailing Address: 500 N Western Ave, Suite 100

City, State, and Zip: Sioux Falls, SD 57104

Telephone Number: (605)367-5390 Fax: (605)367-5394

Email address: gis@secog.org

Consulting Engineering Firm: Stockwell Engineers

Contact Person: Mitch Mergen

Mailing Address: 600 N. Main Ave, Suite 100

City, State, and Zip: Sioux Falls, SD 57104

Telephone Number: (605)338-6668 Fax: (605)338-8750

Email address: mmergen@stockwellengineers.com

Legal Counsel's Firm: Eich Law Office

Contact Person: Robin M. Eich

Mailing Address: 210 N. Main Ave., Suite 102, PO Box 310

City, State, and Zip: Parker, SD 57053

Telephone Number: 605)297-4809 Fax: (605)297-3187

Email address: Robin@eichlawoffice.com

Bond Counsel's Firm: Todd V Meierhenry

Contact Person: Meierhenry Sargent, LLP

Mailing Address: 315 South Phillips Avenue

City, State, and Zip: Sioux Falls, SD 57104

Telephone Number: (605) 335-4965 Fax: (605) 335-4961

Email address: todd@meierhenrylaw.com

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel	$6,000					$6,000
D. Other SECOG	$3,000					$3,000
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$24,000					$24,000
B. Project Inspection Fees	$6,000					$6,000
C. Other						
4. Construction & Improvements	$134,415					$134,415
5. Equipment						
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$173,415					$173,415
10. Contingencies	$7,000					$7,000
11. Total (Lines 9 and 10)	$180,415					$180,415
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)			
Other (Explain) CWFCP/DWSRF		$180,415	March 2016
Other (Explain)			
Other (Explain)			
Total		$180,415	$180,415

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: January 1

Population Served Current: 263 2010 264 2000 328

Top three employers within 30 miles	Number of Employees	Type of Business
Sanford Health	8600	Health Care
Avera Health	6734	Health Care
John Morrell & Co.	3300	Meat Processing

Repayment Information

Interest rate you are applying for: 2.25% Term: 10

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☒ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan.
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year	2006					
Purpose	Water System Improvements					
Security Pledged	Drinking Water Revenue					
Amount	$205,948					
Maturity Date (mmm/yyyy)	7/15/2037					
Debt Holder	BWNR					
Debt Coverage Requirement	110%					
Avg. Annual Required Payment	$10,773					
Outstanding Balance	$167,527					

Comments:

2006 is loan #1

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$48,712	$43,690	$50,000	$50,000	$50,000	$50,000
Surcharge Fees						
Other (Explain)						
Operating Expenses						
Personal Services	($4,509)	($4,413)	($5,000)	($5,000)	($5,150)	($5,305)
Chemical, Material & Supplies	($29,753)	($33,205)	($25,000)	($25,000)	($25,750)	($26,523)
Electric & Other Utilities						
Other (Explain)						
Operating Net Cash	$14,450	$6,072	$20,000	$20,000	$19,100	$18,172
Nonoperating Cash Flow						
Interest Revenue						
Transfers In (Explain)						
Fixed Asset Purchases						
Transfers Out (Explain)						
Principal Debt Payments	($3,686)	($5,055)	($5,222)	($5,393)	($5,571)	($22,029)
Interest Debt Payments	($4,394)	($5,717)	($5,551)	($5,379)	($5,202)	($8,941)
Other (Explain)						
Nonoperating Net Cash	($8,080)	($10,773)	($10,773)	($10,773)	($10,773)	($30,970)
Increase (Decrease) Cash	$6,371	($4,701)	$9,227	$9,227	$8,327	($12,798)
Beginning Cash Balance	$149,531	$155,902	$151,201	$160,428	$169,655	$177,982
Ending Cash Balance	$155,902	$151,201	$160,428	$169,655	$177,982	$165,184
Restricted Balance						
Unrestricted Balance						

Explanations

2015 numbers were figured using a combination of current actual numbers along with budget.
2016 are budget numbers
2017-2018 factoring in an increase in expenses of 3%

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: [X] Incorporated Municipality or Sanitary District

or

[ ] Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic	$37.00		116	1500
Business	$37.00		5	4000
Other:				
Other:				

Are fees based on usage or flat rate? Usage

When is proposed fee scheduled to take effect? N/A

When did the current fee take effect? March 2013

What was the fee prior to the current rate? $28.00

Four Largest Customers	Type of Business	% of System Revenue
Ampride Convenience	Convenience store	5.7%
Chancellor Bar	Bar	5.1%
Security State Bank	Bank	4.6%
Hostetler Repair	Repair shop	2%

Appendix A

Certification of Drinking Water Needs Categories and Certification Regarding Debarment, Suspension and Other Responsibility Matters

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$180,415
Treatment	
Storage	
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$180,415

Dennis Wieker, Town Board President

Name & Title of Authorized Representative

Dennis L Wieker

Signature of Authorized Representative

12-14-15

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Dennis Wieker, Town Board President

Name & Title of Authorized Representative

Dennis L Wieker

Signature of Authorized Representative

12-14-15

Date

☐ I am unable to certify to the above statements. Attached is my explanation

Appendix B

Signed Application Resolution

RESOLUTION NO. 2015-12-1

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the Town of Chancellor (the "Town") has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to the Water Meter Replacement Project (the "Project"); and

WHEREAS, the Town has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the Town and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the Town as follows:

1. The Town hereby approves the submission of an Application for financial assistance in an amount not to exceed $180,415 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Board President is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Board President is hereby designated as the authorized representative of the Town to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at Chancellor, South Dakota, on this 14th day of December 2015.

APPROVED:

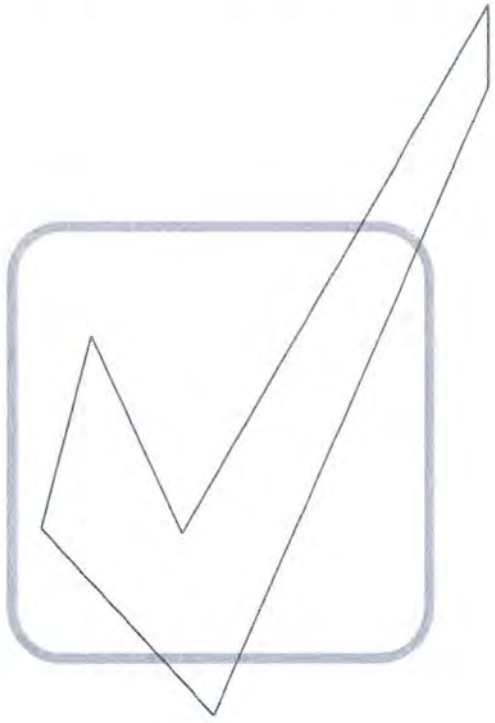
Dennis L Wieker

Dennis Wieker, Board President
Town of Chancellor

(Seal)

Attest: Jolene Berens
Town of Chancellor Finance Officer

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: Town of Chancellor

Prepared by: Jolene Berens
Finance Officer

Phone #: (605)647-8696

Date: 12/2/15

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µg/L: micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** 16,000 GPD	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 20,000 GPD	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 1,000,000 GPD	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 5000%	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** 50 days	☑	☐	☐	☐
Have you been able to provide adequate volumes of water during drought cycles?	☑	☐	☐	☐
Have you had to restrict usage at any time for any reason? ***Please specify:***	☐	☑	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:***	☐	☑	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.***	☐	☐	☐	☑
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☐ ***growing,*** ☐ ***declining, or*** ☑ ***stable.***	☑	☐	☐	☐
Does your source have additional water available for appropriation?	☑	☐	☐	☐
Do you have a water right? ***Water right permit number(s):***	☐	☐	☑	☐
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☐	☐	☑	☐
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☐	☑	☐	☐
Do you have a contract to purchase water? ***If yes, with whom?*** South Lincoln Rural Water System	☑	☐	☐	☐
Are you currently staying within your contract?	☑	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☐	☑	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☐	☑	☐	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☐	☑	☐	☐
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** _____	☐	☐	☐	☑
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** _____	☐	☐	☐	☑
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☐	☐	☐	☑

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☐ **Yes** ☑ **No**

(If you checked "No", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☐	☐
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☐	☐
Are repair parts available?	☐	☐	☐	☐
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:*** _____	☐	☐	☐	☐
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☐	☐
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☐	☐
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:*** _____	☐	☐	☐	☐
Do you have the capability to add coagulant before the filter?	☐	☐	☐	☐

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☐	☐	☑	☐
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** _____	☐	☐	☑	☐
Is your well(s) constructed according to current South Dakota regulations?	☐	☐	☑	☐
Do you have a source water protection plan?	☐	☐	☑	☐
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☐	☐	☑	☐

Disinfection

Do you disinfect? ☐ **Yes** ☑ **No** ***(If "No", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** _____ ***How often?*** _____ ***Disinfectant used:*** _____	☐	☐	☐	☐
Do you have back-up equipment? ***Type:*** _____	☐	☐	☐	☐
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** _____	☐	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** _____ ***Total Chlorine Residual:*** _____ (if using chloramines)	☐	☐	☐	☐

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☐
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☐

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☐	☐	☐	☐
Are chemicals used for treatment properly stored and secure?	☐	☐	☐	☐
Does the water system track chemical usage? (i.e. a sudden	☐	☐	☐	☐

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping

Condition of Pumping Equipment	**Yes**	**No**	**Unknown**	**NA**
Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** _____	☐	☐	☑	☐
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☐	☐	☑	☐
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☐	☐	☑	☐
Standby/Emergency Power Equipment	**Yes**	**No**	**Unknown**	**NA**
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☐	☐	☑	☐
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☐	☐	☑	☐
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☐	☐	☑	☐

Infrastructure - Storage

Storage Capacity	**Yes**	**No**	**Unknown**	**NA**
Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:*** _____	☐	☐	☑	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** _____	☐	☐	☑	☐
Security Measures	**Yes**	**No**	**Unknown**	**NA**
Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☐	☐	☑	☐
Are access hatches locked?	☐	☐	☑	☐
Is the tank and the immediate surrounding area fenced?	☑	☐	☐	☐
Control Systems				
Is there a high and low water level signal system to control the pumps?	☐	☐	☑	☐

Is there a drain valve or hydrant to allow for draining of the tank?	☐	☐	☑	☐
Tank Maintenance	**Yes**	**No**	**Unknown**	**NA**
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☐	☐	☑	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☐	☐	☑	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:*** two times per year	☑	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☐	☑	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☑	☐	☐	☐
Are all valves exercised and lubricated periodically?	☐	☑	☐	☐
Is the system free of severe "water hammer" problems?	☐	☑	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☑	☐	☐	☐
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month?	☑	☐	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 20 %	☐	☑	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 45 psi	☑	☐	☐	☐
Do you have a routine leak detection and repair program?	☐	☑	☐	☐
Are all sources of supply and customers metered?	☑	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☐	☑	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☐	☐	☑	☐

Are any inspections for cross-connections performed?	☐	☐	☑	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☑	☐	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☑	☐	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** _____	☐	☑	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☑	☐	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☑	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☑	☐	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** _____ ***Most common complaint:*** Grandfathered in	☐	☑	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☑	☐	☐	☐

The Management Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** Grandfathered in	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** South Lincoln Rural Water System	☑	☐	☐	☐

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☑	☐	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☑	☐	☐	☐
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications?	☐	☑	☐	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☐	☑	☐	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☐	☑	☐	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☑	☐	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☑	☐	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☑	☐	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** 20 plus years	☑	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☐	☑	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☑	☐	☐
Do you know what to do in the event of a violation?	☐	☑	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☐	☑	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☐	☑	☐	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☐	☑	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☐	☑	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** _____	☐	☑	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☐	☑	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☐	☑	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☐	☑	☐	☐
Do you have written operating procedures for both routine and emergency system operations?	☐	☑	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☐	☑	☐	☐
Does the system work with customers to promote their awareness of security?	☐	☑	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☐	☑	☐	☐

Maintenance	Yes	No	Unknown	NA
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☐	☑	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☐	☑	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☐	☑	☐	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☑	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: Yes, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☑	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☑	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** _____	☐	☑	☐	☐
Does the system have reserve funds available in the event of an emergency?	☐	☑	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☐	☑	☐	☐
Do you have a process for scheduling and committing to capital projects?	☐	☑	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☐	☑	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☐	☑	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** yearly	☑	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☑	☐	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** $12min,plus $5/1st 1500gal,then$5/1000 (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: _____	☐	☑	☐	☐
Does the rate structure assure proportionality among users?	☐	☑	☐	☐
Do you have procedures for billing and collection?	☑	☐	☐	☐
Is your billing collection rate greater than 95%?	☑	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☑	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☑	☐	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☑	☐	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☑	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☐	☑	☐	☐
Do you employ standardized accounting and tracking systems?	☑	☐	☐	☐
Do you track budget performance?	☑	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☐	☑	☐	☐
Are financial management recordkeeping systems organized?	☑	☐	☐	☐
Are controls exercised over expenditures?	☑	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☑	☐	☐	☐
Are there purchasing procedures?	☑	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☑	☐	☐	☐

Financial Spreadsheet

Complete the financial spreadsheet on the following page using the guidance presented on the reverse side of the form.

GUIDELINES:

This cash flow projection form provides a systematic method of estimating cash receipts, disbursements and balances. The entries listed on the form will not necessarily apply to every PWS, and some entries may not be included which would be pertinent to each PWS. It is suggested, therefore, that the form be adapted to each particular PWS, with appropriate changes in the entries as may be required.

Procedure: Most of the entries on the form are self-explanatory; however, the following suggestions are offered to simplify the procedure:

(1) First gather the audited financial statements, internally prepared statements or budgets and other information for the current year and the two prior years. Include the most recent audited financial statement with your self-assessment report.

(2) Complete the columns for the prior two years using actual data from your audited financial statements, if available, or your internally prepared financial statements. Keep in mind, for purposes of this analysis, it is important to use **cash** receipts and disbursements. ***Suggestion: Round amounts to the nearest dollar.***

(3) Complete the current year's column using the most recent budget information. Include all expenditures incurred by the utility.

(4) Complete the form using the suggestions in the partial form below for each entry. Be sure to include any expenditures resulting from planned plant improvement and estimate the impact of inflation on all expenditures.

(5) Item #1 (Beginning Cash on Hand) plus Item #3 (Total Cash Receipts) minus Item #6 (Total Cash Paid Out) should equal Item #7 (Ending Cash Position).

(6) Item #13 (Total Added to Reserves) plus Item #14 (Operating Cash) should equal Item #7 (Ending Cash Position).

(7) Item #1 (Beginning Cash on Hand) should equal Item #14 (Ending Cash Position) from the prior financial period.

(8) Items #8 & 9 are used together to determine the impact of the rate structure on the equivalent residential user. If industrial or business customers contribute a significant portion of the revenues, these amounts should be looked at separately. Consideration should be given to design a rate structure so that each

Appendix D

Capacity Assessment Financial Spreadsheet

8.3.16.1.1

Financial Spreadsheet

Applicant: Town of Chancellor

Completed by: Jolene Berens

Date: 12/10/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	**$155,902**	**$151,201**	**$160,428**	**$169,656**	**$177,983**
2. Cash Receipts:					
a. Unmetered water Revenue					
b. Metered Water Revenue	$43,690	$50,000	$50,000	$50,000	$50,000
c. Other Water Revenue					
d. Total Water Revenues (2a through 2c)	**$43,690**	**$50,000**	**$50,000**	**$50,000**	**$50,000**
e. Connection Fees					
f. Interest and Dividend Income					
g. Other -Sale of Investments					
h. Total Cash Revenues (2d through 2g)	**$43,690**	**$50,000**	**$50,000**	**$50,000**	**$50,000**
i. Transfers in/Additional Rev Needed					
j. Loans, Grants orother Cash					
Received from Interfund Services					
Due from Other Funds					
3. Total Cash Receipts (2h through 2j)	**$43,690**	**$50,000**	**$50,000**	**$50,000**	**$50,000**
4. Total Cash Available (1+3)	**$199,592**	**$201,201**	**$210,428**	**$219,656**	**$227,983**
5. Operating Expenses					
a. Salaries and Wages	$4,413	$5,000	$5,000	$5,150	$5,305
b. Employee Pensions and Benefits					
c. Purchased Water					
d. Purchased Power					
e. Fuel for Power Productin					
f. Chemicals, mat'ls, supplies					
g. Materials and Supplies	$33,205	$25,000	$25,000	$25,750	$26,523
h. Engineering Services					
i. Contractual Services - Other					
j. Equip. Rent/Real Property					
k. Transportation Expenses					
l. Laboratory					
m. Insurance					
n. Regulatory Commission Expenses					
o. Advertising					
p. Paid for Interfund Services					
q. Total Cash O&M Expenses (5a through 5p)	**$37,618**	**$30,000**	**$30,000**	**$30,900**	**$31,828**
r. Replacement Expenditures					
s. Total OM&R Expenditures (5q+5r)	**$37,618**	**$30,000**	**$30,000**	**$30,900**	**$31,828**
t. Loan Principal/Capital Lease Payments	$5,056	$5,222	$5,393	$5,571	$22,029
u. Loan Interest Payments	$5,717	$5,551	$5,379	$5,202	$8,941
v. Transfers Out					
w. Capital Purchases (specify):					
Due to Other Funds					
x. Other					
6. Total Cash Paid Out (5s through 5x)	**$48,391**	**$40,773**	**$40,772**	**$41,673**	**$62,798**
7. Ending Cash Position (4 - 6)	**$151,201**	**$160,428**	**$169,656**	**$177,983**	**$165,185**

Financial Spreadsheet

Applicant: Town of Chancellor

Completed by: Jolene Berens

Date: 12/10/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts	121	121	121	121	121
9. Avg Annual User Charge Account (2d/8)	$361.07	$413.22	$413.22	$413.22	$413.22
10. Coverage Ratio (2h-5s)/(5t+5u)	0.56	1.86	1.86	1.77	0.59
11. Operating Ratio (2d/5s)	1.16	1.67	1.67	1.62	1.57
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve					
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other					
13. Total Reserves (12a through 12e)	$0	$0	$0	$0	$0
14. Year End Operating Cash (7 - 13)	**$151,201**	**$160,428**	**$169,656**	**$177,983**	**$165,185**

ORDINANCE NO. 2013-2

AN ORDINANCE OF THE TOWN OF CHANCELLOR, SD, AMENDING THE REVISED MUNICIPAL ORDINANCES OF THE TOWN BY AMENDING CHAPTER 8.01, GENERAL PROVISIONS AND SECTION 8.0210, PAYMENT OF WATER RATES.

BE IT ORDAINED BY THE TOWN OF CHANCELLOR, SD:

Section 1. That Chapter 8.01 of the Revised Municipal Ordinances of Chancellor, SD, is hereby amended to read as follows:

CHAPTER 8.01 - GENERAL PROVISIONS

8.0101 Utility Service-Application Required. Any person desiring any utility service furnished by the Town shall make application for the same to the Town Board. Such application shall contain the applicant's name, address and the uses for which such service is desired. A separate application shall be made for each premise to be served. The applicant shall abide by the rules and regulations established by the Town relative to utility service in effect at the time of such application and as they may be revised from time to time in addition to conditions and agreements as the Town Board shall deem advisable.

8.0102 Activation Deposit. A deposit of one hundred dollars will be required of each owner or occupant desiring initial activation of a service connection with the municipal utility system. This deposit will be held by the Town and returned to the owner or occupant at the time that the owner or occupant requests that the service connection be deactivated; however, any amount still owed on the owner or occupant's municipal utility account at the time of deactivation will be retained by the Town from the deposit. The deposit in this Section may be adjusted by resolution of the Town Board.

8.0103 Same-Not Available to Debtors. The Town may decline or fail or cease to furnish utility service to any person who may be in debt to the Town for any reason, except ad valorem taxes and special assessments.

8.0104 Consumer's Bills - Water. All meters shall be read near the beginning of each month and following such reading, any amount due for water used shall be payable on or before the twentieth day of the same month. Failure of property owners to comply with the time of payment of water bills shall subject them to a penalty for late payment which shall be ten dollars in addition to termination of water service. If not paid by the twentieth of the month, they become delinquent. If the bill remains unpaid on the twentieth day of the month in which it becomes due, the consumer is notified by mail or personal service that if the account is not paid in full five days from the date of notice, disconnection of service will be effected without further notice, unless the consumer requests a hearing before the Town Board to answer as to why the bill has not been paid. The Town Board may at its discretion enter into agreements with consumers as to mutually satisfactory payment plans for delinquent bills. Should no payment plan be reached or the delinquent consumer fails to show cause why service should not be terminated, the Town Board shall order that the service be terminated without further notice to the consumer. Termination of service may be accomplished at any time, day, or month of the year for cause as determined by the Town Board.

8.0105 Restoration of Service. All utilities disconnected for nonpayment must pay a reconnect fee of

reconnect fee $50 - even voluntarily disconnected

fifty dollars plus payment in full of the account before any utilities will be reconnected. Reconnections will be made only during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday. Utilities voluntarily disconnected shall also require a reconnect fee as set by the Town Board and on file in the office of the Finance Officer.

8.0106 Owner, Lessee Liable. The owner of property, which is serviced by municipal utilities from the Town, shall, as well as the lessee or occupant of the property, be liable to the Town for the utility bills set forth in 8.0104, which may be recovered in an action against such owner, lessee or occupant or against any or all of them, jointly or severally. The provisions contained in 8.0104 and 8.0105 shall equally apply to the owner of the property as they do to the consumer/lessee or occupant.

8.0107 Excavation Requirements. All excavations required for the installation of any Town owned utility service shall be open trench work or ditch, unless otherwise approved by the Town Board. Town personnel shall be allowed to inspect the work at any stage of construction, and in any event, the applicant for the permit shall notify the Town when the work is ready for final inspection and before underground portions are covered.

8.0108 Liability of Town. The Town shall not be liable for any damage to the property of any customer of any water and sewer service or other utility service as furnished by the Town due to backflow of the sewage system, failure of water supply, interruption of service, or from any cause outside the direct control of the Town.

8.0109 Right of Entry. Any person authorized by the Town shall have free access at any time to all premises supplied with any utility service by the Town for the purpose of examination or testing of equipment and related apparatus.

8.0110 Damage, Trespass of Equipment. It shall be unlawful for any person, not having authority to do so, to open any water hydrant or tamper with any utility service equipment or apparatus furnished by the Town to consumers, or to in any other way molest, damage or trespass upon any equipment or premises belonging to the Town connected with any such service.

8.0111 Unlawful Use. No person, other than authorized personnel of the Town, shall connect, turn on, turn off or disconnect any utility service offered by the Town, or remove, replace or repair any equipment connected to any such service.

8.0112 Violations. The Town may, in its discretion, notify any person violating any provision of this Title with written notice stating the nature of the violation and providing a reasonable time for the correction thereof, but such notice shall not be necessary for the prosecution of any violators hereof. Any person, whether receiving such notice or not, violating any provision of this Title shall be liable to the Town for any expense, loss, or damage, occasioned the Town by reason of such violation. All provisions of this Title shall be subject to applicable state and federal law. (SDCL 9-47, SDCL 9-48)

Section 2. That Section 8.0210 of the Revised Municipal Ordinances of Chancellor, SD, is hereby amended to read as follows:

8.0210 Reserved.

Adopted this 11th day of February, 2013.

Daniel Swenson
Town Board President

ATTEST:

Jolene Berens
Finance Officer

Seal

First Reading: January 14, 2013
Second Reading & Adoption: Feb. 11, 2013
Publication: February 28, 2013
Effective Date: March 21, 2013

Published once at the approximate cost of _____.

Gallons	Cost
0	$ 12.00
1-1499	$ 17.00
1500-2499	$ 22.00
2500-3499	$ 27.00
3500-4499	$ 32.00
4500-5499	$ 37.00
5500-6499	$ 42.00
6500-7499	$ 47.00
7500-8499	$ 52.00
8500-9499	$ 57.00
9500-10499	$ 62.00
10500-11499	$ 67.00
11500-12499	$ 72.00
12500-13499	$ 77.00
13500-14499	$ 82.00
14500-15499	$ 87.00
15500-16499	$ 92.00
16500-17499	$ 97.00
17500-18499	$ 102.00
18500-19499	$ 107.00
19500-20499	$ 112.00
20500-21499	$ 117.00
21500-22499	$ 122.00
22500-23499	$ 127.00
23500-24499	$ 132.00
24500-25499	$ 137.00
25500-26499	$ 142.00
26500-27499	$ 147.00
27500-28499	$ 152.00
28500-29499	$ 157.00

Appendix F

Amortization of Existing Drinking Water Debt

(3)

AMORTIZATION SCHEDULE

Principal	Loan Date	Maturity	Loan No	Call / Coll	Account	Officer	Initials
$205,948.00		07-15-2037					

References in the shaded area are for Lender's use only and do not limit the applicability of this document to any particular loan or item.
Any item above containing "***" has been omitted due to text length limitations.

Borrower: City of Chancellor– Drinking Water # 1
PO Box 106
Chancellor, SD 57015–0106

Lender: THE FIRST NATIONAL BANK IN SIOUX FALLS
AS TRUSTEE FOR SOUTH DAKOTA DEPARTMENT
OF ENVIRONMENT AND NATURAL RESOURCES
PIERRE, SD 57501

Disbursement Date:
Interest Rate: 3.250

Repayment Schedule: Installment
Calculation Method: 30 /360 U.S. Rule

Payment Number	Payment Date	Payment Amount	Interest ** Paid	Principal Paid	Remaining Balance
1	10–15–2007 9-10-07	2,693.19	1,673.32	1,019.87	204,928.13
2007 TOTALS:		**2,693.19**	**1,673.32**	**1,019.87**	
2	01–15–2008 11-12-07	2,693.19	1,665.04	1,028.15	203,899.98
3	04–15–2008 3-4-08	2,693.19	1,656.69	1,036.50	202,863.48
4	07–15–2008 6-11-08	2,693.19	1,648.27	1,044.92	201,818.56
5	10–15–2008 9-11-08	2,693.19	1,639.77	1,053.42	200,765.14
2008 TOTALS:		**10,772.76**	**6,609.77**	**4,162.99**	
6	01–15–2009 12-8-08	2,693.19	1,631.22	1,061.97	199,703.17
7	04–15–2009 4-10-09	2,693.19	1,622.59	1,070.60	198,632.57
8	07–15–2009 6-8-09	2,693.19	1,613.89	1,079.30	197,553.27
9	10–15–2009 8-10-09	2,693.19	1,605.12	1,088.07	196,465.20
2009 TOTALS:		**10,772.76**	**6,472.82**	**4,299.94**	
10	01–15–2010 12-8-09	2,693.19	1,596.28	1,096.91	195,368.29
11	04–15–2010 2-8-10	2,693.19	1,587.36	1,105.83	194,262.46
12	07–15–2010 6-14-10	2,693.19	1,578.39	1,114.80	193,147.66
13	10–15–2010 11-1-10	2,693.19	1,569.32	1,123.87	192,023.79
2010 TOTALS:		**10,772.76**	**6,331.35**	**4,441.41**	
14	01–15–2011 12-20-10	2,693.19	1,560.20	1,132.99	190,890.80
15	04–15–2011 2-23-11	2,693.19	1,550.98	1,142.21	189,748.59
16	07–15–2011 5-12-11	2,693.19	1,541.71	1,151.48	188,597.11
17	10–15–2011 9-14-11	2,693.19	1,532.35	1,160.84	187,436.27
2011 TOTALS:		**10,772.76**	**6,185.24**	**4,587.52**	
18	01–15–2012 12-12-11	2,693.19	1,522.92	1,170.27	186,266.00
19	04–15–2012 3-15-12	2,693.19	1,513.41	1,179.78	185,086.22
20	07–15–2012 5-14-12	2,693.19	1,503.83	1,189.36	183,896.86
21	10–15–2012 8-13-12	2,693.19	1,494.16	1,199.03	182,697.83
2012 TOTALS:		**10,772.76**	**6,034.32**	**4,738.44**	
22	01–15–2013 10-10-12	2,693.19	1,484.42	1,208.77	181,489.06
23 March	04–15–2013 3-15-13	2,693.19	1,474.60	1,218.59	180,270.47
24	07–15–2013 6-10-13	2,693.19	1,464.70	1,228.49	179,041.98
25	10–15–2013 9-9-13	2,693.19	1,454.71	1,238.48	177,803.50
2013 TOTALS:		**10,772.76**	**5,878.43**	**4,894.33**	
26	01–15–2014 1-13-14	2,693.19	1,444.66	1,248.53	176,554.97
27	04–15–2014	2,693.19	1,434.50	1,258.69 5055.34	175,296.28
28	07–15–2014	2,693.19	1,424.29	1,268.90	174,027.38
29	10–15–2014	2,693.19	1,413.97	1,279.22	172,748.16
2014 TOTALS:		**10,772.76**	**5,717.42**	**5,055.34**	
30	01–15–2015	2,693.19	1,403.58	1,289.61	171,458.55
31	04–15–2015	2,693.19	1,393.10	1,300.09	170,158.46
32	07–15–2015	2,693.19	1,382.54	1,310.65	168,847.81
33	10–15–2015	2,693.19	1,371.89	1,321.30	167,526.51
2015 TOTALS:		**10,772.76**	**5,551.11**	**5,221.65**	
34	01–15–2016	2,693.19	1,361.15	1,332.04	166,194.47
35	04–15–2016	2,693.19	1,350.33	1,342.86	164,851.61
36	07–15–2016	2,693.19	1,339.42	1,353.77	163,497.84
37	10–15–2016	2,693.19	1,328.42	1,364.77	162,133.07
2016 TOTALS:		**10,772.76**	**5,379.32**	**5,393.44**	

** INTEREST PAID also includes Admin Surcharge amounts.

AMORTIZATION SCHEDULE
(Continued)

38	01–15–2017	2,693.19	1,317.33	1,375.86	160,757.21
39	04–15–2017	2,693.19	1,306.15	1,387.04	159,370.17
40	07–15–2017	2,693.19	1,294.88	1,398.31	157,971.86
41	10–15–2017	2,693.19	1,283.52	1,409.67	156,562.19
2017 TOTALS:		**10,772.76**	**5,201.88**	**5,570.88**	
42	01–15–2018	2,693.19	1,272.07	1,421.12	155,141.07
43	04–15–2018	2,693.19	1,260.52	1,432.67	153,708.40
44	07–15–2018	2,693.19	1,248.88	1,444.31	152,264.09
45	10–15–2018	2,693.19	1,237.15	1,456.04	150,808.05
2018 TOTALS:		**10,772.76**	**5,018.62**	**5,754.14**	
46	01–15–2019	2,693.19	1,225.32	1,467.87	149,340.18
47	04–15–2019	2,693.19	1,213.38	1,479.81	147,860.37
48	07–15–2019	2,693.19	1,201.37	1,491.82	146,368.55
49	10–15–2019	2,693.19	1,189.24	1,503.95	144,864.60
2019 TOTALS:		**10,772.76**	**4,829.31**	**5,943.45**	
50	01–15–2020	2,693.19	1,177.03	1,516.16	143,348.44
51	04–15–2020	2,693.19	1,164.71	1,528.48	141,819.96
52	07–15–2020	2,693.19	1,152.28	1,540.91	140,279.05
53	10–15–2020	2,693.19	1,139.77	1,553.42	138,725.63
2020 TOTALS:		**10,772.76**	**4,633.79**	**6,138.97**	
54	01–15–2021	2,693.19	1,127.15	1,566.04	137,159.59
55	04–15–2021	2,693.19	1,114.42	1,578.77	135,580.82
56	07–15–2021	2,693.19	1,101.59	1,591.60	133,989.22
57	10–15–2021	2,693.19	1,088.66	1,604.53	132,384.69
2021 TOTALS:		**10,772.76**	**4,431.82**	**6,340.94**	
58	01–15–2022	2,693.19	1,075.63	1,617.56	130,767.13
59	04–15–2022	2,693.19	1,062.48	1,630.71	129,136.42
60	07–15–2022	2,693.19	1,049.24	1,643.95	127,492.47
61	10–15–2022	2,693.19	1,035.87	1,657.32	125,835.15
2022 TOTALS:		**10,772.76**	**4,223.22**	**6,549.54**	
62	01–15–2023	2,693.19	1,022.41	1,670.78	124,164.37
63	04–15–2023	2,693.19	1,008.84	1,684.35	122,480.02
64	07–15–2023	2,693.19	995.15	1,698.04	120,781.98
65	10–15–2023	2,693.19	981.35	1,711.84	119,070.14
2023 TOTALS:		**10,772.76**	**4,007.75**	**6,765.01**	
66	01–15–2024	2,693.19	967.45	1,725.74	117,344.40
67	04–15–2024	2,693.19	953.42	1,739.77	115,604.63
68	07–15–2024	2,693.19	939.29	1,753.90	113,850.73
69	10–15–2024	2,693.19	925.04	1,768.15	112,082.58
2024 TOTALS:		**10,772.76**	**3,785.20**	**6,987.56**	
70	01–15–2025	2,693.19	910.67	1,782.52	110,300.06
71	04–15–2025	2,693.19	896.18	1,797.01	108,503.05
72	07–15–2025	2,693.19	881.59	1,811.60	106,691.45
73	10–15–2025	2,693.19	866.87	1,826.32	104,865.13
2025 TOTALS:		**10,772.76**	**3,555.31**	**7,217.45**	
74	01–15–2026	2,693.19	852.03	1,841.16	103,023.97
75	04–15–2026	2,693.19	837.07	1,856.12	101,167.85
76	07–15–2026	2,693.19	821.99	1,871.20	99,296.65
77	10–15–2026	2,693.19	806.78	1,886.41	97,410.24
2026 TOTALS:		**10,772.76**	**3,317.87**	**7,454.89**	
78	01–15–2027	2,693.19	791.46	1,901.73	95,508.51
79	04–15–2027	2,693.19	776.01	1,917.18	93,591.33
80	07–15–2027	2,693.19	760.43	1,932.76	91,658.57
81	10–15–2027	2,693.19	744.72	1,948.47	89,710.10
2027 TOTALS:		**10,772.76**	**3,072.62**	**7,700.14**	
82	01–15–2028	2,693.19	728.90	1,964.29	87,745.81
83	04–15–2028	2,693.19	712.93	1,980.26	85,765.55
84	07–15–2028	2,693.19	696.85	1,996.34	83,769.21
85	10–15–2028	2,693.19	680.62	2,012.57	81,756.64
2028 TOTALS:		**10,772.76**	**2,819.30**	**7,953.46**	

Appendix G

2014 Unaudited Financial Statements

(1)

Exhibit I

MUNICIPALITY OF Chancellor
STATEMENT OF FUND CASH BALANCES
ALL FUNDS
December 31, 2014

	General Fund	3% Fund	2% Fund	Enterprise Funds: Water Fund	Enterprise Funds: Sewer Fund	Enterprise Funds: Fund	Enterprise Funds: Fund	Enterprise Funds: Fund	Total
Cash Assets:									
Cash in Checking Accounts	16,274.29	19,151.51	204,928.83	151,200.64	186,092.77				577,648.04
Change and Petty Cash									
Passbook Savings									
Savings Certificates									
101 FUND CASH BALANCES (Note 1)	16,274.29	19,151.51	204,928.83	151,200.64	186,092.77				577,648.04

Municipal funds are deposited or invested with the following depositories:

Security State Bank	577,648.04
	577,648.04

Note 1: These amounts must equal the amounts stated on the bottom line of Exhibit II, page 3.

MUNICIPALITY OF Chancellor
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014

				Enterprise Funds					
	General Fund	3% Fund	2% Fund	Water Fund	Sewer Fund	Fund	Fund	Fund	Total
Receipts (Source):									
311 Property Taxes	41,380.49								41,380.49
313 Sales Tax	28,317.10	3,256.41	28,317.13						59,890.64
316 911 Telephone Surcharge									
311-319 Other Taxes (319)	60.00								60.00
320 Licenses and Permits	2,215.00								2215.00
331 Federal Grants									
335.1 Bank Franchise Tax	193.86								193.86
335.2 Motor Vehicle Commercial Prorate									
335.3 Liquor Tax Reversion	2,267.48								2,267.48
335.4 Motor Vehicle Licenses (5%)	3,898.74								3,898.74
335.6 Fire Insurance Premium Reversion									
335.7 Liquor License Reversion									
335.8 Local Government Highway and Bridge Fund	6,241.84								6,241.84
338.1 County Road Tax (25%)	210.25								210.25
338.2 County Highway and Bridge Reserve Tax (25%)									
338.3 County Wheel Tax	566.01								
331-339 Other Intergovernmental Revenue (339)									
341-349 Charges for Goods and Services (341)	8,110.60								8,110.60
351-359 Fines and Forfeits (351)	3,913.50								3913.50
361 Investment Earnings	1,612.16								1612.16
362 Rentals	1,200.-								1200.00
363-369 Other Revenues (369)	274.75								274.75

MUNICIPALITY OF Chancellor
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014
(continued)

	General Fund	3% Fund	2% Fund	Enterprise Funds: Water Fund	Sewer Fund	Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
380 Enterprise Operating Revenue				43,689.71	28,118.00				71,807.71
Surcharge as Security for Debt					14,049.00				14,049.00
380.05 Lottery Revenues									
330 Operating Grants									
Total Receipts	100,461.78	3,256.41	28,317.13	43,689.71	42,167.00				217,892.03
Disbursements (Function):									
411-419 General Government (414)	34,466.73	200.-							34,666.73
421 Police	24,678.45								24,678.45
422 Fire	12,398.45								12,398.45
423-429 Other Public Safety (429)	720.-								720.00
431 Highways and Streets (includes snow removal & street lights)	42,455.90								42,455.90
432 Sanitation (includes garbage & rubble sites)									
437 Cemeteries									
433-439 Other Public Works (435)									
441-449 Health and Welfare (441)									
451-459 Culture-Recreation (451)	16,228.64								16,228.64
461-469 Conservation and Development (465)									
470 Debt Service									
480 Intergovernmental Expenditures									
490-492 Miscellaneous (492)									

MUNICIPALITY OF Chancellor
STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND CASH BALANCES
ALL FUNDS
For the Year Ended December 31, 2014
(continued)

				Enterprise Funds					
	General Fund	3% Fund	2% Fund	Water Fund	Sewer Fund	Fund	Fund	Fund	Total
ENTERPRISE FUNDS									
410 Personal Services				4,413.30	4342.18				
420 Other Expenses				19,258.35	23,758.16				
426 Supplies and Materials				24,718.98	948.54				
Total Disbursements	130,948.17	200.-		48,390.63	29,048.88				
39101 Transfers In									
51100 Transfers Out									
391.2 Money Received From Borrowing									
391.07 Capital Contributions (Grants)									
Subtotal of Receipts, Disbursements and Transfers	<30,486.39>	3056.41	28,317.13	<4700.92>	13,118.12				17,940.18
Fund Cash Balance, January 1, 2014	46,760.68	16,095.10	176,611.70	155,901.56	172,974.65				568,343.69
Adjustments:									
Restated Fund Cash Balance, January 1, 20__	46,760.68	16,095.10	176,611.70	155,901.56	172,974.65				568,343.69
FUND CASH BALANCE, DECEMBER 31, 2014	16,274.29	19,151.51	204,928.83	151,200.64	186,092.77				577,648.04

Exhibit III

MUNICIPALITY OF Chancellor
STATEMENT OF CHANGES IN LONG-TERM DEBT
For the Year Ended December 31, 2014

	General Long-Term Debt			Enterprise	
	General Obligation Bonds	Special Assessment Bonds	Other	Revenue Bonds	Total
Debt Payable, January 1, 2014				177,950.82	177,950.82
Add New Issues:					
Less Debt Retired				5055.35	5055.35
DEBT PAYABLE, DECEMBER 31, 2014				172,895.47	172,895.47
	(23101)	(23103)	(23900)	(23102)	

Note: Amounts reported do not include interest.

Appendix H

2015 Budget

2B
2015 budget

ANNUAL APPROPRIATION ORDINANCE #14-8-1

An ordinance making appropriations for the fiscal year beginning January 2015 and ending December 31,2015 and levying the property tax for the year 2015.

Be it ordained by the Town Board of the Town of Chancellor, SD:

Section 1. That the following sums of money, or as much therefore as may be authorized by law, as may be needed or deemed necessary to defray all expenses and liabilities of the Town hereafter specified for the fiscal year commencing on the 1st day of January 2015 and ending on the 31st day of December 20145

	General Fund
410 General Government	
411 Legislative	7,500.00
411.3 Publications	1,500.00
413 Elections	500.00
414 Legal	3,000.00
414.2 Finance Officer	19,000.00
419 Government Building	9,000.00
Total General Government	40,500.00
420 Public Safety	
421 Police	25,656.00
422 Fire	12,400.00
Total Public Safety	38056.00
440 Health and Welfare	3,145.00
430 Public Works	
431 Street	32,800.0
452 Park and Rec.	7,800.00
Total Appropriation	122,301.00

The following designates the fund that money derived from the following source is applied to:

	General Fund
Undesignated fund balance	40,000.00
310 Taxes	78,000.00
320 Licenses and Permits	1,650.00
330 Intergovernmental Rev.	9,000.00
340 Charges for Goods & Services	5,200.00
350 Fines and Forfeits	0.00
360 Misc. Revenues	2,200.00
Sub Total	136,050.00
Less 5% (SDCL 9-21-2)	6,802.50
Total Means of Finance	129,247.50

Propriety Funds	Water	Wastewater
Beginning retained earnings	140,000.00	160,000.00
Est. Rev	50,000.00	540,000.00
Total Est. Balance & Rev.	190,000.00	700,000.00
Less Appropriation	50,000.00	540,000.00
Est. Surplus	140,000.00	160,000.00

Be it ordained by the Town Board of the Town of Chancellor, SD;

Section 2. That a summary by funds of the appropriate amounts be attached #14-8-1, and that said summary be made apart of said ordinance.

Section 3. That there is hereby levied upon all taxable property within the Town of Chancellor for the purpose of providing funds to meet the expenses and liabilities of said amounts, which as received by the Town Finance Officer, shall be credited to the following funds to wit:
For General Funds $43,070.00

Section 4. The Town Finance Officer is hereby authorized and directed to certify said tax levy to the County Auditor of Turner County, State of South Dakota, to the end that the same any be spread and assessed as provided by law.
First Reading: August 11, 2014
Second Reading: September 8, 2014
Published: September18 2014

Attest: Jolene Berens
Finance Officer

Dennis Wieker
President

Appendix I

2016 Budget

(2) A
2016 budget

ANNUAL APPROPRIATION ORDINANCE #15-8-1

An ordinance making appropriations for the fiscal year beginning January 2016 and ending December 31,2016 and levying the property tax for the year 2016.

Be it ordained by the Town Board of the Town of Chancellor, SD:

Section 1. That the following sums of money, or as much therefore as may be authorized by law, as may be needed or deemed necessary to defray all expenses and liabilities of the Town hereafter specified for the fiscal year commencing on the 1st day of January 2015 and ending on the 31st day of December 20145

	General Fund
410 General Government	
411 Legislative	7,500.00
411.3 Publications	1,500.00
413 Elections	500.00
414 Legal	3,000.00
414.2 Finance Officer	19,000.00
419 Government Building	9,000.00
Total General Government	40,500.00
420 Public Safety	
421 Police	26,300.00
422 Fire	12,500.00
Total Public Safety	38,800.00
440 Health and Welfare	3,145.00
430 Public Works	
431 Street	42,455.00
452 Park and Rec.	7,800.00
Total Appropriation	132,700.00

The following designates the fund that money derived from the following source is applied to:

	General Fund
Undesignated fund balance	40,000.00
310 Taxes	76,000.00
320 Licenses and Permits	1,650.00
330 Intergovernmental Rev.	9,000.00
340 Charges for Goods & Services	5,200.00
350 Fines and Forfeits	0.00
360 Misc. Revenues	2,200.00
Sub Total	134,050.00
Less 5% (SDCL 9-21-2)	6,702.00
Total Means of Finance	127,348.00

Propriety Funds	Water	Wastewater
Beginning retained earnings	140,000.00	160,000.00
Est. Rev	50,000.00	50,000.00
Total Est. Balance & Rev.	190,000.00	110,000.00
Less Appropriation	60,000.00	30,000.00
Est. Surplus	90,000.00	90,000.00

Be it ordained by the Town Board of the Town of Chancellor, SD;

Section 2. That a summary by funds of the appropriate amounts be attached #14-8-1, and that said summary be made apart of said ordinance.

Section 3. That there is hereby levied upon all taxable property within the Town of Chancellor for the purpose of providing funds to meet the expenses and liabilities of said amounts, which as received by the Town Finance Officer, shall be credited to the following funds to wit:
For General Funds $43,961.00

Section 4. The Town Finance Officer is hereby authorized and directed to certify said tax levy to the County Auditor of Turner County, State of South Dakota, to the end that the same any be spread and assessed as provided by law.
First Reading: August 10, 2015
Second Reading: September 14,2015
Published: September24,2015

Attest: Jolene Berens
Finance Officer

Dennis Wieker
President

Appendix J

Documentation of an Active Registration in the SAM Database

USER NAME PASSWORD

LOG IN

Forgot Username? Forgot Password?

Create an Account

Entity Dashboard

Entity Overview

- Entity Record
- Core Data
- Assertions
- Reps & Certs
- POCs
- Reports
- Service Contract Report
- BioPreferred Report
- Exclusions
- Active Exclusions
- Inactive Exclusions
- Excluded Family Members

RETURN TO SEARCH

Chancellor, City Of
DUNS: 079134857 CAGE Code: 70YC6
Status: Active

240 2nd Ave.
Chancellor, SD, 57015-2046 ,
UNITED STATES

Expiration Date: 11/08/2016
Purpose of Registration: Federal Assistance Awards Only

Entity Overview

Entity Information

Name: Chancellor, City Of
Business Type: US Local Government
POC Name: Jolene Berens
Registration Status: Active
Activation Date: 11/10/2015
Expiration Date: 11/08/2016

Exclusions

Active Exclusion Records? No

Note to all Users: This is a Federal Government computer system. Use of this system constitutes consent to monitoring at all times.

Appendix K

Public Hearing Notice, Sign-in Sheets, & Minutes

Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF TURNER

I, Dawn Rye, of the City of Parker, County of Turner, State of South Dakota being first duly sworn on oath, deposes and says: The New Era is a weekly legal newspaper of general circulation, printed and published in the City of Parker, in said County of Turner, by The New Era, New Century Press, publishers, and has been such legal newspaper during the times hereinafter mentioned; that the said newspaper has been in existence as such legal newspaper for more than one year prior to the publication of the notice hereunto attached, and has during all of said publication of the notice hereunto attached, and has during all of said time had, and now has, more than 200 bona fide subscribers; that the undersigned, The affiant, is the Office Manager of the said newspaper, in charge of the advertisement department thereof and has personal knowledge of all the facts stated in this affidavit and the advertisement headed:

#7040 Chancellor Water Meter Project 12/3/2015

one printed copy of hereto attached, is printed and published in the said newspaper for one successive week, one each week and on the same day of the week, on the following dates, to wit:

On Thursday, the 3rd day of December, 2015

That $23.17 being the full amount of the fees for publication of the attached notices insures solely for the benefits of the publishers of the said newspaper, that no arrangement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.

Subscribed and sworn to before me this 14th

Day of December 2015

Paul R Harms

Notary Public, Turner County, South Dakota

My Commission Expires: March 20, 2018

Publication Fee $23.17
Notary Fees ..... $
Total $23.17

PAUL R. HARMS
SEAL NOTARY PUBLIC SOUTH DAKOTA SEAL

NOTICE OF PUBLIC HEARING
for the
CHANCELLOR WATER METER PROJECT

Notice is hereby given that the Town of Chancellor will hold a Public Hearing on December 14th, 2015, regarding the Water Meter Replacement Project. The Town is seeking up to $180,415 of funding from the Board of Water and Natural Resources. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or a loan from the Drinking Water State Revolving Fund (SRF) Program. The expected Drinking Water SRF loan terms are 2.25 percent for 10 years, and the Board of Water and Natural Resources may forgive all or a portion of the loan principal.

The amount and source of funds will be determined by the Board of Water and Natural Resources when the application is presented at a scheduled board meeting. The purpose of the public hearing is to discuss the proposed project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

This public hearing will be held at the following time, date and location:

7:00 P.M.

December 14, 2015

Chancellor Town Hall (240 2nd Ave, Chancellor, SD)

In compliance with the Americans with Disabilities Act (ADA), if you need special assistance to participate in this hearing, please contact the Chancellor Finance Officer at (605) 647-8696. Anyone who is deaf, hard-of-hearing or speech-disabled may utilize Relay South Dakota at (800) 877-1113 (TTY/Voice). Notification 48 hours prior to the hearing will enable the Town to make reasonable arrangements to ensure accessibility to this hearing.

Jolene Berens

Chancellor Finance Officer

Published once at the approximate cost of $23.17.

(#7040, The New Era, 12/3/2015)

Town of Chancellor

Public Hearing For DW-SRF Application
Water Meter Replacement Project
7:00 pm, December 14th, 2015
Chancellor Town Hall

Please sign in:

NAME	ADDRESS / REPRESENTING
Lacey Schmeling	SECOG
Jolene Berens	Finance Officer Town of Chancellor
Dennis L. Wieker	President City Council
Daniel Severson	City of Chancellor
Doug Berens	City of Chancellor
DEXTER MAHRT	STOCKWELL ENGINEERS
Mitch Mergen	Stockwell Engineers
Byron Vogel/Meier	Sheriffs Office
Michael McCurt	
Dan McGrane	Metering

CHANCELLOR
BOARD OF TRUSTEES
REGULAR METTING
DECEMBER 14, 2015

The Board of Trustees for the Town of Chancellor SD met in regular session on Monday, December 14, 2015 at 7 pm in the town hall in Chancellor SD.

President Wieker called the meeting to order at 7 pm. Members present were Dennis Wieker, Dan Severson and Doug Berens. Also present were Dexter Mahrt, Mitch Mergen, Lacey Schmeling, Dan McGrane Michael McCart, Byron Nogelmeier and Jolene Berens, Finance Officer.

Motion made by Severson and seconded by Berens to approve the financial report, agenda and minutes with a correction made that the donation for park equipment came from the Lennox Area Community Fund and not the Sioux Falls Area Community Fund.

This being the time a place advertised for a Public Hearing regarding the Water Meter Replacement Project, Lacey Schmeling planner for SECOG addresses the Board. The Town, with SECOG's assistance, will be submitting an application to the Department of Environment and Natural Resources for an $180,415 Drinking Water State Revolving Fund Loan for the Water Meter Replacement Project. The interest rate for the loan is 2.25% for a 10 year term. The annual payment for the $180,415 Drinking Water State Revolving Fund Loan would be $20,197.70. The Town is pledging to repay this loan using project surcharge revenue.

For the Drinking Water SRF loan, if there is no grant or principal forgiveness awarded for the project, there would need to be a $13.91 monthly project service charge for each user.

The project engineers from Stockwell Engineers, Dexter Mahrt and Mitch Mergen explained to the board the project.

Dan McGrane from Metering and Technology Solutions from Burnsville, MN met with the board to explain to the boards the meters and training they have for the project.

Motion made by Severson and seconded by Berens to approve Resolution No. 2015 – 12 – 1. It reads as follows:

RESOLUTION No. 2015 – 12 – 1

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the Town of Chancellor (the "Town") has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to the Water Meter Replacement Project (the "Project); and

WHEREAS, the Town has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the Town and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the Town as follows:

1. The Town hereby approves the submission of an Application for financial assistance in an amount not to exceed $180,415 to the South Dakota Board of Water and Natural Resources for the Project.
2. The Board President is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Board President is hereby designated as the authorized representative of the Town to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.
   Adopted at Chancellor, South Dakota, on this 14th day of December 2015.

APPROVED:
Dennis Wieker, Board President
Town of Chancellor

ATTEST: Jolene Berens
Town of Chancellor Finance Officer

Mitch Mergen and Dexter Mahrt Project Engineers for the wastewater project discussed with the board the progress of the wastewater project.

Byron Nogelemeier, Turner County Sheriff met with the board concerning police matters and to renew the Agreement for 2016. Motion made by Berens and seconded by Severson to approve the town's contract with Turner County Sheriff's Department for the year 2016.

Michael McCart met with the board concerning a bill for camering and opening up his sewer line. Discussion was held and the landowners are responsible for where the service connects with the sewer line. The board decided it is the landowner's bill, but will recamera the line later to determine if the town isresponsible.

Motion made by Severson and seconded by Berens to allow Finance Officer to go to the Annual Report Workshop in Mitchell on January 27th.

Discussion was held on the revised Zoning Ordinance for reuse of a school or church. Motion made by Severson and seconded by Berens to approve the first reading of Ordinance No. 2015 -12 -2. It reads as follows:

ORDINANCE NO. 12 – 2

AN ORDINANCE OF THE TOWN OF CHANCELLOR, SD AMENDING THE 2014 REVISED ZONING ORDINANCE OF THE TOWN OF CHANCELLOR, SD, BY AMENDING CHAPTER 4, R-1:RESIDNETIAL DISTRICT.

BE IT ORDAINDED BY THE TOWN OF CHANCELLOR, SD:

Section 1 That the following conditional use is added to Section 402 of the 2014 Revised Zoning Ordinance of the Town of Chancellor, SD, to read as follows:

Reuse of a school or church: 10.02,10.04,10.06,10.12

One freestanding sign as allowed within 10.06.

The second reading will be held on Monday, January 11, 2015 at the next Town Board meeting.

Motion was made by Severson and seconded by Berens to approve the transfer of $20,000 back into the 2% Sales Tax Account from the 3 % Sales Tax. This was used for building of the museum in 2013.

Discussion was held on nuisances in town with abandoned vehicles and junk. The board will review the town for violations and if money is available to have a town clean up in the spring.

Motion made by Severson and seconded by Berens to move into executive session at 9:05pm the board moved out of executive session on 9:25pm.

The following claims were presented for payment;

BOARD: Salaries 255.00, FTD 39.02, SECOG dues 437.00

FINANCE OFFICER: Salary 1330.00, SD Ret 159.60, FTD 403.50

GOV'T BUILDINGS: Xcel Energy 95.73, Vast Broadband 147.81, Scot Bolte Sanitation 40.00, Farm Gas 147.15, Menards 11.18

FIRE: Chancellor Fire Department 2048.65

POLICE: Turner County Auditor 2128.75

PUB'L: New Century Press 56.27

STREET: Salaries 569.75, FTD 87.20, Xcel Energy 837.33, Country Pride 65.63, Menards 4.99, Rural Manufacturing , blade 3775.00
PARK: Salaries 293.75, FTD 44.96, Xcel Energy 43.63
WATER: Salaries 293.75, FTD 44.96, US Post Office 14.00, South Lincoln 1382.70, SECOG 1500.00, Kenney Gilles, dep. return 100.00, Stockwell Engineers 9,000.00 DENR water certification 6.00, US Postage 35.00
WASTEWATER: Salaries 317.75, SD Ret 141.00, FTD 123.62, Xcel Energy 49.32, Country Pride 5.37, Eich Law Office 1270.38, DENR 2016 fee 250.00, DENR 344.00, Stockwell Engineers 26,426.76, US Postage 35.00

Being no further business motion made by Berens and seconded by Severson to adjourn at 9:47pm. Next town board meeting will be held on Monday, January 11, 2016 at 7pm in the town hall.

Jolene Berens
Finance Officer

Dennis Wieker
President

Published 1 time at the approximate cost of

Facility Plan

For

Water Distribution and Wastewater Collection

In

Chancellor, South Dakota

SPN #00-11010

JULY 2002

SCHMUCKER, PAUL, NOHR & ASSOCIATES
ENGINEERS-PLANNERS- SURVEYORS
620 NORTH LAWLER P.O. BOX 398
MITCHELL, SOUTH DAKOTA, zip 57301
PHONE 605-996-7761 FAX 605-996-0015

SPN ASSOCIATES

SPN

Schmucker, Paul, Nohr and Associates
620 North Lawler – PO Box 398
Mitchell, SD 57301
Phone (605) 996-7761
Wats (800) 952-3598
FAX (605) 996-0015

September 19, 2002

Jolene Berens, Finance Officer
Town of Chancellor
550 1st Avenue
Chancellor SD 57015

RE: Water Distribution and Wastewater Collection
Chancellor, South Dakota
SPN #11010

Dear Ms. Berens:

Enclosed for the Town's files and use are four (4) revised copies of the Facility Plan for the above referenced project. Please collect and dispose of the previous copies that were sent to you.

Sincerely,

SCHMUCKER, PAUL, NOHR & ASSOCIATES

Harlan J. Quenzer, P.E.
Principal / Project Manager

HJQ:rh

Enclosures

SPN

Schmucker, Paul, Nohr and Associates
620 North Lawler – PO Box 398
Mitchell, SD 57301
Phone (605) 996-7761
Wats (800) 952-3598
FAX (605) 996-0015

September 19, 2002

Toby Brown
South East Council of Governments
Suite 210
1000 North West Avenue
Sioux Falls SD 57104

RE: Water Distribution and Wastewater Collection
Chancellor, South Dakota
SPN #11010

Dear Mr. Brown:

Enclosed for your files and use is a copy of the Facility Plan for the above referenced project. Please feel free to call if you have any questions.

Sincerely,

SCHMUCKER, PAUL, NOHR & ASSOCIATES

Harlan J. Quenzer, P.E.
Principal / Project Manager

HJQ:rh

Enclosure

cc: Town of Chancellor

Schmucker, Paul, Nohr and Associates
620 North Lawler – PO Box 398
Mitchell, SD 57301
Phone (605) 996-7761
Wats (800) 952-3598
FAX (605) 996-0015

September 19, 2002

Eric Meintsma
Dept of Environment and Natural Resources
Foss Building
523 East Capitol
Pierre SD 57501

RE: Water Distribution and Wastewater Collection
Chancellor, South Dakota
SPN #11010

Dear Mr. Meintsma:

Enclosed for your files and use are three (3) copies of the Facility Plan for the above referenced project. Please feel free to call if you have any questions.

Sincerely,

SCHMUCKER, PAUL, NOHR & ASSOCIATES

Harlan J. Quenzer, P.E.
Principal / Project Manager

HJQ:rh

Enclosures

cc: Town of Chancellor

Facility Plan for
Water Distribution, Wastewater Collection, and Wastewater Treatment Systems
in
Chancellor, South Dakota

SPN #11010

July, 2002

I hereby certify that this report
was prepared by me or under my direct
supervision and that I am a duly Registered
Professional Engineer under the laws of the
State of South Dakota.

By _____
Harlan J. Quenzer, P.E.

Registration No. SD #2726

Date July 31, 2002

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
HARLAN JOHN
QUENZER
SOUTH DAKOTA

SCHMUCKER, PAUL, NOHR & ASSOCIATES
CONSULTING ENGINEERS - SURVEYORS
620 NORTH LAWLER, PO BOX 398
MITCHELL, SOUTH DAKOTA 57301

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1 INTRODUCTION

1.1 PURPOSE

The Town of Chancellor has contracted with the engineering firm of Schmucker, Paul, Nohr and Associates (SPN) to complete an investigation of its existing water distribution system; and sewage collection and treatment system. The intent of the study is to identify and quantify problems that exist within these systems for the Town.

The results of the completed study are presented in this facility plan. The facility plan contains the information on which the Town Board of Chancellor can make cost-effective decisions. The Town Board will, after appropriate public input, determine what its best options are to make any needed improvements that are identified in the facility plan. As loan and grant funding will undoubtedly be desired to make the improvements that are recommended herein, the identified project(s) will need to be placed on the State Water Plan. The facility plan that is herewith presented will be a valuable tool for the community to utilize in its efforts to make needed public improvements.

1.2 SCOPE

The scope of the study authorized by the Town Board includes:

1) Complete an analysis of the existing water distribution system relating to water losses in the system, identification of system age, evaluation of current water pressures and fire flow capacities and evaluate current and future needs.
2) Complete an analysis of the existing wastewater collection and treatment system relating to wastewater flows at the treatment facility including the identification of potential sources of inflow into the wastewater collection system.

3) Review the State of South Dakota Department of Environment and Natural Resources' (SD DENR) requirements and Chancellor's wastewater discharge permit and past history of operation records to determine the compliance of Chancellor with regulatory standards.
4) Complete an evaluation of the capability of the current wastewater treatment facility to meet present and future requirements and identify and evaluate alternate solutions available to Chancellor and recommend those solutions, which in SPN's judgment meet Chancellor's requirements for the project(s).
5) Provide a general economic analysis of Chancellor's requirements applicable to various alternatives.
6) Prepare a written report, with maps and sketches, setting forth the findings and recommendations of the Preliminary Study, provide Chancellor with ten (10) copies of said report and meet with Chancellor to review said report.

1.3 AUTHORIZATION

The studies reported herein were performed pursuant to the provisions of an engineering agreement between the Town of Chancellor and Schmucker, Paul, Nohr & Associates, Inc. dated December 10, 2001.

2 COMMUNITY DESCRIPTION

The Town of Chancellor is located in northeastern Turner County, South Dakota. It is approximately 25 miles southwest of Sioux Falls, the regional trade center for the area. It is located on SD Highway 44, about 5 miles east of the intersections of SD Highway 19 & SD Highway 44. The Town has a Board of Trustees-type of government, consisting of a Finance Officer and a three-member Board of Trustees.

Turner County is in the southeastern part of South Dakota. It has a total area of approximately 391,680 acres. About 460 acres of this area is covered by water that is contained in several small lakes, the largest of which is Swan Lake. Communities located within the county include Parker, the county seat, Chancellor, Centerville, Davis, Dolton, Hurley, Marion, Monroe, and Viborg. Diversified farming is the major source of income within the county, with about 83% of the total acreage of the county devoted to crop production. Livestock production is also important, as about11% of the acreage of the county remains in native grasses. Chancellor is a typical rural community that serves the surrounding agricultural area as a retail trade center that provides limited shopping and other essential services. It has an active commercial district.

2.1 POPULATION CHARACTERISTICS

Chancellor's population is 328, according to the 2000 census. The community's median age was 32.3 years, as compared to the state's median age of 35.6 years. At the time census data was gathered, 17.4% of its population was over the age of 65, while the state's population that is over the age of 65 was 14.3%. At the time this information was prepared, the economic data information from the 2000 census relating to the community was not yet available, but 1990 census data indicates that the community's median household income of $20,441 was about $500.00 higher than Turner County's median household income of $19,926. Slightly more than 5.8% of the citizens had incomes at or below the poverty level and more than 41.1% of the population earned incomes that were at or below the low-moderate income threshold for the area. It is anticipated that the 2000 data will show similar differences between the area's incomes.

2.2 POPULATION PROJECTIONS

There are many factors that will influence the future population growth in Chancellor. One major factor is the proximity of Chancellor to Sioux Falls. The growth rate of the area between Chancellor and Sioux Falls is quite high, which will probably influence Chancellor's growth rate. Another factor that will influence Chancellor's growth rate is a new ethanol plant that is being constructed. The new plant is located only about one mile east of Chancellor. It is likely that some growth due to employment from this facility will occur. Due to the possibility of a high growth rate, the population projection chosen is meant to be liberal on the side of a high population. A projection that is too low may cause water or wastewater systems to fail prior to the end of their expected design life with insufficient capacity.

It is not economically feasible to make frequent changes in the capacity of a wastewater treatment system or water distribution system. Therefore, a system is generally designed to meet a flow or demand capacity over a selected design period. This design period is selected as a compromise between high costs to future users associated with frequent construction programs and high costs to present users associated with providing future growth capacity. It is customary to use at least 20 years as a design period when determining the capacity of a wastewater treatment system or water distribution system.

Table 2.1 indicates census bureau population from 1950 and projects population through the year 2030. This information is presented graphically in Figure 2.1. When analyzing population information, all factors indicate that the community's population will probably grow significantly in the future. The population has been relatively stable over the reporting period. Very few towns within the state that are similar in size to Chancellor can show a growth of nearly 70% since 1950. Chancellor did have a period of negative growth, where the population decreased by about 28% between 1930 and 1950. However, a similar population decline occurred in most of South Dakota's small communities during the same period.

Table 2.1 Historic and Projected Populations

Historic		Projected	
Year	**Population**	**Year**	**Population**
1950	193	2005	354
1960	214	2010	380
1970	220	2015	406
1980	257	2020	432
1990	276	2025	458
2000	328	2030	484

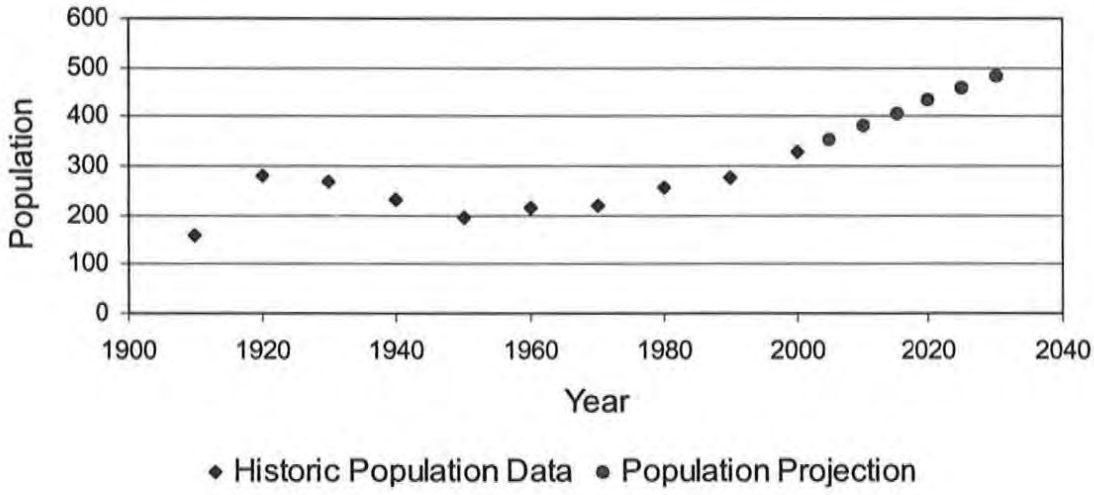


Figure 2.1 Historic and Projected Populations

2.3 ENVIRONMENTAL REVIEW INFORMATION

As part of the environmental assessment requirement for the facility planning process, the project sponsor is required to contact various state and federal agencies. Information related to the various contacts made and responses received from those agencies that responded are found in Appendix A. Other information related to the environment is to be provided as part of the overall information contained in the facility plan.

2.3.1 Topography / Climate

The surface area for most of Turner County is nearly level to gently rolling glacial till and drift plain, known as the James River Lowland. The drainage pattern for the James River Lowland is generally poorly defined in areas where small drainages terminate in depressions, but it is generally well defined along the larger drainages. The East Fork of the Vermillion River and its tributaries drain the area immediately surrounding Chancellor. The northeast part of the county is part of the Coteau des Prairies, which is probably one of the most conspicuous land features in eastern South Dakota. The region around Chancellor is an undulating to gently rolling glacial drift plain that has many small depressions, with poorly defined drainage patterns in most areas. Two creeks provide the major drainage for the area around Chancellor. Long Creek, which flows in a southeasterly direction, is east of Chancellor and Camp Creek, which flows to the south and is located west of town. This area generally slopes gently to the south and west. Elevations range from about 1,640 feet above mean sea level on the northern part of Turner County, to about 1,180 feet above mean sea level on the southeastern part.

The area's climate is generally described as a continental climate. Winters are relatively long and cold, while summers are fair and hot. Normal precipitation for the area is about 24 inches annually. Approximately 75% of the total annual precipitation (18 inches) usually occurs during the growing season, April – September. Average annual lake evaporation between March and October is about 36 to 38 inches. Precipitation from November through March is generally received as snowfall. Average temperatures range

from about 18 degrees (F) in the winter to around 72 degrees (F) in the summer (National Oceanic and Atmospheric Administration, 2000).

2.3.2 Historic and Archaeological Sites

The State Historical Preservation Office was contacted for the purpose of soliciting input on the proposed improvements. Since all work is planned to be in previously disturbed areas, no adverse comments are expected. Correspondence related to this contact will be placed in Appendix A upon receipt.

2.3.3 Floodplains and Wetlands

The US Fish and Wildlife Service, the US Army Corps of Engineers and the South Dakota Department of Game, Fish and Parks, were contacted for input related to the proposed improvements. No floodplains or wetlands in the area are expected to be involved in the project. No permits required by the Clean Water Act are anticipated to be required. Correspondence related to this contact will be placed in Appendix A upon receipt.

2.3.4 Agricultural Lands

The US Department of Agriculture's State Soils Scientist was contacted for input on the proposed improvements. Since the project is confined to previously disturbed areas, no effect on historic properties is expected. Correspondence related to this contact will be placed in Appendix A upon receipt

2.3.5 Wild and Scenic Rivers

Research indicates that there are no designated wild and scenic rivers in the area. Therefore, the proposed improvements will have no impact on this resource..

2.3.6 Water Quality and Quantity

The South Dakota Department of Environment and Natural Resources was contacted for input on the proposed improvements. No effect on water quality and quantity is expected

due to the project. Correspondence related to this contact will be placed in Appendix A upon receipt.

2.3.7 Direct and Indirect Impacts

Soil erosion, noise pollution, traffic obstruction, and increased surface runoff due to dewatering operations sometimes impact the environments during this type of project. However, these impacts are temporary and will not influence the environment over the long term. Enhanced human health and safety and more efficient delivery and treatment of municipal waste are positive impacts to the environment that will have long-lasting value.

2.4 MITIGATING ADVERSE IMPACTS

Adverse impacts will be minimized to the greatest extent possible by the implementation of accepted cautionary measures. Temporary and permanent erosion control will be included in construction contracts. Protection of public health, safety, and welfare will also be incorporated into the specifications and contract documents. Appropriate permits will be obtained before discharging any trench or storm waters. Additionally, should any permanent adverse impacts result from the project, mitigating measures will be followed to the satisfaction of the appropriate review agency.

3 EVALUATION OF EXISTING FACILITIES

3.1 WATER DISTRIBUTION SYSTEM

The Town of Chancellor currently provides water service to approximately 131 connections. Water is supplied to the Town of Chancellor by South Lincoln Rural Water (SLRW).

Research of available information sources has revealed very little or limited information regarding the core of the existing water distribution system. Some new lines have been installed as the community expanded and piecemeal rehabilitation has been occurring over the past 15 to 20 years. However, much of the originally installed piping, which was probably installed in the early 1900's, is still in service.

3.1.1 Water Use

To evaluate the ability of the Town of Chancellor's potential to meet the needs of the future, a review of past water usage records was completed. The process used to estimate future water demand included a determination of the current average per capita demand combined with a projection of the future population. Water purchase and sales records dated from January 1998 to December 2001 were available. Table 3-1 was created using these water use records. For additional tables and figures, which relate to Chancellor's water usage, see Appendix B

The sources and methods used to develop the information presented in Table 3-1 is described in the following:

- Water purchased per month; based on data provided by the Town of Chancellor.
- Water sold per month; based data provided by the Town of Chancellor.
- The percentage of unaccounted for water per month and year; calculated by dividing the difference between water purchased and water accounted for by the water purchased.
- Monthly precipitation; from the National Climatic Data Center.

- Per capita per day usage for each month; calculated by dividing the water accounted for by the population and the days per month.
- Annual sum of water usages; calculated by summing up the columns.
- Two average day values were calculated for each year. The accounted for use and the water purchased for each year were calculated by dividing the sum of the water for each month by the days in the year.
- The 1990 and 2000 census values were used to interpolate or extrapolate the population for each year.

Table 3.1 Water Use Records

	1998					1999				
	Bought	Sold	Unacc.	Precip.	Per Capita	Bought	Sold	Unacc.	Precip.	Per Capita
Month	MG	MG	for %	in.	gpcpd	MG	MG	for %	in.	gpcpd
January	0.56	0.53	5%	0.16	54	0.71	0.60	15%	0.28	61
February	0.57	0.53	7%	0.54	59	0.59	0.48	18%	0.39	54
March	0.53	0.52	1%	3.28	53	0.59	0.49	17%	0.9	49
April	0.54	0.52	5%	3.82	54	0.59	0.57	3%	3.6	59
May	0.67	0.66	1%	1.59	67	0.64	0.60	7%	2.82	59
June	0.84	0.83	1%	4.25	87	0.73	0.69	5%	3.16	71
July	0.80	0.77	4%	3.1	78	0.77	0.70	9%	3.73	69
August	0.80	0.78	3%	3.66	79	0.85	0.79	6%	1.03	79
September	0.64	0.60	6%	0.06	63	0.82	0.77	6%	0.49	79
October	0.79	0.76	4%	5.8	77	0.65	0.61	7%	0.1	60
November	0.63	NA	NA	1.8	NA	0.66	0.60	9%	0.18	61
December	0.57	0.56	0%	0.08	57	0.64	0.57	11%	0.06	56
Annual	7.95	7.07		28.14		8.23	7.45		16.74	
Average Day	0.022	0.019				0.023	0.020			
Accounted Use (mgy)*	7.07					7.45				
Population	318					323				
Average Day (gpcpd)	61.0					63.3				
Average Unacc %	3%					10%				

Table 3.1 Water Use Records, Continued

	2000					2001				
	Bought	Sold	Unacc.	Precip.	Per Capita	Bought	Sold	Unacc.	Precip.	Per Capita
Month	MG	MG	for %	in.	gpcpd	MG	MG	for %	in.	gpcpd
January	0.61	0.55	10%	0.44	54	0.67	0.59	13%	1.38	57
February	0.58	0.50	15%	0.97	52	0.68	0.55	19%	1.14	59
March	0.70	0.46	35%	0.41	45	0.57	0.45	20%	0.44	44
April	0.66	0.64	3%	1.98	65	0.61	0.51	17%	5.76	51
May	0.68	0.62	10%	3.75	60	0.65	0.56	15%	1.78	54
June	0.88	0.85	3%	2.27	86	0.85	0.74	13%	2.8	74
July	**1.03**	0.97	5%	2.68	96	**1.08**	0.86	21%	4.71	83
August	0.74	0.67	10%	1.94	65	**0.98**	0.93	5%	0.6	90
September	0.88	0.70	21%	1.1	70	0.82	0.72	12%	2.31	72
October	**0.95**	0.78	18%	2.46	76	0.72	0.60	16%	0.94	58
November	0.67	0.54	19%	2.65	55	0.72	0.65	9%	NA	65
December	0.73	0.61	16%	0.49	60	0.77	0.59	24%	3.53	57
Annual	9.10	7.88		21.14		9.12	7.74		25.39	
Average Day	0.025	0.022				0.025	0.021			
Accounted Use (mgy)*	7.88					7.74				
Population	328					332				
Average Day (gpcpd)	65.6					63.7				
Average Unacc %	14%					15%				

Average Water Purchased Per Year =	8.6	MG
Average Water Accounted for Per Year =	7.5	MG
Average Percentage of Unaccounted for Water =	12%	
Average Per Capita Usage =	63	gpcpd
Max Month =	0.97	MG

Table 3-1 indicates some variability in the per capita usage and unaccounted for categories. One of the extreme examples occurred on the records of March and April of 2000, where the loss percentage went from 35% to 3%. Some reasons for the variability are listed below along with some supporting information as to why the reasons could be true:

- *Malfunctioning meters* – Since many of the meters in Chancellor are old, it is reasonable to assume some of them may not be accurate. The inaccuracy would cause the meter readings to indicate a loss in the system, since the readings from a malfunctioning meter will indicate a lower than actual flow.
- *Errors made while collecting the meter readings* – If the town checks their meters on a certain day and SLRW checks their meter on a different day, then some error is sure to result, because of the time lapse between the readings.
- *Errors made while logging the meter readings* – Some error is always possible when copying or typing out the recorded information.
- *Customers paying water bills late* – The water usage is figured from the payments made by customers. When customers pay late, usage for the late month tends to be lower, which indicates a higher loss. Additionally, the month in which the payment is received indicates a lower loss, because more water is reported for that month than what was really used.

Based on the data in Table 3-1, the average per capita usage for the period of 1998-2001 was determined to be approximately 63 gpcpd. This is lower than typical values of 100 to 125 gpcpd, but not uncommon for smaller communities in South Dakota. Since the water records that were used do not include any data during significant dry periods, it is our opinion that the average day per capita usage over the design period could potentially be higher than what is indicated. As a result, an average day per capita usage of 80 gpcpd was selected as the design average day per capita flow for Chancellor and will be used throughout the remainder of the report.

An analysis of the water usage data from 1998 through 2001 indicates the Town of Chancellor bought approximately 8.6 million gallons per year (mgy). Of this amount, approximately 7.5 mgy were billed through household and business meters. Approximately 12% of the water paid

for during the period of record is regarded as "unaccounted for water" and can be attributed to leaks, slow or malfunctioning meters, fighting fires, flushing lines, and water used in the park. Table 3-2 shows the yearly data.

Table 3-2 Summary of Water Usages and Unaccounted For Water Losses

	Millions of Gallons				
	1998	1999	2000	2001	Yearly Average
Total Water Bought [(a)]	7.95	8.23	9.10	9.12	8.60
Total Water Sold [(b)]	7.07	7.45	7.88	7.74	7.54
Total Treated Water – Unaccounted [(c)]	0.88	0.77	1.22	1.38	1.06
Percent - Treated Water Unaccounted	11%	9%	13%	15%	12%

(a) Based on plant records as provided by the Town of Chancellor. Represents the water bought from South Lincoln Rural Water.

(b) Represents the water residents bought from the Town of Chancellor.

(c) Represents the water not metered because of leaks, slow meters, fireflow, flushing, and park use.

A summary of water usage and unaccounted for losses during 1998 through 2001 is shown in Table 3-2. These numbers show that the unaccounted loss is currently an average of 12%. Water loss is not often thought of as financial loss. However, when a community purchases water from another source, the financial loss becomes apparent. As a result, it is important that unaccounted-for water loss be limited to a level less than the generally accepted standard of 15 percent. Fortunately, over the period of record, the average percentage of unaccounted water is slightly lower than the generally accepted industry average of 15 percent. However, based on the limited data, a trend of increasing water loss appears to be occurring. This may be an early indication of a slowly deteriorating system and should be monitored annually, but the losses in the system at this time do not warrant the replacement of major portions of the water distribution system.

All water that is purchased for distribution and resale within Chancellor's system is based on flows through a master meter at the point of delivery. If the existing percentage of water loss in Chancellor's distribution system continues to be around 12%, the Town must charge its customers 112% of the water purchase cost just to recoup the cost of the water loss. As a result,

it is important that unaccounted-for water loss is continuously monitored and efforts made to limit the unaccounted for water loss to the lowest level possible. Every effort should be made to achieve the generally accepted standard of 15 percent but in no case should the level be allowed to exceed 20% without an intensive investigation of the causes.

3.1.2 Projection of Water Demand

Chancellor is not expected to have any new industries or commercial activities that might place additional flow requirements on the system. However, a large ethanol plant is currently being constructed approximately 1 mile East of Chancellor. The plant will receive water from SLRW, which may impact the flow and pressure received by the Town of Chancellor since it will have the same source of water. The employment at the plant may provide Chancellor with additional population growth, as mentioned in Section 2.3. Therefore, Using the 2030 design population of 484 people and the average per capita flow of 80 gpcpd, the design daily average flow is calculated to be 38,720 gpd.

To meet the highest peak day usage that may occur in the future, a peaking factor must be determined. From Table 3-1 one can see the average day values ranged from 19,000 to 22,000 gpd. The maximum usage during a month was 0.97 MG and occurred on July 2000. Typically the ratio of the average day of the peak month to the average day is in the vicinity of 1.2 to 1.5 (Salvato, 1985). The actual ratio is calculated to be (0.97 MG ÷31 days per month ÷ 329 people ÷ 63 gpcpd) 1.51, which borders the normal range of values.

Small towns usually have a maximum day peaking factor of 2.0 to 3.0 times the average day usage (Mays, 2000). Our experiences have shown that towns the size of Chancellor have a peaking factor that ranges from 2 to 3.5, which is greater than typically published values because the demand characteristics of a small town have larger variations than a more steady demand that larger cities have. Since the actual peak month day ratio was slightly higher than the normal range of typical values, it is our opinion that the peaking factor for Chancellor should not be less than 3.0. This number will be used throughout the remainder of the report.

It must be noted at this point that an attempt is made to determine design flow parameters as accurately as possible but if any error is to be made in their selection, it must be on the high side to ensure an adequate supply of water for the Town throughout the design period. Utilizing the following criteria and projected populations, future values of design average day and peak day usages were calculated and are presented in Table 3-3.

Future water demand projections are the basis for establishing water distribution system capacity and storage. The design average usage for 2030 is 38,700 gpd or approximately 26.8 gpm, while the design maximum usage is 116,100 gpd or approximately 80.6 gpm. Since the contract with SLRW is currently out of date, new flow rates are recommended in the next section to meet the peak demand until 2030.

Table 3-3 Estimated Future Water Requirements

Year	Projected Population [a]	Annual Average Day gpd [b]	Annual Peak Day gpd [c]	Annual Peak Day gpm
2005	354	28,300	84,900	59.0
2010	380	30,400	91,200	63.3
2015	406	32,500	97,500	67.7
2020	432	34,600	103,800	72.1
2025	458	36,600	109,800	76.3
2030	484	38,700	116,100	80.6

(a) Based on population projections shown in Figure 2-1.
(b) Calculated by multiplying the projected population by an average day flow per capita of 80 gpcpd.
(c) Calculated by multiplying the annual average day by the annual average peak day to annual average day flow ratio of 3.0.

3.1.3 Water Sources

Chancellor obtains drinking water from South Lincoln Rural Water (SLRW). A standard requirement for water supply and distribution systems is that they be able to provide water for the demand of a peak day. Chancellor's previous contract with SLRW for 930,000 gallons per month and 30 gpm was recently renewed to state that the connection is limited to 1,100,000 gallons per month and 45 gpm. This contract is to be renewed in 20 years. A SLRW representative said that the Town of Chancellor has never been held to the contracted amount,

because it has never been necessary. A pressure reducing valve is present on the rural water connection, which restricts the flow to 120 gpm.

Future growth or extreme dry conditions might place a high demand on the system, causing the contract amount to be enforced. It is evident from Table 3.1 that the monthly flows have approached 1,100,000 gallons per month four times in the last two years. Additionally, the future monthly flow computed from the average day flow for 2030 is approximately 1.2 million gallons per month. Therefore, it is recommended to increase the contracted water usage sometime in the future.

The peak monthly flow rate is estimated by using the actual ratio of the average day of the peak month to the average day, which was calculated to be 1.51. However, this ratio does not represent the losses in the system. The water bought during the peak month amounted to 1.08 million gallons. Consequently, the ratio of the peak month day to the average day is 1.51 x 112% = 1.69. The projected average day flow is 38,700 gpd. When multiplied by 31 days per month and the ratio of 1.69, the peak month is 2.03 million gallons.

The peak instantaneous flow rate for Chancellor is estimated using the following statistical equation:

$$Q_{Total} = 4.0 * N_c^{0.5} + 0.3 * N_c + 7.0$$

Where:

- Q_{Total} is the total flow through the water system
- N_c is the number of connections.

Research throughout the Midwest has shown that this equation typically produces accurate results based only on the number of connections to the system. As the number of connections in a system increases, the flow that is demanded from each connection is reduced because the probability of users demanding flow diminishes (University of Kentucky's Civil Engineering Department, 2000). A future number of connections is estimated based on the current ratio of people per connection, which is 2.53. Multiplying this ratio by the design population of 484

gives 191 as an estimated future number of connections. When the equation above is solved for Q_{Total} using 191 connections, the total flow to the system is 120 gpm or 0.63 gpm per connection.

The availability of adequate flow for fire-fighting purposes is a major concern. Town officials have stated that the fire department is above average in their effort and ability to fight fires. Therefore, sufficient instantaneous flow must be guaranteed to maintain the ability to adequately fight fires. Our analysis of the current water distribution system, under future loading conditions, indicates a maximum fire flow of 462 gpm. If a 6-inch hydrant would ever be installed on the system, the fire flow would stay nearly the same due to the restriction caused by the flow through the length of the water main. As a result, the probable future instantaneous flow during a fire flow event is a total of fire flow and domestic use, or 582 gpm.

Currently, a bypass valve is used during emergencies to circumvent the flow-reducing valve, which is set at 120 gpm. SLRW does not charge extra for this feature. Using the calculations above, we recommend the new contract list at least 2.1 million gallons per month and 120 gpm for the new flow rates. Additionally, it is recommended to keep the emergency bypass in place to supply adequate fire flows. Alternatives in Section 4.2 will evaluate two options relating to water supply and storage.

3.1.4 Storage

Water storage facilities are generally designed to serve three major purposes:

a) Meet the fluctuating water demands on the distribution system by storing excess water during periods of low demand and releasing it during periods of high demand
b) Furnish water for emergencies such as fire fighting and accidental breakdowns in the system
c) Provide operating pressures that pressurize the distribution system.

The Chancellor water system currently has no available storage to meet the purposes indicated above. However, Chancellor is served by the SLRW system, which has a 100,000-gallon storage tank nearly one mile from Chancellor. If a fire flow event that lasted for two hours would occur,

along with the average residential usage, a total of 582 gpm for two hours would amount to draining approximately 70,000 gallons from the water tower. This means that only 30,000 gallons would be left for all other customers and emergencies. For this reason and to evaluate the options available, an alternative presented in Section 4.2 will evaluate the addition of a water storage facility.

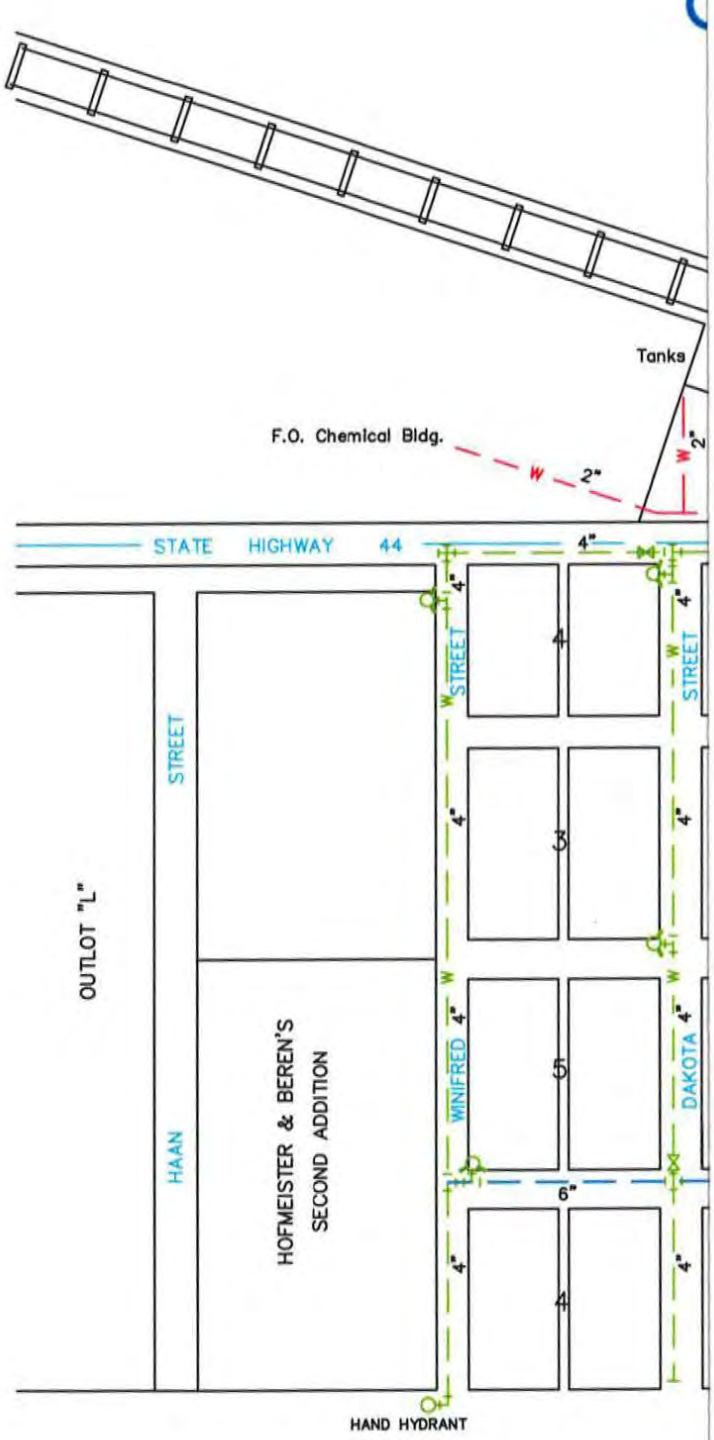
3.1.5 Water Distribution System

Chancellor's water distribution system consists of two, four, and six-inch cast iron water main, and is shown in Figure 3-1. Much of the cast iron water main has reached or is nearing the end of its useful life expectancy, which indicates that distribution system rehabilitation should be evaluated. Although the available data does not indicate excessive water loss to date, the percentage of loss does appear to be on the increase.

3.1.5.1 Water Valves

During our evaluation of the water distribution system, it was found that there is only one operable mainline valve in the existing system. The operating mainline valve is located at the rural water connection near Fifth Street and Highway 44. The other approximately 11 valves are not accessible, because they have been covered by asphalt over the years. Town officials are not sure of the valve locations or if the valves are operational. The lack of operational valves in the water distribution system makes it impossible to properly operate and maintain the system by limiting the operator's ability to isolate segments of the distribution system for repairs. When there is a major leak in any part of the water distribution system, the whole system must be taken out of service. The lack of operable valves also limits the ability to direct flows to specific segments of the system during the flushing and cleaning of the system.

Therefore, it is recommended that each existing valve be located and checked to determine if it works or not. The valves that do not work should be replaced to improve the ability to isolate segments of the system for operation and maintenance purposes. The valve boxes of the valves should be adjusted to the proper grade. Each of the alternatives for water system distribution as discussed in the following sections will include the installation of new mainline valves at various



Scale: 1" = 300'

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Figure 3–1
Existing Water Distribution System

locations within the system. Since the number of existing valves that work is unknown, it is assumed that all the valves that are not accessible do not work.

Town personnel have reported that they do not know of any service line valves in the distribution system that do not work. It is recommended that any water system improvement project include the identification and replacement of non-operable service line valves. Since all service line valves are assumed to be in working order, no further mention of them will occur.

3.1.5.2 Hydrants

The SD DENR, which is the state regulatory agency for public water supplies, requires that fire hydrants be served by water mains with a minimum diameter of six-inches. Hydrants used only for flushing dead-end lines may be located on four-inch mains. Figure 3-1 shows the current main sizes of the Town's distribution system. A SD DENR criterion also recommends that there be relatively few dead-end lines in a Town's water distribution system. Chancellor's distribution system consists of many dead ends, most of which are four-inch lines. Only 6 of the dead ends have hydrants to flush the lines. Two of these hydrants are approximately one-inch hand hydrants, which are operated by residents when water quality seems to be low. These hand hydrants have the potential for high unaccounted water loss if not locked and controlled solely by Town personnel. Of the 19 hydrants in Chancellor, 6 of them are located on dead end lines, and none of them are served by lines larger than four inches.

Without looping and multi-directional flow of water in the distribution system, water is supplied, for the most part, through a long single pipeline. In this type of distribution system, total water usage decreases the closer one gets toward the end of the lines. This results in decreased movement of water in the pipe and exceptionally long retention times of the water in various segments of the pipe. Long retention times in a pipe can have a detrimental effect on the quality of the water in that pipe such as:

- A decrease in the disinfectant levels in the water;
- An increase in the potential for the formation of carcinogenic disinfection process by-products; and,
- An increased potential for the formation of biological growth.

Therefore, it is recommended that a hydrant be installed at each dead end that does not already have a hydrant on it. This will enable Town personnel to properly flush the lines during periods of routine maintenance. Alternatives for improving the water distribution system as discussed in the following sections will address the issue of dead end lines by either installing new hydrants at various locations within the system, or by looping the system.

During the evaluation of the system, all of the hydrants were reported to be operational. It was reported, however, that one hydrant does not drain properly. The Town maintenance personnel routinely pump the water from this hydrant as part of their winterization of the distribution system. The replacement of the hydrant that does not currently drain is not considered to be essential to the operation of the system.

3.1.5.3 Fire Flow Analysis

On June 25, 2001, a hydrant flow and pressure test was performed by the Insurance Services Office (ISO) to upgrade Chancellor's fire insurance. The static pressure measured at all locations was 66 psi. The results of the hydrant flow and pressure test are shown in Table 3-4.

Table 3-4 Results from Hydrant Flow and Pressure Testing

Hydrant Location	Static Pressure psi	Residual Pressure psi	Flow Rate gpm
Main & Hwy 44	66	18	350
1st St & Dewey Ave.	66	45	450
4th St & Dewey Ave.	66	10	250

During the hydrant testing, the hydrant at Fourth Street and Dewey Avenue had a flow rate of 250 gpm and a residual pressure of 10 psi, which is extremely low for fire protection. The static pressure remained consistently at 66 psi.

Main pipelines are to deliver the needed fire flow to each hydrant in accordance with the ISO guidelines. The ISO guidelines are based on a number of variables including size of structure, construction material, occupancy, and exposure and connections to other structures. For 1- and 2-family dwellings not exceeding 2 stories in height, the following needed fire flows are required:

Distance Between Buildings	Fire Flow Requirement
Over 100 feet	500 gpm
31 to 100 feet	750 gpm
11 to 30 feet	1,000 gpm
10 feet or less	1,500 gpm

As for the business district, the needed fire flow would be variable for each structure and an inspection and analysis of each structure would be required. Rather than performing these inspections and analyses, a minimum needed fire flow of 2,000 gpm was sought.

A computerized hydraulic analysis of the distribution system was completed to model the hydraulic characteristics of the water distribution system. Hydraulic modeling enables the evaluation of a water distribution system to be quick and accurate. Figure 3-2 is a representation of the water distribution model developed with up to date software that has been designed to represent how the Chancellor system will perform. The model helps in the determination of the effects of population growth or improvements to the system.

The pipe network in Figure 3-2 has been calibrated to produce results that were similar to the results from the hydrant flow and pressure test performed on June 21, 2001. A representative from SLRW stated that a pressure-reducing valve limits Chancellor's pressure to 65 psi. Furthermore, a flow-reducing valve limits the flow to 120 gpm. In case of emergencies when significant fire flow is needed, this valve can be bypassed, allowing no flow restriction on the rural water connection. During the fire flow analysis, the flow-reducing valve was bypassed.

The hydrant flow test shown in Table 3-4 indicated very low fire flows for the magnitude of pressure that is available. Therefore, to calibrate the model to produce fire flows similar to the results from the hydrant testing, it was necessary to produce a large measure of pressure loss into the water distribution system model. This loss is mainly in the form of pipe roughness, which is a measure of the smoothness of the surface of the interior of the water distribution pipes. The need for the introduction of an unusually high degree of loss into the system is probably due to corrosion and build-up inside the water pipes. A large degree of corrosion and build up can significantly reduce the interior diameter of a pipe, which reduces capacity and requires a greater velocity. As the velocity of the water inside a pipe increases, friction from the interaction of the water and the interior surface of the pipe increases. The increased friction reduces the pressure significantly, which causes lower than normal fire flows.

The model is set up such that Chancellor has 65 psi of static head under low demand. During a fire flow event, it is likely that residents will also be using water. When the statistical equation presented in Section 3.1.3 is solved for the total flow for 131 connections, 92.1 gpm is determined to be the total residential demand. Figure 3-2 displays the existing available fire flow for each hydrant based on a residual pressure of 20 psi. The model indicates a maximum available fire flow of 488 gpm, so the maximum instantaneous flow from the system is residential use plus the maximum fire flow, or approximately 580 gpm.

As shown on Figure 3-2, the expected hydrant flows are below the minimum residential flow rates recommended by ISO. Minimum fire suppression requirements for the central business district of a community such as Chancellor often state that the minimum fire flow should be available for at least two hours. A minimum fire flow of 580 gpm for two hours totals 69,600 gallons. Since Chancellor has no storage facility, minimum fire suppression requirements are not met.

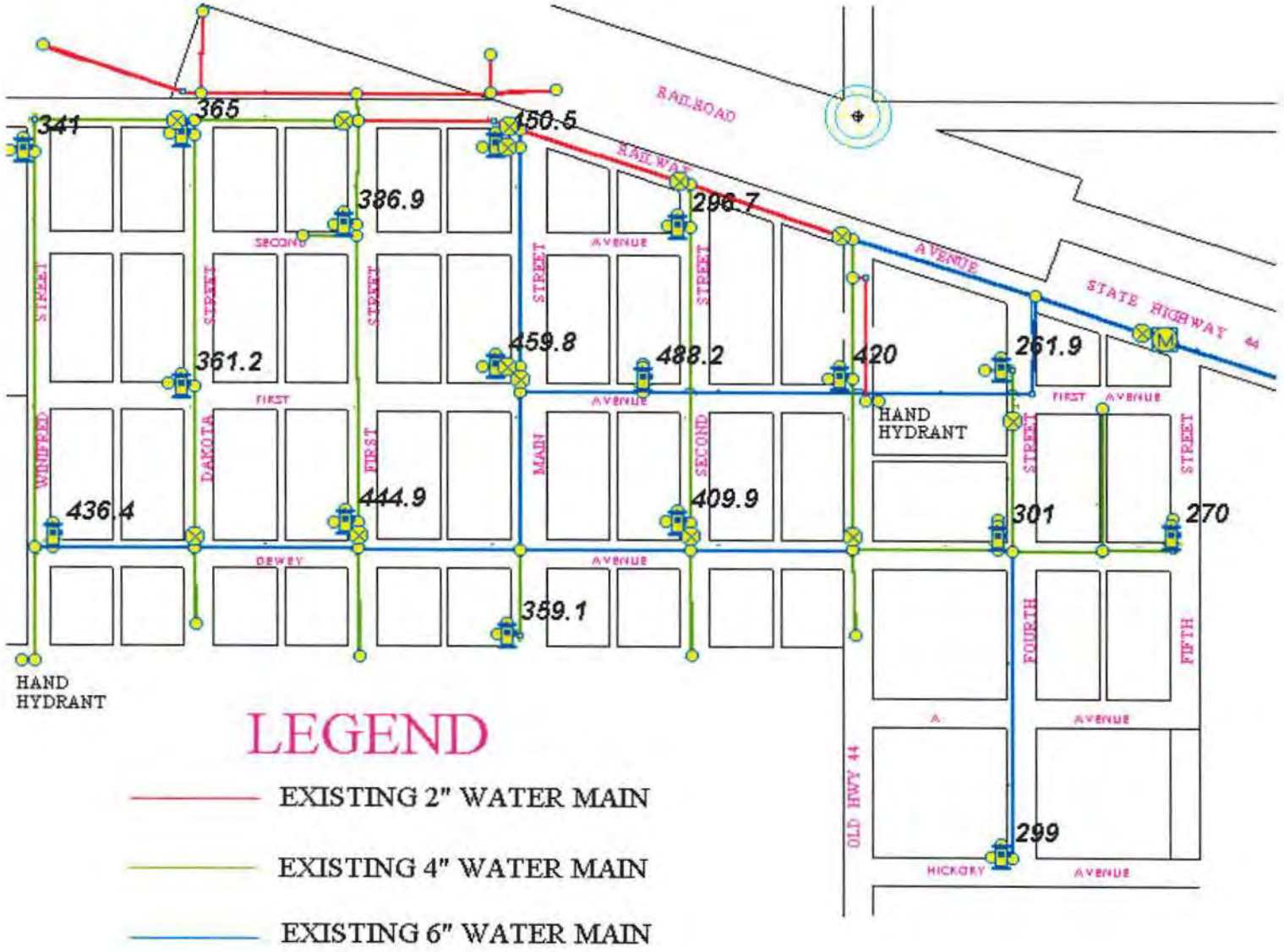


Figure 3-2 Available Fire Flows for the Existing System

3.1.5.4 Pressure Analysis

SD DENR Recommended Design Criteria states in Section 8.4.2:

> *"A water distribution system shall be designed so as to provide a pressure of 20 pounds per square inch at each service outlet or connection under any or all conditions or demands that can be placed on the system. Under normal conditions, minimum pressures should be approximately 60 psi and not less than 35 psi."*

Section 7.3.1 of the Recommended Standards for Water Works by the Committee of the Great Lakes further recommends a minimum working pressure of 35 psi with a normal working pressure of 60 to 80 psi. The AWWA Distribution System Handbook by Mays states on page 3.8 that low operating pressures of less than 30 psi can result in annoying reductions in water flow when more than one water-using device is in service.

To check the system for low-pressure problems, a high demand is simulated. When the statistical equation presented earlier is solved for the total flow for 131 connections, 92.1 gpm is the estimated normal residential usage. The basis for the model in Figure 3-3 is that the residents are using the statistical flow of 92.1 gpm; plus ¼ of them are watering their lawns at 7 gpm; and a 15-gpm demand is placed on the system near the park to indicate watering or recreation activities. According to a SLRW representative, a pressure-reducing valve limits the pressure to 65 psi. Therefore, the model is set such that Chancellor has 65 psi of static head under low demand. The pipe network in Figure 3-3 has been calibrated using the results from the hydrant flow and pressure test performed on June 21, 2001. As can be seen on Figure 3-3, the normal operating pressures are above the minimum recommended pressure of 35 psi in all areas of the community. This differs from the fire flow analysis in that the flow is significantly less. However, at these flows the pressure loss is still substantial (10-15 psi).

As is evident from a review of the existing water distribution system layout (refer to Figure 3-1), many of the lines are not connected in a way that forms loops in the system. The looping of a water distribution system allows for multi-directional water flow thus reducing pressure losses in the system. The installation of water piping to complete the looping of the system will result in an improvement of normal operating pressures at nearly all locations in the community.

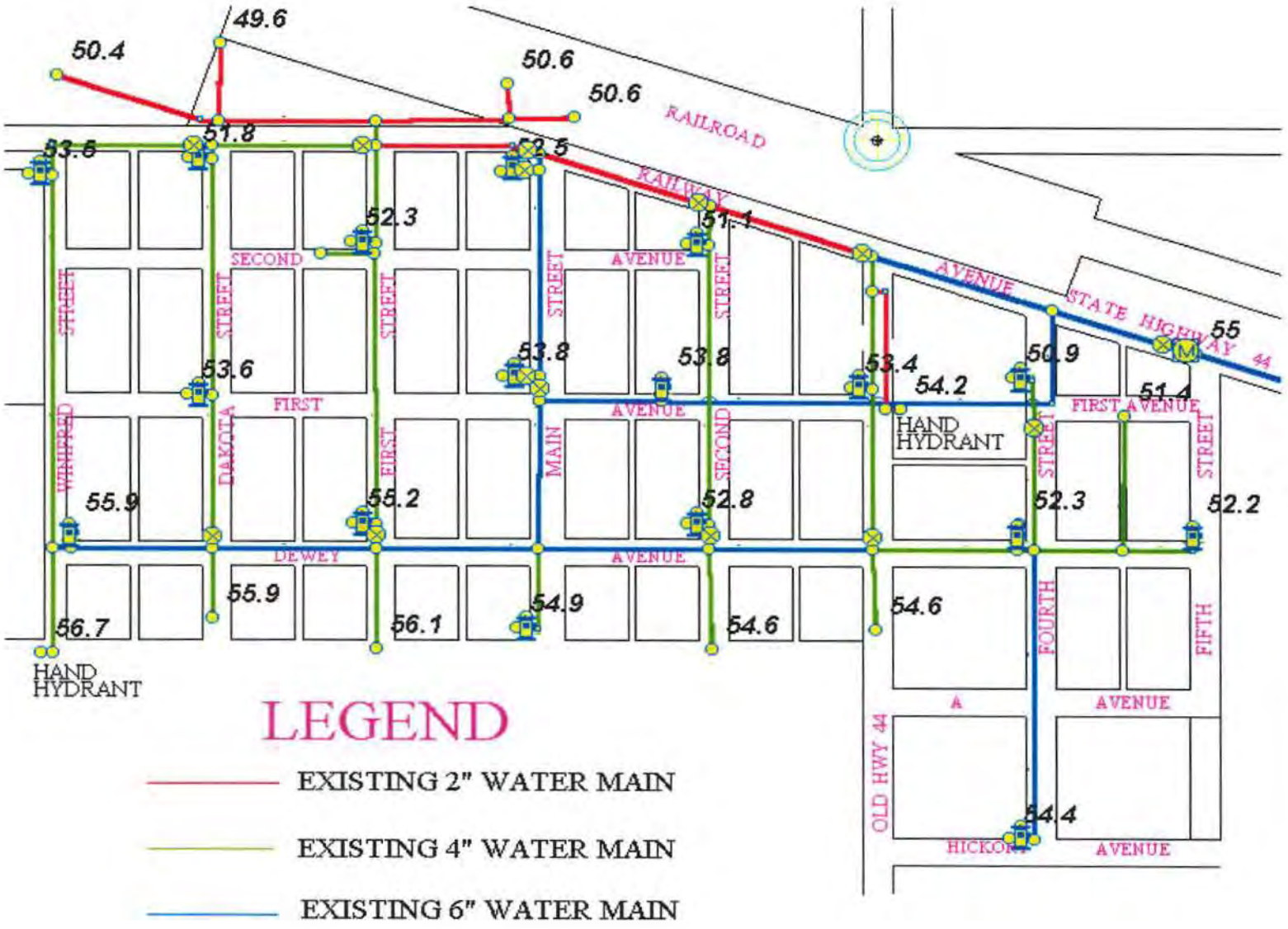


Figure 3-3 Pressures for the Existing System Under High Demand

3.2 WASTEWATER SYSTEM

3.2.1 Collection System

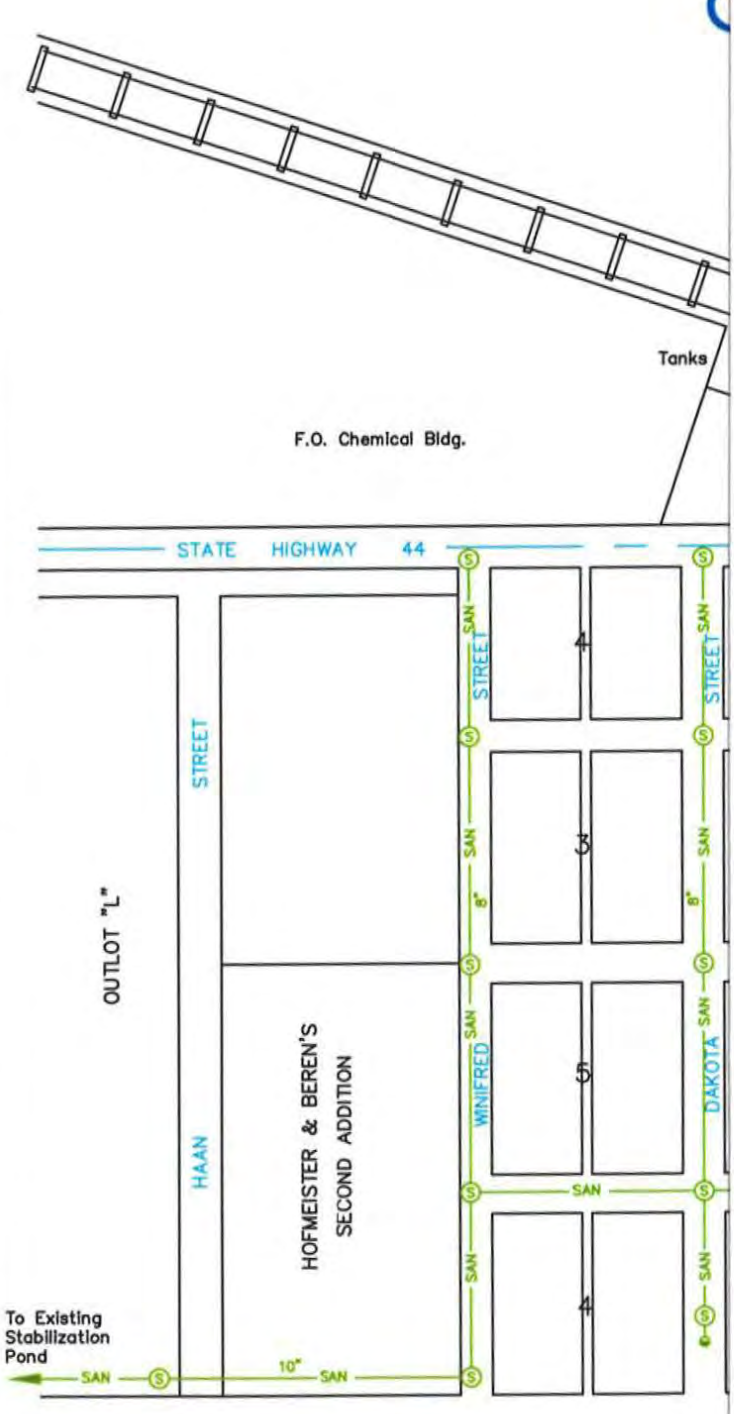
The core of the existing collection system consists of approximately 9,630 feet of 8-inch vitrified clay pipe (VCP) and approximately 1,470 feet of 10-inch VCP. Construction of the original system took place in the early 1900's. Newer segments of the collection system were constructed with PVC lines where the collection system has been extended as required by community growth. According to available information, there is an estimated 1500 feet of more recently constructed 8" PVC sewer. Figure 3-4 indicates the size, and layout of the existing collection system.

A quick drive over the streets in Chancellor revealed that many manhole lids are covered by asphalt, just as the water valves discussed previously. Manholes must be accessible for maintenance purposes. Therefore, Collection System Alternative 2 will consider the uncovering and adjustment to the proper grade of one third of all of Chancellors manholes, or approximately 13 manholes.

3.2.1.1 Infiltration Analysis

Water that enters the sewer system through cracked pipes, poor joints and the walls of manholes is called infiltration. Therefore, infiltration can only occur when the groundwater table is at or above the sewer piping. Evidence of infiltration is apparent by the consistently high average day flows in months and years during and following months and years with above normal precipitation. As would be expected, the above normal precipitation results in an increased level of the groundwater table. This increased level in the groundwater table then subjects a larger portion of the sewer system to infiltration.

The actual infiltration rate of the sewer system is unknown, but can be estimated by evaluating the wastewater flow during overnight hours. The data obtained from an ISCO Model 4150 Flow Logger placed in a manhole near the wastewater pond was utilized to perform a limited I & I study. Figure 3-5 demonstrates the wastewater flow data that was measured for February 8, 2001 through part of February 13, 2001 using the ISCO flow meter. The overnight wastewater flows



N

Scale: 1" = 300'

COMPILED FROM FURNISHED DATA AND RECORDED PLATS, TO BE USED FOR GENERAL INFORMATION PURPOSES ONLY. THE INFORMATION SHOWN ON THIS DRAWING SHOULD NOT BE USED FOR LEGAL OR SURVEY PURPOSES WITHOUT FURTHER VERIFICATION.

Figure 3–4
Existing Wastewater Collection System

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for this period indicate a minimum infiltration flow of approximately 6 gpm or 8640 gpd. During this period, there was very little precipitation and the ground was relatively dry. Therefore, this graph represents typical sanitary sewer flow, provided infiltration is limited and very little inflow is occurring.

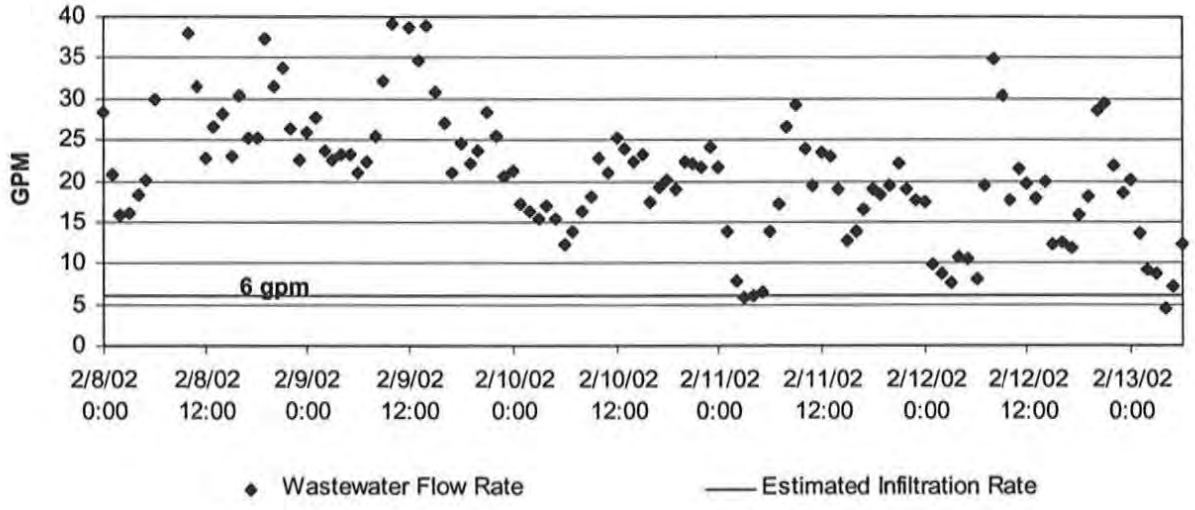

Figure 3-5 Measured Wastewater Flow and Estimated Infiltration Rate for 2/8/02-2/13/02

The SD DENR criterion for acceptable leakage in sewers is 200 gallons / inch of diameter / mile of length / day. Using this standard and an estimated length of 8 and 10-inch VCP sewer of 9,630 and 1,470 feet, plus an estimated 1,500 feet of recently constructed 8-inch PVC sewer, the acceptable rate of flow for infiltration is about 2.7 gpm, which is less than 50% of the estimated rate of 6 gpm for this dry period. Performing a cleaning and TV inspection would also help determine the extent of problems due to infiltration and structural damage. See Appendix C for more wastewater flow data.

Since the flow meter recordings occurred during a relatively dry period, further analysis must be performed to determine an estimate of the infiltration rate during average or wet conditions. Table 3-5 was used to compute the infiltration for each winter month by subtracting 80% of the water usage from the wastewater flow. The SD DENR Design Criteria Manual states that 80% of the water usage during the winter months in systems without I & I can be approximated as the

domestic wastewater flow. 80% of the average water usage during winter months is found to be approximately 14,700 gpd. Since only a relatively small amount of the wastewater flow during the winter months is inflow, the difference between wastewater flow and 80% of the water usage can be estimated as infiltration. Therefore, the average daily infiltration component of the wastewater flow in Table 3-5 is 12,200 gpd.

Of particular interest are the months of December 1998 through February 1999. As shown below, these three months exhibit unusually high infiltration rates. This is due to the period being significantly wetter than normal, which caused infiltration rates to rise dramatically. If these three months of infiltration are not included in the average infiltration rate, then the rate drops to a level similar to what was measured with the flow meter presented above.

Table 3-5 Infiltration Estimate Using Winter Water Usage

Date	WW Flow, gpd	Billed Water Usage, gpd	80% Water Usage, gpd	Estimated Infiltration, gpd
Jan-98	20,644	17,236	13,789	6,856
Feb-98	20,698	18,827	15,062	5,636
Dec-98	51,762	18,179	14,543	37,219
Jan-99	37,688	19,485	15,588	22,100
Feb-99	42,185	17,319	13,855	28,331
Dec-99	17,135	18,262	14,609	2,526
Jan-00	17,818	17,677	14,142	3,676
Feb-00	15,926	17,097	13,678	2,248
Dec-00	24,923	19,744	15,795	9,128
Jan-01	19,715	18,899	15,119	4,596
Feb-01	20,219	19,567	15,654	4,565
Dec-01	34,985	18,922	15,137	19,847
		Average	**14,748**	**12,227**
		Average not Including Bold Dates		**6,564**

The wastewater treatment ponds must be sized and analyzed with pertinent design flows in mind. There are times when long periods of wet weather and high water tables can cause I & I rates to soar. To be certain that the treatment system will not be undersized, a design flow larger than the average day flow must be used when there is a system with considerable I & I. Table 3-6 is used to break up the wastewater records into summer and winter periods. The summer periods include records from April to September. The winter periods include records from October to March. To compute the estimated I & I for each period, 80% of the water usage (or approximate domestic wastewater flow) is subtracted from the wastewater pumped for each period.

Table 3-6 Summer and Winter Wastewater Records

Period	Wastewater Pumped, gallons	80% of Water Use, gallons	Estimated I & I, gallons
1997 Winter	1,428,600	1,321,600	107,000
1998 Summer	5,835,000	3,444,000	2,391,000
1998 Winter	8,573,602	3,106,400	**5,467,202**
1999 Summer	15,429,250	3,511,200	**11,918,050**
1999 Winter	3,234,711	2,757,784	476,927
2000 Summer	4,567,141	3,550,136	1,017,005
2000 Winter	4,486,201	2,819,408	1,666,793
2001 Summer	8,796,977	3,450,224	5,346,753
2001 Winter	2,573,000	1,473,384	1,099,616
Total Winter	20,296,115	11,478,576	8,817,539
Total Summer	34,628,367	13,955,560	20,672,807

As evident from the table above, the winter starting in 1998 through the summer of 1999 had unusually high levels of I & I. Therefore, these records will be used to determine the maximum I & I rate that has occurred over the whole period of record. The estimated I & I during the winter periods include insignificant amounts of inflow, because less precipitation is received and it is usually cold, which inhibits inflow. Thus, the winter period I & I can be estimated as the infiltration. The estimated I & I during the summer periods contains substantial amounts of both infiltration and inflow. Therefore, to calculate the inflow for the period, the winter period is subtracted from the summer period. Using this analysis, the maximum infiltration received during a winter period is 5,467,202 gallons in 182 days, or approximately 30,000 gpd. The

maximum inflow rate received over the period of record is 11,918,050 minus 5,467,202, or 6,450,848, which amounts to approximately 35,300 gpd during the 183-day summer period. These infiltration and inflow numbers will be used throughout this report as the design values for evaluation of the treatment system.

3.2.1.2 Inflow Analysis

Inflow is the flow entering the system from storm sewer connections, perforated manhole covers, improperly abandoned lines, roof drains, basement sump pumps, and other drainage systems. According to some residents, many houses have basement sump pumps, which are connected directly into the sanitary sewer system. Additionally, a new home constructed on the south end of Town indicated a high water table because a great deal of pumping is required to keep the basement dry. Inflow also results from individual precipitation events and periods of snow melt. The intensity of the event can play a large role in the degree of impact to the system. In other words, a 2-inch rainfall over a couple of hours will result in a larger inflow than a 2-inch rainfall over 12 hours.

One method to estimate infiltration and inflow (I & I) is to compute the difference between the wastewater flow and 80 % of the winter water usage. The SD DENR Design Criteria Manual states that domestic wastewater flow is typically 80% of the water usage during the winter months in systems without I & I. The difference from the total wastewater flow represents the flow contributed from I & I. Table 3-7 shows an excerpt of the inflow analysis for February 1999 and indicates many items of interest:

1. The average daily wastewater flow is shown based on wastewater records.
2. Wastewater flow per capita is computed based on the daily wastewater flow and the interpolated population of 322 people for February 1999.
3. The average infiltration rate from Table 3-5 is 12,200 gpd. Using 80% of the winter water records for 1998 through 2001, the average winter usage is approximately 14,700 gpd, which can be approximated as the average domestic wastewater flow as stated above. Therefore, the average domestic and infiltration flow for each day is estimated to be 26,947 gpd by adding the average infiltration rate and the average domestic wastewater flow. If the wastewater flow rate is less than the domestic and infiltration

flow, then the domestic and infiltration flow is set to be the wastewater flow, meaning that the domestic and infiltration flow rate cannot be greater than 26,947 gpd, nor greater than the wastewater flow rate.

4. The daily inflow is calculated by subtracting the domestic and infiltration flow from the wastewater flow. If the value is negative, zero inflow is recorded.

Table 3-7 Components of Average Daily Wastewater Flow for February 1999

Date	Wastewater Flow Measured gpd	Wastewater Flow gpcpd	Domestic & Infiltration gpd	Inflow gpd
02/01/1999	35,963	112	26,947	9,016
02/02/1999	36,883	115	26,947	9,936
02/03/1999	33,194	103	26,947	6,247
02/04/1999	35,039	109	26,947	8,092
02/05/1999	43,331	**135**	26,947	16,384
02/06/1999	40,558	**126**	26,947	13,610
02/07/1999	41,506	**129**	26,947	14,559
02/08/1999	62,690	**195**	26,947	35,743
02/09/1999	23,982	74	23,982	0
02/10/1999	45,171	**140**	26,947	18,224
02/11/1999	35,039	109	26,947	8,092
02/12/1999	55,342	**172**	26,947	28,394
02/13/1999	80,320	**249**	26,947	53,373
02/14/1999	24,849	77.1	24,849	0
02/15/1999	34,071	106	26,947	7,124
02/16/1999	35,963	112	26,947	9,016
02/17/1999	53,483	**166**	26,947	26,536
02/18/1999	57,104	**177**	26,947	30,157
02/19/1999	20,341	63	20,341	0
02/20/1999	35,973	112	26,947	9,026
02/21/1999	36,883	114	26,947	9,936
02/22/1999	40,577	**126**	26,947	13,630
02/23/1999	51,634	**160**	26,947	24,686
02/24/1999	35,963	112	26,947	9,016
02/25/1999	35,944	112	26,947	8,997
02/26/1999	52,573	**163**	26,947	25,625
02/27/1999	45,185	**140**	26,947	18,238
02/28/1999	51,629	**160**	26,947	24,682

The analysis shown in Table 3-7 is performed on 1998 through 2001 wastewater flow records. To view the complete analysis, see Appendix D. Figure 3-6 displays the results of the analysis for February through March 2001. Based on a constant infiltration rate of 12,200 gpd, the daily average inflow rate is 10,600 gpd. However, this is only an average inflow rate and must not be used to size or evaluate the wastewater system. The daily inflow rate of 35,300 gpd over the

summer period, which was developed from the data in Table 3-6, will be used throughout this report as the design inflow rate.

In summary, based on the year 2000 population of 328, the design components of the existing wastewater flow are:

- Domestic – 14,700 gpd, or 45 gpcpd
- Infiltration – 30,000 gpd, or 91 gpcpd
- Inflow –35,300 gpd, or 108 gpcpd

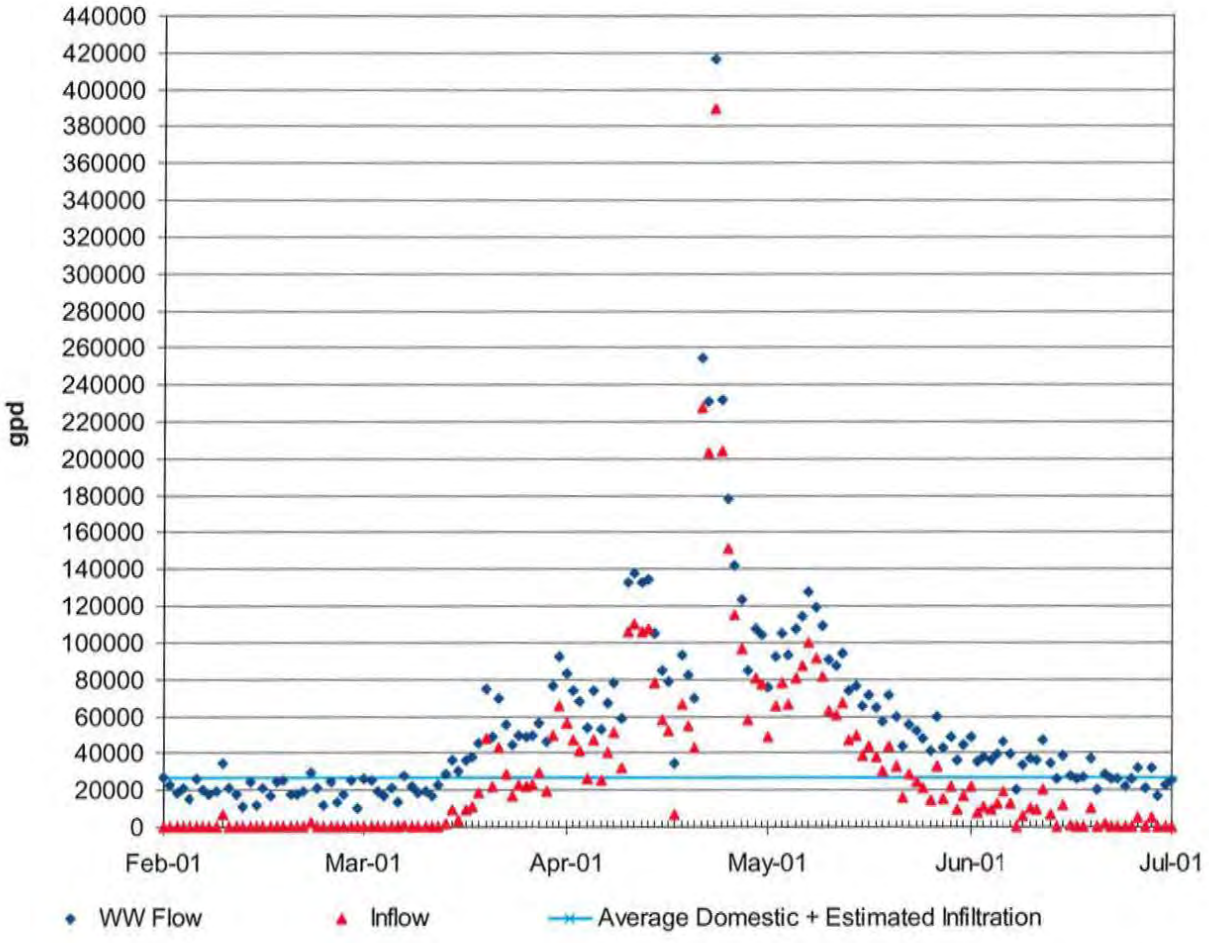

Figure 3-6 Components of Average Daily Wastewater Flow for February-July 2001

The average per capita wastewater flow is computed to be 115 gpcpd for the period of record. However, for several months the per capita wastewater flow is quite high, reaching 356 gpcpd for April 2001. The Environmental Protection Agency (EPA) threshold for infiltration rates to be considered excessive is a wastewater flow of 120 gpcpd during dry-weather flows, which can be considered during December, January, and February (EPA, 1975). This criterion indicates that Chancellor has had excessive infiltration 14 times during February 1999, alone. The complete analysis in Appendix D indicates a total of 67 exceedances for 1998 through 2001. Since the infiltration rate during winter months is frequently excessive, it our opinion that Chancellor's infiltration rate is to be considered excessive.

The EPA's upper limit for normal wastewater flows during wet periods is 275 gpcpd (EPA, 1975). According to the analysis presented in Appendix D, this limit has been exceeded 105 times during 1998 through 2001. Since the normal wet weather infiltration rate has frequently been surpassed, it our opinion that Chancellor's inflow rate also is to be considered excessive.

To compare the measured per capita flows with flows that do not contain I & I, Chancellor's water use records are used to estimate the average domestic wastewater flow rate. One method of estimating the domestic wastewater flow is to consider water use for the months of December, January, and February (SD DENR, 1990). During this period, 80% of the water that is used is assumed to be sent into the wastewater collection system. Using data in Table 3-5, 80% of the average per capita usage for the winter months, or in this case, estimated domestic wastewater flow is approximately 14,700 gpd or approximately 45 gpcpd. This is much lower than the per capita flows from the analysis in Appendix D, which average 115 gpcpd. The difference between the two numbers represents the I & I collected by the collection system.

3.2.1.3 Results of 1988 Study

In June 1988, SPN completed a facility plan entitled, "Wastewater Treatment Improvements" for the Town of Chancellor. This study also involved the estimation of the components of the wastewater flow. In December 1987, a flow meter was set up in a manhole for two weeks. Using the data from the flow meter, water use records, and sewer characteristics, the 1987 data in Table 3-8 was determined. Table 3-8 also displays the current estimations of the wastewater

flow components and the percent relative difference between the 1987 per capita components and the current per capita components.

According to Table 3-8, the winter water usage remained quite similar. This makes sense since it is based on the water used per person, which should not change significantly. The 34% drop in the infiltration rate seems drastic. However, due to the lack of wastewater data, the original estimate was based on an infiltration rate of 600 gallons per mile per inch diameter of sewer pipe. In 1988, this rate of infiltration was the accepted standard method to liberally estimate infiltration. In reality, this method produced results that were on the high side, which added a degree of safety in the design of a wastewater treatment facility.

The 35% drop in the inflow values is not too surprising. Due to the sewer use ordinance that bans the sump pump connection to the collection system, many residents may have removed some inflow sources from the collection system. Another explanation is that the years 1998 through 2001 used in the I & I analyses were slightly drier than many of those previous to the 1988 study.

Table 3-8: 1987 and Current Components of Wastewater Flow

Flow Components	1987 Daily Flow Data		Current Daily Flow Data		Percent Relative Difference
	gpd	gpcpd	gpd	gpcpd	
Winter water usage	15,876	54	18,434	56	+3.7%
Infiltration	16,500	56	12,200	37	-34%
Inflow	14,370	49	10,600	32	-35%

The 1988 study recommended that the Town Board of Chancellor begin vigorous enforcement of the sewer use ordinances that prevent connections of sump pumps and foundation drains into the collection system. It is evident that this enforcement was not completely accomplished, since the collection system still receives high rates of inflow. Therefore, it is our recommendation that the sewer use ordinances be strictly enforced to remove a large percentage of inflow from the collection system. Each home should be inspected for sump pumps or other inflow sources connected to the sewer system. Owners that have homes with connected inflow sources should be given time to route the flow outside of the house. After the allotted time period, a second inspection should be completed to verify if the problem is solved. This enforcement will not be popular, but is necessary to reduce hydraulic loading to the treatment facility.

One of the collection system rehabilitation alternatives considers the enforcement of the sewer use ordinances in Section 4.4.2. Discussion on components of future wastewater flows after enforcement of sewer use ordinances is presented in Section 3.2.3.

3.2.2 Wastewater Treatment System

In 1990, the single-cell wastewater treatment system was upgraded to include a primary pond, secondary pond, and an artificial wetland. At the time of the construction, a design population of 317 was projected to the year 2008, giving the treatment faculty an 18-year useful life expectancy. The treatment system has remained relatively trouble-free throughout its design life expectancy and beyond, with only minor modifications. The location of the existing wastewater treatment facility is shown in Figure 3-7.

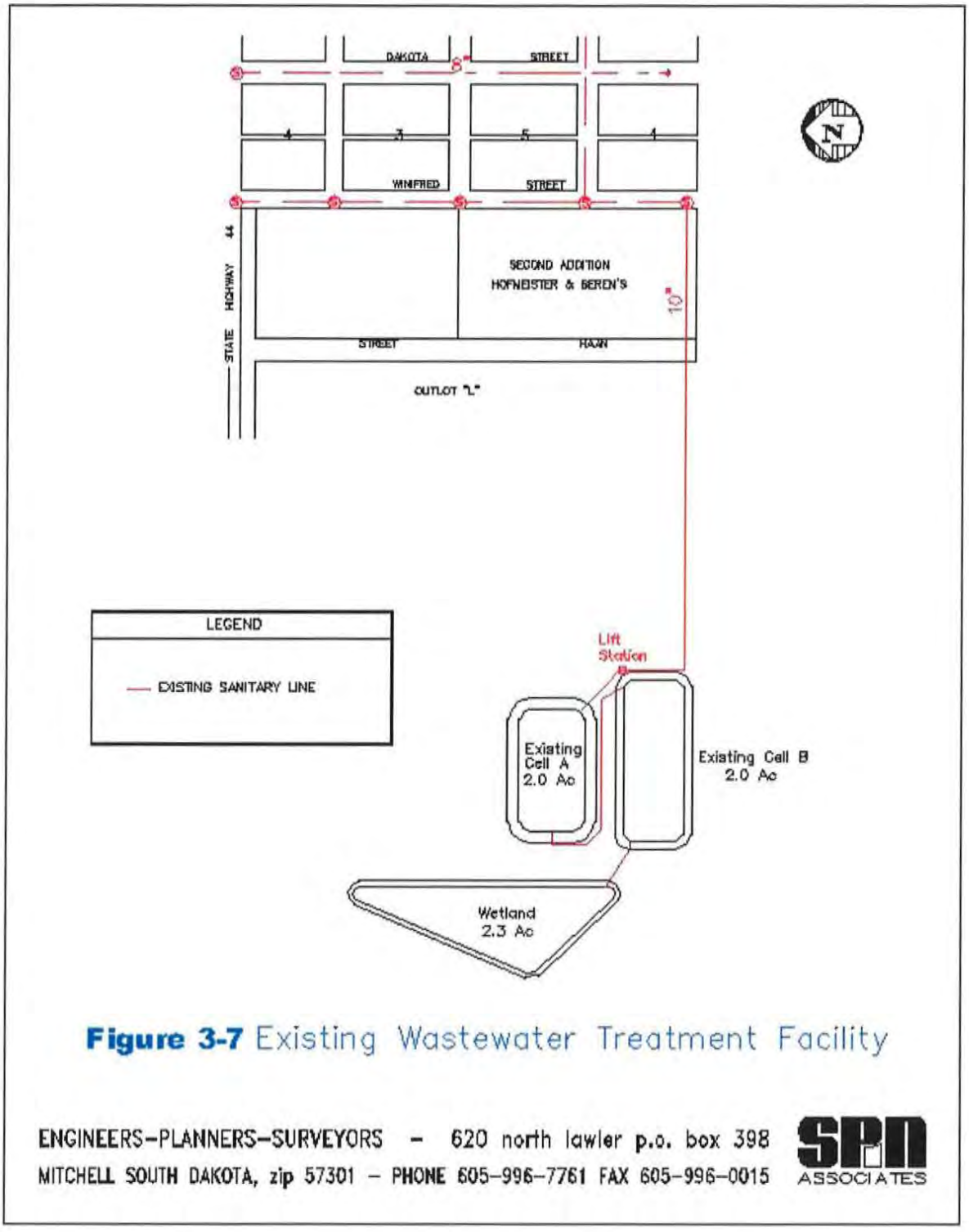

Figure 3-7 Existing Wastewater Treatment Facility

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SPN ASSOCIATES

Chancellor's wastewater treatment pond is located approximately 1350 feet west of the dead end on South Winfred Street. The treatment facility operates under Surface Water Discharge (SWD) Permit # 0023639. For a full copy of Chancellor's discharge permit see Appendix E. Treatment standards have changed over the useful life of the project. All modifications made to the treatment facility have been at the recommendation of regulatory agencies in order to keep the facility within the parameters of its discharge permit. This facility plan will identify the underlying causes of any deficiencies and recommend corrective actions that will need to be taken to solve the identified problems. A copy of the SWD Compliance Inspection Report is in Appendix F.

The primary pond has a water surface area of about 2.0 acres and a design depth of 5 feet. The secondary pond has a water surface area of approximately 2.0 acres and a design depth of 4.8 feet. The artificial wetland has a water surface area of 2.3 acres and a design depth of 2 feet.

The organic waste load that enters the wastewater treatment system is calculated by using an average waste production of 0.20 pounds of BOD_5 per person per day. When multiplied by the 2001 population of 328 people, 66 pounds of BOD_5 per day is estimated to be the current organic waste loading rate. The SD DENR Design Criteria Manual states that the maximum loading to a primary pond is 30 pounds of BOD_5 per acre of pond per day. Given that the area of the primary pond is 2.0 acres, it is found to receive 33 pounds of BOD_5 per acre per day. Unfortunately, the primary pond is already being overloaded with organic material.

An evaluation was performed on the wastewater system to determine compliance with current SD DENR Design Criteria. Table 3-9 contains the current surface water discharge parameters of the SWD permit issued to the Town of Chancellor.

Table 3-9 NPDES Permit Requirements

Effluent Characteristic	Effluent Limit		
	30-Day Average	7-Day Average	Daily Maximum
BOD_5, mg/l	30	45	N/A
Total Suspended Solids, mg/L	90	135	N/A
Fecal Coliforms, no./100 ml May 1 Sept 30	1000	N/A	2000
Ammonia-Nitrogen, mg/l (as N) March – April May – August September – October November – February	 9.1 3.0 5.4 48.0	 N/A 	 17.6 5.9 9.6 85.5
Total Residual Chlorine, mg/l (Applicable only if effluent is chlorinated)	N/A	N/A	0.019
The pH of the discharge shall not be less than 6.5, nor greater than 9.0 in any sample.			

Table 3-10 contains data from the Discharge Monitoring Report (DMR) of Chancellor's discharge events, which took place in 1997 through 2001. In November 2000, the ammonia effluent limits were redeveloped to allow more flexibility in operation. The previous ammonia limits were:

	30-Day Average	Daily Maximum
Ammonia-Nitrogen, mg/l (as N)		
March – April	4.1	2.7
May – August	1.0	1.0
September – October	1.0	1.5
November – February	7.3	13.0

In Table 3-10, all records were evaluated using the current ammonia limits listed above. For a copy of the actual DMR, see Appendix G. Review of Table 3-10 indicates each parameter has exceeded the limits at least once. The frequency of some of the discharges indicate that high levels of I & I must be entering the collection system. If inflow into the collection system would be reduced, the occurrence of discharge events could also be reduced significantly.

Table 3-10 Summary of Chancellor's Discharge Monitoring Reports*

	BOD5 Sample		TSS Sample		Fecal Sample		Ammonia Sample		pH Sample	
Date	30-Day	7-Day	30-Day	7-Day	30-Day	Da Max	30-Day	Da Max	30-Day	Da Max
4/30/97	17	18	10	12	NA	NA	***14.74***	15.6	7.7	7.77
5/31/97	9	13	14	14	66	90	2.01	2.62	7.61	8.02
8/31/97	***32***	38	41	41	673	1300	0.58	1	7.42	7.52
10/31/97	4	10	44	46	NA	NA	2.04	2.7	7.71	7.91
4/30/98	29	32	54	72	NA	NA	3.9	5.96	8.47	***9.2***
7/31/98	20	22	30	40	340	490	0.61	0.82	7.32	8.08
11/30/98	7	10	16	20	NA	NA	2	2.3	8	8.15
4/30/99	7	8	13	13	NA	NA	1.93	2.9	8	8.3
5/31/99	5.6	5.6	8.3	8.3	0	30	0.29	0.37	7.8	8.6
6/30/99	9.6	16	13.3	13.3	0	460	0.55	0.67	7.4	7.9
7/31/99	7	7	13	13	***4400***	***4400***	0.46	0.46	7.24	7.24
8/31/99	25	25	52	52	90	90	1.72	1.72	7.57	7.57
9/30/99	***41***	41	***136***	***136***	250	250	0.26	0.26	8	NA
10/25/00	5.3	5.6	8.3	8.3	NA	NA	NA	NA	NA	NA
10/31/00	13	22	13	17	NA	NA	0.26	0.4	8.6	8.9
4/30/01	7.66	9	9.66	12	NA	NA	***10.6***	11.3	7.65	8.02

* Underlined values indicate non-compliance with permit requirements.

3.2.3 Projection of Wastewater Flow and Waste Load

Future flow projection is a matter of judgment rather than a determination of fact, particularly when projecting future growth patterns and population. Unforeseen policies, events, and technical changes can occur that affect the actual future population and wastewater flows. The best available information and engineering judgment are combined to define a set of design conditions.

It is not economically feasible to make frequent changes in the capacity of a wastewater treatment system. Therefore, a system is generally designed for the maximum flow that is expected during the selected design period. This design period is selected as a compromise between high costs to future users associated with frequent construction programs and high costs to present users associated with providing future growth capacity. It is customary to use at least 20 years as a design period when determining the capacity of a wastewater treatment system or water distribution system. The projected domestic wastewater flow for the design year 2030 as well as infiltration and surface water inflow that are not removed will be utilized to determine the design capacity of the wastewater treatment systems being reviewed.

In order to project the wastewater flow, an itemization of the three components of wastewater flow is estimated: domestic flow, infiltration, and inflow. Usually a town of Chancellor's size produces roughly 75 gpcpd of wastewater flow (SD DENR, 1990). However, the analysis in Appendix D shows per capita flows much higher than that because of the flow that occurred due to precipitation, snowmelt, and infiltration.

The SD DENR states that the domestic flow can be based on 80% of the water use during winter months. As discussed in Section 3.2.1.1, the domestic component of the wastewater flow is estimated to be 14,700 gpd, or 45 gpcpd. SD DENR Recommended Design Criteria Manual states that design of wastewater treatment systems cannot be based on less than 60 gpcpd. Therefore, the domestic component of the wastewater flow used for this itemization will be 60 gpcpd. Using the design population of 484 people, the design domestic flow is 29,040 gpd.

The design daily infiltration rate was estimated in Section 3.2.1.1 to be 30,000 gpd, or 91 gpcpd. The design daily inflow for the summer period was developed in Section 3.2.1.2 to be 35,300 gpd, or 108 gpcpd. This represents the inflow from all of the typical inflow sources such as, perforated manhole covers, improperly abandoned lines, roof drains, basement sump pumps, and foundation drains. However, this value may be reduced if the enforcement of sewer use ordinances is performed. It is our opinion that at least 75% of the inflow comes from sump pumps and other home drainage systems. Consequently, if these sources of inflow are removed then the inflow could potentially be reduced to 8,830 gpd.

The organic waste load that enters the wastewater treatment system is calculated by using an average waste production of 0.20 pounds of BOD_5 per person per day. When multiplied by the design population of 484 people, 97 pounds of BOD_5 per day is found to be the future organic waste loading rate.

A summary of the wastewater flows and organic loadings that will be used for the evaluation and design of the wastewater treatment alternatives is presented in the following Table 3-11.

Table 3-11 Wastewater Facility Design Data

Population	
Design Population	484 People
Organic Loading	
Per Capita Organic Loading	0.20 lb BOD_5 per day
Total Organic Loading	97 lb BOD_5 per day
Hydraulic Loading	
Per Capita Hydraulic Loading	60 gpcpd
Total Domestic Hydraulic Loading	29,040 gpd
Average Daily Infiltration Loading	30,000 gpd
Average Daily Inflow Loading	35,300 gpd
Total Wastewater Flow Rate	94,340 gpd
Wastewater Flow Rate, Limited Inflow	67,870 gpd

3.3 FUTURE CONDITIONS

Information related to project need and planning area is found in Section 3 of this report. Specific information on population projections is found in Section 3.1. Land use is not expected to change significantly in the immediate vicinity of the Town. There is some land available for future development and, based on the past growth of the community, it is viewed as sufficient to meet community needs. As there has been no real need to initiate water conservation measures, there has not been an investigation of water conservation measures.

Due to the importance of conserving water, money, and energy, various means for reducing wastewater flows and water usage are recommended. First, by using faucet aerators, reduced flush toilets, and limited flow showerheads, wastewater flow and water use can be reduced. Second, sump pumps that empty into the sanitary sewer system should be modified to discharge outside the sanitary sewer system.

4 DEVELOPMENT AND EVALUATION OF ALTERNATIVES

The alternatives developed for the Town of Chancellor were composed to demonstrate some options available to fix the identified deficiencies in the systems. There are no areas within the Town limits that are not served by municipal sanitary sewer. Therefore, no restoration of septic systems is necessary. All sewage collection is by conventional methods. The current collection system consists of gravity flow pipes that transport sewage to a lift station near the holding ponds. The lift station pumps the sewage through a force main to holding pond number 1. No alternative collection systems were considered in this report. The Town of Chancellor has no industrial or federal facilities, so treatment of the types of wastes commonly generated by these types of facilities is not required.

4.1 CAUTIONARY NOTES CONCERNING COST ESTIMATES

The opinions of probable cost provided with the following alternatives reflect the anticipated costs for administration, engineering design, construction, contingencies, construction observation, and other costs related to completion of the project. The costs as presented are based on an analysis and comparison of projects of similar size and scope. The actual construction and project costs will vary on an individual project basis. The actual bid cost will reflect the bidder's evaluation of construction problems, weather, soils and difficulty of work. Thus, the engineer cannot be held responsible for the accuracy of the estimates made in this report, as the engineer has no control over the contractors' bid costs.

Changes in materials, equipment and energy costs, as well as availability of other construction work at the time of the bid opening, could substantially influence actual project cost. Construction costs will also vary somewhat based on the quantity of items necessary to construct the project. The quantities and costs contained in this report are preliminary estimates based on our best judgment without field measurements. Final quantities and opinions of probable cost and final construction costs must be based upon final design.

Different funding sources have different requirements for some non-construction items. Therefore, actual costs of non-construction items should be considered tentative at this time and

subject to later modifications and adjustments as current situations and funding sources dictate. Further, inasmuch as the period of construction cannot be accurately predicted, the costs as presented in this report have not been adjusted to reflect projected inflation factors. Therefore, it is important that the estimate of costs as presented be reviewed and updated periodically to reflect construction cost trends.

4.2 WATER STORAGE

The Town of Chancellor does not have a water storage facility to meet the needs of the town. However, Chancellor is served by the SLRW system, which has a 100,000-gallon storage tank nearly one mile from Chancellor. Population growth and hot, dry conditions may place such an extreme demand on the SLRW system in the future that the contract amounts would be strictly enforced. This means a shortage of water would occur based on the current contract limitations. The following two alternatives will evaluate possible options for providing a sufficient water supply to the Town of Chancellor.

4.2.1 Water Storage Alternative 1: Do Nothing

The first alternative for water storage is to do nothing. The current contract with SLRW limits water supply to a maximum of 1.1 million gallons per month or 45 gpm as the town's available flow. However, as presented in Section 3.1.3, it is recommended to raise the contract to 2.1 million gallons per month and 120 gpm of available flow. The cost associated with this new contract is somewhat subjective because a new water main from the SLRW tower may need to be constructed. In order to obtain a precise estimate of the cost of the new contract, SLRW will need to be contacted to determine the new rates and changes for the extra water supply.

4.2.2 Water Storage Alternative 2: Water Tower

The second alternative for water storage is to build a water tower within the City limits. The average flow rate during the design peak month is calculated to be 50 gpm. The instantaneous contract amount can be reduced from 120 gpm in alternative 1 to 50 gpm, because the proposed water tower will provide for peak instantaneous flow. Therefore, a new SLRW contract stipulating 2.1 million gallons per month and 50 gpm is recommended for this alternative. This

lower flow rate may not require a new water main to be installed from the SLRW tower, as in alternative 1.

A 125,000-gallon storage tank will supply sufficient storage to meet the future needs of Chancellor. For the purpose of this preliminary report, the cost of a single pedestal, 150-foot high water tower is evaluated. The cost associated with the construction of the tower and all appurtenances amounts to approximately $350,000. Along with this capital cost are the operation and maintenance costs involved in the water tower's operation for the 20-year design period. All of these costs are converted to an equivalent uniform annual cost (EUAC) of approximately $47,000 per year.

4.3 WATER DISTRIBUTION SYSTEM

The following negative characteristics of Chancellor's water distribution system are summarized below:

- The hydrant flow test results indicated very low flows and pressures for fire suppression.
- Dead-end lines result in a degradation of water quality that can lead to potential health hazards.
- Dead end lines do not allow sufficient control of water flow in the system for flushing and routine operational procedures.
- Dead end lines do not allow sufficient flexibility during times a line must be shut off.
- Approximately 11 of the 12 mainline valves in the distribution system are currently inoperable.
- The distribution system is nearing the end of its useful life expectancy.
- There is no water storage.

To evaluate the possible impacts of each of the alternatives presented in the following sections, water distribution models have been developed using up-to-date computerized software that has been designed to predict normal operating pressures and anticipated fire hydrant flows at or near the end of the design period. As discussed in Section 3.1.5.3 and Section 3.1.5.4 of this report, the computer program was calibrated using the results that were obtained from the hydrant flow

and pressure test performed on June 25, 2001. The analyses that were completed for the following alternatives are based on the following assumptions:

- The pressure-reducing valve will govern the pressure available to 65 psi or less.
- The demands are changed based on a projected number of connections for the future. The current ratio of people per connection, established above, is 2.53. Thus, when using the design population of 484, the future number of connections is 191.
- In order to analyze the pressure performance of a water distribution system, a peak rate of water usage must be determined. The peak summer period water usage is based on the assumption that in addition to the normal water usage per connection of 0.626 gpm, approximately 25% of the connections will be watering lawns at any given time at an average rate of 7 gpm. A 15-gpm demand is also placed on the system near the park to indicate watering or recreation activities. The peak summer usage is determined to average 2.4 gpm per connection.
- During fire flow events normal water usage estimates are also necessary. The normal water usage per connection was established using the statistical equation presented earlier. When this equation is solved for 191 connections, 120 gpm, or 0.63 gpm per connection, is the result.
- Not more than one fire hydrant will be open at any given time.
- The minimum operating pressure will not fall below 20 psi at any given location within the distribution system during a fire-fighting event.
- The water usage per connection will decrease to 0.63 gpm per connection during a fire-fighting event.

4.3.1 Water System Alternative 1: Do Nothing

The activities as described and considered in this Water System Alternative 1 include the replacement of the 11 mainline water valves that are currently inoperable. Also included is the installation of the 6 dead end hydrants. In many locations of the existing system a water main break would cause several blocks to be shut down, even if the existing valves were operable. It is generally sought to have, at most, only 4 blocks of water main out of service. In order to

accomplish this, 10 new mainline water valves will also be included in this Water System Alternative 1.

The "Do Nothing" alternative (Water System Alternative 1) does not include the installation of water lines to complete the loops that would eliminate the existing dead end lines in the system or the replacement of any part of the piping in the water distribution system. The existing water distribution system is shown on Figure 4-1.

Figure 4-1 represents the results of the hydraulic modeling for anticipated normal operating pressures and fire hydrant flows in the distribution system as it is currently laid out. As shown on Figure 4-1, the normal operating pressures are expected to be 25 to 38 psi. SD DENR Recommended Design Criteria states in Section 8.4.2:

> *"A water distribution system shall be designed so as to provide a pressure of 20 pounds per square inch at each service outlet or connection under any or all conditions or demands that can be placed on the system. Under normal conditions, minimum pressures should be approximately 60 psi and not less than 35 psi."*

Section 7.3.1 of the Recommended Standards for Water Works by the Committee of the Great Lakes further recommends a minimum working pressure of 35 psi with a normal working pressure of 60 to 80 psi. The AWWA Distribution System Handbook by Mays states on page 3.8 that low operating pressures of less than 30 psi can result in annoying reductions in water flow when more than one water-using device is in service.

With these sources in mind, Figure 4-1 indicates that under future demands the existing water distribution system will have problems with low pressure. As can be seen on Figure 4-1, the normal operating pressures are indeed below the minimum recommended pressure of 35 psi in nearly all areas of the community. These low-pressure problems can be directly attributed to the absence of proper looping of water mains. Internal corrosion in the older cast iron distribution system piping also causes significant pressure losses contributing to the low-pressure problems being experienced in the system.

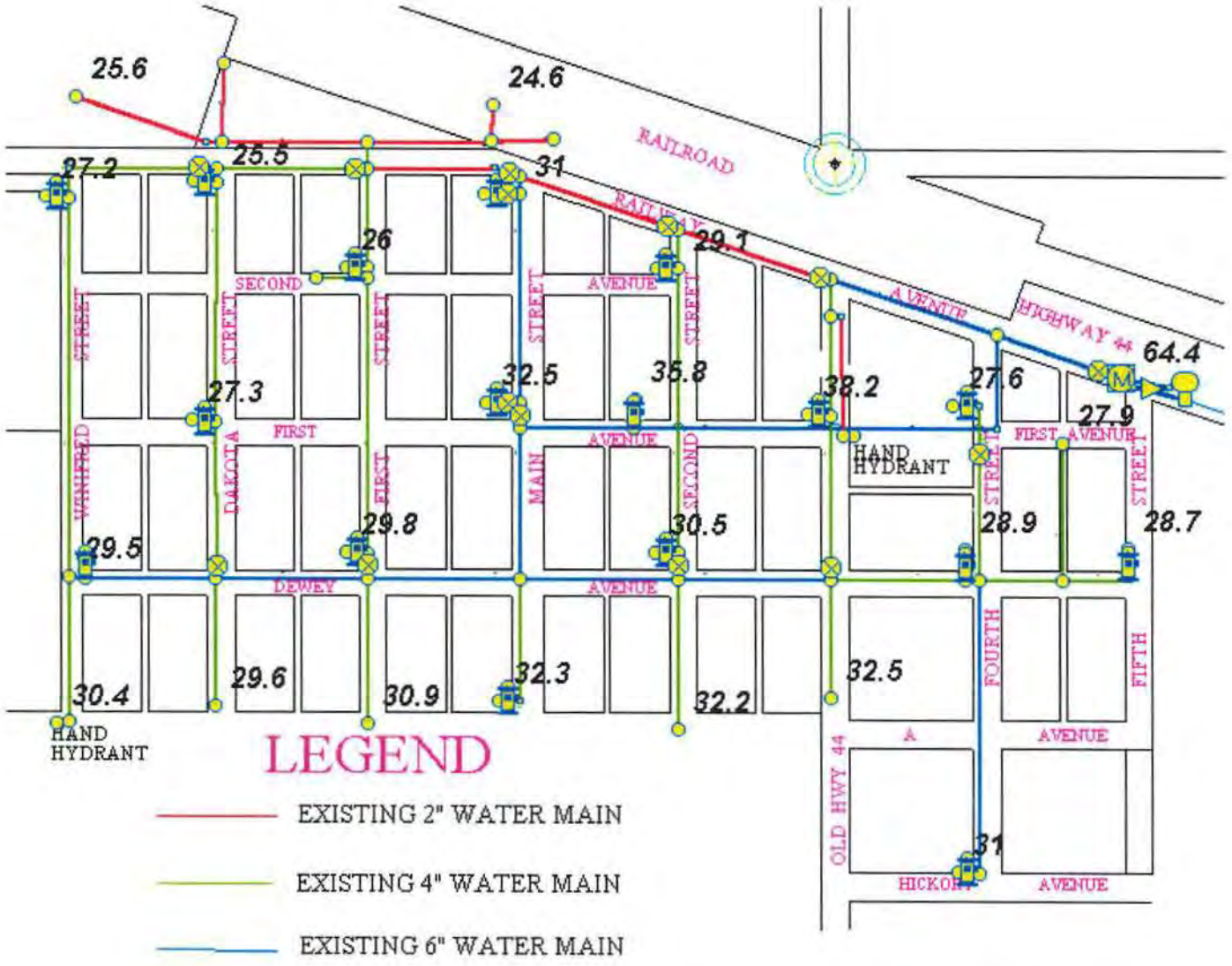


Figure 4-1: Water System Alternative 1, Anticipated Operating Pressures

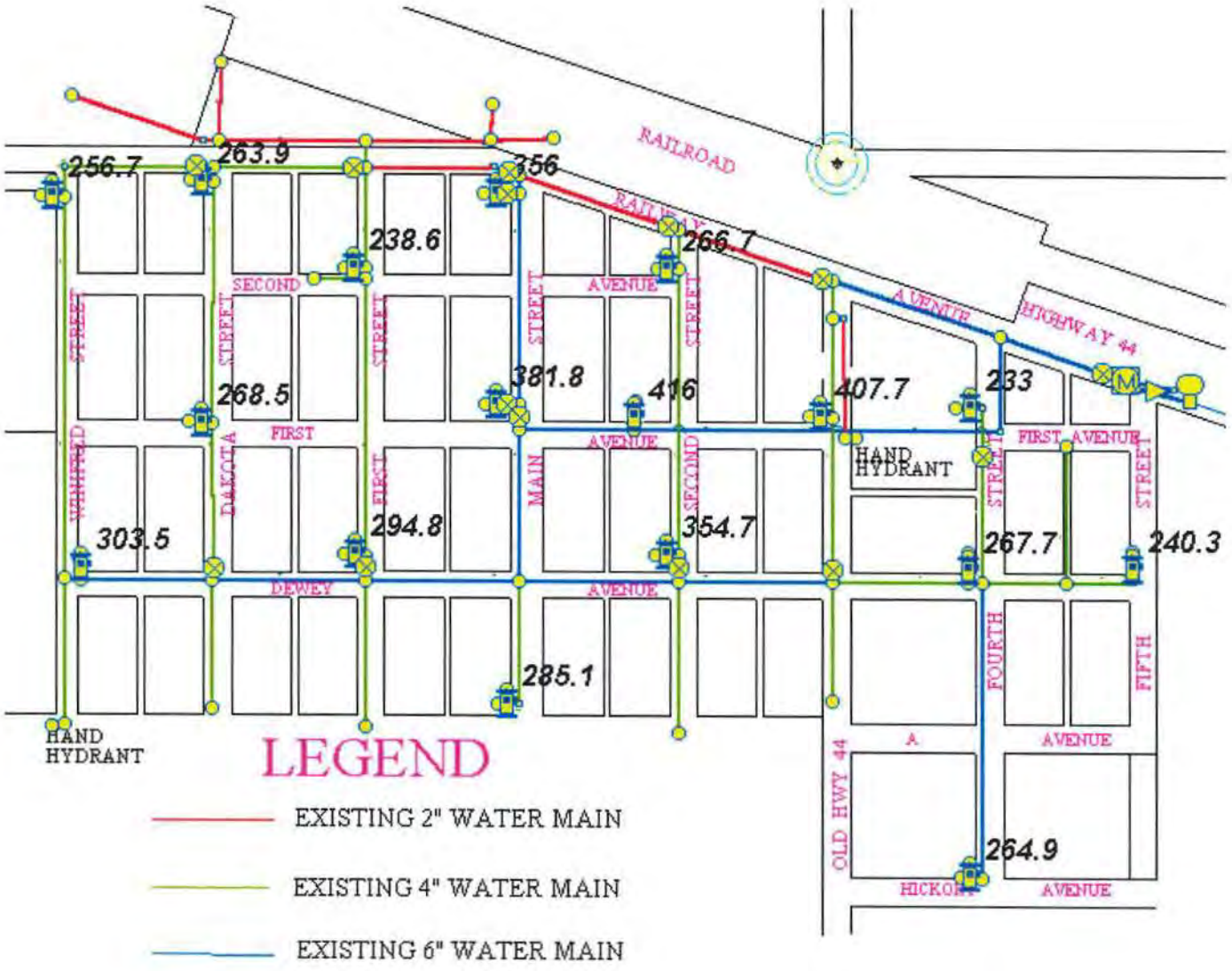


Figure 4-2: Water System Alternative 1, Anticipated Fire Flows

As shown on Figure 4-2, the fire flows are expected to be as low as 233 gpm. The expected hydrant flows available to fight fires are deemed to be insufficient throughout the whole town. The model indicates a maximum available fire flow is 416 gpm, so the maximum instantaneous flow from the system is the residential use of 120 gpm plus the maximum fire flow, or 536 gpm.

Water System Alternative 1 will not address any water main replacement or installation of new water main to complete additional loops in the system. However, it is recommended that action be taken to implement the replacement of the inoperable mainline valves, the installation of dead end fire hydrants, and the installation of the new mainline valves in the system. The probable project cost for this replacement program is presented in Table 4-1.

Table 4-1 Projected Project Costs for Water System Alternative 1

Item	Description	Quantity	Units	Unit Price	Total Cost
1	Replace Existing Gate Valves	11	EA	$1,000.00	$11,000.00
2	Furnish and Install New Gate Valves	10	EA	$1,000.00	$10,000.00
3	Furnish and Install New 6" Hydrant	6	EA	$1,750.00	$10,500.00
4	Furnish and Install 6" PVC Hydrant Lead	120	EA	$15.00	$1,800.00
5	Asphalt Street Repair	650	SY	$35.00	$22,750.00
7	Lawn Area Repair	70	SY	$2.00	$140.00
				Subtotal of Construction Cost	$56,190.00
				Contingencies	$5,600.00
				Administration & Legal	$2,200.00
				Design Engineering	$7,000.00
				Construction Phase Engineering	$7,400.00
				Total Probable Project Cost	$78,390.00

4.3.2 Water System Alternative 2: Loop System

The primary improvements being considered in this Water System Alternative 2 include the installation of new 6-inch diameter water lines to form loops in the distribution system, thus eliminating the dead end lines that now exist. Since the dead ends will be removed, the two hand hydrants can also be removed. The location of the new piping is shown in Figure 4-2. The additions as proposed will result in a looped system that will:

1) Improve the available flow for fire control;
2) Improve water pressures under normal operating conditions;
3) Improve water quality by eliminating the dead-ends;
4) Improve the control of water flow in the system during flushing and routine operational procedures; and
5) Allow for flexibility during maintenance and repair procedures.

The replacement of the 2-inch water main along Highway 44 with 6-inch pvc is also considered in this alternative. The 2-inch water main is not sufficient to provide the capacity desired in typical water distribution systems. A comparison of fire flows and peak use pressures using the new 6-inch water main and the existing 2-inch water main indicates that the new water main will greatly improve the capacity of the system.

The activities as described and considered in this Water System Alternative 2 also include the replacement of the 11 mainline water valves that are currently inoperable. In many locations of the existing system a water main break would cause several blocks to be shut down, even if the existing valves were operable. It is generally sought to have, at most, only 4 blocks of water main out of service. In order to accomplish this, 23 new mainline water valves will also be included in this Water System Alternative 2. To accomplish additional looping in the water distribution system, three crosses will be installed to intersect two sets of water mains. One cross is placed at First Avenue and Second Street and the other two are placed at First Avenue and Third Street.

Figure 4-3: Water System Alternative 2, Anticipated Operating Pressures

Figure 4-4: Water System Alternative 2, Anticipated Fire Flows

The normal operating pressures shown on Figure 4-3 indicate that the improvements as proposed will result in significant improvements to the normal operating pressures in the system. At all locations within the town the anticipated water pressures exceed the desired minimum operating pressure of 35 psi.

It is also evident from the information shown on Figure 4-4 that the hydrant flows available for fire suppression are slightly improved over the existing conditions. However, most hydrant flows are still too low in much of the system to meet fire control standards as listed in Section 3.1.5.4 of this report.

Table 4-2 presents an estimate of the total costs that are anticipated for the completion of Water System Alternative II.

Table 4-2 Projected Project Costs for Water System Alternative 2

Item	Description	Quantity	Units	Unit Price	Total Cost
1	Remove Hand Hydrant	2	EA	$250.00	$500.00
2	New 6" PVC Water Main	4,560	LF	$15.00	$68,400.00
3	Replace Existing Gate Valves	11	EA	$1,000.00	$11,000.00
4	New Gate Valves	23	EA	$1,000.00	$23,000.00
5	Furnish and Install 2"X 6" Cross	1	EA	$400.00	$400.00
6	Furnish and Install 4"X 6" Cross	2	EA	$450.00	$900.00
7	Miscellaneous Fittings	1	LS	$5,400.00	$5,400.00
8	Connection to Existing 2" Piping	2	EA	$250.00	$500.00
9	Connection to Existing 4" Piping	20	EA	$300.00	$6,000.00
10	Connection to Existing 6" Piping	9	EA	$350.00	$3,150.00
11	Asphalt Street Repair	3,900	SY	$35.00	$136,500.00
				Subtotal of Construction Cost	$255,750.00
				Contingencies	$25,600.00
				Administration & Legal	$10,200.00
				Design Engineering	$25,900.00
				Construction Phase Engineering	$27,500.00
				Total Probable Project Cost	$344,950.00

4.3.3 Water System Alternative 3: Replace System

The primary improvements being considered in this Water System Alternative 3 include the replacement of all water distribution piping. The new water main piping will have a minimum diameter of six inches, except for the service lines north of Highway 44. This Water System Alternative III also includes the installation of new water lines to complete the loops in the distribution system thus eliminating the dead end lines that now exist. Since the dead ends will be removed, the two hand hydrants can also be removed. The location of the new piping is shown in Figure 4-5. The additions as proposed would result in a totally looped system with a minimum pipe diameter of 6 inches that will:

1) Improve the available flow for fire control;
2) Improve water pressures under normal operating conditions;
3) Improve water quality by eliminating the dead-ends;
4) Improve the control of water flow in the system during flushing and routine operational procedures; and
5) Allow for flexibility during maintenance and repair procedures.

The improvements to the system considered in Water System Alternative 3 include the replacement of the 11 mainline valves that are currently inoperable and the installation of 23 additional new mainline valves in various locations to improve the operation of the distribution system.

The improvements as proposed in Water System Alternative 3 also include the replacement of 17 existing hydrants that are currently connected to the existing 4-inch water main. Most of the existing hydrants do not currently have pumper nozzles. The new hydrants would be connected to the new 6-inch diameter water main and would be provided with pumper nozzles.

Also included in the proposed improvements in Water System Alternative 3 is the replacement of all service lines from the main line to the curb stop valves. The replacement is deemed necessary, as there is no information available that would indicate the condition or type of

material used for the existing service lines. Whereas most of the existing service line valves are currently in working order, the proposed improvements considered in this Water System Alternative 3 includes the replacement of all 131 curb stop valves on the service lines.

Another improvement considered in Water System Alternative 3 is the abandoning of the 2-inch cast iron water line that runs parallel to the water main on Third Street near Highway 44. Abandoning this line requires the extension of approximately 4 service lines to the new 6-inch water main.

The normal operating pressures shown on Figure 4-5 indicate that the improvements as proposed will result in significant improvements to the normal operating pressures in the system. At all locations, the anticipated water pressures exceed the desired minimum operating pressure of 35 psi.

It is evident from the information shown on Figure 4-6 that the hydrant flows available for fire suppression are expected in all locations to meet the fire control standards as listed in Section 3.1.5.4 of this report.

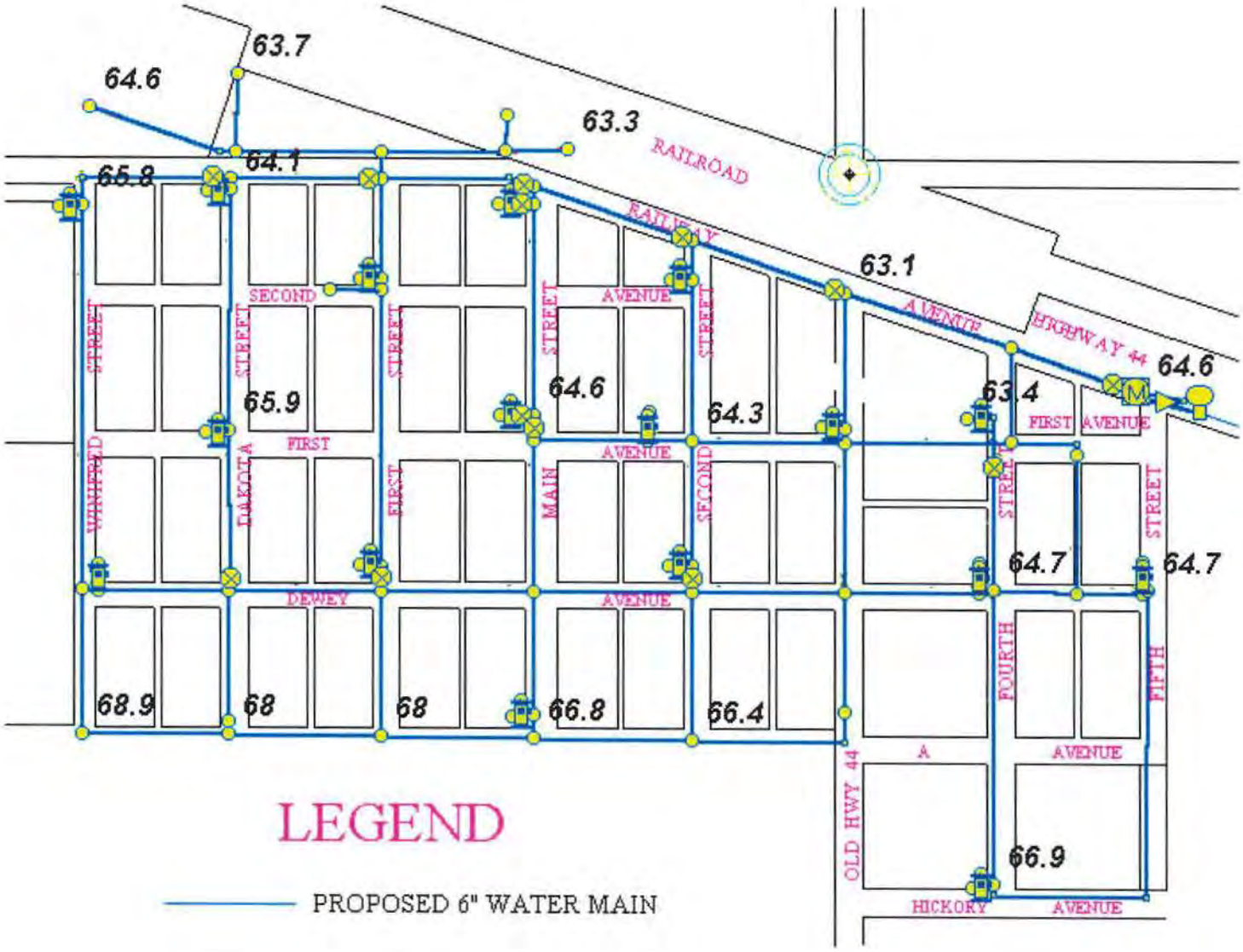


Figure 4-5: Water System Alternative 3, Anticipated Operating Pressures

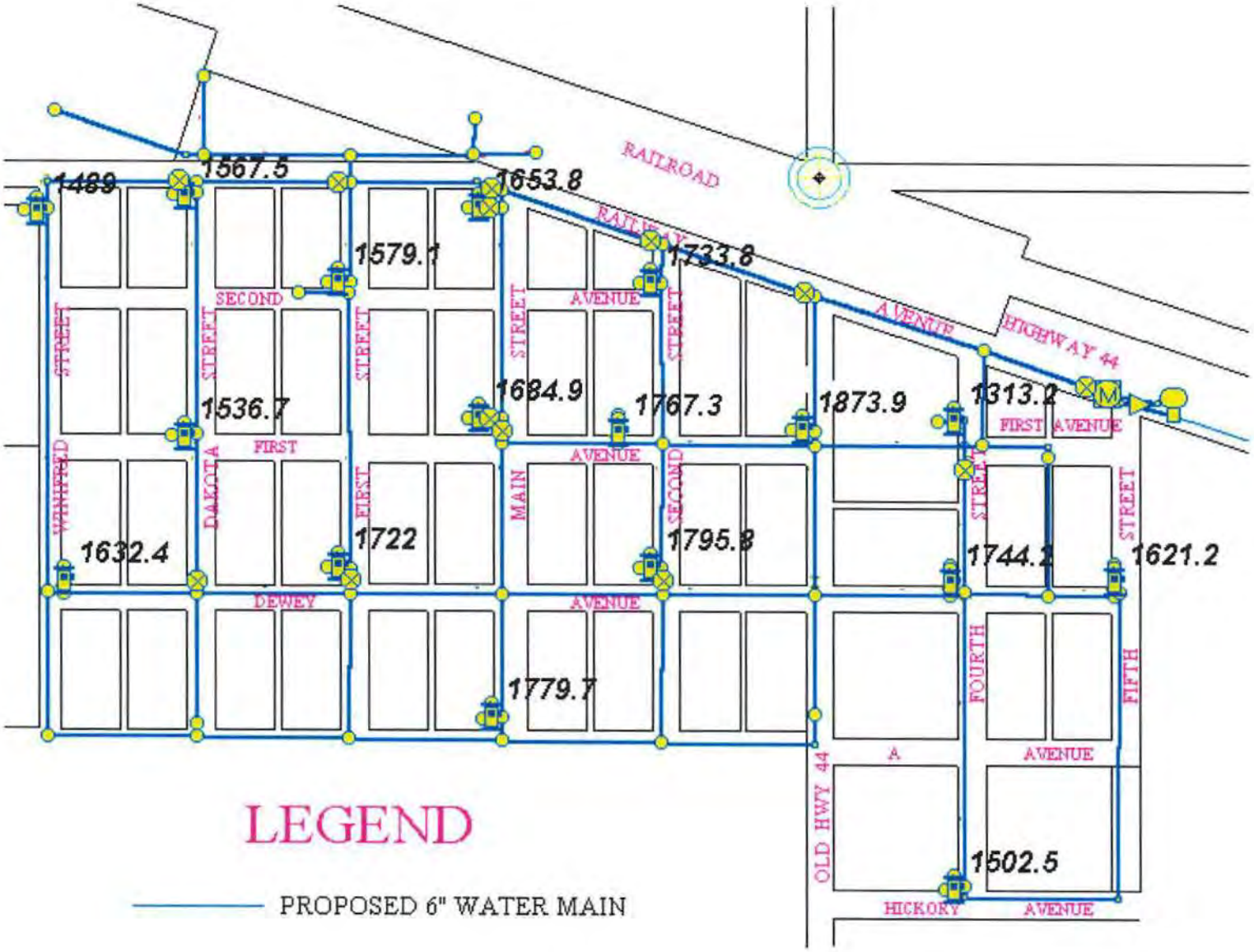


Figure 4-6: Water System Alternative 3, Anticipated Fire Flows

Water System Alternative 3 addresses all of the problems with the distribution system except storage. Table 4-3 shows the costs associated with the implementation of Water System Alternative 3.

Table 4-3 Projected Project Costs for Water System Alternative 3

Item	Description	Quantity	Units	Unit Price	Total Cost
1	Remove Hand Hydrant	2	EA	$250.00	$500.00
2	New 4" PVC Water Main	1,100	LF	$12.00	$13,200.00
3	New 6" PVC Water Main	15,480	LF	$15.00	$232,200.00
4	Remove & Replace Existing Hydrants	17	EA	$1,750.00	$29,750.00
5	6" PVC Hydrant Lead	340	LF	$15.00	$5,100.00
6	New Gate Valves	35	EA	$1,000.00	$35,000.00
7	Extend Service Line	4	EA	$1,500.00	$6,000.00
8	Miscellaneous Fittings	1	LS	$12,800.00	$12,800.00
9	Replace Existing Curb Stops	131	EA	$175.00	$22,925.00
10	New Service Saddles with Corp Stops	131	EA	$150.00	$19,650.00
11	Replace Existing Service Lines	4,300	LF	$12.00	$51,600.00
12	Asphalt Street Repair	17,350	SY	$35.00	$607,250.00
13	Gravel Street Repair	400	SY	$2.50	$833.33
14	Lawn Area Repair	700	SY	$2.00	$1,400.00

Subtotal of Construction Cost	$1,038,375.00
Contingencies	$103,800.00
Administration & Legal	$41,500.00
Design Engineering	$100,000.00
Construction Phase Engineering	$106,000.00
Total Probable Project Cost	$1,389,675.00

4.4 WASTEWATER COLLECTION SYSTEM

The operating characteristics and deficiencies of the wastewater collection system are discussed in detail in Section 3.2.1 of this report. The following is a summary of the negative characteristics of Chancellor's wastewater collection system:

- Most of the collection system is nearing the end of its useful life expectancy.
- Inflow sources connected to the sanitary sewer cause excessive hydraulic loading to the wastewater system.
- The infiltration rate is considered to be excessive at times.

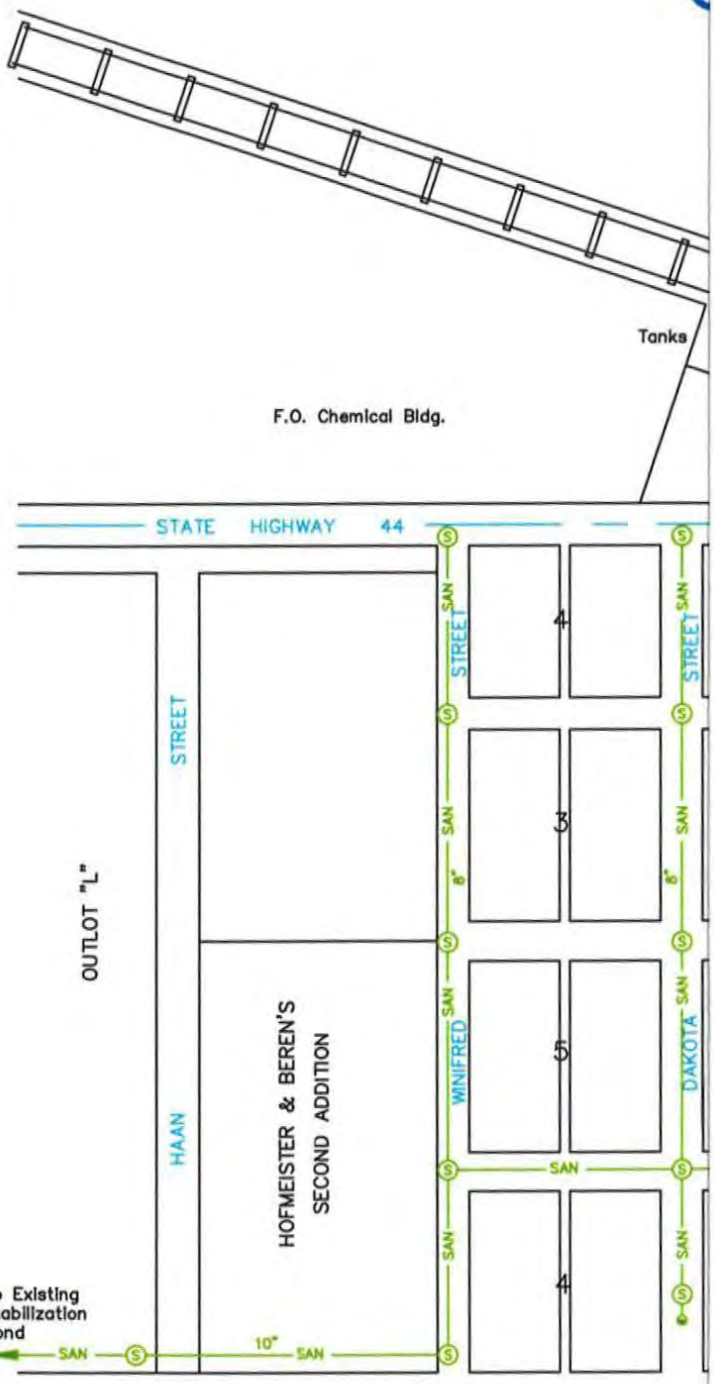
The alternatives relating to the sanitary sewage collection system that were evaluated are described in the following sections. Figure 4-7 shows the layout and size of the current sanitary sewer collection system.

4.4.1 Collection System Alternative 1: Do Nothing

The first Wastewater Collection System Alternative that was considered is the "do nothing" alternative. This alternative will not eliminate the hydraulic overloading of the collection system or wastewater treatment facility. The excessive infiltration and inflow rates in the collection system will continue to occur. Because Wastewater Collection System Alternative 1 will not address any of the problems with the system, it is not considered as an acceptable alternative. However, treatment alternatives in Section 4.5 will be presented that consider this Alternative 1.

4.4.2 Collection System Alternative 2: Reduce Inflow Sources

The improvements as considered in this Wastewater Collection System Alternative 2 will not include any extensions of the existing sanitary sewer collection system. As described in Section 3.2.1, the sanitary sewer system is subject to what appears to be unusually high rates of I & I at times. The sources of these flows have not been identified during the course of this study. It is expected that because of the age of the system and the standards of construction at the time the system was built, the sources of the infiltration flows are fairly wide spread in the system. If this assumption is correct, the infiltration is entering the system through the cracks and joints in the sanitary sewer main piping and service line piping. To determine the extent of degradation of the



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Scale: 1" = 300'

COMPILED FROM FURNISHED DATA AND RECORDED PLATS, TO BE USED FOR GENERAL INFORMATION PURPOSES ONLY. THE INFORMATION SHOWN ON THIS DRAWING SHOULD NOT BE USED FOR LEGAL OR SURVEY PURPOSES WITHOUT FURTHER VERIFICATION.

Figure 4–7
Existing Wastewater Collection System

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pipes and possibly isolate the sources of the infiltration flows, it is recommended that prior to the implementation of Wastewater Collection System Alternative 2, the main line piping of the sanitary sewer system should be cleaned and inspected by means of a television camera. After the integrity of the sanitary sewer system is evaluated, the full extent of replacement of pipes can also be determined.

The primary improvements being considered in this Collection System Alternative 2 include emphatically enforcing the sewer use ordinances that prevent connections of sump pumps and other inflow sources from being connected to the collection system. Also considered is the uncovering and adjusting to grade approximately 13 manholes. The improvements to the manholes will enhance proper routine maintenance and prove to be valuable during emergencies when entry into the manholes is required. A set of treatment alternative in Section 4.5 will be evaluated based on the completion of this alternative.

Table 4-4 displays the costs anticipated for the implementation of Collection System Alternative 2.

Table 4-4 Projected Project Costs for Collection System Alternative 2

Item	Description	Quantity	Units	Unit Price	Total Cost
1	Clean Sewer System	12,500	LF	$0.40	$5,000.00
2	TV Insp. Sewer System	12,500	LF	$0.50	$6,250.00
3	Locate and Uncover Manhole Lid	13	EA	$200.00	$2,600.00
4	Adjust to Grade Manhole Cover	13	EA	$250.00	$3,250.00
5	Asphalt Street Repair	30	SY	$35.00	$1,050.00
				Subtotal of Construction Cost	$18,150.00
				Contingencies	$1,800.00
				Administration & Legal	$700.00
				Design Engineering	$3,400.00
				Construction Phase Engineering	$3,600.00
				Total Probable Construction Cost	$27,650.00

4.4.3 Collection System Alternative 3 Replace Collection System

As described in Section 3.2.1, the sanitary sewer system is subject to what appears to be high rates of I & I. The sources of these flows have not been identified during the course of this study. It is expected that because of the age of the system and the standards of construction at the time the system was built, the sources of the infiltration flows are fairly wide spread in the system. If this assumption is correct, the infiltration is entering the system through the cracks and joints in the sanitary sewer main piping and service line piping. To determine the extent of degradation of the pipes and possibly isolate the sources of the infiltration flows, it is recommended that prior to the implementation of Wastewater Collection System Alternative 3, the main line piping of the sanitary sewer system should be cleaned and inspected by means of a television camera. After the integrity of the sanitary sewer system is evaluated, the full extent of replacement of pipes can also be determined.

Until the cleaning and television inspection and evaluation is complete, Wastewater Collection System Alternative 3 will consider the complete replacement of the sanitary sewer main line piping and the sanitary sewer service lines from the main to a point 5 feet from the foundation of the individual users. The cost analysis in Table 4-5 includes the cost of the cleaning, television inspection and evaluation, and the replacement of the entire sanitary sewer collection system.

Collection System Alternative 3 considers the replacement of the entire sanitary sewer collections system, other than the most recently installed approximately 1,500 feet of pvc sewer in the southeast part of town. Replacement of all service lines to the homes and businesses is also considered, excluding those connected to the newest part. New service lines in addition to new sewer mains would eliminate nearly all of the infiltration. The new system will be designed and constructed to the new SD DENR standards for infiltration. Treatment alternatives in Section 4.5 will consider the implementation of this alternative.

Collection System Alternative 3 must also include emphatically enforcing the sewer use ordinances that prevent connections of sump pumps and other inflow sources from being

connected to the collection system. Otherwise, much of the new construction performed will go unnoticed due to the potential high rates of inflow from these sources.

Table 4-5 displays the costs anticipated for the completion of Collection System Alternative 3.

Table 4-5 Projected Project Costs of Collection System Alternative 3

Item	Description	Quantity	Units	Unit Price	Total Cost
1	Clean Sewer System	12,500	LF	$0.40	$5,000.00
2	TV Insp. Sewer System	12,500	LF	$0.50	$6,250.00
3	Remove and Replace Manholes	38	EA	$2,500.00	$95,000.00
4	New 8" PVC Sewer	9,630	LF	$20.00	$192,600.00
5	New 10" PVC Sewer	1,470	LF	$25.00	$36,750.00
6	Service Wyes	131	EA	$80.00	$10,480.00
7	New PVC Sewer Service Piping	10,900	LF	$10.00	$109,000.00
8	Reconnect Sewer Service	131	EA	$50.00	$6,550.00
9	Asphalt Street Repair	12,400	SY	$35.00	$434,000.00
10	Gravel Street Repair	500	SY	$2.50	$1,250.00
11	Lawn Area Repair	7300	SY	$2.00	$14,600.00
				Subtotal of Construction Cost	$911,480.00
				Contingencies	$91,100.00
				Administration & Legal	$36,500.00
				Design Engineering	$88,000.00
				Construction Phase Engineering	$93,300.00
				Total Probable Project Cost	$1,220,380.00

4.5 WASTEWATER TREATMENT SYSTEM

The following negative characteristics of Chancellor's wastewater system are summarized below:

- The wastewater treatment facility does not always comply with the SWD Permit requirements.
- The wastewater treatment facility does not have adequate volume to meet the 180-day storage requirements of the SD DENR.
- I & I sources cause excessive hydraulic loading to the wastewater pond at times.
- The current hydraulic loading rate from the existing collection system requires additional primary pond area to meet the SD DENR requirements.
- Current organic loading to the existing system requires additional primary pond area to meet the SD DENR requirements.

The alternatives relating to the wastewater treatment facility that were evaluated are described in the following sections. Three parts for each alternative will be presented. Part "a" will consider the implementation of Collection System Alternative 1, which will not affect the current high wastewater flow rates. Part "b" will consider the implementation of Collection System Alternative 2, which will reduce the current inflow rate by 75%. Finally, Part "c" will take into account the execution of Collection System Alternative 3, which will drastically reduce the inflow and will virtually eliminate inflow. The location of the existing wastewater treatment facility is shown in Figure 4-8. A summary of the design information is listed below in Table 4-6.

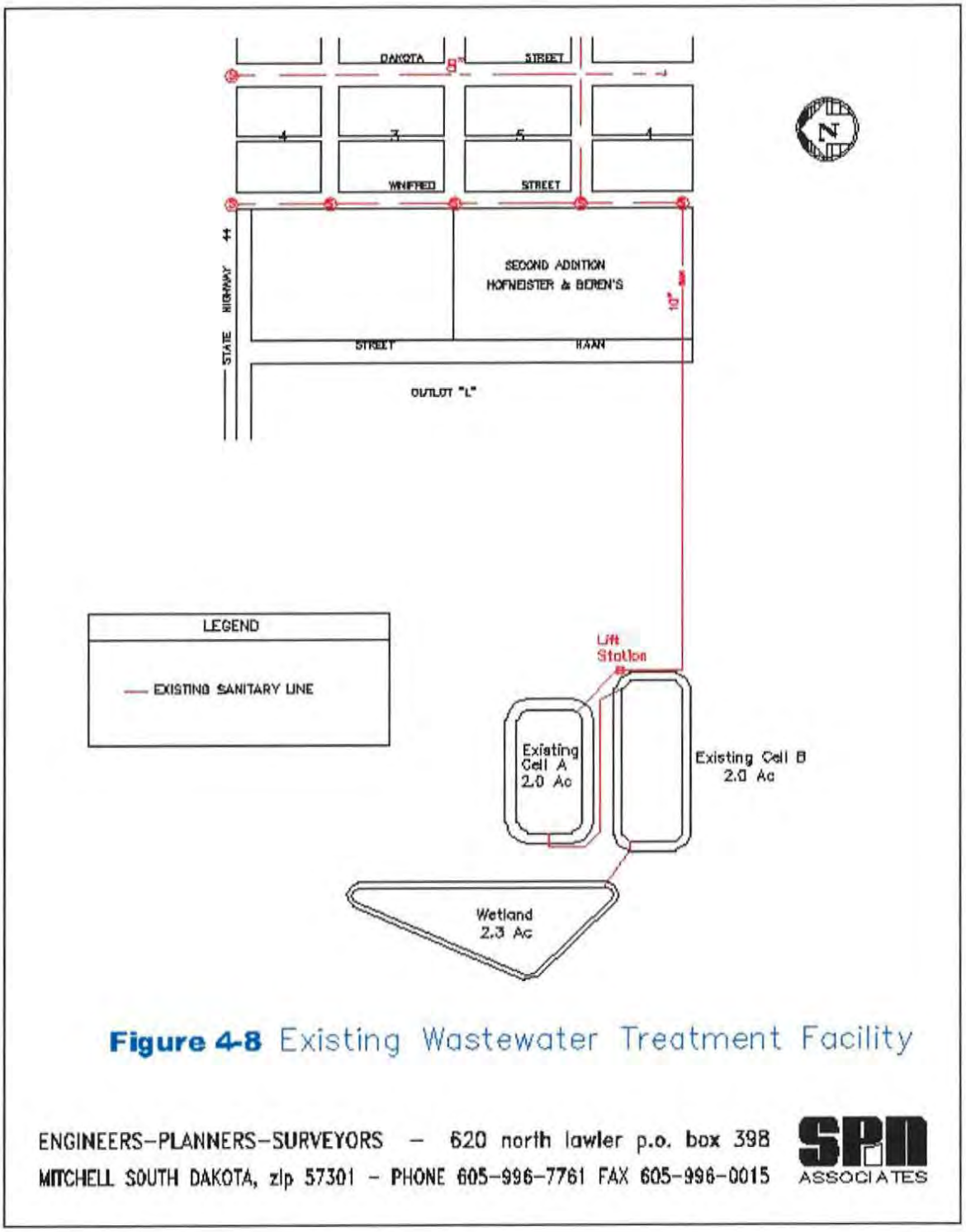

Figure 4-8 Existing Wastewater Treatment Facility

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SPN ASSOCIATES

Table 4-6 Alternative Wastewater Flow Components

	Part "a"	Part "b"	Part "c"
Wastewater Component	**No Improvements**	**Reduce Inflow**	**New Sewer**
Organic Loading, lbs BOD_5 per day	97		
Domestic Hydraulic Loading, gpd	29,040		
Design Infiltration Loading, gpd	30,000	30,000	5,540
Design Inflow Loading, gpd	35,300	8,830	0
Total Wastewater Flow	94,340	67,870	34,580

The current wastewater pumps must also be evaluated to determine if they are able to handle future flows. Based on available information, the two wastewater pumps were calibrated at approximately 153 gpm each. The pumps can run at the same time, which allows a rate of about 306 gpm. The pumps can pump a maximum of 440,640 gpd in a 24-hour period. The wastewater pumping records from 1998 through 2001 indicate this rate was approached twice: on April 24, 2001, 417,000 gallons were pumped, and on May 6, 1999, 344,000 gallons were pumped. Because of these two instances, each treatment alternative evaluates the necessity of upgrading one of the pumps.

In addition to an opinion of cost for each alternative discussed in this section, a breakdown of the estimated equivalent uniform annual cost (EUAC) is also given. The EUAC not only takes the capital costs into account when evaluating the options but also looks at the salvage value of the components and the expected annual operation and maintenance costs. The result is a comparison of the alternatives on an overall basis throughout a design life of 20 years. As a result, the EUAC may show that the lowest capital cost alternative is not the lowest cost alternative. This situation would occur when options have a low capital cost but high operation and maintenance costs. The terms and values utilized in performing the EUAC are given in Table 4-7.

Table 4-7: Equivalent Uniform Annual Cost Terminology and Values Used

Term	Definition	Value Used
Interest = I	Annual interest rate	5 1/8 %
Salvage Value = SV	Value of component at end of 20-year design life	Variable
Present Worth = PW	Present worth (equal to opinion of cost for that item)	Variable
Net Present Worth of Salvage Value = PW SV	Present worth of the salvage value	0.36836
Net Present Worth of Capital Costs = NPW	Present worth less the present worth of the salvage value	Variable
Net Present Worth of Annual Costs	Present worth of annual costs over the 20-year design life	12.334
Equivalent Uniform Annual Cost = EUAC	Annual cost of total present worth of capital and annual costs	0.0811
Design Life	Length of time facilities are projected to operate and/or meet design parameters	20 years

4.5.1 Treatment Alternative 1: Do Nothing

The first alternative is to do nothing. As future conditions cause hydraulic and organic loading to the system to increase, the quality of the effluent from the wetland will diminish. The SD DENR criteria will become harder to meet because of the increasing stress placed on the system.

An analysis was performed that evaluated the existing flows on the current treatment system. This analysis indicated that, on the basis of population and current average day flows, the treatment system is already overloaded hydraulically by 125 people. In other words, if the population of Chancellor was reduced by 125 people, the treatment system would be operating at the design limits. Additionally the primary pond is overloaded organically by 93 people.

The analysis was also performed with the reduced inflow rates and indicated that if 57 more people connect to the collection system, the treatment system will be hydraulically operating at the design limits. The analysis also shows that the primary pond is organically overloaded by 93 people.

Since this alternative will not address any of the problems with the system, is not considered as acceptable, and will be given no further consideration.

4.5.2 Treatment Alternative 2: Expand Artificial Wetland System

Artificial wetlands are a relatively new technology used successfully in South Dakota for the treatment of municipal waste. A pre-treatment system consisting of not less than two cells is recommended. The pre-treatment cells must have a total storage volume equal to not less than 150 days of the design wastewater flows. The bottom two feet of this storage is not considered part of the required 150-day storage, meaning a minimum of 2 feet must remain in the ponds at all times. Another requirement of the SD DENR is that the entire treatment facility must have a storage capacity of at least 180 days of the design flow, discounting the 2-foot minimum depth in the holding ponds.

The partially treated wastewater is discharged to the wetland treatment portion of the facility through a discharge header that is designed to distribute the flow evenly across the width of the wetland area. Optimum water depth in the wetland area is recommended to be nine inches. The hydraulic flow through the wetland area is controlled to provide a minimum of 14 days of detention in the wetland area. Since no discharge is recommended during the winter period, the wetland is generally designed to be capable of supplementing the storage capacity provided in the two primary treatment cells.

4.5.2.1 Treatment Alternative 2a

Treatment Alternative 2a is sized assuming that no change has been made to the wastewater collection system. Therefore, the total average daily flow to the treatment system is 94,340 gpd. Since the current high rates of I & I are expected to continue, and due to the instances mentioned above where the wastewater flow rate approached the maximum rate, Treatment Alternative 2a will consider the replacement of one of the wastewater pumps with a 350 gpm 5 horsepower pump. The bigger pump will provide sufficient capability of the treatment plant to handle the excessive flows.

Using the design information and criteria from the SD DENR Recommended Design Criteria Manual, it is evident that the current treatment facility must be expanded to meet recommended standards. The simplest way to increase the storage capacity of treatment facility is to create more pond area by adding one or more ponds.

After computing the flow balance of wastewater entering the holding ponds and leaving through seepage, it is found that 150-day storage of the design flow rate in the holding ponds requires 8.8 acres of total water surface area. The current area of the holding ponds is 4.0 acres. Thus, an additional 4.8 acres of pond area is required to meet hydraulic loading requirements.

The organic loading limit set by the SD DENR is 30 pounds of BOD_5 per acre of primary pond per day. Based on this criterion, and the organic loading of 97 pounds of BOD_5 per day, a 3.2-acre primary pond is required to properly handle the organic loading.

Since the water surface area required for the organic sizing is less than the water surface area required for hydraulic sizing, the hydraulic sizing would govern. As a result, the consideration of a new 4.8-acre holding pond is included in Treatment Alternative 2a. When considering the addition of the 4.8-acre pond, the 180-day storage in the entire treatment system is more than adequate.

Using the recommended design criteria for the design of wetlands, 3.6 acres of wetland area is needed for optimum conditions. Chancellor's 2.3-acre wetland must be operated at a depth of 20 inches instead of the optimum nine inches, to obtain the maximum allowed detention time of 14 days. 20 inches of flow in the wetland leaves barely any room for unexpected flow surges or increases in flow. Additionally, aquatic plant life may have trouble thriving under conditions of such a depth. Consequently, Chancellor's artificial wetland is not sufficient to treat the future design flow. This alternative will not include a cost analysis, as this option will not enable Chancellor to properly operate their wastewater system.

4.5.2.2 Treatment Alternative 2b

Treatment Alternative 2b is sized assuming that the wastewater flows contributed by inflow have been reduced by the enforcement of sewer use ordinances. Therefore, if the inflow sources are removed, the average day design flow for 2030 will be 67,870 gpd. Since the current high rate of inflow will be reduced, it is our opinion that the existing wastewater pumps are sufficient to handle the future wastewater flows. Therefore, Treatment Alternative 2b will not consider the replacement of the wastewater pumps.

Using the design information and criteria from the SD DENR Recommended Design Criteria Manual, it is evident that the current treatment facility must be expanded to meet recommended standards. The simplest way to increase the storage capacity of treatment facility is to create more pond area by adding one or more ponds.

After computing the flow balance of wastewater entering the holding ponds and leaving through seepage, it is found that 150-day storage of the design flow rate in the holding ponds requires 8.8 acres of total water surface area. The current area of the holding ponds is 4.0 acres. Thus, an additional 4.8 acres of pond area is required. The additional area required is the same as what is required in alternative 2a, because inflow normally is not a factor during the winter storage period. Thus, the reduction of inflow in this alternative has no effect on the sizing of the holding ponds.

The organic loading limit set by the SD DENR is 30 pounds of BOD_5 per acre of primary pond per day. Based on this criterion, and the organic loading of 97 pounds of BOD_5 per day, a 3.2-acre primary pond is required to properly handle the organic loading.

Since the water surface area required for the organic sizing is less than the water surface area required for hydraulic sizing, the hydraulic sizing would govern. As a result, the consideration of a new 4.8-acre holding pond is included in Treatment Alternative 2b. When considering the

addition of the 4.8-acre pond, the 180-day storage in the entire treatment system is more than adequate.

Using the recommended design criteria for the design of wetlands, 1.9 acres of wetland area is needed for optimum conditions. The current wetland area is 2.3 acres. Consequently, Chancellor's artificial wetland is sufficient to treat the future design flow.

Creating a new primary pond will enable Chancellor to properly operate their wastewater system. The wastewater from the community will enter the wastewater system for treatment and storage as it now does, except the lift station will pump the wastewater to the new primary pond. The organic loading on the new primary cell will be approximately 20 lb of BOD_5 per acre per day.

The general layout and proposed location of the wetland treatment facility as presented in this Treatment Alternative 2b is shown on Figure 4-9. This option is practical for the Town of Chancellor and focuses on the problems with the treatment system.

The probable project costs for the expansion of the primary cell and the modifications to the existing cell as described in this alternative is shown in Table 4-8. The EUAC for Alternative 2b is presented in Table 4-9.

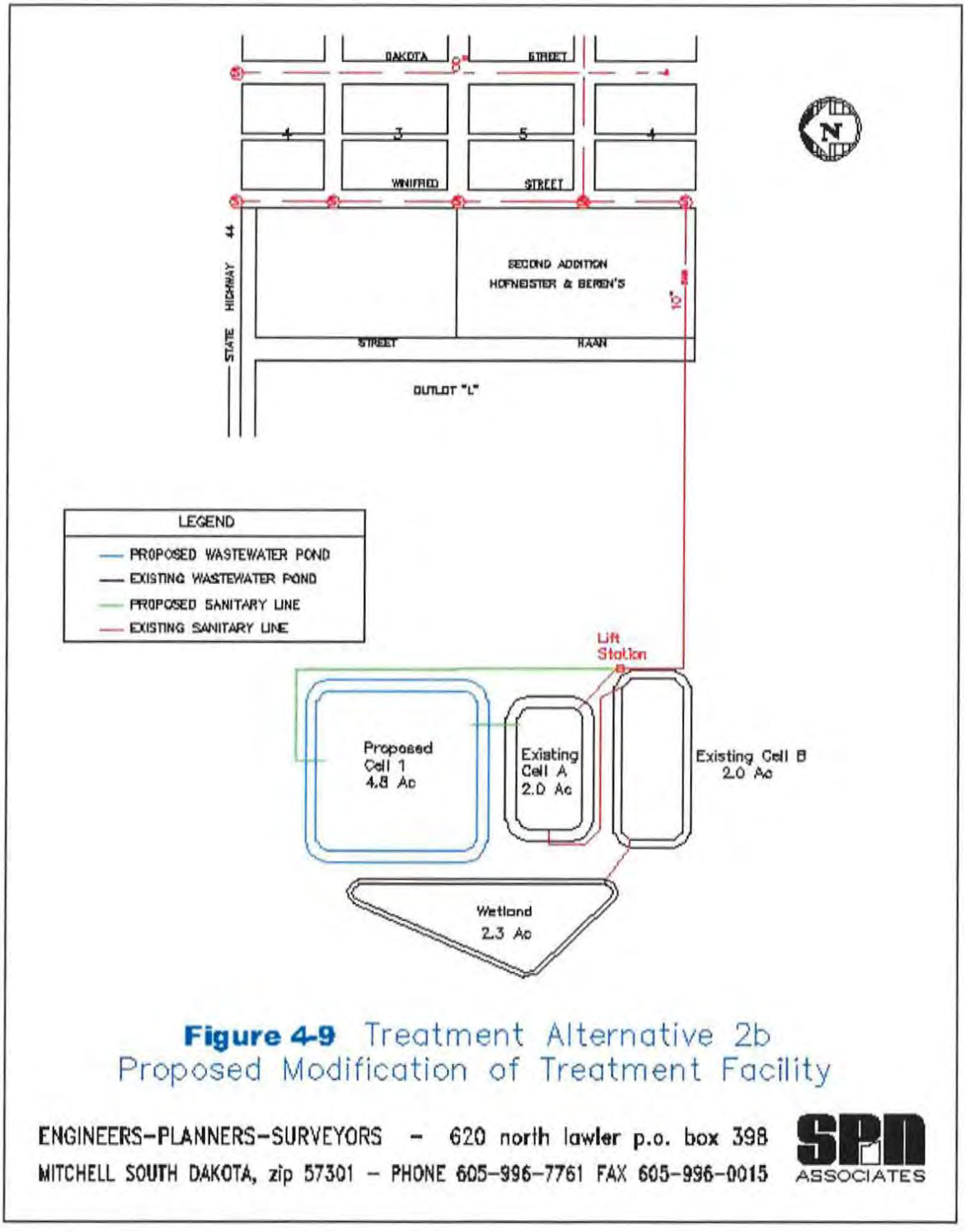

Figure 4-9 Treatment Alternative 2b
Proposed Modification of Treatment Facility

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MITCHELL SOUTH DAKOTA, zip 57301 - PHONE 605-996-7761 FAX 605-996-0015
SPN ASSOCIATES

Table 4-8 Projected Costs of Wastewater Treatment Alternative 2b

Item	Description	Quantity	Unit	Unit Price	Total Cost
1	Excavation to Construct Pond	13,100	CY	$1.50	$19,650.00
2	Borrow Site Clay Excavation, Hauling, Compaction	10,600	CY	$5.00	$53,000.00
3	10" SDR 35 PVC Inter Pond Piping	140	LF	$40.00	$5,600.00
4	8" SDR 18 PVC Force Main	1250	LF	$12.00	$15,000.00
5	Pond Structures	2	EA	$2,000.00	$4,000.00
6	Riprap on New Pond	3000	TN	$25.00	$75,000.00
7	New Barb Wire Fence	1,300	LF	$2.50	$3,250.00
8	Seeding and Fertilizing Disturbed Areas and Dikes	1.9	AC	$1,000.00	$1,900.00
				Subtotal of Construction Costs	$177,400.00
				Contingencies	$17,700.00
				Land Purchase	$10,200.00
				Administration	$7,100.00
				Design Engineering	$18,500.00
				Construction Engineering	$19,600.00
				Total Probable Construction Cost	$250,500.00

Table 4-9 Equivalent Uniform Annual Cost Analysis for Alternative 2b

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Land Purchase	$10,200.00	$6,120.00	$2,252.16	$7,947.84
Excavation and construction of new cells	$72,650.00	$0.00	$0.00	$72,650.00
Pond Structures	$4,000.00	$0.00	$0.00	$4,000.00
Wastewater Piping	$20,600.00	$12,360.00	$4,548.48	$16,051.52
Riprap	$75,000.00	$0.00	$0.00	$75,000.00
Seeding & Fertilizing	$1,900.00	$0.00	$0.00	$1,900.00
Fencing	$3,250.00	$0.00	$0.00	$3,250.00
Capital Costs	$62,900.00	$0.00	$0.00	$62,900.00
Total Construction Cost	$250,500.00	$18,480.00	$6,800.64	$243,699.36

b. Operation and Maintenance Costs

Item	Annual Cost	NRW
Labor	$5,000.00	$61,656.00
Utilities	$3,000.00	$36,993.60
Materials	$1,000.00	$12,331.20
Miscellaneous	$3,000.00	$36,993.60
Equipment Replacement	$2,000.00	$24,662.40
Subtotal	$14,000.00	$172,636.80

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$243,699.36
NPW of O & M Costs	$172,636.80
Total Net Present Worth	$416,336.16
Equivalent Uniform Annual Cost	$33,764.86

4.5.2.3 Treatment Alternative 2c

Treatment Alternative 2c is sized assuming that a new wastewater collection system has been installed. Therefore, since much of the I & I will be reduced, the design flow for 2030 will be 34,580 gpd. Since the current high rate of I & I will be reduced, it is our opinion that the existing wastewater pumps are sufficient to handle the future wastewater flows. Therefore, Treatment Alternative 2c will not consider the replacement of the wastewater pumps.

Using the design information and criteria from the SD DENR Recommended Design Criteria Manual, it is evident that the current treatment facility must be expanded to meet recommended standards. The simplest way to increase the storage capacity of treatment facility is to create more pond area by adding one or more ponds.

After computing the flow balance of wastewater entering the holding ponds and leaving through seepage, it is found that 150-day storage of the design flow rate in the holding ponds requires 5.2 acres of total water surface area. The current area of the holding ponds is 4.0 acres. Thus, an additional 1.2 acres of pond area is required.

The organic loading limit set by the SD DENR is 30 pounds of BOD_5 per acre of primary pond per day. Based on this criterion, and the organic loading of 97 pounds of BOD_5 per day, a 3.2-acre primary pond is required to properly handle the organic loading.

Since the water surface area required for the organic sizing is greater than the water surface area required for hydraulic sizing, the organic sizing would govern. As a result, the consideration of a new 3.2-acre holding pond is included in Treatment Alternative 2c. When considering the addition of the 3.2-acre pond, the 180-day storage in the entire treatment system is more than adequate.

Using the recommended design criteria for the design of wetlands, 0.9 acres of wetland area is needed for optimum conditions. The current wetland area is 2.3 acres. Consequently, Chancellor's artificial wetland is sufficient to treat the future design flow.

Creating a new primary pond will enable Chancellor to properly operate their wastewater system. The wastewater from the community will enter the wastewater system for treatment and storage as it now does, except the lift station will pump the wastewater to the new primary pond. The organic loading on the new primary cell will be approximately 30 lb of BOD_5 per acre per day.

The general layout and proposed location of the wetland treatment facility as presented in this Treatment Alternative 2c is shown on Figure 4-10. This option is practical for the Town of Chancellor and focuses on the problems with the treatment system.

The probable project costs for the expansion of the primary cell and the modifications to the existing cell as described in this alternative is shown in Table 4-10. The EUAC for Alternative 2c is presented in Table 4-11.

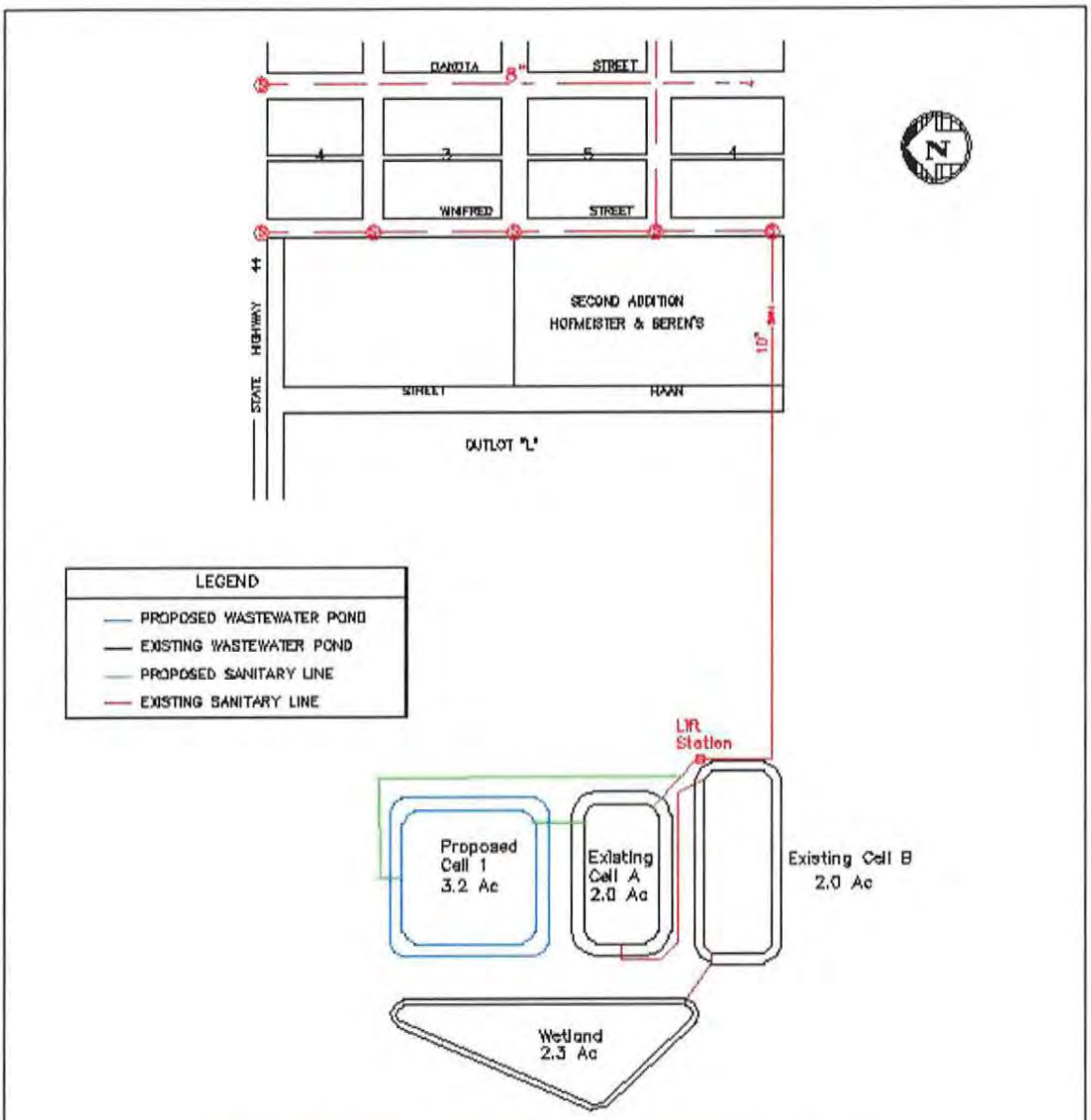

Figure 4-10 Treatment Alternative 2c
Proposed Modification of Treatment Facility

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SPN ASSOCIATES

Table 4-10 Projected Costs of Wastewater Treatment Alternative 2c

Item	Description	Quantity	Unit	Unit Price	Total Cost
1	Excavation to Construct Pond	10,000	CY	$1.50	$15,000.00
2	Borrow Site Clay Excavation, Hauling, Compaction	7,100	CY	$5.00	$35,500.00
3	10" SDR 35 PVC Inter Pond Piping	140	LF	$40.00	$5,600.00
4	8" SDR 18 PVC Force Main	1175	LF	$12.00	$14,100.00
5	Pond Structures	2	EA	$2,000.00	$4,000.00
6	Riprap on New Pond	2400	TN	$25.00	$60,000.00
7	New Barb Wire Fence	1,000	LF	$2.50	$2,500.00
8	Seeding and Fertilizing Disturbed Areas and Dikes	1.6	AC	$1,000.00	$1,600.00
				Subtotal of Construction Costs	$138,300.00
				Contingencies	$13,800.00
				Land Purchase	$7,400.00
				Administration	$5,500.00
				Design Engineering	$14,800.00
				Construction Engineering	$15,700.00
				Total Probable Construction Cost	$195,500.00

Table 4-11 Equivalent Uniform Annual Cost Analysis for Alternative 2c

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Land Purchase	$7,400.00	$4,440.00	$1,633.92	$5,766.08
Excavation and construction of new cells	$50,500.00	$0.00	$0.00	$50,500.00
Pond Structures	$4,000.00	$0.00	$0.00	$4,000.00
Wastewater Piping	$19,700.00	$11,820.00	$4,349.76	$15,350.24
Riprap	$60,000.00	$0.00	$0.00	$60,000.00
Seeding & Fertilizing	$1,600.00	$0.00	$0.00	$1,600.00
Fencing	$2,500.00	$0.00	$0.00	$2,500.00
Capital Costs	$49,800.00	$0.00	$0.00	$49,800.00
Total Construction Cost	$195,500.00	$16,260.00	$5,983.68	$189,516.32

b. Operation and Maintenance Costs

Item	Annual Cost	NRW
Labor	$5,000.00	$61,656.00
Utilities	$3,000.00	$36,993.60
Materials	$1,000.00	$12,331.20
Miscellaneous	$3,000.00	$36,993.60
Equipment Replacement	$2,000.00	$24,662.40
Subtotal	$14,000.00	$172,636.80

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$189,516.32
NPW of O & M Costs	$172,636.80
Total Net Present Worth	$362,153.12
Equivalent Uniform Annual Cost	$29,370.62

4.5.3 Treatment Alternative 3: 180-day Retention

Theory and recent practice show that a stabilization pond treatment facility, when designed, constructed and maintained in conformance with the current standards and practices, will provide efficient and trouble free treatment of wastewater. Such ponds are normally designed for 180-day storage of wastewater flow; a maximum of 20 pounds of BOD_5 per acre per day of total water surface; and a maximum of 30 pounds of BOD_5 per acre per day of primary pond water surface. The larger of the sizing, based on these three requirements, is used for the pond design. Treated wastewater is generally discharged from a 180-day retention facility in the spring and in the fall of a year.

Since the sludge accumulation generally averages less than 1/8 inch per year, it is not normally necessary to consider continuous sludge removal and handling from this type of treatment facility. The actual amount of sludge accumulation is dependent upon the organic loading of the pond, the amount of sand and silt carried by surface inflow, etc.

Treatment Alternative 3 does not consider the storage of the existing wetland to evaluate the need of the current system for additional pond area. This is done for several reasons: First, the wetland receives too much flow during wet weather to allow the system to properly work as an artificial wetland. Adding on to the wetland is impractical because of its location and the large cost involved in such a venture. Additionally, the existing wetland will have the potential to act as emergency storage during periods of wet weather. The wetland will also act as a final tertiary pond to help treat the wastewater to a level sufficient to meet SD DENR standards. Finally, the wetland will act as a safety factor in the design to improve the system.

4.5.3.1 Treatment Alternative 3a

Treatment Alternative 3a is sized assuming that no change has been made to the wastewater collection system. Therefore, the total average daily flow to the treatment system is 94,340 gpd. Since the current high rates of I & I are expected to continue, and due to the instances mentioned above where the wastewater flow rate approached the maximum rate, Treatment Alternative 3a

will consider the replacement of one of the wastewater pumps with a 350 gpm 5 horsepower pump. The bigger pump will provide sufficient capability of the treatment plant to handle the excessive flows.

Using the design information and criteria from the SD DENR Recommended Design Criteria Manual, it is evident that the current treatment facility must be expanded to meet recommended standards. The simplest way to increase the storage capacity of treatment facility is to create more pond area by adding one or more ponds.

After computing the flow balance of wastewater entering the holding ponds and leaving through seepage, it is found that 180-day storage of the design flow rate in the holding ponds requires 10.1 acres of total water surface area. The current area of the holding ponds is 4.0 acres. Thus, an additional 6.1 acres of pond area is required.

The organic loading limit set by the SD DENR is 30 pounds of BOD_5 per acre of primary pond per day. Based on this criterion, and the organic loading of 97 pounds of BOD_5 per day, a 3.2-acre primary pond is required to properly handle the organic loading.

Since the water surface area required for the organic sizing is less than the water surface area required for hydraulic sizing, the hydraulic sizing would govern. As a result, the consideration of a new 6.1-acre holding pond is included in Treatment Alternative 3a.

Creating a new primary pond will enable Chancellor to properly operate their wastewater system. The wastewater from the community will enter the wastewater system for treatment and storage as it now does, except the lift station will pump the wastewater to the new primary pond. The organic loading on the new primary cell will be approximately 16 lb of BOD_5 per acre per day. The organic loading over the total pond area will be 9.6 lb of BOD_5 per acre per day.

The general layout and proposed location of the wetland treatment facility as presented in this Treatment Alternative 3a is shown on Figure 4-11. This option is practical for the Town of Chancellor and focuses on the problems with the treatment system.

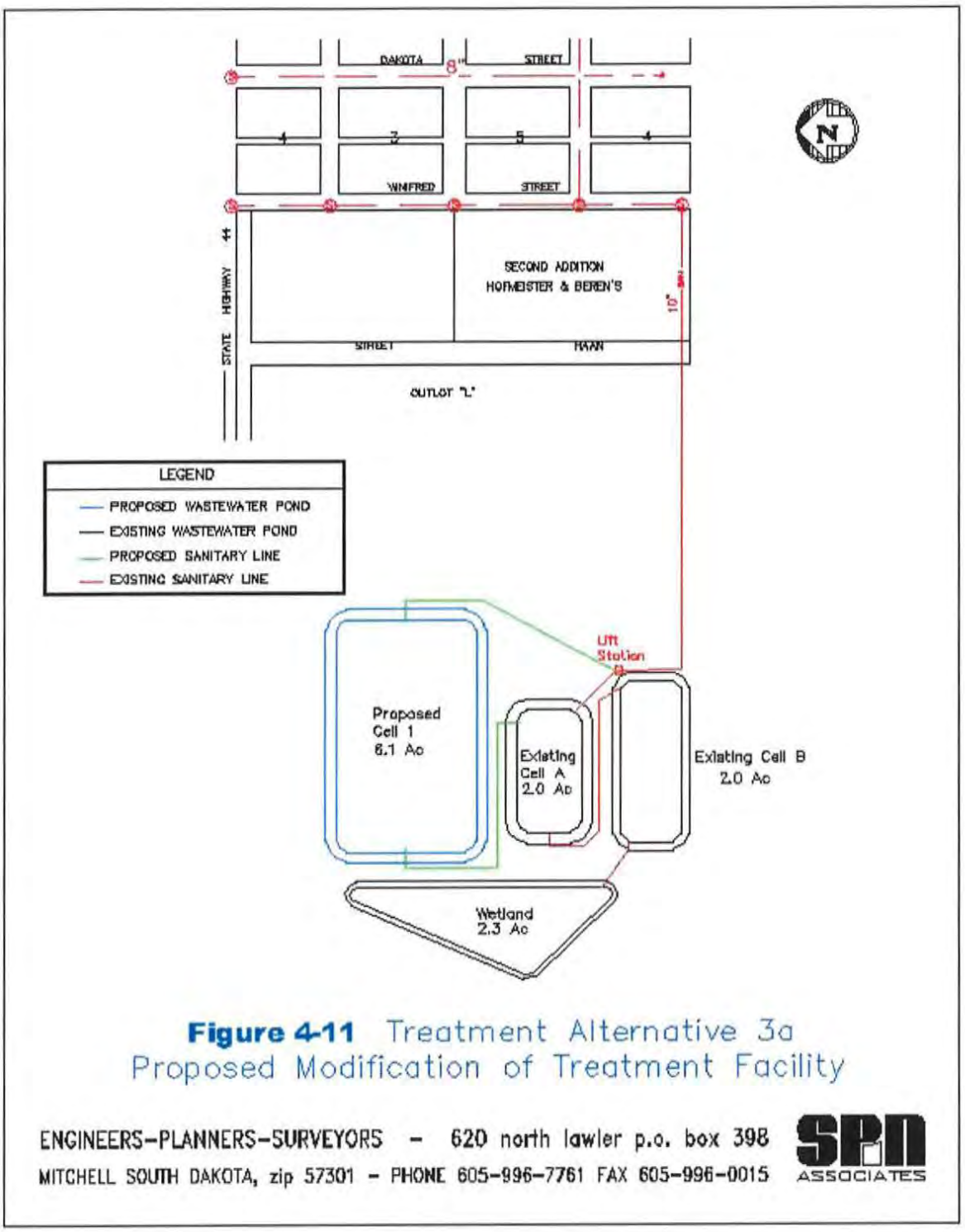

Figure 4-11 Treatment Alternative 3a
Proposed Modification of Treatment Facility

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SPN ASSOCIATES

Table 4-12 Projected Costs of Wastewater Treatment Alternative 3a

Item	Description	Quantity	Unit	Unit Price	Total Cost
1	Replace Existing Pump	1	LS	$10,000.00	$10,000.00
2	Replace Pump Controls	1	LS	$7,000.00	$7,000.00
3	Excavation to Construct New Ponds	15,400	CY	$1.50	$23,100.00
4	Borrow Site Clay Excavation, Hauling, Compaction	13,300	CY	$5.00	$66,500.00
5	10" SDR 35 PVC Inter Pond Piping	800	LF	$40.00	$32,000.00
6	8" SDR 18 PVC Force Main	700	LF	$12.00	$8,400.00
7	Pond Structures	2	EA	$2,000.00	$4,000.00
8	Riprap on New Ponds	3400	TN	$25.00	$85,000.00
9	New Barb Wire Fence	1,600	LF	$2.50	$4,000.00
10	Seeding and Fertilizing Disturbed Areas and Dikes	2.2	AC	$1,000.00	$2,200.00
				Subtotal of Construction Costs	$242,200.00
				Contingencies	$24,200.00
				Land Purchase	$12,500.00
				Administration	$9,700.00
				Design Engineering	$24,600.00
				Construction Engineering	$26,100.00
				Total Probable Construction Cost	$339,300.00

Table 4-13 Equivalent Uniform Annual Cost Analysis for Alternative 3a

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Land Purchase	$12,500.00	$7,500.00	$2,760.00	$9,740.00
Excavation and construction of new cell	$89,600.00	$0.00	$0.00	$89,600.00
Replace Pump and Equipment	$17,000.00	$10,200.00	$3,753.60	$13,246.40
Wastewater Piping	$40,400.00	$24,240.00	$8,920.32	$31,479.68
Pond Structures	$4,000.00	$0.00	$0.00	$4,000.00
Riprap	$85,000.00	$0.00	$0.00	$85,000.00
Seeding & Fertilizing	$2,200.00	$0.00	$0.00	$2,200.00
Fencing	$4,000.00	$0.00	$0.00	$4,000.00
Capital Costs	$84,600.00	$0.00	$0.00	$84,600.00
Total Construction Cost	$339,300.00	$41,940.00	$15,433.92	$323,866.08

b. Operation and Maintenance Costs

Item	Annual Cost	NRW
Labor	$5,000.00	$61,656.00
Utilities	$3,000.00	$36,993.60
Materials	$1,000.00	$12,331.20
Miscellaneous	$3,000.00	$36,993.60
Equipment Replacement	$2,000.00	$24,662.40
Subtotal	$14,000.00	$172,636.80

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$323,866.08
NPW of O & M Costs	$172,636.80
Total Net Present Worth	$496,502.88
Equivalent Uniform Annual Cost	$40,266.38

The probable project costs for the expansion of the primary cell and the modifications to the existing cell as described in this alternative is shown in Table 4-12 above. The EUAC for Alternative 3a is presented in Table 4-13 above.

4.5.3.2 Treatment Alternative 3b

Treatment Alternative 3b is sized assuming that the wastewater flows contributed by inflow have been reduced by the enforcement of sewer use ordinances. Therefore, if the inflow sources are removed, the average day design flow for 2030 will be 67,870 gpd. Since the current high rate of inflow will be reduced, it is our opinion that the existing wastewater pumps are sufficient to handle the future wastewater flows. Therefore, Treatment Alternative 3b will not consider the replacement of the wastewater pumps.

Using the design information and criteria from the SD DENR Recommended Design Criteria Manual, it is evident that the current treatment facility must be expanded to meet recommended standards. The simplest way to increase the storage capacity of treatment facility is to create more pond area by adding one or more ponds.

After computing the flow balance of wastewater entering the holding ponds and leaving through seepage, it is found that 180-day storage of the design flow rate in the holding ponds requires 10.1 acres of total water surface area. The current area of the holding ponds is 4.0 acres. Thus, an additional 6.1 acres of pond area is required. The additional area required is the same as what is required in alternative 3a, because inflow normally is not a factor during the winter storage period. Thus, the reduction of inflow in this alternative has no effect on the sizing of the holding ponds.

The organic loading limit set by the SD DENR is 30 pounds of BOD_5 per acre of primary pond per day. Based on this criterion, and the organic loading of 97 pounds of BOD_5 per day, a 3.2-acre primary pond is required to properly handle the organic loading.

Since the water surface area required for the organic sizing is less than the water surface area required for hydraulic sizing, the hydraulic sizing would govern. As a result, the consideration of a new 6.1-acre holding pond is included in Treatment Alternative 3b.

Creating a new primary pond will enable Chancellor to properly operate their wastewater system. The wastewater from the community will enter the wastewater system for treatment and storage as it now does, except the lift station will pump the wastewater to the new primary pond. The organic loading on the new primary cell will be approximately 16 lb of BOD_5 per acre per day. The organic loading over the total pond area will be 9.6 lb of BOD_5 per acre per day.

The general layout and proposed location of the wetland treatment facility as presented in this Treatment Alternative 3b is shown on Figure 4-12. This option is practical for the Town of Chancellor and focuses on the problems with the treatment system.

The probable project costs for the expansion of the primary cell and the modifications to the existing cell as described in this alternative is shown in Table 4-14. The EUAC for Alternative 3b is presented in Table 4-15.

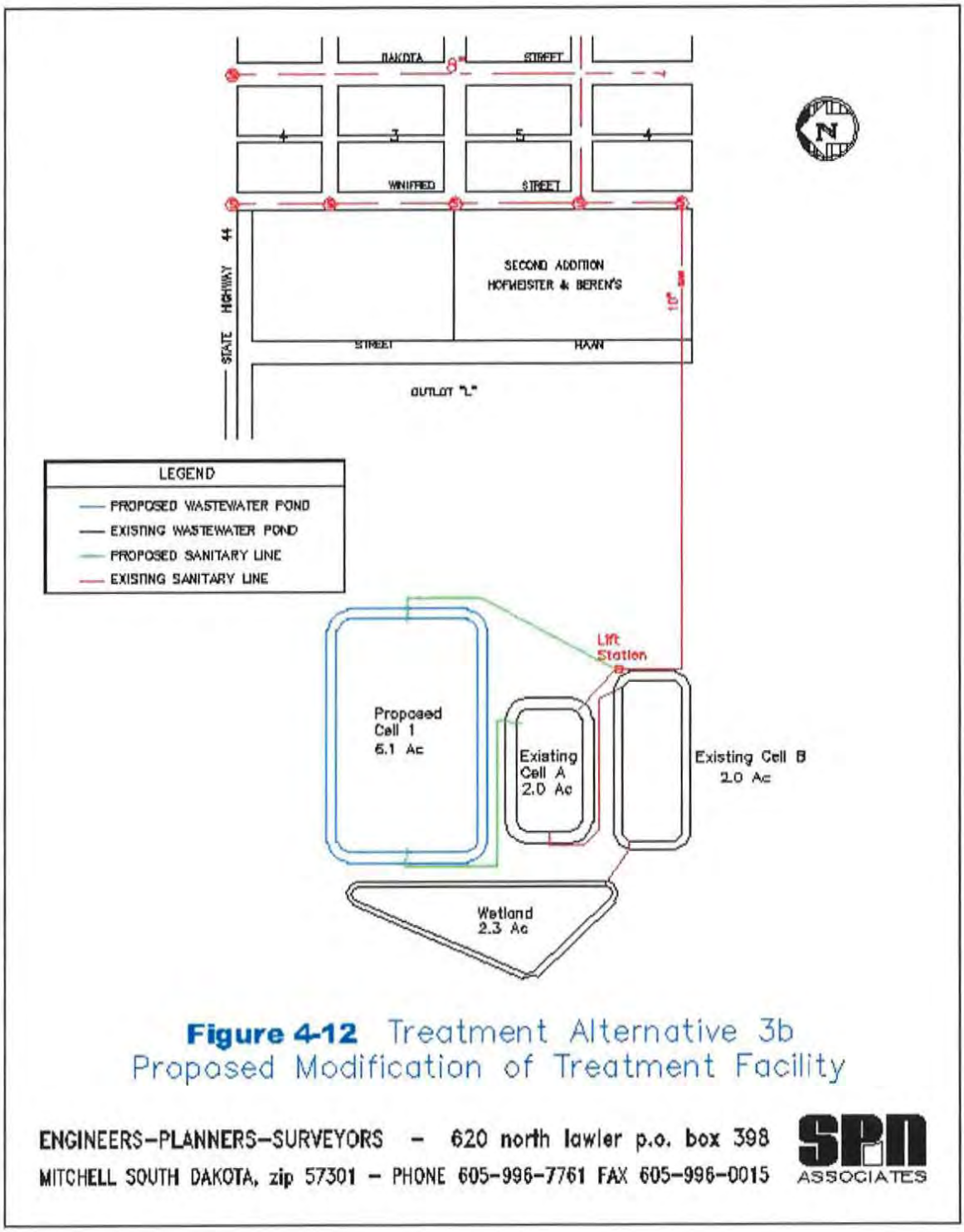

Figure 4-12 Treatment Alternative 3b
Proposed Modification of Treatment Facility

Table 4-14 Projected Costs of Wastewater Treatment Alternative 3b

Item	Description	Quantity	Unit	Unit Price	Total Cost
1	Excavation to Construct New Ponds	15,400	CY	$1.50	$23,100.00
2	Borrow Site Clay Excavation, Hauling, Compaction	13,300	CY	$5.00	$66,500.00
3	10" SDR 35 PVC Inter Pond Piping	800	LF	$24.00	$19,200.00
4	8" SDR 18 PVC Force Main	700	LF	$12.00	$8,400.00
5	Pond Structures	2	EA	$2,000.00	$4,000.00
6	Riprap on New Ponds	3400	TN	$25.00	$85,000.00
7	New Barb Wire Fence	1,600	LF	$2.50	$4,000.00
8	Seeding and Fertilizing Disturbed Areas and Dikes	2.2	AC	$1,000.00	$2,200.00

Subtotal of Construction Costs	$212,400.00
Contingencies	$21,200.00
Land Purchase	$12,500.00
Administration	$8,500.00
Design Engineering	$21,800.00
Construction Engineering	$23,100.00
Total Probable Construction Cost	$299,500.00

Table 4-15 Equivalent Uniform Annual Cost Analysis for Alternative 3b

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Land Purchase	$12,500.00	$7,500.00	$2,760.00	$9,740.00
Excavation and construction of new cells	$89,600.00	$0.00	$0.00	$89,600.00
Pond Structures	$4,000.00	$0.00	$0.00	$4,000.00
Wastewater Piping	$27,600.00	$16,560.00	$6,094.08	$21,505.92
Riprap	$85,000.00	$0.00	$0.00	$85,000.00
Seeding & Fertilizing	$2,200.00	$0.00	$0.00	$2,200.00
Fencing	$4,000.00	$0.00	$0.00	$4,000.00
Capital Costs	$74,600.00	$0.00	$0.00	$74,600.00
Total Construction Cost	$299,500.00	$24,060.00	$8,854.08	$290,645.92

b. Operation and Maintenance Costs

Item	Annual Cost	NRW
Labor	$5,000.00	$61,656.00
Utilities	$3,000.00	$36,993.60
Materials	$1,000.00	$12,331.20
Miscellaneous	$3,000.00	$36,993.60
Equipment Replacement	$2,000.00	$24,662.40
Subtotal	$14,000.00	$172,636.80

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$290,645.92
NPW of O & M Costs	$172,636.80
Total Net Present Worth	$463,282.72
Equivalent Uniform Annual Cost	$37,572.23

4.5.3.3 Treatment Alternative 3c

Treatment Alternative 3c is sized assuming that a new wastewater collection system has been installed. Therefore, since much of the I & I will be reduced, the design flow for 2030 will be 34,580 gpd. Since the current high rate of I & I will be reduced, it is our opinion that the existing wastewater pumps are sufficient to handle the future wastewater flows. Therefore, Treatment Alternative 3c will not consider the replacement of the wastewater pumps.

Using the design information and criteria from the SD DENR Recommended Design Criteria Manual, it is evident that the current treatment facility must be expanded to meet recommended standards. The simplest way to increase the storage capacity of treatment facility is to create more pond area by adding one or more ponds.

After computing the flow balance of wastewater entering the holding ponds and leaving through seepage, it is found that 180-day storage of the design flow rate in the holding ponds requires 5.9 acres of total water surface area. The current area of the holding ponds is 4.0 acres. Thus, an additional 1.9 acres of pond area is required.

The organic loading limit set by the SD DENR is 30 pounds of BOD_5 per acre of primary pond per day. Based on this criterion, and the organic loading of 97 pounds of BOD_5 per day, a 3.2-acre primary pond is required to properly handle the organic loading.

Since the water surface area required for the organic sizing is greater than the water surface area required for hydraulic sizing, the organic sizing would govern. As a result, the consideration of a new 3.2-acre holding pond is included in Treatment Alternative 3c.

Creating a new primary pond will enable Chancellor to properly operate their wastewater system. The wastewater from the community will enter the wastewater system for treatment and storage as it now does, except the lift station will pump the wastewater to the new primary pond. The organic loading on the new primary cell will be approximately 30 lb of BOD_5 per acre per day.

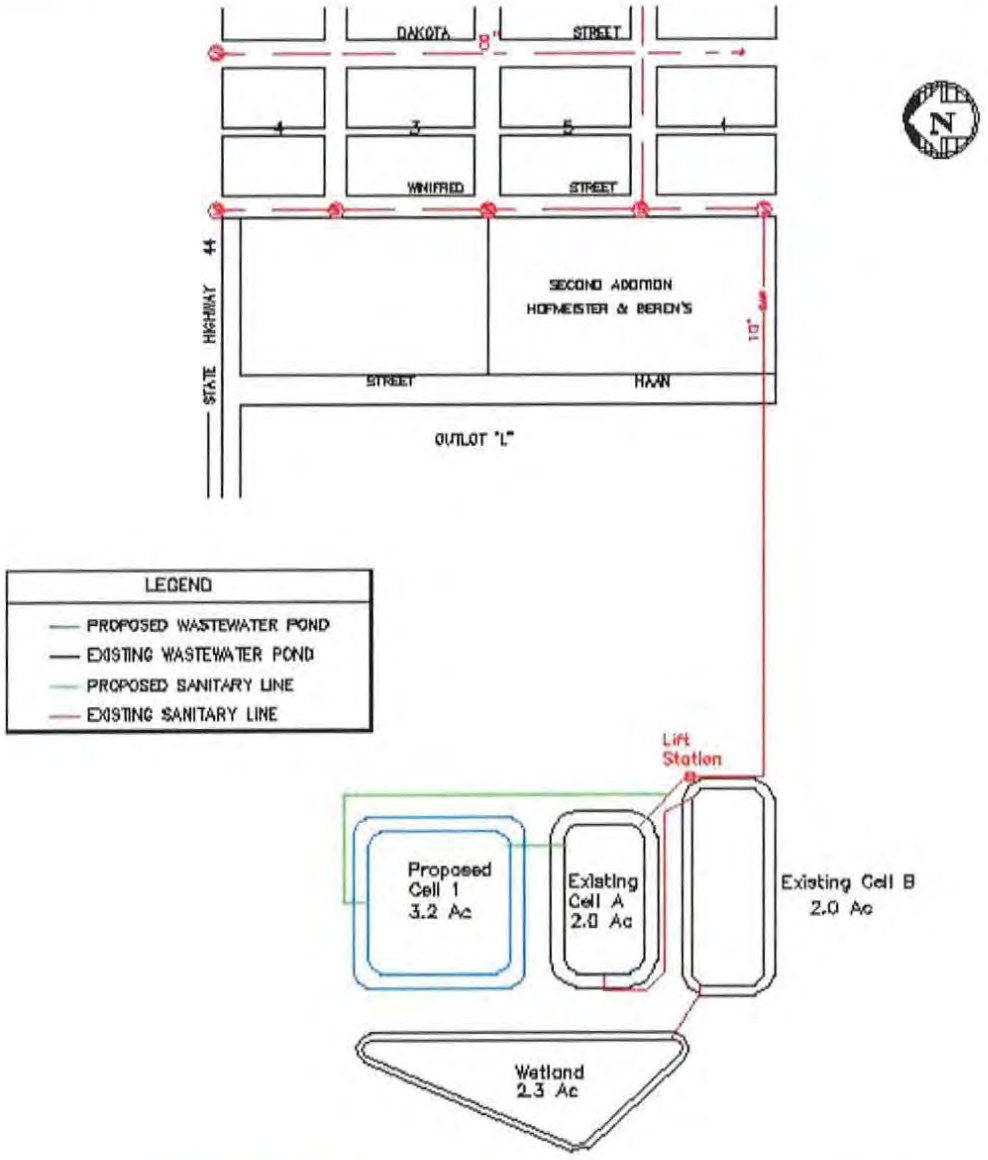

Figure 4-13 Treatment Alternative 3c
Proposed Modification of Treatment Facility

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MITCHELL SOUTH DAKOTA, zip 57301 – PHONE 605-996-7761 FAX 605-996-0015

SPN ASSOCIATES

Table 4-16 Projected Costs of Wastewater Treatment Alternative 3c

Item	Description	Quantity	Unit	Unit Price	Total Cost
1	Excavation to Construct Pond	10,000	CY	$1.50	$15,000.00
2	Borrow Site Clay Excavation, Hauling, Compaction	7,100	CY	$5.00	$35,500.00
3	10" SDR 35 PVC Inter Pond Piping	140	LF	$40.00	$5,600.00
4	8" SDR 18 PVC Force Main	1175	LF	$12.00	$14,100.00
5	Pond Structures	2	EA	$2,000.00	$4,000.00
6	Riprap on New Pond	2400	TN	$25.00	$60,000.00
7	New Barb Wire Fence	1,000	LF	$2.50	$2,500.00
8	Seeding and Fertilizing Disturbed Areas and Dikes	1.6	AC	$1,000.00	$1,600.00

Subtotal of Construction Costs	$138,300.00
Contingencies	$13,800.00
Land Purchase	$7,400.00
Administration	$5,500.00
Design Engineering	$14,800.00
Construction Engineering	$15,700.00
Total Probable Construction Cost	$195,500.00

Table 4-17 Equivalent Uniform Annual Cost Analysis for Alternative 3c

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Land Purchase	$7,400.00	$4,440.00	$1,633.92	$5,766.08
Excavation and construction of new cells	$50,500.00	$0.00	$0.00	$50,500.00
Pond Structures	$4,000.00	$0.00	$0.00	$4,000.00
Wastewater Piping	$19,700.00	$11,820.00	$4,349.76	$15,350.24
Riprap	$60,000.00	$0.00	$0.00	$60,000.00
Seeding & Fertilizing	$1,600.00	$0.00	$0.00	$1,600.00
Fencing	$2,500.00	$0.00	$0.00	$2,500.00
Capital Costs	$49,800.00	$0.00	$0.00	$49,800.00
Total Construction Cost	$195,500.00	$16,260.00	$5,983.68	$189,516.32

b. Operation and Maintenance Costs

Item	Annual Cost	NRW
Labor	$5,000.00	$61,656.00
Utilities	$3,000.00	$36,993.60
Materials	$1,000.00	$12,331.20
Miscellaneous	$3,000.00	$36,993.60
Equipment Replacement	$2,000.00	$24,662.40
Subtotal	$14,000.00	$172,636.80

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$189,516.32
NPW of O & M Costs	$172,636.80
Total Net Present Worth	$362,153.12
Equivalent Uniform Annual Cost	$29,370.62

The general layout and proposed location of the wetland treatment facility as presented in this Treatment Alternative 3c is shown on Figure 4-13 above. This option is practical for the Town of Chancellor and focuses on the problems with the treatment system.

The probable project costs for the expansion of the primary cell and the modifications to the existing cell as described in this alternative is shown in Table 4-16 above. The EUAC for Alternative 3c is presented in Table 4-17 above.

4.5.4 Treatment Alternative 4: Total Retention

Theory and recent practice show that a stabilization pond treatment facility, when designed, constructed, and maintained in conformance with the current standards and practices, will provide efficient and trouble-free treatment of wastewater. The concept of total retention of wastewater as a means of treatment and disposal complies with the ultimate goal of zero discharge of pollutants. A treatment facility of this nature relies generally on the natural elements of solar energy and wind to evaporate or dispose of the wastewater. The facility also relies on the seepage of the wastewater in the ground at a controlled rate. Such ponds are normally designed for storage of all the wastewater flow over the period of a year; a maximum of 20 pounds of BOD_5 per acre per day of total water surface; and a maximum of 30 pounds of BOD_5 per acre per day of primary pond water surface. The larger of the sizing, based on these three requirements, is used for the pond design.

Since the sludge accumulation generally averages less than 1/8 inch per year, it is not normally necessary to consider continuous sludge removal and handling from this type of treatment facility. The actual amount of sludge accumulation is dependent upon the organic loading of the pond, the amount of sand and silt carried by surface inflow, etc.

4.5.4.1 Treatment Alternative 4a

Treatment Alternative 4a is sized assuming that no change has been made to the wastewater collection system. Therefore, the total design flow to the treatment system is calculated by adding the domestic flow of 29,040 gpd, and the I & I flow figured from Table 3-6 (rows three

and four), which is averaged over 365 days to be 47,630 gpd. This totals a design daily flow of 76,670 gpd.

Since the current high rates of I & I are expected to continue, and due to the instances mentioned above where the wastewater flow rate approached the maximum rate, Treatment Alternative 4a will consider the replacement of one of the wastewater pumps with a 350 gpm 5 horsepower pump. The bigger pump will provide sufficient capability of the treatment plant to handle the excessive flows.

Using the design information and criteria from the SD DENR Recommended Design Criteria Manual, it is evident that the current treatment facility must be expanded to meet recommended standards for a total retention facility. The simplest way to increase the storage capacity of treatment facility is to create more pond area by adding one or more ponds.

To provide additional flexibility, the existing artificial wetland will be kept in operation. The wetland will provide the treatment system with storage, water surface for evaporation, and a place to discharge wastewater incase of emergencies.

After computing the flow balance of wastewater entering the treatment system and leaving through seepage, it is found that total retention of the design flow rate in the treatment ponds requires 27 acres of total water surface area. The area of the existing holding ponds plus the wetland is 6.3 acres. Thus, an additional 20.7 acres of pond area is required. In order to meet the SD DENR requirements for organic loading, the primary pond must be 3.2 acres. Therefore, Treatment Alternative 4a will consider creating a 3.2-acre primary pond and a 17.5-acre secondary pond.

Creating the new treatment ponds will enable Chancellor to properly operate their wastewater system. The wastewater from the community will be pumped from the current lift station to the new primary pond. From the primary pond the wastewater will enter the new secondary pond and proceed to the existing cell 1. The organic loading on the new primary cell will be

approximately 30 lb of BOD_5 per acre per day. The organic loading on the entire treatment facility will be approximately 3.6 lb of BOD_5 per acre per day.

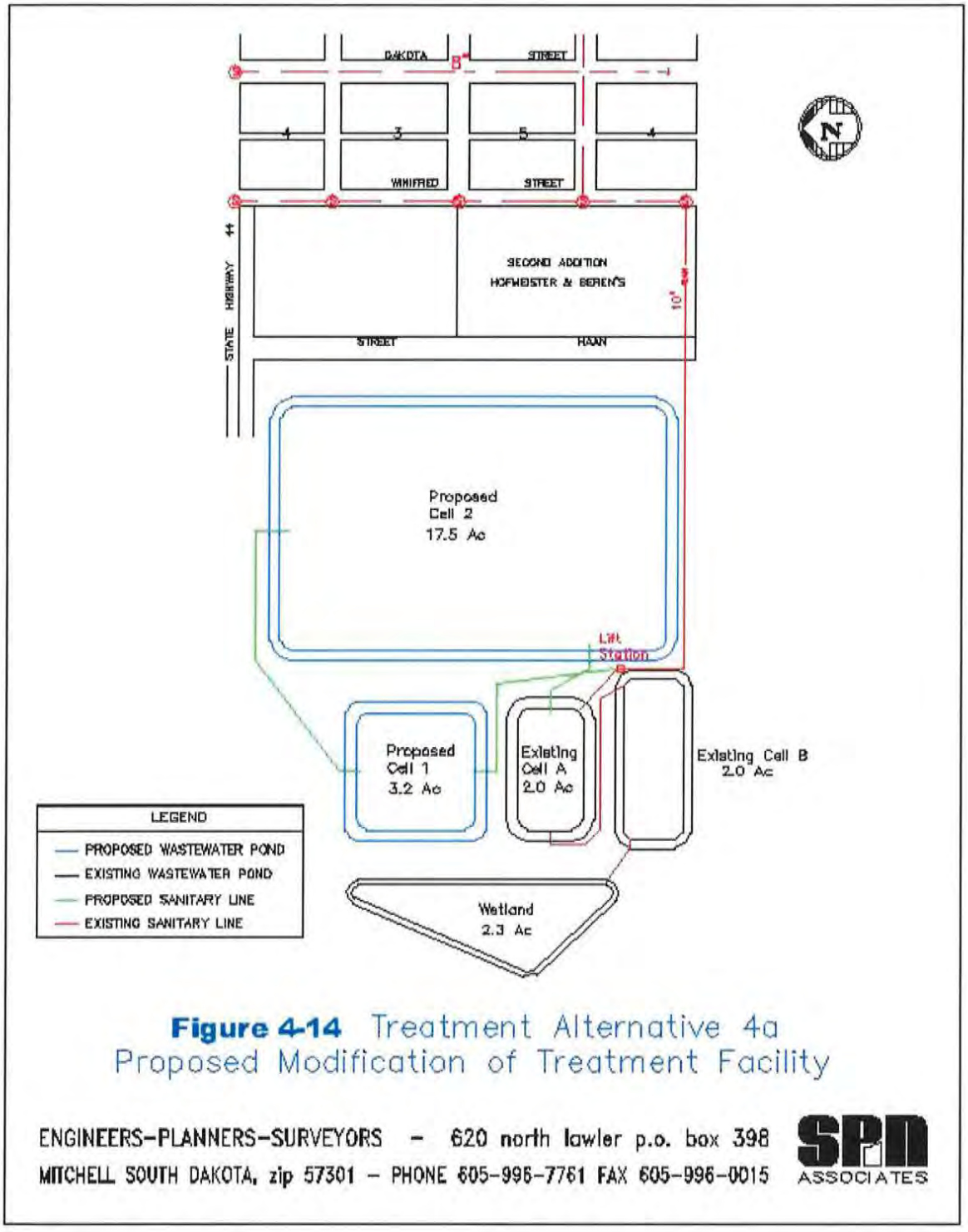

Figure 4-14 Treatment Alternative 4a
Proposed Modification of Treatment Facility

ENGINEERS-PLANNERS-SURVEYORS - 620 north lawler p.o. box 398
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SPN ASSOCIATES

Table 4-18 Projected Costs of Wastewater Treatment Alternative 4a

Item	Description	Quantity	Unit	Unit Price	Total Cost
1	Replace Existing Pump	1	LS	$10,000.00	$10,000.00
2	Replace Pump Controls	1	LS	$7,000.00	$7,000.00
3	Excavation to Construct New Ponds	38,900	CY	$1.50	$58,350.00
4	Borrow Site Clay Excavation, Hauling, Compaction	45,200	CY	$5.00	$226,000.00
5	10" SDR 35 PVC Inter Pond Piping	1170	LF	$40.00	$46,800.00
6	8" SDR 18 PVC Force Main	650	LF	$12.00	$7,800.00
7	Pond Structures	2	EA	$2,000.00	$4,000.00
8	Riprap on New Ponds	8000	TN	$25.00	$200,000.00
9	New Barb Wire Fence	4,800	LF	$2.50	$12,000.00
10	Seeding and Fertilizing Disturbed Areas and Dikes	5.0	AC	$1,000.00	$5,000.00
				Subtotal of Construction Costs	$576,950.00
				Contingencies	$57,700.00
				Land Purchase	$31,700.00
				Administration	$23,100.00
				Design Engineering	$56,300.00
				Construction Engineering	$59,700.00
				Total Probable Construction Cost	$805,450.00

Table 4-19 Equivalent Uniform Annual Cost Analysis for Alternative 4a

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Land Purchase	$31,700.00	$19,020.00	$6,999.36	$24,700.64
Excavation and construction of new cells	$284,350.00	$0.00	$0.00	$284,350.00
Replace Pump and Equipment	$17,000.00	$10,200.00	$3,753.60	$13,246.40
Pond Structures	$4,000.00	$0.00	$0.00	$4,000.00
Wastewater Piping	$54,600.00	$32,760.00	$12,055.68	$42,544.32
Riprap	$200,000.00	$0.00	$0.00	$200,000.00
Seeding & Fertilizing	$5,000.00	$0.00	$0.00	$5,000.00
Fencing	$12,000.00	$0.00	$0.00	$12,000.00
Capital Costs	$196,800.00	$0.00	$0.00	$196,800.00
Total Construction Cost	$805,450.00	$61,980.00	$22,808.64	$782,641.36

b. Operation and Maintenance Costs

Item	Annual Cost	NRW
Labor	$3,000.00	$36,993.60
Utilities	$3,000.00	$36,993.60
Materials	$1,000.00	$12,331.20
Miscellaneous	$2,500.00	$30,828.00
Equipment Replacement	$2,000.00	$24,662.40
Subtotal	$11,500.00	$141,808.80

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$782,641.36
NPW of O & M Costs	$141,808.80
Total Net Present Worth	$924,450.16
Equivalent Uniform Annual Cost	$74,972.91

The general layout and proposed location of the wetland treatment facility as presented in this Treatment Alternative 4a is shown above on Figure 4-14. This option is practical for the Town of Chancellor and focuses on the problems with the treatment system.

The probable project costs for the expansion of the primary cell and the modifications to the existing cell as described in this alternative is shown above in Table 4-18. The EUAC for Alternative 4a is presented above in Table 4-19.

4.5.4.2 Treatment Alternative 4b

Treatment Alternative 4b is sized assuming that the wastewater flows contributed by inflow have been reduced by the enforcement of sewer use ordinances. Therefore, if the inflow sources are removed, the total design flow to the treatment system is calculated by adding the domestic flow of 29,040 gpd, the infiltration flow of 30,000 gpd, and 25% of the inflow rate figured from Table 3-6 (rows three and four), which is averaged over 365 days to be 4,420 gpd. This totals a design daily flow of 63,460 gpd. Since the current high rate of inflow will be reduced, it is our opinion that the existing wastewater pumps are sufficient to handle the future wastewater flows. Therefore, Treatment Alternative 4b will not consider the replacement of the wastewater pumps.

Using the design information and criteria from the SD DENR Recommended Design Criteria Manual, it is evident that the current treatment facility must be expanded to meet recommended standards for a total retention facility. The simplest way to increase the storage capacity of treatment facility is to create more pond area by adding one or more ponds.

To provide additional flexibility, the existing artificial wetland will be kept in operation. The wetland will provide the treatment system with storage, water surface for evaporation, and a place to discharge wastewater incase of emergencies.

After computing the flow balance of wastewater entering the treatment system and leaving through seepage, it is found that total retention of the design flow rate in the treatment ponds requires 21.9 acres of total water surface area. The area of the existing holding ponds plus the wetland is 6.3 acres. Thus, an additional 15.6 acres of pond area is required. In order to meet the

SD DENR requirements for organic loading, the primary pond must be 3.2 acres. Therefore, Treatment Alternative 4b will consider creating a 3.2-acre primary pond and a 12.4-acre pond.

Creating the new treatment ponds will enable Chancellor to properly operate their wastewater system. The wastewater from the community will be pumped from the current lift station to the new primary pond. From the primary pond the wastewater will enter the new secondary pond and proceed to the existing cell 1. The organic loading on the new primary cell will be approximately 30 lb of BOD_5 per acre per day. The organic loading on the entire treatment facility will be approximately 4.4 lb of BOD_5 per acre per day.

The general layout and proposed location of the wetland treatment facility as presented in this Treatment Alternative 4b is shown on Figure 4-15. This option is practical for the Town of Chancellor and focuses on the problems with the treatment system.

The probable project costs for the expansion of the primary cell and the modifications to the existing cell as described in this alternative is shown in Table 4-20. The EUAC for Alternative 4b is presented in Table 4-21.

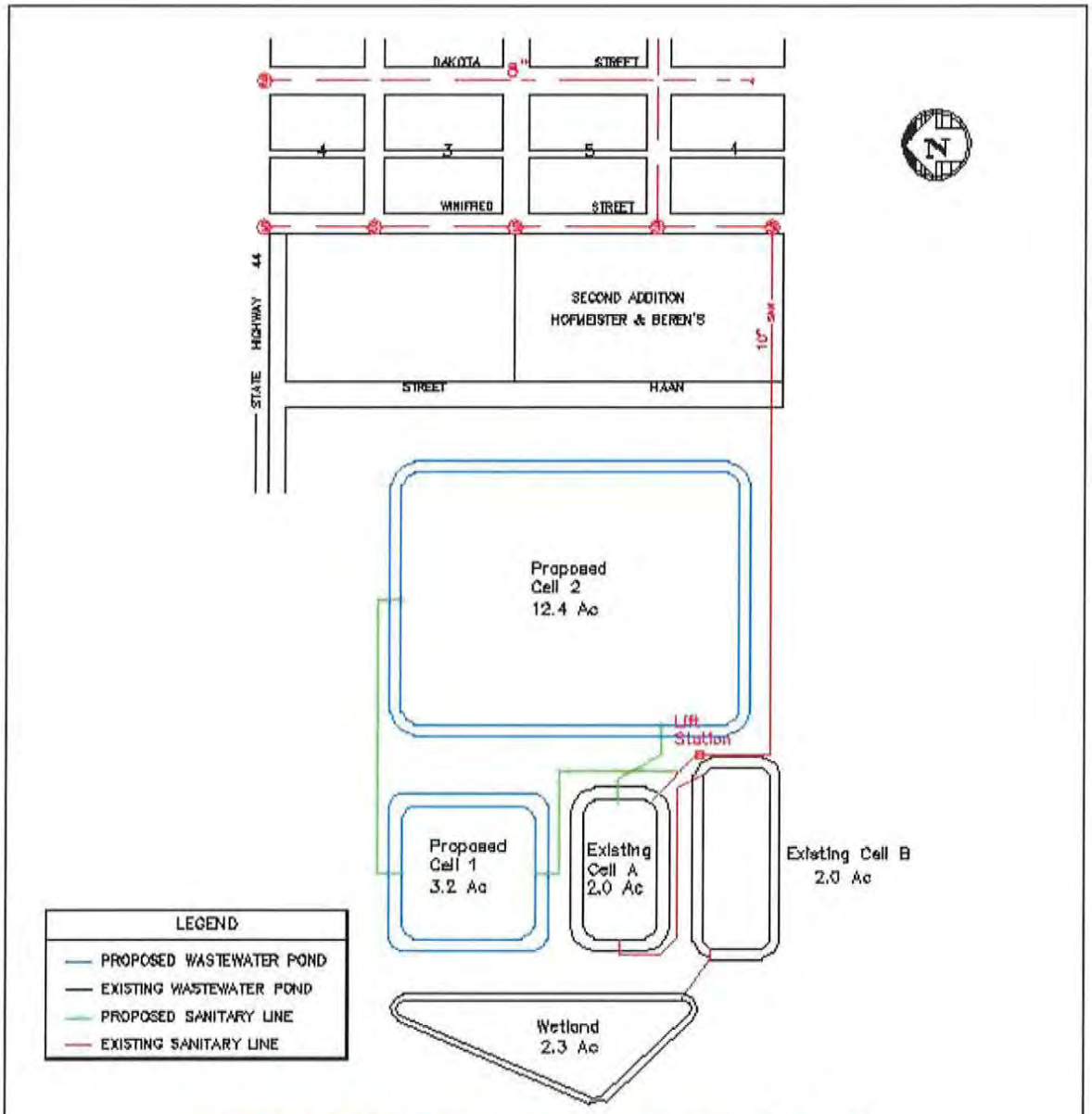

Figure 4-15 Treatment Alternative 4b
Proposed Modification of Treatment Facility

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MITCHELL SOUTH DAKOTA, zip 57301 - PHONE 605-996-7761 FAX 605-996-0015
SPN ASSOCIATES

Table 4-20 Projected Costs of Wastewater Treatment Alternative 4b

Item	Description	Quantity	Unit	Unit Price	Total Cost
1	Excavation to Construct New Ponds	33,700	CY	$1.50	$50,550.00
2	Borrow Site Clay Excavation, Hauling, Compaction	34,100	CY	$5.00	$170,500.00
3	10" SDR 35 PVC Inter Pond Piping	1075	LF	$24.00	$25,800.00
4	8" SDR 18 PVC Force Main	650	LF	$12.00	$7,800.00
6	Pond Structures	2	EA	$2,000.00	$4,000.00
7	Riprap on New Ponds	7100	TN	$25.00	$177,500.00
8	New Barb Wire Fence	4,300	LF	$2.50	$10,750.00
9	Seeding and Fertilizing Disturbed Areas and Dikes	4.5	AC	$1,000.00	$4,500.00
				Subtotal of Construction Costs	$451,400.00
				Contingencies	$45,100.00
				Land Purchase	$23,300.00
				Administration	$18,100.00
				Design Engineering	$44,400.00
				Construction Engineering	$47,100.00
				Total Probable Construction Cost	$629,400.00

Table 4-21 Equivalent Uniform Annual Cost Analysis for Alternative 4b

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Land Purchase	$23,300.00	$13,980.00	$5,144.64	$18,155.36
Excavation and construction of new cells	$221,050.00	$0.00	$0.00	$221,050.00
Wastewater Piping	$33,600.00	$20,160.00	$7,418.88	$26,181.12
Pond Structures	$4,000.00	$0.00	$0.00	$4,000.00
Riprap	$177,500.00	$0.00	$0.00	$177,500.00
Seeding & Fertilizing	$4,500.00	$0.00	$0.00	$4,500.00
Fencing	$10,750.00	$0.00	$0.00	$10,750.00
Capital Costs	$154,700.00	$0.00	$0.00	$154,700.00
Total Construction Cost	$629,400.00	$34,140.00	$12,563.52	$616,836.48

b. Operation and Maintenance Costs

Item	Annual Cost	NRW
Labor	$3,000.00	$36,993.60
Utilities	$3,000.00	$36,993.60
Materials	$1,000.00	$12,331.20
Miscellaneous	$2,500.00	$30,828.00
Equipment Replacement	$2,000.00	$24,662.40
Subtotal	$11,500.00	$141,808.80

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$616,836.48
NPW of O & M Costs	$141,808.80
Total Net Present Worth	$758,645.28
Equivalent Uniform Annual Cost	$61,526.13

4.5.4.3 Treatment Alternative 4c

Treatment Alternative 4c is sized assuming that a new wastewater collection system has been installed. Therefore, since much of the I & I will be reduced, the total design flow to the treatment system is calculated by adding the domestic flow of 29,040 gpd, and the estimated infiltration flow of 5,540 gpd. This totals a design wastewater flow rate of 34,580 gpd. Since the current high rate of I & I will be reduced, it is our opinion that the existing wastewater pumps are sufficient to handle the future wastewater flows. Therefore, Treatment Alternative 4c will not consider the replacement of the wastewater pumps.

Using the design information and criteria from the SD DENR Recommended Design Criteria Manual, it is evident that the current treatment facility must be expanded to meet recommended standards for a total retention facility. The simplest way to increase the storage capacity of treatment facility is to create more pond area by adding one or more ponds.

To provide additional flexibility, the existing artificial wetland will be kept in operation. The wetland will provide the treatment system with storage, water surface for evaporation, and a place to discharge wastewater incase of emergencies.

After computing the flow balance of wastewater entering the treatment system and leaving through seepage, it is found that total retention of the design flow rate in the treatment ponds requires 10.6 acres of total water surface area. The area of the existing holding ponds plus the wetland is 6.3 acres. Thus, an additional 4.3 acres of pond area is required. In order to meet the SD DENR requirements for organic loading, the primary pond must be 3.2 acres. Therefore, since the hydraulic sizing requires a larger pond, Treatment Alternative 4c will consider creating a 4.3-acre primary pond.

Creating the new treatment pond will enable Chancellor to properly operate their wastewater system. The wastewater from the community will be pumped from the current lift station to the new primary pond. From the primary pond the wastewater will proceed to the existing cell 1.

The organic loading on the new primary cell will be approximately 22 lb of BOD_5 per acre per day. The organic loading on the entire treatment facility will be approximately 9.1 lb of BOD_5 per acre per day.

The general layout and proposed location of the wetland treatment facility as presented in this Treatment Alternative 4c is shown on Figure 4-16. This option is practical for the Town of Chancellor and focuses on the problems with the treatment system.

The probable project costs for the expansion of the primary cell and the modifications to the existing cell as described in this alternative is shown in Table 4-22. The EUAC for Alternative 4c is presented in Table 4-23.

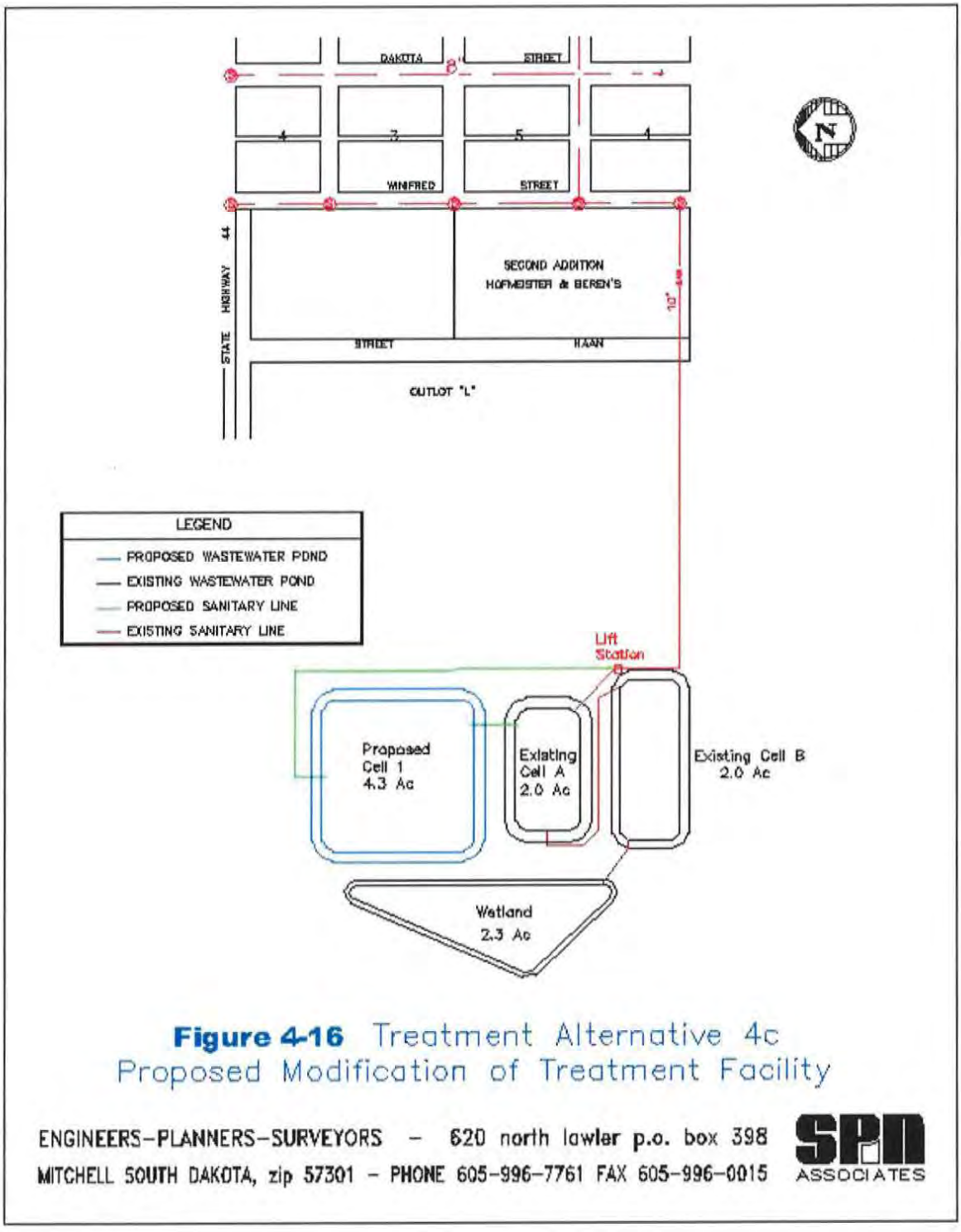

Figure 4-16 Treatment Alternative 4c
Proposed Modification of Treatment Facility

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MITCHELL SOUTH DAKOTA, zip 57301 - PHONE 605-996-7761 FAX 605-996-0015

SPN ASSOCIATES

Table 4-22 Projected Costs of Wastewater Treatment Alternative 4c

Item	Description	Quantity	Unit	Unit Price	Total Cost
1	Excavation to Construct Pond	12,100	CY	$1.50	$18,150.00
2	Borrow Site Clay Excavation, Hauling, Compaction	9,500	CY	$5.00	$47,500.00
3	10" SDR 35 PVC Inter Pond Piping	140	LF	$40.00	$5,600.00
4	8" SDR 18 PVC Force Main	1,275	LF	$12.00	$15,300.00
5	Pond Structures	2	EA	$2,000.00	$4,000.00
6	Riprap on New Pond	2800	TN	$25.00	$70,000.00
7	New Barb Wire Fence	1,200	LF	$2.50	$3,000.00
8	Seeding and Fertilizing Disturbed Areas and Dikes	1.8	AC	$1,000.00	$1,800.00
				Subtotal of Construction Costs	$165,350.00
				Contingencies	$16,500.00
				Land Purchase	$9,300.00
				Administration	$6,600.00
				Design Engineering	$17,300.00
				Construction Engineering	$18,300.00
				Total Probable Construction Cost	$233,350.00

Table 4-23 Equivalent Uniform Annual Cost Analysis for Alternative 4c

a. Construction Costs

Item	Cost	SV	PW SV	NPW
Land Purchase	$9,300.00	$5,580.00	$2,053.44	$7,246.56
Excavation and construction of new cells	$65,650.00	$0.00	$0.00	$65,650.00
Pond Structures	$4,000.00	$2,400.00	$883.20	$3,116.80
Wastewater Piping	$20,900.00	$0.00	$0.00	$20,900.00
Riprap	$70,000.00	$0.00	$0.00	$70,000.00
Seeding & Fertilizing	$1,800.00	$0.00	$0.00	$1,800.00
Fencing	$3,000.00	$0.00	$0.00	$3,000.00
Capital Costs	$58,700.00	$0.00	$0.00	$58,700.00
Total Construction Cost	$233,350.00	$7,980.00	$2,936.64	$230,413.36

b. Operation and Maintenance Costs

Item	Annual Cost	NRW
Labor	$3,000.00	$36,993.60
Utilities	$3,000.00	$36,993.60
Materials	$1,000.00	$12,331.20
Miscellaneous	$2,500.00	$30,828.00
Equipment Replacement	$2,000.00	$24,662.40
Subtotal	$11,500.00	$141,808.80

c. Equivalent Uniform Annual Cost

NPW of Construction Cost	$230,413.36
NPW of O & M Costs	$141,808.80
Total Net Present Worth	$372,222.16
Equivalent Uniform Annual Cost	$30,187.22

4.6 OPTIMUM OPERATION OF EXISTING FACILITIES

The existing facilities are being operated in the most efficient manner that can be accomplished, considering the deficiencies and problems that will be addressed in the proposed improvements.

4.7 REGIONALIZATION

4.7.1 Water System

The Town of Chancellor currently obtains its water from South Lincoln Rural Water, which is a regional water system.

4.7.2 Wastewater Treatment System

There are no other communities within a reasonable distance to make consideration of regional wastewater solutions feasible.

4.7.1 Storm Drainage System

Since the issue of storm drainage is a localized issue, the regionalization of storm drainage is not a feasible consideration.

5 SELECTION OF ALTERNATIVES

5.1 WATER STORAGE

Water Storage Alternative 2 (Water Tower) is not recommended due to the excessive cost of the alternative versus the limited benefits that would be realized.

Water Storage Alternative 1 (Do Nothing) is recommended as long as the contract flow rates can be raised to the values discussed in Section 4.1. SLRW seems to have a relatively reliable water source, which may alleviate the need for storage in Chancellor's distribution system, as long as the recommended contract flow rates can be acquired. Additionally, the rates charged by SLRW seem to be quite reasonable.

5.2 WATER DISTRIBUTION SYSTEM

The Water System Alternative 1 (Do Nothing) is not recommended, because it would not address many of the identified deficiencies associated with the water system. Due to the seriousness of some of the problems, such as low fire flows, low anticipated future pressures, and water quality issues relating to the dead end lines, the deficiencies must be dealt with.

Water System Alternative 3 (Replace System) is not recommended due to the excessive cost of the alternative versus the limited benefits that would be realized.

Water System Alternative 2 (Loop System) is recommended because it addresses all of the deficiencies that have been identified and discussed in this report regarding the water distribution system, other than storage.

5.3 WASTEWATER COLLECTION SYSTEM

The Collection System Alternative 1 (Do Nothing) is not recommended because it would not address any of the identified deficiencies or potential health hazards associated with the existing wastewater collection system.

Collection System Alternative 3 (Replace Collection System), although it would address the issue of high infiltration rates, is not recommended due to the excessive cost of the alternative versus the limited benefits that would be realized.

Collection System Alternative 2 (Remove Inflow Sources) is recommended. This alternative will reduce the potential excessive flows caused by many inflow sources and will allow less cost to be accrued due to construction during the upgrading of the current treatment facilities.

5.4 WASTEWATER TREATMENT

Treatment Alternative 1 (Do Nothing) is not recommended, as it does not address the deficiencies identified with the existing wastewater treatment facility.

Treatment Alternative 3 (Total Retention) is not recommended due to the requirement for even greater water storage and water surface. This alternative requires the most land and the greatest construction cost and is not recommended due to the excessive cost of the alternative versus the limited benefits that would be realized.

Since Wastewater Treatment Improvement Alternative 2 (Expand Artificial Wetland System) has a low initial cost, it is recommended. This alternative also has the lowest Equivalent Uniform Annual Cost, which indicates it is the most cost effective of all the alternatives considered. This alternative is the simplest and most efficient approach to solving the deficiencies that have been identified and discussed in this report regarding the wastewater treatment facilities.

The total EUAC for both the collection system and treatment system alternatives was estimated based on an annual operation and maintenance of the collection system of $5,000. The salvage value of any piping, manholes, and connections was also considered to produce the EUAC totals listed below. As indicated in Table 5-1, the combination of collection alternative 2 and wastewater treatment alternative 2 appears to be the most cost effective choice, because they require the least EUAC to improve each system.

Table 5-1 Total EUAC for Collection System and Wastewater Treatment Alternatives

Wastewater Treatment Alternatives	Collection Alternatives		
	1 - No Improvements	2 - Reduce Inflow	3 - New System
2 - Wetland	Not Considered	**$41,008**	$125,279
3 - 180-Day Retention	$45,571	$44,815	$125,279
4 - Total Retention	$80,277	$68,769	$125,793

5.5 CAPITAL FINANCING PLAN

The Town of Chancellor will make application to state and federal resources for loan and grant assistance to complete the project during the upcoming construction season.

5.6 ENVIRONMENTAL EVALUATION

The Town of Chancellor has requested comments from concerned federal agencies. The correspondence related to these inquiries is found in Appendix A of this preliminary report supplement.

5.7 VIEWS OF THE PUBLIC AND CONCERNED INTEREST GROUPS

The Town of Chancellor is planning to conduct a public hearing on the proposed project. Information related to the hearing will be submitted after it is conducted.

6 SELECTED PLAN, DESCRIPTION AND IMPLEMENTATION ARRANGEMENTS

6.1 JUSTIFICATION AND DESCRIPTION OF SELECTED PLAN

The alternative chosen for water storage will satisfy all demands of the water distribution system, as long as SLRW is able to supply a sufficient amount of water. The higher flow rate from SLRW should be cheaper than the cost of constructing and maintaining a water tower.

The alternative chosen for the water distribution system will improve all of the deficiencies in the system other than the lack of storage. This alternative will provide Chancellor with pressures and flows that are more appealing than the current system.

The alternative chosen for the rehabilitation of the wastewater collection system was chosen because it will remedy all of the problems with the system, other than the excessive infiltration rate. The cleaning and TV inspection of the existing sewer system will give a good indication of its condition to allow for proper design of the replacement plan, should one be needed.

The alternative chosen for the wastewater treatment facility improvements will achieve the desired treatment of the sewage and will provide an effluent that will not impact waters of the state. The alternative chosen is the most cost effective alternative considered.

6.2 DESIGN OF SELECTED PLAN

6.2.1 Water Distribution System

The design of the improvements on the distribution system will provide enhanced flexibility in operation and will be designed in accordance with the SD DENR design criteria and the accepted principles and standards for the design of water distribution systems.

6.2.2 Wastewater Collection System

Whereas the existing wastewater collection system will not be replaced, a design of the collection system will not be required. In the event extensions of the sanitary sewer system are installed, system will be designed in accordance with the SD DENR design criteria and the accepted principles and standards for the design of wastewater collection systems.

6.2.3 Wastewater Treatment Facility

The design of the wastewater facility will be in accordance with the SD DENR and other accepted principles and standards for the design of stabilization ponds.

The pond constructed will be lined with a clay liner from a source not yet chosen. Geotechnical testing will be performed on possible borrow sites to determine the physical characteristics of the liner material prior to design. The thickness of the liner will be designed based on permeability of the soils and allowable percolation. Riprap on the interior slopes of the cell is included in the project cost projections since the current ponds contain riprap.

The maximum water depth of the constructed cell will be five feet in accordance with SD DENR design criteria. Control structures will be designed to ensure the elevation in the wastewater ponds remains at the design level. These elevations will be adjusted during the filling of the new cell to guarantee the minimum water elevation of two feet is maintained. Prefilling of the new cell will be required as part of the contract to test the liner and to make sure the liner does not dry and crack.

6.3 COST ESTIMATES FOR SELECTED PLAN

A summary of the costs associated with all of the alternatives that were chosen is given in Table 6-1.

Table 6-1 Summary of Costs

WATER DISTRIBUTION SYSTEM	
Water System Alternative 2: Loop System	$344,950.00
WASTEWATER COLLECTION SYSTEM	
Collection System Alternative 2: Remove Inflow Sources	$27,650.00
WASTEWATER TREATMENT SYSTEM	
Treatment Alternative 2b: Expand Artificial Wetland System	$250,500.00
TOTAL PROJECT COST	$623,100.00

6.4 ENVIRONMENTAL IMPACTS OF SELECTED PLAN

Environmental information gathered thus far does not indicate that any of the state or federal agencies will have environmental concerns related to the project or its proposed construction activities.

6.5 ARRANGEMENTS FOR IMPLEMENTATION

This report provides information to describe the proposed project and to support the council's decision to proceed with it as quickly as possible. Final design will be completed by the Town of Chancellor's consultant and approved by the Department of Environment and Natural Resources, as it is definitely a "work of sanitary significance." Cost estimates have been prepared and are referenced elsewhere in this document.

The project will be bid in accordance with state statutes that govern municipal corporations and will be constructed by the lowest responsible bidder.

6.6 LAND ACQUISITION

No land acquisition will be required for the water distribution system improvements or the storm drainage improvements as all work will be completed in existing street right-of-way or in easements that have already been or will be obtained.

The acquisition of land will be required for the wastewater treatment facility improvements. These activities have not been initiated at the time of completion of this report.

6.7 INTERAGENCY AGREEMENTS

No operating agreements with other agencies are needed, as the Town of Chancellor owns, operates and maintains its municipal water system. Loan documents will have to be executed with the appropriate lender, but, as Chancellor is a municipal corporation, it has the legal authority to enter into such agreements. Chancellor's attorney will advise the council on any legal matters related to this issue.

7 REFERENCES

University of Kentucky Civil Engineering Department, (2000). Pipe 2000 Manual (Lexington, KY: University of Kentucky, Civil Engineering Software Center), pp.

Committee of the Great Lakes – Upper Missouri River Board of State Public Health and Environmental Managers, (1997). *Recommended Standards For Water Works* (Albany, NY: Health Education Services), pp.

Environmental Protection Agency, (1975). Handbook for Sewer System Evaluation and Rehabilitation (Washington, D.C.: Office of Water Program Operations), pp.

South Dakota Department of Environment and Natural Resources, (May 1990). *Recommended Design Criteria Manual, Wastewater Collection and Treatment Facilities,* Pierre, SD: Division of Environmental Regulation.

Mays, Larry W., (2000). *Water Distribution Systems Handbook*, (New York, NY: McGraw Hill), pp.

National Oceanic and Atmospheric Administration, (2000). *Climatological Data, Annual Summary for South Dakota.* Volume 105, Number 13.

Salvato, Joseph A., (1982). *Environmental Engineering And Sanitation* (New York, NY: John Wiley & Sons), pp.

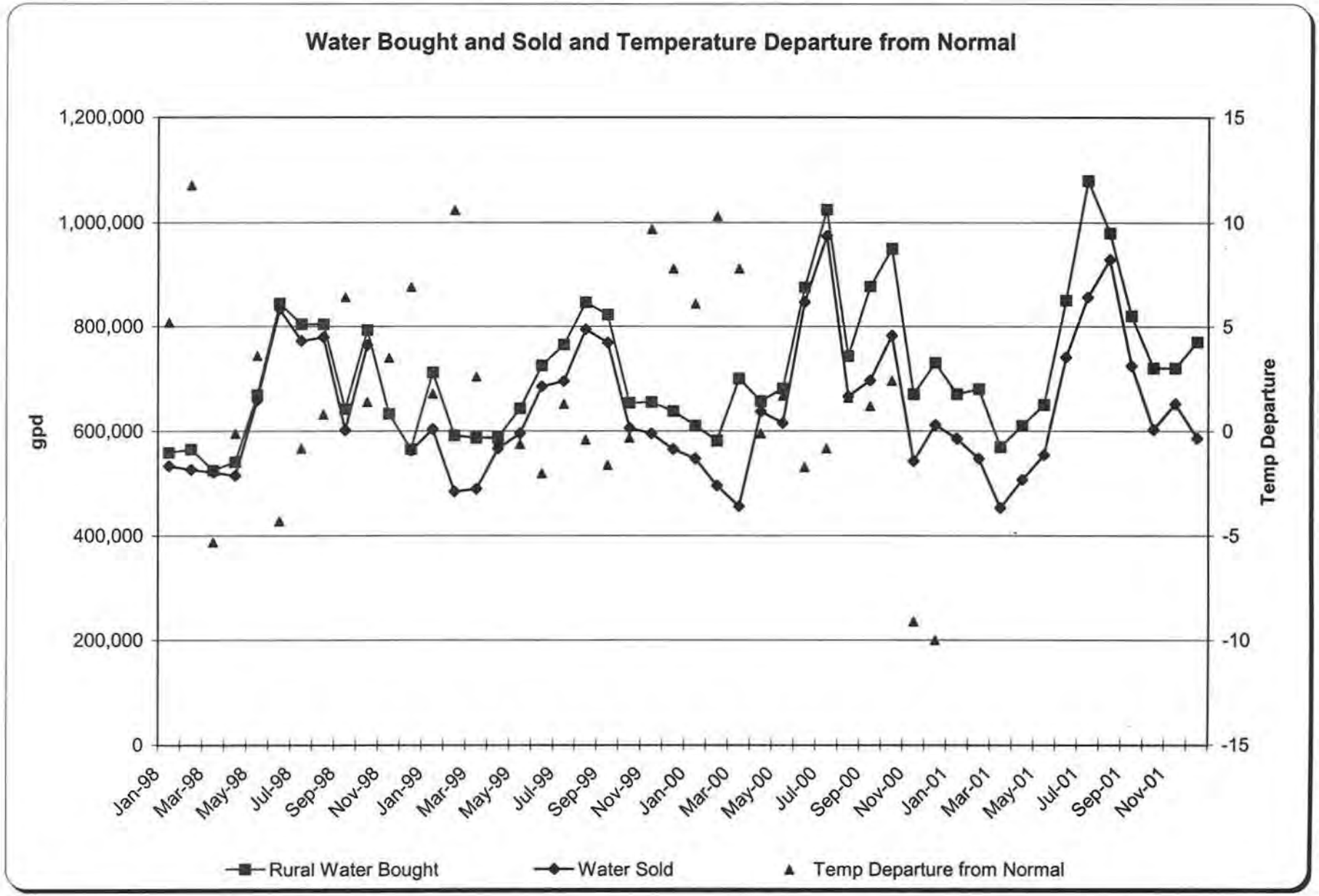
Appendix A

Comment Letters

Appendix B

Water Usage Data

Month	Gallons from Rural Water	Gallons paid by Residents	% Unaccounted	Avg Temp ° F	Temp Departure ° F	Precip inches	Average Day Flow gpd	Estimated WW Flow gpd	Winter Usage gpcpd
Jan-98	560,000	534,310	5%	21.5	5.2	0.16	18,065	17,236	54.5
Feb-98	566,000	527,160	7%	34.2	11.8	0.54	20,214	18,827	59.4
Mar-98	526,000	521,830	1%	28.7	-5.3	3.28	16,968	16,833	
Apr-98	542,000	515,580	5%	48.4	-0.1	3.82	18,067	17,186	
May-98	669,000	659,190	1%	63.7	3.6	1.59	21,581	21,264	
Jun-98	844,000	833,170	1%	65.5	-4.3	4.25	28,133	27,772	
Jul-98	804,000	772,380	4%	74.6	-0.8	3.1	25,935	24,915	
Aug-98	804,000	779,210	3%	73.5	0.8	3.66	25,935	25,136	
Sep-98	642,000	602,360	6%	69.2	6.4	0.06	21,400	20,079	
Oct-98	793,000	764,270	4%	52.1	1.4	5.8	25,581	24,654	
Nov-98	633,000	-	-	38.4	3.5	1.8	21,100	18,853	
Dec-98	566,000	563,550	0%	27.6	6.9	0.08	18,258	18,179	56.6
Jan-99	712,000	604,040	15%	18.1	1.8	0.28	22,968	19,485	60.6
Feb-99	592,000	484,920	18%	33	10.6	0.39	21,143	17,319	53.8
Mar-99	587,000	489,750	17%	36.6	2.6	0.9	18,935	15,798	
Apr-99	588,000	567,470	3%	48	-0.5	3.6	19,600	18,916	
May-99	643,000	595,990	7%	59.5	-0.6	2.82	20,742	19,225	
Jun-99	725,000	685,200	5%	67.8	-2	3.16	24,167	22,840	
Jul-99	765,000	695,400	9%	76.7	1.3	3.73	24,677	22,432	
Aug-99	846,000	794,630	6%	72.3	-0.4	1.03	27,290	25,633	
Sep-99	822,000	768,750	6%	61.2	-1.6	0.49	27,400	25,625	
Oct-99	654,000	606,110	7%	50.4	-0.3	0.1	21,097	19,552	
Nov-99	655,000	595,790	9%	44.6	9.7	0.18	21,833	19,860	
Dec-99	638,000	566,110	11%	28.5	7.8	0.06	20,581	18,262	56.0
Jan-00	610,000	548,000	10%	22.4	6.1	0.44	19,677	17,677	54.1
Feb-00	582,000	495,820	15%	32.7	10.3	0.97	20,069	17,097	52.3
Mar-00	700,000	456,410	35%	41.8	7.8	0.41	22,581	14,723	
Apr-00	657,000	637,600	3%	48.4	-0.1	1.98	21,900	21,253	
May-00	681,000	615,450	10%	61.8	1.7	3.75	21,968	19,853	
Jun-00	875,000	847,040	3%	68.1	-1.7	2.27	29,167	28,235	
Jul-00	1,025,000	974,860	5%	74.6	-0.8	2.68	33,065	31,447	
Aug-00	743,000	666,250	10%	74.3	1.6	1.94	23,968	21,492	
Sep-00	877,000	696,470	21%	64	1.2	1.1	29,233	23,216	
Oct-00	950,000	782,300	18%	53.1	2.4	2.46	30,645	25,235	
Nov-00	670,000	542,990	19%	25.8	-9.1	2.65	22,333	18,100	
Dec-00	730,000	612,050	16%	10.7	-10	0.49	23,548	19,744	59.6
Jan-01	670,000	585,880	13%			1.38	21,613	18,899	56.9
Feb-01	680,000	547,880	19%			1.14	24,286	19,567	58.9
Mar-01	570,000	453,160	20%			0.44	18,387	14,618	
Apr-01	610,000	507,370	17%			5.76	20,333	16,912	
May-01	650,000	555,090	15%			1.78	20,968	17,906	
Jun-01	850,000	740,960	13%			2.8	28,333	24,699	
Jul-01	1,080,000	856,000	21%			4.71	34,839	27,613	
Aug-01	980,000	929,250	5%			0.6	31,613	29,976	
Sep-01	820,000	724,110	12%			2.31	27,333	24,137	
Oct-01	720,000	603,000	16%			0.94	23,226	19,452	
Nov-01	720,000	652,160	9%				24,000	21,739	
Dec-01	770,000	586,570	24%			3.53	24,839	18,922	56.2
average			11%					18,434	57


Water Bought and Sold and Temperature Departure from Normal
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
gpd
15
10
5
0
-5
-10
-15
Temp Departure
Jan-98
Mar-98
May-98
Jul-98
Sep-98
Nov-98
Jan-99
Mar-99
May-99
Jul-99
Sep-99
Nov-99
Jan-00
Mar-00
May-00
Jul-00
Sep-00
Nov-00
Jan-01
Mar-01
May-01
Jul-01
Sep-01
Nov-01
Rural Water Bought
Water Sold
Temp Departure from Normal

Appendix C

Wastewater Flow Data

Date	Pump #1 Reading Hours	Pump #2 Reading Hours	Pump #1 Operation Hours	Pump #2 Operation Hours	Pump #1 Gallons Pumped	Pump #2 Gallons Pumped	Total Gallons Pumped	Avg Day Flow gpd	Precip. inches
02/21/2002	11101	5825.6	2	1.3	18,396	12,020	30,416		
02/20/2002	11099	5824.3	0.6	1.5	5,519	13,869	19,388		
02/19/2002	11098.4	5822.8	1.3	1.3	11,957	12,020	23,977		
02/18/2002	11097.1	5821.5	1.3	1.5	11,957	13,869	25,826		
02/17/2002	11095.8	5820	1.5	1.5	13,797	13,869	27,666		
02/16/2002	11094.3	5818.5	1.3	1.3	11,957	12,020	23,977		
02/15/2002	11093	5817.2	1.2	1.4	11,038	12,944	23,982		
02/14/2002	11091.8	5815.8	1.3	1.3	11,957	12,020	23,977		
02/13/2002	11090.5	5814.5	1.3	1.3	11,957	12,020	23,977		
02/12/2002	11089.2	5813.2	1.3	1.3	11,957	12,020	23,977		
02/11/2002	11087.9	5811.9	1.5	1.6	13,797	14,794	28,591		
02/10/2002	11086.4	5810.3	1.4	1.5	12,877	13,869	26,746		
02/09/2002	11085	5808.8	1.4	1.4	12,877	12,944	25,822		
02/08/2002	11083.6	5807.4	1.5	1.6	13,797	14,794	28,591		
02/07/2002	11082.1	5805.8	1.3	1.3	11,957	12,020	23,977		
02/06/2002	11080.8	5804.5	1.6	1.7	14,717	15,718	30,435		
02/05/2002	11079.2	5802.8	1.3	1.3	11,957	12,020	23,977		
02/04/2002	11077.9	5801.5	1.1	1.4	10,118	12,944	23,062		
02/03/2002	11076.8	5800.1	1.4	1.2	12,877	11,095	23,972		
02/02/2002	11075.4	5798.9	1.9	1.9	17,476	17,567	35,044		
02/01/2002	11073.5	5797	1.5	1.5	13,797	13,869	27,666		
01/31/2002	11072	5795.5	1.7	1.9	15,637	17,567	33,204		
01/30/2002	11070.3	5793.6	1.2	1.1	11,038	10,171	21,208		
01/29/2002	11069.1	5792.5	1.8	1.9	16,556	17,567	34,124		
01/28/2002	11067.3	5790.6							
12/31/2001	11023.1	5746.2	2.1	2.1	19,316	19,417	38,732	34,985	
12/30/2001	11021	5744.1	1.6	1.9	14,717	17,567	32,284		
12/29/2001	11019.4	5742.2	1.6	1.4	14,717	12,944	27,661		
12/28/2001	11017.8	5740.8	1.8	1.8	16,556	16,643	33,199		
12/27/2001	11016	5739	3	2.1	27,594	19,417	47,011		
12/26/2001	11013	5736.9	1.1	2	10,118	18,492	28,610		
12/25/2001	11011.9	5734.9	1.1	1.1	10,118	10,171	20,288		
12/24/2001	11010.8	5733.8	2.3	2.8	21,155	25,889	47,044		
12/23/2001	11008.5	5731	1.8	1.3	16,556	12,020	28,576		
12/22/2001	11006.7	5729.7	2.1	2	19,316	18,492	37,808		
12/21/2001	11004.6	5727.7	2.1	1.6	19,316	14,794	34,109		
12/20/2001	11002.5	5726.1	1.8	2.4	16,556	22,190	38,747		
12/19/2001	11000.7	5723.7	1.8	1.8	16,556	16,643	33,199		
12/18/2001	10998.9	5721.9	1.8	1.9	16,556	17,567	34,124		
12/17/2001	10997.1	5720	0.6	0.9	5,519	8,321	13,840		
12/16/2001	10996.5	5719.1	0.6	1.1	5,519	10,171	15,689		
12/15/2001	10995.9	5718	3.8	2.8	34,952	25,889	60,841		
12/14/2001	10992.1	5715.2	2.8	3.1	25,754	28,663	54,417		
12/13/2001	10989.3	5712.1	2	1.9	18,396	17,567	35,963		
12/12/2001	10987.3	5710.2	1.9	2.1	17,476	19,417	36,893		
12/11/2001	10985.4	5708.1	1.9	1.8	17,476	16,643	34,119		
12/10/2001	10983.5	5706.3	2.2	2.3	20,236	21,266	41,501		
12/09/2001	10981.3	5704	1.9	2	17,476	18,492	35,968		
12/08/2001	10979.4	5702	2.1	2.2	19,316	20,341	39,657		
12/07/2001	10977.3	5699.8	2.1	2.1	19,316	19,417	38,732		
12/06/2001	10975.2	5697.7	2.1	2.7	19,316	24,964	44,280		
12/05/2001	10973.1	5695	2.1	1.1	19,316	10,171	29,486		
12/04/2001	10971	5693.9	1.3	2	11,957	18,492	30,449		
12/03/2001	10969.7	5691.9	1.5	1	13,797	9,246	23,043		
12/02/2001	10968.2	5690.9	1.7	2.8	15,637	25,889	41,525		
12/01/2001	10966.5	5688.1	1.8	1.1	16,556	10,171	26,727		
11/30/2001	10964.7	5687	2	2.1	18,396	19,417	37,813	27,421	
11/29/2001	10962.7	5684.9	1.5	1.5	13,797	13,869	27,666		
11/28/2001	10961.2	5683.4	1.9	2.2	17,476	20,341	37,817		
11/27/2001	10959.3	5681.2	1.8	1.9	16,556	17,567	34,124		
11/26/2001	10957.5	5679.3	2.9	2.4	26,674	22,190	48,865		
11/25/2001	10954.6	5676.9	2.7	3.1	24,835	28,663	53,497		
11/24/2001	10951.9	5673.8	2.8	2.9	25,754	26,813	52,568		
11/23/2001	10949.1	5670.9	1.1	1.1	10,118	10,171	20,288		
11/22/2001	10948	5669.8	1.4	1.4	12,877	12,944	25,822		
11/21/2001	10946.6	5668.4	0.8	1	7,358	9,246	16,604		
11/20/2001	10945.8	5667.4	1.3	1.3	11,957	12,020	23,977		
11/19/2001	10944.5	5666.1	1.2	1.3	11,038	12,020	23,057		
11/18/2001	10943.3	5664.8	1.1	1.3	10,118	12,020	22,138		

RECENT PUMP CALIBRATION		
approx 6-1-99		
Pump #1	153.3	gpm
Pump #2	154.1	gpm

EARLIER PUMP CALIBRATION		
Pump #1	100	gpm
Pump #2	100	gpm

11/17/2001	10942.2	5663.5	1.2	1.1	11,038	10,171	21,208		
11/16/2001	10941	5662.4	1.2	1.2	11,038	11,095	22,133		
11/15/2001	10939.8	5661.2	1.1	1.3	10,118	12,020	22,138		
11/14/2001	10938.7	5659.9	0.6	0.7	5,519	6,472	11,991		
11/13/2001	10938.1	5659.2	1.3	1.1	11,957	10,171	22,128		
11/12/2001	10936.8	5658.1	1.5	1.7	13,797	15,718	29,515		
11/11/2001	10935.3	5656.4	0.7	1.1	6,439	10,171	16,609		
11/10/2001	10934.6	5655.3	1.1	0.8	10,118	7,397	17,515		
11/09/2001	10933.5	5654.5	2	1.6	18,396	14,794	33,190		
11/08/2001	10931.5	5652.9	0.6	1.6	5,519	14,794	20,312		
11/07/2001	10930.9	5651.3	1.8	1.1	16,556	10,171	26,727		
11/06/2001	10929.1	5650.2	1.6	1.6	14,717	14,794	29,510		
11/05/2001	10927.5	5648.6	1.3	1.2	11,957	11,095	23,053		
11/04/2001	10926.2	5647.4	1.3	1	11,957	9,246	21,203		
11/03/2001	10924.9	5646.4	1.3	1.6	11,957	14,794	26,751		
11/02/2001	10923.6	5644.8	1.8	1.9	16,556	17,567	34,124		
11/01/2001	10921.8	5642.9	1.1	1.1	10,118	10,171	20,288		
10/31/2001	10920.7	5641.8	0.9	0.9	8,278	8,321	16,600	21,479	
10/30/2001	10919.8	5640.9	1.5	1.5	13,797	13,869	27,666		
10/29/2001	10918.3	5639.4	1.2	1.4	11,038	12,944	23,982		
10/28/2001	10917.1	5638	1.5	1.2	13,797	11,095	24,892		
10/27/2001	10915.6	5636.8	0.8	0.9	7,358	8,321	15,680		
10/26/2001	10914.8	5635.9	1.4	1.2	12,877	11,095	23,972		
10/25/2001	10913.4	5634.7	0.9	1	8,278	9,246	17,524		
10/24/2001	10912.5	5633.7	1.2	0.9	11,038	8,321	19,359		
10/23/2001	10911.3	5632.8	1.1	1.5	10,118	13,869	23,987		
10/22/2001	10910.2	5631.3	1	0.9	9,198	8,321	17,519		
10/21/2001	10909.2	5630.4	1.2	1.3	11,038	12,020	23,057		
10/20/2001	10908	5629.1	1.3	1.2	11,957	11,095	23,053		
10/19/2001	10906.7	5627.9	1.1	1.1	10,118	10,171	20,288		
10/18/2001	10905.6	5626.8	1.1	1.2	10,118	11,095	21,213		
10/17/2001	10904.5	5625.6	1.3	1.3	11,957	12,020	23,977		
10/16/2001	10903.2	5624.3	1.2	1	11,038	9,246	20,284		
10/15/2001	10902	5623.3	1	1.4	9,198	12,944	22,142		
10/14/2001	10901	5621.9	1.4	1.2	12,877	11,095	23,972		
10/13/2001	10899.6	5620.7	1.1	1.2	10,118	11,095	21,213		
10/12/2001	10898.5	5619.5	1.1	1.1	10,118	10,171	20,288		
10/11/2001	10897.4	5618.4	1.1	1.1	10,118	10,171	20,288		
10/10/2001	10896.3	5617.3	1.3	1.3	11,957	12,020	23,977		
10/09/2001	10895	5616	0.8	0.8	7,358	7,397	14,755		
10/08/2001	10894.2	5615.2	1.3	1.3	11,957	12,020	23,977		
10/07/2001	10892.9	5613.9	1.4	1.5	12,877	13,869	26,746		
10/06/2001	10891.5	5612.4	1.2	1.2	11,038	11,095	22,133		
10/05/2001	10890.3	5611.2	1.1	1.1	10,118	10,171	20,288		
10/04/2001	10889.2	5610.1	1.2	1.3	11,038	12,020	23,057		
10/03/2001	10888	5608.8	1	1	9,198	9,246	18,444		
10/02/2001	10887	5607.8	1	1.1	9,198	10,171	19,369		
10/01/2001	10886	5606.7	1.1	1.3	10,118	12,020	22,138		
09/30/2001	10884.9	5605.4	1.9	0.9	17,476	8,321	25,798	21,457	
09/29/2001	10883	5604.5	0.8	1.5	7,358	13,869	21,227		
09/28/2001	10882.2	5603	0.3	1	2,759	9,246	12,005		
09/27/2001	10881.9	5602	2.1	1.3	19,316	12,020	31,336		
09/26/2001	10879.8	5600.7	1	1.1	9,198	10,171	19,369		
09/25/2001	10878.8	5599.6	1.5	1.2	13,797	11,095	24,892		
09/24/2001	10877.3	5598.4	0.9	1.3	8,278	12,020	20,298		
09/23/2001	10876.4	5597.1	1.2	1.4	11,038	12,944	23,982		
09/22/2001	10875.2	5595.7	1.2	1.3	11,038	12,020	23,057		
09/21/2001	10874	5594.4	1	0.9	9,198	8,321	17,519		
09/20/2001	10873	5593.5	1	0.9	9,198	8,321	17,519		
09/19/2001	10872	5592.6	1.5	0.7	13,797	6,472	20,269		
09/18/2001	10870.5	5591.9	1.6	2.5	14,717	23,115	37,832		
09/17/2001	10868.9	5589.4	1.4	1.7	12,877	15,718	28,595		
09/16/2001	10867.5	5587.7	1.2	1.3	11,038	12,020	23,057		
09/15/2001	10866.3	5586.4	1.2	1.3	11,038	12,020	23,057		0.74
09/14/2001	10865.1	5585.1	1.4	1.4	12,877	12,944	25,822		0.1
09/13/2001	10863.7	5583.7	0.8	1	7,358	9,246	16,604		0.9
09/12/2001	10862.9	5582.7	1.1	1	10,118	9,246	19,364		0.1
09/11/2001	10861.8	5581.7	1.3	1.1	11,957	10,171	22,128		
09/10/2001	10860.5	5580.6	0.7	1.3	6,439	12,020	18,458		
09/09/2001	10859.8	5579.3	1	0.8	9,198	7,397	16,595		
09/08/2001	10858.8	5578.5	0.9	1.2	8,278	11,095	19,373		0.28
09/07/2001	10857.9	5577.3	0.8	0.9	7,358	8,321	15,680		
09/06/2001	10857.1	5576.4	0.9	0.9	8,278	8,321	16,600		
09/05/2001	10856.2	5575.5	1.1	1.1	10,118	10,171	20,288		

09/04/2001	10855.1	5574.4	1.5	1.3	13,797	12,020	25,817		
09/03/2001	10853.6	5573.1	0.9	0.9	8,278	8,321	16,600		
09/02/2001	10852.7	5572.2	0.9	1.2	8,278	11,095	19,373		
09/01/2001	10851.8	5571	1.3	1	11,957	9,246	21,203		
08/31/2001	10850.5	5570	1.1	1.3	10,118	12,020	22,138	20,021	
08/30/2001	10849.4	5568.7	0.9	0.9	8,278	8,321	16,600		
08/29/2001	10848.5	5567.8	1.1	1.8	10,118	16,643	26,761		0.25
08/28/2001	10847.4	5566	1.3	0.3	11,957	2,774	14,731		
08/27/2001	10846.1	5565.7	1.1	0.9	10,118	8,321	18,439		
08/26/2001	10845	5564.8	1.2	1.3	11,038	12,020	23,057		
08/25/2001	10843.8	5563.5	1.1	1.1	10,118	10,171	20,288		
08/24/2001	10842.7	5562.4	0.9	0.9	8,278	8,321	16,600		
08/23/2001	10841.8	5561.5	1.6	1.1	14,717	10,171	24,887		
08/22/2001	10840.2	5560.4	0.5	1.1	4,599	10,171	14,770		
08/21/2001	10839.7	5559.3	1	1.2	9,198	11,095	20,293		
08/20/2001	10838.7	5558.1	1.4	1.1	12,877	10,171	23,048		
08/19/2001	10837.3	5557	0.8	0.8	7,358	7,397	14,755		
08/18/2001	10836.5	5556.2	1.2	1.2	11,038	11,095	22,133		
08/17/2001	10835.3	5555	1.1	1.2	10,118	11,095	21,213		
08/16/2001	10834.2	5553.8	0.9	0.9	8,278	8,321	16,600		
08/15/2001	10833.3	5552.9	0.9	0.9	8,278	8,321	16,600		
08/14/2001	10832.4	5552	1.1	1	10,118	9,246	19,364		
08/13/2001	10831.3	5551	1.1	1.1	10,118	10,171	20,288		0.24
08/12/2001	10830.2	5549.9	1	1.2	9,198	11,095	20,293		
08/11/2001	10829.2	5548.7	1.2	1.1	11,038	10,171	21,208		
08/10/2001	10828	5547.6	0.9	0.8	8,278	7,397	15,675		
08/09/2001	10827.1	5546.8	1.1	1.2	10,118	11,095	21,213		
08/08/2001	10826	5545.6	1.2	1.2	11,038	11,095	22,133		
08/07/2001	10824.8	5544.4	1.2	1.3	11,038	12,020	23,057		
08/06/2001	10823.6	5543.1	1.2	1.1	11,038	10,171	21,208		
08/05/2001	10822.4	5542	1.1	1	10,118	9,246	19,364		
08/04/2001	10821.3	5541	0.9	1.1	8,278	10,171	18,449		
08/03/2001	10820.4	5539.9	1	1.1	9,198	10,171	19,369		
08/02/2001	10819.4	5538.8	1.5	2.3	13,797	21,266	35,063		
08/01/2001	10817.9	5536.5	1	0.2	9,198	1,849	11,047		
07/31/2001	10816.9	5536.3	1.2	1.3	11,038	12,020	23,057	22,550	
07/30/2001	10815.7	5535	1.3	1.1	11,957	10,171	22,128		
07/29/2001	10814.4	5533.9	1.3	0.4	11,957	3,698	15,656		
07/28/2001	10813.1	5533.5	1.2	2.4	11,038	22,190	33,228		
07/27/2001	10811.9	5531.1	1.2	1.3	11,038	12,020	23,057		
07/26/2001	10810.7	5529.8	1.5	1.4	13,797	12,944	26,741		
07/25/2001	10809.2	5528.4	1.3	1.6	11,957	14,794	26,751		
07/24/2001	10807.9	5526.8	1.5	1.3	13,797	12,020	25,817		
07/23/2001	10806.4	5525.5	1.1	1.1	10,118	10,171	20,288		3.15
07/22/2001	10805.3	5524.4	1.1	1.3	10,118	12,020	22,138		0.55
07/21/2001	10804.2	5523.1	1.2	1.1	11,038	10,171	21,208		0.27
07/20/2001	10803	5522	1.1	1.2	10,118	11,095	21,213		
07/19/2001	10801.9	5520.8	1.9	1.1	17,476	10,171	27,647		
07/18/2001	10800	5519.7	0.2	1	1,840	9,246	11,086		
07/17/2001	10799.8	5518.7	1.1	1.2	10,118	11,095	21,213		
07/16/2001	10798.7	5517.5	1.3	1.3	11,957	12,020	23,977		
07/15/2001	10797.4	5516.2	1	1	9,198	9,246	18,444		0.28
07/14/2001	10796.4	5515.2	1.2	1.3	11,038	12,020	23,057		
07/13/2001	10795.2	5513.9	1.1	1.1	10,118	10,171	20,288		
07/12/2001	10794.1	5512.8	1.1	1.1	10,118	10,171	20,288		
07/11/2001	10793	5511.7	1.2	1.1	11,038	10,171	21,208		
07/10/2001	10791.8	5510.6	1.3	1.3	11,957	12,020	23,977		
07/09/2001	10790.5	5509.3	1.1	1.2	10,118	11,095	21,213		
07/08/2001	10789.4	5508.1	2	0.9	18,396	8,321	26,717		
07/07/2001	10787.4	5507.2	0.6	1.7	5,519	15,718	21,237		
07/06/2001	10786.8	5505.5	1.4	1.3	12,877	12,020	24,897		0.23
07/05/2001	10785.4	5504.2	1.2	1.2	11,038	11,095	22,133		
07/04/2001	10784.2	5503	1	1.1	9,198	10,171	19,369		
07/03/2001	10783.2	5501.9	1	1	9,198	9,246	18,444		
07/02/2001	10782.2	5500.9	1.5	1.5	13,797	13,869	27,666		
07/01/2001	10780.7	5499.4	1.4	1.3	12,877	12,020	24,897		0.11
06/30/2001	10779.3	5498.1	1.2	1.3	11,038	12,020	23,057	31,539	
06/29/2001	10778.1	5496.8	0.9	0.9	8,278	8,321	16,600		
06/28/2001	10777.2	5495.9	1.8	1.7	16,556	15,718	32,275		0.27
06/27/2001	10775.4	5494.2	0.8	1.5	7,358	13,869	21,227		
06/26/2001	10774.6	5492.7	1.8	1.7	16,556	15,718	32,275		
06/25/2001	10772.8	5491	1.7	1.1	15,637	10,171	25,807		0.9
06/24/2001	10771.1	5489.9	1.2	1.2	11,038	11,095	22,133		
06/23/2001	10769.9	5488.7	1.5	1.3	13,797	12,020	25,817		

06/22/2001	10768.4	5487.4	1.3	1.5	11,957	13,869	25,826		
06/21/2001	10767.1	5485.9	1.6	1.5	14,717	13,869	28,586		
06/20/2001	10765.5	5484.4	1.1	1.1	10,118	10,171	20,288		
06/19/2001	10764.4	5483.3	2	2	18,396	18,492	36,888		
06/18/2001	10762.4	5481.3	1.4	1.5	12,877	13,869	26,746		
06/17/2001	10761	5479.8	1.1	1.7	10,118	15,718	25,836		
06/16/2001	10759.9	5478.1	1.8	1.2	16,556	11,095	27,652		
06/15/2001	10758.1	5476.9	2.1	2.1	19,316	19,417	38,732		
06/14/2001	10756	5474.8	1.4	1.4	12,877	12,944	25,822		
06/13/2001	10754.6	5473.4	1.9	1.8	17,476	16,643	34,119		
06/12/2001	10752.7	5471.6	2.5	2.6	22,995	24,040	47,035		0.13
06/11/2001	10750.2	5469	2	1.9	18,396	17,567	35,963		0.32
06/10/2001	10748.2	5467.1	2	2	18,396	18,492	36,888		
06/09/2001	10746.2	5465.1	2.2	1.4	20,236	12,944	33,180		0.51
06/08/2001	10744	5463.7	0.7	1.5	6,439	13,869	20,308		
06/07/2001	10743.3	5462.2	2.2	2.1	20,236	19,417	39,652		
06/06/2001	10741.1	5460.1	2.5	2.5	22,995	23,115	46,110		
06/05/2001	10738.6	5457.6	2.6	1.7	23,915	15,718	39,633		
06/04/2001	10736	5455.9	1.5	2.4	13,797	22,190	35,987		0.36
06/03/2001	10734.5	5453.5	2.1	2	19,316	18,492	37,808		
06/02/2001	10732.4	5451.5	1.9	1.9	17,476	17,567	35,044		
06/01/2001	10730.5	5449.6	2.7	2.6	24,835	24,040	48,874		
05/31/2001	10727.8	5447	2.4	2.4	22,075	22,190	44,266	75,171	0.26
05/30/2001	10725.4	5444.6	2	1.9	18,396	17,567	35,963		
05/29/2001	10723.4	5442.7	2.6	2.7	23,915	24,964	48,879		
05/28/2001	10720.8	5440	2.4	2.2	22,075	20,341	42,416		
05/27/2001	10718.4	5437.8	3.5	3	32,193	27,738	59,931		
05/26/2001	10714.9	5434.8	2.1	2.4	19,316	22,190	41,506		
05/25/2001	10712.8	5432.4	2.9	2.3	26,674	21,266	47,940		
05/24/2001	10709.9	5430.1	2.5	3.1	22,995	28,663	51,658		
05/23/2001	10707.4	5427	3	3	27,594	27,738	55,332		
05/22/2001	10704.4	5424	2.4	2.3	22,075	21,266	43,341		
05/21/2001	10702	5421.7	3.2	3.3	29,434	30,512	59,945		
05/20/2001	10698.8	5418.4	4.3	3.4	39,551	31,436	70,988		
05/19/2001	10694.5	5415	2.6	3.6	23,915	33,286	57,200		0.17
05/18/2001	10691.9	5411.4	3.5	3.5	32,193	32,361	64,554		
05/17/2001	10688.4	5407.9	4.1	3.6	37,712	33,286	70,997		
05/16/2001	10684.3	5404.3	3.3	3.8	30,353	35,135	65,488		
05/15/2001	10681	5400.5	4.1	4.2	37,712	38,833	76,545		
05/14/2001	10676.9	5396.3	4	4	36,792	36,984	73,776		
05/13/2001	10672.9	5392.3	5	5.2	45,990	48,079	94,069		
05/12/2001	10667.9	5387.1	4.9	4.6	45,070	42,532	87,602		
05/11/2001	10663	5382.5	5.1	4.7	46,910	43,456	90,366		
05/10/2001	10657.9	5377.8	5.9	5.9	54,268	54,551	108,820		
05/09/2001	10652	5371.9	6.6	6.3	60,707	58,250	118,957		
05/08/2001	10645.4	5365.6	7.3	6.5	67,145	60,099	127,244		
05/07/2001	10638.1	5359.1	6.2	6.2	57,028	57,325	114,353		
05/06/2001	10631.9	5352.9	5.8	5.9	53,348	54,551	107,900		
05/05/2001	10626.1	5347	5.4	4.7	49,669	43,456	93,125		0.21
05/04/2001	10620.7	5342.3	5.9	5.5	54,268	50,853	105,121		0.65
05/03/2001	10614.8	5336.8	5.1	4.9	46,910	45,305	92,215		0.07
05/02/2001	10609.7	5331.9	4.7	3.5	43,231	32,361	75,592		0.06
05/01/2001	10605	5328.4	5.4	5.9	49,669	54,551	104,221		0.44
04/30/2001	10599.6	5322.5	6.1	5.6	56,108	51,778	107,885	118,570	
04/29/2001	10593.5	5316.9	4.7	4.5	43,231	41,607	84,838		0.22
04/28/2001	10588.8	5312.4	7.5	5.9	68,985	54,551	123,536		
04/27/2001	10581.3	5306.5	7.9	7.5	72,664	69,345	142,009		
04/26/2001	10573.4	5299	12.5	6.8	114,975	62,873	177,848		
04/25/2001	10560.9	5292.2	12.9	12.2	118,654	112,801	231,455		
04/24/2001	10548	5280	22.6	22.6	207,875	208,960	416,834		
04/23/2001	10525.4	5257.4	12.1	12.9	111,296	119,273	230,569		
04/22/2001	10513.3	5244.5	15.1	12.5	138,890	115,575	254,465		0.35
04/21/2001	10498.2	5232	4.1	3.5	37,712	32,361	70,073		2.45
04/20/2001	10494.1	5228.5	4.8	4.1	44,150	37,909	82,059		
04/19/2001	10489.3	5224.4	7.2	2.9	66,226	26,813	93,039		0.25
04/18/2001	10482.1	5221.5	0.2	3.5	1,840	32,361	34,201		
04/17/2001	10481.9	5218	4.6	4	42,311	36,984	79,295		
04/16/2001	10477.3	5214	4.9	4.3	45,070	39,758	84,828		
04/15/2001	10472.4	5209.7	6.3	5.1	57,947	47,155	105,102		
04/14/2001	10466.1	5204.6	8	6.6	73,584	61,024	134,608		
04/13/2001	10458.1	5198	8.4	6	77,263	55,476	132,739		
04/12/2001	10449.7	5192	8.7	6.2	80,023	57,325	137,348		
04/11/2001	10441	5185.8	7.5	6.9	68,985	63,797	132,782		
04/10/2001	10433.5	5178.9	2.5	3.9	22,995	36,059	59,054		1.76

04/09/2001	10431	5175	4.9	3.6	45,070	33,286	78,356		
04/08/2001	10426.1	5171.4	4.5	2.8	41,391	25,889	67,280		
04/07/2001	10421.6	5168.6	3.1	2.6	28,514	24,040	52,553		
04/06/2001	10418.5	5166	4.5	3.5	41,391	32,361	73,752		0.5
04/05/2001	10414	5162.5	3.2	2.6	29,434	24,040	53,473		
04/04/2001	10410.8	5159.9	4.3	3.1	39,551	28,663	68,214		
04/03/2001	10406.5	5156.8	4.6	3.4	42,311	31,436	73,747		
04/02/2001	10401.9	5153.4	5.1	3.9	46,910	36,059	82,969		
04/01/2001	10396.8	5149.5	5.8	4.2	53,348	38,833	92,182		
03/31/2001	10391	5145.3	4.6	3.7	42,311	34,210	76,521	36,072	
03/30/2001	10386.4	5141.6	3.2	1.8	29,434	16,643	46,076		0.21
03/29/2001	10383.2	5139.8	2.9	3.2	26,674	29,587	56,261		
03/28/2001	10380.3	5136.6	3	2.4	27,594	22,190	49,784		
03/27/2001	10377.3	5134.2	2.7	2.6	24,835	24,040	48,874		
03/26/2001	10374.6	5131.6	3.1	2.3	28,514	21,266	49,780		
03/25/2001	10371.5	5129.3	2.7	2.1	24,835	19,417	44,251		
03/24/2001	10368.8	5127.2	3.3	2.7	30,353	24,964	55,318		
03/23/2001	10365.5	5124.5	4.1	3.5	37,712	32,361	70,073		
03/22/2001	10361.4	5121	3.1	2.2	28,514	20,341	48,855		
03/21/2001	10358.3	5118.8	4	4.1	36,792	37,909	74,701		
03/20/2001	10354.3	5114.7	3.2	1.7	29,434	15,718	45,152		
03/19/2001	10351.1	5113	2.5	1.6	22,995	14,794	37,789		
03/18/2001	10348.6	5111.4	2.4	1.5	22,075	13,869	35,944		
03/17/2001	10346.2	5109.9	1.4	1.9	12,877	17,567	30,445		
03/16/2001	10344.8	5108	2.9	1	26,674	9,246	35,920		
03/15/2001	10341.9	5107	1.9	1.2	17,476	11,095	28,571		
03/14/2001	10340	5105.8	1.5	1	13,797	9,246	23,043		
03/13/2001	10338.5	5104.8	1.1	0.7	10,118	6,472	16,590		
03/12/2001	10337.4	5104.1	1.5	0.6	13,797	5,548	19,345		
03/11/2001	10335.9	5103.5	1.4	0.6	12,877	5,548	18,425		
03/10/2001	10334.5	5102.9	1.1	1.3	10,118	12,020	22,138		
03/09/2001	10333.4	5101.6	1.4	1.6	12,877	14,794	27,671		
03/08/2001	10332	5100	1.3	0.2	11,957	1,849	13,807		
03/07/2001	10330.7	5099.8	1.5	0.8	13,797	7,397	21,194		
03/06/2001	10329.2	5099	0.9	0.9	8,278	8,321	16,600		
03/05/2001	10328.3	5098.1	1.2	0.9	11,038	8,321	19,359		
03/04/2001	10327.1	5097.2	1.4	1.3	12,877	12,020	24,897		
03/03/2001	10325.7	5095.9	0.9	1.9	8,278	17,567	25,846		
03/02/2001	10324.8	5094	1	0.1	9,198	925	10,123		
03/01/2001	10323.8	5093.9	1.6	1.1	14,717	10,171	24,887		
02/28/2001	10322.2	5092.8	1	0.9	9,198	8,321	17,519	20,219	
02/27/2001	10321.2	5091.9	0.7	0.8	6,439	7,397	13,835		
02/26/2001	10320.5	5091.1	1.5	1.1	13,797	10,171	23,968		
02/25/2001	10319	5090	0.9	0.4	8,278	3,698	11,977		
02/24/2001	10318.1	5089.6	1.4	0.9	12,877	8,321	21,199		
02/23/2001	10316.7	5088.7	1.3	1.9	11,957	17,567	29,525		
02/22/2001	10315.4	5086.8	1.2	0.9	11,038	8,321	19,359		
02/21/2001	10314.2	5085.9	1	0.9	9,198	8,321	17,519		
02/20/2001	10313.2	5085	1	0.9	9,198	8,321	17,519		
02/19/2001	10312.2	5084.1	1.5	1.2	13,797	11,095	24,892		
02/18/2001	10310.7	5082.9	1.3	1.3	11,957	12,020	23,977		
02/17/2001	10309.4	5081.6	1	0.8	9,198	7,397	16,595		
02/16/2001	10308.4	5080.8	1.1	1.2	10,118	11,095	21,213		
02/15/2001	10307.3	5079.6	0.9	0.4	8,278	3,698	11,977		
02/14/2001	10306.4	5079.2	1.4	1.2	12,877	11,095	23,972		
02/13/2001	10305	5078	1.2	0	11,038	0	11,038		
02/12/2001	10303.8	5078	0	1.9	0	17,567	17,567		
02/11/2001	10303.8	5076.1	1	1.3	9,198	12,020	21,218		
02/10/2001	10302.8	5074.8	2.7	1	24,835	9,246	34,081		
02/09/2001	10300.1	5073.8	1.1	1	10,118	9,246	19,364		
02/08/2001	10299	5072.8	1	0.9	9,198	8,321	17,519		
02/07/2001	10298	5071.9	1.2	1	11,038	9,246	20,284		
02/06/2001	10296.8	5070.9	1.6	1.2	14,717	11,095	25,812		
02/05/2001	10295.2	5069.7	0.7	0.9	6,439	8,321	14,760		
02/04/2001	10294.5	5068.8	1.4	0.9	12,877	8,321	21,199		
02/03/2001	10293.1	5067.9	0.9	1.1	8,278	10,171	18,449		
02/02/2001	10292.2	5066.8	1.4	1.1	12,877	10,171	23,048		
02/01/2001	10290.8	5065.7	1.3	1.6	11,957	14,794	26,751		
01/31/2001	10289.5	5064.1	1.9	0.9	17,476	8,321	25,798	19,715	
01/30/2001	10287.6	5063.2	1.4	1.1	12,877	10,171	23,048		
01/29/2001	10286.2	5062.1	1.2	0.9	11,038	8,321	19,359		
01/28/2001	10285	5061.2	1	1.1	9,198	10,171	19,369		
01/27/2001	10284	5060.1	1.5	1	13,797	9,246	23,043		
01/26/2001	10282.5	5059.1	1	0.8	9,198	7,397	16,595		

01/25/2001	10281.5	5058.3	1.4	0.9	12,877	8,321	21,199	
01/24/2001	10280.1	5057.4	1.1	1	10,118	9,246	19,364	
01/23/2001	10279	5056.4	1.3	0.8	11,957	7,397	19,354	
01/22/2001	10277.7	5055.6	1.1	0.6	10,118	5,548	15,665	
01/21/2001	10276.6	5055	1	0.8	9,198	7,397	16,595	
01/20/2001	10275.6	5054.2	0.7	1.1	6,439	10,171	16,609	
01/19/2001	10274.9	5053.1	2.1	1	19,316	9,246	28,562	
01/18/2001	10272.8	5052.1	1	0.8	9,198	7,397	16,595	
01/17/2001	10271.8	5051.3	1.1	0.8	10,118	7,397	17,515	
01/16/2001	10270.7	5050.5	1	0.9	9,198	8,321	17,519	
01/15/2001	10269.7	5049.6	2	1.3	18,396	12,020	30,416	
01/14/2001	10267.7	5048.3	1.1	0.9	10,118	8,321	18,439	
01/13/2001	10266.6	5047.4	1.3	0.8	11,957	7,397	19,354	
01/12/2001	10265.3	5046.6	1.3	0.9	11,957	8,321	20,279	
01/11/2001	10264	5045.7	0	0	0	0	0	
01/10/2001	10264	5045.7	1.1	0.9	10,118	8,321	18,439	
01/09/2001	10262.9	5044.8	1.3	0.8	11,957	7,397	19,354	
01/08/2001	10261.6	5044	2.4	0.9	22,075	8,321	30,397	
01/07/2001	10259.2	5043.1	0.3	1.1	2,759	10,171	12,930	
01/06/2001	10258.9	5042	1.3	2	11,957	18,492	30,449	
01/05/2001	10257.6	5040	2.1	0.4	19,316	3,698	23,014	
01/04/2001	10255.5	5039.6	0.6	0.9	5,519	8,321	13,840	
01/03/2001	10254.9	5038.7	1.9	0.9	17,476	8,321	25,798	
01/02/2001	10253	5037.8	1	0.8	9,198	7,397	16,595	
01/01/2001	10252	5037	0.9	0.8	8,278	7,397	15,675	
12/31/2000	10251.1	5036.2	1.1	0.8	10,118	7,397	17,515	24,923
12/30/2000	10250	5035.4	1	1.1	9,198	10,171	19,369	
12/29/2000	10249	5034.3	1.2	1.1	11,038	10,171	21,208	
12/28/2000	10247.8	5033.2	0.9	1.1	8,278	10,171	18,449	
12/27/2000	10246.9	5032.1	1.9	1	17,476	9,246	26,722	
12/26/2000	10245	5031.1	1.1	0.9	10,118	8,321	18,439	
12/25/2000	10243.9	5030.2	1.3	1.1	11,957	10,171	22,128	
12/24/2000	10242.6	5029.1	1.1	1.2	10,118	11,095	21,213	
12/23/2000	10241.5	5027.9	2.2	1.1	20,236	10,171	30,406	
12/22/2000	10239.3	5026.8	0.9	1.5	8,278	13,869	22,147	
12/21/2000	10238.4	5025.3	2.7	2	24,835	18,492	43,327	
12/20/2000	10235.7	5023.3	1.4	1.2	12,877	11,095	23,972	
12/19/2000	10234.3	5022.1	1.7	1.2	15,637	11,095	26,732	
12/18/2000	10232.6	5020.9	1.2	1.2	11,038	11,095	22,133	
12/17/2000	10231.4	5019.7	1.9	1.3	17,476	12,020	29,496	
12/16/2000	10229.5	5018.4	1.5	0.9	13,797	8,321	22,118	
12/15/2000	10228	5017.5	0.7	1.2	6,439	11,095	17,534	
12/14/2000	10227.3	5016.3	1.2	1.1	11,038	10,171	21,208	
12/13/2000	10226.1	5015.2	2.1	1.3	19,316	12,020	31,336	
12/12/2000	10224	5013.9	1.3	1.8	11,957	16,643	28,600	
12/11/2000	10222.7	5012.1	1.2	0.9	11,038	8,321	19,359	
12/10/2000	10221.5	5011.2	1.6	1.6	14,717	14,794	29,510	
12/09/2000	10219.9	5009.6	1.4	1.1	12,877	10,171	23,048	
12/08/2000	10218.5	5008.5	1.4	0.9	12,877	8,321	21,199	
12/07/2000	10217.1	5007.6	1.4	1.4	12,877	12,944	25,822	
12/06/2000	10215.7	5006.2	1.8	1.2	16,556	11,095	27,652	
12/05/2000	10213.9	5005	1.5	1.5	13,797	13,869	27,666	
12/04/2000	10212.4	5003.5	1.7	1.5	15,637	13,869	29,506	
12/03/2000	10210.7	5002	1.6	0.9	14,717	8,321	23,038	
12/02/2000	10209.1	5001.1	0.9	1.1	8,278	10,171	18,449	
12/01/2000	10208.2	5000	3.2	1.5	29,434	13,869	43,303	
11/30/2000	10205	4998.5	0.5	1.2	4,599	11,095	15,694	24,649
11/29/2000	10204.5	4997.3	0.8	1.3	7,358	12,020	19,378	
11/28/2000	10203.7	4996	2	1.1	18,396	10,171	28,567	
11/27/2000	10201.7	4994.9	0.9	1.4	8,278	12,944	21,223	
11/26/2000	10200.8	4993.5	2	2.3	18,396	21,266	39,662	
11/25/2000	10198.8	4991.2	1.2	0.4	11,038	3,698	14,736	
11/24/2000	10197.6	4990.8	1.7	1.2	15,637	11,095	26,732	
11/23/2000	10195.9	4989.6	1.5	1.2	13,797	11,095	24,892	
11/22/2000	10194.4	4988.4	1.1	1	10,118	9,246	19,364	
11/21/2000	10193.3	4987.4	1.7	1.6	15,637	14,794	30,430	
11/20/2000	10191.6	4985.8	1.6	1.7	14,717	15,718	30,435	
11/19/2000	10190	4984.1	1.9	1.2	17,476	11,095	28,571	
11/18/2000	10188.1	4982.9	1.1	1.3	10,118	12,020	22,138	
11/17/2000	10187	4981.6	1.2	1.6	11,038	14,794	25,831	
11/16/2000	10185.8	4980	1.9	1.1	17,476	10,171	27,647	
11/15/2000	10183.9	4978.9	1.3	1.2	11,957	11,095	23,053	
11/14/2000	10182.6	4977.7	1.6	1.5	14,717	13,869	28,586	
11/13/2000	10181	4976.2	1.4	0.9	12,877	8,321	21,199	

11/12/2000	10179.6	4975.3	1.7	1.3	15,637	12,020	27,656		
11/11/2000	10177.9	4974	1.5	1.6	13,797	14,794	28,591		
11/10/2000	10176.4	4972.4	1.4	1.3	12,877	12,020	24,897		
11/09/2000	10175	4971.1	1.6	1.3	14,717	12,020	26,737		
11/08/2000	10173.4	4969.8	1.5	1.5	13,797	13,869	27,666		
11/07/2000	10171.9	4968.3	1.5	0.8	13,797	7,397	21,194		
11/06/2000	10170.4	4967.5	2.2	1.1	20,236	10,171	30,406		
11/05/2000	10168.2	4966.4	1.1	1.3	10,118	12,020	22,138		
11/04/2000	10167.1	4965.1	1.2	0.9	11,038	8,321	19,359		
11/03/2000	10165.9	4964.2	1.3	0.7	11,957	6,472	18,430		
11/02/2000	10164.6	4963.5	1.1	1.1	10,118	10,171	20,288		
11/01/2000	10163.5	4962.4	1.4	1.2	12,877	11,095	23,972		
10/31/2000	10162.1	4961.2	1.3	0.9	11,957	8,321	20,279	21,890	
10/30/2000	10160.8	4960.3	1.5	1.2	13,797	11,095	24,892		
10/29/2000	10159.3	4959.1	1.4	0.9	12,877	8,321	21,199		
10/28/2000	10157.9	4958.2	1.4	1.1	12,877	10,171	23,048		
10/27/2000	10156.5	4957.1	1.4	0.9	12,877	8,321	21,199		
10/26/2000	10155.1	4956.2	0.9	0.8	8,278	7,397	15,675		
10/25/2000	10154.2	4955.4	1.7	0.9	15,637	8,321	23,958		
10/24/2000	10152.5	4954.5	1	1.1	9,198	10,171	19,369		
10/23/2000	10151.5	4953.4	1.1	0.9	10,118	8,321	18,439		
10/22/2000	10150.4	4952.5	1.4	1	12,877	9,246	22,123		
10/21/2000	10149	4951.5	1.1	0.9	10,118	8,321	18,439		
10/20/2000	10147.9	4950.6	1.3	1.1	11,957	10,171	22,128		
10/19/2000	10146.6	4949.5	1.1	0.8	10,118	7,397	17,515		
10/18/2000	10145.5	4948.7	0.8	1	7,358	9,246	16,604		
10/17/2000	10144.7	4947.7	1.2	1.2	11,038	11,095	22,133		
10/16/2000	10143.5	4946.5	1.3	1.3	11,957	12,020	23,977		
10/15/2000	10142.2	4945.2	1.6	1.6	14,717	14,794	29,510		
10/14/2000	10140.6	4943.6	1.3	1.2	11,957	11,095	23,053		
10/13/2000	10139.3	4942.4	1.2	1.1	11,038	10,171	21,208		
10/12/2000	10138.1	4941.3	1.2	1.1	11,038	10,171	21,208		
10/11/2000	10136.9	4940.2	1.2	1.2	11,038	11,095	22,133		
10/10/2000	10135.7	4939	1.7	1	15,637	9,246	24,883		
10/09/2000	10134	4938	1.1	1.2	10,118	11,095	21,213		
10/08/2000	10132.9	4936.8	1.3	1.1	11,957	10,171	22,128		
10/07/2000	10131.6	4935.7	1.5	1.3	13,797	12,020	25,817		
10/06/2000	10130.1	4934.4	1.1	0.9	10,118	8,321	18,439		
10/05/2000	10129	4933.5	1.3	1.2	11,957	11,095	23,053		
10/04/2000	10127.7	4932.3	1.6	1.4	14,717	12,944	27,661		
10/03/2000	10126.1	4930.9	0.7	0.7	6,439	6,472	12,911		
10/02/2000	10125.4	4930.2	1.7	1.3	15,637	12,020	27,656		
10/01/2000	10123.7	4928.9	1.5	1.4	13,797	12,944	26,741		
09/30/2000	10122.2	4927.5	0.8	0.7	7,358	6,472	13,831	20,867	
09/29/2000	10121.4	4926.8	2.4	1.2	22,075	11,095	33,170		
09/28/2000	10119	4925.6	0.2	0.9	1,840	8,321	10,161		
09/27/2000	10118.8	4924.7	1.1	0.9	10,118	8,321	18,439		
09/26/2000	10117.7	4923.8	1.3	0.8	11,957	7,397	19,354		
09/25/2000	10116.4	4923	1.4	1	12,877	9,246	22,123		
09/24/2000	10115	4922	1.3	1.1	11,957	10,171	22,128		
09/23/2000	10113.7	4920.9	0.9	0.8	8,278	7,397	15,675		
09/22/2000	10112.8	4920.1	1.6	1.4	14,717	12,944	27,661		
09/21/2000	10111.2	4918.7	1.2	0.9	11,038	8,321	19,359		0.57
09/20/2000	10110	4917.8	1.2	1.2	11,038	11,095	22,133		
09/19/2000	10108.8	4916.6	1.1	0.9	10,118	8,321	18,439		
09/18/2000	10107.7	4915.7	1.3	1.1	11,957	10,171	22,128		
09/17/2000	10106.4	4914.6	1.3	1.1	11,957	10,171	22,128		
09/16/2000	10105.1	4913.5	1.2	0.9	11,038	8,321	19,359		
09/15/2000	10103.9	4912.6	1.4	1.2	12,877	11,095	23,972		
09/14/2000	10102.5	4911.4	1.1	0.6	10,118	5,548	15,665		
09/13/2000	10101.4	4910.8	1.3	1.1	11,957	10,171	22,128		
09/12/2000	10100.1	4909.7	1	0.8	9,198	7,397	16,595		
09/11/2000	10099.1	4908.9	1.3	1.3	11,957	12,020	23,977		
09/10/2000	10097.8	4907.6	1.5	1.2	13,797	11,095	24,892		
09/09/2000	10096.3	4906.4	1.2	1.1	11,038	10,171	21,208		
09/08/2000	10095.1	4905.3	1.3	1.1	11,957	10,171	22,128		
09/07/2000	10093.8	4904.2	1.2	1	11,038	9,246	20,284		
09/06/2000	10092.6	4903.2	1.2	1	11,038	9,246	20,284		
09/05/2000	10091.4	4902.2	1.3	1.2	11,957	11,095	23,053		
09/04/2000	10090.1	4901	1.2	1.2	11,038	11,095	22,133		
09/03/2000	10088.9	4899.8	1.1	1.5	10,118	13,869	23,987		0.46
09/02/2000	10087.8	4898.3	1.2	1.1	11,038	10,171	21,208		
09/01/2000	10086.6	4897.2	1.6	0.4	14,717	3,698	18,415		
08/31/2000	10085	4896.8	1.2	1.8	11,038	16,643	27,680	25,137	

08/30/2000	10083.8	4895	1.3	1.1	11,957	10,171	22,128		
08/29/2000	10082.5	4893.9	0.9	1.1	8,278	10,171	18,449		
08/28/2000	10081.6	4892.8	1.5	1.4	13,797	12,944	26,741		
08/27/2000	10080.1	4891.4	2.1	1.2	19,316	11,095	30,411		
08/26/2000	10078	4890.2	0.2	1	1,840	9,246	11,086		
08/25/2000	10077.8	4889.2	1.1	1.3	10,118	12,020	22,138		
08/24/2000	10076.7	4887.9	1.6	1.3	14,717	12,020	26,737		
08/23/2000	10075.1	4886.6	0.5	1.5	4,599	13,869	18,468		
08/22/2000	10074.6	4885.1	2.5	1.4	22,995	12,944	35,939		
08/21/2000	10072.1	4883.7	1.2	1.3	11,038	12,020	23,057		0.2
08/20/2000	10070.9	4882.4	1.1	1.2	10,118	11,095	21,213		
08/19/2000	10069.8	4881.2	1.1	1.5	10,118	13,869	23,987		
08/18/2000	10068.7	4879.7	2.1	1.5	19,316	13,869	33,185		
08/17/2000	10066.6	4878.2	1.4	1.2	12,877	11,095	23,972		
08/16/2000	10065.2	4877	1.2	1.2	11,038	11,095	22,133		
08/15/2000	10064	4875.8	1.2	1.3	11,038	12,020	23,057		
08/14/2000	10062.8	4874.5	1.6	1.5	14,717	13,869	28,586		
08/13/2000	10061.2	4873	1.5	1.5	13,797	13,869	27,666		
08/12/2000	10059.7	4871.5	1.3	1	11,957	9,246	21,203		
08/11/2000	10058.4	4870.5	1.7	2	15,637	18,492	34,129		
08/10/2000	10056.7	4868.5	1.8	1.5	16,556	13,869	30,425		
08/09/2000	10054.9	4867	1.7	1.8	15,637	16,643	32,279		
08/08/2000	10053.2	4865.2	1.9	1.8	17,476	16,643	34,119		
08/07/2000	10051.3	4863.4	1.6	1.8	14,717	16,643	31,360		0.93
08/06/2000	10049.7	4861.6	1.4	1.1	12,877	10,171	23,048		
08/05/2000	10048.3	4860.5	1.2	1.2	11,038	11,095	22,133		
08/04/2000	10047.1	4859.3	1	1	9,198	9,246	18,444		0.48
08/03/2000	10046.1	4858.3	1.2	1.1	11,038	10,171	21,208		
08/02/2000	10044.9	4857.2	1	1.1	9,198	10,171	19,369		
08/01/2000	10043.9	4856.1	1.4	1.3	12,877	12,020	24,897		
07/31/2000	10042.5	4854.8	1.3	1.1	11,957	10,171	22,128	24,809	
07/30/2000	10041.2	4853.7	1.3	1.5	11,957	13,869	25,826		
07/29/2000	10039.9	4852.2	1.1	0.9	10,118	8,321	18,439		
07/28/2000	10038.8	4851.3	1.4	1.2	12,877	11,095	23,972		
07/27/2000	10037.4	4850.1	1.1	0.9	10,118	8,321	18,439		
07/26/2000	10036.3	4849.2	1	1.2	9,198	11,095	20,293		
07/25/2000	10035.3	4848	1.3	1.1	11,957	10,171	22,128		
07/24/2000	10034	4846.9	1.1	1.1	10,118	10,171	20,288		
07/23/2000	10032.9	4845.8	1.3	1.4	11,957	12,944	24,902		
07/22/2000	10031.6	4844.4	1.6	1.3	14,717	12,020	26,737		
07/21/2000	10030	4843.1	1.4	1.5	12,877	13,869	26,746		
07/20/2000	10028.6	4841.6	0.8	0.9	7,358	8,321	15,680		
07/19/2000	10027.8	4840.7	1.5	1.2	13,797	11,095	24,892		
07/18/2000	10026.3	4839.5	1.4	1.6	12,877	14,794	27,671		
07/17/2000	10024.9	4837.9	1.4	1.4	12,877	12,944	25,822		
07/16/2000	10023.5	4836.5	1.5	1.5	13,797	13,869	27,666		
07/15/2000	10022	4835	0.1	1.1	920	10,171	11,090		
07/14/2000	10021.9	4833.9	2.5	1.4	22,995	12,944	35,939		0.27
07/13/2000	10019.4	4832.5	1.7	1.6	15,637	14,794	30,430		
07/12/2000	10017.7	4830.9	1.7	1.4	15,637	12,944	28,581		
07/11/2000	10016	4829.5	1.1	1.3	10,118	12,020	22,138		
07/10/2000	10014.9	4828.2	1.2	1.1	11,038	10,171	21,208		0.99
07/09/2000	10013.7	4827.1	1.3	1.3	11,957	12,020	23,977		
07/08/2000	10012.4	4825.8	1.7	1.5	15,637	13,869	29,506		
07/07/2000	10010.7	4824.3	1.4	1.5	12,877	13,869	26,746		
07/06/2000	10009.3	4822.8	1.5	1.3	13,797	12,020	25,817		
07/05/2000	10007.8	4821.5	1.8	0.7	16,556	6,472	23,029		
07/04/2000	10006	4820.8	1.4	2.3	12,877	21,266	34,143		
07/03/2000	10004.6	4818.5	1.6	1.6	14,717	14,794	29,510		1.13
07/02/2000	10003	4816.9	1.8	1	16,556	9,246	25,802		
07/01/2000	10001.2	4815.9	1.3	1.9	11,957	17,567	29,525		
06/30/2000	9999.9	4814	1.8	1.5	16,556	13,869	30,425	28,063	
06/29/2000	9998.1	4812.5	1.6	1.8	14,717	16,643	31,360		
06/28/2000	9996.5	4810.7	1.7	1.3	15,637	12,020	27,656		
06/27/2000	9994.8	4809.4	2.3	2	21,155	18,492	39,647		0.4
06/26/2000	9992.5	4807.4	1.5	2.4	13,797	22,190	35,987		
06/25/2000	9991	4805	1.6	0.8	14,717	7,397	22,114		
06/24/2000	9989.4	4804.2	1.6	1.6	14,717	14,794	29,510		0.95
06/23/2000	9987.8	4802.6	0.9	0.9	8,278	8,321	16,600		0.46
06/22/2000	9986.9	4801.7	1.6	1.5	14,717	13,869	28,586		
06/21/2000	9985.3	4800.2	1.1	1.1	10,118	10,171	20,288		
06/20/2000	9984.2	4799.1	1.3	1.2	11,957	11,095	23,053		
06/19/2000	9982.9	4797.9	1.4	1.6	12,877	14,794	27,671		
06/18/2000	9981.5	4796.3	1.3	1	11,957	9,246	21,203		

06/17/2000	9980.2	4795.3	1.2	1.3	11,038	12,020	23,057		
06/16/2000	9979	4794	1.2	1.6	11,038	14,794	25,831		
06/15/2000	9977.8	4792.4	1.8	1.5	16,556	13,869	30,425		
06/14/2000	9976	4790.9	2	1.8	18,396	16,643	35,039		
06/13/2000	9974	4789.1	1	1.1	9,198	10,171	19,369		
06/12/2000	9973	4788	1.3	1.3	11,957	12,020	23,977		
06/11/2000	9971.7	4786.7	0.9	1.6	8,278	14,794	23,072		
06/10/2000	9970.8	4785.1	2.3	1.7	21,155	15,718	36,874		
06/09/2000	9968.5	4783.4	1.4	0.8	12,877	7,397	20,274		
06/08/2000	9967.1	4782.6	1.6	1.3	14,717	12,020	26,737		
06/07/2000	9965.5	4781.3	2.2	1.9	20,236	17,567	37,803		
06/06/2000	9963.3	4779.4	1.8	1.6	16,556	14,794	31,350		
06/05/2000	9961.5	4777.8	2.2	2	20,236	18,492	38,728		
06/04/2000	9959.3	4775.8	1.7	1.8	15,637	16,643	32,279		
06/03/2000	9957.6	4774	1.3	1.3	11,957	12,020	23,977		
06/02/2000	9956.3	4772.7	1.7	1.2	15,637	11,095	26,732		
06/01/2000	9954.6	4771.5	1.9	1.6	17,476	14,794	32,270		
05/31/2000	9952.7	4769.9	1.6	1.2	14,717	11,095	25,812	30,104	
05/30/2000	9951.1	4768.7	1.2	1.1	11,038	10,171	21,208		0.47
05/29/2000	9949.9	4767.6	2	1.3	18,396	12,020	30,416		
05/28/2000	9947.9	4766.3	1.6	1.5	14,717	13,869	28,586		
05/27/2000	9946.3	4764.8	1.6	1.3	14,717	12,020	26,737		
05/26/2000	9944.7	4763.5	1.3	1.1	11,957	10,171	22,128		
05/25/2000	9943.4	4762.4	2.1	1.6	19,316	14,794	34,109		0.5
05/24/2000	9941.3	4760.8	1.4	1.4	12,877	12,944	25,822		
05/23/2000	9939.9	4759.4	2.7	2.3	24,835	21,266	46,100		
05/22/2000	9937.2	4757.1	1.7	1.3	15,637	12,020	27,656		
05/21/2000	9935.5	4755.8	3	3	27,594	27,738	55,332		
05/20/2000	9932.5	4752.8	2.9	2.5	26,674	23,115	49,789		
05/19/2000	9929.6	4750.3	4.3	4.7	39,551	43,456	83,008		
05/18/2000	9925.3	4745.6	3.7	4.7	34,033	43,456	77,489		
05/17/2000	9921.6	4740.9	0.9	2.4	8,278	22,190	30,469		1.9
05/16/2000	9920.7	4738.5	1.7	0.6	15,637	5,548	21,184		
05/15/2000	9919	4737.9	1	1	9,198	9,246	18,444		
05/14/2000	9918	4736.9	1.3	1.6	11,957	14,794	26,751		
05/13/2000	9916.7	4735.3	1.1	1.5	10,118	13,869	23,987		
05/12/2000	9915.6	4733.8	1.3	1.1	11,957	10,171	22,128		
05/11/2000	9914.3	4732.7	0.8	1.1	7,358	10,171	17,529		
05/10/2000	9913.5	4731.6	0.8	1.3	7,358	12,020	19,378		
05/09/2000	9912.7	4730.3	2.6	1.1	23,915	10,171	34,085		0.28
05/08/2000	9910.1	4729.2	1.4	1.9	12,877	17,567	30,445		
05/07/2000	9908.7	4727.3	1.1	1	10,118	9,246	19,364		0.44
05/06/2000	9907.6	4726.3	1.5	1.1	13,797	10,171	23,968		
05/05/2000	9906.1	4725.2	1	1	9,198	9,246	18,444		
05/04/2000	9905.1	4724.2	1	1.2	9,198	11,095	20,293		
05/03/2000	9904.1	4723	1	1.1	9,198	10,171	19,369		
05/02/2000	9903.1	4721.9	0.7	0.6	6,439	5,548	11,986		
05/01/2000	9902.4	4721.3	0.9	1.4	8,278	12,944	21,223		
04/30/2000	9901.5	4719.9	2.1	1.4	19,316	12,944	32,260	20,589	
04/29/2000	9899.4	4718.5	1	0.8	9,198	7,397	16,595		
04/28/2000	9898.4	4717.7	1.1	1	10,118	9,246	19,364		
04/27/2000	9897.3	4716.7	1.3	1.1	11,957	10,171	22,128		
04/26/2000	9896	4715.6	1.4	1.3	12,877	12,020	24,897		
04/25/2000	9894.6	4714.3	1.4	1.2	12,877	11,095	23,972		
04/24/2000	9893.2	4713.1	1.1	1	10,118	9,246	19,364		
04/23/2000	9892.1	4712.1	1.3	1.2	11,957	11,095	23,053		
04/22/2000	9890.8	4710.9	1.9	1.6	17,476	14,794	32,270		
04/21/2000	9888.9	4709.3	1	1	9,198	9,246	18,444		
04/20/2000	9887.9	4708.3	1.3	1.3	11,957	12,020	23,977		
04/19/2000	9886.6	4707	1.3	1.2	11,957	11,095	23,053		
04/18/2000	9885.3	4705.8	0.9	0.9	8,278	8,321	16,600		
04/17/2000	9884.4	4704.9	0.9	1.1	8,278	10,171	18,449		
04/16/2000	9883.5	4703.8	1	0.9	9,198	8,321	17,519		
04/15/2000	9882.5	4702.9	1.6	1.5	14,717	13,869	28,586		
04/14/2000	9880.9	4701.4	1	0.9	9,198	8,321	17,519		
04/13/2000	9879.9	4700.5	0.9	0.9	8,278	8,321	16,600		
04/12/2000	9879	4699.6	1	1.1	9,198	10,171	19,369		
04/11/2000	9878	4698.5	0.8	1.1	7,358	10,171	17,529		
04/10/2000	9877.2	4697.4	0.9	0.9	8,278	8,321	16,600		
04/09/2000	9876.3	4696.5	1	1.1	9,198	10,171	19,369		
04/08/2000	9875.3	4695.4	0.9	1	8,278	9,246	17,524		
04/07/2000	9874.4	4694.4	0	1.9	0	17,567	17,567		
04/06/2000	9874.4	4692.5	0.4	1.8	3,679	16,643	20,322		
04/05/2000	9874	4690.7	1.9	0.1	17,476	925	18,401		

04/04/2000	9872.1	4690.6	1.5	0	13,797	0	13,797	
04/03/2000	9870.6	4690.6	2.4	0	22,075	0	22,075	
04/02/2000	9868.2	4690.6	2.9	0	26,674	0	26,674	
04/01/2000	9865.3	4690.6	1.5	0	13,797	0	13,797	
03/31/2000	9863.8	4690.6	1.8	0	16,556	0	16,556	19,894
03/30/2000	9862	4690.6	1.6	1.1	14,717	10,171	24,887	
03/29/2000	9860.4	4689.5	1.1	1.5	10,118	13,869	23,987	
03/28/2000	9859.3	4688	1.1	0.1	10,118	925	11,042	
03/27/2000	9858.2	4687.9	1.3	1	11,957	9,246	21,203	
03/26/2000	9856.9	4686.9	2.2	2.4	20,236	22,190	42,426	
03/25/2000	9854.7	4684.5	1.7	0	15,637	0	15,637	
03/24/2000	9853	4684.5	1.3	0.8	11,957	7,397	19,354	
03/23/2000	9851.7	4683.7	1.1	1.2	10,118	11,095	21,213	
03/22/2000	9850.6	4682.5	1.5	1.1	13,797	10,171	23,968	
03/21/2000	9849.1	4681.4	0.9	0.9	8,278	8,321	16,600	
03/20/2000	9848.2	4680.5	1.2	1.1	11,038	10,171	21,208	
03/19/2000	9847	4679.4	1.6	0.7	14,717	6,472	21,189	
03/18/2000	9845.4	4678.7	1.1	0.7	10,118	6,472	16,590	
03/17/2000	9844.3	4678	1	1	9,198	9,246	18,444	
03/16/2000	9843.3	4677	0.9	0.8	8,278	7,397	15,675	
03/15/2000	9842.4	4676.2	0.9	0.8	8,278	7,397	15,675	
03/14/2000	9841.5	4675.4	1.1	1.1	10,118	10,171	20,288	
03/13/2000	9840.4	4674.3	1.1	1.1	10,118	10,171	20,288	
03/12/2000	9839.3	4673.2	1.3	0.7	11,957	6,472	18,430	
03/11/2000	9838	4672.5	1	1.1	9,198	10,171	19,369	
03/10/2000	9837	4671.4	1.1	1	10,118	9,246	19,364	
03/09/2000	9835.9	4670.4	0.9	0.8	8,278	7,397	15,675	
03/08/2000	9835	4669.6	0.8	0.7	7,358	6,472	13,831	
03/07/2000	9834.2	4668.9	1.4	1.1	12,877	10,171	23,048	
03/06/2000	9832.8	4667.8	1.3	1.2	11,957	11,095	23,053	
03/05/2000	9831.5	4666.6	1.1	1.4	10,118	12,944	23,062	
03/04/2000	9830.4	4665.2	1.2	0.8	11,038	7,397	18,434	
03/03/2000	9829.2	4664.4	1.1	1	10,118	9,246	19,364	
03/02/2000	9828.1	4663.4	0.8	0.9	7,358	8,321	15,680	
03/01/2000	9827.3	4662.5	1.9	0.4	17,476	3,698	21,175	
02/29/2000	9825.4	4662.1	0.7	0.7	6,439	6,472	12,911	15,926
02/28/2000	9824.7	4661.4	1	0.8	9,198	7,397	16,595	
02/27/2000	9823.7	4660.6	1.2	0.3	11,038	2,774	13,811	
02/26/2000	9822.5	4660.3	1.5	0	13,797	0	13,797	
02/25/2000	9821	4660.3	1.2	0.9	11,038	8,321	19,359	
02/24/2000	9819.8	4659.4	1	0.5	9,198	4,623	13,821	
02/23/2000	9818.8	4658.9	1.1	0.5	10,118	4,623	14,741	
02/22/2000	9817.7	4658.4	0.9	1	8,278	9,246	17,524	
02/21/2000	9816.8	4657.4	1.1	0.8	10,118	7,397	17,515	
02/20/2000	9815.7	4656.6	1.1	0.8	10,118	7,397	17,515	
02/19/2000	9814.6	4655.8	0.8	1.1	7,358	10,171	17,529	
02/18/2000	9813.8	4654.7	1.1	0.8	10,118	7,397	17,515	
02/17/2000	9812.7	4653.9	0.9	0.7	8,278	6,472	14,750	
02/16/2000	9811.8	4653.2	0.9	0.8	8,278	7,397	15,675	
02/15/2000	9810.9	4652.4	0.9	0.8	8,278	7,397	15,675	
02/14/2000	9810	4651.6	1	1	9,198	9,246	18,444	
02/13/2000	9809	4650.6	1	1.1	9,198	10,171	19,369	
02/12/2000	9808	4649.5	0.9	0.9	8,278	8,321	16,600	
02/11/2000	9807.1	4648.6	0.8	0.8	7,358	7,397	14,755	
02/10/2000	9806.3	4647.8	1	0.7	9,198	6,472	15,670	
02/09/2000	9805.3	4647.1	0.7	0.7	6,439	6,472	12,911	
02/08/2000	9804.6	4646.4	1.1	1	10,118	9,246	19,364	
02/07/2000	9803.5	4645.4	1	1.1	9,198	10,171	19,369	
02/06/2000	9802.5	4644.3	0.8	0.4	7,358	3,698	11,057	
02/05/2000	9801.7	4643.9	1	0.7	9,198	6,472	15,670	
02/04/2000	9800.7	4643.2	1.7	0.5	15,637	4,623	20,260	
02/03/2000	9799	4642.7	0.1	0.8	920	7,397	8,317	
02/02/2000	9798.9	4641.9	0.9	0.4	8,278	3,698	11,977	
02/01/2000	9798	4641.5	1.1	1	10,118	9,246	19,364	
01/31/2000	9796.9	4640.5	0.9	0.6	8,278	5,548	13,826	17,818
01/30/2000	9796	4639.9	0.9	0.9	8,278	8,321	16,600	
01/29/2000	9795.1	4639	1	0.9	9,198	8,321	17,519	
01/28/2000	9794.1	4638.1	1	1.1	9,198	10,171	19,369	
01/27/2000	9793.1	4637	0.8	0.8	7,358	7,397	14,755	
01/26/2000	9792.3	4636.2	1	1	9,198	9,246	18,444	
01/25/2000	9791.3	4635.2	1.1	0.8	10,118	7,397	17,515	
01/24/2000	9790.2	4634.4	1.1	1.1	10,118	10,171	20,288	
01/23/2000	9789.1	4633.3	1	1	9,198	9,246	18,444	
01/22/2000	9788.1	4632.3	0.9	0.9	8,278	8,321	16,600	

01/21/2000	9787.2	4631.4	1.2	1.2	11,038	11,095	22,133	
01/20/2000	9786	4630.2	0.7	1.1	6,439	10,171	16,609	
01/19/2000	9785.3	4629.1	1.1	0.7	10,118	6,472	16,590	
01/18/2000	9784.2	4628.4	1.2	1.3	11,038	12,020	23,057	
01/17/2000	9783	4627.1	1.2	1.3	11,038	12,020	23,057	
01/16/2000	9781.8	4625.8	1.1	1.1	10,118	10,171	20,288	
01/15/2000	9780.7	4624.7	1.1	1	10,118	9,246	19,364	
01/14/2000	9779.6	4623.7	0.8	1.1	7,358	10,171	17,529	
01/13/2000	9778.8	4622.6	1	0.9	9,198	8,321	17,519	
01/12/2000	9777.8	4621.7	1	0.8	9,198	7,397	16,595	
01/11/2000	9776.8	4620.9	0.9	0.8	8,278	7,397	15,675	
01/10/2000	9775.9	4620.1	0.9	1	8,278	9,246	17,524	
01/09/2000	9775	4619.1	1	0.6	9,198	5,548	14,746	
01/08/2000	9774	4618.5	1	1	9,198	9,246	18,444	
01/07/2000	9773	4617.5	0.8	0.7	7,358	6,472	13,831	
01/06/2000	9772.2	4616.8	1.2	1	11,038	9,246	20,284	
01/05/2000	9771	4615.8	0.9	1	8,278	9,246	17,524	
01/04/2000	9770.1	4614.8	0.9	0.6	8,278	5,548	13,826	
01/03/2000	9769.2	4614.2	1.1	1	10,118	9,246	19,364	
01/02/2000	9768.1	4613.2	0.9	0.7	8,278	6,472	14,750	
01/01/2000	9767.2	4612.5	1.1	1.1	10,118	10,171	20,288	
12/31/1999	9766.1	4611.4	0.9	0.9	8,278	8,321	16,600	17,135
12/30/1999	9765.2	4610.5	0.9	1	8,278	9,246	17,524	
12/29/1999	9764.3	4609.5	1.1	1.1	10,118	10,171	20,288	
12/28/1999	9763.2	4608.4	0.8	1	7,358	9,246	16,604	
12/27/1999	9762.4	4607.4	1	1.1	9,198	10,171	19,369	
12/26/1999	9761.4	4606.3	1.1	1.1	10,118	10,171	20,288	
12/25/1999	9760.3	4605.2	0.9	0.8	8,278	7,397	15,675	
12/24/1999	9759.4	4604.4	0.8	0.7	7,358	6,472	13,831	
12/23/1999	9758.6	4603.7	1.1	0.8	10,118	7,397	17,515	
12/22/1999	9757.5	4602.9	0.8	0.9	7,358	8,321	15,680	
12/21/1999	9756.7	4602	1.1	0.8	10,118	7,397	17,515	
12/20/1999	9755.6	4601.2	1.2	1.1	11,038	10,171	21,208	
12/19/1999	9754.4	4600.1	0.8	0.6	7,358	5,548	12,906	
12/18/1999	9753.6	4599.5	1.1	1	10,118	9,246	19,364	
12/17/1999	9752.5	4598.5	1	1.1	9,198	10,171	19,369	
12/16/1999	9751.5	4597.4	0.8	1	7,358	9,246	16,604	
12/15/1999	9750.7	4596.4	1.1	1	10,118	9,246	19,364	
12/14/1999	9749.6	4595.4	0.7	1.1	6,439	10,171	16,609	
12/13/1999	9748.9	4594.3	0.8	1	7,358	9,246	16,604	
12/12/1999	9748.1	4593.3	0.9	0.9	8,278	8,321	16,600	
12/11/1999	9747.2	4592.4	0.9	0.9	8,278	8,321	16,600	
12/10/1999	9746.3	4591.5	0.9	0.7	8,278	6,472	14,750	
12/09/1999	9745.4	4590.8	0.7	0.7	6,439	6,472	12,911	
12/08/1999	9744.7	4590.1	0.9	0.8	8,278	7,397	15,675	
12/07/1999	9743.8	4589.3	1	1.2	9,198	11,095	20,293	
12/06/1999	9742.8	4588.1	1	1	9,198	9,246	18,444	
12/05/1999	9741.8	4587.1	0.8	0.9	7,358	8,321	15,680	
12/04/1999	9741	4586.2	1	1.1	9,198	10,171	19,369	
12/03/1999	9740	4585.1	0.8	0.6	7,358	5,548	12,906	
12/02/1999	9739.2	4584.5	0.8	0.9	7,358	8,321	15,680	
12/01/1999	9738.4	4583.6	1.1	1	10,118	9,246	19,364	
11/30/1999	9737.3	4582.6	1.1	1	10,118	9,246	19,364	17,702
11/29/1999	9736.2	4581.6	1	0.9	9,198	8,321	17,519	
11/28/1999	9735.2	4580.7	0.7	1.1	6,439	10,171	16,609	
11/27/1999	9734.5	4579.6	1.3	0.9	11,957	8,321	20,279	
11/26/1999	9733.2	4578.7	1.1	0.6	10,118	5,548	15,665	
11/25/1999	9732.1	4578.1	0.8	1	7,358	9,246	16,604	
11/24/1999	9731.3	4577.1	1.1	0.8	10,118	7,397	17,515	
11/23/1999	9730.2	4576.3	0.7	0.8	6,439	7,397	13,835	
11/22/1999	9729.5	4575.5	1.4	1.4	12,877	12,944	25,822	
11/21/1999	9728.1	4574.1	0.2	0.2	1,840	1,849	3,689	
11/20/1999	9727.9	4573.9	1.7	1.3	15,637	12,020	27,656	
11/19/1999	9726.2	4572.6	2.1	1.2	19,316	11,095	30,411	
11/18/1999	9724.1	4571.4	0.2	1.1	1,840	10,171	12,010	
11/17/1999	9723.9	4570.3	0.7	0.6	6,439	5,548	11,986	
11/16/1999	9723.2	4569.7	1.2	1	11,038	9,246	20,284	
11/15/1999	9722	4568.7	0.7	0.4	6,439	3,698	10,137	
11/14/1999	9721.3	4568.3	0.9	1.1	8,278	10,171	18,449	
11/13/1999	9720.4	4567.2	0.9	1.1	8,278	10,171	18,449	
11/12/1999	9719.5	4566.1	1.1	1.1	10,118	10,171	20,288	
11/11/1999	9718.4	4565	0.9	1	8,278	9,246	17,524	
11/10/1999	9717.5	4564	0.8	1.1	7,358	10,171	17,529	
11/09/1999	9716.7	4562.9	0.9	1	8,278	9,246	17,524	

11/08/1999	9715.8	4561.9	1	1	9,198	9,246	18,444		
11/07/1999	9714.8	4560.9	1.1	1.1	10,118	10,171	20,288		
11/06/1999	9713.7	4559.8	0.8	1	7,358	9,246	16,604		
11/05/1999	9712.9	4558.8	1.1	1.4	10,118	12,944	23,062		
11/04/1999	9711.8	4557.4	0.6	0.5	5,519	4,623	10,142		
11/03/1999	9711.2	4556.9	1.1	0.7	10,118	6,472	16,590		
11/02/1999	9710.1	4556.2	1.9	0	17,476	0	17,476		
11/01/1999	9708.2	4556.2	2.1	0	19,316	0	19,316		
10/31/1999	9706.1	4556.2	2	0	18,396	0	18,396	17,469	
10/30/1999	9704.1	4556.2	1.9	0	17,476	0	17,476		
10/29/1999	9702.2	4556.2	1.7	0	15,637	0	15,637		
10/28/1999	9700.5	4556.2	1.7	0	15,637	0	15,637		
10/27/1999	9698.8	4556.2	2.2	0	20,236	0	20,236		
10/26/1999	9696.6	4556.2	1.9	0	17,476	0	17,476		
10/25/1999	9694.7	4556.2	1.6	0	14,717	0	14,717		
10/24/1999	9693.1	4556.2	2.1	0	19,316	0	19,316		
10/23/1999	9691	4556.2	1.8	0	16,556	0	16,556		
10/22/1999	9689.2	4556.2	1.9	0	17,476	0	17,476		
10/21/1999	9687.3	4556.2	1.8	0	16,556	0	16,556		
10/20/1999	9685.5	4556.2	1.9	0	17,476	0	17,476		
10/19/1999	9683.6	4556.2	2	0	18,396	0	18,396		
10/18/1999	9681.6	4556.2	1.4	0	12,877	0	12,877		
10/17/1999	9680.2	4556.2	1.7	0	15,637	0	15,637		
10/16/1999	9678.5	4556.2	1.9	0	17,476	0	17,476		
10/15/1999	9676.6	4556.2	1.6	0.7	14,717	6,472	21,189		
10/14/1999	9675	4555.5	0.9	1	8,278	9,246	17,524		
10/13/1999	9674.1	4554.5	1	0.9	9,198	8,321	17,519		
10/12/1999	9673.1	4553.6	0.7	0.9	6,439	8,321	14,760		
10/11/1999	9672.4	4552.7	1.1	0.9	10,118	8,321	18,439		
10/10/1999	9671.3	4551.8	0.9	0.8	8,278	7,397	15,675		
10/09/1999	9670.4	4551	0.8	0.9	7,358	8,321	15,680		
10/08/1999	9669.6	4550.1	1.1	1.1	10,118	10,171	20,288		
10/07/1999	9668.5	4549	1.1	1.2	10,118	11,095	21,213		
10/06/1999	9667.4	4547.8	1.1	1.1	10,118	10,171	20,288		
10/05/1999	9666.3	4546.7	0.9	0.9	8,278	8,321	16,600		
10/04/1999	9665.4	4545.8	1	1.1	9,198	10,171	19,369		
10/03/1999	9664.4	4544.7	0.9	0.7	8,278	6,472	14,750		
10/02/1999	9663.5	4544	0.8	1	7,358	9,246	16,604		
10/01/1999	9662.7	4543	1.2	1	11,038	9,246	20,284		
09/30/1999	9661.5	4542	1.1	0.9	10,118	8,321	18,439	24,942	
09/29/1999	9660.4	4541.1	1	0.9	9,198	8,321	17,519		
09/28/1999	9659.4	4540.2	1.1	0.9	10,118	8,321	18,439		
09/27/1999	9658.3	4539.3	1	0.9	9,198	8,321	17,519		
09/26/1999	9657.3	4538.4	0.9	0.9	8,278	8,321	16,600		
09/25/1999	9656.4	4537.5	1.1	1.2	10,118	11,095	21,213		
09/24/1999	9655.3	4536.3	0.9	0.8	8,278	7,397	15,675		
09/23/1999	9654.4	4535.5	1.3	1.1	11,957	10,171	22,128		
09/22/1999	9653.1	4534.4	0.7	0.8	6,439	7,397	13,835		
09/21/1999	9652.4	4533.6	1.3	1.3	11,957	12,020	23,977		
09/20/1999	9651.1	4532.3	0.9	0.8	8,278	7,397	15,675		
09/19/1999	9650.2	4531.5	1.2	1.4	11,038	12,944	23,982		
09/18/1999	9649	4530.1	0.9	0.8	8,278	7,397	15,675		
09/17/1999	9648.1	4529.3	1.2	1.2	11,038	11,095	22,133		
09/16/1999	9646.9	4528.1	1.1	1.1	10,118	10,171	20,288		
09/15/1999	9645.8	4527	1.1	1	10,118	9,246	19,364		
09/14/1999	9644.7	4526	0	16.3	0	150,710	150,710		
09/13/1999	9644.7	4509.7	1.5	1.5	13,797	13,869	27,666		
09/12/1999	9643.2	4508.2	1	0.9	9,198	8,321	17,519		
09/11/1999	9642.2	4507.3	1.6	1.5	14,717	13,869	28,586		
09/10/1999	9640.6	4505.8	0.9	1.1	8,278	10,171	18,449		
09/09/1999	9639.7	4504.7	1	1.1	9,198	10,171	19,369		
09/08/1999	9638.7	4503.6	1.1	0.9	10,118	8,321	18,439		
09/07/1999	9637.6	4502.7	1.3	1.3	11,957	12,020	23,977		
09/06/1999	9636.3	4501.4	1.7	1.5	15,637	13,869	29,506		
09/05/1999	9634.6	4499.9	1.3	1.2	11,957	11,095	23,053		
09/04/1999	9633.3	4498.7	1.4	1.2	12,877	11,095	23,972		
09/03/1999	9631.9	4497.5	1.2	1.2	11,038	11,095	22,133		0.47
09/02/1999	9630.7	4496.3	1	0.8	9,198	7,397	16,595		
09/01/1999	9629.7	4495.5	1.5	1.3	13,797	12,020	25,817		
08/31/1999	9628.2	4494.2	1.5	2	13,797	18,492	32,289	28,350	
08/30/1999	9626.7	4492.2	1	0.4	9,198	3,698	12,896		
08/29/1999	9625.7	4491.8	1.2	1.1	11,038	10,171	21,208		
08/28/1999	9624.5	4490.7	1.1	1.1	10,118	10,171	20,288		
08/27/1999	9623.4	4489.6	1.2	1.3	11,038	12,020	23,057		

08/26/1999	9622.2	4488.3	1	1	9,198	9,246	18,444		
08/25/1999	9621.2	4487.3	1.2	1.3	11,038	12,020	23,057		
08/24/1999	9620	4486	1.5	1.4	13,797	12,944	26,741		
08/23/1999	9618.5	4484.6	1.3	1.4	11,957	12,944	24,902		
08/22/1999	9617.2	4483.2	1.3	1.1	11,957	10,171	22,128		
08/21/1999	9615.9	4482.1	1.2	1.2	11,038	11,095	22,133		
08/20/1999	9614.7	4480.9	1.4	1.4	12,877	12,944	25,822		
08/19/1999	9613.3	4479.5	1.1	1.2	10,118	11,095	21,213		
08/18/1999	9612.2	4478.3	1.4	1.5	12,877	13,869	26,746		
08/17/1999	9610.8	4476.8	1.1	1.5	10,118	13,869	23,987		
08/16/1999	9609.7	4475.3	3.1	1.1	28,514	10,171	38,684		
08/15/1999	9606.6	4474.2	1.6	1.1	14,717	10,171	24,887		
08/14/1999	9605	4473.1	0.2	1.9	1,840	17,567	19,407		
08/13/1999	9604.8	4471.2	1.7	1.7	15,637	15,718	31,355		
08/12/1999	9603.1	4469.5	1.2	1.2	11,038	11,095	22,133		
08/11/1999	9601.9	4468.3	1.6	1.6	14,717	14,794	29,510		0.63
08/10/1999	9600.3	4466.7	2.2	2	20,236	18,492	38,728		
08/09/1999	9598.1	4464.7	1.6	1.6	14,717	14,794	29,510		
08/08/1999	9596.5	4463.1	1.6	1.2	14,717	11,095	25,812		
08/07/1999	9594.9	4461.9	1.8	2.2	16,556	20,341	36,898		
08/06/1999	9593.1	4459.7	1.7	1.7	15,637	15,718	31,355		
08/05/1999	9591.4	4458	2.3	1.9	21,155	17,567	38,723		
08/04/1999	9589.1	4456.1	1.2	1.7	11,038	15,718	26,756		
08/03/1999	9587.9	4454.4	2.1	2.3	19,316	21,266	40,582		
08/02/1999	9585.8	4452.1	2.1	3.7	19,316	34,210	53,526		
08/01/1999	9583.7	4448.4	3.1	1.9	28,514	17,567	46,081		
07/31/1999	9580.6	4446.5	2.5	2.6	22,995	24,040	47,035	69,013	
07/30/1999	9578.1	4443.9	2.8	2.5	25,754	23,115	48,869		
07/29/1999	9575.3	4441.4	2.8	2.8	25,754	25,889	51,643		
07/28/1999	9572.5	4438.6	3	3	27,594	27,738	55,332		
07/27/1999	9569.5	4435.6	2	1.9	18,396	17,567	35,963		
07/26/1999	9567.5	4433.7	4	4.2	36,792	38,833	75,625		
07/25/1999	9563.5	4429.5	3.7	3.9	34,033	36,059	70,092		
07/24/1999	9559.8	4425.6	4.9	4.7	45,070	43,456	88,526		
07/23/1999	9554.9	4420.9	4	3.9	36,792	36,059	72,851		
07/22/1999	9550.9	4417	3.9	4.9	35,872	45,305	81,178		
07/21/1999	9547	4412.1	3.9	2.8	35,872	25,889	61,761		
07/20/1999	9543.1	4409.3	3.8	3.5	34,952	32,361	67,313		
07/19/1999	9539.3	4405.8	3.4	4.1	31,273	37,909	69,182		0.8
07/18/1999	9535.9	4401.7	3.4	2.9	31,273	26,813	58,087		0.01
07/17/1999	9532.5	4398.8	3.7	3.3	34,033	30,512	64,544		0.38
07/16/1999	9528.8	4395.5	3.1	3.1	28,514	28,663	57,176		
07/15/1999	9525.7	4392.4	2.9	2.8	26,674	25,889	52,563		0.55
07/14/1999	9522.8	4389.6	3	2.7	27,594	24,964	52,558		
07/13/1999	9519.8	4386.9	2.6	2.5	23,915	23,115	47,030		
07/12/1999	9517.2	4384.4	3	3.1	27,594	28,663	56,257		
07/11/1999	9514.2	4381.3	3.5	3	32,193	27,738	59,931		
07/10/1999	9510.7	4378.3	3.7	2.6	34,033	24,040	58,072		
07/09/1999	9507	4375.7	2.7	3.3	24,835	30,512	55,346		
07/08/1999	9504.3	4372.4	5.2	4.9	47,830	45,305	93,135		
07/07/1999	9499.1	4367.5	3.5	3.2	32,193	29,587	61,780		
07/06/1999	9495.6	4364.3	4.6	4.7	42,311	43,456	85,767		
07/05/1999	9491	4359.6	6.8	5.8	62,546	53,627	116,173		
07/04/1999	9484.2	4353.8	6.2	5.1	57,028	47,155	104,182		
07/03/1999	9478	4348.7	5.5	6	50,589	55,476	106,065		
07/02/1999	9472.5	4342.7	5.1	5.1	46,910	47,155	94,064		0.3
07/01/1999	9467.4	4337.6	5.1	4.8	46,910	44,381	91,291		1.33
06/30/1999	9462.3	4332.8	2.9	2.8	26,674	25,889	52,563	100,653	0.33
06/29/1999	9459.4	4330	4.5	4.1	41,391	37,909	79,300		0.17
06/28/1999	9454.9	4325.9	6.8	6.4	62,546	59,174	121,721		
06/27/1999	9448.1	4319.5	3.4	3.2	31,273	29,587	60,860		0.48
06/26/1999	9444.7	4316.3	3.2	3.2	29,434	29,587	59,021		0.78
06/25/1999	9441.5	4313.1	3.8	3.5	34,952	32,361	67,313		
06/24/1999	9437.7	4309.6	4.3	4.4	39,551	40,682	80,234		
06/23/1999	9433.4	4305.2	3.9	4	35,872	36,984	72,856		
06/22/1999	9429.5	4301.2	3.8	3.7	34,952	34,210	69,163		
06/21/1999	9425.7	4297.5	4.3	4	39,551	36,984	76,535		
06/20/1999	9421.4	4293.5	5.1	4.9	46,910	45,305	92,215		
06/19/1999	9416.3	4288.6	3.3	3.2	30,353	29,587	59,941		0.13
06/18/1999	9413	4285.4	5	4.9	45,990	45,305	91,295		0.04
06/17/1999	9408	4280.5	3.6	3.5	33,113	32,361	65,474		
06/16/1999	9404.4	4277	5.7	5.4	52,429	49,928	102,357		0.01
06/15/1999	9398.7	4271.6	4.2	4.1	38,632	37,909	76,540		0.61
06/14/1999	9394.5	4267.5	5.1	5	46,910	46,230	93,140		

06/13/1999	9389.4	4262.5	4.3	4.3	39,551	39,758	79,309		
06/12/1999	9385.1	4258.2	5.3	5.1	48,749	47,155	95,904		
06/11/1999	9379.8	4253.1	6.5	6.5	59,787	60,099	119,886		0.1
06/10/1999	9373.3	4246.6	5.3	5.3	48,749	49,004	97,753		0.02
06/09/1999	9368	4241.3	7.5	7.3	68,985	67,496	136,481		0.01
06/08/1999	9360.5	4234	5.9	5.3	54,268	49,004	103,272		
06/07/1999	9354.6	4228.7	8.6	7.9	79,103	73,043	152,146		
06/06/1999	9346	4220.8	7.7	7.1	70,825	65,647	136,471		
06/05/1999	9338.3	4213.7	10.7	8.5	98,419	78,591	177,010		
06/04/1999	9327.6	4205.2	10.7	5.7	98,419	52,702	151,121		
06/03/1999	9316.9	4199.5	12.8	9.4	117,734	86,912	204,647		
06/02/1999	9304.1	4190.1	9.5	4.3	87,381	39,758	127,139		
06/01/1999	9294.6	4185.8	8.7	4.1	80,023	37,909	117,931		
05/31/1999	9285.9	4181.7	13.2	6.2	121,414	57,325	178,739	149,436	0.79
05/30/1999	9272.7	4175.5	6	5.3	55,188	49,004	104,192		
05/29/1999	9266.7	4170.2	5.9	5.1	54,268	47,155	101,423		0.4
05/28/1999	9260.8	4165.1	4.9	4.7	45,070	43,456	88,526		
05/27/1999	9255.9	4160.4	7	6.2	64,386	57,325	121,711		
05/26/1999	9248.9	4154.2	6.2	5	57,028	46,230	103,258		
05/25/1999	9242.7	4149.2	6.6	6.9	60,707	63,797	124,504		
05/24/1999	9236.1	4142.3	6.6	6.2	60,707	57,325	118,032		
05/23/1999	9229.5	4136.1	7.6	6.9	69,905	63,797	133,702		
05/22/1999	9221.9	4129.2	8.6	7.9	79,103	73,043	152,146		
05/21/1999	9213.3	4121.3	8.9	8.3	81,862	76,742	158,604		
05/20/1999	9204.4	4113	8	7.6	73,584	70,270	143,854		
05/19/1999	9196.4	4105.4	8.8	7.7	80,942	71,194	152,137		0.4
05/18/1999	9187.6	4097.7	9.8	8.8	90,140	81,365	171,505		
05/17/1999	9177.8	4088.9	8.3	3.1	76,343	28,663	105,006		
05/16/1999	9169.5	4085.8	7.9	13.9	72,664	128,519	201,184		
05/15/1999	9161.6	4071.9	7.7	6.7	70,825	61,948	132,773		
05/14/1999	9153.9	4065.2	6.9	6.4	63,466	59,174	122,641		
05/13/1999	9147	4058.8	7.8	7	71,744	64,722	136,466		
05/12/1999	9139.2	4051.8	8	7.4	73,584	68,420	142,004		
05/11/1999	9131.2	4044.4	11.4	8.7	104,857	80,440	185,297		
05/10/1999	9119.8	4035.7	8.7	7	80,023	64,722	144,745		0.94
05/09/1999	9111.1	4028.7	16.1	7	148,088	64,722	212,810		0.05
05/08/1999	9095	4021.7	8	12.8	73,584	118,349	191,933		
05/07/1999	9087	4008.9	12	18.8	110,376	173,825	284,201		
05/06/1999	9075	3990.1	18.7	18.6	172,003	171,976	343,978		0.14
05/05/1999	9056.3	3971.5	11.2	8.2	103,018	75,817	178,835		0.18
05/04/1999	9045.1	3963.3	5.2	5.1	47,830	47,155	94,984		0.14
05/03/1999	9039.9	3958.2	5.7	4.8	52,429	44,381	96,809		0.14
05/02/1999	9034.2	3953.4	5.7	5.3	52,429	49,004	101,432		0.08
05/01/1999	9028.5	3948.1	6.5	4.9	59,787	45,305	105,092		0.04
04/30/1999	9022	3943.2	6.4	5.3	58,867	49,004	107,871	133,687	
04/29/1999	9015.6	3937.9	4.5	3.7	41,391	34,210	75,601		
04/28/1999	9011.1	3934.2	7.3	6	67,145	55,476	122,621		
04/27/1999	9003.8	3928.2	2.1	5.7	19,316	52,702	72,018		
04/26/1999	9001.7	3922.5	12	5.7	110,376	52,702	163,078		0.17
04/25/1999	8989.7	3916.8	6.4	6	58,867	55,476	114,343		0.6
04/24/1999	8983.3	3910.8	5.5	5.2	50,589	48,079	98,668		
04/23/1999	8977.8	3905.6	7.1	5.3	65,306	49,004	114,310		
04/22/1999	8970.7	3900.3	6.7	5.3	61,627	49,004	110,630		
04/21/1999	8964	3895	8.7	6.2	80,023	57,325	137,348		
04/20/1999	8955.3	3888.8	8.1	5.8	74,504	53,627	128,131		
04/19/1999	8947.2	3883	7.9	5.7	72,664	52,702	125,366		
04/18/1999	8939.3	3877.3	8.4	5.5	77,263	50,853	128,116		
04/17/1999	8930.9	3871.8	9.3	5.8	85,541	53,627	139,168		
04/16/1999	8921.6	3866	18.9	6.2	173,842	57,325	231,167		
04/15/1999	8902.7	3859.8	16.2	4.1	149,008	37,909	186,916		
04/14/1999	8886.5	3855.7	12.5	6.1	114,975	56,401	171,376		0.04
04/13/1999	8874	3849.6	17.9	2.4	164,644	22,190	186,835		0.27
04/12/1999	8856.1	3847.2	20.4	1.7	187,639	15,718	203,357		
04/11/1999	8835.7	3845.5	18.7	8	172,003	73,968	245,971		
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04/08/1999	8779.3	3830.2	6.3	1.6	57,947	14,794	72,741		0.22
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04/02/1999	8735	3808.9	3.9	2.9	35,872	26,813	62,686		0.06
04/01/1999	8731.1	3806	4.1	3.1	37,712	28,663	66,374		

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03/29/1999	8718.8	3797	2.7	2.7	24,835	24,964	49,799	
03/28/1999	8716.1	3794.3	7.5	4.7	68,985	43,456	112,441	
03/27/1999	8708.6	3789.6	3.2	2.3	29,434	21,266	50,699	
03/26/1999	8705.4	3787.3	5.2	3.8	47,830	35,135	82,964	
03/25/1999	8700.2	3783.5	4.4	3.1	40,471	28,663	69,134	
03/24/1999	8695.8	3780.4	5	3	45,990	27,738	73,728	
03/23/1999	8690.8	3777.4	4.6	4.4	42,311	40,682	82,993	
03/22/1999	8686.2	3773	3.6	2.6	33,113	24,040	57,152	
03/21/1999	8682.6	3770.4	3.8	2.9	34,952	26,813	61,766	
03/20/1999	8678.8	3767.5	7	5.5	64,386	50,853	115,239	
03/19/1999	8671.8	3762	5.1	4.1	46,910	37,909	84,818	
03/18/1999	8666.7	3757.9	5.3	4	48,749	36,984	85,733	
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03/16/1999	8657.1	3750.1	3.3	3	30,353	27,738	58,091	
03/15/1999	8653.8	3747.1	3.5	3.1	32,193	28,663	60,856	
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03/13/1999	8648.1	3741.4	4.1	2.8	37,712	25,889	63,601	
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03/09/1999	8635.7	3731.4	3.3	2.8	30,353	25,889	56,242	
03/08/1999	8632.4	3728.6	3.4	3.1	31,273	28,663	59,936	
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03/06/1999	8625.7	3722.7	3.2	2.7	29,434	24,964	54,398	
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03/03/1999	8616.1	3714.3	3	2.5	27,594	23,115	50,709	
03/02/1999	8613.1	3711.8	2.8	2.3	25,754	21,266	47,020	
03/01/1999	8610.3	3709.5	2.9	3.2	26,674	29,587	56,261	
02/28/1999	8607.4	3706.3	3.1	2.5	28,514	23,115	51,629	42,185
02/27/1999	8604.3	3703.8	2.5	2.4	22,995	22,190	45,185	
02/26/1999	8601.8	3701.4	2.7	3	24,835	27,738	52,573	
02/25/1999	8599.1	3698.4	2.4	1.5	22,075	13,869	35,944	
02/24/1999	8596.7	3696.9	2	1.9	18,396	17,567	35,963	
02/23/1999	8594.7	3695	3	2.6	27,594	24,040	51,634	
02/22/1999	8591.7	3692.4	2.2	2.2	20,236	20,341	40,577	
02/21/1999	8589.5	3690.2	2.1	1.9	19,316	17,567	36,883	
02/20/1999	8587.4	3688.3	1.8	2.1	16,556	19,417	35,973	
02/19/1999	8585.6	3686.2	0	2.2	0	20,341	20,341	
02/18/1999	8585.6	3684	4.6	1.6	42,311	14,794	57,104	
02/17/1999	8581	3682.4	3	2.8	27,594	25,889	53,483	
02/16/1999	8578	3679.6	2	1.9	18,396	17,567	35,963	
02/15/1999	8576	3677.7	2.9	0.8	26,674	7,397	34,071	
02/14/1999	8573.1	3676.9	2.4	0.3	22,075	2,774	24,849	
02/13/1999	8570.7	3676.6	2.5	6.2	22,995	57,325	80,320	
02/12/1999	8568.2	3670.4	2.8	3.2	25,754	29,587	55,342	
02/11/1999	8565.4	3667.2	2	1.8	18,396	16,643	35,039	
02/10/1999	8563.4	3665.4	2.8	2.1	25,754	19,417	45,171	
02/09/1999	8560.6	3663.3	1.2	1.4	11,038	12,944	23,982	
02/08/1999	8559.4	3661.9	3.8	3	34,952	27,738	62,690	
02/07/1999	8555.6	3658.9	2.1	2.4	19,316	22,190	41,506	
02/06/1999	8553.5	3656.5	2.6	1.8	23,915	16,643	40,558	
02/05/1999	8550.9	3654.7	2.6	2.1	23,915	19,417	43,331	
02/04/1999	8548.3	3652.6	2	1.8	18,396	16,643	35,039	
02/03/1999	8546.3	3650.8	1.9	1.7	17,476	15,718	33,194	
02/02/1999	8544.4	3649.1	2.1	1.9	19,316	17,567	36,883	
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01/31/1999	8540.3	3645.3	1.8	1.5	16,556	13,869	30,425	37,688
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01/21/1999	8520.5	3627.3	1.4	1.4	12,877	12,944	25,822	
01/20/1999	8519.1	3625.9	2.5	2.6	22,995	24,040	47,035	
01/19/1999	8516.6	3623.3	1.9	2	17,476	18,492	35,968	
01/18/1999	8514.7	3621.3	2.3	2.1	21,155	19,417	40,572	
01/17/1999	8512.4	3619.2	1.8	1.7	16,556	15,718	32,275	

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01/15/1999	8509.1	3615.9	2.7	2.4	24,835	22,190	47,025	
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01/12/1999	8502.6	3609.8	1.7	1.6	15,637	14,794	30,430	
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01/10/1999	8497.9	3605.3	2.1	2.1	19,316	19,417	38,732	
01/09/1999	8495.8	3603.2	2	1.8	18,396	16,643	35,039	
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01/07/1999	8491.2	3599	2	1.9	18,396	17,567	35,963	
01/06/1999	8489.2	3597.1	1.9	1.8	17,476	16,643	34,119	
01/05/1999	8487.3	3595.3	2.6	2.5	23,915	23,115	47,030	
01/04/1999	8484.7	3592.8	2.5	2.8	22,995	25,889	48,884	
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12/31/1998	8475	3583.9	1.9	2.3	17,476	21,266	38,742	51,762
12/30/1998	8473.1	3581.6	2.6	2.5	23,915	23,115	47,030	
12/29/1998	8470.5	3579.1	2.3	2.6	21,155	24,040	45,195	
12/28/1998	8468.2	3576.5	2.6	2.6	23,915	24,040	47,954	
12/27/1998	8465.6	3573.9	2.2	0.4	20,236	3,698	23,934	
12/26/1998	8463.4	3573.5	2.3	5	21,155	46,230	67,385	
12/25/1998	8461.1	3568.5	2.9	1.9	26,674	17,567	44,242	
12/24/1998	8458.2	3566.6	2.7	2.3	24,835	21,266	46,100	
12/23/1998	8455.5	3564.3	2.5	2.4	22,995	22,190	45,185	
12/22/1998	8453	3561.9	2.7	2.4	24,835	22,190	47,025	
12/21/1998	8450.3	3559.5	2.7	2.8	24,835	25,889	50,723	
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12/19/1998	8445	3554.4	2.6	2.4	23,915	22,190	46,105	
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12/17/1998	8439.4	3549.2	2.4	2.5	22,075	23,115	45,190	
12/16/1998	8437	3546.7	2.9	2.3	26,674	21,266	47,940	
12/15/1998	8434.1	3544.4	2.9	3	26,674	27,738	54,412	
12/14/1998	8431.2	3541.4	3.2	3	29,434	27,738	57,172	
12/13/1998	8428	3538.4	2.8	3.2	25,754	29,587	55,342	
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12/11/1998	8422	3532.9	3.3	3.1	30,353	28,663	59,016	
12/10/1998	8418.7	3529.8	2.7	2.4	24,835	22,190	47,025	
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12/08/1998	8413.5	3525	3.4	3	31,273	27,738	59,011	
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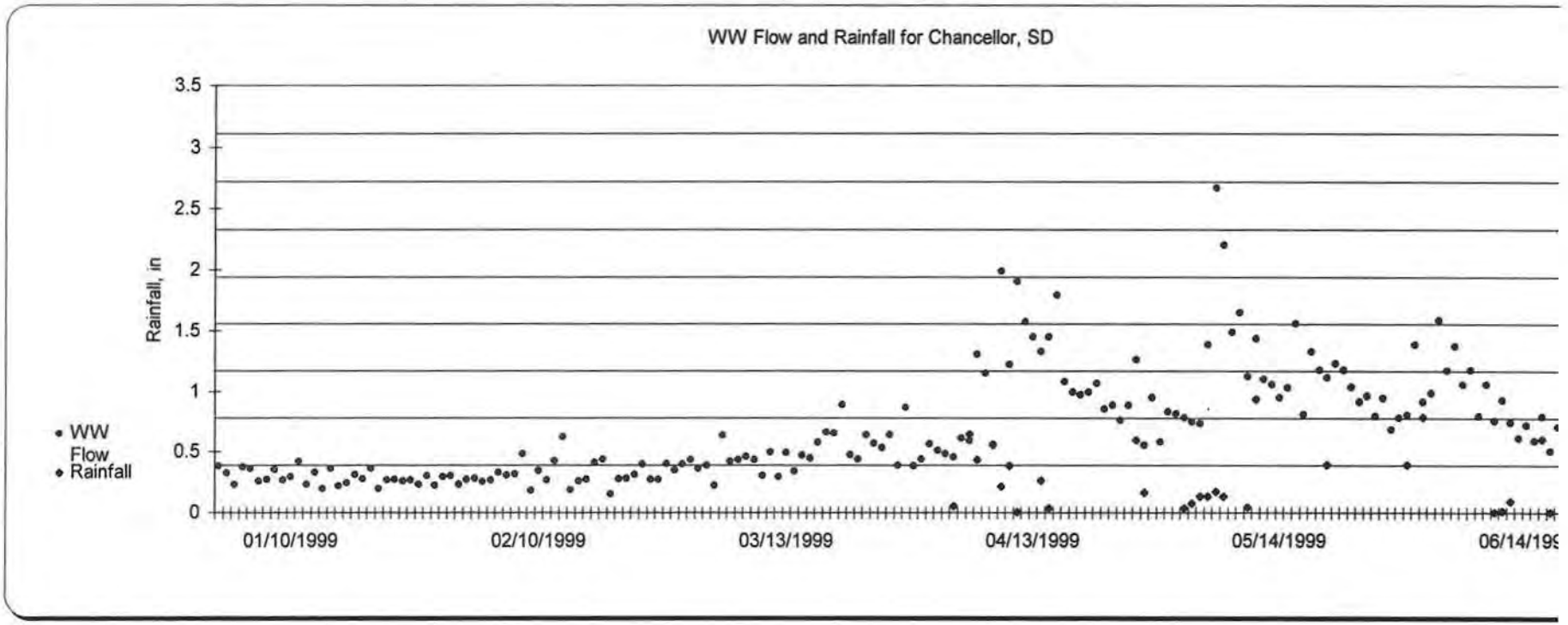
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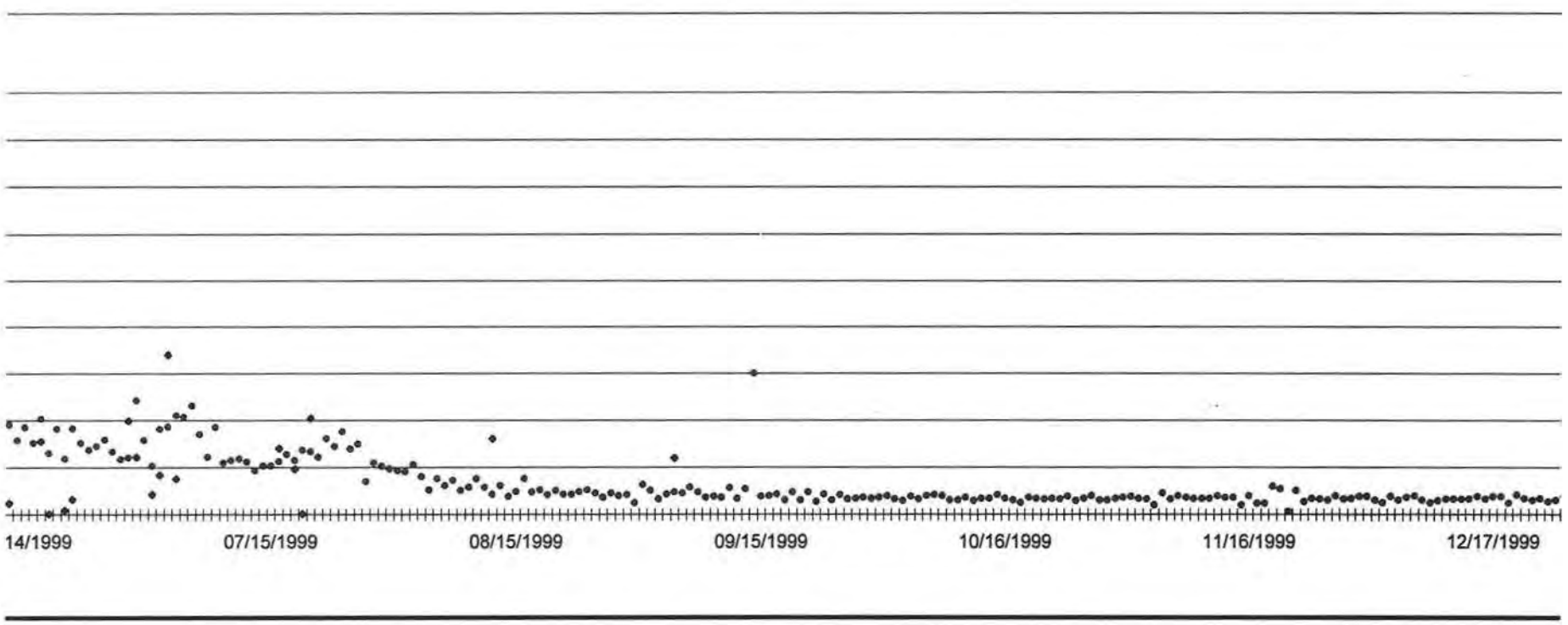
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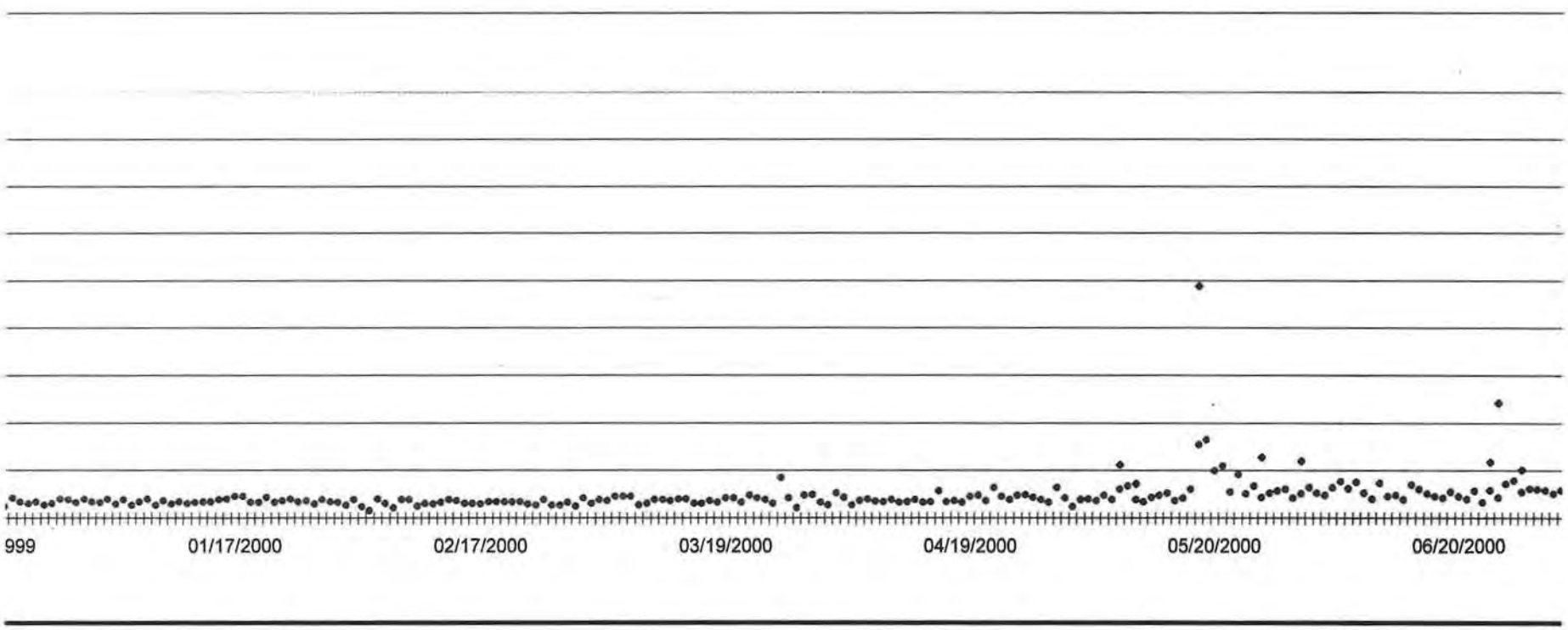
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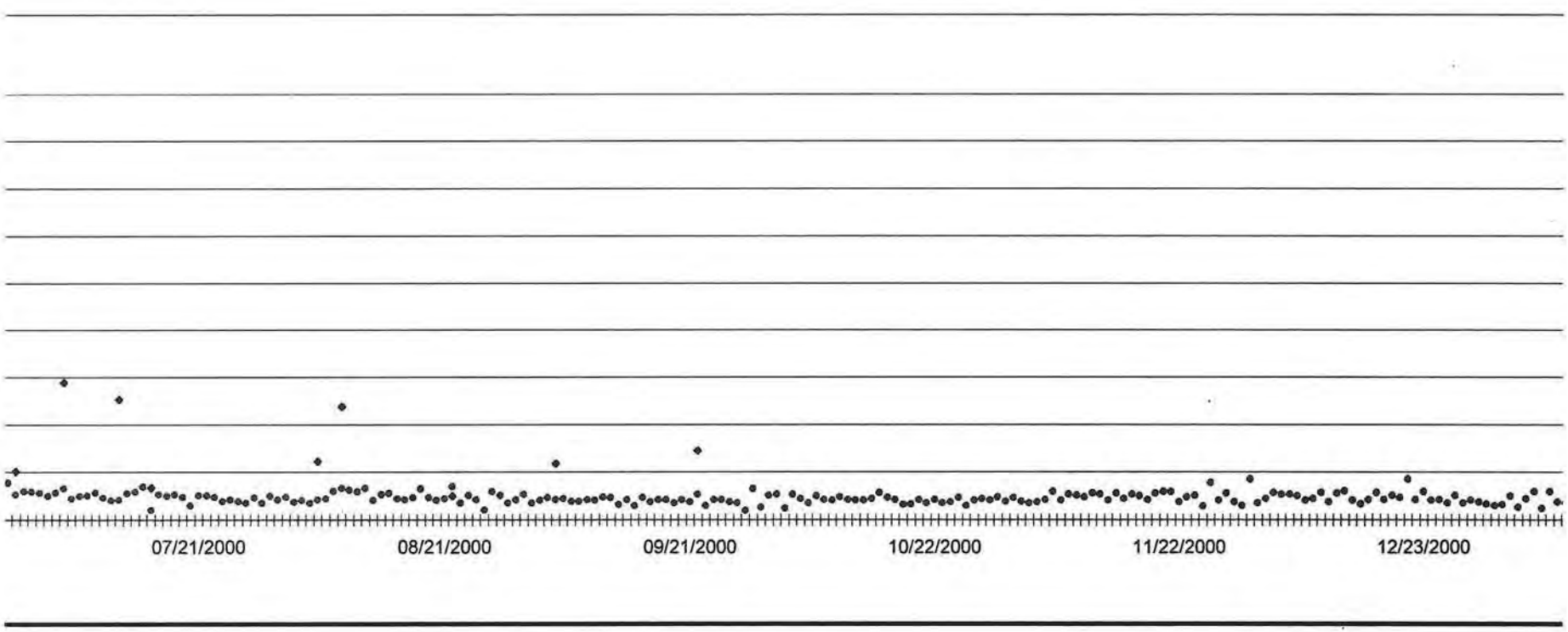
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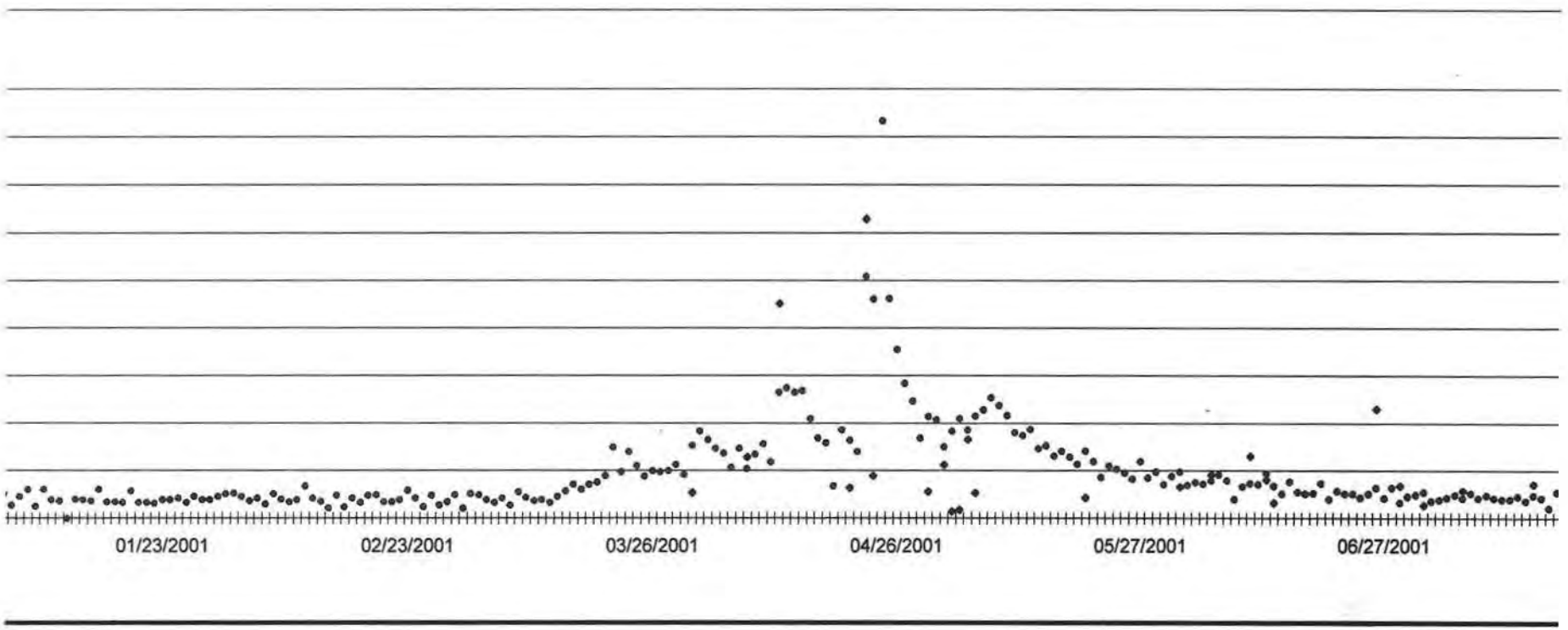
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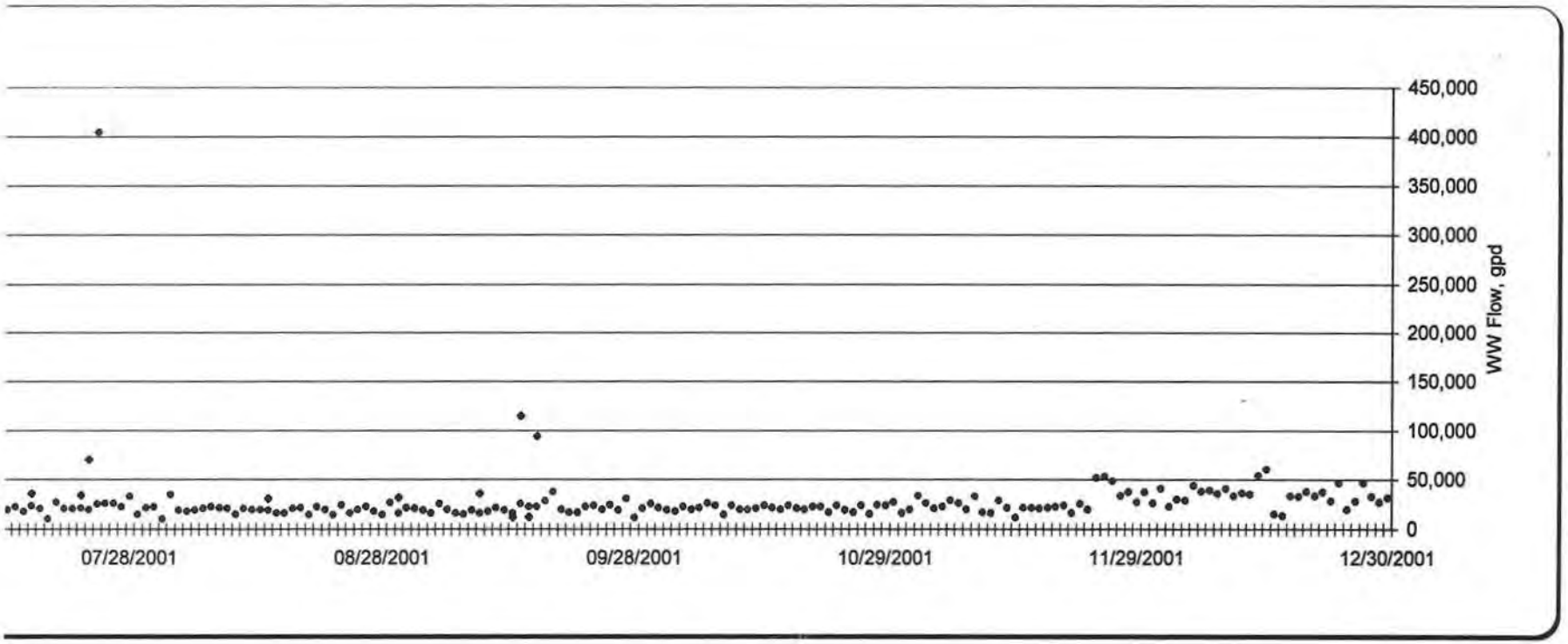
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300,000
250,000
200,000
150,000
100,000
50,000
0
WW Flow, gpd
07/28/2001
08/28/2001
09/28/2001
10/29/2001
11/29/2001
12/30/2001

Appendix D

Inflow Analysis

Date	WW Flow gpd	Actual Domestic & Infilt. gpd	Inflow gpd	Pop	WW gpcpd	# of Winter exceedances over 120	# of exceedances over 275
01/02/1998	13200	13200	0	316	41.73	0	0
01/03/1998	7800	7800	0	316	24.66	0	0
01/04/1998	17400	17400	0	316	55	0	0
01/05/1998	16200	16200	0	316	51.21	0	0
01/06/1998	12600	12600	0	316	39.82	0	0
01/07/1998	12000	12000	0	316	37.93	0	0
01/08/1998	13800	13800	0	316	43.61	0	0
01/09/1998	12600	12600	0	316	39.82	0	0
01/10/1998	17400	17400	0	316	54.99	0	0
01/11/1998	10800	10800	0	316	34.13	0	0
01/12/1998	14400	14400	0	316	45.5	0	0
01/13/1998	12600	12600	0	316	39.81	0	0
01/14/1998	15000	15000	0	316	47.39	0	0
01/15/1998	14400	14400	0	317	45.5	0	0
01/16/1998	16200	16200	0	317	51.18	0	0
01/17/1998	13800	13800	0	317	43.6	0	0
01/18/1998	8400	8400	0	317	26.54	0	0
01/19/1998	18000	18000	0	317	56.86	0	0
01/20/1998	13800	13800	0	317	43.59	0	0
01/21/1998	13800	13800	0	317	43.59	0	0
01/22/1998	9600	9600	0	317	30.32	0	0
01/23/1998	13800	13800	0	317	43.58	0	0
01/24/1998	11400	11400	0	317	36	0	0
01/25/1998	16200	16200	0	317	51.16	0	0
01/26/1998	15000	15000	0	317	47.37	0	0
01/27/1998	9600	9600	0	317	30.31	0	0
01/28/1998	12000	12000	0	317	37.89	0	0
01/29/1998	18000	18000	0	317	56.83	0	0
01/30/1998	12000	12000	0	317	37.89	0	0
01/31/1998	10800	10800	0	317	34.1	0	0
02/01/1998	13800	13800	0	317	43.57	0	0
02/02/1998	7200	7200	0	317	22.73	0	0
02/03/1998	10200	10200	0	317	32.2	0	0
02/04/1998	27600	26947	653	317	87.12	0	0
02/05/1998	11400	11400	0	317	35.98	0	0
02/06/1998	11400	11400	0	317	35.98	0	0
02/07/1998	16800	16800	0	317	53.02	0	0
02/08/1998	12600	12600	0	317	39.77	0	0
02/09/1998	15000	15000	0	317	47.34	0	0
02/10/1998	10800	10800	0	317	34.08	0	0
02/11/1998	15000	15000	0	317	47.33	0	0
02/12/1998	12000	12000	0	317	37.87	0	0
02/13/1998	12000	12000	0	317	37.86	0	0
02/14/1998	10800	10800	0	317	34.08	0	0
02/15/1998	11400	11400	0	317	35.97	0	0
02/16/1998	13200	13200	0	317	41.64	0	0
02/17/1998	12600	12600	0	317	39.75	0	0
02/18/1998	19200	19200	0	317	60.57	0	0
02/19/1998	10200	10200	0	317	32.18	0	0
02/20/1998	15000	15000	0	317	47.31	0	0
02/21/1998	13800	13800	0	317	43.53	0	0
02/22/1998	15600	15600	0	317	49.2	0	0
02/23/1998	14400	14400	0	317	45.42	0	0
02/24/1998	12000	12000	0	317	37.85	0	0
02/25/1998	16200	16200	0	317	51.09	0	0
02/26/1998	11400	11400	0	317	35.95	0	0
02/27/1998	7800	7800	0	317	24.6	0	0
02/28/1998	18000	18000	0	317	56.76	0	0
03/01/1998	7500	7500	0	317	23.65		0
03/02/1998	22200	22200	0	317	69.99		0
03/03/1998	15600	15600	0	317	49.18		0
03/04/1998	10200	10200	0	317	32.16		0
03/05/1998	11400	11400	0	317	35.94		0
03/06/1998	15600	15600	0	317	49.18		0
03/07/1998	10200	10200	0	317	32.15		0
03/08/1998	18000	18000	0	317	56.74		0
03/09/1998	15600	15600	0	317	49.17		0
03/10/1998	14400	14400	0	317	45.39		0
03/11/1998	13200	13200	0	317	41.6		0
03/12/1998	6600	6600	0	317	20.8		0

03/13/1998	20400	20400	0	317	64.29	0
03/14/1998	18000	18000	0	317	56.72	0
03/15/1998	10800	10800	0	317	34.03	0
03/16/1998	18000	18000	0	317	56.72	0
03/17/1998	12600	12600	0	317	39.7	0
03/18/1998	15600	15600	0	317	49.15	0
03/19/1998	14400	14400	0	317	45.37	0
03/20/1998	16800	16800	0	317	52.93	0
03/21/1998	16800	16800	0	317	52.92	0
03/22/1998	17400	17400	0	317	54.81	0
03/23/1998	18000	18000	0	317	56.7	0
03/24/1998	22200	22200	0	317	69.93	0
03/25/1998	13200	13200	0	317	41.58	0
03/26/1998	20400	20400	0	318	64.25	0
03/27/1998	19800	19800	0	318	62.36	0
03/28/1998	45000	26947	18053	318	141.7	0
03/29/1998	49200	26947	22253	318	154.9	0
03/30/1998	40200	26947	13253	318	126.6	0
03/31/1998	45600	26947	18653	318	143.6	0
04/01/1998	46200	26947	19253	318	145.5	0
04/02/1998	77400	26947	50453	318	243.7	0
04/03/1998	61800	26947	34853	318	194.6	0
04/04/1998	46800	26947	19853	318	147.3	0
04/05/1998	49200	26947	22253	318	154.9	0
04/06/1998	40200	26947	13253	318	126.5	0
04/07/1998	47400	26947	20453	318	149.2	0
04/08/1998	67800	26947	40853	318	213.4	0
04/09/1998	77400	26947	50453	318	243.6	0
04/10/1998	65400	26947	38453	318	205.8	0
04/11/1998	52200	26947	25253	318	164.3	0
04/12/1998	64200	26947	37253	318	202	0
04/13/1998	45600	26947	18653	318	143.5	0
04/14/1998	58200	26947	31253	318	183.1	0
04/15/1998	51600	26947	24653	318	162.4	0
04/16/1998	38400	26947	11453	318	120.8	0
04/17/1998	43800	26947	16853	318	137.8	0
04/18/1998	41400	26947	14453	318	130.3	0
04/19/1998	32400	26947	5453	318	101.9	0
04/20/1998	52200	26947	25253	318	164.2	0
04/21/1998	42600	26947	15653	318	134	0
04/22/1998	43200	26947	16253	318	135.9	0
04/23/1998	33000	26947	6053	318	103.8	0
04/24/1998	30600	26947	3653	318	96.25	0
04/25/1998	104400	26947	77453	318	328.4	1
04/26/1998	51600	26947	24653	318	162.3	0
04/27/1998	85200	26947	58253	318	268	0
04/28/1998	79800	26947	52853	318	251	0
04/29/1998	63600	26947	36653	318	200	0
04/30/1998	63000	26947	36053	318	198.1	0
05/01/1998	51600	26947	24653	318	162.3	0
05/02/1998	69000	26947	42053	318	217	0
05/03/1998	49800	26947	22853	318	156.6	0
05/04/1998	58800	26947	31853	318	184.9	0
05/05/1998	28200	26947	1253	318	88.66	0
05/06/1998	42600	26947	15653	318	133.9	0
05/07/1998	42000	26947	15053	318	132	0
05/08/1998	40200	26947	13253	318	126.4	0
05/09/1998	39600	26947	12653	318	124.5	0
05/10/1998	38400	26947	11453	318	120.7	0
05/11/1998	44400	26947	17453	318	139.6	0
05/12/1998	40800	26947	13853	318	128.2	0
05/13/1998	43200	26947	16253	318	135.8	0
05/14/1998	42000	26947	15053	318	132	0
05/15/1998	31800	26947	4853	318	99.93	0
05/16/1998	43200	26947	16253	318	135.7	0
05/17/1998	35400	26947	8453	318	111.2	0
05/18/1998	34800	26947	7853	318	109.3	0
05/19/1998	42600	26947	15653	318	133.8	0
05/20/1998	25200	25200	0	318	79.17	0
05/21/1998	36000	26947	9053	318	113.1	0
05/22/1998	31200	26947	4253	318	98.01	0
05/23/1998	35400	26947	8453	318	111.2	0
05/24/1998	27000	26947	53	318	84.81	0
05/25/1998	26400	26400	0	318	82.92	0

05/26/1998	34200	26947	7253	318	107.4	0
05/27/1998	25800	25800	0	318	81.03	0
05/28/1998	24000	24000	0	318	75.38	0
05/29/1998	19200	19200	0	318	60.3	0
05/30/1998	30000	26947	3053	318	94.21	0
05/31/1998	27000	26947	53	318	84.79	0
06/01/1998	21600	21600	0	318	67.83	0
06/02/1998	25200	25200	0	318	79.13	0
06/03/1998	28200	26947	1253	318	88.54	0
06/04/1998	24600	24600	0	319	77.24	0
06/05/1998	31200	26947	4253	319	97.95	0
06/06/1998	24600	24600	0	319	77.23	0
06/07/1998	24600	24600	0	319	77.23	0
06/08/1998	37200	26947	10253	319	116.8	0
06/09/1998	37200	26947	10253	319	116.8	0
06/10/1998	34200	26947	7253	319	107.3	0
06/11/1998	33000	26947	6053	319	103.6	0
06/12/1998	32400	26947	5453	319	101.7	0
06/13/1998	23400	23400	0	319	73.44	0
06/14/1998	31800	26947	4853	319	99.8	0
06/15/1998	43200	26947	16253	319	135.6	0
06/16/1998	61800	26947	34853	319	193.9	0
06/17/1998	40800	26947	13853	319	128	0
06/18/1998	44400	26947	17453	319	139.3	0
06/19/1998	46200	26947	19253	319	145	0
06/20/1998	38400	26947	11453	319	120.5	0
06/21/1998	27600	26947	653	319	86.59	0
06/22/1998	37200	26947	10253	319	116.7	0
06/23/1998	33600	26947	6653	319	105.4	0
06/24/1998	34200	26947	7253	319	107.3	0
06/25/1998	45000	26947	18053	319	141.2	0
06/26/1998	33600	26947	6653	319	105.4	0
06/27/1998	27000	26947	53	319	84.68	0
06/28/1998	33000	26947	6053	319	103.5	0
06/29/1998	27000	26947	53	319	84.68	0
06/30/1998	31200	26947	4253	319	97.84	0
07/01/1998	31200	26947	4253	319	97.84	0
07/02/1998	17400	17400	0	319	54.56	0
07/03/1998	28200	26947	1253	319	88.42	0
07/04/1998	33600	26947	6653	319	105.4	0
07/05/1998	19200	19200	0	319	60.2	0
07/06/1998	18000	18000	0	319	56.43	0
07/07/1998	23400	23400	0	319	73.36	0
07/08/1998	21600	21600	0	319	67.71	0
07/09/1998	26400	26400	0	319	82.76	0
07/10/1998	24000	24000	0	319	75.23	0
07/11/1998	22200	22200	0	319	69.59	0
07/12/1998	23400	23400	0	319	73.34	0
07/13/1998	25200	25200	0	319	78.98	0
07/14/1998	15600	15600	0	319	48.89	0
07/15/1998	21000	21000	0	319	65.81	0
07/16/1998	13800	13800	0	319	43.25	0
07/17/1998	22200	22200	0	319	69.57	0
07/18/1998	21600	21600	0	319	67.68	0
07/19/1998	27600	26947	653	319	86.48	0
07/20/1998	29400	26947	2453	319	92.12	0
07/21/1998	31800	26947	4853	319	99.63	0
07/22/1998	29400	26947	2453	319	92.11	0
07/23/1998	24000	24000	0	319	75.19	0
07/24/1998	30000	26947	3053	319	93.98	0
07/25/1998	18000	18000	0	319	56.39	0
07/26/1998	19800	19800	0	319	62.02	0
07/27/1998	20400	20400	0	319	63.9	0
07/28/1998	22200	22200	0	319	69.53	0
07/29/1998	21600	21600	0	319	67.65	0
07/30/1998	23400	23400	0	319	73.28	0
07/31/1998	19800	19800	0	319	62.01	0
08/01/1998	12600	12600	0	319	39.46	0
08/02/1998	25800	25800	0	319	80.79	0
08/03/1998	25800	25800	0	319	80.79	0
08/04/1998	58800	26947	31853	319	184.1	0
08/05/1998	49800	26947	22853	319	155.9	0
08/06/1998	42600	26947	15653	319	133.4	0
08/07/1998	47400	26947	20453	319	148.4	0

08/08/1998	27000	26947	53	319	84.53	0
08/09/1998	35400	26947	8453	319	110.8	0
08/10/1998	27600	26947	653	319	86.4	0
08/11/1998	28200	26947	1253	319	88.27	0
08/12/1998	34800	26947	7853	319	108.9	0
08/13/1998	14400	14400	0	320	45.07	0
08/14/1998	30000	26947	3053	320	93.89	0
08/15/1998	27000	26947	53	320	84.5	0
08/16/1998	23400	23400	0	320	73.23	0
08/17/1998	24600	24600	0	320	76.98	0
08/18/1998	21000	21000	0	320	65.71	0
08/19/1998	20400	20400	0	320	63.83	0
08/20/1998	24600	24600	0	320	76.97	0
08/21/1998	17400	17400	0	320	54.44	0
08/22/1998	19800	19800	0	320	61.95	0
08/23/1998	21000	21000	0	320	65.7	0
08/24/1998	19800	19800	0	320	61.94	0
08/25/1998	24600	24600	0	320	76.95	0
08/26/1998	19800	19800	0	320	61.94	0
08/27/1998	22800	22800	0	320	71.32	0
08/28/1998	22200	22200	0	320	69.44	0
08/29/1998	20400	20400	0	320	63.8	0
08/30/1998	18000	18000	0	320	56.3	0
08/31/1998	18000	18000	0	320	56.29	0
09/01/1998	18600	18600	0	320	58.17	0
09/02/1998	20400	20400	0	320	63.79	0
09/03/1998	18600	18600	0	320	58.16	0
09/04/1998	21600	21600	0	320	67.54	0
09/05/1998	14400	14400	0	320	45.02	0
09/06/1998	18000	18000	0	320	56.28	0
09/07/1998	15600	15600	0	320	48.77	0
09/08/1998	17400	17400	0	320	54.4	0
09/09/1998	15600	15600	0	320	48.77	0
09/10/1998	15000	15000	0	320	46.89	0
09/11/1998	16200	16200	0	320	50.64	0
09/12/1998	16200	16200	0	320	50.64	0
09/13/1998	11400	11400	0	320	35.63	0
09/14/1998	19800	19800	0	320	61.88	0
09/15/1998	21600	21600	0	320	67.51	0
09/16/1998	17400	17400	0	320	54.38	0
09/17/1998	13800	13800	0	320	43.13	0
09/18/1998	15000	15000	0	320	46.87	0
09/19/1998	15000	15000	0	320	46.87	0
09/20/1998	13200	13200	0	320	41.24	0
09/21/1998	15000	15000	0	320	46.87	0
09/22/1998	16800	16800	0	320	52.49	0
09/23/1998	12600	12600	0	320	39.36	0
09/24/1998	16800	16800	0	320	52.48	0
09/25/1998	13800	13800	0	320	43.11	0
09/26/1998	12600	12600	0	320	39.36	0
09/27/1998	16800	16800	0	320	52.48	0
09/28/1998	13800	13800	0	320	43.1	0
09/29/1998	13800	13800	0	320	43.1	0
09/30/1998	12600	12600	0	320	39.35	0
10/01/1998	21600	21600	0	320	67.46	0
10/02/1998	31200	26947	4253	320	97.43	0
10/03/1998	37800	26947	10853	320	118	0
10/04/1998	33000	26947	6053	320	103	0
10/05/1998	44400	26947	17453	320	138.6	0
10/06/1998	29400	26947	2453	320	91.8	0
10/07/1998	28200	26947	1253	320	88.05	0
10/08/1998	25800	25800	0	320	80.55	0
10/09/1998	23400	23400	0	320	73.05	0
10/10/1998	32400	26947	5453	320	101.1	0
10/11/1998	21000	21000	0	320	65.56	0
10/12/1998	22800	22800	0	320	71.17	0
10/13/1998	21600	21600	0	320	67.42	0
10/14/1998	23400	23400	0	320	73.04	0
10/15/1998	22800	22800	0	320	71.16	0
10/16/1998	28200	26947	1253	320	88.01	0
10/17/1998	36600	26947	9653	320	114.2	0

10/18/1998	16800	16800	0	320	52.43		0
10/19/1998	22800	22800	0	320	71.15		0
10/20/1998	22800	22800	0	320	71.15		0
10/21/1998	27000	26947	53	320	84.25		0
10/22/1998	28200	26947	1253	320	87.99		0
10/23/1998	24600	24600	0	321	76.75		0
10/24/1998	31800	26947	4853	321	99.21		0
10/25/1998	24600	24600	0	321	76.75		0
10/26/1998	19200	19200	0	321	59.9		0
10/27/1998	41400	26947	14453	321	129.1		0
10/28/1998	33000	26947	6053	321	102.9		0
10/29/1998	49200	26947	22253	321	153.5		0
10/30/1998	52800	26947	25853	321	164.7		0
10/31/1998	46800	26947	19853	321	146		0
11/01/1998	32400	26947	5453	321	101		0
11/02/1998	42600	26947	15653	321	132.9		0
11/03/1998	26400	26400	0	321	82.33		0
11/04/1998	42600	26947	15653	321	132.8		0
11/05/1998	22800	22800	0	321	71.1		0
11/06/1998	31200	26947	4253	321	97.28		0
11/07/1998	30000	26947	3053	321	93.54		0
11/08/1998	31200	26947	4253	321	97.27		0
11/09/1998	33600	26947	6653	321	104.8		0
11/10/1998	75600	26947	48653	321	235.7		0
11/11/1998	87600	26947	60653	321	273.1		0
11/12/1998	59400	26947	32453	321	185.2		0
11/13/1998	72600	26947	45653	321	226.3		0
11/14/1998	55200	26947	28253	321	172.1		0
11/15/1998	78000	26947	51053	321	243.1		0
11/16/1998	78000	26947	51053	321	243.1		0
11/17/1998	101400	26947	74453	321	316		1
11/18/1998	75600	26947	48653	321	235.6		0
11/19/1998	65400	26947	38453	321	203.8		0
11/20/1998	76800	26947	49853	321	239.3		0
11/21/1998	57000	26947	30053	321	177.6		0
11/22/1998	63000	26947	36053	321	196.3		0
11/23/1998	61800	26947	34853	321	192.6		0
11/24/1998	66000	26947	39053	321	205.6		0
11/25/1998	52800	26947	25853	321	164.5		0
11/26/1998	52800	26947	25853	321	164.5		0
11/27/1998	55200	26947	28253	321	172		0
11/28/1998	43800	26947	16853	321	136.4		0
11/29/1998	51000	26947	24053	321	158.9		0
11/30/1998	55800	26947	28853	321	173.8		0
12/01/1998	45600	26947	18653	321	142	1	0
12/02/1998	69158	26947	42211	321	215.4	1	0
12/03/1998	62705	26947	35758	321	195.3	1	0
12/04/1998	61780	26947	34833	321	192.4	1	0
12/05/1998	65450	26947	38503	321	203.8	1	0
12/06/1998	56266	26947	29319	321	175.2	1	0
12/07/1998	68233	26947	41286	321	212.5	1	0

12/08/1998	59011	26947	32064	321	183.7	1	0
12/09/1998	45185	26947	18238	321	140.7	1	0
12/10/1998	47025	26947	20078	321	146.4	1	0
12/11/1998	59016	26947	32069	321	183.7	1	0
12/12/1998	50699	26947	23752	321	157.8	1	0
12/13/1998	55342	26947	28394	321	172.3	1	0
12/14/1998	57172	26947	30224	321	178	1	0
12/15/1998	54412	26947	27465	321	169.4	1	0
12/16/1998	47940	26947	20993	321	149.2	1	0
12/17/1998	45190	26947	18243	321	140.7	1	0
12/18/1998	53483	26947	26536	321	166.5	1	0
12/19/1998	46105	26947	19158	321	143.5	1	0
12/20/1998	45181	26947	18233	321	140.6	1	0
12/21/1998	50723	26947	23776	321	157.8	1	0
12/22/1998	47025	26947	20078	321	146.3	1	0
12/23/1998	45185	26947	18238	321	140.6	1	0
12/24/1998	46100	26947	19153	321	143.4	1	0
12/25/1998	44242	26947	17294	321	137.6	1	0
12/26/1998	67385	26947	40438	321	209.6	1	0
12/27/1998	23934	23934	0	321	74.46	0	0
12/28/1998	47954	26947	21007	321	149.2	1	0
12/29/1998	45195	26947	18248	321	140.6	1	0
12/30/1998	47030	26947	20083	321	146.3	1	0
12/31/1998	38742	26947	11795	321	120.5	1	0
01/01/1999	49784	26947	22837	322	154.8	1	0
01/02/1999	42416	26947	15469	322	131.9	1	0
01/03/1999	30425	26947	3478	322	94.62	0	0
01/04/1999	48884	26947	21937	322	152	1	0
01/05/1999	47030	26947	20083	322	146.3	1	0
01/06/1999	34119	26947	7172	322	106.1	0	0
01/07/1999	35963	26947	9016	322	111.8	0	0
01/08/1999	46105	26947	19158	322	143.4	1	0
01/09/1999	35039	26947	8092	322	108.9	0	0
01/10/1999	38732	26947	11785	322	120.4	1	0
01/11/1999	54407	26947	27460	322	169.2	1	0
01/12/1999	30430	26947	3483	322	94.6	0	0
01/13/1999	43341	26947	16394	322	134.7	1	0
01/14/1999	25822	25822	0	322	80.27	0	0
01/15/1999	47025	26947	20078	322	146.2	1	0
01/16/1999	28591	26947	1643	322	88.87	0	0
01/17/1999	32275	26947	5327	322	100.3	0	0
01/18/1999	40,572	26,947	13,625	322	126.1	1	0
01/19/1999	35,968	26,947	9,021	322	111.8	0	0
01/20/1999	47,035	26,947	20,087	322	146.2	1	0
01/21/1999	25,822	25,822	0	322	80.24	0	0
01/22/1999	35,044	26,947	8,096	322	108.9	0	0
01/23/1999	35,959	26,947	9,011	322	111.7	0	0
01/24/1999	34,119	26,947	7,172	322	106	0	0
01/25/1999	35,039	26,947	8,092	322	108.9	0	0
01/26/1999	30,430	26,947	3,483	322	94.54	0	0
01/27/1999	39,652	26,947	12,705	322	123.2	1	0
01/28/1999	29,501	26,947	2,554	322	91.65	0	0
01/29/1999	38,732	26,947	11,785	322	120.3	1	0
01/30/1999	39,647	26,947	12,700	322	123.2	1	0
01/31/1999	30,425	26,947	3,478	322	94.51	0	0
02/01/1999	35,963	26,947	9,016	322	112	0	0
02/02/1999	36,883	26,947	9,936	322	115	0	0
02/03/1999	33,194	26,947	6,247	322	103	0	0
02/04/1999	35,039	26,947	8,092	322	109	0	0
02/05/1999	43,331	26,947	16,384	322	135	1	0
02/06/1999	40,558	26,947	13,610	322	126	1	0
02/07/1999	41,506	26,947	14,559	322	129	1	0
02/08/1999	62,690	26,947	35,743	322	195	1	0
02/09/1999	23,982	23,982	0	322	74	0	0
02/10/1999	45,171	26,947	18,224	322	140	1	0
02/11/1999	35,039	26,947	8,092	322	109	0	0
02/12/1999	55,342	26,947	28,394	322	172	1	0
02/13/1999	80,320	26,947	53,373	322	249	1	0
02/14/1999	24,849	24,849	0	322	77.1	0	0
02/15/1999	34,071	26,947	7,124	322	106	0	0
02/16/1999	35,963	26,947	9,016	322	112	0	0
02/17/1999	53,483	26,947	26,536	322	166	1	0
02/18/1999	57,104	26,947	30,157	322	177	1	0
02/19/1999	20,341	20,341	0	322	63	0	0

02/20/1999	35,973	26,947	9,026	322	112	0	0
02/21/1999	36,883	26,947	9,936	322	114	0	0
02/22/1999	40,577	26,947	13,630	322	126	1	0
02/23/1999	51,634	26,947	24,686	322	160	1	0
02/24/1999	35,963	26,947	9,016	322	112	0	0
02/25/1999	35,944	26,947	8,997	322	112	0	0
02/26/1999	52,573	26,947	25,625	322	163	1	0
02/27/1999	45,185	26,947	18,238	322	140	1	0
02/28/1999	51,629	26,947	24,682	322	160	1	0
03/01/1999	56,261	26,947	29,314	322	174.5		0
03/02/1999	47,020	26,947	20,073	322	145.9		0
03/03/1999	50,709	26,947	23,762	322	157.3		0
03/04/1999	29,434	26,947	2,486	322	91.3		0
03/05/1999	82,136	26,947	55,189	322	254.8		0
03/06/1999	54,398	26,947	27,451	322	168.7		0
03/07/1999	56,242	26,947	29,295	322	174.4		0
03/08/1999	59,936	26,947	32,989	322	185.9		0
03/09/1999	56,242	26,947	29,295	322	174.4		0
03/10/1999	39,647	26,947	12,700	322	122.9		0
03/11/1999	64,592	26,947	37,645	322	200.3		0
03/12/1999	38,675	26,947	11,728	323	119.9		0
03/13/1999	63,601	26,947	36,653	323	197.2		0
03/14/1999	44,275	26,947	17,328	323	137.3		0
03/15/1999	60,856	26,947	33,908	323	188.7		0
03/16/1999	58,091	26,947	31,144	323	180.1		0
03/17/1999	74,686	26,947	47,739	323	231.5		0
03/18/1999	85,733	26,947	58,786	323	265.8		0
03/19/1999	84,818	26,947	57,871	323	262.9		0
03/20/1999	115,239	26,947	88,292	323	357.2		1
03/21/1999	61,766	26,947	34,819	323	191.4		0
03/22/1999	57,152	26,947	30,205	323	177.1		0
03/23/1999	82,993	26,947	56,046	323	257.2		0
03/24/1999	73,728	26,947	46,781	323	228.5		0
03/25/1999	69,134	26,947	42,187	323	214.2		0
03/26/1999	82,964	26,947	56,017	323	257.1		0
03/27/1999	50,699	26,947	23,752	323	157.1		0
03/28/1999	112,441	26,947	85,494	323	348.4		1
03/29/1999	49,799	26,947	22,852	323	154.3		0
03/30/1999	57,148	26,947	30,200	323	177.1		0
03/31/1999	72,827	26,947	45,880	323	225.6		0
04/01/1999	66,374	26,947	39,427	323	205.6		0
04/02/1999	62,686	26,947	35,738	323	194.2		0
04/03/1999	58,997	26,947	32,050	323	182.8		0
04/04/1999	79,285	26,947	52,338	323	245.6		0
04/05/1999	76,487	26,947	49,540	323	236.9		0
04/06/1999	168,554	26,947	141,607	323	522.1		1
04/07/1999	148,347	26,947	121,400	323	459.5		1
04/08/1999	72,741	26,947	45,794	323	225.3		0
04/09/1999	256,874	26,947	229,927	323	795.5		1
04/10/1999	157,387	26,947	130,439	323	487.4		1
04/11/1999	245,971	26,947	219,023	323	761.7		1
04/12/1999	203,357	26,947	176,410	323	629.7		1
04/13/1999	186,835	26,947	159,887	323	578.5		1
04/14/1999	171,376	26,947	144,428	323	530.6		1
04/15/1999	186,916	26,947	159,969	323	578.7		1
04/16/1999	231,167	26,947	204,220	323	715.7		1
04/17/1999	139,168	26,947	112,221	323	430.8		1
04/18/1999	128,116	26,947	101,169	323	396.6		1
04/19/1999	125,366	26,947	98,419	323	388.1		1
04/20/1999	128,131	26,947	101,183	323	396.6		1
04/21/1999	137,348	26,947	110,401	323	425.1		1
04/22/1999	110,630	26,947	83,683	323	342.4		1
04/23/1999	114,310	26,947	87,362	323	353.8		1
04/24/1999	98,668	26,947	71,721	323	305.4		1
04/25/1999	114,343	26,947	87,396	323	353.9		1
04/26/1999	163,078	26,947	136,131	323	504.7		1
04/27/1999	72,018	26,947	45,071	323	222.9		0
04/28/1999	122,621	26,947	95,674	323	379.4		1
04/29/1999	75,601	26,947	48,654	323	233.9		0
04/30/1999	107,871	26,947	80,924	323	333.8		1
05/01/1999	105,092	26,947	78,145	323	325.1		1
05/02/1999	101,432	26,947	74,485	323	313.8		1
05/03/1999	96,809	26,947	69,862	323	299.5		1
05/04/1999	94,984	26,947	68,037	323	293.8		1

05/05/1999	178,835	26,947	151,888	323	553.2	1
05/06/1999	343,978	26,947	317,031	323	1064	1
05/07/1999	284,201	26,947	257,254	323	879.1	1
05/08/1999	191,933	26,947	164,986	323	593.6	1
05/09/1999	212,810	26,947	185,863	323	658.2	1
05/10/1999	144,745	26,947	117,797	323	447.6	1
05/11/1999	185,297	26,947	158,350	323	573	1
05/12/1999	142,004	26,947	115,057	323	439.1	1
05/13/1999	136,466	26,947	109,519	323	422	1
05/14/1999	122,641	26,947	95,693	323	379.2	1
05/15/1999	132,773	26,947	105,826	323	410.5	1
05/16/1999	201,184	26,947	174,236	323	622	1
05/17/1999	105,006	26,947	78,059	323	324.6	1
05/18/1999	171,505	26,947	144,558	323	530.2	1
05/19/1999	152,137	26,947	125,189	323	470.3	1
05/20/1999	143,854	26,947	116,906	323	444.7	1
05/21/1999	158,604	26,947	131,657	324	490.3	1
05/22/1999	152,146	26,947	125,199	324	470.3	1
05/23/1999	133,702	26,947	106,755	324	413.3	1
05/24/1999	118,032	26,947	91,085	324	364.8	1
05/25/1999	124,504	26,947	97,557	324	384.8	1
05/26/1999	103,258	26,947	76,310	324	319.1	1
05/27/1999	121,711	26,947	94,764	324	376.1	1
05/28/1999	88,526	26,947	61,579	324	273.6	0
05/29/1999	101,423	26,947	74,476	324	313.4	1
05/30/1999	104,192	26,947	77,245	324	321.9	1
05/31/1999	178,739	26,947	151,792	324	552.3	1
06/01/1999	117,931	26,947	90,984	324	364.4	1
06/02/1999	127,139	26,947	100,192	324	392.8	1
06/03/1999	204,647	26,947	177,700	324	632.2	1
06/04/1999	151,121	26,947	124,174	324	466.9	1
06/05/1999	177,010	26,947	150,062	324	546.8	1
06/06/1999	136,471	26,947	109,524	324	421.6	1
06/07/1999	152,146	26,947	125,199	324	470	1
06/08/1999	103,272	26,947	76,325	324	319	1
06/09/1999	136,481	26,947	109,534	324	421.5	1
06/10/1999	97,753	26,947	70,806	324	301.9	1
06/11/1999	119,886	26,947	92,939	324	370.2	1
06/12/1999	95,904	26,947	68,957	324	296.2	1
06/13/1999	79,309	26,947	52,362	324	244.9	0
06/14/1999	93,140	26,947	66,193	324	287.6	1
06/15/1999	76,540	26,947	49,593	324	236.3	0
06/16/1999	102,357	26,947	75,410	324	316	1
06/17/1999	65,474	26,947	38,527	324	202.2	0
06/18/1999	91,295	26,947	64,348	324	281.9	1
06/19/1999	59,941	26,947	32,993	324	185.1	0
06/20/1999	92,215	26,947	65,268	324	284.7	1
06/21/1999	76,535	26,947	49,588	324	236.3	0
06/22/1999	69,163	26,947	42,215	324	213.5	0
06/23/1999	72,856	26,947	45,909	324	224.9	0
06/24/1999	80,234	26,947	53,287	324	247.6	0
06/25/1999	67,313	26,947	40,366	324	207.8	0
06/26/1999	59,021	26,947	32,074	324	182.2	0
06/27/1999	60,860	26,947	33,913	324	187.8	0
06/28/1999	121,721	26,947	94,774	324	375.6	1
06/29/1999	79,300	26,947	52,352	324	244.7	0
06/30/1999	52,563	26,947	25,616	324	162.2	0
07/01/1999	91,291	26,947	64,343	324	281.7	1
07/02/1999	94,064	26,947	67,117	324	290.2	1
07/03/1999	106,065	26,947	79,118	324	327.2	1
07/04/1999	104,182	26,947	77,235	324	321.4	1
07/05/1999	116,173	26,947	89,226	324	358.4	1
07/06/1999	85,767	26,947	58,820	324	264.6	0
07/07/1999	61,780	26,947	34,833	324	190.6	0
07/08/1999	93,135	26,947	66,188	324	287.3	1
07/09/1999	55,346	26,947	28,399	324	170.7	0
07/10/1999	58,072	26,947	31,125	324	179.1	0
07/11/1999	59,931	26,947	32,984	324	184.8	0
07/12/1999	56,257	26,947	29,309	324	173.5	0
07/13/1999	47,030	26,947	20,083	324	145	0
07/14/1999	52,558	26,947	25,611	324	162.1	0
07/15/1999	52,563	26,947	25,616	324	162.1	0
07/16/1999	57,176	26,947	30,229	324	176.3	0
07/17/1999	64,544	26,947	37,597	324	199	0

07/18/1999	58,087	26,947	31,139	324	179.1	0
07/19/1999	69,182	26,947	42,235	324	213.3	0
07/20/1999	67,313	26,947	40,366	324	207.5	0
07/21/1999	61,761	26,947	34,814	324	190.4	0
07/22/1999	81,178	26,947	54,230	324	250.3	0
07/23/1999	72,851	26,947	45,904	324	224.6	0
07/24/1999	88,526	26,947	61,579	324	272.9	0
07/25/1999	70,092	26,947	43,145	324	216	0
07/26/1999	75,625	26,947	48,678	324	233.1	0
07/27/1999	35,963	26,947	9,016	324	110.8	0
07/28/1999	55,332	26,947	28,385	324	170.5	0
07/29/1999	51,643	26,947	24,696	324	159.2	0
07/30/1999	48,869	26,947	21,922	324	150.6	0
07/31/1999	47,035	26,947	20,087	325	144.9	0
08/01/1999	46,081	26,947	19,134	325	142	0
08/02/1999	53,526	26,947	26,579	325	164.9	0
08/03/1999	40,582	26,947	13,634	325	125	0
08/04/1999	26,756	26,756	0	325	82.43	0
08/05/1999	38,723	26,947	11,776	325	119.3	0
08/06/1999	31,355	26,947	4,408	325	96.6	0
08/07/1999	36,898	26,947	9,950	325	113.7	0
08/08/1999	25,812	25,812	0	325	79.51	0
08/09/1999	29,510	26,947	2,563	325	90.9	0
08/10/1999	38,728	26,947	11,780	325	119.3	0
08/11/1999	29,510	26,947	2,563	325	90.89	0
08/12/1999	22,133	22,133	0	325	68.17	0
08/13/1999	31,355	26,947	4,408	325	96.57	0
08/14/1999	19,407	19,407	0	325	59.77	0
08/15/1999	24,887	24,887	0	325	76.64	0
08/16/1999	38,684	26,947	11,737	325	119.1	0
08/17/1999	23,987	23,987	0	325	73.86	0
08/18/1999	26,746	26,746	0	325	82.35	0
08/19/1999	21,213	21,213	0	325	65.31	0
08/20/1999	25,822	25,822	0	325	79.5	0
08/21/1999	22,133	22,133	0	325	68.14	0
08/22/1999	22,128	22,128	0	325	68.12	0
08/23/1999	24,902	24,902	0	325	76.66	0
08/24/1999	26,741	26,741	0	325	82.32	0
08/25/1999	23,057	23,057	0	325	70.97	0
08/26/1999	18,444	18,444	0	325	56.77	0
08/27/1999	23,057	23,057	0	325	70.97	0
08/28/1999	20,288	20,288	0	325	62.44	0
08/29/1999	21,208	21,208	0	325	65.27	0
08/30/1999	12,896	12,896	0	325	39.69	0
08/31/1999	32,289	26,947	5,342	325	99.36	0
09/01/1999	25,817	25,817	0	325	79.44	0
09/02/1999	16,595	16,595	0	325	51.06	0
09/03/1999	22,133	22,133	0	325	68.1	0
09/04/1999	23,972	23,972	0	325	73.76	0
09/05/1999	23,053	23,053	0	325	70.93	0
09/06/1999	29,506	26,947	2,558	325	90.78	0
09/07/1999	23,977	23,977	0	325	73.76	0
09/08/1999	18,439	18,439	0	325	56.72	0
09/09/1999	19,369	19,369	0	325	59.58	0
09/10/1999	18,449	18,449	0	325	56.75	0
09/11/1999	28,586	26,947	1,639	325	87.93	0
09/12/1999	17,519	17,519	0	325	53.89	0
09/13/1999	27,666	26,947	719	325	85.09	0
09/14/1999	150,710	26,947	123,763	325	463.5	1
09/15/1999	19,364	19,364	0	325	59.55	0
09/16/1999	20,288	20,288	0	325	62.39	0
09/17/1999	22,133	22,133	0	325	68.06	0
09/18/1999	15,675	15,675	0	325	48.2	0
09/19/1999	23,982	23,982	0	325	73.74	0
09/20/1999	15,675	15,675	0	325	48.2	0
09/21/1999	23,977	23,977	0	325	73.72	0
09/22/1999	13,835	13,835	0	325	42.54	0
09/23/1999	22,128	22,128	0	325	68.03	0
09/24/1999	15,675	15,675	0	325	48.19	0
09/25/1999	21,213	21,213	0	325	65.21	0
09/26/1999	16,600	16,600	0	325	51.02	0
09/27/1999	17,519	17,519	0	325	53.85	0
09/28/1999	18,439	18,439	0	325	56.67	0
09/29/1999	17,519	17,519	0	325	53.85	0

09/30/1999	18,439	18,439	0	325	56.67		0
10/01/1999	20,284	20,284	0	325	62.34		0
10/02/1999	16,604	16,604	0	325	51.03		0
10/03/1999	14,750	14,750	0	325	45.33		0
10/04/1999	19,369	19,369	0	325	59.52		0
10/05/1999	16,600	16,600	0	325	51		0
10/06/1999	20,288	20,288	0	325	62.34		0
10/07/1999	21,213	21,213	0	325	65.17		0
10/08/1999	20,288	20,288	0	325	62.33		0
10/09/1999	15,680	15,680	0	326	48.17		0
10/10/1999	15,675	15,675	0	326	48.15		0
10/11/1999	18,439	18,439	0	326	56.64		0
10/12/1999	14,760	14,760	0	326	45.34		0
10/13/1999	17,519	17,519	0	326	53.81		0
10/14/1999	17,524	17,524	0	326	53.82		0
10/15/1999	21,189	21,189	0	326	65.08		0
10/16/1999	17,476	17,476	0	326	53.67		0
10/17/1999	15,637	15,637	0	326	48.02		0
10/18/1999	12,877	12,877	0	326	39.54		0
10/19/1999	18,396	18,396	0	326	56.49		0
10/20/1999	17,476	17,476	0	326	53.66		0
10/21/1999	16,556	16,556	0	326	50.84		0
10/22/1999	17,476	17,476	0	326	53.66		0
10/23/1999	16,556	16,556	0	326	50.83		0
10/24/1999	19,316	19,316	0	326	59.3		0
10/25/1999	14,717	14,717	0	326	45.18		0
10/26/1999	17,476	17,476	0	326	53.65		0
10/27/1999	20,236	20,236	0	326	62.12		0
10/28/1999	15,637	15,637	0	326	48		0
10/29/1999	15,637	15,637	0	326	48		0
10/30/1999	17,476	17,476	0	326	53.64		0
10/31/1999	18,396	18,396	0	326	56.46		0
11/01/1999	19,316	19,316	0	326	59.28		0
11/02/1999	17,476	17,476	0	326	53.63		0
11/03/1999	16,590	16,590	0	326	50.91		0
11/04/1999	10,142	10,142	0	326	31.12		0
11/05/1999	23,062	23,062	0	326	70.77		0
11/06/1999	16,604	16,604	0	326	50.95		0
11/07/1999	20,288	20,288	0	326	62.25		0
11/08/1999	18,444	18,444	0	326	56.59		0
11/09/1999	17,524	17,524	0	326	53.76		0
11/10/1999	17,529	17,529	0	326	53.78		0
11/11/1999	17,524	17,524	0	326	53.76		0
11/12/1999	20,288	20,288	0	326	62.24		0
11/13/1999	18,449	18,449	0	326	56.59		0
11/14/1999	18,449	18,449	0	326	56.59		0
11/15/1999	10,137	10,137	0	326	31.09		0
11/16/1999	20,284	20,284	0	326	62.21		0
11/17/1999	11,986	11,986	0	326	36.76		0
11/18/1999	12,010	12,010	0	326	36.83		0
11/19/1999	30,411	26,947	3,464	326	93.26		0
11/20/1999	27,656	26,947	709	326	84.81		0
11/21/1999	3,689	3,689	0	326	11.31		0
11/22/1999	25,822	25,822	0	326	79.17		0
11/23/1999	13,835	13,835	0	326	42.42		0
11/24/1999	17,515	17,515	0	326	53.7		0
11/25/1999	16,604	16,604	0	326	50.91		0
11/26/1999	15,665	15,665	0	326	48.03		0
11/27/1999	20,279	20,279	0	326	62.17		0
11/28/1999	16,609	16,609	0	326	50.91		0
11/29/1999	17,519	17,519	0	326	53.7		0
11/30/1999	19,364	19,364	0	326	59.35		0
12/01/1999	19,364	19,364	0	326	59.35	0	0
12/02/1999	15,680	15,680	0	326	48.06	0	0
12/03/1999	12,906	12,906	0	326	39.55	0	0
12/04/1999	19,369	19,369	0	326	59.36	0	0
12/05/1999	15,680	15,680	0	326	48.05	0	0
12/06/1999	18,444	18,444	0	326	56.52	0	0
12/07/1999	20,293	20,293	0	326	62.18	0	0
12/08/1999	15,675	15,675	0	326	48.03	0	0
12/09/1999	12,911	12,911	0	326	39.56	0	0
12/10/1999	14,750	14,750	0	326	45.19	0	0
12/11/1999	16,600	16,600	0	326	50.86	0	0
12/12/1999	16,600	16,600	0	326	50.85	0	0

12/13/1999	16,604	16,604	0	326	50.87	0	0
12/14/1999	16,609	16,609	0	326	50.88	0	0
12/15/1999	19,364	19,364	0	326	59.31	0	0
12/16/1999	16,604	16,604	0	326	50.86	0	0
12/17/1999	19,369	19,369	0	326	59.32	0	0
12/18/1999	19,364	19,364	0	327	59.31	0	0
12/19/1999	12,906	12,906	0	327	39.53	0	0
12/20/1999	21,208	21,208	0	327	64.95	0	0
12/21/1999	17,515	17,515	0	327	53.64	0	0
12/22/1999	15,680	15,680	0	327	48.01	0	0
12/23/1999	17,515	17,515	0	327	53.63	0	0
12/24/1999	13,831	13,831	0	327	42.35	0	0
12/25/1999	15,675	15,675	0	327	47.99	0	0
12/26/1999	20,288	20,288	0	327	62.12	0	0
12/27/1999	19,369	19,369	0	327	59.3	0	0
12/28/1999	16,604	16,604	0	327	50.83	0	0
12/29/1999	20,288	20,288	0	327	62.11	0	0
12/30/1999	17,524	17,524	0	327	53.64	0	0
12/31/1999	16,600	16,600	0	327	50.81	0	0
01/01/2000	20,288	20,288	0	327	62.1	0	0
01/02/2000	14,750	14,750	0	327	45.15	0	0
01/03/2000	19,364	19,364	0	327	59.26	0	0
01/04/2000	13,826	13,826	0	327	42.31	0	0
01/05/2000	17,524	17,524	0	327	53.63	0	0
01/06/2000	20,284	20,284	0	327	62.07	0	0
01/07/2000	13,831	13,831	0	327	42.32	0	0
01/08/2000	18,444	18,444	0	327	56.44	0	0
01/09/2000	14,746	14,746	0	327	45.12	0	0
01/10/2000	17,524	17,524	0	327	53.62	0	0
01/11/2000	15,675	15,675	0	327	47.96	0	0
01/12/2000	16,595	16,595	0	327	50.77	0	0
01/13/2000	17,519	17,519	0	327	53.6	0	0
01/14/2000	17,529	17,529	0	327	53.62	0	0
01/15/2000	19,364	19,364	0	327	59.23	0	0
01/16/2000	20,288	20,288	0	327	62.06	0	0
01/17/2000	23,057	23,057	0	327	70.53	0	0
01/18/2000	23,057	23,057	0	327	70.52	0	0
01/19/2000	16,590	16,590	0	327	50.74	0	0
01/20/2000	16,609	16,609	0	327	50.8	0	0
01/21/2000	22,133	22,133	0	327	67.69	0	0
01/22/2000	16,600	16,600	0	327	50.76	0	0
01/23/2000	18,444	18,444	0	327	56.4	0	0
01/24/2000	20,288	20,288	0	327	62.04	0	0
01/25/2000	17,515	17,515	0	327	53.55	0	0
01/26/2000	18,444	18,444	0	327	56.39	0	0
01/27/2000	14,755	14,755	0	327	45.11	0	0
01/28/2000	19,369	19,369	0	327	59.22	0	0
01/29/2000	17,519	17,519	0	327	53.56	0	0
01/30/2000	16,600	16,600	0	327	50.75	0	0
01/31/2000	13,826	13,826	0	327	42.26	0	0
02/01/2000	19,364	19,364	0	327	59.19	0	0
02/02/2000	11,977	11,977	0	327	36.61	0	0
02/03/2000	8,317	8,317	0	327	25.42	0	0
02/04/2000	20,260	20,260	0	327	61.92	0	0
02/05/2000	15,670	15,670	0	327	47.89	0	0
02/06/2000	11,057	11,057	0	327	33.79	0	0
02/07/2000	19,369	19,369	0	327	59.19	0	0
02/08/2000	19,364	19,364	0	327	59.17	0	0
02/09/2000	12,911	12,911	0	327	39.45	0	0
02/10/2000	15,670	15,670	0	327	47.88	0	0
02/11/2000	14,755	14,755	0	327	45.08	0	0
02/12/2000	16,600	16,600	0	327	50.72	0	0
02/13/2000	19,369	19,369	0	327	59.17	0	0
02/14/2000	18,444	18,444	0	327	56.35	0	0
02/15/2000	15,675	15,675	0	327	47.89	0	0
02/16/2000	15,675	15,675	0	327	47.88	0	0
02/17/2000	14,750	14,750	0	327	45.06	0	0
02/18/2000	17,515	17,515	0	327	53.5	0	0
02/19/2000	17,529	17,529	0	327	53.54	0	0
02/20/2000	17,515	17,515	0	327	53.49	0	0
02/21/2000	17,515	17,515	0	327	53.49	0	0
02/22/2000	17,524	17,524	0	327	53.52	0	0
02/23/2000	14,741	14,741	0	327	45.02	0	0
02/24/2000	13,821	13,821	0	327	42.2	0	0

02/25/2000	19,359	19,359	0	327	59.11	0	0
02/26/2000	13,797	13,797	0	328	42.13	0	0
02/27/2000	13,811	13,811	0	328	42.17	0	0
02/28/2000	16,595	16,595	0	328	50.67	0	0
02/29/2000	12,911	12,911	0	328	39.42	0	0
03/01/2000	21,175	21,175	0	328	64.64		0
03/02/2000	15,680	15,680	0	328	47.87		0
03/03/2000	19,364	19,364	0	328	59.11		0
03/04/2000	18,434	18,434	0	328	56.27		0
03/05/2000	23,062	23,062	0	328	70.39		0
03/06/2000	23,053	23,053	0	328	70.36		0
03/07/2000	23,048	23,048	0	328	70.34		0
03/08/2000	13,831	13,831	0	328	42.21		0
03/09/2000	15,675	15,675	0	328	47.84		0
03/10/2000	19,364	19,364	0	328	59.09		0
03/11/2000	19,369	19,369	0	328	59.1		0
03/12/2000	18,430	18,430	0	328	56.24		0
03/13/2000	20,288	20,288	0	328	61.91		0
03/14/2000	20,288	20,288	0	328	61.9		0
03/15/2000	15,675	15,675	0	328	47.82		0
03/16/2000	15,675	15,675	0	328	47.82		0
03/17/2000	18,444	18,444	0	328	56.27		0
03/18/2000	16,590	16,590	0	328	50.61		0
03/19/2000	21,189	21,189	0	328	64.64		0
03/20/2000	21,208	21,208	0	328	64.69		0
03/21/2000	16,600	16,600	0	328	50.63		0
03/22/2000	23,968	23,968	0	328	73.1		0
03/23/2000	21,213	21,213	0	328	64.7		0
03/24/2000	19,354	19,354	0	328	59.03		0
03/25/2000	15,637	15,637	0	328	47.69		0
03/26/2000	42,426	26,947	15,479	328	129.4		0
03/27/2000	21,203	21,203	0	328	64.66		0
03/28/2000	11,042	11,042	0	328	33.67		0
03/29/2000	23,987	23,987	0	328	73.14		0
03/30/2000	24,887	24,887	0	328	75.88		0
03/31/2000	16,556	16,556	0	328	50.48		0
04/01/2000	13,797	13,797	0	328	42.06		0
04/02/2000	26,674	26,674	0	328	81.32		0
04/03/2000	22,075	22,075	0	328	67.3		0
04/04/2000	13,797	13,797	0	328	42.06		0
04/05/2000	18,401	18,401	0	328	56.09		0
04/06/2000	20,322	20,322	0	328	61.94		0
04/07/2000	17,567	17,567	0	328	53.55		0
04/08/2000	17,524	17,524	0	328	53.41		0
04/09/2000	19,369	19,369	0	328	59.03		0
04/10/2000	16,600	16,600	0	328	50.59		0
04/11/2000	17,529	17,529	0	328	53.42		0
04/12/2000	19,369	19,369	0	328	59.02		0
04/13/2000	16,600	16,600	0	328	50.58		0
04/14/2000	17,519	17,519	0	328	53.38		0
04/15/2000	28,586	26,947	1,639	328	87.1		0
04/16/2000	17,519	17,519	0	328	53.38		0
04/17/2000	18,449	18,449	0	328	56.21		0
04/18/2000	16,600	16,600	0	328	50.57		0
04/19/2000	23,053	23,053	0	328	70.23		0
04/20/2000	23,977	23,977	0	328	73.04		0
04/21/2000	18,444	18,444	0	328	56.18		0
04/22/2000	32,270	26,947	5,323	328	98.29		0
04/23/2000	23,053	23,053	0	328	70.22		0
04/24/2000	19,364	19,364	0	328	58.98		0
04/25/2000	23,972	23,972	0	328	73.01		0
04/26/2000	24,897	24,897	0	328	75.82		0
04/27/2000	22,128	22,128	0	328	67.39		0
04/28/2000	19,364	19,364	0	328	58.97		0
04/29/2000	16,595	16,595	0	328	50.53		0
04/30/2000	32,260	26,947	5,313	328	98.23		0
05/01/2000	21,223	21,223	0	328	64.62		0
05/02/2000	11,986	11,986	0	328	36.49		0
05/03/2000	19,369	19,369	0	328	58.97		0
05/04/2000	20,293	20,293	0	328	61.78		0
05/05/2000	18,444	18,444	0	328	56.15		0
05/06/2000	23,968	23,968	0	328	72.96		0
05/07/2000	19,364	19,364	0	329	58.94		0
05/08/2000	30,445	26,947	3,497	329	92.67		0

05/09/2000	34,085	26,947	7,138	329	103.7	0
05/10/2000	19,378	19,378	0	329	58.98	0
05/11/2000	17,529	17,529	0	329	53.35	0
05/12/2000	22,128	22,128	0	329	67.34	0
05/13/2000	23,987	23,987	0	329	73	0
05/14/2000	26,751	26,751	0	329	81.41	0
05/15/2000	18,444	18,444	0	329	56.12	0
05/16/2000	21,184	21,184	0	329	64.46	0
05/17/2000	30,469	26,947	3,521	329	92.71	0
05/18/2000	77,489	26,947	50,542	329	235.8	0
05/19/2000	83,008	26,947	56,060	329	252.5	0
05/20/2000	49,789	26,947	22,842	329	151.5	0
05/21/2000	55,332	26,947	28,385	329	168.3	0
05/22/2000	27,656	26,947	709	329	84.13	0
05/23/2000	46,100	26,947	19,153	329	140.2	0
05/24/2000	25,822	25,822	0	329	78.54	0
05/25/2000	34,109	26,947	7,162	329	103.7	0
05/26/2000	22,128	22,128	0	329	67.3	0
05/27/2000	26,737	26,737	0	329	81.32	0
05/28/2000	28,586	26,947	1,639	329	86.94	0
05/29/2000	30,416	26,947	3,469	329	92.5	0
05/30/2000	21,208	21,208	0	329	64.49	0
05/31/2000	25,812	25,812	0	329	78.49	0
06/01/2000	32,270	26,947	5,323	329	98.12	0
06/02/2000	26,732	26,732	0	329	81.28	0
06/03/2000	23,977	23,977	0	329	72.9	0
06/04/2000	32,279	26,947	5,332	329	98.14	0
06/05/2000	38,728	26,947	11,780	329	117.7	0
06/06/2000	31,350	26,947	4,403	329	95.31	0
06/07/2000	37,803	26,947	10,856	329	114.9	0
06/08/2000	26,737	26,737	0	329	81.27	0
06/09/2000	20,274	20,274	0	329	61.63	0
06/10/2000	36,874	26,947	9,926	329	112.1	0
06/11/2000	23,072	23,072	0	329	70.12	0
06/12/2000	23,977	23,977	0	329	72.87	0
06/13/2000	19,369	19,369	0	329	58.86	0
06/14/2000	35,039	26,947	8,092	329	106.5	0
06/15/2000	30,425	26,947	3,478	329	92.46	0
06/16/2000	25,831	25,831	0	329	78.49	0
06/17/2000	23,057	23,057	0	329	70.06	0
06/18/2000	21,203	21,203	0	329	64.43	0
06/19/2000	27,671	26,947	724	329	84.07	0
06/20/2000	23,053	23,053	0	329	70.04	0
06/21/2000	20,288	20,288	0	329	61.64	0
06/22/2000	28,586	26,947	1,639	329	86.84	0
06/23/2000	16,600	16,600	0	329	50.43	0
06/24/2000	29,510	26,947	2,563	329	89.64	0
06/25/2000	22,114	22,114	0	329	67.17	0
06/26/2000	35,987	26,947	9,040	329	109.3	0
06/27/2000	39,647	26,947	12,700	329	120.4	0
06/28/2000	27,656	26,947	709	329	84	0
06/29/2000	31,360	26,947	4,412	329	95.24	0
06/30/2000	30,425	26,947	3,478	329	92.4	0
07/01/2000	29,525	26,947	2,578	329	89.66	0
07/02/2000	25,802	25,802	0	329	78.35	0
07/03/2000	29,510	26,947	2,563	329	89.61	0
07/04/2000	34,143	26,947	7,196	329	103.7	0
07/05/2000	23,029	23,029	0	329	69.92	0
07/06/2000	25,817	25,817	0	329	78.38	0
07/07/2000	26,746	26,746	0	329	81.2	0
07/08/2000	29,506	26,947	2,558	329	89.58	0
07/09/2000	23,977	23,977	0	329	72.79	0
07/10/2000	21,208	21,208	0	329	64.38	0
07/11/2000	22,138	22,138	0	329	67.2	0
07/12/2000	28,581	26,947	1,634	329	86.75	0
07/13/2000	30,430	26,947	3,483	329	92.36	0
07/14/2000	35,939	26,947	8,992	329	109.1	0
07/15/2000	11,090	11,090	0	329	33.66	0
07/16/2000	27,666	26,947	719	330	83.96	0
07/17/2000	25,822	25,822	0	330	78.36	0
07/18/2000	27,671	26,947	724	330	83.97	0
07/19/2000	24,892	24,892	0	330	75.53	0
07/20/2000	15,680	15,680	0	330	47.58	0
07/21/2000	26,746	26,746	0	330	81.15	0

07/22/2000	26,737	26,737	0	330	81.12	0
07/23/2000	24,902	24,902	0	330	75.55	0
07/24/2000	20,288	20,288	0	330	61.55	0
07/25/2000	22,128	22,128	0	330	67.13	0
07/26/2000	20,293	20,293	0	330	61.56	0
07/27/2000	18,439	18,439	0	330	55.93	0
07/28/2000	23,972	23,972	0	330	72.71	0
07/29/2000	18,439	18,439	0	330	55.93	0
07/30/2000	25,826	25,826	0	330	78.33	0
07/31/2000	22,128	22,128	0	330	67.11	0
08/01/2000	24,897	24,897	0	330	75.51	0
08/02/2000	19,369	19,369	0	330	58.74	0
08/03/2000	21,208	21,208	0	330	64.31	0
08/04/2000	18,444	18,444	0	330	55.93	0
08/05/2000	22,133	22,133	0	330	67.11	0
08/06/2000	23,048	23,048	0	330	69.88	0
08/07/2000	31,360	26,947	4,412	330	95.08	0
08/08/2000	34,119	26,947	7,172	330	103.4	0
08/09/2000	32,279	26,947	5,332	330	97.86	0
08/10/2000	30,425	26,947	3,478	330	92.24	0
08/11/2000	34,129	26,947	7,181	330	103.5	0
08/12/2000	21,203	21,203	0	330	64.27	0
08/13/2000	27,666	26,947	719	330	83.86	0
08/14/2000	28,586	26,947	1,639	330	86.64	0
08/15/2000	23,057	23,057	0	330	69.88	0
08/16/2000	22,133	22,133	0	330	67.08	0
08/17/2000	23,972	23,972	0	330	72.65	0
08/18/2000	33,185	26,947	6,238	330	100.6	0
08/19/2000	23,987	23,987	0	330	72.69	0
08/20/2000	21,213	21,213	0	330	64.28	0
08/21/2000	23,057	23,057	0	330	69.87	0
08/22/2000	35,939	26,947	8,992	330	108.9	0
08/23/2000	18,468	18,468	0	330	55.96	0
08/24/2000	26,737	26,737	0	330	81	0
08/25/2000	22,138	22,138	0	330	67.07	0
08/26/2000	11,086	11,086	0	330	33.58	0
08/27/2000	30,411	26,947	3,464	330	92.12	0
08/28/2000	26,741	26,741	0	330	81	0
08/29/2000	18,449	18,449	0	330	55.88	0
08/30/2000	22,128	22,128	0	330	67.02	0
08/31/2000	27,680	26,947	733	330	83.84	0
09/01/2000	18,415	18,415	0	330	55.77	0
09/02/2000	21,208	21,208	0	330	64.23	0
09/03/2000	23,987	23,987	0	330	72.64	0
09/04/2000	22,133	22,133	0	330	67.02	0
09/05/2000	23,053	23,053	0	330	69.81	0
09/06/2000	20,284	20,284	0	330	61.42	0
09/07/2000	20,284	20,284	0	330	61.42	0
09/08/2000	22,128	22,128	0	330	67	0
09/09/2000	21,208	21,208	0	330	64.21	0
09/10/2000	24,892	24,892	0	330	75.36	0
09/11/2000	23,977	23,977	0	330	72.59	0
09/12/2000	16,595	16,595	0	330	50.24	0
09/13/2000	22,128	22,128	0	330	66.98	0
09/14/2000	15,665	15,665	0	330	47.42	0
09/15/2000	23,972	23,972	0	330	72.56	0
09/16/2000	19,359	19,359	0	330	58.59	0
09/17/2000	22,128	22,128	0	330	66.97	0
09/18/2000	22,128	22,128	0	330	66.97	0
09/19/2000	18,439	18,439	0	330	55.8	0
09/20/2000	22,133	22,133	0	330	66.98	0
09/21/2000	19,359	19,359	0	330	58.58	0
09/22/2000	27,661	26,947	714	330	83.7	0
09/23/2000	15,675	15,675	0	330	47.43	0
09/24/2000	22,128	22,128	0	331	66.95	0
09/25/2000	22,123	22,123	0	331	66.93	0
09/26/2000	19,354	19,354	0	331	58.55	0
09/27/2000	18,439	18,439	0	331	55.78	0
09/28/2000	10,161	10,161	0	331	30.74	0
09/29/2000	33,170	26,947	6,223	331	100.3	0
09/30/2000	13,831	13,831	0	331	41.84	0
10/01/2000	26,741	26,741	0	331	80.89	0
10/02/2000	27,656	26,947	709	331	83.65	0
10/03/2000	12,911	12,911	0	331	39.05	0

10/04/2000	27,661	26,947	714	331	83.66		0
10/05/2000	23,053	23,053	0	331	69.72		0
10/06/2000	18,439	18,439	0	331	55.76		0
10/07/2000	25,817	25,817	0	331	78.07		0
10/08/2000	22,128	22,128	0	331	66.91		0
10/09/2000	21,213	21,213	0	331	64.14		0
10/10/2000	24,883	24,883	0	331	75.23		0
10/11/2000	22,133	22,133	0	331	66.92		0
10/12/2000	21,208	21,208	0	331	64.12		0
10/13/2000	21,208	21,208	0	331	64.12		0
10/14/2000	23,053	23,053	0	331	69.69		0
10/15/2000	29,510	26,947	2,563	331	89.21		0
10/16/2000	23,977	23,977	0	331	72.48		0
10/17/2000	22,133	22,133	0	331	66.9		0
10/18/2000	16,604	16,604	0	331	50.19		0
10/19/2000	17,515	17,515	0	331	52.94		0
10/20/2000	22,128	22,128	0	331	66.88		0
10/21/2000	18,439	18,439	0	331	55.73		0
10/22/2000	22,123	22,123	0	331	66.86		0
10/23/2000	18,439	18,439	0	331	55.72		0
10/24/2000	19,369	19,369	0	331	58.53		0
10/25/2000	23,958	23,958	0	331	72.39		0
10/26/2000	15,675	15,675	0	331	47.36		0
10/27/2000	21,199	21,199	0	331	64.05		0
10/28/2000	23,048	23,048	0	331	69.63		0
10/29/2000	21,199	21,199	0	331	64.04		0
10/30/2000	24,892	24,892	0	331	75.2		0
10/31/2000	20,279	20,279	0	331	61.26		0
11/01/2000	23,972	23,972	0	331	72.41		0
11/02/2000	20,288	20,288	0	331	61.28		0
11/03/2000	18,430	18,430	0	331	55.67		0
11/04/2000	19,359	19,359	0	331	58.47		0
11/05/2000	22,138	22,138	0	331	66.86		0
11/06/2000	30,406	26,947	3,459	331	91.83		0
11/07/2000	21,194	21,194	0	331	64		0
11/08/2000	27,666	26,947	719	331	83.55		0
11/09/2000	26,737	26,737	0	331	80.74		0
11/10/2000	24,897	24,897	0	331	75.18		0
11/11/2000	28,591	26,947	1,643	331	86.33		0
11/12/2000	27,656	26,947	709	331	83.5		0
11/13/2000	21,199	21,199	0	331	64		0
11/14/2000	28,586	26,947	1,639	331	86.3		0
11/15/2000	23,053	23,053	0	331	69.59		0
11/16/2000	27,647	26,947	700	331	83.46		0
11/17/2000	25,831	25,831	0	331	77.98		0
11/18/2000	22,138	22,138	0	331	66.82		0
11/19/2000	28,571	26,947	1,624	331	86.24		0
11/20/2000	30,435	26,947	3,488	331	91.86		0
11/21/2000	30,430	26,947	3,483	331	91.84		0
11/22/2000	19,364	19,364	0	331	58.44		0
11/23/2000	24,892	24,892	0	331	75.12		0
11/24/2000	26,732	26,732	0	331	80.67		0
11/25/2000	14,736	14,736	0	331	44.47		0
11/26/2000	39,662	26,947	12,715	331	119.7		0
11/27/2000	21,223	21,223	0	331	64.04		0
11/28/2000	28,567	26,947	1,619	331	86.19		0
11/29/2000	19,378	19,378	0	331	58.47		0
11/30/2000	15,694	15,694	0	331	47.35		0
12/01/2000	43,303	26,947	16,355	331	130.6	1	0
12/02/2000	18,449	18,449	0	331	55.65	0	0
12/03/2000	23,038	23,038	0	332	69.5	0	0
12/04/2000	29,506	26,947	2,558	332	89	0	0
12/05/2000	27,666	26,947	719	332	83.45	0	0
12/06/2000	27,652	26,947	704	332	83.4	0	0
12/07/2000	25,822	25,822	0	332	77.88	0	0
12/08/2000	21,199	21,199	0	332	63.93	0	0
12/09/2000	23,048	23,048	0	332	69.51	0	0
12/10/2000	29,510	26,947	2,563	332	88.99	0	0
12/11/2000	19,359	19,359	0	332	58.38	0	0
12/12/2000	28,600	26,947	1,653	332	86.24	0	0
12/13/2000	31,336	26,947	4,388	332	94.49	0	0
12/14/2000	21,208	21,208	0	332	63.95	0	0
12/15/2000	17,534	17,534	0	332	52.86	0	0
12/16/2000	22,118	22,118	0	332	66.68	0	0

12/17/2000	29,496	26,947	2,549	332	88.92	0	0
12/18/2000	22,133	22,133	0	332	66.72	0	0
12/19/2000	26,732	26,732	0	332	80.58	0	0
12/20/2000	23,972	23,972	0	332	72.26	0	0
12/21/2000	43,327	26,947	16,379	332	130.6	1	0
12/22/2000	22,147	22,147	0	332	66.75	0	0
12/23/2000	30,406	26,947	3,459	332	91.64	0	0
12/24/2000	21,213	21,213	0	332	63.93	0	0
12/25/2000	22,128	22,128	0	332	66.69	0	0
12/26/2000	18,439	18,439	0	332	55.57	0	0
12/27/2000	26,722	26,722	0	332	80.53	0	0
12/28/2000	18,449	18,449	0	332	55.59	0	0
12/29/2000	21,208	21,208	0	332	63.9	0	0
12/30/2000	19,369	19,369	0	332	58.36	0	0
12/31/2000	17,515	17,515	0	332	52.77	0	0
01/01/2001	15,675	15,675	0	332	47.23	0	0
01/02/2001	16,595	16,595	0	332	50	0	0
01/03/2001	25,798	25,798	0	332	77.72	0	0
01/04/2001	13,840	13,840	0	332	41.69	0	0
01/05/2001	23,014	23,014	0	332	69.33	0	0
01/06/2001	30,449	26,947	3,502	332	91.72	0	0
01/07/2001	12,930	12,930	0	332	38.95	0	0
01/08/2001	30,397	26,947	3,449	332	91.55	0	0
01/09/2001	19,354	19,354	0	332	58.29	0	0
01/10/2001	18,439	18,439	0	332	55.53	0	0
01/11/2001	0	0	0	332	0	0	0
01/12/2001	20,279	20,279	0	332	61.07	0	0
01/13/2001	19,354	19,354	0	332	58.28	0	0
01/14/2001	18,439	18,439	0	332	55.52	0	0
01/15/2001	30,416	26,947	3,469	332	91.58	0	0
01/16/2001	17,519	17,519	0	332	52.75	0	0
01/17/2001	17,515	17,515	0	332	52.73	0	0
01/18/2001	16,595	16,595	0	332	49.96	0	0
01/19/2001	28,562	26,947	1,615	332	85.99	0	0
01/20/2001	16,609	16,609	0	332	50	0	0
01/21/2001	16,595	16,595	0	332	49.95	0	0
01/22/2001	15,665	15,665	0	332	47.15	0	0
01/23/2001	19,354	19,354	0	332	58.26	0	0
01/24/2001	19,364	19,364	0	332	58.28	0	0
01/25/2001	21,199	21,199	0	332	63.8	0	0
01/26/2001	16,595	16,595	0	332	49.94	0	0
01/27/2001	23,043	23,043	0	332	69.35	0	0
01/28/2001	19,369	19,369	0	332	58.29	0	0
01/29/2001	19,359	19,359	0	332	58.26	0	0
01/30/2001	23,048	23,048	0	332	69.35	0	0
01/31/2001	25,798	25,798	0	332	77.62	0	0
02/01/2001	26,751	26,751	0	332	80.49	0	0
02/02/2001	23,048	23,048	0	332	69.34	0	0
02/03/2001	18,449	18,449	0	332	55.5	0	0
02/04/2001	21,199	21,199	0	332	63.77	0	0
02/05/2001	14,760	14,760	0	332	44.4	0	0
02/06/2001	25,812	25,812	0	332	77.65	0	0
02/07/2001	20,284	20,284	0	332	61.01	0	0
02/08/2001	17,519	17,519	0	332	52.7	0	0
02/09/2001	19,364	19,364	0	332	58.24	0	0
02/10/2001	34,081	26,947	7,133	332	102.5	0	0
02/11/2001	21,218	21,218	0	332	63.81	0	0
02/12/2001	17,567	17,567	0	333	52.83	0	0
02/13/2001	11,038	11,038	0	333	33.19	0	0
02/14/2001	23,972	23,972	0	333	72.09	0	0
02/15/2001	11,977	11,977	0	333	36.01	0	0
02/16/2001	21,213	21,213	0	333	63.79	0	0
02/17/2001	16,595	16,595	0	333	49.9	0	0
02/18/2001	23,977	23,977	0	333	72.09	0	0
02/19/2001	24,892	24,892	0	333	74.84	0	0
02/20/2001	17,519	17,519	0	333	52.67	0	0
02/21/2001	17,519	17,519	0	333	52.67	0	0
02/22/2001	19,359	19,359	0	333	58.2	0	0
02/23/2001	29,525	26,947	2,578	333	88.75	0	0
02/24/2001	21,199	21,199	0	333	63.72	0	0
02/25/2001	11,977	11,977	0	333	36	0	0
02/26/2001	23,968	23,968	0	333	72.04	0	0
02/27/2001	13,835	13,835	0	333	41.58	0	0
02/28/2001	17,519	17,519	0	333	52.65	0	0

03/01/2001	24,887	24,887	0	333	74.79	0
03/02/2001	10,123	10,123	0	333	30.42	0
03/03/2001	25,846	25,846	0	333	77.67	0
03/04/2001	24,897	24,897	0	333	74.81	0
03/05/2001	19,359	19,359	0	333	58.17	0
03/06/2001	16,600	16,600	0	333	49.87	0
03/07/2001	21,194	21,194	0	333	63.68	0
03/08/2001	13,807	13,807	0	333	41.48	0
03/09/2001	27,671	26,947	724	333	83.13	0
03/10/2001	22,138	22,138	0	333	66.5	0
03/11/2001	18,425	18,425	0	333	55.35	0
03/12/2001	19,345	19,345	0	333	58.11	0
03/13/2001	16,590	16,590	0	333	49.83	0
03/14/2001	23,043	23,043	0	333	69.21	0
03/15/2001	28,571	26,947	1,624	333	85.81	0
03/16/2001	35,920	26,947	8,973	333	107.9	0
03/17/2001	30,445	26,947	3,497	333	91.43	0
03/18/2001	35,944	26,947	8,997	333	107.9	0
03/19/2001	37,789	26,947	10,841	333	113.5	0
03/20/2001	45,152	26,947	18,205	333	135.6	0
03/21/2001	74,701	26,947	47,753	333	224.3	0
03/22/2001	48,855	26,947	21,908	333	146.7	0
03/23/2001	70,073	26,947	43,126	333	210.4	0
03/24/2001	55,318	26,947	28,370	333	166.1	0
03/25/2001	44,251	26,947	17,304	333	132.8	0
03/26/2001	49,780	26,947	22,832	333	149.4	0
03/27/2001	48,874	26,947	21,927	333	146.7	0
03/28/2001	49,784	26,947	22,837	333	149.4	0
03/29/2001	56,261	26,947	29,314	333	168.9	0
03/30/2001	46,076	26,947	19,129	333	138.3	0
03/31/2001	76,521	26,947	49,574	333	229.7	0
04/01/2001	92,182	26,947	65,234	333	276.7	1
04/02/2001	82,969	26,947	56,022	333	249	0
04/03/2001	73,747	26,947	46,800	333	221.3	0
04/04/2001	68,214	26,947	41,267	333	204.7	0
04/05/2001	53,473	26,947	26,526	333	160.5	0
04/06/2001	73,752	26,947	46,805	333	221.3	0
04/07/2001	52,553	26,947	25,606	333	157.7	0
04/08/2001	67,280	26,947	40,333	333	201.9	0
04/09/2001	78,356	26,947	51,409	333	235.1	0
04/10/2001	59,054	26,947	32,107	333	177.2	0
04/11/2001	132,782	26,947	105,835	333	398.3	1
04/12/2001	137,348	26,947	110,401	333	412	1
04/13/2001	132,739	26,947	105,792	333	398.2	1
04/14/2001	134,608	26,947	107,660	333	403.8	1
04/15/2001	105,102	26,947	78,155	333	315.2	1
04/16/2001	84,828	26,947	57,881	333	254.4	0
04/17/2001	79,295	26,947	52,348	333	237.8	0
04/18/2001	34,201	26,947	7,253	333	102.6	0
04/19/2001	93,039	26,947	66,092	333	279	1
04/20/2001	82,059	26,947	55,112	333	246.1	0
04/21/2001	70,073	26,947	43,126	333	210.1	0
04/22/2001	254,465	26,947	227,518	333	763	1
04/23/2001	230,569	26,947	203,622	334	691.3	1
04/24/2001	416,834	26,947	389,887	334	1250	1
04/25/2001	231,455	26,947	204,508	334	693.9	1
04/26/2001	177,848	26,947	150,901	334	533.2	1
04/27/2001	142,009	26,947	115,062	334	425.7	1
04/28/2001	123,536	26,947	96,589	334	370.3	1
04/29/2001	84,838	26,947	57,890	334	254.3	0
04/30/2001	107,885	26,947	80,938	334	323.4	1
05/01/2001	104,221	26,947	77,273	334	312.4	1
05/02/2001	75,592	26,947	48,644	334	226.6	0
05/03/2001	92,215	26,947	65,268	334	276.4	1
05/04/2001	105,121	26,947	78,174	334	315	1
05/05/2001	93,125	26,947	66,178	334	279.1	1
05/06/2001	107,900	26,947	80,953	334	323.3	1
05/07/2001	114,353	26,947	87,406	334	342.7	1
05/08/2001	127,244	26,947	100,297	334	381.3	1
05/09/2001	118,957	26,947	92,009	334	356.4	1
05/10/2001	108,820	26,947	81,872	334	326.1	1
05/11/2001	90,366	26,947	63,419	334	270.7	0
05/12/2001	87,602	26,947	60,655	334	262.5	0
05/13/2001	94,069	26,947	67,122	334	281.8	1

05/14/2001	73,776	26,947	46,829	334	221	0
05/15/2001	76,545	26,947	49,598	334	229.3	0
05/16/2001	65,488	26,947	38,541	334	196.2	0
05/17/2001	70,997	26,947	44,050	334	212.7	0
05/18/2001	64,554	26,947	37,607	334	193.4	0
05/19/2001	57,200	26,947	30,253	334	171.3	0
05/20/2001	70,988	26,947	44,041	334	212.6	0
05/21/2001	59,945	26,947	32,998	334	179.5	0
05/22/2001	43,341	26,947	16,394	334	129.8	0
05/23/2001	55,332	26,947	28,385	334	165.7	0
05/24/2001	51,658	26,947	24,710	334	154.7	0
05/25/2001	47,940	26,947	20,993	334	143.5	0
05/26/2001	41,506	26,947	14,559	334	124.3	0
05/27/2001	59,931	26,947	32,984	334	179.4	0
05/28/2001	42,416	26,947	15,469	334	127	0
05/29/2001	48,879	26,947	21,932	334	146.3	0
05/30/2001	35,963	26,947	9,016	334	107.7	0
05/31/2001	44,266	26,947	17,318	334	132.5	0
06/01/2001	48,874	26,947	21,927	334	146.3	0
06/02/2001	35,044	26,947	8,096	334	104.9	0
06/03/2001	37,808	26,947	10,861	334	113.2	0
06/04/2001	35,987	26,947	9,040	334	107.7	0
06/05/2001	39,633	26,947	12,686	334	118.6	0
06/06/2001	46,110	26,947	19,163	334	138	0
06/07/2001	39,652	26,947	12,705	334	118.7	0
06/08/2001	20,308	20,308	0	334	60.77	0
06/09/2001	33,180	26,947	6,233	334	99.29	0
06/10/2001	36,888	26,947	9,941	334	110.4	0
06/11/2001	35,963	26,947	9,016	334	107.6	0
06/12/2001	47,035	26,947	20,087	334	140.7	0
06/13/2001	34,119	26,947	7,172	334	102.1	0
06/14/2001	25,822	25,822	0	334	77.25	0
06/15/2001	38,732	26,947	11,785	334	115.9	0
06/16/2001	27,652	26,947	704	334	82.72	0
06/17/2001	25,836	25,836	0	334	77.29	0
06/18/2001	26,746	26,746	0	334	80.01	0
06/19/2001	36,888	26,947	9,941	334	110.3	0
06/20/2001	20,288	20,288	0	334	60.68	0
06/21/2001	28,586	26,947	1,639	334	85.5	0
06/22/2001	25,826	25,826	0	334	77.24	0
06/23/2001	25,817	25,817	0	334	77.21	0
06/24/2001	22,133	22,133	0	334	66.19	0
06/25/2001	25,807	25,807	0	334	77.17	0
06/26/2001	32,275	26,947	5,327	334	96.51	0
06/27/2001	21,227	21,227	0	334	63.47	0
06/28/2001	32,275	26,947	5,327	334	96.5	0
06/29/2001	16,600	16,600	0	334	49.63	0
06/30/2001	23,057	23,057	0	334	68.94	0
07/01/2001	24,897	24,897	0	334	74.43	0
07/02/2001	27,666	26,947	719	335	82.71	0
07/03/2001	18,444	18,444	0	335	55.14	0
07/04/2001	19,369	19,369	0	335	57.9	0
07/05/2001	22,133	22,133	0	335	66.16	0
07/06/2001	24,897	24,897	0	335	74.42	0
07/07/2001	21,237	21,237	0	335	63.47	0
07/08/2001	26,717	26,717	0	335	79.85	0
07/09/2001	21,213	21,213	0	335	63.4	0
07/10/2001	23,977	23,977	0	335	71.66	0
07/11/2001	21,208	21,208	0	335	63.38	0
07/12/2001	20,288	20,288	0	335	60.63	0
07/13/2001	20,288	20,288	0	335	60.62	0
07/14/2001	23,057	23,057	0	335	68.89	0
07/15/2001	18,444	18,444	0	335	55.11	0
07/16/2001	23,977	23,977	0	335	71.64	0
07/17/2001	21,213	21,213	0	335	63.38	0
07/18/2001	11,086	11,086	0	335	33.12	0
07/19/2001	27,647	26,947	700	335	82.59	0
07/20/2001	21,213	21,213	0	335	63.37	0
07/21/2001	21,208	21,208	0	335	63.35	0
07/22/2001	22,138	22,138	0	335	66.12	0
07/23/2001	20,288	20,288	0	335	60.6	0
07/24/2001	25,817	25,817	0	335	77.11	0
07/25/2001	26,751	26,751	0	335	79.89	0
07/26/2001	26,741	26,741	0	335	79.86	0

07/27/2001	23,057	23,057	0	335	68.86	0
07/28/2001	33,228	26,947	6,281	335	99.22	0
07/29/2001	15,656	15,656	0	335	46.75	0
07/30/2001	22,128	22,128	0	335	66.07	0
07/31/2001	23,057	23,057	0	335	68.84	0
08/01/2001	11,047	11,047	0	335	32.98	0
08/02/2001	35,063	26,947	8,116	335	104.7	0
08/03/2001	19,369	19,369	0	335	57.82	0
08/04/2001	18,449	18,449	0	335	55.08	0
08/05/2001	19,364	19,364	0	335	57.8	0
08/06/2001	21,208	21,208	0	335	63.31	0
08/07/2001	23,057	23,057	0	335	68.82	0
08/08/2001	22,133	22,133	0	335	66.06	0
08/09/2001	21,213	21,213	0	335	63.31	0
08/10/2001	15,675	15,675	0	335	46.78	0
08/11/2001	21,208	21,208	0	335	63.29	0
08/12/2001	20,293	20,293	0	335	60.56	0
08/13/2001	20,288	20,288	0	335	60.54	0
08/14/2001	19,364	19,364	0	335	57.78	0
08/15/2001	16,600	16,600	0	335	49.53	0
08/16/2001	16,600	16,600	0	335	49.53	0
08/17/2001	21,213	21,213	0	335	63.29	0
08/18/2001	22,133	22,133	0	335	66.03	0
08/19/2001	14,755	14,755	0	335	44.02	0
08/20/2001	23,048	23,048	0	335	68.76	0
08/21/2001	20,293	20,293	0	335	60.54	0
08/22/2001	14,770	14,770	0	335	44.06	0
08/23/2001	24,887	24,887	0	335	74.24	0
08/24/2001	16,600	16,600	0	335	49.51	0
08/25/2001	20,288	20,288	0	335	60.51	0
08/26/2001	23,057	23,057	0	335	68.77	0
08/27/2001	18,439	18,439	0	335	54.99	0
08/28/2001	14,731	14,731	0	335	43.93	0
08/29/2001	26,761	26,761	0	335	79.8	0
08/30/2001	16,600	16,600	0	335	49.5	0
08/31/2001	22,138	22,138	0	335	66.01	0
09/01/2001	21,203	21,203	0	335	63.22	0
09/02/2001	19,373	19,373	0	335	57.76	0
09/03/2001	16,600	16,600	0	335	49.49	0
09/04/2001	25,817	25,817	0	335	76.97	0
09/05/2001	20,288	20,288	0	335	60.48	0
09/06/2001	16,600	16,600	0	335	49.49	0
09/07/2001	15,680	15,680	0	335	46.74	0
09/08/2001	19,373	19,373	0	335	57.75	0
09/09/2001	16,595	16,595	0	335	49.46	0
09/10/2001	18,458	18,458	0	336	55.02	0
09/11/2001	22,128	22,128	0	336	65.95	0
09/12/2001	19,364	19,364	0	336	57.71	0
09/13/2001	16,604	16,604	0	336	49.48	0
09/14/2001	25,822	25,822	0	336	76.95	0
09/15/2001	23,057	23,057	0	336	68.71	0
09/16/2001	23,057	23,057	0	336	68.71	0
09/17/2001	28,595	26,947	1,648	336	85.21	0
09/18/2001	37,832	26,947	10,885	336	112.7	0
09/19/2001	20,269	20,269	0	336	60.39	0
09/20/2001	17,519	17,519	0	336	52.2	0
09/21/2001	17,519	17,519	0	336	52.19	0
09/22/2001	23,057	23,057	0	336	68.69	0
09/23/2001	23,982	23,982	0	336	71.44	0
09/24/2001	20,298	20,298	0	336	60.46	0
09/25/2001	24,892	24,892	0	336	74.15	0
09/26/2001	19,369	19,369	0	336	57.69	0
09/27/2001	31,336	26,947	4,388	336	93.33	0
09/28/2001	12,005	12,005	0	336	35.76	0
09/29/2001	21,227	21,227	0	336	63.22	0
09/30/2001	25,798	25,798	0	336	76.83	0
10/01/2001	22,138	22,138	0	336	65.92	0
10/02/2001	19,369	19,369	0	336	57.68	0
10/03/2001	18,444	18,444	0	336	54.92	0
10/04/2001	23,057	23,057	0	336	68.66	0
10/05/2001	20,288	20,288	0	336	60.41	0
10/06/2001	22,133	22,133	0	336	65.9	0
10/07/2001	26,746	26,746	0	336	79.63	0
10/08/2001	23,977	23,977	0	336	71.38	0

10/09/2001	14,755	14,755	0	336	43.93		0
10/10/2001	23,977	23,977	0	336	71.38		0
10/11/2001	20,288	20,288	0	336	60.39		0
10/12/2001	20,288	20,288	0	336	60.39		0
10/13/2001	21,213	21,213	0	336	63.14		0
10/14/2001	23,972	23,972	0	336	71.35		0
10/15/2001	22,142	22,142	0	336	65.9		0
10/16/2001	20,284	20,284	0	336	60.37		0
10/17/2001	23,977	23,977	0	336	71.35		0
10/18/2001	21,213	21,213	0	336	63.13		0
10/19/2001	20,288	20,288	0	336	60.37		0
10/20/2001	23,053	23,053	0	336	68.59		0
10/21/2001	23,057	23,057	0	336	68.61		0
10/22/2001	17,519	17,519	0	336	52.13		0
10/23/2001	23,987	23,987	0	336	71.37		0
10/24/2001	19,359	19,359	0	336	57.59		0
10/25/2001	17,524	17,524	0	336	52.13		0
10/26/2001	23,972	23,972	0	336	71.31		0
10/27/2001	15,680	15,680	0	336	46.64		0
10/28/2001	24,892	24,892	0	336	74.04		0
10/29/2001	23,982	23,982	0	336	71.33		0
10/30/2001	27,666	26,947	719	336	82.29		0
10/31/2001	16,600	16,600	0	336	49.37		0
11/01/2001	20,288	20,288	0	336	60.34		0
11/02/2001	34,124	26,947	7,177	336	101.5		0
11/03/2001	26,751	26,751	0	336	79.55		0
11/04/2001	21,203	21,203	0	336	63.05		0
11/05/2001	23,053	23,053	0	336	68.55		0
11/06/2001	29,510	26,947	2,563	336	87.75		0
11/07/2001	26,727	26,727	0	336	79.47		0
11/08/2001	20,312	20,312	0	336	60.39		0
11/09/2001	33,190	26,947	6,242	336	98.67		0
11/10/2001	17,515	17,515	0	336	52.07		0
11/11/2001	16,609	16,609	0	336	49.38		0
11/12/2001	29,515	26,947	2,568	336	87.74		0
11/13/2001	22,128	22,128	0	336	65.78		0
11/14/2001	11,991	11,991	0	336	35.64		0
11/15/2001	22,138	22,138	0	336	65.8		0
11/16/2001	22,133	22,133	0	336	65.78		0
11/17/2001	21,208	21,208	0	336	63.03		0
11/18/2001	22,138	22,138	0	336	65.79		0
11/19/2001	23,057	23,057	0	336	68.52		0
11/20/2001	23,977	23,977	0	337	71.25		0
11/21/2001	16,604	16,604	0	337	49.34		0
11/22/2001	25,822	25,822	0	337	76.73		0
11/23/2001	20,288	20,288	0	337	60.28		0
11/24/2001	52,568	26,947	25,621	337	156.2		0
11/25/2001	53,497	26,947	26,550	337	158.9		0
11/26/2001	48,865	26,947	21,917	337	145.2		0
11/27/2001	34,124	26,947	7,177	337	101.4		0
11/28/2001	37,817	26,947	10,870	337	112.3		0
11/29/2001	27,666	26,947	719	337	82.18		0
11/30/2001	37,813	26,947	10,865	337	112.3		0
12/01/2001	26,727	26,727	0	337	79.39	0	0
12/02/2001	41,525	26,947	14,578	337	123.3	1	0
12/03/2001	23,043	23,043	0	337	68.44	0	0
12/04/2001	30,449	26,947	3,502	337	90.43	0	0
12/05/2001	29,486	26,947	2,539	337	87.57	0	0
12/06/2001	44,280	26,947	17,333	337	131.5	1	0
12/07/2001	38,732	26,947	11,785	337	115	0	0
12/08/2001	39,657	26,947	12,710	337	117.8	0	0
12/09/2001	35,968	26,947	9,021	337	106.8	0	0
12/10/2001	41,501	26,947	14,554	337	123.2	1	0
12/11/2001	34,119	26,947	7,172	337	101.3	0	0
12/12/2001	36,893	26,947	9,946	337	109.5	0	0
12/13/2001	35,963	26,947	9,016	337	106.8	0	0
12/14/2001	54,417	26,947	27,470	337	161.5	1	0
12/15/2001	60,841	26,947	33,894	337	180.6	1	0
12/16/2001	15,689	15,689	0	337	46.57	0	0
12/17/2001	13,840	13,840	0	337	41.08	0	0
12/18/2001	34,124	26,947	7,177	337	101.3	0	0
12/19/2001	33,199	26,947	6,252	337	98.54	0	0
12/20/2001	38,747	26,947	11,800	337	115	0	0
12/21/2001	34,109	26,947	7,162	337	101.2	0	0

12/22/2001	37,808	26,947	10,861	337	112.2	0	0
12/23/2001	28,576	26,947	1,629	337	84.8	0	0
12/24/2001	47,044	26,947	20,097	337	139.6	1	0
12/25/2001	20,288	20,288	0	337	60.2	0	0
12/26/2001	28,610	26,947	1,663	337	84.89	0	0
12/27/2001	47,011	26,947	20,063	337	139.5	1	0
12/28/2001	33,199	26,947	6,252	337	98.5	0	0
12/29/2001	27,661	26,947	714	337	82.06	0	0
12/30/2001	32,284	26,947	5,337	337	95.78	0	0
SUM	54,826,487	32,957,961	21,868,526	-	-	67	105
AVERAGE	37,578	22,589	14,989	326	115		
GPCPD	115	69	46				

Average Domestic and Infiltration Flow
12/30/2001 26947 gpd
01/01/1998 26947 gpd

Infiltration =
[redacted] gpm
12200 gpd

Average domestic flow from water records =
(water usage [redacted] 14747 gpd

WW flow less inflow =
26947 gpd

Total inflow 21,868,526 gal
5,467,131 gpy
14,978 gpd

Domestic and Infilt.
32,957,961 gal
8,239,490 gpy
22,574 gpd

I assume this daily data is more accurate than the monthly data. So, I will assume inflow here is correct. Not the monthly inflow calculated.

The infiltration rate used so far has been the minimum infiltration rate. To adjust this to actual, I set the montly I/I = to the I/I here by changing the infiltration rate.

Total WW Flow from Left
54,826,487 gal
13,706,622 gpy
37,552 gpd

I Use This Data!

Itemization to Balance Flow			Rounded	gpcpd
Dom	14,747		14,700	45.1
infilt	12,200	22,805	12,200	37.4
inflow	10,605		10,600	32.5
	37552		37,500	115.0

Modified to Reflect Total I&I from Monthly Data			Rounded	gpcpd
Dom. Winter	14,747		14,700	45.1
infilt	13,860	24,460	13,900	42.6
inflow	10,600		10,600	32.5
	39207		39,200	120.2

Actual average is 115 gpcpd

Appendix E

Surface Water Discharge Permit

Permit No.: SD-0023639

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA 57501-3181

AUTHORIZATION TO DISCHARGE UNDER THE

SURFACE WATER DISCHARGE SYSTEM

In compliance with the provisions of the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota (ARSD), Chapters 74:52:01 through 74:52:11,

the **Town of Chancellor**

is authorized to discharge from its wastewater treatment facility located approximately ¼ mile southwest of the town in the northwest ¼ of Section 28, Township 99 North, Range 52 West in Turner County (Longitude 96° 59' 56", Latitude 43° 22' 20"),

to an **unnamed tributary of Camp Creek,**

in accordance with discharge point(s), effluent limits, monitoring requirements and other conditions set forth herein. Authorization for discharge is limited to those outfalls specifically listed in the permit.

This permit shall become effective **April 1, 1999.**

This permit and the authorization to discharge shall expire at midnight, **March 31, 2004.**

Signed this 29th day of March, 1999.

Nettie H. Myers

Authorized Permitting Official

Nettie H. Myers
Secretary
Department of Environment and Natural Resources

Amended: November 9, 2000
Effective: January 1, 2001

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I. EFFLUENT LIMITS AND MONITORING REQUIREMENTS

A. Definitions.

1. The "30-day (and monthly) average," other than for fecal coliform bacteria and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for fecal coliform bacteria and total coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

2. The "7-day (and weekly) average" is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limits. The calendar week which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday.

3. "Daily Maximum" ("Daily Max.") is the maximum value allowable in any single sample or instantaneous measurement.

4. "Composite samples" shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

   a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;

   b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;

   c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,

   d. Continuous collection of sample, with sample collection rate proportional to flow rate.

5. A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

6. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

A. Definitions (Continued)

7. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

8. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

9. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

10. "Secretary" means the Secretary of the South Dakota Department of Environment and Natural Resources, or authorized representative.

11. "SDDENR" means the South Dakota Department of Environment and Natural Resources.

12. "Sewage Sludge" is any solid, semi-solid or liquid residue removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes but is not limited to solids removed during primary, secondary or advanced wastewater treatment, scum, septage, portable toilet pumpings, and sewage sludge products. Sewage sludge does not include grit, screenings, or ash generated during the incineration of sewage sludge.

B. Description of Discharge Points

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a SWD permit is a violation of the South Dakota Water Pollution Control Act and could subject the person{s} responsible for such discharge to penalties under Section 34A-2-75 of the Act. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge within a reasonable time from the first learning of an unauthorized discharge could subject such person to criminal penalties as provided under the South Dakota Water Pollution Control Act.

Outfall Serial Number	Description of Discharge Point
001	Any discharge from the artificial wetland to an unnamed tributary of Camp Creek (Longitude 96° 59' 56.07", Latitude 43° 22' 20.47")

C. Specific Limits and Self-Monitoring Requirements

1. Effluent Limits

No discharge shall occur until permission for discharge is granted by the South Dakota Department of Environment and Natural Resources.

Effective immediately and lasting through the life of this permit, the quality of effluent discharged by the facility shall, as a minimum, meet the limits as set forth below:

Effluent Characteristic	Effluent Limit		
	30-Day Average [1]	7-Day Average [1]	Daily Maximum [1]
BOD_5, mg/L	30	45	N/A
Total Suspended Solids, mg/L	90	135	N/A
Fecal Coliforms, no./100 mL [2] (May 1 - September 30)	1,000	N/A	2,000
Ammonia-Nitrogen, lbs/day(as N) November – February (Winter) March – April (Spring) May – August (Summer) September – October (Fall)	 48.0 9.1 3.0 5.4	N/A	 85.5 17.6 5.9 9.6
Total Residual Chlorine, mg/L (Applicable only if effluent is chlorinated)	N/A	N/A	0.019
The pH of the discharge shall not be less than 6.5 s.u. nor greater than 9.0 s.u. in any sample.			

[1] See Definitions, Part I.A.

[2] Fecal Coliform organisms from May 1 to September 30 may not exceed a concentration of 1000 per 100 milliliters as a geometric mean based on a minimum of 5 samples obtained during separate 24-hour periods for any 30-day period, and they may not exceed this value in more than 20 percent of the samples examined in this 30-day period. They may not exceed 2000 per 100 milliliters in any one sample from May 1 to September 30.

C. Specific Limits and Self-Monitoring Requirements

2. Self-Monitoring Requirements

a. Applicable when the permittee is requesting permission to discharge.

Prior to the start of any discharge from the lagoon system, the permittee shall collect a grab sample from each lagoon cell from which it is desired to discharge and have the sample analyzed for the following constituents:

BOD_5, mg/L
Total Suspended Solids, mg/L
pH, s.u.
Fecal Coliforms, no./100 mL
Ammonia-Nitrogen, mg/L
Water Temperature, °C

The results of the analyses, along with a request to discharge, shall be submitted to the Secretary. The request to discharge shall explain why a discharge is needed, when the discharge would start, the expected duration of the discharge, and the approximate volume of water to be discharged. The estimated flow condition of the receiving water shall also be reported (i.e., dry, low, normal, high). No discharge shall occur until permission has been granted by the Secretary.

b. Applicable when a discharge is occurring.

During periods of discharge, the permittee shall, as a minimum, monitor the discharge for the constituents listed below at the frequencies and with the types of samples indicated. The sample and measurements shall be representative of the volume and nature of the monitored discharge. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report Form (EPA No. 3320-1) that no discharge or overflow occurred.

Continued on next page.

C. Specific Limits and Self-Monitoring Requirements

2. Self-Monitoring Requirements - Outfall 001

As a minimum, upon the effective date of this permit, the following parameters shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report Form (EPA No. 3320-1) that no discharge or overflow occurred.

Effluent Characteristic	Frequency	Reporting Value	Sample Type
Rate of Discharge, MGD	At least 3 per discharge [2]	daily maximum; 30-day average; [3]	Instantaneous
pH, standard units	At least 3 per discharge [2]	daily minimum; daily maximum	Instantaneous [4]
BOD_5, mg/L	At least 3 per discharge [2]	7-day average; 30-day average	Grab
Total Suspended Solids, mg/L	At least 3 per discharge [2]	7-day average; 30-day average	Grab
Fecal Coliform, no./100 mL	[5]	daily maximum; 30-day geometric mean	Grab
Ammonia-Nitrogen, mg/L (as N)[6]	At least 3 per discharge [2]	daily maximum; 30-day average[7]	Grab
Ammonia-Nitrogen, lbs/day (as N) [8]	As sample results are received	daily maximum; 30-day average	Calculated
Total Residual Chlorine, mg/L (Required only if effluent is chlorinated)	At least 3 per discharge [2]	daily maximum[7]	Grab

[1] See definitions, Part I.A.

[2] At the initiation of any discharge, three samples shall be taken the first week and one sample each week for the following three weeks. Samples shall be taken once per month thereafter, until the discharge is discontinued. If a discharge is less than one week in duration, a sample shall be taken at the beginning, middle, and end of the discharge. If a discharge becomes intermittent, due to losses from evaporation and percolation, the discharge shall be sampled once per week during any week that flow is noted. All of the samples collected during the 7-day or 30-day period are to be used in determining the averages. If only one sample is collected during the period, it must be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

[3] In addition to reporting the daily maximum and 30-day average flow rates, the total flow (million gallons) during the reporting period shall be reported. The date and time of the start and termination of each discharge shall also be reported.

[4] pH is to be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment.

[5] For fecal coliforms, if a minimum of 5 samples are collected in a 30-day period, all of the samples collected are to be used in determining the geometric mean. Samples are to be collected at the same time BOD_5, TSS, etc. Additional samples are to be collected during any other separate 24-hour periods. If less than five samples are taken during any 30 day period, the maximum limit still applies. ***This sampling protocol for fecal coliforms only applies if the discharge occurs between May 1 and September 30.***

[6] The pH and temperature of the effluent shall be determined when ammonia samples are collected.

[7] SDDENR considers the analytical detection limit for ammonia to be 0.01 mg/L and for total residual chlorine to be 0.05 mg/L. If the effluent value is less than the analytical detection limit, "0" shall be used for reporting and averaging purposes.

[8] Daily ammonia-nitrogen loading (lbs/day) shall be calculated by multiplying the discharge flow rate (million gallons per day) by the measured ammonia-nitrogen concentration (mg/L) times 8.34 (a conversion factor). 30-day average ammonia-nitrogen loading (lbs/day) shall be calculated by averaging the computed daily ammonia-nitrogen loadings (lbs/day) for the monitoring period.

Water Temperature, °C	At least 3 per discharge [2]	daily maximum; 30-day average	Instantaneous [9]

[9] The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

C. Specific Limits and Self-Monitoring Requirements

3. Inspection Requirements: The permittee shall inspect its wastewater treatment facility and lift station on at least a **weekly** basis. The inspection shall be conducted to determine if a discharge is occurring, has occurred since the previous inspection, and/or if a discharge is likely to occur before the next inspection. In addition, the inspection shall be performed to determine if proper operation and maintenance procedures are being undertaken at the wastewater treatment facility. Daily inspections are required when discharging. The permittee shall maintain a notebook recording information obtained during the inspection. At a minimum, the notebook shall include the following:

    1. Date and time of the inspection;
    2. Name of the inspector(s);
    3. The facility's discharge status;
    4. The measured amount of pond freeboard at the outlet works;
    5. Identification of operational problems and/or maintenance problems;
    6. Recommendations, as appropriate, to remedy identified problems;
    7. A brief description of any actions taken with regard to problems identified; and
    8. Other information, as appropriate.

    The permittee shall maintain the notebook in accordance with proper record-keeping procedures and shall make the notebook available for inspection, upon request, by the Secretary or the U.S. Environmental Protection Agency.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under Part I shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under ARSD 74:52:03:06, a.b.r. 40 CFR, Part 136, unless other test procedures have been specified in this permit.

C. Penalties for Tampering. Any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a Class 1 misdemeanor. In addition to a jail sentence authorized by SDCL 22-6-2, a Class 1 misdemeanor imposed by SDCL, Chapter 34A-2, is subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, for damages to the environment of this state.

D. Reporting of Monitoring Results. Effluent monitoring results obtained during the previous three (3) months shall be summarized for each month and reported on separate Discharge Monitoring Report Form(s) (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the Signatory Requirements (see Part IV), and submitted to the Secretary at the following address:

original to: South Dakota Department of
Environment and Natural Resources
Surface Water Quality Program
Joe Foss Building
523 East Capitol Avenue
Pierre, South Dakota 57501-3181

E. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Additional Monitoring by the Permittee. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under ARSD 74:52:03:06, a.b.r. 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.

G. Records Contents. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;

2. The initials or name(s) of the individual(s) who performed the sampling or measurements;

3. The date(s) analyses were performed;

4. The time analyses was initiated;

5. The initials or name(s) of individual(s) who performed the analyses;

6. References and written procedures, when available, for the analytical techniques or methods used; and,

7. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

H. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Secretary at any time. Data collected on site, copies of Discharge Monitoring Reports, a copy of this SWD permit and copies of any Unauthroized Release of Wastewater forms must be maintained on site during the duration of activity at the permitted location.

I. Twenty-four Hour Notice of Noncompliance Reporting.

1. The permittee shall report any noncompliance which may endanger health or the environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The report shall be made to the State of South Dakota at (605) 773-3231 and the EPA, Region VIII, Emergency Response Branch at (303) 293-1788.

2. The following occurrences of noncompliance shall be reported by telephone to the Secretary at (605) 773-3351 by the first workday (8:00 a.m. - 4:30 p.m. Central Time) following the day the permittee became aware of the circumstances:

   a. Any unanticipated bypass which exceeds any effluent limit in the permit (See Part III.G., Bypass of Treatment Facilities.);

   b. Any upset which exceeds any effluent limit in the permit (See Part III.H., Upset Conditions.); or,

   c. Violation of a maximum daily discharge limit for any of the pollutants listed in the permit to be reported within 24 hours.

I. Twenty-four Hour Notice of Noncompliance Reporting. (Continued)

3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times;

   c. The estimated time noncompliance is expected to continue if it has not been corrected; and,

   d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

4. The Secretary may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Surface Water Quality Program, South Dakota Department of Environment and Natural Resources, Pierre, (605) 773-3351.

5. Reports shall be submitted to the addresses in Part II.D., Reporting of Monitoring Results.

J. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for Part II.D. are submitted. The reports shall contain the information listed in Part II.I.3.

K. Inspection and Entry. The permittee shall allow the Secretary or EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give the director advance notice of any planned changes at the permitted facility or of an activity which may result in permit noncompliance.

B. Penalties for Violations of Permit Conditions. Any person who violates a permit condition shall, upon conviction, be punished by a Class 1 misdemeanor. In addition to a jail sentence authorized by SDCL 22-6-2, a Class 1 misdemeanor imposed by SDCL, Chapter 34A-2, is subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, for damages to the environment of this state. Except as provided in permit conditions on Part III.G., Bypass of Treatment Facilities and Part III.H., Upset Conditions, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. However, the permittee shall operate, as a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.

F. Removed Substances. Collected screenings, grit, solids, sludges, or other pollutants removed in the course of treatment shall be buried or disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. These materials may be landfilled at a municipal solid waste landfill. Sludge/digestor supernatant and filter backwash shall not be directly blended with or enter either the final plant discharge and/or waters of the state.

G. Bypass of Treatment Facilities:

1. Bypass not exceeding limits. The permittee may allow any bypass to occur which does not cause effluent limits to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. and 3. of this section.

2. Notice:
   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 60 days before the date of the bypass.

   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part II.I., Twenty-four Hour Notice of Noncompliance Reporting.

G. Bypass of Treatment Facilities: (Continued)

3. Prohibition of bypass.

a. Bypass is prohibited and the Secretary may take enforcement action against a permittee for a bypass, unless:

(1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

(3) The permittee submitted notices as required under paragraph 2. of this section.

b. The Secretary may approve an anticipated bypass, after considering its adverse effects, if the Secretary determines that it will meet the three conditions listed above in paragraph 3.a. of this section.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limits if the requirements of paragraph 2. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review (i.e., Permittees will have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with technology-based permit effluent limits).

2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the permittee can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated;

c. The permittee submitted notice of the upset as required under Part II.I., Twenty-four Hour Notice of Noncompliance Reporting; and,

d. The permittee complied with any remedial measures required under Part III.D., Duty to Mitigate.

3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

I. Industrial Wastes

1. Each significant industrial user must be identified as to qualitative and quantitative characteristics of the discharge as well as production data. A significant industrial user is defined as an industrial user discharging to a publicly owned treatment works (POTW) that satisfies any of the following: (1) has a process wastewater flow of 25,000 gallons or more per average work day; (2) has a flow greater than five percent of the flow carried by the municipal system receiving the waste; (3) has in its waste a toxic pollutant in toxic amounts as defined under Section 307(a) of the Federal Clean Water Act of 1977, as amended, or is otherwise standard developed under Section 307(b) of the Federal Clean Water Act; or, (4) is found by the permit issuing authority to have a significant impact on the treatment works or the quality of effluent from the POTW.

2. The permittee must notify the permitting authority of any new introductions by new or existing significant industrial users or any substantial change in pollutants from any significant industrial user. Such notice must contain the information described in paragraph 1. above and be forwarded no later than sixty (60) days following the introduction or change.

3. Pretreatment Standards [ARSD 74:52:11:01, a.b.r. 40 CFR 403.5] developed pursuant to Section 307 of the Federal Clean Water Act require that under no circumstances shall the permittee allow the introduction of the following pollutants to the waste treatment system from any source of nondomestic discharge:

(a) Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including but not limited to, wastestreams with a closed cup flashpoint of less than sixty (60) degrees Centigrade (140 degrees Fahrenheit) using the test methods specified in ARSD 74:28:22:01, a.b.r. 40 CFR 261.21;

(b) Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;

(c) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, or other interference with the operation of the POTW;

(d) Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;

(e) Heat in amounts which will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds forty (40) degrees Centigrade (104 degrees Fahrenheit);

(f) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

(g) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

(h) Any trucked or hauled pollutants, except at discharge points designated by the POTW;

(i) Any pollutant which causes pass through or interference; and,

(j) In addition to the general limits expressed above, more specific pretreatment limits have been promulgated for specific industrial categories under Section 307 of the Act (see ARSD, Chapter 74:52:10, a.b.r. 40 CFR Subchapter N, Parts 405 through 471, for specific information).

I. Industrial Wastes (Continued)

4. The permittee shall provide adequate notice to the Secretary of the South Dakota Department of Environment and Natural Resources of:

   (a) Any new introduction of pollutants into the treatment works from an indirect discharger (i.e., industrial user) which would be subject to Sections 301 or 306 of the Federal Clean Water Act if it were directly discharging those pollutants;

   (b) Any substantial change in the volume or character of pollutants being introduced into the treatment works by an industrial user introducing pollutants into the treatment works at the time of application of the SWD permit; and,

   (c) For the purposes of this section, adequate notice shall include information on:

      (1) The quality and quantity of effluent to be introduced into such treatment works; and,

      (2) Any anticipated impact of the change on the quantity or quality of effluent to be discharged from such publicly owned treatment works.

5. At such time as a specific pretreatment limit becomes applicable to an industrial user of the permittee, the permit issuing authority may, as appropriate, do the following:

   (a) Amend the permittee's SWD discharge permit to specify the additional pollutant(s) and corresponding effluent limit(s) consistent with the applicable national pretreatment limit;

   (b) Require the permittee to specify, by ordinance, permit, or similar means, the type of pollutant(s) and the maximum amount which may be discharged to the permittee's facility for treatment. Such requirement shall be imposed in a manner consistent with the POTW program development requirements of the General Pretreatment Regulations at [ARSD 74:52:11:01, a.b.r. 40 CFR 403]; and/or,

   (c) Require the permittee to monitor its discharge for any pollutant which may likely be discharged from the permittee's facility, should the industrial user fail to properly pretreat its waste.

6. The permit issuing authority retains, at all times, the right to take legal action against the industrial user and/or the treatment works, in those cases where a SWD permit violation has occurred because of the failure of an industrial user to discharge at an acceptable level.

IV. GENERAL REQUIREMENTS

A. Planned Changes. The permittee shall give notice to the Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants which are not subject to effluent limits in the permit. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source (see ARSD, Chapter 74:52:01:01(30)).

B. Anticipated Noncompliance. The permittee shall give advance notice to the Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit.

E. Duty to Provide Information. The permittee shall furnish to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Secretary, upon request, copies of records required to be kept by this permit.

F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Secretary, it shall promptly submit such facts or information.

G. Signatory Requirements. All applications, reports or information submitted to the Secretary shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Secretary shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the Secretary; and,

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph IV.G.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph IV.G.2. must be submitted to the Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.

G. Signatory Requirements. (Continued)

4. Certification. Any person signing a document under this section shall make the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Penalties for Falsification of Reports. Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a Class 1 misdemeanor. In addition to a jail sentence authorized by SDCL 22-6-2, a Class 1 misdemeanor imposed by SDCL, Chapter 34A-2, is subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, for damages to the environment of this state, or both.

I. Availability of Reports. Except for data determined to be confidential under ARSD 74:52:02:17, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of SDDENR and EPA. Permit applications, permits and effluent data shall not be considered confidential.

J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Federal Clean Water Act.

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

L. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

M. Transfers. This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Secretary at least 30 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,

3. The Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2. above.

N. Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limits (and compliance schedule, if necessary), or other appropriate requirements if one or more of the following events occurs:

1. Water Quality Standards: The water quality standards of the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.

2. Total Maximum Daily Load: Additional controls in the permit are necessary to implement a total maximum daily load approved by the Secretary and/or EPA.

3. Water Quality Management Plan: A revision to the current water quality management plan is approved and adopted which calls for different effluent limits than contained in this permit.

4. Sludge: To include sludge conditions required when EPA delegates the 503 sludge program to the state.

O. Toxicity Limit-Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include whole effluent toxicity limits if whole effluent toxicity is detected in the discharge.

Addendum

Applicant: Town of Chancellor
Permit Number: SD-0023639
Contact Person: Raymond Ihnen, President
Phone: (605) 647-5862
Permit Type: Minor Municipal Wastewater Treatment Facility -- Modification

DESCRIPTION

The town of Chancellor requested that their permit be modified regarding the application of ammonia effluent limits. The current permit contains concentration-based effluent limits for ammonia. These limits were developed from the seasonal mass-based wasteload allocations, and converted to concentration-based limits using the facility effluent flow rate.

By changing the limits to mass-based, the permitted pollutant load to the receiving waters would be limited to the same levels as in the current permit. However, the mass-based limits would allow the facility more operational flexibility.

Because the allowable pollutant levels are not being increased, but only applied in a different manner, this is considered a minor modification and is not subject to public notice.

The following table summarizes the proposed modifications to the ammonia effluent limits:

Season	Ammonia Limits (as N)			
	Current 30-Day Average (mg/L)	Proposed 30-Day Average (lbs/day)	Current Daily Maximum (mg/L)	Proposed Daily Maximum (lbs/day)
Spring (March – April)	1.4	9.1	2.7	17.6
Summer (May - August)	1.0*	3.0	1.0*	5.9
Fall (September - October)	1.0*	5.4	1.5	9.6
Winter (November - February)	7.3	48.0	13.0	85.5

* Current 30-day average ammonia limits of 0.5 mg/L and 0.8 mg/L were computed for the summer and fall seasons, respectively; and a current daily maximum of 0.90 mg/L for the summer season was computed. These limits were raised to 1.0 mg/L based on BPJ and the inability of most minor treatment facilities to meet limits less than 1.0 mg/L.

SELF MONITORING

In order to track compliance with the mass-based effluent limits, additional reporting requirements are necessary. The facility must report the effluent ammonia loadings, in lbs/day.

ANTIDEGRADATION

Since the allowable pollutant levels are not being increased by this modification, no formal antidegradation review was conducted or necessary.

ENDANGERED SPECIES

This is a modification of an existing permit. No listed endangered species are expected to be impacted by activities related to this permit.

PERMIT EXPIRATION

The permit expiration date shall not change due to this modification.

CONTACT

Any questions pertaining to this modification can be directed to Lonnie Steinke, Natural Resources Engineering Specialist at (605) 773-3351.

November 8, 2000

Appendix F

SWD Compliance Inspection Report

Statement of Basis

Applicant:	Town of Chancellor
Permit Number:	SD-0023639
Contact Person:	Raymond Ihnen, President
Phone:	(605) 647-5862
Permit Type:	Minor Municipal Wastewater Treatment Facility -- Renewal

DESCRIPTION

The town of Chancellor operates a wastewater treatment facility located approximately ¼ mile southwest of the town in the northwest ¼ of Section 28, Township 99 North, Range 52 West in Turner County, South Dakota (Longitude 96° 59' 56", Latitude 43° 22' 20", Navigational Quality - GPS). The system serves a population of 276 (from application) and was designed for intermittent discharges. There are no significant industrial users discharging to this facility.

Chancellor's facility began operation in 1959 and was renovated in 1990. The treatment system consists of two stabilization ponds operated in series, followed by an artificial wetland. Cells #1 and #2 are 2.0 and 2.3 acres, respectively, and the wetland area is 2.4 acres. The wastewater flows by gravity from the town to the main lift station located at the pond site. The wastewater is then pumped into the stabilization ponds. The water is allowed to enter the artificial wetland through a manual gate valve and flows approximately ½ mile until discharged into Camp Creek.

RECEIVING WATERS

Any discharge from this facility will enter an unnamed tributary which flows ½ mile to Camp Creek, which in turn flows two miles before entering the Vermillion River. The unnamed tributary and Camp Creek are classified by the South Dakota Surface Water Quality Standards (SDSWQS), Administrative Rules of South Dakota (ARSD), Chapters 74:51:01 and 74:51:03, for the following beneficial uses:

(9) Fish and wildlife propagation, recreation, and stock watering waters; and
(10) Irrigation waters.

The Vermillion River is classified by the SDSWQS, ARSD, Chapters 74:51:01 and 74:51:03, for the following beneficial uses:

(5) Warmwater semipermanent fish life propagation waters;
(8) Limited contact recreation waters;
(9) Fish and wildlife propagation, recreation, and stock watering waters; and
(10) Irrigation waters.

ANTIDEGRADATION

SDDENR has fulfilled the antidegradation review requirements for this permit. In accordance with South Dakota's Antidegradation Implementation Procedure and the SDSWQS, no further review is required for this discharge. The results of this review are included in Attachment A.

SELF MONITORING DATA

The following data is a summary of the results reported on Discharge Monitoring Reports submitted to DENR:

DMR Date	BOD 7 day Avg	BOD 30 day Avg	pH Minimum	pH Maximum	TSS 7 day Ave	TSS 30 day Ave	NH3-N 7 day Ave	NH3-N Maximum
Limit [1]/	45	30	6.5	9.0	45	30		
04/30/96	23.0	19.6	7.83	7.84	42	29.3		
11/30/96	20	18	7.77	7.99			<0	<0
04/30/97	18	17	7.70	7.77	12	10		
05/31/97	13	9	7.61	8.02	14	14		
08/31/97	38		7.42	7.52	41		0.58	1.00
10/31/97	<10	<4	7.71	7.91				2.7
04/30/98	32	29	8.47				3.9	5.96
07/31/98	22	20	7.32	8.08	40	30	0.61	0.82

[1]/ Ammonia –Nitrogen is based on seasonal limits which vary

Indicates noncompliance

This data shows that the facility has had trouble meeting the discharge limits set in their SWD permit for total suspended solids and ammonia. The town of Chancellor should investigate operational and/or additional treatment alternatives to comply with their surface water discharge permit limits. Randy Hilding, with SDDENR, plans on conducting an operation management evaluation at this facility to help determine what needs to be done to ensure that Chancellor complies with their Surface Water Discharge Permit.

INSPECTIONS

The most recent "Operation and Maintenance" inspection was conducted by SDDENR personnel on December 18, 1995. The following comments were made:

1. Your facility is considered to be in noncompliance because of insufficient sampling and discharges which didn't meet standards. This was discussed with Mr. Ihnen during the inspection to help in understanding which parameters are to be sampled and at what frequency.

2. Changes in the operations, as discussed during the inspection, will help ensure that future discharges will occur only when the water quality is high and within the standards.

PERMIT LIMITS

No discharge shall occur from the town of Chancellor's wastewater treatment facility until permission is granted by SDDENR. This requirement is included in the permit because the discharge could reach a stream classified as a warmwater semipermanent fishery. If permission is granted by the department, the permittee shall comply with the following effluent limits which are based on the Secondary Treatment Standards (ARSD 74:52:06:03), the SDSWQS, and a total maximum daily load developed for the Vermillion River:

Outfall 001 -- Any discharge to an unnamed tributary of Camp Creek from the artificial wetland (Longitude 96° 59' 56.07", Latitude 43° 22' 20.47", Navigation Quality-GPS).

1. The five-day biochemical oxygen demand (BOD_5) concentration shall not exceed 30 mg/L (30-day average) or 45 mg/L (7-day average). These limits are based on the Secondary Treatment Standards.

2. The Total Suspended Solids (TSS) concentration shall not exceed 90 mg/L (30-day average) or 135 mg/L (7-day average). These limits are based on ARSD § 74:52:06:04 and SDDENR policy for discharges from artificial wetlands/stabilization pond systems which discharge to waters classified as warmwater fisheries, and the current permit limits.

3. The pH shall not be less than 6.5 units nor greater than 9.0 units in any single analysis and/or measurement. These limits are based on the Secondary Treatment Standards and the warmwater semipermanent fish life propagation waters classification of the Vermillion River and the SDSWQS (ARSD § 74:51:01:48).

   Note: pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale and bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment.

4. Fecal coliform organisms from May 1 to September 30 may not exceed a concentration of 1,000 per 100 milliliters as a geometric mean based on a minimum of 5 samples obtained during separate 24-hour periods for any 30-day period, and they may not exceed this value in more than 20 percent of the samples examined in this thirty day period. They may not exceed 2,000 per 100 milliliters in any one sample from May 1 to September 30. These limits are based on the limited contact recreation waters classification of the Vermillion River and the SDSWQS (ARSD § 74:51:01:51).

5. The total residual chlorine (TRC) shall not exceed 0.019 mg/L in any sample or analysis. This limit is based on the warmwater semipermanent fish life propagation waters classification of the Vermillion River and the SDSWQS (ARSD § 74:51:01:48).

Note: SDDENR considers the analytical detection limit for the analysis of total residual chlorine to be 0.05 mg/L. If the effluent total residual chlorine is less than the analytical detection limit, "0" shall be used for reporting purposes.

6. The ammonia-nitrogen concentration shall not exceed the limits specified in the table below. These limits are based on a TMDL developed in accordance with section 303(d) of the federal Clean Water Act. The TMDL is based on the background water quality of the Vermillion River near Chancellor, the surface water quality standard for un-ionized ammonia of 0.04 mg/L, and BPJ. See the TMDL for more detail. The 0.04 mg/L instream standard for un-ionized ammonia is based on the warmwater semipermanent fish life propagation waters classification of the Vermillion River and the SDSWQS (ARSD §74:51:01:48).

The TMDL contains seasonal computations of a wasteload allocation (WLA), to be allocated among point sources. These mass-based WLAs, in pounds per day, were converted to concentration-based limits below, in mg/L, using the following equation:

$$\textit{Effluent Limit (mg/L)} = \frac{\textit{Wasteload Allocation (lbs / day)}}{\textit{80th percentile effluent flow (cfs)} \times \textit{5.3934 (conversion factor)}}$$

Season	Ammonia Limits (as N) 30 Day Average (mg/L)	Daily Maximum (mg/L)
Spring (March – April)	1.4	2.7
Summer (May - August)	1.0*	1.0
Fall (September - October)	1.0*	1.5
Winter (November - February)	7.3	13.0

* 30-day average ammonia limits of 0.5 mg/L and 0.8 mg/L were computed for the summer and fall seasons, respectively; and a daily maximum of 0.90 mg/L for the summer season was computed. These limits were raised to 1.0 mg/L based on BPJ and the inability of most minor treatment facilities to meet limits less than 1.0 mg/L.

Note: SDDENR considers the analytical detection limit for the analysis of ammonia-nitrogen to be 0.01 mg/L. If the effluent ammonia-nitrogen is less than the analytical detection limit, "0" shall be used for averaging and reporting purposes.

Temperature (°C) and flow (MGD) shall be required to be monitored, but will not have a limit.

SELF MONITORING

Prior to requesting permission to discharge, the permittee is to collect a grab sample from each cell from which it is desired to discharge wastewater and have the sample analyzed for

temperature, BOD_5, TSS, pH, fecal coliform, ammonia-nitrogen, and total residual chlorine (when chlorinating). The analysis must be submitted to SDDENR.

At the initiation of any discharge, three samples shall be taken the first week and one sample each week for the following three weeks. Samples shall be taken once per month thereafter, until the discharge is discontinued. If a discharge is less than one week in duration, a sample shall be taken at the beginning, middle, and end of the discharge. If a discharge becomes intermittent, due to losses from evaporation and percolation, the discharge shall be sampled once per week during any week that flow is noted.

All of the samples collected during the 7-day or 30-day period are to be used in determining the averages. If only one sample is collected during the period, it must be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate. Effluent monitoring results shall be summarized for each month and recorded on separate DMRs to be submitted to SDDENR on a **quarterly** basis. If no discharge occurs during a month, it shall be stated as such on the DMR.

For fecal coliforms, if a minimum of 5 samples are collected in a 30-day period, all of the samples collected are to be used in determining the geometric mean. Samples are to be collected at the same time as BOD_5, TSS, etc. Additional samples are to be collected during any other separate 24-hour periods. If less than five samples are taken during any 30-day period, the daily maximum limit still applies. The sampling protocol for fecal coliforms only applies if the discharge occurs between May 1 and September 30.

Monitoring shall consist of inspections of the lift stations at a frequency of at least **one time per week**. Daily inspections of the lift stations are recommended. Monitoring shall also consist of **weekly** inspections of the wastewater treatment facility to verify whether or not there is a need for a discharge or if a discharge is occurring, and to determine if proper operation and maintenance procedures are being undertaken. Documentation of each of these visits shall be recorded in a notebook to be reviewed by SDDENR or EPA personnel when an inspection occurs. If an unintentional discharge is discovered, the proper authorities shall be notified in accordance with the Noncompliance Notification requirements of the permit.

SLUDGE

The town of Chancellor is required to notify SDDENR and EPA if a one-time sludge disposal is necessary.

ENDANGERED SPECIES

This is a renewal of an existing permit. No listed endangered species are expected to be impacted by activities related to this permit.

PERMIT EXPIRATION

A five year permit is recommended.

CONTACT

Any questions pertaining to this statement of basis can be directed to Stacy J. Reed, Natural Resources Engineer at (605) 773-3351.

February 17, 1999

ATTACHMENT A

Antidegradation Review

Permit Type: Minor Municipal Applicant: Town of Chancellor
Date Received: 10/09/98 Permit #: SD-0023639
County: Turner Legal Description: S28, T99N, R52W
Receiving Stream: Camp Creek Classification: 9 10
If the discharge affects a downstream waterbody with a higher use classification, list its
Name and uses: Vermillion River 5 8 9 10

APPLICABILITY

1. Is the permit or the stream segment exempt from the antidegradation review process under ARSD 74:51:01? Yes ☒ No ☐ If no, go to question #2. If yes, check those reasons why the review is not required:

- ☒ Existing facility covered under a surface water discharge permit is operating at or below design flows and pollutant loadings;
- ☐ *Existing effluent quality from a surface water discharge permitted facility is in compliance with all discharge permit limits;
- ☐ *Existing surface water discharge permittee was discharging to the current stream segment prior to March 27, 1973, and the quality and quantity of the discharge has not degraded the water quality of that segment as it existed on March 27, 1973;
- ☐ *The existing surface water discharge permittee, with DENR approval, has upgraded or built new wastewater treatment facilities between March 27, 1973, and July 1, 1988;
- ☐ The existing surface water discharge permittee discharges to a receiving water assigned only the beneficial uses of (9) and (10); the discharge is not expected to contain toxic pollutants in concentrations that may cause an impact to the receiving stream; and DENR has documented that the stream cannot attain a higher use classification. This exemption does not apply to discharges that may cause impacts to downstream segments that are of higher quality;
- ☐ Receiving water meets Tier 1 waters criteria. Any permitted discharge must meet water quality standards;
- ☐ The permitted discharge will be authorized by a Section 404 Corps of Engineers Permit, will undergo a similar review process in the issuance of that permit, and will be issued a 401 certification by the department, indicating compliance with the state's antidegradation provisions; or
- ☐ Other _____

*An antidegradation review is not required where the proposal is to maintain or improve the existing effluent levels and conditions. Proposals for increased effluent levels, in these categories of activities are subject to review.

No further review required.

ANTIDEGRADATION REVIEW SUMMARY

2. The outcome of the review is:

- ☒ A formal antidegradation review was not required for reasons stated in this worksheet. Any permitted discharge must ensure water quality standards will not be violated.
- ☐ The review has determined that degradation of water quality should not be allowed. Any permitted discharge would have to meet effluent limits or conditions that would not result in any degradation estimated through appropriate modeling techniques based on ambient water quality in the receiving stream, or pursue an alternative to discharging to the waterbody.
- ☐ The review has determined that the discharge will cause an insignificant change in water quality in the receiving stream. The appropriate agency may proceed with permit issuance with the appropriate conditions to ensure water quality standards are met.
- ☐ The review has determined, with public input, that the permitted discharge is allowed to discharge effluent at concentrations determined through a total maximum daily load (TMDL). The TMDL will determine the appropriate effluent limits based on the upstream ambient water quality and the water quality standard(s) of the receiving stream.
- ☐ The review has determined that the discharge is allowed. However, the full assimilative capacity of the receiving stream cannot be used in developing the permit effluent limits or conditions. In this case, a TMDL must be completed based on the upstream ambient water quality and the assimilative capacity allowed by the antidegradation review.
- ☐ Other: _____

12. Describe any other requirements to implement antidegradation or any special conditions That are required as a result of this antidegradation review: _____

Stacy J. Reed	02/17/99
Reviewer	Date
Kelli D. Buscher, P.E.	02/17/99
Program Supervisor or Team Leader	Date

ATTACHMENT B

Total Maximum Daily Load

Total Maximum Daily Load
for
Ammonia

in Vermillion River
near
Chancellor, South Dakota

developed in accordance with

Section 303(d) of the federal Clean Water Act

Prepared by

South Dakota Department of Environment and Natural Resources

1999

Copies of the TMDL can be obtained by request at the following address:

South Dakota Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, SD 57501
(605) 773-3351

Appendix G

Discharge Monitoring Report

QL ********** QL

NPID FNMS OFFL TELE MADI

DSDG PRAS LQAV LQMX LQUC LCMN LCAV LCMX LCUC
LQAS LQXS LCMS LCAS LCXS

MVDT VMLO MQAV MQMX MCMN MCAV MCMX NODI MVIO

SD0023639 CHANCELLOR - TOWN OF RAYMOND IHNEN 6056475862
001A TEMPERATURE, WATER DEG. CENT DELMON ADDMON 30DA AVG ADDMON 7 DA AVG DEG.C

04/30/97 1				E	MEASUREMENT ONLY, NO VIOLATION
05/31/97 1				E	MEASUREMENT ONLY, NO VIOLATION
08/31/97 1		68	68		MEASUREMENT ONLY, NO VIOLATION
10/31/97 1		42	43		MEASUREMENT ONLY, NO VIOLATION
04/30/98 1		55	62		MEASUREMENT ONLY, NO VIOLATION
07/31/98 1		72	74		MEASUREMENT ONLY, NO VIOLATION
08/31/98 1				E	MEASUREMENT ONLY, NO VIOLATION
11/30/98 1		40	44		MEASUREMENT ONLY, NO VIOLATION
05/31/99 1		21	22		MEASUREMENT ONLY, NO VIOLATION
06/30/99 1		18	24		MEASUREMENT ONLY, NO VIOLATION
07/31/99 1		74	74		MEASUREMENT ONLY, NO VIOLATION
08/31/99 1		73	73		MEASUREMENT ONLY, NO VIOLATION
09/30/99 1		60	60		MEASUREMENT ONLY, NO VIOLATION
10/25/00 1		12	18		MEASUREMENT ONLY, NO VIOLATION
10/31/00 1		13	18		MEASUREMENT ONLY, NO VIOLATION
04/30/01 1		13	15		MEASUREMENT ONLY, NO VIOLATION

001A FLOW RATE ADDMON 30DA AVG ADDMON DAILY MX MGD

05/31/99 1	0.254	0.594	MEASUREMENT ONLY, NO VIOLATION
06/30/99 1	0.119	0.174	MEASUREMENT ONLY, NO VIOLATION
07/31/99 1	18		MONITOR ONLY, QUANTITY ABSENT
08/31/99 1		22.70	MONITOR ONLY, QUANTITY ABSENT
09/30/99 1	25.50		MONITOR ONLY, QUANTITY ABSENT
10/25/00 1	0.523	0.961	MEASUREMENT ONLY, NO VIOLATION
10/31/00 1	44	93	MEASUREMENT ONLY, NO VIOLATION
04/30/01 1	.33	.59	MEASUREMENT ONLY, NO VIOLATION

001A BOD, 5-DAY (20 D DELMON 30 30DA AVG 45 7 DA AVG MG/L

04/30/97 1	17	18	MEASUREMENT ONLY, NO VIOLATION
05/31/97 1	9	13	MEASUREMENT ONLY, NO VIOLATION
08/31/97 1	32	38	NUMERIC VIOLATION

DMR DATA

QL ********** QL

NPID	FNMS	OFFL			TELE	MADI				
DSDG	PRAS	LQAV	LQMX	LQUC	LCMN	LCAV	LCMX	LCUC		
		LQAS	LQXS		LCMS	LCAS	LCXS			
MVDT	VMLO	MQAV	MQMX		MCMN	MCAV	MCMX	NODI	MVIO	
10/31/97	1					< 4	10		MEASUREMENT ONLY, NO VIOLATION	
04/30/98	1					29	32		MEASUREMENT ONLY, NO VIOLATION	
07/31/98	1					20	22		MEASUREMENT ONLY, NO VIOLATION	
08/31/98	1							E	MEASUREMENT ONLY, NO VIOLATION	
11/30/98	1					7	10		MEASUREMENT ONLY, NO VIOLATION	
04/30/99	1					7	8		MEASUREMENT ONLY, NO VIOLATION	
05/31/99	1					5.6	5.6		MEASUREMENT ONLY, NO VIOLATION	
06/30/99	1					9.6	16		MEASUREMENT ONLY, NO VIOLATION	
07/31/99	1					7	7		MEASUREMENT ONLY, NO VIOLATION	
08/31/99	1					25	25		MEASUREMENT ONLY, NO VIOLATION	
09/30/99	1					41	41		NUMERIC VIOLATION	
10/25/00	1					5.6	5.6		MEASUREMENT ONLY, NO VIOLATION	
10/31/00	1					13	22		MEASUREMENT ONLY, NO VIOLATION	
04/30/01	1					7.66	9		MEASUREMENT ONLY, NO VIOLATION	
001A	PH				6.5	DELMON	9.0		SU	
					MINIMUM		MAXIMUM			
04/30/97	1				7.70		7.77		MEASUREMENT ONLY, NO VIOLATION	
05/31/97	1				7.61		8.02		MEASUREMENT ONLY, NO VIOLATION	
08/31/97	1				7.42		7.52		MEASUREMENT ONLY, NO VIOLATION	
10/31/97	1				7.71		7.91		MEASUREMENT ONLY, NO VIOLATION	
04/30/98	1				8.47		9.2		NUMERIC VIOLATION	
07/31/98	1				7.32		8.08		MEASUREMENT ONLY, NO VIOLATION	
08/31/98	1							E	MEASUREMENT ONLY, NO VIOLATION	
11/30/98	1				8		8.15		MEASUREMENT ONLY, NO VIOLATION	
04/30/99	1				8.0		8.3		MEASUREMENT ONLY, NO VIOLATION	
05/31/99	1				7.8		8.6		MEASUREMENT ONLY, NO VIOLATION	
06/30/99	1				7.4		7.9		MEASUREMENT ONLY, NO VIOLATION	
07/31/99	1				7.24		7.24		MEASUREMENT ONLY, NO VIOLATION	
08/31/99	1				7.57		7.57		MEASUREMENT ONLY, NO VIOLATION	
09/30/99	1				8.0				LIMITED, CONCENTRATION ABSENT	
10/31/00	1				8.6		8.9		MEASUREMENT ONLY, NO VIOLATION	
04/30/01	1				7.65		8.02		MEASUREMENT ONLY, NO VIOLATION	
001A	SOLIDS,TOTAL	SUSPENDED			DELMON	30	45		MG/L	
						30DA AVG	7 DA AVG			
04/30/97	1					10	12		MEASUREMENT ONLY, NO VIOLATION	

DMR DATA

QL ********** QL

NPID	FNMS	OFFL	TELE	MADI
DSDG	PRAS	LQAV / LQAS / LQMX / LQXS / LQUC	LCMN / LCMS / LCAV / LCAS / LCMX / LCXS / LCUC	
MVDT	VMLO	MQAV / MQMX	MCMN / MCAV / MCMX	NODI MVIO
05/31/97	1		14 / 14	MEASUREMENT ONLY, NO VIOLATION
08/31/97	1		41 / 41	NUMERIC VIOLATION
10/31/97	1		44 / 46	NUMERIC VIOLATION
04/30/98	1		54 / 72	NUMERIC VIOLATION
07/31/98	1		30 / 40	MEASUREMENT ONLY, NO VIOLATION
08/31/98	1		/	E MEASUREMENT ONLY, NO VIOLATION
11/30/98	1		16 / 20	MEASUREMENT ONLY, NO VIOLATION
001A	SOLIDS,TOTAL SUSPENDED		DELMON 90 / 135	MG/L
			30DA AVG / 7 DA AVG	
04/30/99	1		13 / 13	MEASUREMENT ONLY, NO VIOLATION
05/31/99	1		8.3 / 8.3	MEASUREMENT ONLY, NO VIOLATION
06/30/99	1		13.3 / 13.3	MEASUREMENT ONLY, NO VIOLATION
07/31/99	1		13 / 13	MEASUREMENT ONLY, NO VIOLATION
08/31/99	1		52 / 52	MEASUREMENT ONLY, NO VIOLATION
09/30/99	1		136 / 136	NUMERIC VIOLATION
10/25/00	1		8.3 / 8.3	MEASUREMENT ONLY, NO VIOLATION
10/31/00	1		13 / 17	MEASUREMENT ONLY, NO VIOLATION
04/30/01	1		9.66 / 12	MEASUREMENT ONLY, NO VIOLATION
001A	NITROGEN, AMMONIA TOTAL (AS		DELMON 7.26 / 12.7	MG/L
			7 DA AVG / DAILY MX	
04/30/97	1		14.74 / 15.6	NUMERIC VIOLATION
001A	NITROGEN, AMMONIA TOTAL (AS		DELMON 0.728 / 1.3	MG/L
			7 DA AVG / DAILY MX	
05/31/97	1		2.01 / 2.62	NUMERIC VIOLATION
08/31/97	1		.58 / 1.00	MEASUREMENT ONLY, NO VIOLATION
001A	NITROGEN, AMMONIA TOTAL (AS		DELMON 1.54 / 2.7	MG/L
			7 DA AVG / DAILY MX	
10/31/97	1		2.04 / 2.7	NUMERIC VIOLATION
001A	NITROGEN, AMMONIA TOTAL (AS		DELMON 7.26 / 12.7	MG/L

DMR DATA

NPID	FNMS	OFFL			TELE	MADI			
DSDG	PRAS	LQAV	LQMX	LQUC	LCMN	LCAV	LCMX	LCUC	
		LQAS	LQXS		LCMS	LCAS	LCXS		
MVDT	VMLO	MQAV	MQMX		MCMN	MCAV	MCMX	NODI	MVIO
						7 DA AVG	DAILY MX		
04/30/98	1					3.9	5.96		MEASUREMENT ONLY, NO VIOLATION
001A	NITROGEN, AMMONIA TOTAL (AS				DELMON	0.728	1.3		MG/L
						7 DA AVG	DAILY MX		
07/31/98	1					.61	.82		MEASUREMENT ONLY, NO VIOLATION
08/31/98	1							E	MEASUREMENT ONLY, NO VIOLATION
001A	NITROGEN, AMMONIA TOTAL (AS				DELMON	4.19	7.3		MG/L
						7 DA AVG	DAILY MX		
11/30/98	1					2	2.3		MEASUREMENT ONLY, NO VIOLATION
001A	NITROGEN, AMMONIA TOTAL (AS				DELMON	1.4	2.7		MG/L
						30DA AVG	DAILY MX		
04/30/99	1					1.93	2.9		NUMERIC VIOLATION
001A	NITROGEN, AMMONIA TOTAL (AS				DELMON	1.0	1.0		MG/L
						30DA AVG	DAILY MX		
05/31/99	1					.29	.37		MEASUREMENT ONLY, NO VIOLATION
06/30/99	1					.55	.67		MEASUREMENT ONLY, NO VIOLATION
07/31/99	1					.46	.46		MEASUREMENT ONLY, NO VIOLATION
08/31/99	1					1.72	1.72		NUMERIC VIOLATION
001A	NITROGEN, AMMONIA TOTAL (AS				DELMON	1.0	1.5		MG/L
						30DA AVG	DAILY MX		
09/30/99	1					.26	.26		MEASUREMENT ONLY, NO VIOLATION
10/31/00	1					0.26	0.40		MEASUREMENT ONLY, NO VIOLATION
001A	NITROGEN, AMMONIA TOTAL (AS	9.1	17.6	LBS/DY					

DMR DATA

NPID	FNMS	OFFL			TELE	MADI			
DSDG	PRAS	LQAV	LQMX	LQUC	LCMN	LCAV	LCMX	LCUC	
		LQAS	LQXS		LCMS	LCAS	LCXS		
MVDT	VMLO	MQAV	MQMX		MCMN	MCAV	MCMX	NODI	MVIO
		30DA AVG	DAILY MX			30DA AVG	DAILY MX		
04/30/01	1	10.6	11.3						NUMERIC VIOLATION
001A	CHLORINE, TOTAL	RESIDUAL			DELMON	DELMON	0.05 DAILY MX		MG/L
08/31/97	1						0		MEASUREMENT ONLY, NO VIOLATION
001A	CHLORINE, TOTAL	RESIDUAL			DELMON	DELMON	0.06 DAILY MX		MG/L
10/31/97	1							E	MEASUREMENT ONLY, NO VIOLATION
001A	CHLORINE, TOTAL	RESIDUAL			DELMON	DELMON	0.05 DAILY MX		MG/L
07/31/98	1							B	MEASUREMENT ONLY, NO VIOLATION
08/31/98	1							E	MEASUREMENT ONLY, NO VIOLATION
001A	CHLORINE, TOTAL	RESIDUAL			DELMON	DELMON	0.019 DAILY MX		MG/L
04/30/99	1							E	MEASUREMENT ONLY, NO VIOLATION
05/31/99	1							E	MEASUREMENT ONLY, NO VIOLATION
06/30/99	1							E	MEASUREMENT ONLY, NO VIOLATION
07/31/99	1							E	MEASUREMENT ONLY, NO VIOLATION
08/31/99	1							E	MEASUREMENT ONLY, NO VIOLATION
09/30/99	1							E	MEASUREMENT ONLY, NO VIOLATION
001A	COLIFORM, FECAL	GENERAL			DELMON	1000 30DA GEO	2000 #/ DAILY MX		100ML
05/31/97	1					66	90		MEASUREMENT ONLY, NO VIOLATION
08/31/97	1					673	1300		MEASUREMENT ONLY, NO VIOLATION
07/31/98	1					340	490		MEASUREMENT ONLY, NO VIOLATION

DMR DATA

QL ********** QL

NPID FNMS OFFL TELE MADI

DSDG PRAS LQAV LQMX LQUC LCMN LCAV LCMX LCUC

LQAS LQXS LCMS LCAS LCXS

MVDT VMLO MQAV MQMX MCMN MCAV MCMX NODI MVIO

08/31/98 1							E	MEASUREMENT ONLY, NO VIOLATION
05/31/99 1					0	30		MEASUREMENT ONLY, NO VIOLATION
06/30/99 1					0	460		MEASUREMENT ONLY, NO VIOLATION
07/31/99 1					4400	4400		NUMERIC VIOLATION
08/31/99 1					90	90		MEASUREMENT ONLY, NO VIOLATION
09/30/99 1					250	250		MEASUREMENT ONLY, NO VIOLATION

001A FLOW ADDMON 30DA AVG ADDMON DAILY MX CFS

04/30/97 1	83.93	546.6			MEASUREMENT ONLY, NO VIOLATION
05/31/97 1	83.93	546.6			MEASUREMENT ONLY, NO VIOLATION
08/31/97 1	86	120.8			MEASUREMENT ONLY, NO VIOLATION
10/31/97 1	70.2	70.2			MEASUREMENT ONLY, NO VIOLATION
04/30/98 1	321.7	546.6			MEASUREMENT ONLY, NO VIOLATION
07/31/98 1	362.40	476.6			MEASUREMENT ONLY, NO VIOLATION
08/31/98 1				E	MEASUREMENT ONLY, NO VIOLATION
11/30/98 1	389	667.4			MEASUREMENT ONLY, NO VIOLATION

001A FLOW DELMON ADDMON MO TOTAL MGAL

04/30/99 1	667			MEASUREMENT ONLY, NO VIOLATION
05/31/99 1	412			MEASUREMENT ONLY, NO VIOLATION
06/30/99 1	120			MEASUREMENT ONLY, NO VIOLATION
07/31/99 1	18			MEASUREMENT ONLY, NO VIOLATION
08/31/99 1			E	MEASUREMENT ONLY, NO VIOLATION
09/30/99 1	25.50			MEASUREMENT ONLY, NO VIOLATION
10/31/00 1	93.4			MEASUREMENT ONLY, NO VIOLATION
04/30/01 1	4.78			MEASUREMENT ONLY, NO VIOLATION

TOTAL QUICK LOOK PRINT LINES: 172

ADDENDUM NUMBER ONE

to the

FACILITY PLAN

for the

WATER DISTRIBUTION AND WASTEWATER COLLECTION

IN

CHANCELLOR, SOUTH DAKOTA

PROJECT #13828

SEPTEMBER 2013

SPN & Associates
ENGINEERS-PLANNERS- SURVEYORS
2100 NORTH SANBORN BLVD, P.O. BOX 398
MITCHELL, SOUTH DAKOTA 57301
PHONE 605-996-7761 FAX 605-996-0015

Addendum Number One to the

Facility Plan for the

Water Distribution and Wastewater Collection

in

Chancellor, South Dakota

Project Number: 13828

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

By Camden A Hofer

Camden A. Hofer, P.E.

Registration No. SD #8322

Date 9-18-13

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8322
CAMDEN A. HOFER
SOUTH DAKOTA

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1 INTRODUCTION

1.1 PURPOSE

The Town of Chancellor has contracted with the engineering firm of SPN and Associates to complete an investigation of its existing sanitary sewer system and wastewater treatment facility. The intent of the study is to identify and quantify problems that exist within these systems for the Town.

SPN and Associates completed the *Water Distribution and Wastewater Collection Facility Plan* in July 2002. New or revised information and data will be presented as an addendum to the 2002 Facility Plan. All sections in the July 2002 Facility Plan remain unchanged except where text is included in each section by this addendum.

This addendum contains the information on which the Town Board of Chancellor can make cost-effective decisions. The Town Board has had a public hearing requesting appropriate public input and has determined the best options to make any needed improvements that are identified in this addendum. This addendum will be used to apply for loan and grant funding for the improvements that are recommended herein. The identified projects in this addendum have been placed on the State Water Plan.

1.2 SCOPE

No changes are made to this section as the scope of the original study did not change.

1.3 AUTHORIZATION

No changes are made to this section since it is related to the original study.

2 COMMUNITY DESCRIPTION

No changes are made to this section.

2.1 POPULATION CHARACTERISTICS

The 2010 Census Bureau data indicates that Chancellor's median age was 39.9 years, as compared to the state's median age of 36.9 years. At the time census data was gathered, 18.6 percent of Chancellor's population was over the age of 65, while the state's population that was over the age of 65 was 14.3 percent. Data from the 2010 Census indicates that the community's median household income of $41,875 lower than the state's median household income of $48,010.

2.2 POPULATION PROJECTIONS

The 2010 Census Bureau data shows the population for Chancellor to be 264. This is a 20 percent decrease from the 2000 population of 328. For this reason the design population of 264 will be used in this addendum.

2.3 ENVIRONMENTAL REVIEW INFORMATION

No changes are made to this Section which includes Paragraphs 2.3.1 through 2.3.7.

2.4 MITIGATING ADVERSE IMPACTS

No changes are made to this section.

3 EVALUATION OF EXISTING FACILITIES

3.1 WATER DISTRIBUTION SYSTEM

No changes are made to this Section which includes Paragraphs 3.1.1 through 3.1.5 and all sub-sections.

3.2 WASTEWATER SYSTEM

3.2.1 Collection System

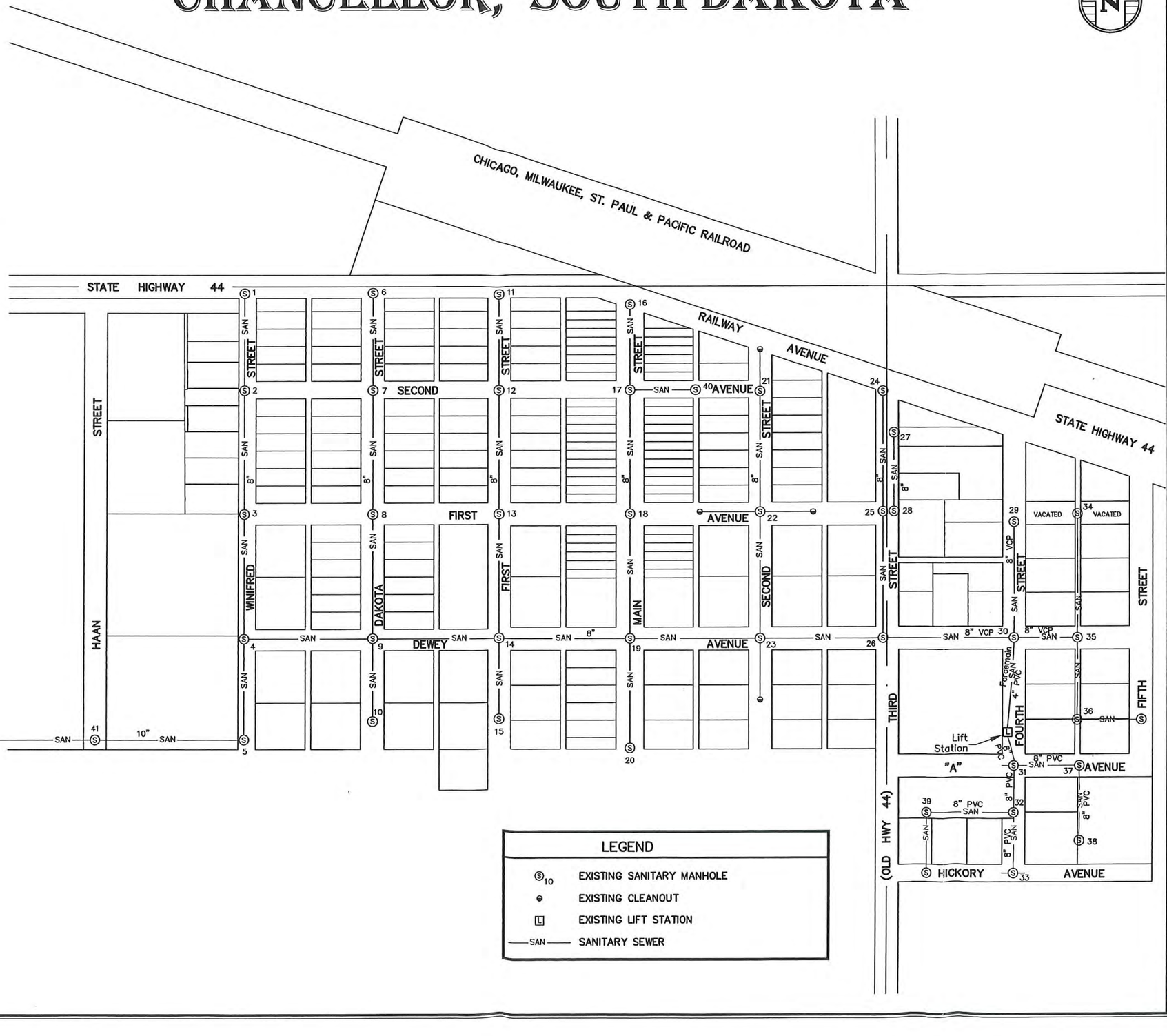
The Town of Chancellor currently provides sanitary sewer service to approximately 120 homes and six businesses. The core of the sanitary sewer system was constructed in the early 1900's. Newer segments of the sanitary sewer were constructed with PVC lines where the system has been extended as required by community growth. According to available information, the existing sanitary sewer system consists of the following lengths and types of pipe:

	4" PVC Service	5" Clay Service	8" PVC	8" Clay	10" Clay	Total
Length, ft	400	10,640	816	11,904	1,760	25,520

A layout of the existing sanitary sewer system is shown in the following figure. There are 43 manholes throughout the sanitary sewer system. There are 30 manholes that are composed of brick and in poor condition. The wastewater flows by gravity to the main lift station which was installed in 1990. The lift station pumps the wastewater through approximately 42 feet of four-inch ductile iron dual force main into the inflow manhole at the primary pond.

Wastewater flows by gravity from the PVC piping in the southeast part of the Town to a small submersible duplex lift station. This lift station pumps the wastewater to a nearby manhole through approximately 270 feet of four-inch PVC force main.

CHANCELLOR, SOUTH DAKOTA



LEGEND

- EXISTING SANITARY MANHOLE
- EXISTING CLEANOUT
- EXISTING LIFT STATION
- SAN — SANITARY SEWER

SPN & Associates

Engineers - Planners - Surveyors

2100 North Sanborn Boulevard - P.O. Box 398
Mitchell, South Dakota - Zip 57301-0398
Phone: (605) 996-7761 - Fax: (605) 996-0015

PRELIMINARY NOT FOR CONSTRUCTION

Plan Horiz. Scale:	1" = 300'
Drawn By:	NAP
Checked By:	CHOFER
Date:	03/2013
Project No.:	13828
Computer Name:	G:Land Proj R2
File Name:	13828–ChancellorMap

Project Name:
Chancellor Sanitary Sewer

Located in:
Chancellor, South Dakota

Sheet Name:
Sanitary Sewer Map

Sheet Number:	Total Sheets:
1	1

C:\Users\CAD\Documents\Projects R2\2013 Chancellor Rezoning\13828-ChancellorManhole Phase 2.dwg, ExistingSanitary

The sanitary sewer system was cleaned and televised in June 2013. The conditions of the pipe and manholes were recorded and evaluated. A detailed evaluation of the sanitary sewer TV inspection records can be found in Appendix B. Overall, the clay portion of the sanitary sewer has been found to be structurally unsound and is leaking significantly. There are numerous sags, cracks, missing pieces of pipe, offset joints, broken service connections and other deficiencies. The brick manholes are also structurally deficient and in need of rehabilitation or replacement. A two-phased approach to repairing the sanitary sewer system is presented in Section 4.4.

3.2.1.1 Infiltration Analysis

Delete this section in its entirety and insert the following:

3.2.1.1 Wastewater Flow

3.2.1.1.1 Domestic Flow Analysis

In order to estimate the wastewater flow rate, an itemization of the domestic flow along with infiltration and inflow is completed. Usually, a town of Chancellor's size produces roughly 75 gpcpd of wastewater flow (SD DENR, 1990). However, the high rate of infiltration and inflow collected in Chancellor increases the per capita flows to values higher than what is considered normal.

The domestic component of the wastewater is estimated from historic water use records. One method of estimating the domestic wastewater flow is to consider water use for the months of December, January and February. During these months, 80 percent of the water that is used is assumed to be sent into the wastewater collection system. Water is supplied to Chancellor by South Lincoln Rural Water (SLRW). The winter water usage for the period of available records is listed in Table 3.5. The average per capita usage for the winter months is 56.1 gpcpd. The portion of the water that is assumed to enter the sewer system is 80 percent or 44.9 gpcpd. The DENR recommends a minimum rate for design purposes of 60 gpcpd. Therefore, using 60 gpcpd and the population of 264, the current domestic wastewater flow rate is estimated to be **15,800 gpd** (60 x 264).

Table 3.5: Winter Water Usage

Month	Usage, gal	GPCPD
Dec-08	14,516	55.0
Jan-09	17,742	67.2
Feb-09	17,500	66.3
Dec-09	14,839	56.2
Jan-10	16,667	63.1
Feb-10	14,286	54.1
Dec-10	13,548	51.3
Jan-11	14,839	56.2
Feb-11	14,286	54.1
Dec-11	15,484	58.7
Jan-12	14,138	53.6
Feb-12	14,828	56.2
Dec-12	14,194	53.8
Jan-13	12,258	46.4
Feb-13	12,903	48.9
	Average	56.1

3.2.1.1.2 Lift Station Flow Records

Lift station pumping records were studied to evaluate the variability of the wastewater flow rates. The Town of Chancellor supplied lift station records of the hours of daily pump operation from 2008 through July 2013 for the main lift station. The hour readings for the lift station were converted to flow and are shown graphically in Figure 3.5. The limited period of records was used to show the amount of flow pumped to the wastewater treatment facility. Once a trend was established, this data was also used as an indicator of how much inflow and infiltration were entering the sanitary sewer system during the evaluation period.

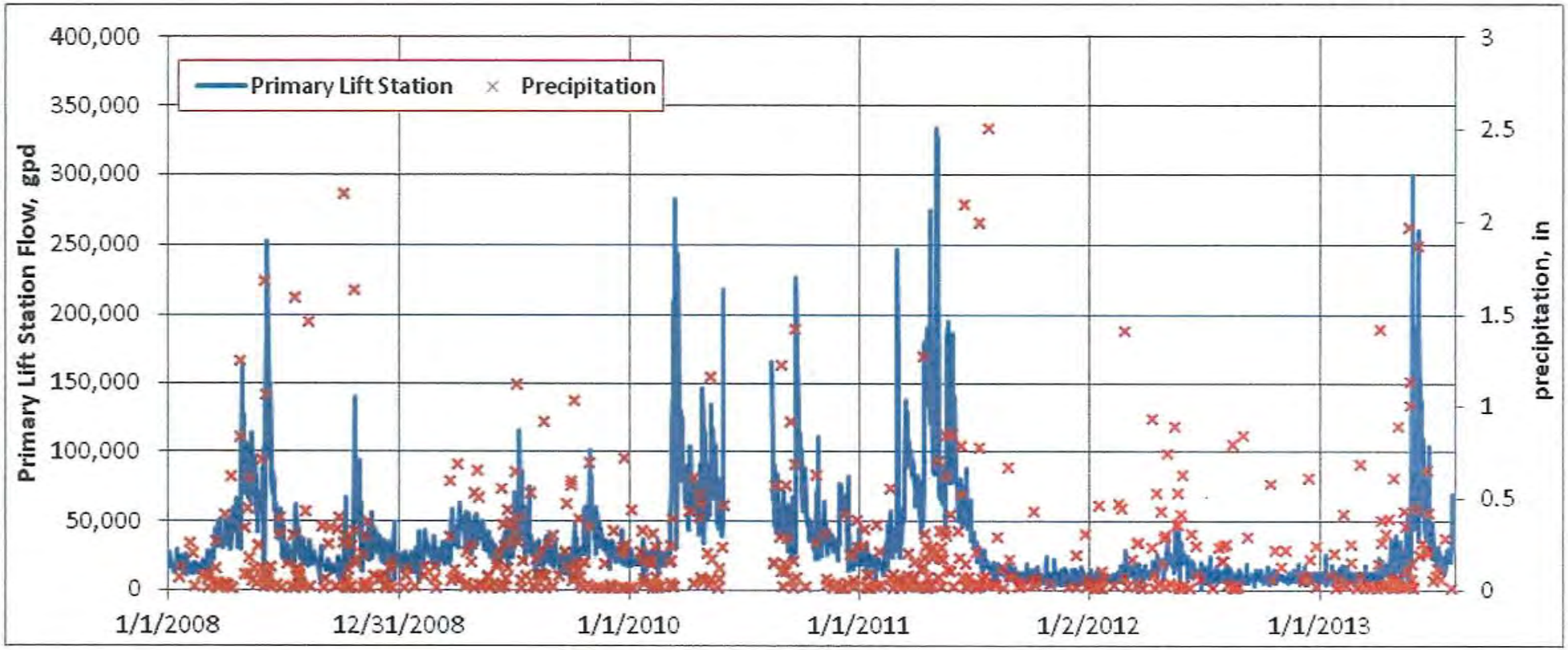


Figure 3.5: Lift Station Flows

The estimated domestic wastewater flow production based on the current population amounts to approximately 15,800 gallons per day. The average wastewater flow rate from the lift station data shown in Figure 3.3 is approximately 35,300 gallons per day. There were 17 days during the spring and fall through the period of record when the daily wastewater flow exceeded 200,000 gpd. This is an indication that there is significant inflow and infiltration entering the system which is most likely caused by deficiencies in the collection system and sump pump connections. In general, the Town is aware of a high groundwater table throughout the south part of the community which promotes the high rates of infiltration and inflow. The peak flow recorded for this period of evaluation was approximately 334,000 gallons per day.

The maximum capacity in an eight-inch clay pipe at minimum slope is estimated to be 378,000 gpd or 262 gpm. Approximately 91 percent of the flow from the Town is through the eight-inch diameter sewer on Dewey Avenue. From there to the main lift station the pipe has a 10-inch diameter which has a capacity of 573,000 gpd or 398 gpm. Records discussed later in this report indicate this capacity has been exceeded during very wet periods.

Over the period of lift station records, the average wastewater flow rate per capita for the lift station is computed to be 134 gpcpd. The average wastewater flow per capita during the peak day is approximately 1,260 gpcpd. It is evident that there is a problem with high flows due to daily wastewater flow rates that vary by more than a factor of nine. In many communities the inflow into the collection system due to intense storm events or snow melting can create an intense increase in the average day flows. Flow records are not available to determine the actual peak instantaneous flow rate during the highest daily flow on record.

The capacity of the WWTF and lift station must be analyzed with pertinent design flows. There are times when long periods of wet weather and high water tables can cause infiltration rates to soar. To be certain that the WWTF is not undersized, extra

consideration must be made when there is a system with considerable infiltration and inflow.

3.2.1.1.3 Infiltration and Inflow Evaluation

Inflow is the flow entering the system from storm sewer connections, perforated manhole covers, improperly abandoned lines, roof drains, basement sump pumps, and other drainage systems. According to representatives of the Town, there are some houses that have basement sump pumps which are connected directly into the sanitary sewer system. Inflow also results from individual precipitation events and periods of snow melt. The intensity of the event can play a large role in the degree of impact to the system. In other words, a two-inch rainfall over a couple of hours will result in a larger inflow than a two-inch rainfall over 12 hours.

The inflow component of the total wastewater flow is difficult to estimate because it can occur in short intense flows that are related to precipitation events. For the purpose of this evaluation the wastewater flow is estimated using a combined infiltration and inflow component.

Water that enters the sewer system through cracked pipes, poor joints and the walls of manholes is infiltration. Therefore, infiltration occurs when the groundwater table is at or above the sewer piping. Evidence of infiltration is apparent by the consistently high average day flows in months and years during and following months and years with above-normal precipitation. As would be expected, the above-normal precipitation results in an increased level of the groundwater table. This increased level in the groundwater table then subjects a larger portion of the sewer system to infiltration. This is evident by extended periods of high flows.

A continuous flow recorder was installed in sewer pipe leading to the main lift station during the period of May 10, 2013, through June 23, 2013. The data obtained from the flow recorder was utilized to perform a limited infiltration and inflow study. During the period of measurement there was an average flow of 70,500 gpd or 49.0 gpm. Figure 3.6

shows a daily summary of the wastewater flow data that was measured. The daily precipitation is also shown. The wastewater flow generally shows an upward trend after precipitation events occurred. In general, the flow was recorded during wet conditions and is not considered to represent the average flow.

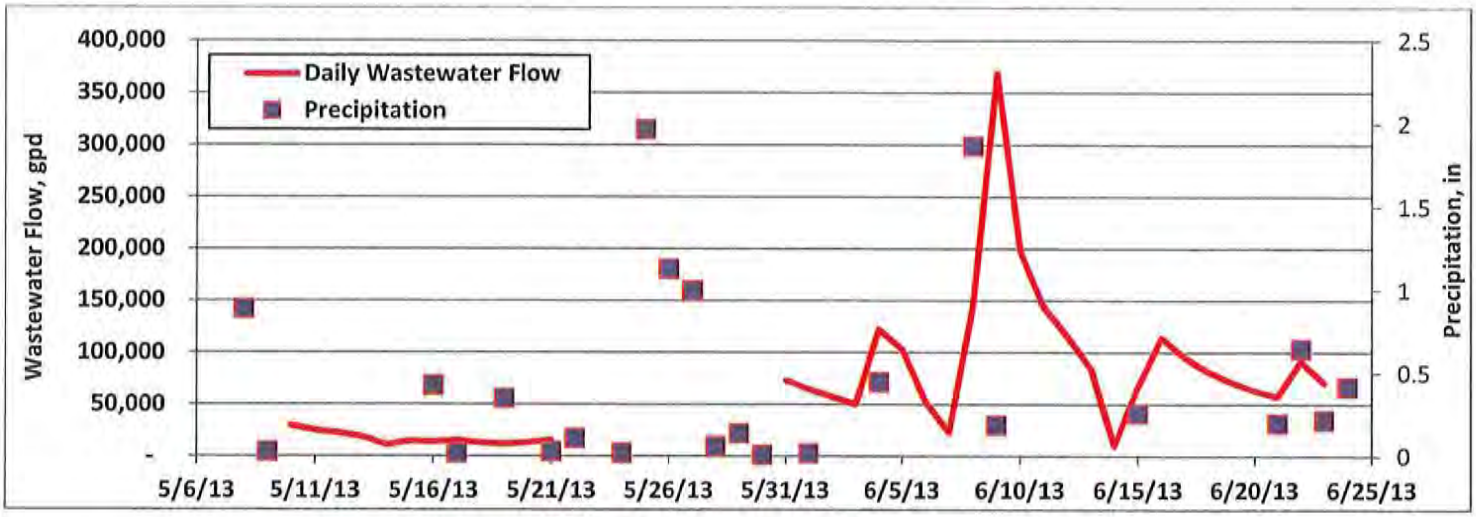


Figure 3.6: Daily Wastewater Flow Measurements

Two other flow meters were installed in the following locations to further evaluate the infiltration and inflow that are collected by the sewer system:

- Midpoint - The west invert in the manhole at Dewey Avenue and First Street.
- East - The east invert in the manhole at Dewey Avenue and Main Street.

The contributing areas of the sewer system were roughly split into thirds. Figure 3.7 illustrates the flows based on the contributing areas. The flows were measured every minute and show an increase in flow significantly due to the rain events. Overall, the records indicate that all parts of the Town seem to contribute equally to the high wastewater flows.

The measured peak flow rate of over 450 gpm was higher than the calculated capacity of the sanitary sewer. Therefore, the sewer system was backed up to some degree which pressurized the flow.

The Environmental Protection Agency (EPA) threshold for infiltration rates to be considered excessive is a wastewater flow of 120 gpcpd during dry-weather flows, which can be considered during December, January and February (EPA, 1975). The dry weather flows calculated from the available main lift station records indicate an average wastewater flow rate of 120 gpcpd. During a peak day the average flow during dry, cold periods was 313 gpcpd. Therefore, the wastewater flow during dry weather is considered excessive by the EPA's standards.

The EPA's upper limit for what they consider "normal wastewater flows during wet periods" is 275 gpcpd (EPA, 1975). The wastewater flow records for the main lift station indicate an average flow of 426 gpcpd during April 2011. This indicates that wet weather flows can be considered excessive by EPA's standards.

The SD DENR criterion for acceptable leakage in sewers is 200 gallons / inch of diameter / mile of length / day for clay pipe and 50 gallons / inch of diameter / mile of length / day for PVC pipe. The estimation of the inch-miles is listed below:

Infiltration Rate, gpd/in-diam-mile	Length, ft	Miles of Pipe	Diameter, in	In-Diam-Mile	Infilt-ration, gpd
50	400	0.08	4	0.3	15
50	816	0.15	8	1.2	62
200	10,640	2.02	5	10.1	2,015
200	11,904	2.25	8	18.0	3,607
200	1,760	0.33	10	3.3	667
	25,520	4.83		33.0	**6,366**

Using this standard and an estimated quantity of 33.0 inch-miles, the acceptable rate of flow for infiltration is 6,366 gpd. The average estimated infiltration and inflow rate, as determined from the available lift station pumping records, is 19,500 gpd (35,300 - 15,800) or 13.5 gpm. The DENR allowable infiltration rate is approximately 32.7 percent of the average estimated infiltration and inflow rate which indicates excessive infiltration and inflow.

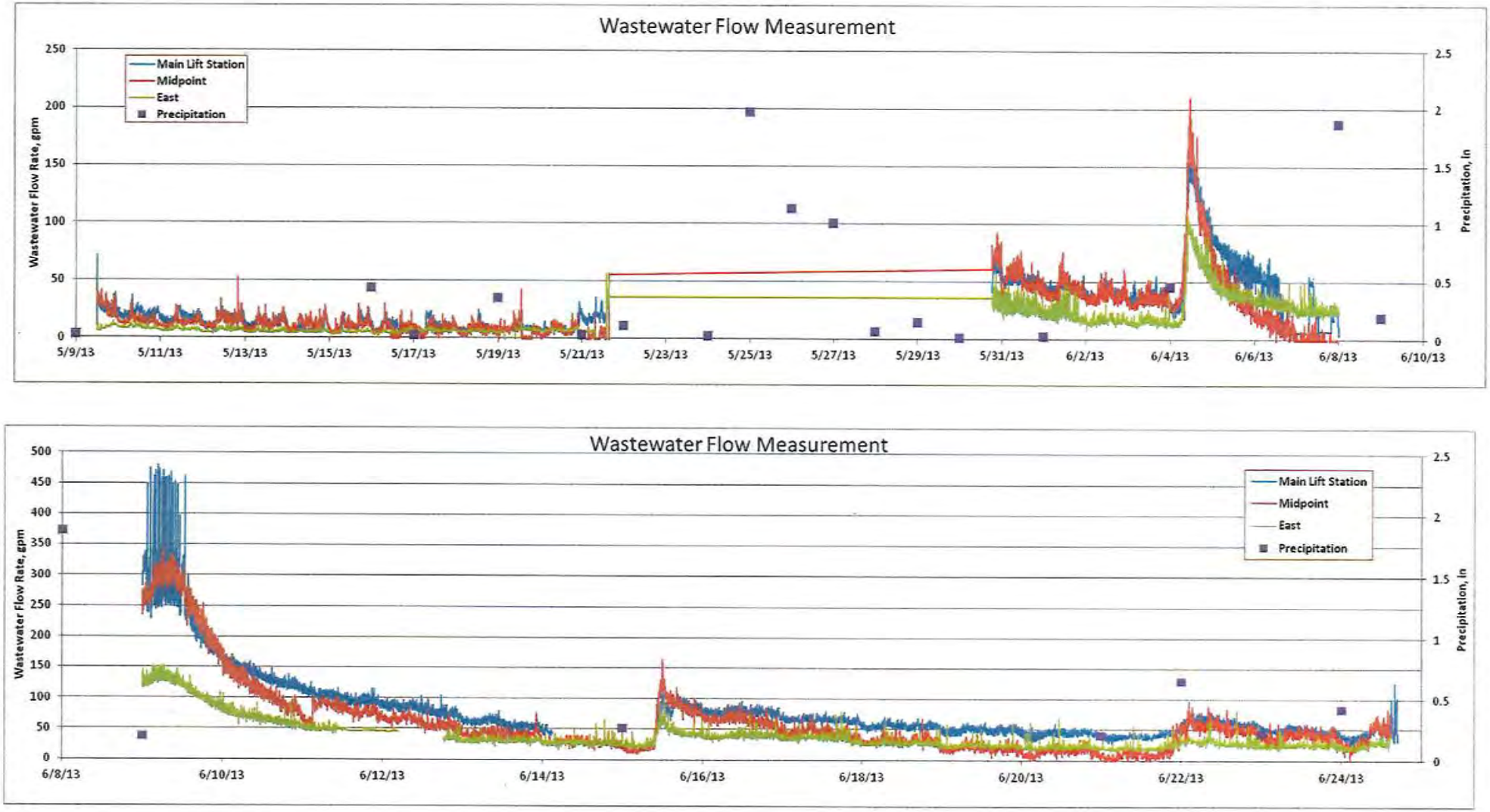


Figure 3.7: Wastewater Flow at Different Locations

3.2.1.1.4 Results of 1988 Study

Insert 3.2.1.3 here and add the following discussion:

Note that the 1988 Study indicated at total design wastewater flow rate of 46,746 gpd; the July 2002 Facility Plan indicated a rate of 41,234; and the current 2013 evaluation indicates a rate of 44,600. These rates are relatively similar and would be expected to fluctuate somewhat based on the diverse methods used in each evaluation and the difference in historic weather patterns that occurred which causes changing flow rates over time.

3.2.1.1.5 Projection of Wastewater Flow and Waste Load

Future flow projection is a matter of judgment rather than a determination of fact, particularly when projecting future growth patterns, population, weather conditions and system capacities. Unforeseen policies, events and technical changes can occur that affect the actual future population and wastewater flows. The best available information and engineering judgment are combined to define a set of design conditions.

It is not economically feasible to make frequent changes in the capacity of a wastewater collection system or WWTF. Therefore, a system is generally designed for the maximum flow that is expected during a design period of 20 years. The 2010 population of 264 will be used for the basis of evaluation and design. The design daily domestic wastewater flow rate is estimated to be **15,800 gpd** (264 x 60 gpcpd).

The period that is of most concern is during October through March when discharges from the WWTF are not recommended. The peak winter period wastewater flow rate pumped by the lift station was found to be an average of 44,600 gpd. Therefore, the infiltration and inflow component of the wastewater flow has been estimated as **28,800 gpd** (44,600 - 15,800). This value is the design infiltration and inflow component that will be used throughout this report.

The organic loading to the treatment ponds can be measured by the five-day biochemical oxygen demand (BOD_5). The DENR suggests that typical organic waste that is collected by a community ranges from 0.17 to 0.22 pounds of BOD_5 per person per day. For the purpose of this evaluation, the organic waste load that is collected by the sanitary sewer is calculated using an average waste production of 0.20 pounds of BOD_5 per person per day. A summary of the wastewater flows and organic loadings that will be used for the evaluation and design of the wastewater treatment alternatives is presented in Table 3.6.

Table 3.6: Wastewater Facility Design Data

Population	264
BOD_5 per Capita (lbs)	0.20
Total BOD_5 (lbs)	52.8
Hydraulic Loading, gpcpd	60
Total Domestic Hydraulic Loading	15,800
Design Daily Infiltration and Inflow	28,800
Total Design Wastewater Flow Rate	44,600

3.2.1.2 Inflow Analysis

Delete this section in its entirety and insert the following.

3.2.1.2 Lift Stations

The wastewater flows by gravity to the main lift station which was installed in 1990. The lift station pumps the wastewater through approximately 42 feet of four-inch ductile iron dual force main into the inflow manhole at the primary pond. The lift station consists of a six-foot diameter concrete wet well with duplex submersible pumps. According to available records the lift station is adequately sized and is able to meet the current and future needs of the Town.

Wastewater from the PVC piping in the southeast part of the Town flows to a small submersible duplex lift station. This lift station pumps the wastewater to a nearby manhole through approximately 270 feet of four-inch PVC force main. The lift station

wet well is a four-foot diameter fiberglass wet well. There appears to be a seal issue on the mating surface between one of the pumps and one of the base elbows. The operator has indicated that the wastewater swirls around one pump as if there is unusual flow. It is also suspected there is a restriction in the force main. Pumping capacity is lower than expected at approximately 25 gpm with both pumps operating. The control system is wired to operate both pumps simultaneously since either single pump will not move wastewater adequately.

3.2.1.3 Results of 1988 Study

Move this section to 3.3.1.1.4.

3.2.2 Wastewater Treatment System

The Wastewater Treatment Facility (WWTF) is designed to be a 180-day discharging facility and consists of two stabilization cells and an artificial wetland. The treatment facility operates under Surface Water Discharge (SWD) Permit #SD0023639. A copy of the permit has been provided in Appendix C.

In 1990, the single-cell wastewater treatment system was upgraded to include a primary pond, secondary pond, and an artificial wetland. At the time of the construction, a design population of 317 was projected to the year 2008, giving the WWTF an 18-year useful life expectancy. The WWTF has remained relatively trouble-free throughout its design life expectancy and beyond, with only minor modifications. The location of the existing WWTF is shown previously in Figure 3.4.

The primary pond has a water surface area of about 2.0 acres and a design depth of 5 feet. The secondary pond has a water surface area of approximately 2.0 acres and a design depth of 4.8 feet. The artificial wetland has a water surface area of 2.3 acres and a design depth of 2 feet. Refer to Figure 3.8 for the layout of the WWTF.

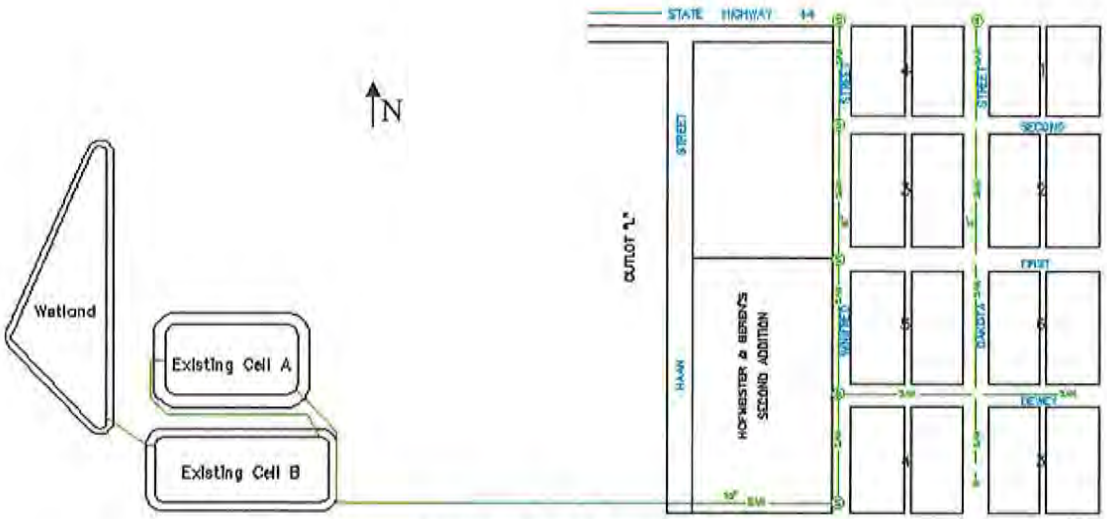


Figure 3.8: Layout of WWTF

The pond and wetland dikes were constructed in 1990 with 4:1 slopes on each side. The second pond has interior dikes with 3:1 slopes. The interior slopes of the ponds are clad with riprap up to the high water elevation. The wastewater between ponds and the wetland is controlled manually by the use of gate valves located in control manholes. The control manholes include overflow devices that let wastewater flow from the pond automatically when the wastewater reaches the high water level. The wastewater flow rate from the wetland can be measured by a weir structure. The discharge from the wetland is controlled by a gate flow control structure.

The wastewater discharged from the WWTF enters a tributary to Camp Creek which is classified with the following beneficial uses:

- Warmwater marginal fish life propagation waters
- Limited-contact recreation waters
- Fish and wildlife propagation, recreation and stock watering waters
- Irrigation waters

The Vermillion River is approximately two miles from the WWTF discharge location. This river is classified with the following beneficial uses:

- Warm water marginal fish life propagation waters
- Limited-contact recreation waters
- Fish and wildlife propagation, recreation and stock watering waters
- Irrigation waters

The most recent DENR Inspection was performed on September 22, 2009. Since this time, compliance reviews by the DENR have been completed which evaluate the historic records of the wastewater discharge parameters. Refer to Appendix D for copies of the DENR inspection records and compliance reviews. The available records of wastewater discharges indicate that the discharge from the WWTF has exceeded the maximum limits for ammonia, five-day biochemical oxygen demand (BOD_5), total suspended solids and pH on multiple occasions. It is for this reason that the DENR has placed the Town under an enforcement order to begin a plan to improve the system.

The organic waste loading is calculated to be 52.8 pounds per day. The SD DENR Design Criteria states that the maximum loading to a primary pond should be 30 pounds of BOD_5 per acre of pond per day. Also stated is that the maximum loading to the surface of both ponds should be a maximum of 20 pounds of BOD_5 per acre of pond per day. Given that the area of the primary pond is two acres, the current BOD_5 loading is 26.4 pounds per acre per day which is less than the recommended maximum criterion. Also given that the total pond area is four acres, the current BOD_5 loading is 13.2 pounds per acre per day which is less than the recommended maximum criterion.

3.2.3 Projection of Wastewater Flow and Waste Load

Delete this section in its entirety and replace with the following:

3.2.3 Hydraulic Capacity

To aid in evaluating the capacity of the existing WWTF, a water balance is compiled and is presented in Table 3.7. The water balance is created for evaluative purposes only. The actual operating conditions of the WWTF could vary greatly due to changes in evaporation, precipitation, discharges, actual seepage and other things that would affect the condition of the WWTF.

Table 3.7: WWTF Hydraulic Capacity

Effective System Population	264
Wastewater Flow, gpcpd	60
Domestic Wastewater Flow, gpd	15,800
I & I, gpd	28,800
Design Storage Time, days	180
Winter Period Pond Influent, gal	8,028,000
Pond One Storage Capacity, gal	1,802,474
Pond Two Storage Capacity, gal	1,691,422
Wetland Storage Capacity, gal	907,630
Total Storage Available, gal	4,401,526
Seepage Rate Pond 1, in per day	1/32
Seepage Rate Pond 2, in per day	1/16
Seepage Rate Wetland, in per day	1/8
Total Seepage, gal	2,097,282
Excess Storage Capacity, gal	-1,529,192
Additional Pond Area Required, ac	**1.56**

The hydraulic capacity calculations are based on the design wastewater flow rate estimated above. Because of evaporation loss during the summer, the most critical period for wastewater storage occurs during the winter period. The seepage rate is difficult to determine because of the many factors that influence its intensity. During the periods when there is a high water table in the vicinity of the WWTF very little, if any, seepage would occur. Therefore, for the purpose of this report a low seepage rate is assumed.

The hydraulic capacity calculations indicate that there is insufficient capacity to store and dispose of the wastewater. Years with high precipitation which causes infiltration and inflow rates to rise are causing the Town's WWTF to become hydraulically overloaded to a greater extent.

Based on the data shown in Table 3.7, if 29 percent of the estimated average rate of the infiltration and inflow was eliminated, the existing WWTF would have adequate capacity. Improvement alternatives are included later in this report to address the shortage in wastewater storage and to consider sewer improvements to reduce the infiltration and inflow.

3.3 FUTURE CONDITIONS

No changes are made to this section.

4 DEVELOPMENT AND EVALUATION OF SANITARY SEWER ALTERNATIVES

No changes are made to this section.

4.1 CAUTIONARY NOTES CONCERNING COST ESTIMATES

Add Section 4.1.1 following Section 4.1.

4.1.1 Equivalent Uniform Annual Cost

The equivalent uniform annual cost (EUAC) not only takes the capital costs into account when evaluating the options but also looks at the salvage value of the components and the expected annual operation and maintenance costs. The result is a comparison of the alternatives on an overall basis throughout a design life of 20 years. As a result, the EUAC may show that the lowest capital cost alternative is not the lowest cost alternative. This situation would occur when options have a low capital cost but high operation and maintenance costs. The EUAC's of the alternatives presented in this addendum are eliminated from consideration since the proposed improvements offer one viable alternative.

4.2 WATER STORAGE

No changes are made to this section.

4.2.1 Water Storage Alternative 1: Do Nothing

No changes are made to this section.

4.2.2 Water Storage Alternative 2: Water Tower

No changes are made to this section.

4.3 WATER DISTRIBUTION SYSTEM

No changes are made to this section.

4.3.1 Water System Alternative 1: Do Nothing

No changes are made to this section.

4.3.2 Water System Alternative 2: Loop System

No changes are made to this section.

4.3.3 Water System Alternative 3: Replace System

No changes are made to this section.

4.4 WASTEWATER COLLECTION SYSTEM

No changes are made to this section.

4.4.1 Collection System Alternative 1: Do Nothing

No changes are made to this section.

4.4.2 Collection System Alternative 2: Reduce Inflow Sources

This alternative has been completed except for the enforcement of the sewer use ordinance. The Town is currently in the process of inspecting each home and enforcing the elimination of illicit discharges to the sanitary sewer. The result on the final wastewater flow rate due to eliminating the illicit discharges to the sanitary sewer is unknown. An evaluation of the actual reduction of infiltration and inflow will be required after the elimination of the connections is completed. This evaluation will determine the necessity and size of a WWTF expansion.

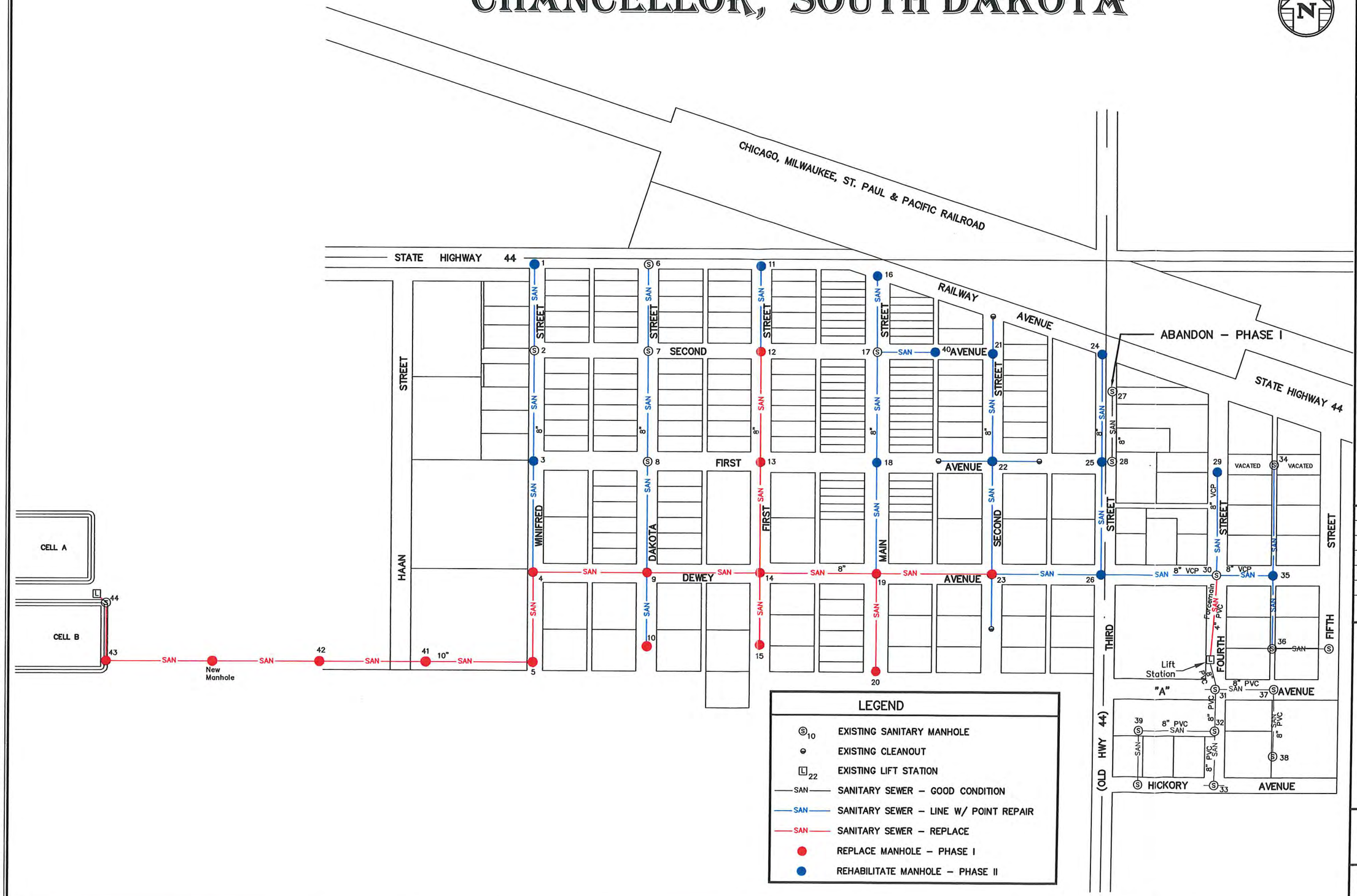
4.4.3 Collection System Alternative 3: Replace Collection System

Delete this section in its entirety and replace with the following 4.4.3, 4.4.4 and 4.4.5:

4.4.3 Collection System Phase 1: Replacement

The most structurally deficient part of the system is shown in red in the following figure as Phase 1. This part of the system is considered in very poor condition with numerous cracks, offsets, broken pipe, sags and other deficiencies. The pipe proposed for replacement in Phase 1 is in the general area where infiltration is the worst due to high groundwater levels.

CHANCELLOR, SOUTH DAKOTA



LEGEND

- EXISTING SANITARY MANHOLE
- EXISTING CLEANOUT
- EXISTING LIFT STATION
- SANITARY SEWER – GOOD CONDITION
- SANITARY SEWER – LINE W/ POINT REPAIR
- SANITARY SEWER – REPLACE
- REPLACE MANHOLE – PHASE I
- REHABILITATE MANHOLE – PHASE II

SPN & Associates

Engineers - Planners - Surveyors

2100 North Sanborn Boulevard - P.O. Box 398
Mitchell, South Dakota - Zip 57301-0398
Phone: (605) 996-7761 - Fax: (605) 996-0015

PRELIMINARY NOT FOR CONSTRUCTION

Plan Horiz. Scale:	1" = 300'
Drawn By:	NAP
Checked By:	CHOFER
Date:	03/2013
Project No.:	13828
Computer Name:	G:\Land Proj R2
File Name:	13828–ChancellorMap

Project Name:
Chancellor Sanitary Sewer

Located in:
Chancellor, South Dakota

Sheet Name:
Sanitary Sewer Map

Sheet Number:	Total Sheets:
1	1

G:\Land Projects R2\2000 Chancellor Planning\13828-Chancellor Manhole Trace.dwg, OA Layout tab

Phase 1 includes the replacement of approximately 2,730 feet of eight-inch PVC pipe and 1,760 feet of 10-inch PVC pipe. The sewer service pipe would be replaced within the rights-of-way with four-inch PVC pipe. Phase 1 includes the replacement of 14 manholes and the installation of an additional manhole where the length of the sewer was measured to be over 500 feet between manholes. The estimated costs associated with the improvements in this alternative are presented in Table 4.4.

The improvements proposed would result in a reduction of the infiltration and inflow due to the newly installed PVC pipe. It is difficult to estimate the actual percent reduction in infiltration and inflow that would be achieved due to the implementation of this alternative. Recent research into the effectiveness of sewer rehabilitation at removing infiltration and inflow indicated that up to 90 percent of infiltration can be removed from the sections of pipe replaced (Insituform 2005). However, only a relatively small portion of the private sewer service lines will be replaced at this time. As a result, a majority of the existing infiltration originating in the sewer services would remain. The sewer service infiltration has been documented in some collection systems to contribute from 40 to 80 percent of the total infiltration (NCPI and PTSA 2005).

The observed rate of inflow from services which is apparently mostly from sump pumps and related groundwater sources was unusually high. At the time of the TV inspection the groundwater from services was estimated to be approximately 68 percent of the total flow. The domestic portion of the wastewater flow amounted to approximately 21 percent of the total. Therefore, at the time, 11 percent of the total flow was found to be infiltration through the pipes and manholes. For the purpose of this report the infiltration is assumed to be reduced by 60 percent in the sections that are replaced. If this phase was completed, approximately 25 percent of the system (in inch-diameter miles) would be replaced. The total inflow and infiltration would be expected to be reduced by an estimated 15 percent of which is a reduction of approximately 4,300 gpd (15% of 28,800).

Table 4.4: Anticipated Costs of Phase 1

1	Mobilization	1 LS	$5,000.00	$5,000.00
2	Remove and Dispose of Existing Manhole	14 EA	$250.00	$3,500.00
3	Remove Asphalt Surfacing	9,970 SY	$5.00	$49,850.00
4	Asphalt Saw Cut	420 LF	$3.50	$1,470.00
5	Remove Concrete Curb and Gutter	80 LF	$4.00	$320.00
6	Sanitary Sewer Manhole (0-10 ft)	15 EA	$3,000.00	$45,000.00
7	Additional Depth Sanitary Sewer Manhole	23 VF	$300.00	$6,900.00
8	Connect to Existing Manhole	1 EA	$1,200.00	$1,200.00
9	Connect to Existing Sanitary Sewer Main	7 EA	$300.00	$2,100.00
10	8" x 4" Sanitary Sewer Wye	32 EA	$250.00	$8,000.00
11	10" x 4" Sanitary Sewer Wye	1 EA	$300.00	$300.00
12	4" PVC Sanitary Sewer Pipe	1,089 LF	$22.00	$23,958.00
13	8" PVC Sanitary Sewer Pipe (12-14 ft)	2,730 LF	$40.00	$109,200.00
14	10" PVC Sanitary Sewer Pipe (12-14 ft)	1,760 LF	$45.00	$79,200.00
15	Furnish and Install Tracer Wire Box	33 EA	$100.00	$3,300.00
16	Bypass Pumping	1 LS	$6,000.00	$6,000.00
17	Furnish and Install Asphalt Surfacing	1,680 TN	$110.00	$184,800.00
18	Gravel Base Course	5,440 TN	$21.00	$114,240.00
19	Gravel Surfacing	510 TN	$21.00	$10,710.00
20	Concrete Curb and Gutter	80 LF	$40.00	$3,200.00
21	Set up and Maintain Traffic Control	1 LS	$5,000.00	$5,000.00
22	Erosion Control	1 LS	$2,000.00	$2,000.00
23	Topsoil, Seed, Fertilize & Mulch	1 LS	$2,000.00	$2,000.00
			Subtotal	$667,248
			Contingencies	$100,100
			Total Construction Cost	$767,348
			Legal and Administration Cost	$30,700
			Design Engineering	$48,200
			Bidding Phase Engineering	$5,000
			Construction Engineering	$81,200
			Total Project Cost	$932,448

CONST. COST
792,000

Dennis Wieker Bd Pres

4.4.4 Collection Sys ase 2: Lining

The remaining clay pipe not replaced in Phase 1 is considered to be capable of providing a few years of sewer service. However, the pipe and manholes have many leaking joints

and other properties that allow infiltration. For this reason the remaining clay pipe is included in Phase 2 and will be rehabilitated by the lining process. The manholes shown for Phase 2 will also be lined to keep them in service for many years. The estimated costs associated with the improvements in this alternative are presented in Table 4.5.

Table 4.5: Anticipated Costs of Phase 2

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$33,900.00	$33,900.00
2	Mobilization (Lining Crew)	1 LS	$15,700.00	$15,700.00
3	Remove Asphalt Surfacing	7,060 SY	$5.00	$35,300.00
4	Asphalt Saw Cut	6,480 LF	$1.00	$6,480.00
5	Manhole Spot Repair	10 EA	$50.00	$500.00
6	Connect to Existing Manhole	1 EA	$1,200.00	$1,200.00
7	Manhole Liner in 15 Manholes	168 VF	$240.00	$40,320.00
8	Pre-Rehabilitation TV Inpection of Sewer	7,180 LF	$1.25	$8,975.00
9	8-Inch Cured in Place Pipe Liner (CIPP liner)	7,180 LF	$36.00	$258,480.00
10	Post-Rehabilitation TV Inspection 8" Sewer	7,180 LF	$1.00	$7,180.00
11	Connect to Existing Sanitary Sewer Main	2 EA	$300.00	$600.00
12	8" x 4" Sanitary Sewer Wye Point Repair	10 EA	$250.00	$2,500.00
13	4" Sanitary Sewer Saddle	88 EA	$500.00	$44,000.00
14	4" Sanitary Sewer Pipe	3,234 LF	$22.00	$71,148.00
15	8" PVC Pipe - 10 Point Repairs (12-14 ft)	500 LF	$50.00	$25,000.00
16	Furnish and Install Tracer Wire Box	98 EA	$100.00	$9,800.00
17	Bypass Pumping	1 LS	$6,000.00	$6,000.00
18	Furnish and Install Asphalt Surfacing	1,190 TN	$110.00	$130,900.00
19	Gravel Base Course	3,850 TN	$21.00	$80,850.00
20	Set up and Maintain Traffic Control	1 LS	$5,000.00	$5,000.00
21	Erosion Control	1 LS	$2,000.00	$2,000.00
22	Topsoil, Seed, Fertilize & Mulch	1 LS	$2,000.00	$2,000.00
			Subtotal	$787,833
			Contingencies	$78,800
			Total Construction Cost	$866,633
			Legal and Administration Cost	$34,700
			Design Engineering	$66,400
			Bidding Phase Engineering	$5,000
			Construction Engineering	$79,800
			Total Project Cost	$1,052,533

4.4.5 Lift Station Improvements

Improvements to the indentified deficiencies of the southeast lift station are evaluated in this section. The seal issue on the mating surface between one of the pumps and one of the base elbows should be fixed. The restriction in the force main should also be eliminated. The control system should be rewired to allow normal a duplex pump operation in which the pumps alternate.

4.4.5.1 Lift Station Alternative 1: Do Nothing

Because doing nothing will not address any of the problems with the system, this is not considered as an acceptable alternative.

4.4.5.2 Lift Station Alternative 2: Repair SE Lift Station

The southeast lift station will be repaired by replacing the 270 feet of four-inch PVC force main. This will eliminate the problem with the restricted force main and allow single pump operation. The pumps will be physically reset to be sure they are sealed properly. The control panel will be adjusted to allow for normal duplex operation where the pumps take turns operating. Table 4.6 shows the estimated costs for this alternative.

Table 4.6: Anticipated Costs of Lift Station Repair

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$2,100.00	$2,100.00
2	Remove and Reset Pumps	1	LS	$2,000.00	$2,000.00
3	Rehabilitate Control Panel	1	LS	$5,000.00	$5,000.00
4	Replace 4-Inch PVC Force Main	270	LF	$30.00	$8,100.00
5	Connect Force Main to Manhole and Lift Station	2	EA	$1,000.00	$2,000.00
6	Gravel Surfacing	120	TN	$22.00	$2,640.00
7	Seeding	600	SY	$2.00	$1,200.00
				Subtotal	$23,040.00
				Contingencies (10%)	$2,300.00
				Construction Total	$25,340.00
				Design Engineering	$3,800.00
				Bidding and Contract Documents	$4,000.00
				Construction Engineering	$4,600.00
				Administration & Legal	$1,000.00
				Total Project Cost	$38,740.00

4.5 WASTEWATER TREATMENT FACILITY

The operating characteristics of the wastewater treatment facility (WWTF) are discussed in detail in Section 3.2.2 of this report. The WWTF does not have adequate storage for the 180-day winter period at the design conditions. The excessive infiltration and inflow exacerbates the problem. The lack of adequate capacity most likely is the cause of exceeding the Surface Water Discharge Permit limits many times as previously discussed.

4.5.1 WWTF Alternative 1: Do Nothing

The first WWTF alternative that was considered is the "Do Nothing" alternative. Due to the high infiltration and inflow rates the WWTF in its current condition has a hydraulic loading that exceeds the system's capacity. However, the "Do Nothing" alternative could be a considerable alternative in this case. If the Town plans to pursue reducing the infiltration and inflow through various methods such as clay pipe replacement or sump pump ordinance enforcement, it is practical that the wastewater flow rate could be reduced to a level by which the WWTF could be considered adequate.

4.5.2 WWTF Alternative 2: Expand Artificial Wetland System

In order to increase the capacity of the WWTF an artificial wetland area is proposed. It may be difficult to maintain the water level at or above the two-foot minimum level in the treatment ponds during dry weather. Therefore, a wetland is considered in this alternative due to the flexibility it would provide over operating more treatment pond area.

The revised hydraulic balance is shown in Table 4.7 which takes into account that the Phase 1 improvements will reduce the design infiltration and inflow overall by 15 percent. Based on these calculations a wetland just under two acres is needed.

The associated costs expected for this alternative are presented in Table 4.8. It should be noted that the location of the proposed wetland will have an effect on the cost of this alternative and would have to be determined during the design phase.

Table 4.7: Revised Hydraulic Balance

Effective System Population	264
Wastewater Flow, gpcpd	60
Domestic Wastewater Flow, gpd	15,800
I & I, gpd	24,480
Design Storage Time, days	180
Winter Period Pond Influent, gal	7,250,400
Pond One Storage Capacity, gal	1,802,474
Pond Two Storage Capacity, gal	1,691,422
Wetland Storage Capacity, gal	907,630
Total Storage Available, gal	4,401,526
Seepage Rate Pond 1, in per day	1/32
Seepage Rate Pond 2, in per day	1/16
Seepage Rate Wetland, in per day	1/8
Total Seepage, gal	2,097,282
Excess Storage Capacity, gal	-751,592
Additional Pond Area Required, ac	**0.77**
or	
Additional Wetland Area Required, ac	**1.85**

Table 4.8: Anticipated Costs of WWTF Alternative 2

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$14,100.00	$14,100.00
2	Remove and Stockpile Topsoil	2,400	CY	$2.00	$4,800.00
3	Unclassified Excavation & Embankment	5,900	CY	$2.50	$14,750.00
4	Place Topsoil	2,400	CY	$3.00	$7,200.00
5	Transfer Lift Station and Controls	1	LS	$55,000.00	$55,000.00
6	6" PVC Force Main	1,000	LF	$35.00	$35,000.00
7	Inlet/Outlet Structure	3	EA	$2,000.00	$6,000.00
8	Flow Measurement / Discharge Structure	1	EA	$10,000.00	$10,000.00
9	Depth Indicator	1	EA	$2,000.00	$2,000.00
10	Seepage Collars	3	EA	$500.00	$1,500.00
11	8" Plug Valve	2	EA	$2,500.00	$5,000.00
12	8" Ductile Iron Piping	200	LF	$60.00	$12,000.00
13	Bypass Pumping	1	LS	$5,000.00	$5,000.00
14	Sanitary Sewer Manhole	1	EA	$3,200.00	$3,200.00
15	Seed, Fertilize & Mulch	3.0	AC	$2,000.00	$6,000.00
16	Fence Removal	500	LF	$1.50	$750.00
17	Fence	1,100	LF	$2.50	$2,750.00
18	Erosion Control	1	LS	$5,000.00	$5,000.00
				Subtotal	$190,050.00
				Contingencies (10%)	$20,000.00
				Construction Total	$210,050.00
				Design Engineering	$21,200.00
				Bidding and Contract Documents	$5,000.00
				Construction Engineering	$25,400.00
				Land Purchase	$29,000.00
				Administration & Legal	$9,000.00
				Total Project Cost	$299,650.00

4.5.3 WWTF Alternative 3: 180-Day Retention

In order to add hydraulic capacity and improve the ability of the WWTF to meet the discharge limits a pond area expansion is recommended. The hydraulic balance shown previously indicates that a pond area of one acre will be sufficient after the reduction in infiltration and inflow is considered. The costs associated with adding a pond are

presented in Table 4.9. The location of the proposed pond will have an effect on the cost of this alternative and would have to be determined during the design phase.

Table 4.9: Anticipated Costs of WWTF Alternative 3

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$14,700.00	$14,700.00
2	Remove and Stockpile Topsoil	1,600	CY	$2.00	$3,200.00
3	Unclassified Excavation & Embankment	8,100	CY	$2.50	$20,250.00
4	Pond Clay Liner	2,400	CY	$4.00	$9,600.00
5	Place Topsoil	1,600	CY	$3.00	$4,800.00
6	Transfer Lift Station and Controls	1	LS	$55,000.00	$55,000.00
7	6" PVC Force Main	1,000	LF	$35.00	$35,000.00
8	Inlet/Outlet Structure	3	EA	$2,000.00	$6,000.00
9	Flow Measurement / Discharge Structure	1	EA	$10,000.00	$10,000.00
10	Pond Depth Indicator	1	EA	$2,000.00	$2,000.00
11	Seepage Collars	3	EA	$500.00	$1,500.00
12	8" Plug Valve	2	EA	$2,500.00	$5,000.00
13	Inter-Pond Piping (8" DIP)	200	LF	$60.00	$12,000.00
14	Bypass Pumping	1	LS	$5,000.00	$5,000.00
15	Sanitary Sewer Manhole	1	EA	$3,200.00	$3,200.00
16	Seed, Fertilize & Mulch	1.6	AC	$2,000.00	$3,200.00
17	Fence Removal	500	LF	$1.50	$750.00
18	Fence	900	LF	$2.50	$2,250.00
19	Erosion Control	1	LS	$5,000.00	$5,000.00
				Subtotal	$198,450.00
				Contingencies (10%)	$20,000.00
				Construction Total	$218,450.00
				Design Engineering	$21,900.00
				Bidding and Contract Documents	$5,000.00
				Construction Engineering	$26,300.00
				Land Purchase	$20,000.00
				Administration & Legal	$9,000.00
				Total Project Cost	$300,650.00

4.5.4 WWTF Alternative 4: Total Retention

Delete this section in its entirety since the land required for this option is cost prohibitive and not practical.

4.5.5 Impact of Each Alternative on User Fees

Delete this section in its entirety.

4.6 OPTIMUM OPERATION OF EXISTING FACILITIES

No changes are made to this section.

4.7 REGIONALIZATION

4.7.1 Water System

No changes are made to this section.

4.7.2 Wastewater Treatment System

No changes are made to this section.

4.7.3 Storm Drainage System

No changes are made to this section.

5 SELECTION OF ALTERNATIVES

5.1 WATER STORAGE

No changes are made to this section.

5.2 WATER DISTRIBUTION SYSTEM

No changes are made to this section.

5.3 WASTEWATER COLLECTION SYSTEM

Sanitary Sewer Alternative 1 (Do Nothing) is not recommended because it would not address any of the identified deficiencies with the sanitary sewer system.

Sanitary Sewer Phase 1 (Replacement) is recommended. This alternative will address the structural problems within the existing clay lines and the brick manholes. This alternative will also reduce the amount of infiltration and inflow that the system is collecting.

Sanitary Sewer Phase 2 (Lining) is recommended when funding becomes available. This alternative will address the structural problems within the remaining clay lines and brick manholes after Phase 1 is implemented. This alternative will also further reduce the amount of infiltration and inflow that the system is collecting. Once the reduction of infiltration and inflow sources are complete due to the implementation of Phase 1 and enforcing the sewer use ordinance, an evaluation of further infiltration and inflow reduction can be completed and evaluated regarding the cost effectiveness of implementing Phase 2.

5.3.1 Lift Station

The do nothing alternative is not recommended because this will not accomplish the needed repair of the identified deficiencies. The repair of the southeast lift station (Alternative 2) is recommended. The improvements in this alternative will return the lift station to proper working order as intended.

5.4 WASTEWATER TREATMENT FACILITY

It is expected that future improvements made to the sanitary sewer and enforcement of a sewer use ordinance would reduce the infiltration and inflow to an extent that the existing wastewater treatment facility would be considered adequately sized. For this reason the alternative of doing nothing, at this time, is recommended. A re-evaluation of the wastewater flow rate is recommended after the elimination of illicit discharges is completed and the Phase 1 improvements are implemented.

5.5 CAPITAL FINANCING PLAN

No changes are made to this section.

5.6 ENVIRONMENTAL EVALUATION

No changes are made to this section.

5.7 VIEWS OF THE PUBLIC AND CONCERNED INTEREST GROUPS

A public hearing has been conducted.

5.8 DEMONSTRATION OF FINANCIAL CAPABILITY

As part of the cost analysis of the recommended improvements, the Town's ability to pay for the project is evaluated. The total costs of the improvements are listed in Table 6.1. For the purpose of this financial evaluation, the total cost of the improvements is assumed to be eligible for a low interest loan from the State Revolving Fund. This, however, is subject to change due to decisions that must be made by the appropriate funding agencies.

Table 5.1 summarizes the financial data that was supplied by the Finance Officer and is used to determine the proposed operational surplus or deficit of the Wastewater Fund. The budgeted revenues generated from user fees for 2012 are listed in Table 5.1. The estimated project costs are increased by an annual inflation factor of three percent.

The budget analysis indicates that the current revenue is sufficient until the payment for the proposed project loan is added. The annual loan payment for principal and interest on

the total cost of the improvements is calculated based on a 20-year loan period and an interest rate of 3.00 percent. The new loan will create a deficit and require an increase in user fees. The increase in user fees will depend on the actual financing that is available. The current sewer fee is a flat rate of $22 per month. The DENR requires a minimum sewer rate of $22 per month to qualify for funding and a higher rate to obtain grant money. The operation and maintenance costs for the Wastewater Fund are based on the costs for 2012. These costs include the salaries and all expenses incurred during the year.

The proposed improvements are expected to cause an insignificant change to the annual costs of operation and maintenance. The expected short-lived asset replacement cost associated with this project is listed in Table 5.1. This money should be set aside to provide for the replacement cost of lift station equipment. Because the financing that will be supplied by various funding agencies is unknown at this time, multiple columns of budget information are provided based on varying grant percentages.

Table 5.1: Evaluation of the Wastewater Fund

Funding Percentages grant/loan	0/100 grant/loan	20/80 grant/loan	40/60 grant/loan	50/50 grant/loan	60/40 grant/loan	80/20 grant/loan	100/0 grant/loan
Annual O & M	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000
Grant Amount	$0	$200,065	$400,129	$500,162	$600,194	$800,259	$1,000,324
Loan Amount	$1,000,324	$800,259	$600,194	$500,162	$400,129	$200,065	$0
Annual Loan Payment	$67,237	$53,790	$40,342	$33,619	$26,895	$13,447	$0
Debt Reserves	$6,724	$5,379	$4,034	$3,362	$2,689	$1,345	$0
Short-Lived Asset Replacement	$4,200	$4,200	$4,200	$4,200	$4,200	$4,200	$4,200
Current Debt/Other Cost	$0	$0	$0	$0	$0	$0	$0
Total Annual Costs	$90,161	$75,369	$60,577	$53,181	$45,784	$30,992	$16,200
Annual Revenue	$28,000	$28,000	$28,000	$28,000	$28,000	$28,000	$28,000
Surplus/Deficit After Project	-$62,161	-$47,369	-$32,577	-$25,181	-$17,784	-$2,992	$11,800
Minimum Sewer Rate Increase	$41.25	$31.50	$21.75	$16.75	$12.00	$2.00	
Current Rate	$22.00	$22.00	$22.00	$22.00	$22.00	$22.00	$22.00
Proposed Rate	$63.25	$53.50	$43.75	$38.75	$34.00	$24.00	$22.00

6 SELECTED PLAN, DESCRIPTION AND IMPLEMENTATION ARRANGEMENTS

6.1 JUSTIFICATION AND DESCRIPTION OF SELECTED PLAN

The alternative chosen for water storage will satisfy all demands of the water distribution system as long as SLRW is able to supply a sufficient amount of water. The higher flow rate from SLRW should be cheaper than the cost of constructing and maintaining a water tower.

The alternative chosen for the water distribution system will improve all of the deficiencies in the system other than the lack of storage. This alternative will provide Chancellor with pressures and flows that are more appealing than the current system.

The Phase 1 collection system improvements will remedy the worst of the structural deficiencies identified in the clay sewer pipe. The infiltration and inflow rate will be reduced to some degree which will help the hydraulic overloading at the WWTF.

Improvements for the WWTF can be placed on hold until the degree of infiltration and inflow reduction is known.

6.2 DESIGN OF SELECTED PLAN

6.2.1 Water Distribution System

No changes are made to this section.

6.2.2 Wastewater Collection System

The system will be designed in accordance with the SD DENR design criteria and the accepted principles and standards for the design of wastewater collection systems.

6.2.3 Wastewater Treatment Facility

No improvements to the WWTF are proposed at this time.

6.3 COST ESTIMATES FOR SELECTED PLAN

A summary of the costs discussed in this report and the costs recommended are shown in Table 6.1.

Table 6.1: Summary of Costs

Improvement Options	Cost	Recommended
Collection System Phase 1: Replacement	$932,448	$932,448
Collection System Phase 2: Lining	$1,052,533	
Lift Station Alternative 2: Repair SE Lift Station	$38,740	$38,740
WWTF Alternative 2: Expand Wetland	$299,650	
WWTF Alternative 2: Expand Pond	$300,650	
	Total Cost	$971,188

6.4 ENVIRONMENTAL IMPACTS OF SELECTED PLAN

No changes are made to this section.

6.5 ARRANGEMENTS FOR IMPLEMENTATION

This report provides information to describe the proposed project and to support the Town Board's decision to proceed with it as quickly as possible. Final design will be completed by the Town of Chancellor's consultant and approved by the DENR, as it is definitely a "work of sanitary significance." Cost estimates have been prepared and are referenced elsewhere in this document. The project will be bid in accordance with state statutes that govern municipal corporations and will be constructed by the lowest responsible bidder.

The anticipated schedule for the progression of the project is as follows:

Task	Date
Facility Plan Submitted to Funding Agencies	Oct-2013
Environmental Review Completed	Nov-2013
Funding Agency Approval of Facility Plan	Nov-2013
Final Funding Package Complete	Mar-2014
Begin Design	Mar-2014
Plans & Specifications Submitted to DENR	Aug-2014
Plans & Specifications Approved by DENR	Sep-2014
Advertisement for Bids	Sep-2014
Open Bids	Sep-2014
Award Bids	Oct-2014
Begin Construction	Apr-2015
Construction Complete	Oct-2015
Project Close-out	Nov-2015

6.6 LAND ACQUISITION

No land acquisition will be required for the proposed collection system improvements as all work will be completed in existing street rights-of-way, in easements that have already been obtained or on Town property.

6.7 INTERAGENCY AGREEMENTS

No changes are made to this section.

7 REFERENCES

No changes are made to this section.

Appendix A

Environmental Assessment Correspondence

Correspondence will be inserted when available.

Appendix B

Summary of TV Inspection Records

Records of TV Inspections

235.4	[illegible]
815.9	Good Condition
4190.8	Phase I Severe (replacement) Phase I
7178.1	Phase II, Line with Point Replacement
12484.5	

Services

2	
5	
33	
98	

SEWER LOCATION				Pipe	Pipe			Approx.	Number	Severity	Deficiency
Street	from	to	Length	Dia.	Type	Surface	Connec-	Serv. Line	Deficiency		
			(ft)	(in)			tions	in-mi			
Fourth St & Hickory Ave	**MH 32**	**MH 33**	**175**	**8**	**PVC**	**Gravel**	**2**	**0.53**			**None**
Fourth St	**MH 32**	**MH 39**	**245.6**	**8**	**PVC**	**Grass**	**1**	**0.27**			**None**
Fourth St & A Ave	MH 32	MH 31	126.3	8	PVC	Gravel	1	0.27			
									1	Medium	Joint Seperated
									1	Small	Joint Offset
Fourth St & A Ave	MH 31	LS	47.2	8	PVC	Gravel					
									1	Large	Joint Seperated
									1	Medium	Joint Angular
Dewey Ave	MH 35	MH36	90.4	8	PVC	Grass	2				
									1	Light	Sag (16.9 ft)
									1	Light	Joint Gasket
Dewey Ave	MH 35	MH 34	142.7	8	PVC	Grass	1				
									1	Severe	Sag (11.4 ft)
									4	Small	Joint Angular
Dewey Ave & Fourth St	MH35	MH30	150.4	8	PVC	Asphalt					
									1	Light	Sag(13.6 ft)
									1	Small	Joint Offset
									1	Light	Sag
									3	Severe	Joint Gasket
Fourth St	MH 30	MH 29	349.3	8	Clay	Asphalt	4				
									1	Severe	Joint Gasket
									1	Small	Crack
Third St	MH 25	MH 24	281.5	8	Clay	Asphalt	2				
									1	Medium	Sag (6 ft)
									1	Light	Infiltration
									5	Small	Joint Offset
									12	Light	Roots
									1	Light	Sag
									3	Wide	Crack
									4	Medium	Joint Offset
Third St	**MH 25**	**MH 28**	**27.4**	**8**	**Clay**	**Asphalt**					
									1	Medium	Joint Offset
									1	Light	Root
Third St	MH 25	MH 26	360.8	8	Clay	Road and	5				
									1	Small	Joint Offset
									2	Light	Sag
									2	Lateral	Connection Protruding
									10	Light	Roots
									1	Light	Sag(4.2)
									2	Narrow	Crack
									1	Medium	Roots
									1	Medium	Joint Seperated
									2	Light	Infiltration
									1	Medium	Sag
Dewey Ave	MH 39	MH 26	385.2	8	Clay	Asphalt	5				
									1	Large	Joint Seperated
									1	Light	Infiltration
Third St	**MH 28**	**MH 27**	**208**	**8**	**Clay**	**Asphalt**	**2**				
									3	Light	Sag
									1	Lateral	Pipe Damaged
									8	Light	Root-in-Joint
									1	Light	Joint Offset
									1	Lateral	Pipe Damaged
									2	Narrow	Crack (Mutlitple)
									3	Medium	Root-in-Joint
Second St	MH 27	CO	98.6	8	Clay	Asphalt	4				
									8	Light	Infiltration
									2	Light	Sag
									1	Medium	Joint Seperated
									1	Light	Sag(10.7 ft)
									1	Lateral	Connection Protruding
									1	Narrow	Crack
									1	Narrow	Crack (multiple)

SEWER LOCATION				Pipe	Pipe			Approx.	Number	Severity	Deficiency
Street	from	to	Length	Dia.	Type	Surface	Connec-	Serv. Line	Deficiency		
			(ft)	(in)			tions	in-mi			
Second St	MH 21	MH22	348.7	8	Clay	Asphalt	6				
									12	Light	Infiltration
									6	Light	Sag
									2	Narrow	Crack
									2	Light	Root-in-Joint
									1	Wide	Crack (multiple)
Second St	MH 22	MH23	369.8	8	Clay	Asphalt	3				
									8	Light	Sag
									2	Light	Root-in-Joint
									1	Small	Joint Offset
									1	Lateral	Connection Protruding
									1	Wide	Crack (Multiple)
									1	Narrow	Crack
									1	Wide	Crack
									1	Medium	Sag
First Ave	MH 22	CO West	136.3	8	Clay	Asphalt	2				
									1	Medium	Sag (27.1 ft)
									2	Light	Root-in-Joint
									1	Medium	Sag
									1	Medium	Sag (11.7 ft)
									2	Small	Joint Offset
									Broken/Hole?		
First Ave	MH 22	CO East	129.2	8	Clay	Asphalt	1				
									3	Light	Sag
									1	Medium	Sag(10.6 ft)
									2	Medium	Sag
									9	Light	Root-in-Joint
									1	Medium	Root-in-Joint
									1	Heavy	Root-in-Lateral
Dewey Ave	MH 23	MH 36	329.6	8	Clay	Asphalt	1				
									10	Light	Sag
									6	Small	Joint Offset
									1	Narrow	Crack Longitudinal(2.5 ft)
									2	Heavy	Root-in-Lateral
									2	Lateral	Abandoned Unsealed
									1	Lateral	Connection Protruding
									1	Narrow	Crack Longitudinal
									2	Wide	Crack Multiple
									1	Heavy	Root
									1	Medium	Sag
Grand St	MH 23	CO	254.7	8	Clay	Asphalt	5				
									1	Medium	Sag (54.5 ft)
									2	Severe	Sag
									9	Small	Joint Offset
									1	Medium	Sag(18.3 ft)
									1	Light	Root-in-Lateral
									1	Medium	Joint Offset
									1	Narrow	Crack Circular
									2	Light	Root-in-Joint
									1		Protruding Connection
									1	Narrow	Crack (Multiple)
Main St	MH 17	MH 18	237.8	8	Clay	Asphalt	4				
									7	Light	Sag
									4	Small	Joint Offset
									2	Lateral	Abandoned Unsealed
									1	Narrow	Crack Longitudinal
									18	Light	Infiltration
Second Ave	MH 17	MH 40	138	8	Clay	Asphalt					
									1	Severe	Sag (14.9 ft)
									2	Small	Joint Offset
									2	Light	Sag
									1	Lateral	Abandoned Unsealed

SEWER LOCATION				Pipe	Pipe			Approx.	Number	Severity	Deficiency
Street	from	to	Length	Dia.	Type	Surface	Connec-	Serv. Line	Deficiency		
			(ft)	(in)			tions	in-mi			
Main St	MH 17	MH 18	351.1	8	Clay	Asphalt	6				
									12	Light	Infiltration
									10	Light	Sag
									1	Light	Grease
									1	Lateral	Connection Protruding
									1	Light	Sag (14.1 ft)
									1	Wide	Crack Longitudinal
									1	Small	Joint Offset
Main St	MH 18	MH 19	358.7	8	Clay	Asphalt	4				
									14	Light	Infiltration
									2	Narrow	Crack Longitudinal
									5	Light	Sag
									5	Light	Root-in-Joint
									1	Narrow	Crack Multiple
									1	Lateral	Abandoned Unsealed
									1	Heavy	Root-in-Joint
									1	Lateral	Connection Protruding
									1	Medium	Root
									1	Small	Joint Offset
									1	Narrow	Crack Longitudinal
									1	Light	Grease
									1	Wide	Crack Multiple
Main St	MH 19	MH 20	305	8	Clay	Asphalt	6				
									4	Light	Sag
									1	Light	Grease
									25	Light	Infiltration
									2	Broken	Hole
									5	Small	Joint Offset
									3	Light	Root-in-Joint
									2	Medium	Root-in-Joint
									1	Medium	Root-in-Joint
									2	Heavy	Root-in-Joint
									1	Medium	Root-in-Lateral
									1	Light	Root-in-Lateral
									2	Small	Joint Seperated
									1	Heavy	Root-in-Lateral
									1	Medium	Sag
									1	Light	Sag (5.4 ft)
									2	Narrow	Crack Longitudinal
									1	Wide	Crack Multiple
									1	Heavy	Root-in-Joint
Dewey Ave	MH 23	MH 19	307.2	8	Clay	Asphalt	3				
									4	Wide	Crack Circular
									13	Light	Sag
									1	Lateral	Connection Protruding
									1	Light	Root
									1	Medium	Sag
									2	Light	Root-in-Joint
A Ave	**MH 37**	**MH 38**	**210.4**	**8**	**PVC**	**Grass**	**2**			**None**	
A Ave	**MH 37**	**MH 31**	**184.9**	**8**	**PVC**	**Grass**				**None**	
First St	MH 12	MH 11	217.8	8	Clay	Asphalt	7				
									1	Narrow	Crack Multiple
									1	Severe	Sag (9.3 ft)
									1	Narrow	Crack Longitudinal
									3	Light	Sag
									4	Light	Infiltration
									3	Light	Root-in-Joint
									1	Wide	Crack Longitudinal
									1	Lateral	Connection Protruding
									1	Light	Root-in-Lateral
									1	Medium	Root-in-Lateral

SEWER LOCATION				Pipe	Pipe			Approx.	Number	Severity	Deficiency
Street	from	to	Length	Dia.	Type	Surface	Connec-	Serv. Line	Deficiency		
			(ft)	(in)			tions	in-mi			
First St	MH 12	MH 13	353.3	8	Clay	Asphalt	8				
									3	Light	Root-in-Joint
									1	Heavy	Root-in-Lateral
									2	Light	Sag
									1	Medium	Root
									41	Light	Infiltration
									1	Lateral	Pipe Damaged
									3	Lateral	Pipe Protruding
									4	Narrow	Crack Longitudinal
									2	Medium	Sag
									2	Light	Root
First St	MH 13	MH 14	354.9	8	Clay	Asphalt	4				
									31	Light	Infiltration
									8	Light	Root-in-Joint
									1	Lateral	Abandoned Unsealed
									1	Heavy	Root-in-Lateral
									2	Medium	Root-in-Lateral
									3	Light	Sag
									1	Wide	Crack Multiple
									1	Light	Root
									1	Severe	Sag 4.9 ft
Dakota St	MH 7	MH 6	282.1	8	Clay	Asphalt	6				
									15	Light	Root-in-Joint
									1	Light	Root
									2	Heavy	Root
									1	Medium	Root-in-Joint
									1	Heavy	Root-in-Joint
									2	Heavy	Root-in-Lateral
									5	Light	Sag
									1	Wide	Crack Spiral
									1	Lateral	Abandoned Unsealed
									1	Wide	Crack Longitudinal
									1	Lateral	Pipe Damaged
									1	Wide	Crack Circular
									1	Medium	Root
									2	Severe	Grease
Dakota St	MH 7	MH 8	346.1	8	Clay	Asphalt	6				
									3	Light	Sag
									13	Light	Root-in-Joint
									2	Medium	Root-in-Joint
									1	Medium	Root-in-Lateral
									1	Medium	Sag
									2	Heavy	Root-in-Lateral
									1	Wide	Crack Longitudinal
									1	Narrow	Crack Multiple
									1	Wide	Crack Circular
Dakota St	MH 8	MH 9	360.8	8	Clay	Asphalt	5				
									1	Medium	Root-in-Lateral
									1	Heavy	Root-in-Lateral
									6	Light	Root-in-Joint
									5	Light	Sag
									1	Medium	Sag
									4	Light	Infiltration
									1	Narrow	Crack Longitudinal
									1	Lateral	Connection Protruding
Dewey Ave	MH 10	MH 11	387.4	8	Clay	Asphalt	2				
									4	Light	Root-in-Joint
									1	Medium	Root-in-Lateral
									13	Light	Sag
									4	Medium	Sag
									3	Severe	Sag
									2	Small	Joint Offset
									2	Light	Infiltration
									1	Severe	Infiltration
									2	Narrow	Crack Circular
									1	Narrow	Crack Multiple
									1	Wide	Crack Spiral

SEWER LOCATION				Pipe	Pipe			Approx.	Number	Severity	Deficiency
Street	from	to	Length	Dia.	Type	Surface	Connec-	Serv. Line	Deficiency		
			(ft)	(in)			tions	in-mi			
Hoot St	MH 14	MH 15	272.1	8	Clay	Asphalt	4				
									9	Light	Infiltration
									4	Light	Root-in-Joint
									1	Medium	Root-in-Lateral
									6	Light	Sag
									1	Medium	Sag
									1	Severe	Sag
									1	Light	Joint Gasket
									1	Medium	Joint Gasket
									2	Small	Joint Offset
									1	Lateral	Abandoned Unsealed
Dewey St	MH 14	MH 9	358.2	8	Clay	Asphalt	2				
									5	Light	Root-in-Joint
									14	Light	Sag
									7	Medium	Sag
									1	Severe	Sag
									2	Light	Infiltration
									3	Narrow	Crack Multiple
									1	Wide	Crack Multiple
									1	Light	Grease
									1	Small	Cavity
Dakota St	MH 9	MH 10	202.4	8	Clay	Asphalt	2				
									16	Light	Infiltration
									1	Light	Root-in-Joint
									1	Heavy	Root-in-Lateral
									4	Light	Sag
									1	Medium	Sag
									1	Wide	Crack Multiple
									1	Narrow	Crack Longitudinal
									1	Medium	Cavity
Dewey Ave	MH 9	MH 4	351.6	8	Clay	Asphalt	4				
									4	Light	Root-in-Joint
									1	Medium	Root-in-Lateral
									9	Light	Sag
									2	Severe	Sag
									1		Broken/Hole
									3	Wide	Crack Multiple
									2	Narrow	Crack Multiple
									1	Narrow	Crack Circular
									1	Medium	Cavity
									1	Light	Grease
									1	Lateral	Connection Protruding
Winifred St	MH 2	MH 1	278.3	8	Clay	Asphalt	4				
									10	Light	Root-in-Joint
									3	Medium	Root-in-Joint
									1	Medium	Root-in-Lateral
									1	Heavy	Root-in-Lateral
									1		Broken Hole
									1	Small	Cavity
									1	Large	Cavity
									3	Narrow	Crack Multiple
									2	Wide	Crack Multiple
									1	Light	Infiltration
									1	Small	Joint Offset
									1	Medium	Joint Offset
									1	Lateral	Connection Protruding
									1	Medium	Sag
Winifred St	MH 2	MH 3	352.1	8	Clay	Asphalt	3				
									1	Narrow	Crack Spiral
									2	Wide	Crack Circular
									28	Light	Root-in-Joint
									8	Medium	Root-in-Joint
									3	Heavy	Root-in-Joint
									2	Light	Root-in-Lateral
									3	Heavy	Root-in-Lateral

SEWER LOCATION				Pipe	Pipe			Approx.	Number	Severity	Deficiency
Street	from	to	Length	Dia.	Type	Surface	Connec-	Serv. Line	Deficiency		
			(ft)	(in)			tions	in-mi			
Winifred St	MH 3	MH 4	357.2	8	Clay	Asphalt	3				
									1	Broken	Hole
									1	Narrow	Crack Multiple
									2	Wide	Crack Multiple
									1	Narrow	Crack Circular
									1	Wide	Crack Circular
									3	Medium	Root
									19	Light	Root-in-Joint
									1	Medium	Root-in-Joint
									1	Light	Sag
									1	Severe	Sag
Winifred St	MH 4	MH 5	260	8	Clay	Asphalt	1				
									1	Narrow	Crack Spiral
									1	Lateral	Connection Protruding
									7	Light	Sag
									2	Medium	Sag
Haan St	MH 5	MH 41	392.9	10	Clay	Gravel					
									1	Light	Grease
									8	Light	Root-in-Joint
									7	Light	Sag
									4	Medium	Sag
									4	Severe	Sag
To Cell B	MH 41	MH 42	417	10	Clay	Grass					
									1	Wide	Crack Multiple
									5	Light	Root-in-Joint
									10	Light	Sag
									4	Medium	Sag
									5	Severe	Sag
To Cell B	MH 42	MH 43	517.9	10	Clay	Grass					
									1	Narrow	Crack Spiral
									1	Wide	Crack Spiral
									2	Narrow	Crack Longitudinal
									1	Medium	Joing Seperated
									1	Large	Joint Offset
									12	Light	Sag
									5	Medium	Sag
									4	Severe	Sag
To Cell B	MH 43	MH 44	172.6	10	PVC	Grass					
									5	Light	Sag
									1	Medium	Sag

Phase I Sanitary Sewer Replacement	4491	Lineal Feet	138	
Phase II Sanitary Sewer Lining	7178	Lineal Feet		
Phase II Sanitary Sewer Point Replacement	500	Lineal Feet		
			Proposed 10"	Proposed 8"	Proposed Liner
Total Amount of Sanitary Sewer	12720	Lineal Feet	1760.4	4990.5	7178.1

Appendix C

Surface Water Discharge Permit

Permit No.: SD0023639

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Surface Water Discharge Permit
Authorizing Discharge
Under The South Dakota Surface Water Discharge System

In compliance with the provisions of the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota, Article 74:52,

The Town of Chancellor

is authorized under this permit to discharge to

an unnamed tributary of Camp Creek

from its wastewater treatment facility located about ¼ mile southwest of the town in the Northwest ¼ of Section 28, Township 99 North, Range 52 West in Turner County, South Dakota (Latitude 43.370361°, Longitude -96.996722°), in accordance with discharge points, effluent limits, monitoring requirements, and other conditions set forth herein. Authorization is limited to those outfalls specifically listed in the permit. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the South Dakota Water Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

This permit shall become effective July 1, 2012.

This permit and the authorization to discharge shall expire at midnight, March 31, 2017.

Signed this 27th day of March, 2012.

Authorized Permitting Official

Steven M. Pirner
Secretary
Department of Environment and Natural Resources

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APPENDIX A – Emergency Release Reporting Summary Form

3. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,

4. Continuous collection of sample, with sample collection rate proportional to flow rate.

"Daily Maximum (Daily Max.)" is the maximum value allowable in any single sample or instantaneous measurement.

"DMR" means Discharge Monitoring Report, EPA Form 3320-1, or a report filed electronically by an EPA-approved electronic system, which is used to report sampling data.

An **"Emergency Discharge"** is a discharge from the treatment or containment system through a release structure or over or through retention dikes or walls. An emergency discharge is distinguished from a sanitary sewer overflow in that a sanitary sewer overflow discharges wastewater prior to reaching the treatment or containment system. An emergency discharge must meet the conditions of Section 3.2.1.

"EPA" or **"US EPA"** means United States Environmental Protection Agency.

A **"Grab Sample,"** for monitoring requirements, is a single "dip and take" sample collected at a representative point in the discharge stream.

An **"Industrial User"** is a non-domestic source of pollutants discharged into a publicly owned treatment works.

An **"Instantaneous Measurement,"** for monitoring requirements, is a single reading, observation, or measurement either taken at the facility or within 15 minutes of the sample.

"MGD" is the measure of flow rate meaning million gallons per day.

"pH" is the measure of the hydrogen ion concentration of water or wastewater; expressed as the negative log of the hydrogen ion concentration. A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic.

A **"Publicly-Owned Treatment Works"** or **"POTW"** is any device or system used in the treatment, including recycling and reclamation, of municipal sewage or industrial waste of a liquid nature that is owned by the state or a municipality. This term includes sewers, pipes, or other conveyances only if they convey wastewater to a publicly owned treatment works providing treatment.

A **"Sanitary Sewer Overflow"** or **"SSO"** is the intentional or unintentional discharge of untreated sewage from the sanitary sewer collection system, including sewer lines, manholes, lift stations, etc.

"SDDENR" means the South Dakota Department of Environment and Natural Resources.

"Secretary" means the Secretary of the South Dakota Department of Environment and Natural Resources, or authorized representative.

2.0 PERMIT COVERAGE

2.1 Permit Transfers

1. Coverage under this permit may be transferred to a new permittee if:

   a. The signatory authority notifies the Secretary at least 30 days in advance of the proposed transfer date;

   b. The notice includes a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

   c. The new permittee submits a Certification of Applicant form certifying the new permittee is qualified to perform the obligations of a permit holder in accordance with South Dakota Codified Law 1-40-27.

2. The Secretary will notify the existing and new permittee of his or her intent to transfer, modify, or revoke and reissue the permit based on the information received and other permit information.

2.2 Reopener Provisions

This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limits (and compliance schedules, if necessary), or other appropriate requirements if one or more of the following events occurs:

1. Water Quality Standards: The water quality standards of the receiving waters applicable to this permit are modified in such a manner as to require different effluent limits than contained in this permit;

2. Water Quality Management Plan: A revision to the current water quality management plan is approved and adopted that calls for different effluent limits than contained in this permit;

3. Effluent Guidelines: Effluent limit guidelines are promulgated or revised for point sources covered by this permit;

4. Total Maximum Daily Load: Additional controls in the permit are necessary to implement a total maximum daily load approved by the Secretary and/or EPA;

5. Noncompliance: The discharger is a significant contributor of pollution to waters of the state, presents a health hazard, or is in noncompliance with the conditions of the permit;

6. Whole Effluent Toxicity: Whole effluent toxicity is detected in the discharge;

7. Pretreatment Program: The permittee is required to develop and implement a pretreatment program, regulating indirect discharges of wastewater into its publicly owned treatment works; or

2.7 Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

3. Any emergency discharge or sanitary sewer overflow that meets the conditions of paragraph 1 above shall be reported as soon as possible (but in no case less than 24 hours after becoming aware of the circumstances) in accordance with the provisions in **Section 4.7 – Emergency Discharge Reporting Requirements**. The report shall be made to the Secretary at (605) 773-3351 during regular business hours (8:00 a.m. – 5:00 p.m. Central Time) or to the South Dakota Emergency Management at (605) 773-3231 any other time.

3.3 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and treatment and control systems that are installed or used by the permittee to achieve compliance with the conditions of this permit or other conditions required by the Secretary upon issuance.

1. This may include the maintenance of freeboard levels of lagoons or holding ponds.

2. Proper operation and maintenance may also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

3.5 Final Effluent Limits – *Outfall 001*

No discharge shall occur until permission for discharge is granted by the South Dakota Department of Environment and Natural Resources. The permittee shall sample its wastewater in accordance with **Section 4.1 – Pre-Discharge Sampling Requirements** and provide the results to SDDENR.

Effective **May 1, 2014** and lasting through the life of this permit, the quality of effluent discharged by the facility shall, as a minimum, meet the limits as set forth below:

Effluent Characteristic	Effluent Limit		
	30-Day Average[1]	7-Day Average[1]	Daily Maximum[1]
Five-Day Biochemical Oxygen Demand (BOD_5), mg/L	30	45	N/A
Total Suspended Solids (TSS), mg/L	30	45	N/A
Escherichia coli (*E. coli*), no./100 mL [2] (May 1 – September 30)	630	N/A	1,178
Ammonia-Nitrogen (as N), mg/L		N/A	
January 1 – January 31	9.8		23.1
February 1 – February 29	12.9		35.6
March 1 – March 31	7.0		14.6
April 1 – April 30	3.4		9.9
May 1 – May 31	2.6		10.9
June 1 – June 30	1.9		10.3
July 1 – July 31	1.5		9.9
August 1 – August 31	1.9		13.3
September 1 – September 30	2.8		13.3
October 1 – October 31	3.4		10.9
November 1 – November 30	7.1		14.9
December 1 – December 31	8.6		19.3
The pH of the discharge shall not be less than 6.5 standard units or greater than 9.0 standard units in any sample.			
No chemicals, such as chlorine, shall be used without prior written permission.			

[1] See Definitions.

[2] *E. coli* organisms from May 1 to September 30 shall not exceed a concentration of 630 per 100 milliliters as a geometric mean based on a minimum of 5 samples obtained during separate 24-hour periods for any calendar month. They shall not exceed 1,178 per 100 milliliters in any one sample from May 1 to September 30.

j. Other information, as appropriate.

3. The permittee shall maintain the notebook(s) for the facility and each lift station in accordance with proper record-keeping procedures and shall make the notebook(s) available for inspection, upon request, by the Secretary or the US EPA.

3.7 Schedule of Compliance

The permittee shall achieve compliance with the effluent limits specified for discharges in accordance with the following schedule:

1. Submit a Facility Plan that, at a minimum, includes the following elements:
   a. An evaluation of the treatment system, equipment, or process modifications necessary to achieve compliance with parameters or requirements listed in the permit.
   b. If necessary, selection of alternative type of treatment system, process modifications, or equipment needed to meet the limits and requirements set forth in the permit.
   c. The Facility Plan submittal date shall be on or before:.....**January 1, 2013**

2. Submit a progress report on design of the treatment system and/or process modifications described in the Facility Plan by: ..... **April 1, 2013**

3. Complete design of the treatment system and/or process modifications described in the Facility Plan and submit the design by: ..... **September 1, 2013**

4. Start construction of treatment system, process modifications, or equipment acquisition, if necessary, by:.....**September 1, 2014**

5. Submit quarterly progress reports on construction of treatment system, process modifications, equipment acquisition, or other items specified in the Facility Plan beginning: .....**September 1, 2014**

6. Complete construction and startup of treatment system, process modifications, or equipment installation, and achieve full compliance with permit limits and requirements set forth in the permit by:.....**October 1, 2015**

The milestones must be completed by the date specified. The permittee shall submit to the Secretary a written notice of compliance or noncompliance with each milestone by the state specified above. If the permittee is not in compliance with the milestone, the notice shall include the cause of any noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

3.8 Capacity, Management, Operation, and Maintenance

In the event that the Secretary notifies the permittee of the need to develop a capacity, management, operation, and maintenance program in order to address, reduce, or eliminate the frequency of sanitary sewer overflows or emergency discharges, the

4.0 MONITORING, RECORD KEEPING, & REPORTING REQUIREMENTS

4.1 Pre-Discharge Sampling Requirements

1. The permittee must receive permission from SDDENR to discharge prior to the start of any discharge from the facility. If a discharge occurs without permission from SDDENR, then the discharge will be considered an unauthorized discharge (See **Section 3.2 – Emergency Discharges and Sanitary Sewer Overflows**). The permittee shall collect a grab sample from each cell from which it will discharge and have the sample analyzed for the parameters listed below. The permittee shall call SDDENR at (605) 773-3351 to request permission for the discharge and shall provide SDDENR with the sample results for the following parameters:

   a. Five-Day Biochemical Oxygen Demand (BOD_5), mg/L;

   b. Total Suspended Solids (TSS), mg/L;

   c. pH, s.u.;

   d. Fecal Coliform, no./100 mL through April 30, 2014;

   e. *E. coli*, no./100 mL;

   f. Ammonia-Nitrogen, mg/L; and

   g. Water Temperature, °C

2. The request to discharge shall explain why a discharge is needed, when the discharge would start, the expected duration of the discharge, and the approximate volume of water to be discharged. The estimated flow condition of the receiving water shall also be reported (I.e. dry, low, normal, high).

3. No discharge shall occur until permission has been granted by the Secretary.

4.2 Interim Self-Monitoring Requirements – *Outfall 001*

Effective immediately and lasting through **April 30, 2014**, all authorized discharges, sanitary sewer overflows, and emergency discharges shall be monitored for the following parameters at the frequency and with the type of measurement indicated. Promptly upon discovery of an emergency bypass, sanitary sewer overflow, or other discharge, the discharge shall be monitored as shown below. Knowingly discharging or failing to report a discharge within a reasonable time from the permittee first learning of a discharge could subject the permittee to penalties as provided under the South Dakota Water Pollution Control Act. The permittee shall report the monitoring results in accordance with **Section 4.6 – Reporting of Monitoring Results.**

Effluent Characteristic	Frequency	Reporting Values[1]	Sample Type [1]
Duration of Discharge, days	Monthly	Monthly Total[2]	Calculate
Total Flow, million gallons	Monthly	Monthly Total	Calculate

4.3 Final Self-Monitoring Requirements – *Outfall 001*

Effective **May 1, 2014** and lasting through the life of this permit, all authorized discharges, sanitary sewer overflows, and emergency discharges shall be monitored for the following parameters at the frequency and with the type of measurement indicated. Promptly upon discovery of an emergency bypass, sanitary sewer overflow, or other discharge, the discharge shall be monitored as shown below. Knowingly discharging or failing to report a discharge within a reasonable time from the permittee first learning of a discharge could subject the permittee to penalties as provided under the South Dakota Water Pollution Control Act. The permittee shall report the monitoring results in accordance with **Section 4.6 – Reporting of Monitoring Results.**

Effluent Characteristic	Frequency	Reporting Values [1]	Sample Type [1]
Duration of Discharge, days	Monthly	Monthly Total[2]	Calculate
Total Flow, million gallons	Monthly	Monthly Total	Calculate
Flow Rate, MGD	At least three per discharge [3]	Daily Maximum; 30-Day Average	Instantaneous
pH, standard units	At least three per discharge [3]	Daily Minimum; Daily Maximum	Instantaneous [4,5]
Water Temperature, °C	At least three per discharge [3]	Daily Maximum; 30-Day Average	Instantaneous [5,6]
Five-Day Biochemical Oxygen Demand (BOD_5), mg/L	At least three per discharge[3]	Max 7-Day Average; 30-Day Average	Grab
Total Suspended Solids (TSS), mg/L	At least three per discharge [3]	Max 7-Day Average; 30-Day Average	Grab
Ammonia-Nitrogen (as N), mg/L	At least three per discharge [3]	Daily Maximum; 30-Day Average	Grab [5]
E. coli, no./100 mL	At least three per discharge [3,7]	Daily Maximum; 30-Day Geo Mean	Grab

[1] See Definitions.

[2] The date and time of the start and termination of each discharge shall also be reported in the comment section of the DMR.

[3] At the initiation of any discharge, three samples shall be taken the first week and one sample each week for the following three weeks. Samples shall be taken once per month thereafter, until the discharge is discontinued. If a discharge is less than one week in duration, a sample shall be taken at the beginning, middle, and end of the discharge. If a discharge becomes intermittent, due to losses from evaporation and percolation, the discharge shall be sampled once per week during any week that flow is noted. All of the samples collected during the 7-day or 30-day period are to be used in determining the averages. The permittee always has the option of collecting additional samples if appropriate.

[4] The pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are

2. In accordance with SDCL 1-40-39, the Secretary is authorized to accept a document with an electronic signature. SDDENR shall provide for the authenticity of each electronic signature by adhering to any standards established by the South Dakota Bureau of Information and Telecommunications pursuant to SDCL 53-12-47 and 53-12-50 or any other standards established by rules promulgated pursuant to SDCL Chapter 1-26.

4.7 Emergency Release Reporting Requirements

1. The permittee shall report any emergency related to this permit or permitted facility that may endanger health or the environment as soon as possible, but no later than 24 hours after becoming aware of the circumstances as follows:

   a. During regular business hours (8:00 a.m. – 5:00 p.m. Central Time), the report shall be made at (605) 773-3351.

   b. Outside of normal business hours, the permittee shall contact the South Dakota Emergency Management at (605) 773-3231.

2. Effluent discharges, sanitary sewer overflows, emergency discharges, upsets, and other unauthorized releases that do not meet the conditions of Paragraph 1 above shall be reported to the Secretary within 24 hours from the time the permittee becomes aware of the circumstances as follows:

   a. During regular business hours (8:00 a.m. – 5:00 p.m. Central Time), the report shall be made at (605) 773-3351.

   b. Outside of normal business hours, the permittee shall leave a message at 1-800-GET-DENR (1-800-438-3367).

3. Anticipated releases shall be reported to the Secretary in advance, if possible.

4. The Secretary may require the permittee to notify the general public or downstream users that could be or will be impacted by the emergency discharge.

   a. In making the decision to require public notification, the Secretary will consider the potential impacts as a result of the discharge, the downstream beneficial uses (such as drinking water or recreation), and the potential for public contact.

   b. If required by the Secretary, the permittee shall notify the public and/or downstream users as soon as possible, but in no case more than 24 hours after the discharge begins.

5. In addition to verbal notification, the permittee shall submit a written report of the circumstances regarding the sanitary sewer overflow, emergency discharge, or other unauthorized release to the Secretary using the Emergency Release Reporting Summary Form in Appendix A.

   a. Reports shall be submitted in accordance with **Section 4.6 – Reporting of Monitoring Results**.

   b. The written submission shall contain:

      i. A description of the event and its cause;

4.10 Signatory Requirements

1. All permit applications, reports or information submitted to the Secretary shall be signed and certified by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Secretary shall be signed by a person described in paragraph 1 of this section or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the Secretary; and,

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of superintendent or equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized representative may be either a named individual or any individual occupying a named position.

3. If an authorization under paragraph 2 a. above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the Secretary.

4. Any person signing a document under this section shall make the following certification:

   I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

4.11 Retention of Records

1. The permittee shall retain records of all monitoring information and other data required by this permit. This includes:

   a. Data collected on site;

   b. Copies of all Discharge Monitoring Report Forms;

   c. A copy of the permit;

   d. All calibration and maintenance records;

5.0 COMPLIANCE REQUIREMENTS

5.1 Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the South Dakota Water Pollution Control Act and the federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application (a violation of a condition of this permit is subject to SDCL 34A-2-75).

5.2 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any wastewater discharge and/or sludge disposal or reuse in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

5.3 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5.4 Upset Conditions

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limits if the requirements of Paragraph 2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review (i.e., Permittees will have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with technology-based permit effluent limits).

2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An upset occurred and that the permittee can identify the cause(s) of the upset;

   b. The permitted facility was at the time being properly operated;

   c. The permittee submitted notice of the upset as required under **Section 4.7 – Discharge Reporting Requirements**; and,

   d. The permittee complied with mitigation measures required under **Section 5.2 – Duty to Mitigate.**

3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6.0 INDUSTRIAL WASTES

6.1 Industrial Users

1. During the life of the permit, the permittee shall conduct an industrial waste survey to identify the character and volume of pollutants from each significant industrial user, as well as documenting production data.

2. The permittee shall notify the Secretary of any new introductions by new or existing industrial users or any substantial change in pollutants from any industrial user. Such notice must contain the information described in paragraph 1 above and be submitted to the Secretary no later than 60 days following the introduction or change.

3. The permittee shall provide adequate notice to the Secretary of any substantial change in the volume or character of pollutants being introduced into the POTW by any other industrial users. For the purposes of this section, adequate notice shall include information on:

   a. The quality and quantity of effluent to be introduced into the POTW; and,

   b. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

6.2 Prohibited Discharges

1. Under no circumstances shall the permittee allow the introduction of the following pollutants to the POTW from any source of nondomestic discharge:

   a. Pollutants that create a fire or explosion hazard in the publicly owned treatment works, including but not limited to waste streams with a closed cup flashpoint of less than 60 degrees Celsius (140 degrees Fahrenheit) using the test methods specified in ARSD Section 74:28:22:01 (a.b.r. 40 CFR 261.21);

   b. Pollutants that will cause corrosive structural damage to the Publicly owned treatment works (POTW), but in no case discharges with pH lower than 5.0 standard units nor greater than 12.5 standard units;

   c. Solid or viscous pollutants in amounts that will cause obstruction to the flow in the POTW, or other interference with the operation of the POTW;

   d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration that will cause interference with the POTW;

   e. Heat in amounts that will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Celsius (104 degrees Fahrenheit);

   f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

7.0 ADDITIONAL PERMIT CONDITIONS

7.1 Inspection and Entry

The permittee shall allow the Secretary or EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the South Dakota Water Pollution Control Act, any substances or parameters at any location.

7.2 Removed Substances

1. Collected screenings, grit, solids, sludges, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard in accordance with applicable requirements of SDCL 34A-2, -6, and -11.

2. If sludge disposal is necessary, the permittee shall submit to the Secretary a sludge disposal plan for review and approval prior to the removal and disposal of sludge. The permittee shall not dispose of sludge without the Secretary's approval.

EMERGENCY RELEASE REPORTING SUMMARY FORM

This form is to be used to summarize effluent monitoring information for discharges from the facility covered under the Surface Water Discharge Permit.

Address: _____

Facility Contact: **Phone:**

Description of Event

(Attach additional sheets if necessary)

Date and Time the discharge began or was discovered: _____

Date and Time the discharge was stopped: _____

Describe the events resulting in the discharge and its cause(s):

Where was the wastewater discharged:

Describe the steps taken or planned to reduce, eliminate, and prevent reoccurrence:

Time and Date 24-Hour Notice of Noncompliance given to SDDENR: _____

Describe any adverse effects, such as fish kills, etc.: _____

Duration of discharge (include dates and times): _____

Total flow, million gallons:

Appendix D

SD DENR Wastewater System Inspection Report and Compliance Reviews

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

COPY

April 26, 2010

Dennis Wicker
President, Town of Chancellor
PO Box 106
Chancellor, SD 57325

RE: Surface Water Discharge Compliance Inspection (SWD Permit Number: SD0023639)

Dear Mr. Wicker:

The South Dakota Department of Environment and Natural Resources conducted a Surface Water Discharge Compliance Inspection at the town of Chancellor's wastewater treatment facility on September 22, 2009. I appreciate both George Ihnen's and Jolene Berens' time and cooperation in supplying the requested information.

I have attached an inspection summary and a copy of the inspection report. Please pay special attention to the Inspection Summary tables and implement the required corrective actions as soon as possible. All corrective actions taken will be reviewed during our next inspection at your facility. **Within 30 days of receipt of this report, please submit a summary of the corrective actions taken to the department at the address listed in the letterhead.**

Thank you for your continued efforts to protect the environment and natural resources of South Dakota. If you have any questions concerning the attached report, please feel free to contact me at (605) 362-3543.

Sincerely,

Jill M. Riedel, E.I.T.
Natural Resources Project Engineer
Sioux Falls Regional Office
Jill.Riedel@state.sd.us

Enclosures

cc: Mr. George Ihnen, Utilities Operator, Town of Chancellor
EPA – Region VIII
Surface Water Quality Program Files – Pierre

INSPECTION SUMMARY

Facility: Town of Chancellor WWTF

SWD Permit: SD00223639

Inspection Date: September 22, 2009

The following comments and corrective actions are ***required*** in order to come into compliance with the town's Surface Water Discharge permit.

COMMENTS	REQUIRED CORRECTIVE ACTIONS
The town of Chancellor has experienced the following violations since the last on-site inspection in March 2005: • May 2005: 30-day average Ammonia; • April 2006: 30-day average and daily maximum Ammonia; • April 2007: 30-day average and daily maximum Ammonia; • May 2007: 30-day average Ammonia; • May 2008: 30-day average and daily maximum Ammonia	The town must take steps to ensure adequate treatment of the wastewater. For instance, the town's ammonia limits are most stringent during April – September; therefore, the operator should try to discharge during months when the town's ammonia limits are not as stringent, such as early spring or late fall. Failure to comply with the effluent limits contained in the permit can subject the town to enforcement action, including penalties of up to $10,000 per day per violation.
The April 2009 Discharge Monitoring Report (DMR) was reviewed. The Number of Exceedances column (No Ex.) was not completed, and ammonia values were reported as "N", even though samples were collected.	DMRs must be filled out in their entirety, including filling out the No Ex. column, regardless of whether a violation occurred or not. Also, ammonia sampling is required every discharge with a frequency of three times per week the first week of discharge, and once a week thereafter. If sample values are not available to report on DMRs, a letter to the Department must be submitted along with the DMR stating why samples were not available.

The following comments and corrective actions are ***recommended*** and are items that will improve the operation of your facility.

COMMENTS	RECOMMENDED CORRECTIVE ACTIONS
The operator mentioned he notices a muskrat every once in a while in the stabilization pond area; however, none were noted at the time of the inspection. The operator also mentioned muskrat dens are usually abundant within the artificial wetland; however, the reeds and cattails were too high to notice any dens during the inspection.	Continue efforts to eliminate rodents. They can do extensive damage in just a short period of time, resulting in operation and maintenance problems and major expenses for repairs. Also, please continue to contact your local Game, Fish, and Parks conservation officer for information on how to remove rodents from the stabilization pond area. Also, the operator mentioned trying to control the cattails within the artificial wetlands as a means for removing the muskrats. A form entitled "*How to Grow/Remove Cattails*" has been enclosed to assist with cattail removal.
Written emergency procedures have not been established in the case of a major storm event, a sewer main break, or a chemical release into the sewer system.	The town may wish to consider establishing written emergency procedures.
We would like to encourage you to give Mr. Ihnen or another representative of the town of Chancellor the opportunity to attend the wastewater training courses sponsored by the state to upgrade skills and share knowledge concerning the operation and maintenance of municipal wastewater systems.	For more information as to dates and locations of upcoming courses in your area, contact South Dakota Association of Rural Water Systems, under contract with DENR, at 5009 W. 12th Street, Suite 5, Sioux Falls, SD 57106. Phone: (605) 336-7219. Website: http://www.sdarws.com.

How to Grow/Remove Cattails

An initial stand of cattail or rush may be established in the following manner:

1. Lower the water level in the wetland to 4 inches or less. Optimum seeding levels are between 1 and 2 inches.
2. Seed with cattails from the local area (indigenous species).
3. Gradually increase the water level as the plants begin to grow. Be careful not to drown the new plants.
4. Repeat the process as needed.

The best time for germination is in the spring. Catkins may be collected the previous fall and stored. There will also be viable catkins standing in the spring.

Once cattails are established, they will spread by means of underground stems called rhizomes. These rhizomes send up shoots that emerge from flooded areas. At this point it will no longer be necessary to seed the wetland. **The ultimate goal is 75% coverage**.

If cattails become very thick throughout the wetland, it may become necessary to thin some portion of the cattails. Cattails may be drowned in the following manner:

1. Lower the water level in the wetland to 4 inches or less. Drainage of the wetland is recommended.
2. Cut cattails as low as possible.
3. Raise water level so the cut shoots are several inches below the water surface.
4. Maintain water level above the cut shoots.

Cattails may also be thinned by burning in the winter. This activity should be performed with great care and under optimum weather conditions to avoid a widespread blaze

NON-MECHANICAL FACILITY INSPECTION CHECKLIST

SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

I. General Facility Information

Name	**Town of Chancellor Wastewater Treatment Facility**		
Location	**¼ mile SW of town**		
SWD Permit No.	**SD0023639**		
Contact Person / Title	**George Ihnen, Utilities Operator**	Phone Number (Office, Cell, Home, Etc)	**Home: (605) 647-2333**
Responsible Party/Title	**Dennis Wicker, President**	Phone Number (Office, Cell, Home, Etc)	**Office: (605) 647-8696**
Mailing Address	**PO Box 106; Chancellor, SD 57015**		
Inspection Date	**Sept 22, 2009**	Last Inspection Date	**Offsite: June 14, 2007** **Onsite: March 22, 2005**
Entrance Time	**1:30 pm**	Exit Time	**3:15 pm**
Permit Effective Date	**July 1, 2005**	Permit Expiration Date	**June 30, 2010**
Avg. Reported Flow Rate	**0.36 MGD**	Avg. Design Flow Rate	**0.037 MGD**
Population Served	**328 (2000 census)**	Design Population Equivalent (if known)	**Unknown**
Date Facility Began Operation	**1959**	Dates of Facility Upgrades	**1990**
Receiving Water:	**Unnamed Tributary of Camp Creek, to the Vermillion River**		
Classification:	9, 10;	6, 8, 9, 10;	5, 8, 9, 10

Facility Description from Statement of Basis and Flow Diagram (Flow diagram attached)

The WWTF consists of gravity flow collection lines which drain to the main lift station. Wastewater is pumped from the lift station to a two cell stabilization pond system, operated in series, followed by a constructed wetland. Cells #1 and #2 are 2.0 and 2.3 acres, respectively, and the wetland is 2.4 acres. The system is operated in series. Water is transferred from Cell #2 to the constructed wetland and is discharged from the wetland via a manual slide gate. The effluent from the wetland flows approximately ½ mile until discharged into Camp Creek.

The facility was constructed in 1959 and modified in 1990. It has an average design flow of 0.037 MGD and was designed for a population equivalent of 370 people. The WWTF currently serves a population of 328 persons (2000 census), with no known industrial users contributing flow to the system.

Does the facility match the above description? Yes If not, describe facility modifications or changes.

Is a permit modification needed? No

For office use only:	*OMA* Yes ☐ No ☒	*OME* Yes ☐ No ☒	*SEV* Yes ☐ No ☒	*ENF* Yes ☐ No ☒

II. Personnel Inventory and Budget

Number of personnel: **1**

Certification	Class I	Class II	Class III	Class IV
Wastewater Treatment				
Wastewater Collection				

Is a certified operator required? If yes, what classification is required? **None**

Budget: **Fiscal Year 2008**

Annual wastewater expenses **$ 8,379.71**

Annual wastewater revenue **$ 25,109.00**

Residential Sewer Use Fee **$ 17.00/month**

Commercial Sewer Use Fee **$ Same**

Describe any wastewater projects planned during the next three years. **None**

Describe measures taken to raise funds for the project(s). **None**

Personnel and budget comments:

III. Required Recordkeeping and Reporting

Permit Verification

	Yes	No	N/A
1. Is a current copy of the permit and other related materials readily available?	X		
2. Are the number and location of discharge points as described in the permit? If no, explain.	X		
3. Is the facility information correct in the database? If not, list corrected information below.	X		
4. Is the facility information correct in ICIS ? If not, list corrected information below.	X		
5. Has there been any new, different, or increased loading to the WWTF? If yes, describe changes.		X	
6. Are influent flows increasing or decreasing? **Same**			
7. List any industries/non-domestic contributors.			X

Permit verification comments:

Inspection Records

	Yes	No	N/A
1. The following necessary information is current, complete, and reasonably available:			
a. Inspection notebooks for the WWTF with the following information:	X		
i. Date and time of the inspection	X		
Ii Name or initials of inspector	X		
iii. Facility's discharge status	X		
iv. Measured depth of the ponds or measured freeboard	X		
v. Identification of operational/maintenance problems	X		
vi. Recommendations to remedy problems	X		
vii. Steps taken to remedy problems	X		
b. Lab results	X		
c. pH testing	X		
d. Discharge Monitoring Reports (DMRs)	X		
e. Emergency discharge forms			X
f. Other: _____			X
g. Other: _____			X
2. Is information is maintained for the required 3-year period?	X		

Inspection records comments:

Sampling and Laboratory Information

	Yes	No	N/A
1. The following sampling and analysis requirements are met:			
a. Dates, times, locations of sampling are recorded.	X		
b. Initials of person performing sampling are recorded.	X		
c. The pH meter meets the following specifications:			X
i. Capable of simultaneous two-point calibration			X
ii. Reads to two decimal places			X
iii. Temperature compensation adjustment			X
d. pH meter is calibrated properly before use.			X
e. pH calibration logbook is maintained with the following information:			
i. Date			X
ii. Time			X
iii. Initials of person performing calibration			X
iv. 7 buffer reading			X
v. 10 buffer reading			X
vi. Temperature of buffer			X
vii. Buffer expiration date			X
f. Is the permittee performing any other tests?		X	
2. Are samples taken at sampling location specified by permit? **3rd cell (wetland)**	X		
3. Is the permittee using the method of sample collection required by the permit?	X		
Required method: _____			
If not, explain: _____			
4. Sample collection procedures adequate and include:			
a. Sample refrigeration during compositing.			X
b. Proper preservation techniques.		X	
c. Containers in conformance with 40 CFR 136.3.	X		

Specify any problems:	Yes	No	N/A

5. Laboratory Information (from lab result sheets)

Name:	**SD Department of Health**
Address:	**615 E Fourth Street**
Contact:	**Pierre, SD 57501**
Phone:	**(605) 773-3368**
Parameters tested:	**BOD, TSS, ammonia, fecal coliform**
Dates, times, and initials of person performing analyses are recorded:	**yes**

Sampling and laboratory comments:

The pH is analyzed at POET Biorefining within the 15-minute hold time; POET's pH meter and calibration logs were not reviewed at the time of the inspection

Flow Measurement:

Type of effluent flow measurement device: **V-notch weir**

		Yes	No	N/A
1.	Is flow measured at each outfall? Number of outfalls: **Outfall 001 – wetland**	X		
2.	Are facility personnel calculating flows properly?	X		
3.	Are the proper flow tables used by facility personnel?	X		
4.	If flow measurement equipment adequate to handle expected ranges of flow rate?	X		

Weirs

		Yes	No	N/A
1.	Type and size of weirs(s): ***60° v-notch weir***			
2.	Is the weir level?	X		
3.	Is the weir plate plumb and are top edges sharp and clean?	X		
4.	Is there free access for air below the nappe of the weir?	X		
5.	Is the upstream channel of the weir straight for at least four times the depth of water level, and free from disturbing influences?	X		
6.	Is the weir under free flow conditions at all times? (Weir is not submerged.)	X		
7.	Is the stilling basin of the weir of sufficient size and clear of debris?	X		
8.	Are head measurements properly made by facility personnel?	X		
9.	Is the weir free of leakage?	X		

Comments on effluent flow measurement:

Self-Monitoring Reporting Information

	Yes	No	N/A
1. Is the facility required to obtain permission from the department before discharging?	X		
a. If yes, has the facility requested permission for discharges?	X		
b. If yes, has the facility received permission for discharges?	X		
2. Are DMRs being submitted to DENR as required by the permit?	X		
a. Are they submitted on time?	X		
Use the attached DMR Calculations Form to help answer 5 – 8 for most recent discharges.			
3. Is monitoring for required parameters performed at least as frequently as required by the permit?	X		
a. Are they sampling more frequently?		X	
4. If the geometric mean properly calculated and recorded for fecal/total coliform data?			X
5. Are weekly and monthly averages calculated properly and reported on the DMR?	X		
6. Are the maximum and minimum values of all data points reported properly?	X		
7. Is the number of exceedances column (NO. EX) completed properly?		X	
8. Is the permit signatory or authorized representative signing the DMRs?	X		
9. Are sample types reported properly?	X		

Self-monitoring or DMR comments:

The number of exceedances column was not filled in. Also, ammonia values were not reported on the April 2009 DMR.

DMR Calculations Form

Month of April 2009

Week 1						
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)
4/14/09 - Tues	9	20	9.17	0.29	12.8	0.11
4/15/09 - Wed	15	24	8.68	0.36	10.0	0.89
4/16/09 - Thurs	27	21	8.46	0.29	8.9	4.36
Week Total	51	65	---	---	---	---
÷ # of Samples	3	3	---	---	---	---
=7-Day Avg.	17.0	21.7	---	---	---	---

Week 2						
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)
4/20/09 - Mon	19	32	7.36	0.17	9.4	5.51
Week Total	19	32	---	---	---	---
÷ # of Samples	1	1	---	---	---	---
=7-Day Avg.	19.0	32.0	---	---	---	---

Week 3						
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)
4/27/09 - Mon	31	64	8.49	0.10	10.0	0.05
Week Total	31	64	---	---	---	---
÷ # of Samples	1	1	---	---	---	---
=7-Day Avg.	31.0	64.0	---	---	---	---

Monthly Summary						
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)
Daily Max.	---	---	9.17	0.36	12.8	5.51
Daily Min.	---	---	7.36	---	---	---
Max. 7-day Avg.	31.0	64.0	---	---	---	---
Month Total	101	161	---	1.21	51.1	10.92
÷ # of Samples	5	5	---	5	5	5
=30-Day Avg.	20.2	32.2	---	0.22	10.2	2.2

Discharge began on 4-14-09 and was terminated on 4-28-09.

IV. Facility Compliance Review

Effluent Violations

		Yes	No	N/A
1.	Has the facility discharged since the last inspection. If yes, list how many. **9**	X		
2.	Is the facility in compliance with all effluent limits since the last inspection?		X	
a.	Effluent BOD5 violations. If yes, how many?		X	
b.	Effluent TSS violations. If yes, how many?		X	
c.	Effluent pH violations. If yes, how many?		X	
d.	Effluent ammonia violations. If yes, how many? **8**	X		
e.	Effluent fecal coliform violations. If yes, how many?		X	
f.	Effluent total coliform violations. If yes, how many?			X
h.	Effluent temperature violations. If yes, how many?			X
i.	Effluent TRC violations. If yes, how many?			X
j.	Other violations. If yes, list parameter and number of occurrences .			X

Effluent violations comments:

Ammonia violations occurred during April and May discharges; October and November discharges did not result in any violations.

Compliance Schedule

		Yes	No	N/A
1.	Is the facility subject to a compliance schedule either in its permit or in an enforcement action? If yes, note date and type of enforcement action.		X	
2.	List milestones that remain in the schedule:			
3.	Has facility has missed milestone dates? If yes explain:			X
4.	Will the facility meet or do they plan to meet final compliance schedule date?			X

Compliance schedule comments:

Facility Review

		Yes	No	N/A
1.	Are written emergency procedures established (in the event of a major storm event, a chemical release into the sewer system, a sewer main break, etc.)?		X	
2.	Can the facility be bypassed (internal, collection system, total)? Describe bypass procedures: **The second pond can be bypassed**	X		
3.	Does the facility accept hauled (septage) wastes? If yes, list amount and hauler contact information.		X	
4.	Does the facility accept industrial or nondomestic wastes? If yes, list amount and sources.		X	
5.	Has the facility experienced problems with industrial or hauled wastes? If yes, explain:			X
6.	Are the non-domestic users regulated by sewer ordinance? If yes, attach relevant ordinance.			X

Facility review comments:

V. Collection System

Piping and Manholes

Type of Collection System

☐ Separate
☐ Both
☐ Combined (San + Storm)
☒ Other – **no storm sewers, only overland conveyance**

	Yes	No	N/A
1. Is a routine sewer-cleaning schedule maintained? If yes, what is the schedule and what type of equipment is used?		X	
2. Have sewer backups occurred into basements during high flows since the last inspection? If yes, explain:		X	

If overflows occurred at this facility, the information from question 3 should be entered in the SSO database.

	Yes	No	N/A
3. Have manholes overflowed during high flows? If yes, give dates, volumes, receiving waters, etc.		X	
4. Was DENR notified of any overflows or unauthorized releases? If no, why not?			X
5. Were samples taken of the overflow/unauthorized release? If yes, list the sample results in the comment section below. If no, explain.			X
6. Have bypasses occurred from the collection system (including lift stations) since the last inspection? If yes, explain (date, volumes, receiving water, etc.)			X
7. Does the community have a sump pump ordinance? If yes, how is it enforced? **The community is aware of the ordinance, but it's not really enforced**	X		
8. Has testing for inflow/infiltration sources been conducted since the last inspection? If yes, describe testing.		X	
9. Have sources of inflow/infiltration been identified?			X
10. Have measures been taken to correct inflow/infiltration problems?			X
11. Has the collection system been upgraded since the last inspection? If yes, describe:		X	

Piping and manhole comments:

Lift Stations

Item	Comments
Number of lift stations	**One main lift station at the lagoons**
Type of lift stations (wetwell/drywell or submersible)	**Wetwell**
List areas served	**Entire town**
Inspection frequency	**Daily**
Condition of lift stations	**Good**
Alternative power source available for each lift station	**Portable generator at fire station**
Wetwell baskets (quantity)	**None**
Cleaning schedule	**NA**
Bar screens (quantity)	**None**
Cleaning schedule	**NA**
Screening disposal method	**NA**
Dehumidifier working properly (if applicable)	**NA**
Ventilation system working properly (if applicable)	**NA**
Type of alarm system	**Audible and visible**
Alarm system working properly	**Yes**
Lift station have hour meters	**Yes**
Hour meters are logged in an inspection notebook	**Yes**
Pump ratings	**100 gpm**
Pump calibration schedule	**None**
Are inspections being documented?	**Yes**

Comments concerning collection system and lift stations:

One small private lift station serves two homes on the northwest side of town – not town owned or inspected

VI. Treatment Processes

Stabilization Ponds

Item	Comments
Inspection frequency	**Daily**
Weeds and/or trees growing on the dikes	**Some – operator sprays for weeds**
Vegetation growing in the ponds	**No**
Pond dikes protected from erosion with riprap	**Yes**
Dike structure failure (sloughing and/or sagging)	**No**
Evidence of erosion	**None**
Pond seepage surfacing reported	**No**
Sludge: Past disposal practices	**NA**
Future Plans	**None**
Observation of sludge accumulation	**NA**
Fencing in good condition	**Yes**
All access gates are kept locked	**Yes**
Signs legible and properly located	**Yes**
Facility accessible in all weather conditions	**Yes**
Evidence of burrowing animals	**No**
Evidence of grazing animals	**No**
Odor problem (except seasonal turnover)	**No**
Inter-pond piping valves are working and used	**Yes**
Depth indicator(s)	**Yes – concrete slabs**
Discharge structure (valve control, overflow, etc.)	**Gate valve – overflow at 5ft level not controlled**
Which ponds are drawn down during a discharge?	**Pond 2 to the wetland**
Cells operated in series or parallel	**Series**
Are chemicals added for algae, insects, etc?	**No**

Cell information (stabilization pond)

	Cell #1	Cell #2			
Maximum operation depth	**5.0 ft**	**5.0 ft**			
Current operating depth	**3.0 ft**	**3.0 ft**			
Minimum operating depth	**2.0 ft**	**2.0 ft**			
Surface area at maximum depth	**2.0 acres**	**2.3 acres**			

Comments concerning stabilization ponds:

Artificial Wetlands

Item	Comments
Inspection frequency	**Daily**
Weeds and/or trees growing on the dikes	**No**
Proper vegetation growing in the wetlands	**Yes**
List types of vegetation	**Cattails and reeds**
Percent vegetative cover	**80%**
Application procedure and schedule	**Batch transfer**
Frequency of discharge	**As needed, every 6 months or so**
Erosion noted	**No**
Dike structure failure (sloughing and/or sagging)	**No**
Normal operation depth (optimum 6-12 inches)	**6 to 18 inches**
Evidence of burrowing animals	**None noticed – muskrats usually build dens in the wetland, reeds were too high to see any at the time of the inspection**
Evidence of grazing animals	**No**
Chemicals used/needed	**No**
Short circuiting	**No**
Fencing, gates, signage	**Yes**
Problems with mosquitos	**No**

Cell information (wetland)

	Cell #1				
Maximum operation depth	**2.0 ft**				
Current operating depth	**1.0 ft**				
Minimum operating depth	**0.5 ft**				
Surface area at maximum depth	**2.4 acres**				

Comments concerning artificial wetlands:

Operator mentioned muskrats building dens in the wetland has been an issue the last couple years and was going to try to thin the cattails this fall to flush out the muskrats.

Surface Water Discharge Compliance Inspection Report

Section A: National Data System Coding

Transaction Code	Permit No.	mm/dd/yy	Insp. Type	Inspector	Fac. Type
N 5	SD0023639	09/22/09	C	S	1

Remarks:

Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved	Reserved
0.5	3	N	N		

Section B: Facility Data

Name and Location of Facility (*For Industrial Users include POTW name and SWD permit number*)	Entry Time:	Permit Eff. Date:
Town of Chancellor Wastewater Treatment Facility	1:30 pm	July 1, 2005
Name of On-Site Representative(s)/ Title/ Phone and Fax Number George Ihnen / Utilities Operator / (605) 647-2333	**Exit Time:** 3:15 pm	**Permit Exp. Date:** June 30, 2010
Name and Address of Responsible Official/Title/Phone and Fax Number Dennis Wicker / Town President / (605) 647-8696 **Contacted?** No	**Other Facility Data**	

Section C: Areas Evaluated During Inspection
(S=Satisfactory, M=Marginal, U=Unsatisfactory, N=Not Evaluated)

S	Permit	S	Flow Measurement	S	O & M	S	CSO/SSO
M	Records/Reports	S	Self-Monitoring	N	Sludge Disposal	N	PP
S	Facility Site Review	N	Compliance Schedule	N	Industrial Users	N	Multimedia
M	Effluent/Receiving Waters	N	Laboratory	N	Storm Water	N	Other

Section D: Summary of Findings/Comments (*Attach additional sheets if necessary*)

1. Fill out DMRs in its entirety: fill out "No Ex." DMR column and values for ammonia
2. Facility experienced multiple ammonia violations.
3. Continue efforts to eliminate muskrats
4. Establish written emergency procedures
5. Encourage additional training for personnel

Name of Inspector(s)	Signature	Affiliation / Phone	Date
Jill M. Riedel, E.I.T.	Jill M Riedel	*SDDENR / (605) 362-3543*	10/13/09
Name of Reviewer	**Signature**	**Affiliation / Phone**	**Date**
Kelli D. Buscher, P.E.	Kelli Buscher	*SDDENR / (605) 773-3351*	4/21/10

INSTRUCTIONS FOR SURFACE WATER DISCHARGE COMPLIANCE INSPECTION REPORT

SECTION A: NATIONAL DATA SYSTEM CODING

Transaction Code: Use N, C or D for New, Change or Delete. All inspections will be New (N) unless there is an error in the data entered.

Permit No.: SWD Permit Number.

Inspection Date: Use month/day/year format.

Inspection Type: Uses the following codes to describe the type of inspection:

A-Performance Audit
B-Biomonitoring
C-Compliance Evaluation
D-Diagnostic
E-Corps of Engrs Inspection
F-Pretreatment Follow-up
G-Pretreatment Audit
I-Industrial User (IU)
L-Enforcement Case Support
M-Multimedia
P-Pretreatment Compliance Inspection
R-Reconnaissance Inspection
S-Compliance Sampling
U-IU Inspection with Pretreatment Audit
X-Toxics Inspection
Z-Biosolids
2 IU Sampling Inspection
3 IU Non-Sampling Insp
4 IU Toxics Inspection
5 IU Sampling Insp w/Prt
6 IU Non-Samp Insp w/Prt
7 IU Toxics w/Prt
%-SSO Sampling Insp
& -SSO Non-Sampling Insp
# -CSO Sampling Insp
$ - CSO Non-Sampling Insp

Inspector Code: Use following codes to describe the lead agency:

C-Contractor or Other (specify)
E-Corps of Engineers
J-Joint EPA/State - EPA Lead
N-NEIC Inspectors
R-EPA Regional inspector
S-State Inspector
T-Joint State/EPA - State Lead

Facility Type: Use following codes to describe the facility:

1-Municipal - Publicly Owned Treatment Works (POTW) with SIC code 4952.
2-Industrial - Other than municipal, agricultural and Federal facilities.
3-Agricultural - Facilities with SIC 0111 to 0971.
4-Federal - Facilities identified as Federal by the EPA Regional Office.

Remarks: Columns for remarks at discretion of the Inspector.

Inspection Work Days: Estimate the total work effort (to the nearest 0.1 work day), up to 99.9 days, that were used to complete the inspection and submit a QA reviewed report of findings. This estimate includes the accumulative effort of all participating inspectors; any effort for laboratory analyses, testing, and remote sensing; and the billed payroll time for travel and pre and post inspection preparation. This estimate does not require detailed documentation.

Facility Evaluation Rating: Evaluate the quality of the facility self monitoring program using scale of 1 to 5, with a 5 being a very reliable program, a 3 being satisfactory and a 1 being a very unreliable program.

Biomonitoring Information: Enter D for static testing; F for flow through testing; or N for no biomonitoring.

Quality Assurance Data Inspection: Enter Q if inspection was a follow-up on QA sample results. Enter N otherwise.

SECTION B: FACILITY DATA

This section is self-explanatory, except for *Other Facility Data*, which may include new information not in the permit or PCS (e.g., new outfalls, names of receiving waters, new ownership, and other updates to the record).

SECTION C: AREAS EVALUATED DURING INSPECTION

Indicate findings (S, M, U or N) in the appropriate line. Use section D and additional sheets as need to explain findings in a brief narrative when appropriate. The heading marked *Multimedia* may indicate medias such as CAA, RCRA, and TSCA. The heading marked "Other" may be used to note any additional concerns, such as SPCC, BMPs, and concerns that are not covered elsewhere.

SECTION D: SUMMARY OF FINDINGS/COMMENTS

Briefly summarize the inspection findings along with referencing any attachments such as checklists from NPDES inspection manuals, pretreatment guidance documents and monitoring results.

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

August 18, 2011

The Honorable Dennis Wieker
President, Town of Chancellor
PO Box 106
Chancellor, SD 57325

RE: Surface Water Discharge Compliance Inspection (SWD Permit Number: SD0023639)

Dear President Wieker:

The South Dakota Department of Environment and Natural Resources conducted a Surface Water Discharge permit file review of the city's wastewater permit on August 17, 2011. I appreciate ***contact's*** time and cooperation in supplying the requested information.

I have attached an inspection summary. Please pay special attention to the Inspection Summary tables and implement the required corrective actions as soon as possible. All corrective actions taken will be reviewed during our next inspection at your facility. **Within 30 days of receipt of this report, please submit a summary of the corrective actions taken to the department at the address listed in the letterhead.**

Thank you for your continued efforts to protect the environment and natural resources of South Dakota. Please review this report for accuracy, and respond within thirty days with any needed corrections. If you have any questions about this letter or the inspection reports, please contact me at (605) 773-3351.

Sincerely,

Albert Spangler
Natural Resources Project Engineer
Surface Water Quality Program
Enclosures

cc: George Ihnen, Wastewater Operator, PO Box 106, Chancellor, SD 57325
Mr. Seth Draper, EPA Region 8
SWD File - Pierre

Month of March 2011

Week 1							
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)	Fecal (#/100 ml)
3/28	5	9	7.21	0.232	5.6	8.25	N/A
3/29	6	8	7.4	0.787	5	8.14	N/A
3/30	6	6	7.32	0.174	5	11.3	N/A
Week Total	17	23	----------	----------	----------	----------	----------
÷ # of Samples	3	3	----------	----------	----------	----------	----------
=7-Day Avg.	5.7	7.7	----------	----------	----------	----------	----------
Monthly Summary							
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)	Fecal (#/100 ml)
Daily Max.	----------	----------	7.4	0.787	5.6	11.3	N/A
Daily Min.	----------	----------	7.2	----------	---------	----------	----------
Max. 7-day Avg.	Saturday	Rule	----------	----------	---------	----------	----------
Month Total	17	23	----------	1.193	15.6	27.69	----------
÷ # of Samples	3	3	----------	3	3	3	----------
=30-Day Avg.	5.7	7.7	----------	0.398	5.2	9.2	----------
Reported on DMR							
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)	Fecal (#/100 ml)
Daily Max.	----------	----------	7.4	0.78	5.5	11.3	N/A
Daily Min.	----------	----------	7.21	----------	---------	----------	----------
Max. 7-day Avg.	5.6	7.31	----------	----------	---------	----------	----------
30-Day Avg.	5.6	7.31	----------	0.15	5.16	9.23	----------

SWD PERMIT OFF-SITE EVALUATION CHECKLIST

South Dakota Department of Environment and Natural Resources

I. GENERAL INFORMATION

Facility Name	Chancellor Wastewater Treatment Facility		
SWD Permit No.	SD0023639		
Reviewer / Title	Albert Spangler/Natural Resources Project Engineer		
Review Date	8/16/2011	**Last Inspection Date**	9/22/2009
Permit Effective Date	7/1/2005	**Expiration Date**	6/30/2010
Industries Potentially Served by the Facility (Review Phone Book, Internet, Industrial Guide, etc.)	Poet-Chancellor is the only industry in the area. They are not connected to the city sewer system.		
Population Served	264 (2010 census)		

Date Facility Began Operation 1959 **Date of Facility Upgrade(s)** 1990

II. PERMIT VERIFICATION

		Yes	No	N/A
1.	DENR has been notified of any new, different, or increased loading to the WWTF.		X	
2.	Name of receiving water(s) and classification. **Unnamed trib. Camp Creek (9,10), Camp Creek (6,8,9,10), Vermillion River (5,8,9,10)**			
3.	Names, address, location, and phone number are correct in the database and ICIS. If not, indicate correct information below.		X	
4.	Are any changes to the permit necessary?		X	
5.	Is the permit properly coded (Review Limit Summary in ICIS)?	X		
6.	Is a follow-up letter to the facility required?	X		

Comments: *Cognizant official phone number was wrong in ICIS. It has been corrected.*

For office use only:	***OMA***	***OME***	***SEV***	***ENF***
	Yes ☐ No ☒	Yes ☒ No ☐	Yes ☐ No ☒	Yes ☐ No ☒

III. RECORDKEEPING AND REPORTING EVALUATION

1. The following information shall be reviewed where reasonably available:
   a. Lab results (Review Health Lab results, if applicable)
   b. Discharge Monitoring Reports (DMRs – Review last 2 years of DMRs)
   c. Emergency Discharge Forms
   d. Compliance Schedule Reports
   e. Other: ***Previous Inspection Report***
   f. Other: _____

	Yes	No	N/A
2. The facility is required to obtain permission from the department before discharging.	X		
a. If yes, has the facility requested permission for discharges	X		
b. If yes, has the facility received permission for discharges	X		
3. The DMRs and/or Emergency Release Forms have been submitted on time	X		
4. The DMRs and/or Emergency Release Forms have been completed properly		X	
a. Monitoring for required parameters is performed at least as frequently as required by the permit	X		
b. Monitoring is performed for all required parameters		X	
c. Minimum, maximum, and average columns are properly completed		X	
d. The number of exceedances column (NO. EX) is completed properly		X	
e. The permit signatory or authorized representative is signing the DMRs	X		
f. Each page of the DMRs is signed and dated		X	

Comments: *The March 2011 through June 2011 DMRs were reviewed and compared to sample results from the lab. The flooding log in the database indicates that a discharge was started on March 28th because of heavy I/I and a second discharge was started on May 23rd because of heavy rains. Samples were taken correctly for a discharge starting on March 28th and ending the first week in April followed by a second discharge starting May 23rd and ending on June 10th. One sample in June was not analyzed for fecal coliform as required. The DMRs indicate that a single discharge was started on March 28th and ended on June 10th. The "Saturday rule" was not followed on the March DMR. Since the samples taken in March were in a week that actually ended in April, the 7-day average for BOD and TSS should have been included with the April results instead of the March results. The May and June DMRs were not dated. The number of exceedances column on the DMRs was not filled out consistently. Fecal coliform was not reported on the June DMR and 30-day average flow was not reported on the May DMR.*

IV. COMPLIANCE EVALUATION

Facility Performance

		Yes	No	N/A
1. Facility has reported a discharge since last inspection. If yes, how many?	7	X		
2. Facility is in compliance with all effluent limits since last inspection.			X	
a. Effluent BOD_5 violations? If yes, how many?			X	
b. Effluent TSS violations? If yes, how many?			X	
c. Effluent pH violations? If yes, how many?			X	
d. Effluent ammonia violations? If yes, how many?	9	X		
e. Effluent fecal coliform violations? If yes, how many?			X	
f. Effluent total coliform violations? If yes, how many?				X
g. Effluent temperature violations? If yes, how many?				X
h. Effluent TRC violations? If yes, how many?				X
i. Other effluent violations?				X
3. Department has received complaints (Describe below)			X	

Comments: *The facility has an ongoing problem with ammonia violations.*

Enforcement/Compliance Schedule Evaluation

	Yes	No	N/A
1. Has the facility received an enforcement action in the last 5 years?	X		
a. Has the facility complied with the Order for Compliance?			X
b. Have similar violations occurred?	X		
c. Were facility modifications or construction necessary to meet the Order?			X
2. Is the facility subject to a compliance schedule either in its permit or in an enforcement action? If yes, note date and type of schedule.		X	
3. List milestones that remain in the schedule:			
4. Facility has missed milestone dates, but will still meet the final compliance date.			X

Comments: *Several warning letters have been sent regarding the ammonia violations.*

Sanitary Sewer Overflow Evaluation

Review file and SSO database for the following questions

	Yes	No	N/A
1. Facility has reported sanitary sewer overflows or bypasses (internal, collection system, total). Describe in detail, including dates, total volumes, receiving waters:		X	
2. DENR was properly notified of any bypasses/overflows (24-hr verbal notice plus a letter in 5 days) or unauthorized releases (treated and/or untreated). If no, why not?			X
3. Samples were collected for all bypasses and/or overflows. If yes, summarize sampling results. If no, why not?			X

Comments: *None*

Land Application Evaluation

	Yes	No	N/A
1. Is the facility approved to land apply wastewater?		X	
2. Has land application of wastewater occurred?		X	
3. Has the facility followed the sampling and reporting requirements for land application			X

Comments: *None*

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.denr.sd.gov

June 06, 2012

COPY

Dennis Wicker
Town of Chancellor
PO Box 106
Chancellor, SD 57015-0106

WARNING LETTER

RE: Effluent Violation Summary for Permit SD0023639

Dear President Wicker:

The South Dakota Department of Environment and Natural Resources has recently conducted a file review of the Surface Water Discharge permit for the Town of Chancellor.

The purpose of this letter is to provide you with a summary of violations that were reported by your personnel on Discharge Monitoring Reports (DMRs) for the specified period listed below.

The following is a list of reported violations from submitted DMRs, not covered by another letter:

DMR	Mth/Year	Parameter	Limit	Reported Value
001A	5/ 2011	Nitrogen, ammonia total (as N)	1.3 mg/L 30DA AVG	1.5 mg/L
001A	6/ 2011	Nitrogen, ammonia total (as N)	1.1 mg/L 30DA AVG	1.5 mg/L
001A	11/ 2011	BOD, 5-day, 20 deg. C	30 mg/L 30DA AVG	33 mg/L
001A	11/ 2011	Solids, total suspended	90 mg/L 30DA AVG	109.3 mg/L
001A	11/ 2011	pH	9 SU DAILY MX	9.6 SU

Every effort must be made to comply with your permit limits. Continuing to have violations can lead to an enforcement action which can include fines up to $10,000 per day per violation. If you feel you have received this letter in error, please contact me at (605) 773-4731.

Sincerely,

Tim Flor
Environmental Program Scientist/Enforcement
Surface Water Quality Program

C: SWQ/Enforcement File

ADDENDUM NUMBER TWO

to the

FACILITY PLAN

for the

WATER DISTRIBUTION

AND WASTEWATER COLLECTION

in

CHANCELLOR, SOUTH DAKOTA

SEI NO. 9815

SEPTEMBER 2015

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

REGISTERED PROFESSIONAL ENGINEER
REG. NO 9237
MITCHELL M. MERGEN
SOUTH DAKOTA

Mitchell Mergen 2/12/16

Mitchell M. Mergen

S.D. Registration No. 9237

STOCKWELL
ENGINEERS

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1 INTRODUCTION

1.1 PURPOSE

The Town of Chancellor has contacted Stockwell Engineers, Inc. (SEI) to review existing water meters and provide recommendations for possible improvements in an addendum to the *Water Distribution and Wastewater Collection Facility Plan.* The facility plan was completed by SPN and Associates in July 2002 and appended by them in September 2013 to provide updated information.

All sections in the July 2002 Facility Plan remain unchanged except where it is noted in the 2013 addendum as well as this addendum.

1.2 SCOPE

Add this to the end of the original section

In addition to the previous scope, the agreement between the Town of Chancellor and Stockwell Engineers has been changed to including the following to facilitate water meter replacement:

1) Review all background information provided by the Town of Chancellor
2) Amend existing *Facility Plan for Water Distribution and Wastewater Collection in Chancellor, South Dakota* prepared in 2002 to include a review of existing water meters and make recommendations for possible improvements.

1.3 AUTHORIZATION

The addendum, review and recommendations reported herein were performed pursuant to the provision of an engineering agreement between the Town of Chancellor and Stockwell Engineers, dated September 15, 2015.

2 COMMUNITY INFORMATION

No changes are made to this section which includes Paragraphs 2.1 through 2.4 and all sub-sections.

2.1 POPULATION CHARACTERISTICS

2.2 POPULATION PROJECTIONS

2.3 ENVIRONMENTAL REVIEW INFORMATION

2.4 MITIGATING ADVERSE IMPACTS

3 EVALUATION OF EXISTING FACILITIES

No changes are made to this section which includes Paragraphs 3.1 through 3.1.5.4.

3.1 WATER DISTRIBUTION SYSTEM

3.1.5.5 Water Meters

Add this section

There are approximately 131 residences billed monthly for water use as of September 2015. The existing water meters are a variety of units that are over 20 years old which is near the life expectancy for a typical municipal meter. As water meters age, they become less accurate which can cause the city to either over or under bill residences for water usage. Accurate readings also improve the quality of future engineering designs of the water infrastructure.

Due to their age, it is not cost effective to repair the meters so they must be completely replaced. Upgrading the meters with a radio transceiver will allow for automatic reporting of water usage data which will greatly improve collection efficiency.

3.2 WASTEWATER SYSTEM

No changes are made to this section which includes Paragraphs 3.2 through 3.3

3.3 FUTURE CONDITIONS

4 DEVELOPMENT AND EVALUATION OF ALTERNATIVES

No changes are made to this section which includes Paragraphs 4.1 through 4.2 and all sub-sections.

4.1 CAUTIONARY NOTES CONCERNING COST ESTIMATES

4.2 WATER STORAGE

4.3 WATER DISTRIBUTION SYSTEM

4.3.4 Water System Alternative 4: Replace Water Meters

Add this section

Alternative 4 would simply replace the approximately 131 existing water meters which are near and/or past their life expectancy with new automatic reporting units. The new meters would be radio read to reduce time for the City to collect water usage data and to reduce human error when writing the data down. New meter resetters are also included to provide a new ball valve and check valve per State Plumbing Code. The estimated costs and equivalent uniform annual costs associated with the water meter improvements are presented in Table 4.1 and Table 4.2 respectively.

Table 4.1 Anticipated Costs of Water Distribution Alternative 4.1

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	PRICE
1	Mobilization	LS	1	$7,000.00	$7,000.00
2	Furnish 5/8"x3/4" Water Meter with Radio Tranceiver	EA	118	$275.00	$32,450.00
3	Furnish 1" Water Meter with Radio Transceiver	EA	10	$340.00	$3,400.00
4	Furnish 1 1/2" Water Meter with Radio Transceiver	EA	1	$910.00	$910.00
5	Furnish 2" Water Meter with Radio Transceiver	EA	1	$1,130.00	$1,130.00
6	Furnish 3" Water Meter with Radio Transceiver	EA	1	$1,570.00	$1,570.00
7	Install 5/8"x3/4" Water Meter & Radio Transceiver	EA	118	$110.00	$12,980.00
8	Install 1" Water Meter & Radio Transceiver	EA	10	$150.00	$1,500.00
9	Install 1 1/2" Water Meter & Radio Transceiver	EA	1	$225.00	$225.00
10	Install 2" Water Meter & Radio Transceiver	EA	1	$250.00	$250.00
11	Install 3" Water Meter & Radio Transceiver	EA	1	$500.00	$500.00
12	Furnish & Install 5/8"x3/4" Resetter w/ball Valve & Dual Check	EA	30	$300.00	$9,000.00
13	Furnish & Install 1" Resetter w/ball Valve & Dual Check	EA	2	$450.00	$900.00
14	Furnish & Install 5/8" x 3/4" Vertical Resetter w/ball Valve & Dual Check	EA	1	$350.00	$350.00
15	Furnish Thermal Expansion Absorber	EA	131	$50.00	$6,550.00
16	Install Thermal Expansion Absorber	EA	131	$100.00	$13,100.00
17	Base Station	LS	1	$25,000.00	$25,000.00
18	Handheld Device, Software, Installation & Training	LS	1	$8,800.00	$8,800.00
19	Two Years of Meter System Annual Service Contract	LS	1	$3,300.00	$3,300.00
20	Miscellaneous Materials & Supplies	LS	1	$2,000.00	$2,000.00
21	Furnish & Install 3/4" In-Line Ball Valve	EA	10	$75.00	$750.00
22	Furnish & Install 1" In-Line Ball Valve	EA	10	$100.00	$1,000.00
23	Furnish & Install 3/4" In-Line Dual Check Valve	EA	10	$75.00	$750.00
24	Furnish & Install 1" In-Line Dual Check Valve	EA	10	$100.00	$1,000.00
				Subtotal Estimated Construction Costs	$134,415.00
				Contingencies @ 5%	$7,000.00
				Total Estimated Construction Costs	$141,415.00
				Engineering Design	$24,000.00
				Engineering Inspection	$6,000.00
				Legal	$6,000.00
				Total Project Costs	**$177,415.00**

Table 4.2 Equivalent Annual Cost Estimate for Water Distribution alternative 4.

Description	Price	Salvage Value	Present Worth of Salvage	Net Present Worth
Mobilization	$7,000.00	$4,200.00	$2,325.44	$4,674.56
Furnish 5/8"x3/4" Water Meter with Radio Tranceiver	$32,450.00	$19,470.00	$10,780.07	$21,669.93
Furnish 1" Water Meter with Radio Transceiver	$3,400.00	$2,040.00	$1,129.50	$2,270.50
Furnish 1 1/2" Water Meter with Radio Transceiver	$910.00	$546.00	$302.31	$607.69
Furnish 2" Water Meter with Radio Transceiver	$1,130.00	$678.00	$375.39	$754.61
Furnish 3" Water Meter with Radio Transceiver	$1,570.00	$942.00	$521.56	$1,048.44
Install 5/8"x3/4" Water Meter & Radio Transceiver	$12,980.00	$0.00	$0.00	$12,980.00
Install 1" Water Meter & Radio Transceiver	$1,500.00	$0.00	$0.00	$1,500.00
Install 1 1/2" Water Meter & Radio Transceiver	$225.00	$0.00	$0.00	$225.00
Install 2" Water Meter & Radio Transceiver	$250.00	$0.00	$0.00	$250.00
Install 3" Water Meter & Radio Transceiver	$500.00	$0.00	$0.00	$500.00
Dual Check	$9,000.00	$5,400.00	$2,989.85	$6,010.15
Furnish & Install 1" Resetter w/ball Valve & Dual Check	$900.00	$540.00	$298.98	$601.02
Furnish & Install 5/8" x 3/4" Vertical Resetter w/ball Valve & Dual Check	$350.00	$210.00	$116.27	$233.73
Furnish Thermal Expansion Absorber	$6,550.00	$3,930.00	$2,175.95	$4,374.05
Install Thermal Expansion Absorber	$13,100.00	$0.00	$0.00	$13,100.00
Base Station	$25,000.00	$15,000.00	$8,305.14	$16,694.86
Handheld Device, Software, Installation & Training	$8,800.00	$0.00	$0.00	$8,800.00
Two Years of Meter System Annual Service Contract	$3,300.00	$0.00	$0.00	$3,300.00
Miscellaneous Materials & Supplies	$2,000.00	$0.00	$0.00	$2,000.00
Furnish & Install 3/4" In-Line Ball Valve	$750.00	$450.00	$249.15	$500.85
Furnish & Install 1" In-Line Ball Valve	$1,000.00	$600.00	$332.21	$667.79
Furnish & Install 3/4" In-Line Dual Check Valve	$750.00	$450.00	$249.15	$500.85
Furnish & Install 1" In-Line Dual Check Valve	$1,000.00	$600.00	$332.21	$667.79
Total Construction Cost	**$134,415.00**	**$55,056.00**	**$30,483.17**	**$103,931.83**
Annual Operation and Maintence Cost				
Description	**Annual Cost**			**Net Present Worth**
Equipment	$500.00			$7,438.74
Supplies	$500.00			$7,438.74
Utilities	$0.00			$0.00
Labor	$1,500.00			$22,316.21
Total Annual Cost	**$2,500.00**			**$37,193.69**
			Total Present Worth	**$141,125.51**
			EUAC	**$9,485.85**

4.4 WASTEWATER COLLECTION SYSTEM

No changes are made to this section which includes Paragraphs 4.4 through 4.7 and all sub-sections.

4.5 WASTEWATER TREATMENT FACILITY

4.6 OPTIMUM OPERATION OF EXISTING FACILITIES

4.7 REGIONALIZATION

5 SELECTION OF ALTERNATIVES

No changes are made to this section which includes Paragraphs 5.1 and all sub-sections.

5.1 WATER STORAGE

5.2 WATER DISTRIBUTION SYSTEM

Add at the end of this section

Alternative 4 is also recommended because the current water meters are at the end of their life expectancy. The new units would increase the accuracy and collection efficiency of reported water usage data.

5.3 WASTEWATER COLLECTION SYSTEM

No changes are made to this section which includes Paragraphs 5.1 through 5.8 and all sub-sections.

5.4 WASTEWATER TREATMENT FACILITY

5.5 CAPITAL FINANCING PLAN

5.6 ENVIRONMENTAL EVALUATION

5.7 VIEWS OF THE PUBLIC AND CONCERNED INTEREST GROUPS

5.8 DEMONSTATION OF FINANCIAL CAPABILITY

6 SELECTED PLAN, DESCRIPTION AND IMPLEMENTATION ARRANGEMENTS

No changes are made to this section.

6.1 JUSTIFICATION AND DESCRIPTION OF SELECTED PLAN

Replace 2nd paragraph with

The alternatives chosen for the water distribution system will improve all of the deficiencies in the system other than the lack of storage. These alternatives will provide Chancellor with pressure and flows that are more appealing than the current system and also allow for a more accurate and efficient water usage billing process.

6.2 DESIGN OF SELECTED PLAN

No changes are made to this section.

6.3 COST ESTIMATES FOR SELECTION PLAN

Replace this section with

A summary of the costs including the original facility plan, addendum #1 and this report is shown in Table 6.1

Table 6.1: Summary of Costs

WATER DISTRIBUTION SYSTEM	
Water System Alternative 2: Loop System	$344,950.00
Water System Alternative 4: Replace Water Meters	$194,415.00
WASTEWATER COLLECTION SYSTEM	
Collection Systems Phase 1: Replacement	$932,448.00
WASTEWATER TREATMENT SYSTEM	
WWTF Alternative 2: Expand Wetland	$299,650.00
TOTAL PROJECT COST	**$1,771,463.00**

6.4 ENVIRONMENTAL IMPACTS OF SELECTED PLAN

No changes are made to this section which includes Paragraphs 6.4 through 6.7 and all sub-sections.

6.5 ARRANGEMENTS FOR IMPLEMENTATION

6.6 LAND ACQUISITION

6.7 IMPLEMENTATION SCHEDULE

A tentative schedule for the completion of the project is shown in Table 6.2.

Table 6.2 Implementation Schedule

Item to Complete	Date
Apply to State Water Plan	September 29, 2015
Board Approval to State Water Plan	November 5, 2015
Funding Application Submitted	December 28, 2015
Environmental Review Completed	February 12, 2016
Board Approval of Funding	March 31, 2016
Begin Design Work	April 15, 2016
Submit Construction Documents for Review	May 27, 2016
Advertise for Bids	June 23, 2016
Open Bids	July 14, 2016
Award Contract	July 18, 2016
Begin Construction	August 1, 2016
Complete Construction	October 1, 2016

6.8 INTERAGENCY AGREEMENTS

7 REFERENCES

No changes are made to this section.

8 APPENDICES

8.1 AFFIDAVIT OF PUBLICATION

Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF TURNER

I, Dawn Rye, of the City of Parker, County of Turner, State of South Dakota being first duly sworn on oath, deposes and says: The New Era is a weekly legal newspaper of general circulation, printed and published in the City of Parker, in said County of Turner, by The New Era, New Century Press, publishers, and has been such legal newspaper during the times hereinafter mentioned; that the said newspaper has been in existence as such legal newspaper for more than one year prior to the publication of the notice hereunto attached, and has during all of said publication of the notice hereunto attached, and has during all of said time had, and now has, more than 200 bona fide subscribers; that the undersigned, The affiant, is the Office Manager of the said newspaper, in charge of the advertisement department thereof and has personal knowledge of all the facts stated in this affidavit and the advertisement headed:

#7040 Chancellor Water Meter Project 12/3/2015

one printed copy of hereto attached, is printed and published in the said newspaper for one successive week, one each week and on the same day of the week, on the following dates, to wit:

On Thursday, the 3rd day of December, 2015

That $23.17 being the full amount of the fees for publication of the attached notices insures solely for the benefits of the publishers of the said newspaper, that no arrangement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.

Subscribed and sworn to before me this 14th

Day of December 2015

Paul R Harms

Notary Public, Turner County, South Dakota

My Commission Expires: March 20, 2018

Publication Fee $23.17
Notary Fees ..... $
Total $23.17

PAUL R. HARMS
SEAL NOTARY PUBLIC SOUTH DAKOTA SEAL

NOTICE OF PUBLIC HEARING
for the
CHANCELLOR WATER METER PROJECT

Notice is hereby given that the Town of Chancellor will hold a Public Hearing on December 14th, 2015, regarding the Water Meter Replacement Project. The Town is seeking up to $180,415 of funding from the Board of Water and Natural Resources. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or a loan from the Drinking Water State Revolving Fund (SRF) Program. The expected Drinking Water SRF loan terms are 2.25 percent for 10 years, and the Board of Water and Natural Resources may forgive all or a portion of the loan principal.

The amount and source of funds will be determined by the Board of Water and Natural Resources when the application is presented at a scheduled board meeting. The purpose of the public hearing is to discuss the proposed project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

This public hearing will be held at the following time, date and location:

7:00 P.M.

December 14, 2015

Chancellor Town Hall (240 2nd Ave, Chancellor, SD)

In compliance with the Americans with Disabilities Act (ADA), if you need special assistance to participate in this hearing, please contact the Chancellor Finance Officer at (605) 647-8696. Anyone who is deaf, hard-of-hearing or speech-disabled may utilize Relay South Dakota at (800) 877-1113 (TTY/Voice). Notification 48 hours prior to the hearing will enable the Town to make reasonable arrangements to ensure accessibility to this hearing.

Jolene Berens

Chancellor Finance Officer

Published once at the approximate cost of $23.17.

(#7040, The New Era, 12/3/2015)

8.2 CULTURAL RESOURCES EFFECTS ASSESSMENT

DEPARTMENT OF ENVIRONMENT and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

December 15, 2015

State Historic Preservation Center
Department of Education and Cultural Affairs
900 Governors Drive
Pierre, South Dakota 57501-2217

Attn: Ms. Amy Rubingh
Review and Compliance Archaeologist

RE: City of Chancellor
Water Meter Replacement Project

Dear Ms. Rubingh:

The Department of Environment and Natural Resources (DENR) received a project description and supporting documentation for the above referenced project proposed by the city of Chancellor. The city is applying for DENR funding of the project. Subsequent funding may include a State Revolving Fund loan.

I have reviewed the project description and the information provided by city. I concur with the finding of "No Historic Properties Affected" on the enclosed Cultural Resources Effects Assessment Summary sheet. Please reply with the State Historical Preservation Office determination of effect for this project.

Sincerely,

Eric Meintsma
Natural Resources Engineer IV
Water and Waste Funding Program

Enclosure

cc: City of Chancellor
Stockwell Engineers, Sioux Falls
SECOG

CULTURAL RESOURCES EFFECTS ASSESSMENT SUMMARY

Applicant City of Chancellor Project Contact Jolene Berens, Finance Officer
Address PO Box 106, Chancellor, SD 57015 Telephone Number 605-647-8696

Legal Location of Project All project activities will take place within the city limits and easements/facilities of the City of Chancellor
City Chancellor County Turner Project No. DWSRF-C462122-02

Project Description

The original project scope included the following elements:

Convert approximately 131 existing water meters to an automatic meter reading system. The existing meters are a variety of older meters that are over 20 years old. All meters require a complete replacement. The City also proposes to purchase the required computer software associated with the new meters. The proposed water meter system will allow the City to more efficiently gather water usage data and improve the overall accuracy of the data collected.

A reference map is attached for your review.

For projects that involve new construction on vacant land please include information as to what previously occupied the site and whether that site has any known historic or archaeological significance.
The project involves replacement, repair, and upgrading of existing facilities.

Please describe below or attach information supporting the determination of effect.
See attached maps

A map showing the project location is required. Drawings or photographs may also be helpful.

Please indicate the effect the project will have on cultural resources based on the review performed:

X No Historic Properties Affected: There are no historic properties present or the undertaking will not affect any properties eligible for or listed in the National Register of Historic Preservation.

_____ No Adverse Effect: This property is listed in or eligible for the National Register of Historic Places. This project will have no adverse effect upon the historic significance of the property because the proposed undertaking meets the Secretary of the Interior's Standards for the Treatment of Historic Properties.

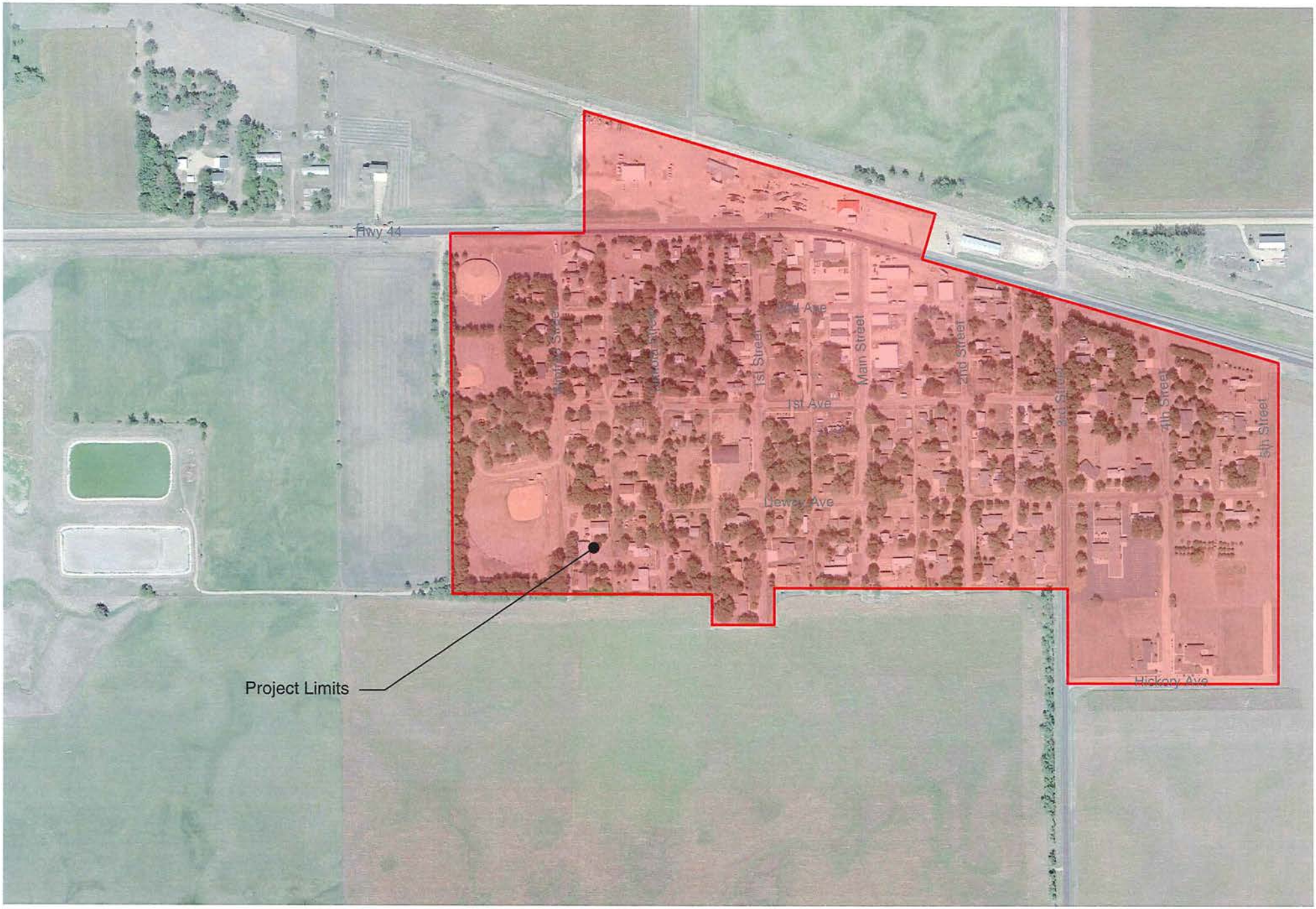
_____ Adverse Effect: This property is listed in or eligible for eligible for the National Register of Historic Places. This project will have an adverse effect upon the historic significance of the property. (Attach proposed mitigation measures that may minimize the adverse effect.)

Prepared by: Mikkel Merz Date 12/15/15

DETERMINATION OF EFFECTS

I have reviewed the project description and the information provided concerning historical and cultural effects of this project. Based on that review, the Department of Environment and Natural Resources concurs with the applicant's determination of the effects that the construction of this project will have on historical or cultural resources. Additionally, if historical or cultural resources are discovered during project construction, the contractor is required to cease construction and notify the State Historical Preservation Officer.

Approved by: Eric Mortenson Date 12/15/15
SD Department of Environment and Natural Resources



Water Meter Improvements Project

Project Limits | City of Chancellor | December 14, 2015

STOCKWELL ENGINEERS

8.3 PUBLIC HEARING MEETING MINUTES

CHANCELLOR
BOARD OF TRUSTEES
REGULAR METTING
DECEMBER 14, 2015

The Board of Trustees for the Town of Chancellor SD met in regular session on Monday, December 14, 2015 at 7 pm in the town hall in Chancellor SD.

President Wieker called the meeting to order at 7 pm. Members present were Dennis Wieker, Dan Severson and Doug Berens. Also present were Dexter Mahrt, Mitch Mergen, Lacey Schmeling, Dan McGrane Michael McCart, Byron Nogelmeier and Jolene Berens, Finance Officer.

Motion made by Severson and seconded by Berens to approve the financial report, agenda and minutes with a correction made that the donation for park equipment came from the Lennox Area Community Fund and not the Sioux Falls Area Community Fund.

This being the time a place advertised for a Public Hearing regarding the Water Meter Replacement Project, Lacey Schmeling planner for SECOG addresses the Board. The Town, with SECOG's assistance, will be submitting an application to the Department of Environment and Natural Resources for an $180,415 Drinking Water State Revolving Fund Loan for the Water Meter Replacement Project. The interest rate for the loan is 2.25% for a 10 year term. The annual payment for the $180,415 Drinking Water State Revolving Fund Loan would be $20,197.70. The Town is pledging to repay this loan using project surcharge revenue.

For the Drinking Water SRF loan, if there is no grant or principal forgiveness awarded for the project, there would need to be a $13.91 monthly project service charge for each user.

The project engineers from Stockwell Engineers, Dexter Mahrt and Mitch Mergen explained to the board the project.

Dan McGrane from Metering and Technology Solutions from Burnsville, MN met with the board to explain to the boards the meters and training they have for the project.

Motion made by Severson and seconded by Berens to approve Resolution No. 2015 – 12 – 1. It reads as follows:

RESOLUTION No. 2015 – 12 – 1

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the Town of Chancellor (the "Town") has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to the Water Meter Replacement Project (the "Project); and

WHEREAS, the Town has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the Town and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the Town as follows:

1. The Town hereby approves the submission of an Application for financial assistance in an amount not to exceed $180,415 to the South Dakota Board of Water and Natural Resources for the Project.
2. The Board President is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Board President is hereby designated as the authorized representative of the Town to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at Chancellor, South Dakota, on this 14th day of December 2015.

APPROVED:
Dennis Wieker, Board President
Town of Chancellor

ATTEST: Jolene Berens
Town of Chancellor Finance Officer

Mitch Mergen and Dexter Mahrt Project Engineers for the wastewater project discussed with the board the progress of the wastewater project.

Byron Nogelemeier, Turner County Sheriff met with the board concerning police matters and to renew the Agreement for 2016. Motion made by Berens and seconded by Severson to approve the town's contract with Turner County Sheriff's Department for the year 2016.

Michael McCart met with the board concerning a bill for camering and opening up his sewer line. Discussion was held and the landowners are responsible for where the service connects with the sewer line. The board decided it is the landowner's bill, but will recamera the line later to determine if the town isresponsible.

Motion made by Severson and seconded by Berens to allow Finance Officer to go to the Annual Report Workshop in Mitchell on January 27th.

Discussion was held on the revised Zoning Ordinance for reuse of a school or church. Motion made by Severson and seconded by Berens to approve the first reading of Ordinance No. 2015 -12 -2. It reads as follows:

ORDINANCE NO. 12 – 2

AN ORDINANCE OF THE TOWN OF CHANCELLOR, SD AMENDING THE 2014 REVISED ZONING ORDINANCE OF THE TOWN OF CHANCELLOR, SD, BY AMENDING CHAPTER 4, R-1:RESIDNETIAL DISTRICT.

BE IT ORDAINDED BY THE TOWN OF CHANCELLOR, SD:

Section 1 That the following conditional use is added to Section 402 of the 2014 Revised Zoning Ordinance of the Town of Chancellor, SD, to read as follows:

Reuse of a school or church: 10.02,10.04,10.06,10.12

One freestanding sign as allowed within 10.06.

The second reading will be held on Monday, January 11, 2015 at the next Town Board meeting.

Motion was made by Severson and seconded by Berens to approve the transfer of $20,000 back into the 2% Sales Tax Account from the 3 % Sales Tax. This was used for building of the museum in 2013.

Discussion was held on nuisances in town with abandoned vehicles and junk. The board will review the town for violations and if money is available to have a town clean up in the spring.

Motion made by Severson and seconded by Berens to move into executive session at 9:05pm the board moved out of executive session on 9:25pm.

The following claims were presented for payment;

BOARD: Salaries 255.00, FTD 39.02, SECOG dues 437.00

FINANCE OFFICER: Salary 1330.00, SD Ret 159.60, FTD 403.50

GOV'T BUILDINGS: Xcel Energy 95.73, Vast Broadband 147.81, Scot Bolte Sanitation 40.00, Farm Gas 147.15, Menards 11.18

FIRE: Chancellor Fire Department 2048.65

POLICE: Turner County Auditor 2128.75

PUB'L: New Century Press 56.27

STREET: Salaries 569.75, FTD 87.20, Xcel Energy 837.33, Country Pride 65.63, Menards 4.99, Rural Manufacturing , blade 3775.00
PARK: Salaries 293.75, FTD 44.96, Xcel Energy 43.63
WATER: Salaries 293.75, FTD 44.96, US Post Office 14.00, South Lincoln 1382.70, SECOG 1500.00, Kenney Gilles, dep. return 100.00, Stockwell Engineers 9,000.00 DENR water certification 6.00, US Postage 35.00
WASTEWATER: Salaries 317.75, SD Ret 141.00, FTD 123.62, Xcel Energy 49.32, Country Pride 5.37, Eich Law Office 1270.38, DENR 2016 fee 250.00, DENR 344.00, Stockwell Engineers 26,426.76, US Postage 35.00

Being no further business motion made by Berens and seconded by Severson to adjourn at 9:47pm. Next town board meeting will be held on Monday, January 11, 2016 at 7pm in the town hall.

Jolene Berens
Finance Officer

Dennis Wieker
President

Published 1 time at the approximate cost of

Town of Chancellor

Public Hearing For DW-SRF Application
Water Meter Replacement Project
7:00 pm, December 14th, 2015
Chancellor Town Hall

Please sign in:

NAME	ADDRESS / REPRESENTING
Lacey Schmeling	SECOG
Jolene Berens	Finance Officer Town of Chancellor
Dennis L. Wieker	Pres. dent City Course
Daniel Severson	City of Chancellor
Doug Berens	City of Chancellor
Dexter Mahrt	Stockwell Engineers
Mitch Mergen	Stockwell Engineers
Byron Vogel Meier	Sheriffs Office
Michael McCurt	

8.4 REVIEW AGENCIES RESPONSES (FOUR)

USDA

United States Department of Agriculture

February 12, 2016

Mr. Dexter Mahrt
Project Engineer
Stockwell Engineering
600 N. Main Avenue, Suite 100
Sioux Falls, South Dakota 57104

Dear Mr. Mahrt:

The Natural Resources Conservation Service (NRCS) has no concerns over this project. Since the scope of the project is within current public rights of way, we feel it will be very minimal since the lands are no longer engaged in production agriculture and there is no disturbance to previously undisturbed prime soils. Therefore, the NRCS has no concerns over this project.

A written response is moving through the final edits and will be mailed next week.

JEFFREY J. ZIMPRICH
State Conservationist

cc: Nathan Jones, SSS, NRCS, Huron SO

Natural Resources Conservation Service
200 Fourth Street SW, Room 203, Huron, SD 57350
Voice: 605.352.1200 Fax: 855.256.2565
An Equal Opportunity Provider and Employer

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

REPLY TO
ATTENTION OF

December 22, 2015

Planning, Programs, and Project Management Division

Mr. Mitch Mergen
Stockwell Engineers
600 N. Main Avenue, Suite 100
Sioux Falls, South Dakota 57104

Dear Mr. Mergen:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated December 15, 2015 (received December 18, 2015) regarding the environmental review of water distribution improvements in Chancellor, Turner County, South Dakota. We offer the following comments for your consideration:

Your plans should be coordinated with the state water quality office that has jurisdiction within the area where the project is located to ensure compliance with federal and state water quality standards and regulations mandated by the Clean Water Act and administered by the U.S. Environmental Protection Agency. Please coordinate with the South Dakota Department of Environment & Natural Resources concerning state water quality programs.

If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks regarding fish and wildlife resources. In addition, the South Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

If any proposed waterline construction crosses the floodplains of small drainageways and streams, flood-related problems should not occur if the lines are buried far enough below the beds of drainageways and streams to prevent exposure due to streambed erosion during periods of high floodflows. Any aboveground construction subject to flood damage, such as pump houses, should either be flood proofed or placed a level above the one percent annual chance flood elevation.

Since the proposed project does not appear to be located within Corps owned or operated lands, your plans should be submitted to the local floodplain administrator for review and approval prior to construction. It should be ensured that the proposed project is in compliance with the floodplain management criteria of Turner County and the State of South Dakota. In addition, please coordinate with the following floodplain management office:

South Dakota Division of Emergency Management
Attention: Mr. Marc Macy
118 W. Capitol Avenue
Pierre, South Dakota 57501
Telephone: 605-773-3231
Fax: 605-773-3580
Email: marc.macy@state.sd.us

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (http://www.nwo.usace.army.mil/Missions/RegulatoryProgram.aspx) to determine if this project requires a 404 permit. For a detailed review of the permit requirements, preliminary and final project plans should be sent to:

U.S. Army Corps of Engineers
Pierre Regulatory Office
Attention: Mr. Steve Naylor, CENWO-OD-R-SD
28563 Powerhouse Road, Room 120
Pierre, South Dakota 57501

If you have any questions, please contact Ms. Amanda Ciurej of my staff at (402) 995-2897 or amanda.k.ciurej@usace.army.mil and reference PD# 6789 in the subject line.

Sincerely,

Eric A. Laux
Chief, Environmental Resources and Missouri River Recovery Program Plan Formulation Section

RECEIVED
DEC 17 2015
U.S. FISH & WILDLIFE SERVICE

STOCKWELL
ENGINEERS

December 15, 2015

US Dept. of Interior
Fish and Wildlife Service
Mr. Scott Larson
420 S. Garfield Avenue
Pierre, SD 57501-5408

Re: Wetland & Endangered Species Comments
Chancellor Water Meters
Chancellor, South Dakota

Dear Mr. Larson:

In accordance with state regulations, regulatory agencies are being contacted for comment regarding environmental impacts for the above mentioned project. Attached to this letter is a map illustrating the boundaries of the project. As shown, construction will occur in the existing public right of way. Work will include replacement of the existing water meters to an automatic meter reading system.

The City of Chancellor, located in Turner County, South Dakota, is proposing to use Clean Water State Revolving Fund (CW-SRF) and Drinking Water State Revolving Fund (DW-SRF) loan funds to make improvements to the existing water distribution systems. The City of Chancellor also plans to use a Consolidated loan.

The existing water meters are a variety of older meters that are over 20 years old. The purposed water meter system will allow the City to more efficiently gather water usage date and improve the overall accuracy of the data collected.

U.S. Fish & Wildlife Service
SD ES Field Office
Project as described will have no significant impact on fish and wildlife resources. It does not involve any federally listed threatened or endangered species or their habitats. If project design changes, please submit plans for review.

12/20/15
Date

Scott Larson
Field Supervisor

DETAILS MATTER.

600 N. Main Ave., Suite 100, Sioux Falls, SD 57104
StockwellEngineers.com | 605.338.6668

A written response is requested within 30 days. If you have any questions, please contact our office at your earliest convenience.

Respectfully submitted,

STOCKWELL ENGINEERS, INC.

Mitch Mergen, P.E.
Project Engineer

Enclosures: Project Location Map (1)

cc: City of Chancellor
SEI Project File: 9815\Correspondence

DEPARTMENT OF GAME, FISH, AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

December 17, 2015

Mr. Mitch Mergen
Stockwell Engineers
600 N. Main Ave. #100
Sioux Falls, SD 57104

RE: Water Meter Replacement
Chancellor, South Dakota

Dear Mr. Mergen:

This letter is in response to your request for environmental comments regarding the above referenced project involving water meter replacement in the City of Chancellor, South Dakota.

At this time, the project described will have no impacts on fish and wildlife resources. However, if the project design changes or if new information becomes available, please submit the changes for review.

If you have any questions, please contact me at 605.773.6208.

Sincerely,

Leslie Murphy
Senior Biologist

WRAP REVIEW SHEET
DRINKING WATER FACILITIES FUNDING APPLICATION
APPLICANT: CITY OF CANTON

Project Title:	Dakota Street Utilities Improvement
Funding Requested:	$760,000
Other Proposed Funding:	$200,000 - Community Access Grant
Total Project Cost:	$960,000
Project Description:	The City of Canton is planning to reconstruct approximately 2,700 feet of Dakota Street to improve the underground utility infrastructure. The existing water distribution system, sanitary sewer system, and storm sewer system are in need of replacement due to the age and condition of the existing system. The existing water mains range from 2- to 8-inches and are cast iron, ductile iron, PVC or asbestos cement pipes. Approximately 2,840 feet of new 12-inch PVC main will replace the existing water main along Dakota Street. This project will also replace necessary valves, hydrants, and appurtenances. The new 12-inch main will become a portion of the main connection between the City's ground storage reservoir located on the south edge of the community and the City's elevated storage tank located on the northern edge.
Alternatives Evaluated:	"No Action Alternative" is not recommended as it does not correct the deteriorating conditions of the water mains. "Open Trench Construction Alternative" is the recommended type of construction for this project due to the presence of multiple underground utilities, both public and private, within the street corridor. "Trenchless Technology Construction Alternative" includes horizontal directional drilling or boring/jacking trenchless techniques which are not recommended methods because of the numerous unknown conflicts with various utilities within the project corridor.
Implementation Schedule:	The city of Canton plans to advertise bids for this project in January 2017 with a completion date of November 2017.
Service Population:	3,317
Current Domestic Rate:	$31.19 per 5,000 gallons usage

Interest Rate: 3.0% Term: 30 years Security: System Revenue

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan, Canton would have 51.7% debt coverage based on system revenue generated with the current rate of $31.20 for 5,000 gallons usage. Rates would need to increase $1.40 to $32.60 for 5,000 gallon usage in order to provide 110% coverage.

25% Funding Subsidy:	$190,000 subsidy with a loan of $570,000
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $570,000, Canton would need to increase its rate to $31.91 for 5,000 gallons usage for 110% debt coverage.

50% Funding Subsidy:	$380,000 subsidy with a loan of $380,000
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $380,000, Canton would need to increase its rate to $31.25 for 5,000 gallons usage for 110% debt coverage.

75% Funding Subsidy:	$570,000 subsidy with a loan of $190,000
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $190,000, Canton would have 194% debt coverage at current rates of $31.20 for 5,000 gallons usage.

ENGINEERING REVIEW COMPLETED BY: CLAIRE PESCHONG

FINANCIAL REVIEW COMPLETED BY: DEREK LANKFORD

Drinking Water Facilities Funding Application

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:	Proposed Funding Package	
City of Canton		
Address: 210 N. Dakota Street Canton, SD 57013	Requested Funding	$760,000
	Local Cash	
	Other: Community Access	$200,000
Subapplicant:	Other:	
DUNS Number: 033541236	Other:	
	TOTAL	$960,000

Project Title: Dakota Street Project-Phase 1

Description:

The City of Canton is proposing to construct the first phase of the Dakota Street Improvements Project which consists of improvements to the water distribution system, wastewater collection system and storm water system. The project area extends approximately one-half mile along Dakota Street beginning at US Hwy 18 (5th Street) and proceeding north to Lynn Avenue. The City proposes (1) to replace the existing water distribution system (comprised of aging smaller diameter cast-iron, ductile iron, asbestos cement and PVC pipe) with new larger-diameter PVC mains, (2) to replace the existing sanitary sewer collection system (comprised mainly of aging vitrified clay pipe exhibiting multiple joints, cracking, root intrusions, service line intrusions, and infiltration/ exfiltration) with new gravity PVC sewer mains, and (3) to replace and expand upon the existing storm sewer collection system (comprised mainly of undersized RCP, VCP and PVC mains and laterals) using reinforced concrete pipe and concrete junction boxes/inlets. A Community Access Grant of $400,000 was received for this project with $200,000 applied to the Drinking Water portion and $200,000 applied to the Clean Water portion.

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Charles Smith, Mayor		1/15/16
Name & Title of Authorized Signatory (Typed)	Signature	Date

Professional Consultants

Application Prepared By: South Eastern Council of Governments

Contact Person: Kristen Benidt

Mailing Address: 500 N Western Ave, Suite 100

City, State, and Zip: Sioux Falls, SD 57104

Telephone Number: (605)367-5390 Fax: (605)367-5394

Email address: gis@secog.org

Consulting Engineering Firm: JSA Engineering and Land Surveyors

Contact Person: Myron Adam

Mailing Address: 6810 S. Lyncrest Avenue, Suite 101

City, State, and Zip: Sioux Falls, SD 57108

Telephone Number: (605)367-1036 Fax: (605)367-1002

Email address: myron@jsaengineers.biz

Legal Counsel's Firm: Frieberg, Nelson, & Ask, LLP

Contact Person: Larry Nelson

Mailing Address: 206 E. 5th Street

City, State, and Zip: Canton, SD 57013

Telephone Number: (605)987-2686 Fax: (605)987-5779

Email address: lnelson@frieberglaw.com

Bond Counsel's Firm: Meierhenry, Sargent, LLP

Contact Person: Todd Meierhenry

Mailing Address: 315 S. Phillips Ave

City, State, and Zip: Sioux Falls, SD 57104

Telephone Number: (605)336-3075 Fax: (605)336-2593

Email address: todd@meierhenrylaw.com

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B Community Access Grant	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel	$28,000					$28,000
D. Other SECOG	$3,000					$3,000
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$46,800					$46,800
B. Project Inspection Fees	$70,200					$70,200
C. Other						
4. Construction & Improvements	$545,000	$200,000				$745,000
5. Equipment						
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$693,000	$200,000				$893,000
10. Contingencies	$67,000					$67,000
11. Total (Lines 9 and 10)	$760,000	$200,000				$960,000
12. Total %	79.17%	20.83%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)			
Other (Explain) DWSRF/CWFCP		$760,000	March 2016
Other (Explain) Community Access Grant	$200,000		November 2015
Other (Explain)			
Total	$200,000	$760,000	$960,000

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: January 1

Population Served Current: 3,317 2010 3,057 2000 3,110

Top three employers within 30 miles	Number of Employees	Type of Business
Sanford Health	8600	Health Care
Avera Health	6734	Health Care
John Morrell & Co.	3300	Meat Processing

Repayment Information

Interest rate you are applying for: 3% Term: 30

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☒ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan.
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year	2005	2015				
Purpose	Water System Improvements	Water Source Improvements				
Security Pledged	Drinking Water Revenue	Drinking Water Revenue				
Amount	$496,002	$1,550,000				
Maturity Date (mmm/yyyy)	12/1/2024	12/1/2048				
Debt Holder	BWNR	BWNR				
Debt Coverage Requirement	110%	110%				
Avg. Annual Required Payment	$34,888	$78,539				
Outstanding Balance	$268,351	$1,550,000				

Comments:

2005 is loan #1
2015 is loan #2 and that project has not started at this time so this loan has not gone into repayment.

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$581,824	$554,617	$700,400	$675,500	$675,500	$675,500
Surcharge Fees						
Other (Explain)						
Operating Expenses						
Personal Services	($148,673)	($128,416)	($131,000)	($141,000)	($145,230)	($149,587)
Chemical, Material & Supplies	($258,858)	($325,539)	($275,800)	($281,200)	($289,636)	($298,325)
Electric & Other Utilities			($66,000)	($66,000)	($67,980)	($70,019)
Other (Explain)			($18,650)	($16,200)	($16,686)	($17,287)
Operating Net Cash	$174,293	$100,662	$208,950	$171,100	$155,968	$140,282
Nonoperating Cash Flow						
Interest Revenue	$3,296	$3,523	$3,000	$3,000	$3,000	$3,000
Transfers In (Explain)		$190,841				
Fixed Asset Purchases	($42,215)	($246,450)	($602,000)	($587,500)	($100,000)	($100,000)
Transfers Out (Explain)						
Principal Debt Payments	($51,602)	($21,093)	($24,948)	($25,833)	($26,749)	($75,986)
Interest Debt Payments	($15,387)	($10,795)	($9,940)	($9,056)	($8,140)	($75,951)
Other (Explain)	$14,833					
Nonoperating Net Cash	($91,075)	($83,975)	($633,888)	($619,389)	($131,888)	($248,937)
Increase (Decrease) Cash	$83,218	$16,687	($424,938)	($448,289)	$24,080	($108,655)
Beginning Cash Balance	$745,286	$828,504	$845,191	$420,253	($28,036)	($3,957)
Ending Cash Balance	$828,504	$845,191	$420,253	($28,036)	($3,957)	($112,612)
Restricted Balance						
Unrestricted Balance						

Explanations

2014-Transfer In-Sale of Fixed Assets
Other Exp-Misc (Travel, Computers, Etc)
2017 & 2018 assume no increase in revenue and a 3% increase in expenses

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: [X] Incorporated Municipality or Sanitary District

or

[ ] Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic	$31.19		1,145	527 cu. ft.
Business	$32.85		189	2699 cu. ft.
Other:				
Other:				

Are fees based on usage or flat rate? Usage

When is proposed fee scheduled to take effect? N/A

When did the current fee take effect? April 5, 2013

What was the fee prior to the current rate? $30.40

Four Largest Customers	Type of Business	% of System Revenue
Adams Thermal Systems, Inc	Engine cooling syst manufact	8.1%
Keystone	Addiction treatment center	1.9%
Tri-State Ready-Mix	Concrete supplier	1.4%
Good Samaritan National	Nursing home facility	1%

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$760,000
Treatment	
Storage	
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$760,000

Charles Smith, Mayor

Name & Title of Authorized Representative

Signature of Authorized Representative

12-21-15

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

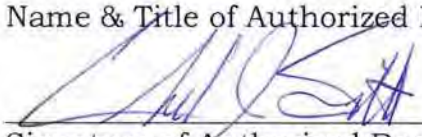
(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Charles Smith, Mayor

Name & Title of Authorized Representative



Signature of Authorized Representative

12-21-15

Date

☐ I am unable to certify to the above statements. Attached is my explanation

SECOG

SOUTH EASTERN COUNCIL OF GOVERNMENTS

SOUTH DAKOTA

December 29, 2015

RECEIVED
DEC 31 2015
Division of Financial & Technical Assistance

Mike Perkovich
SD-DENR
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

Dear Mr. Perkovich:

Enclosed, please find the Drinking Water State Revolving Loan Funding Application for the City of Canton's Dakota Street Improvements Phase I Project. Included with the general application are the following appendices:

Appendix A – Supplemental Signed Application Forms including the Certification of Drinking Water Needs Categories, Certification Regarding Debarment, Suspension, and Other Responsibility Matters.
Appendix B – Signed Application Resolution
Appendix C – Capacity Assessment Worksheets
Appendix D – Capacity Assessment Financial Spreadsheet
Appendix E – User Rate Ordinance
Appendix F – Amortization of Existing Drinking Water Debt
Appendix G – 2014 Unaudited Financial Statements
Appendix H – 2015 Budget
Appendix I – 2016 Budget
Appendix J – Documentation of an Active Registration in the SAM Database
Appendix K – Public Hearing Notice, Sign-in Sheets, & Unofficial Minutes (Official minutes will be sent after they are approved during the January council meeting)

The Facility Plan will be sent directly to DENR by JSA Engineers.

Sincerely,

Kristen Benidt
GIS Technician/Planner

Enclosures

Cc: City of Canton
Myron Adam, JSA Engineers

500 N. Western Ave. Suite 100 • Sioux Falls, SD 57104
Phone: 605.367.5390 • Fax: 605.367.5394
Website: www.secog.org • E-mail: gis@secog.org
Lynne Keller Forbes, Executive Director

RESOLUTION NO. 1234

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the City of Canton (the "City") has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to Dakota Street-Phase I Project (the "Project"); and

WHEREAS, the City has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the City and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the City as follows:

1. The City hereby approves the submission of an Application for financial assistance in an amount not to exceed $760,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Mayor is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Mayor is hereby designated as the authorized representative of the City to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted in Canton, South Dakota, on this 21st day of December, 2015.

APPROVED:

Charles Smith, Mayor
City of Canton

(Seal)

Attest: _____
City of Canton Finance Officer

JSA ENGINEERS AND LAND SURVEYORS
Land Development · Municipal · Streets · Water · Sewer · GPS · Construction Staking

Submittal

RECEIVED
DEC 2 8 2
Division of Financial
& Technical Assistance

To: South Dakota Department of Environment and Natural Resources

From: Myron Adam MKA

CC:

Date: 12/23/2015

Re: Facilities Plan for the City of Canton Dakota Street Improvements – Phase 1

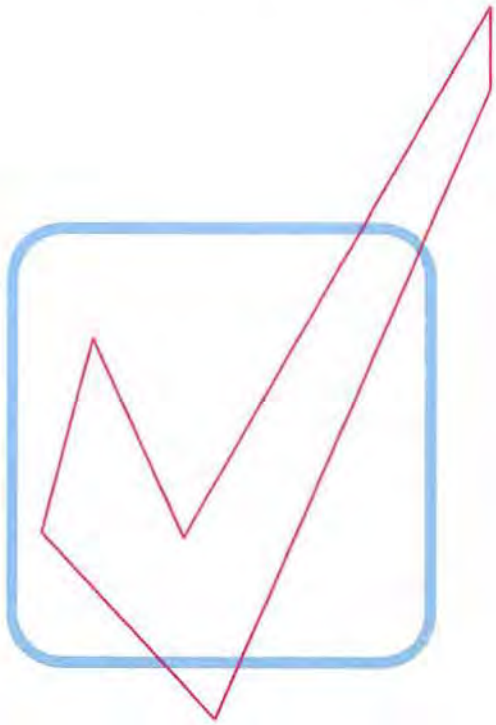
The City of Canton is requesting both Clean Water and Drinking Water State Revolving Funds for the Dakota Street Improvement project.

Enclosed are three copies of the Facilities Plan. These are being submitted as part of the City's SRF applications.

Please contact me with questions related to the project as needed. Thank you.

6810 S. Lyncrest Avenue · Suite 101 · Sioux Falls, South Dakota 57108-2515 · 605-367-1036 · Fax 605-367-1002

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: City of Canton, SD

Prepared by: Myron Adam, PE/LS

JSA Engineers/Land Surveyors

605.367.1036

Phone #:

Date: 12-16-15

Is there a drain valve or hydrant to allow for draining of the tank?	☒	☐	☐	☐
Tank Maintenance	**Yes**	**No**	**Unknown**	**NA**
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☒	☐	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☒	☐	☐	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☒	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:*** SPRING AND FALL	☒	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known? MOST, NOT ALL	☒	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☒	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☒	☐	☐	☐
Are all valves exercised and lubricated periodically?	☐	☒	☐	☐
Is the system free of severe "water hammer" problems? City along with SDRWA determined system free of severe water hammer	☒	☐	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☒	☐	☐	☐
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month? Review is annual	☐	☒	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 3.3 %	☒	☐	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 65 psi	☒	☐	☐	☐
Do you have a routine leak detection and repair program?	☐	☒	☐	☐
Are all sources of supply and customers metered?	☒	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☐	☒	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☐	☒	☐	☐

Are any inspections for cross-connections performed? As part of State plumbing inspection only on new construction	☐	☒	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☐	☒	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☒	☐	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** 74% of mains 6 inch and larger	☒	☐	☐	☐
Is there a program to gradually replace sub-standard sized mains? City replaces stretches on a time/needed basis - no specific program	☐	☒	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☒	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☒	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☒	☐	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** 10-15 per year ***Most common complaint:*** Odor, taste, and clarity	☒	☐	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow? Pressure is maintained above a minimum 20 psi during peak demands and during fire demands	☐	☐	☒	☐

The Management Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR?	☒	☐	☐	☐
If yes, list classification(s): Require Class I for treatment and Class II for distribution. City operators currently maintain Class II certification in both treatment and distribution.				
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☒	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance?	☒	☐	☐	☐
If yes, who SDDENR AND SDRWA				

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☒	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☒	☐	☐	☐
Are the limits of the operator's authority clearly known?	☒	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☒	☐	☐	☐
Is someone responsible for scheduling work?	☒	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☒	☐	☐	☐
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications? City adopted engineering design standards in 2012 with 2014 updates	☒	☐	☐	☐
Do you have rules governing new hook-ups?	☒	☐	☐	☐
Do you have a water main extension policy?	☒	☐	☐	☐
Do you have standard construction specifications to be followed? City adopted standard specifications as part of engineering design standards in 2012 with updates in 2014.	☒	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	X			
Do you have policies or rules describing customer rights and responsibilities?	X			
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	X			
Do you know how to obtain clarification or explanation of requirements?	X			
Do you have a mechanism to obtain the most recent information on regulatory requirements?	X			
Do you maintain adequate records to document compliance? ***If yes, for how long?*** 20+ Year	X			
Did your system have any violations of the primary drinking water standards in the last year?		X		
Did your system have any monitoring or reporting violations in the last year?		X		
Do you know what to do in the event of a violation?	X			
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	X			
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	X			
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	X			
Do you have a clear chain-of-command protocol for emergency action?	X			
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** Current City Manager	X			
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	X			
Has the entire staff been properly trained in the location and use of safety equipment?	X			
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	X			
Do you have written operating procedures for both routine and emergency system operations?		X		
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?			X	
Does the system work with customers to promote their awareness of security?	X			
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	X			

City is registered member of NIXLE and utilizes other social media (web page, Facebook, Twitter).

Maintenance	Yes	No	Unknown	NA
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☒	☐	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☒	☐	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☒	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☒	☐	☐	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☒	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☒	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☒	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** Equipment Reserve, GSR Reserve, and System Improvement Reserve	☒	☐	☐	☐
Does the system have reserve funds available in the event of an emergency?	☒	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☒	☐	☐	☐
Do you have a process for scheduling and committing to capital projects? Staff review of system and potential improvements on an annual basis	☒	☐	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets? Staff has sound understanding of entire system	☒	☐	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems? City performed water source study in 2012	☒	☐	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** Annually	☒	☐	☐	☐
Do you have a plan in place for periodic increases in rates? No formal plan in place however City Commission requests periodic rate increases	☐	☒	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** (City rate based on 100 CF = 748 gallons approx.) Residential: 0-748 gallons is $19.55 plus $2.05 per 748 gallons thereafter (i.e. $22 minimum plus $2.50/1000 gallons)	☒	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: Base rate stays the same then $2.00 per 748 gallons	☒	☐	☐	☐
Does the rate structure assure proportionality among users? Yes. Commercial and industrial users do pay higher rates than residential	☒	☐	☐	☐
Do you have procedures for billing and collection?	☒	☐	☐	☐
Is your billing collection rate greater than 95%?	☒	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☒	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☒	☐	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☒	☐	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☒	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☐	☒	☐	☐
Do you employ standardized accounting and tracking systems?	☒	☐	☐	☐
Do you track budget performance?	☒	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☒	☐	☐	☐
Are financial management recordkeeping systems organized?	☒	☐	☐	☐
Are controls exercised over expenditures?	☒	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☒	☐	☐	☐
Are there purchasing procedures?	☒	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources? City Manager performed review	☒	☐	☐	☐

8.3.16.1.1

Financial Spreadsheet

Applicant: City of Canton

Completed by: Janice Gravning

Date: 12/16/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	**$828,504**	**$845,192**	**$420,254**	**-$28,035**	**-$3,956**
2. Cash Receipts:					
a. Unmetered water Revenue					
b. Metered Water Revenue	$554,617	$700,400	$675,500	$675,500	$675,500
c. Other Water Revenue					
d. Total Water Revenues (2a through 2c)	**$554,617**	**$700,400**	**$675,500**	**$675,500**	**$675,500**
e. Connection Fees					
f. Interest and Dividend Income	$3,523	$3,000	$3,000	$3,000	$3,000
g. Other -Sale of Investments					
h. Total Cash Revenues (2d through 2g)	**$558,140**	**$703,400**	**$678,500**	**$678,500**	**$678,500**
i. Transfers in/Additional Rev Needed	$190,841				
j. Loans, Grants orother Cash					
Received from Interfund Services					
Due from Other Funds					
3. Total Cash Receipts (2h through 2j)	**$748,981**	**$703,400**	**$678,500**	**$678,500**	**$678,500**
4. Total Cash Available (1+3)	**$1,577,485**	**$1,548,592**	**$1,098,754**	**$650,465**	**$674,544**
5. Operating Expenses					
a. Salaries and Wages	$128,416	$131,000	$141,000	$145,230	$149,587
b. Employee Pensions and Benefits					
c. Purchased Water					
d. Purchased Power		$66,000	$66,000	$67,980	$70,019
e. Fuel for Power Productin					
f. Chemicals, mat'ls, supplies	$325,539	$275,800	$281,200	$289,636	$298,325
g. Materials and Supplies					
h. Engineering Services					
i. Contractual Services - Other					
j. Equip. Rent/Real Property					
k. Transportation Expenses					
l. Laboratory					
m. Insurance					
n. Regulatory Commission Expenses					
o. Advertising					
p. Other		$18,650	$16,200	$16,686	$17,287
q. Total Cash O&M Expenses (5a through 5p)	**$453,955**	**$491,450**	**$504,400**	**$519,532**	**$535,218**
r. Replacement Expenditures					
s. Total OM&R Expenditures (5q+5r)	**$453,955**	**$491,450**	**$504,400**	**$519,532**	**$535,218**
t. Loan Principal/Capital Lease Payments	$21,093	$24,948	$25,833	$26,749	$75,986
u. Loan Interest Payments	$10,795	$9,940	$9,056	$8,140	$75,951
v. Transfers Out					
w. Capital Purchases (specify):	$246,450	$602,000	$587,500	$100,000	$100,000
Due to Other Funds					
x. Other					
6. Total Cash Paid Out (5s through 5x)	**$732,293**	**$1,128,338**	**$1,126,789**	**$654,421**	**$787,155**
7. Ending Cash Position (4 - 6)	**$845,192**	**$420,254**	**-$28,035**	**-$3,956**	**-$112,611**

Financial Spreadsheet

Applicant: City of Canton

Completed by: Janice Gravning

Date: 12/16/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts	1334	1334	1334	1334	1334
9. Avg Annual User Charge Account (2d/8)	$415.75	$525.04	$506.37	$506.37	$506.37
10. Coverage Ratio (2h-5s)/(5t+5u)	3.27	6.08	4.99	4.56	0.94
11. Operating Ratio (2d/5s)	1.22	1.43	1.34	1.30	1.26
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve					
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other					
13. Total Reserves (12a through 12e)	$0	$0	$0	$0	$0
14. Year End Operating Cash (7 - 13)	**$845,192**	**$420,254**	**-$28,035**	**-$3,956**	**-$112,611**

ORDINANCE # 1012

AN ORDINANCE AMENDING WATER AND WASTEWATER (SEWER) CHARGES AND SERVICES INSIDE AND OUTSIDE THE CORPORATE LIMITS OF THE CITY OF CANTON.

BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF CANTON, SOUTH DAKOTA THAT CHAPTER 13.12., SECTION 13.12.010 WATER RATES AND SERVICES. A. B., SECTION 13.12.030 WASTEWATER (SEWER) RATES INSIDE THE CORPORATE LIMITS OF THE CITY OF CANTON A. B. C. AND SECTION 13.12.040 WASTEWATER (SEWER) RATES AND SERVICE OUTSIDE THE CORPORATE LIMITS OF THE CITY OF CANTON A. B. C. OF THE CANTON MUNICIPAL CODE ARE HEREBY AMENDED TO READ AS FOLLOWS:

13.12.010 Water Rates and Services.

A. Residential Water Rate: A person serviced by the City of Canton, South Dakota as any single family dwelling unit in which each water service is metered independently shall be charged the following rates for water service:

0 to 100 cubic feet	$19.55 Base Charge per meter
101 cubic feet and above	$19.55 Base Charge per meter plus $2.05 per 100 cubic feet above 101 cubic feet

B. Commercial and Industrial Water Rate: A business or other legal entity serviced by the City of Canton, South Dakota.

0 to 100 cubic feet	$20.60 Base Charge per meter
101 to 25,000 cubic feet	$20.60 Base Charge per meter plus $ 2.15 per 100 cubic feet from 101 to 25,000 cubic feet
25,001 to 50,000 cubic feet	$20.60 Base Charge per meter plus $ 2.15 per 100 cubic feet from 101 to 25,000 plus $2.05 per 100 cubic feet above 25,001 to 50,000 cubic feet
50,001 and above	$20.60 Base Charge per meter plus $ 2.15 per 100 cubic feet from 101 to 25,000 plus $2.05 per 100 cubic feet above 25,001 to 50,000 cubic feet plus $2.00 per 100 cubic feet above 50,000 cubic feet

13.12.030 Wastewater (Sewer) rates inside the corporate limits of the City of Canton.

A. Residential Wastewater (Sewer) Rate: A person serviced by the City of Canton, South Dakota as a single family dwelling unit in which each water service is metered independently and is serviced by the sanitary wastewater (sewer) system.

The City of Canton determines that all residential wastewater (sewer) customers receiving wastewater service from the City shall be charged a residential wastewater rate based upon 100% of the total water usage as calculated from the water meter readings for each account. The fee for wastewater usage shall be as follows:

0 to 167 cubic feet	$25.75 Base Charge per meter
168 to 2,000 cubic feet	$25.75 Base Charge per meter plus $ 2.70 per 100 cubic feet to 2,000 cubic feet
2001 cubic feet and above	Cap of $75.27

B. Residential Wastewater (Sewer) Rate with Two Water Meters on One Service: A person serviced by the City of Canton, South Dakota as any single family dwelling unit which has two water distribution system meters on one water service and is connected to the wastewater (sewer) system.

The City of Canton determines that residential wastewater (sewer) customers receiving wastewater service from the City in that manner shall be charged at a rate of 100% of the total water usage as calculated from the main water meter servicing the residential structure. The fee for wastewater usage shall be as follows:

0 to 167 cubic feet	$25.75 Base Charge per meter
168 cubic feet and above	$25.75 Base Charge per meter plus $ 2.70 per 100 cubic feet

C. Commercial and Industrial Wastewater (Sewer) Rate: A business or other legal entity serviced by the City of Canton, South Dakota and is connected to the sanitary wastewater (sewer) system.

0 to 167 cubic feet	$30.40 Base Charge per meter
168 cubic feet and above	$30.40 Base Charge per meter plus $ 3.35 per 100 cubic feet

Commercial and industrial customer charges shall be based on 100% consumption of water in each month.

13.12.040 Wastewater (sewer) rates and service outside the corporate limits of the City of Canton.

A. Residential Wastewater (Sewer) Rate: A person serviced by the City of Canton, South Dakota as any single family dwelling unit in which each water service is metered independently.

The City of Canton determines that all residential wastewater (sewer) customers receiving wastewater service from the City shall be charged at a rate of 100% of the total water usage as calculated from the water meter readings for each account.

0 to 167 cubic feet	$38.60 Base Charge per meter
168 to 2,000 cubic feet	$38.60 Base Charge per meter plus $ 4.05 per 100 cubic feet to 2,000 cubic feet
2001 cubic feet and above	Cap of $112.88

Residential wastewater (sewer) rates shall be based on consumption of water in each month and shall be adjusted to reflect any changes in usage.

B. Residential Wastewater (Sewer) Rate with Two Water Meters on One Service: A person serviced by the City of Canton, South Dakota as any single family dwelling unit which has two water distribution system meters on one water system and is connected to the wastewater (sewer) system.

The City of Canton determines that residential wastewater (sewer) customers receiving wastewater service from the City in that manner shall be charged at a rate of 100% of the total water usage as calculated from the main water meter servicing the residential structure. The fee for wastewater usage shall be as follows:

0 to 167 cubic feet	$38.60 Base Charge per meter
168 cubic feet and above	$38.60 Base Charge per meter plus $ 4.05 per 100 cubic feet

C. Commercial and Industrial Wastewater (Sewer) Rate: A business or other legal entity serviced by the City of Canton, South Dakota and is connected to the sanitary wastewater (sewer) system.

0 to 167 cubic feet	$45.60 Base Charge per meter
168 to 50,000 cubic feet	$45.60 Base Charge per meter plus $ 5.05 per 100 cubic feet to 50,000 cubic feet
50,001 cubic feet and above	$45.60 Base Charge per meter plus $ 5.05 per 100 cubic feet to 50,000 cubic feet plus $4.30 per 100 cubic feet above 50,000 cubic feet

Commercial and industrial customer charges shall be based on 100% consumption of water in each month and shall be adjusted to reflect any changes in usage.

_____
Charles Smith, Mayor

ATTEST:

_____
Kyle Cwach
Finance Officer

First Reading: February 19, 2013
Second Reading: March 4, 2013
Publish: March 14, 2013
Effective Date: April 5, 2013

AMORTIZATION SCHEDUL

Principal	Loan Date	Maturity	Loan No	Call / Coll	Account	Officer	Initials
$496,001.50		12-01-2024					

References in the shaded area are for Lender's use only and do not limit the applicability of this document to any particular loan or item.
Any item above containing "***" has been omitted due to text length limitations.

Borrower: City of Canton- Drinking Water # 1
210 N Dakota
Canton, SD 57013-1834

Lender: THE FIRST NATIONAL BANK IN SIOUX FALLS
AS TRUSTEE FOR SOUTH DAKOTA DEPARTMENT
OF ENVIRONMENT AND NATURAL RESOURCES
PIERRE, SD 57501

Disbursement Date:
Interest Rate: 3.600

Repayment Schedule: Installment
Calculation Method: 30/360 U.S. Rule

Payment Number	Payment Date	Payment Amount	Interest Paid **	Principal Paid	Remaining Balance
1	06-01-2005	8,722.07	4,291.79	4,430.28	491,571.22
2	09-01-2005	8,722.07	4,301.24	4,420.83	487,150.39
3	12-01-2005	8,722.07	4,262.57	4,459.50	482,690.89
2005 TOTALS:		26,166.21	12,855.60	13,310.61	
4	03-01-2006	8,722.07	4,223.55	4,498.52	478,192.37
5	06-01-2006	8,722.07	4,184.18	4,537.89	473,654.48
6	09-01-2006	8,722.07	4,144.48 *	4,577.59 *	469,076.89
7	12-01-2006	8,722.07	4,104.42	4,617.65	464,459.24
2006 TOTALS:		34,888.28	16,656.63	18,231.65	
8	03-01-2007	8,722.07	4,064.02	4,658.05	459,801.19
9	06-01-2007	8,722.07	4,023.26	4,698.81	455,102.38
10	09-01-2007	8,722.07	3,982.14	4,739.93	450,362.45
11	12-01-2007	8,722.07	3,940.67	4,781.40	445,581.05
2007 TOTALS:		34,888.28	16,010.09	18,878.19	
12	03-01-2008	8,722.07	3,898.84	4,823.23	440,757.82
13	06-01-2008	8,722.07	3,856.63	4,865.44	435,892.38
14	09-01-2008	8,722.07	3,814.06	4,908.01	430,984.37
15	12-01-2008	8,722.07	3,771.11	4,950.96	426,033.41
2008 TOTALS:		34,888.28	15,340.64	19,547.64	
16	03-01-2009	8,722.07	3,727.79	4,994.28	421,039.13
17	06-01-2009	8,722.07	3,684.10	5,037.97	416,001.16
18	09-01-2009	8,722.07	3,640.01	5,082.06	410,919.10
19	12-01-2009	8,722.07	3,595.54	5,126.53	405,792.57
2009 TOTALS:		34,888.28	14,647.44	20,240.84	
20	03-01-2010	8,722.07	3,550.68	5,171.39	400,621.18
21	06-01-2010	8,722.07	3,505.44	5,216.63	395,404.55
22	09-01-2010	8,722.07	3,459.79	5,262.28	390,142.27
23	12-01-2010	8,722.07	3,413.74	5,308.33	384,833.94
2010 TOTALS:		34,888.28	13,929.65	20,958.63	
24	03-01-2011	8,722.07	3,367.30	5,354.77	379,479.17
25	06-01-2011	8,722.07	3,320.44	5,401.63	374,077.54
26	09-01-2011	8,722.07	3,273.18	5,448.89	368,628.65
27	12-01-2011	8,722.07	3,225.50	5,496.57	363,132.08
2011 TOTALS:		34,888.28	13,186.42	21,701.86	
28	03-01-2012	8,722.07	3,177.41	5,544.66	357,587.42
29	06-01-2012	8,722.07	3,128.89	5,593.18	351,994.24
30	09-01-2012	8,722.07	3,079.95	5,642.12	346,352.12
31	12-01-2012	8,722.07	3,030.58	5,691.49	340,660.63
2012 TOTALS:		34,888.28	12,416.83	22,471.45	
32	03-01-2013	8,722.07	2,980.78	5,741.29	334,919.34
33	06-01-2013	8,722.07	2,930.54	5,791.53	329,127.81
34	09-01-2013	8,722.07	2,879.87	5,842.20	323,285.61
35	12-01-2013	8,722.07	2,828.75	5,893.32	317,392.29
2013 TOTALS:		34,888.28	11,619.94	23,268.34	
36	03-01-2014	8,722.07	2,777.18	5,944.89	311,447.40
37	06-01-2014	8,722.07	2,725.17	5,996.90	305,450.60
38	09-01-2014	8,722.07	2,672.69	6,049.38	299,401.12
39	12-01-2014	8,722.07	2,619.76	6,102.31	293,298.81

** INTEREST PAID also includes Admin Surcharge amounts

AMORTIZATION SCHEDULE
(Continued)

2014 TOTALS:		**34,888.28**	**10,794.80**	**24,093.48**	
40	03-01-2015	8,722.07	2,566.36	6,155.71	287,143.10
41	06-01-2015	8,722.07	2,512.51	6,209.56	280,933.54
42	09-01-2015	8,722.07	2,458.16	6,263.91	274,669.63
43	12-01-2015	8,722.07	2,403.36	6,318.71	268,350.92
2015 TOTALS:		**34,888.28**	**9,940.39**	**24,947.89**	
44	03-01-2016	8,722.07	2,348.07	6,374.00	261,976.92
45	06-01-2016	8,722.07	2,292.30	6,429.77	255,547.15
46	09-01-2016	8,722.07	2,236.04	6,486.03	249,061.12
47	12-01-2016	8,722.07	2,179.28	6,542.79	242,518.33
2016 TOTALS:		**34,888.28**	**9,055.69**	**25,832.59**	
48	03-01-2017	8,722.07	2,122.04	6,600.03	235,918.30
49	06-01-2017	8,722.07	2,064.28	6,657.79	229,260.51
50	09-01-2017	8,722.07	2,006.03	6,716.04	222,544.47
51	12-01-2017	8,722.07	1,947.27	6,774.80	215,769.67
2017 TOTALS:		**34,888.28**	**8,139.62**	**26,748.66**	
52	03-01-2018	8,722.07	1,887.98	6,834.09	208,935.58
53	06-01-2018	8,722.07	1,828.19	6,893.88	202,041.70
54	09-01-2018	8,722.07	1,767.86	6,954.21	195,087.49
55	12-01-2018	8,722.07	1,707.02	7,015.05	188,072.44
2018 TOTALS:		**34,888.28**	**7,191.05**	**27,697.23**	
56	03-01-2019	8,722.07	1,645.63	7,076.44	180,996.00
57	06-01-2019	8,722.07	1,583.72	7,138.35	173,857.65
58	09-01-2019	8,722.07	1,521.25	7,200.82	166,656.83
59	12-01-2019	8,722.07	1,458.25	7,263.82	159,393.01
2019 TOTALS:		**34,888.28**	**6,208.85**	**28,679.43**	
60	03-01-2020	8,722.07	1,394.69	7,327.38	152,065.63
61	06-01-2020	8,722.07	1,330.57	7,391.50	144,674.13
62	09-01-2020	8,722.07	1,265.90	7,456.17	137,217.96
63	12-01-2020	8,722.07	1,200.66	7,521.41	129,696.55
2020 TOTALS:		**34,888.28**	**5,191.82**	**29,696.46**	
64	03-01-2021	8,722.07	1,134.84	7,587.23	122,109.32
65	06-01-2021	8,722.07	1,068.46	7,653.61	114,455.71
66	09-01-2021	8,722.07	1,001.49	7,720.58	106,735.13
67	12-01-2021	8,722.07	933.93	7,788.14	98,946.99
2021 TOTALS:		**34,888.28**	**4,138.72**	**30,749.56**	
68	03-01-2022	8,722.07	865.79	7,856.28	91,090.71
69	06-01-2022	8,722.07	797.04	7,925.03	83,165.68
70	09-01-2022	8,722.07	727.70	7,994.37	75,171.31
71	12-01-2022	8,722.07	657.75	8,064.32	67,106.99
2022 TOTALS:		**34,888.28**	**3,048.28**	**31,840.00**	
72	03-01-2023	8,722.07	587.19	8,134.88	58,972.11
73	06-01-2023	8,722.07	516.00	8,206.07	50,766.04
74	09-01-2023	8,722.07	444.20	8,277.87	42,488.17
75	12-01-2023	8,722.07	371.78	8,350.29	34,137.88
2023 TOTALS:		**34,888.28**	**1,919.17**	**32,969.11**	
76	03-01-2024	8,722.07	298.70	8,423.37	25,714.51
77	06-01-2024	8,722.07	225.00	8,497.07	17,217.44
78	09-01-2024	8,722.07	150.66	8,571.41	8,646.03
79	12-01-2024	8,722.07	76.04	8,646.03	0.00
2024 TOTALS:		**34,888.28**	**750.40**	**34,137.88**	
TOTALS:		**689,043.53**	**193,042.03**	**496,001.50**	

NOTICE: This is an estimated loan amortization schedule. Actual amounts may vary if payments are made on different dates or in different amounts.

LASER PRO Lending, Ver. 5.25.30.001 Copr. Harland Financial Solutions, Inc. 1997, 2005. All Rights Reserved. - SD TR-5377 PR-4

Amortization Table

Canton Water Source Improvements

	Enter Amount	**1,550,000.00**
	Enter Rate	**3.00%**
	Term (Years)	**30**
	# Payments per Year	**4**
	Enter Pmt (opt)	**$ -**
Principal	*$ 1,550,000.00*	**Enter Payment Date**	**January 1, 2018**
Rate	*3.00%*		
Term(Qtrs)	*120*	**Annual Interest**	**$ 46,137.76**
Quarterly Payment	*$19,634.74*	**Annual Payments**	**$ 78,538.98**

	Principal Balance	Unscheduled Pmt.	Quarterly Prin. Pmt	Quarterly Int Pmt.
	$ 1,550,000.00			
Jan-18	1,541,990.26	0.00	8,009.74	11,625.00
Apr-18	1,533,920.44	0.00	8,069.82	11,564.93
Jul-18	1,525,790.10	0.00	8,130.34	11,504.40
Oct-18	1,517,598.78	0.00	8,191.32	11,443.43
			32,401.22	46,137.76
Jan-19	1,509,346.02	0.00	8,252.75	11,381.99
Apr-19	1,501,031.37	0.00	8,314.65	11,320.10
Jul-19	1,492,654.36	0.00	8,377.01	11,257.74
Oct-19	1,484,214.53	0.00	8,439.84	11,194.91
Jan-20	1,475,711.39	0.00	8,503.14	11,131.61
Apr-20	1,467,144.48	0.00	8,566.91	11,067.84
Jul-20	1,458,513.32	0.00	8,631.16	11,003.58
Oct-20	1,449,817.42	0.00	8,695.90	10,938.85
Jan-21	1,441,056.31	0.00	8,761.11	10,873.63
Apr-21	1,432,229.49	0.00	8,826.82	10,807.92
Jul-21	1,423,336.46	0.00	8,893.02	10,741.72
Oct-21	1,414,376.74	0.00	8,959.72	10,675.02
Jan-22	1,405,349.82	0.00	9,026.92	10,607.83
Apr-22	1,396,255.20	0.00	9,094.62	10,540.12
Jul-22	1,387,092.37	0.00	9,162.83	10,471.91
Oct-22	1,377,860.82	0.00	9,231.55	10,403.19
Jan-23	1,368,560.03	0.00	9,300.79	10,333.96
Apr-23	1,359,189.48	0.00	9,370.54	10,264.20
Jul-23	1,349,748.66	0.00	9,440.82	10,193.92
Oct-23	1,340,237.03	0.00	9,511.63	10,123.11

Canton

Can Live. Can Dream. Can Do.

2014 Annual Financial Report

CITY OF CANTON
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MUNICIPALITY OF CANTON
STATEMENT OF NET POSITION
December 31, 2014

	Primary Government			
	Governmental Activities	Business-Type Activities	Total	Component Unit
ASSETS:				
Cash and Cash Equivalents	$ 2,752,202.61	$ 2,142,423.29	$ 4,894,625.90	$ 86,673.17
Investments	511,750.11	-	511,750.11	182,945.65
Taxes Receivable	40,053.27		40,053.27	
Accounts Receivable, Net	65,003.21	230,878.41	295,881.62	5,053.26
Inventories	104,917.15	152,073.91	256,991.06	
Other Assets	24,733.23	5,370.77	30,104.00	1,531.00
Restricted Assets:				-
Deposits	67,416.39	-	67,416.39	
Capital Assets:				
Land, Improvements and Construction				25,811.20
Work in Progress	536,766.97	116,844.36	653,611.33	
Other Capital Assets, Net of Depreciation	4,270,136.23	10,169,249.44	14,439,385.67	176,720.17
TOTAL ASSETS	8,372,979.17	12,816,840.18	21,189,819.35	478,734.45
LIABILITIES :				
Accounts Payable	49,738.13	161,923.45	211,661.58	3,119.91
Other Current Liabilities	34,825.42	70,963.58	105,789.00	24,196.25
Noncurrent Liabilities:				
Due Within One Year	47,026.98	139,397.01	186,423.99	-
Due in More than One Year	107,514.66	2,637,737.49	2,745,252.15	6,825.82
TOTAL LIABILITIES	239,105.19	3,010,021.53	3,249,126.72	34,141.98
NET POSITION:				
Net Investment in Capital Assets	4,797,421.31	7,517,046.46	12,314,467.77	202,531.37
Restricted for:				
Special Revenue	106,288.28		106,288.28	27,979.46
Debt Service	-	-	-	
Unspendable	1,836,062.81		1,836,062.81	
Unassigned (Deficit)	1,394,101.58		1,394,101.58	214,081.64
Unrestricted (Deficit)	-	2,289,772.19	2,289,772.19	-
TOTAL NET POSITION	$ 8,133,873.98	$ 9,806,818.65	$17,940,692.63	$ 444,592.47

MUNICIPALITY OF CANTON
STATEMENT OF ACTIVITIES
For the Year Ended December 31, 2014

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants and Contributions	Net (Expense) Revenue and Changes in Net Position: Primary Government: Governmental Activities	Primary Government: Business-Type Activities	Primary Government: Total	Component Unit
Primary Government:								
Governmental Activities:								
General Government	$ 533,721.72	$ 262,728.94			$ (270,992.78)	$	$ (270,992.78)	
Public Safety	542,240.25	2,832.35	976.50		$ (538,431.40)		(538,431.40)	
Public Works	763,291.28	17,814.20	146,037.49	351,444.28	$ (247,995.31)		(247,995.31)	
Health and Welfare	24,008.67	1,500.00	3,130.00		$ (19,378.67)		(19,378.67)	
Culture and Recreation	474,168.08	47,215.03			$ (426,953.05)		(426,953.05)	
Conservation and Development	34,360.00				$ (34,360.00)		(34,360.00)	
Miscellaneous		32,217.90			$ 32,217.90		32,217.90	
*Interest on Long-term Debt	375.90				(375.90)		(375.90)	
Total Governmental Activities	2,372,165.90	364,308.42	150,143.99	351,444.28	(1,506,269.21)		(1,506,269.21)	
Business-type Activities:								
Liquor	831,346.79	829,560.04				(1,786.75)	(1,786.75)	
Water	560,045.62	548,069.87		190,840.71		178,864.96	178,864.96	
Sewer	1,025,426.96	705,530.14		64,794.65		(255,102.17)	(255,102.17)	
Airport	129,163.40	43,748.90		13,803.15		(71,611.35)	(71,611.35)	
Total Business-type Activities	2,545,982.77	2,126,908.95	-	269,438.51		(149,635.31)	(149,635.31)	
Total Primary Government	$ 4,918,148.67	$ 2,491,217.37	$ 150,143.99	$ 620,882.79	(1,506,269.21)	(149,635.31)	(1,655,904.52)	
Component Unit:								
Housing & Redevelopment Comm	422,227.78	75,065.80	306,184.00	-				(40,977.98)

MUNICIPALITY OF CANTON
STATEMENT OF ACTIVITIES
For the Year Ended December 31, 2014

		Net (Expense) Revenue and Changes in Net Assets			
		Primary Government			
		Governmental Activities	Business-Type Activities	Total	Component Unit
* The Municipality does not have interest expense related to the functions presented above. The amount includes indirect interest expense on general long-term debt.	Total Primary Government	(1,506,269.21)	(149,635.31)	(1,655,904.52)	(40,977.98)
	General Revenues:				
	Taxes:				
	Property Taxes	1,171,833.34		1,171,833.34	
	Sales Taxes	1,013,991.02		1,013,991.02	
	State Shared Revenues	34,619.99	-	34,619.99	
	Unrestricted Investment Earnings	18,308.10	3,548.57	21,856.67	
	Miscellaneous Revenue	85,189.09		85,189.09	17,379.47
	Transfers Net	74,000.00	(74,000.00)	-	-
	Total General Revenues and Interest Expense	2,397,941.54	(70,451.43)	2,327,490.11	17,379.47
	Change in Net Position	891,672.33	(220,086.74)	671,585.59	(23,598.51)
	Net Position-Beginning	7,242,201.65	10,026,905.39	17,269,107.04	468,645.98
	Prior Period Adjustment				(455.00)
	NET Position - ENDING	$ 8,133,873.98	$ 9,806,818.65	$ 17,940,692.63	$ 444,592.47

MUNICIPALITY OF CANTON
BALANCE SHEET
GOVERNMENTAL FUNDS
December 31, 2014

	Major Funds				Non-Major	Total Governmental Funds
	General Fund	BBB Sales Tax Fund				
ASSETS:						
Cash and Cash Equivalents	$2,658,721.31	$ 82,709.62			$10,771.68	$2,752,202.61
Taxes Receivable--Delinquent	40,053.27					40,053.27
Special Assessments Receivable--Current						-
Special Assessments Receivable--Deferred						-
Accounts Receivable	63,946.34	1,047.29			9.58	65,003.21
Due from Other Fund						
Inventory	104,917.15					104,917.15
Investments	500,000.00				11,750.11	511,750.11
Prepaid Exp	24,733.23					24,733.23
Deposits	67,416.39					67,416.39
TOTAL ASSETS	$3,459,787.69	$ 83,756.91	$ -	$ -	$22,531.37	$3,566,075.97
LIABILITIES AND FUND BALANCES:						
Liabilities:						
Accounts Payable	$ 49,738.13					$ 49,738.13
Accrued Wages Payable	34,050.42					34,050.42
Due to Other Fund						
Deposits	775.00	-	-	-	-	775.00
Total Liabilities	84,563.55	-	-	-	-	84,563.55
Deferred Inflows of Resources:						
Unavailable Revenue: Property Taxes	40,053.27					40,053.27
Unavailable Revenue: Special Assessments	-	-	-	-	-	-
Total Deferred Inflows of Resources	40,053.27	-	-	-	-	40,053.27
Fund Balances:						
Nonspendable For:						
Next Years Budget	738,226.00					738,226.00
Inventory	104,917.15					104,917.15
Library, Pool & Trail	171,729.27					171,729.27
Fire Equipment	45,000.00		-			45,000.00
Capital Improvement & Dak St	1,074,000.00					1,074,000.00
Equipment	373,000.00					373,000.00
Unassigned Fund Balances:	828,298.45	$ 83,756.91		$ -	22,531.37	934,586.73
Total Fund Balances	3,335,170.87	83,756.91	-	-	22,531.37	3,441,459.15
TOTAL LIABILITIES AND FUND BALANCES	$3,459,787.69	$ 83,756.91	$ -	$ -	$22,531.37	$3,566,075.97

MUNICIPALITY OF CANTON
Reconciliation of the Governmental Funds Balance Sheet to the Statement of Net Position
December 31, 2014

Total Fund Balances - Governmental Funds	$ 3,441,459.15
Amounts reported for governmental activities in the statement of net position are different because:	
Capital assets used in governmental activities are not financial resources and therefore are not reported in the funds.	4,806,903.20
Long-term liabilities, including bonds payable and accrued leave payable are not due and payable in the current period and therefore are not reported in the funds.	(154,541.64)
Assets such as taxes receivable (delinquent) and special assessments receivables (current, delinquent and deferred) are not available to pay for current period expenditures and therefore are deferred in the funds.	40,053.27
Net Position- Governmental Funds	$ 8,133,873.98

MUNICIPALITY OF CANTON
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2014

	Major Funds				Nonmajor	
	General Fund	BBB Sales Tax Fund			Special Revenue Fund	Total Governmental Funds
Revenues:						
Taxes:						
General Property Taxes	$ 1,181,697.94					$ 1,181,697.94
General Sales and Use Taxes	963,330.70	$ 50,660.32				1,013,991.02
Penalties and Interest on Delinquent Taxes						-
Licenses and Permits	32,217.90					32,217.90
Intergovernmental Revenue:						
Grants	170,788.15					170,788.15
State Shared Revenue:						
Liquor Tax Reversion	19,930.21					19,930.21
Motor Vehicle Licenses (5%)	17,718.09					17,718.09
Local Government Highway and Bridge Fund	67,942.68					67,942.68
Bank Franchise Tax	14,689.78					14,689.78
County Shared Revenue:						
County Wheel Tax	16,795.64					16,795.64
Charges for Goods and Services:						
General Government	262,728.94					262,728.94
Public Safety	1,712.00					1,712.00
Highways and Streets	6,103.80					6,103.80
Sanitation	11,710.40					11,710.40
Health	1,500.00					1,500.00
Culture and Recreation	35,932.62				11,282.41	47,215.03
Fines and Forfeits:						
Court Fines and Costs	1,120.35					1,120.35
Miscellaneous Revenue:						
Investment Earnings	18,308.10					18,308.10
Special Assessment Revenue						-
Contributions and Donations from Private Sources	8,624.43					8,624.43
Other	79,564.66					79,564.66
Transfers	100,000.00					100,000.00
Total Revenue	3,012,416.39	50,660.32	-		11,282.41	3,074,359.12

MUNICIPALITY OF CANTON
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2014

	Major Funds		Nonmajor	
	General Fund	BBB Sales Tax Fund	Special Revenue Fund	Total Governmental Funds
Expenditures:				
General Government:				
Legislative	17,439.06			17,439.06
Executive	198,668.94			198,668.94
Elections	1,946.21			1,946.21
Financial Administration	181,099.98			181,099.98
City Attorney	13,494.44			13,494.44
Other	84,112.65			84,112.65
Total General Government	496,761.28			496,761.28
Public Safety:				
Police	424,607.79			424,607.79
Fire	72,695.59			72,695.59
Total Public Safety	497,303.38			497,303.38
Public Works:				
Highways and Streets	561,923.53			561,923.53
Sanitation	100,382.10	-		100,382.10
Total Public Works	662,305.63	-		662,305.63
Health and Welfare				
Health & Welfare	24,008.67			24,008.67
Total Health and Welfare	24,008.67			24,008.67
Culture and Recreation:				
Recreation	142,775.09			142,775.09
Parks	169,091.40			169,091.40
Libraries	107,573.75		10,816.25	118,390.00
Total Culture and Recreation	419,440.24		10,816.25	430,256.49

MUNICIPALITY OF CANTON
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2014

	Major Funds				Nonmajor	
	General Fund	BBB Sales Tax Fund			Special Revenue Fund	Total Governmental Funds
Conservation and Development: Economic Development and Assistance (Industrial Development)	17,080.00	17,280.00				34,360.00
Debt Service	3,600.21					3,600.21
Transfers	26,000.00					26,000.00
Capital Outlay	1,015,606.11					1,015,606.11
Total Expenditures	3,162,105.52	17,280.00		-	10,816.25	3,190,201.77
Excess of Revenue Over (Under) Expenditures	(149,689.13)	33,380.32	-	-	466.16	(115,842.65)
Net Change in Fund Balances	(149,689.13)	33,380.32	-	-	466.16	(115,842.65)
Fund Balance - Beginning	3,484,860.00	50,376.59			22,065.21	3,557,301.80
ADJ to Beginning F/B*						-
FUND BALANCE- ENDING	$ 3,335,170.87	$ 83,756.91	$ -	$ -	$ 22,531.37	$ 3,441,459.15

Foot Notes *

MUNICIPALITY OF CANTON
Reconciliation of the Statement of Revenues, Expenditures and Changes in Fund Balances to the Government-Wide Statement of Activities
For the Year Ended December 31, 2014

Net Change in Fund Balances - Total Governmental Funds	$ (115,842.65)
Amounts reported for governmental activities in the statement of activities are different because:	
Governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense. This is the amount by which capital outlay exceeded depreciation in the current period.	1,066,344.09
In the statement of activities, the loss on disposal of assets is reported, whereas in the Governmental funds, the disposal of fixed assets in not reflected.	(37,628.84)
Repayment of bond principal is an expenditure in the governmental funds, but the repayment reduces long-term liabilities in the statement of net assets.	3,224.31
Governmental funds do not reflect the change in accrued leave, but the Statement of Activities reflects the change in accrued leave through expenditures.	198.20
Issuing of financing sources are recorded as revenue in the governmental funds, as opposed to an increase in liabilities in the statement of Activities	(3,000.00)
Governmental funds do not reflect the change in OPEB, but the Statement of Activities reflects the change in OPEB through expenditures.	(11,758.18)
Governmental funds report property taxes as revenue when they meet the available criteria. Because some property taxes will not be collected for several months after the district's fiscal year ends, they are not considered "available" revenues and are deferred in the governmental funds. Deferred tax revenues decreased by this amount this year.	(9,864.60)
Change in Net Position of Governmental Activities	$ 891,672.33

MUNICIPALITY OF CANTON
STATEMENT OF NET POSITION
PROPRIETARY FUNDS
December 31, 2014

	Enterprise Funds				
	Liquor Fund	Water Fund	Sewer Fund	Airport Fund	Total
ASSETS:					
Current Assets:					
Cash and Cash Equivalents	295,062.76	$ 845,190.57	$ 898,454.70	$ 103,715.26	2,142,423.29
Cash with Fiscal Agent					-
Investments					-
Accounts Receivable, Net	70,194.65	52,371.30	108,312.46	-	230,878.41
Notes Receivable					-
Prepaid Exp		2,959.49	2,411.28		5,370.77
Inventory	-	122,212.73	20,111.43	9,749.75	152,073.91
Total Current Assets	365,257.41	1,022,734.09	1,029,289.87	113,465.01	2,530,746.38
Noncurrent Assets:					
Deposits					-
Capital Assets:					
Land		10,000.00	37,990.11	68,854.25	116,844.36
Buildings		20,602.52	363,592.58		384,195.10
Improvements Other Than Buildings		3,577,247.88	5,374,201.14	2,688,106.00	11,639,555.02
Machinery and Equipment		282,014.77	304,954.06	65,914.00	652,882.83
Construction Work in Progress			819,262.15	-	819,262.15
Less: Accumulated Depreciation	-	(1,429,545.46)	(1,713,354.39)	(183,745.81)	(3,326,645.66)
Total Noncurrent Assets	-	2,460,319.71	5,186,645.65	2,639,128.44	10,286,093.80
TOTAL ASSETS	365,257.41	3,483,053.80	6,215,935.52	2,752,593.45	12,816,840.18

See Accountant's Compilation Report

MUNICIPALITY OF CANTON
STATEMENT OF NET POSITION
PROPRIETARY FUNDS
December 31, 2014

	Enterprise Funds				
	Liquor Fund	Water Fund	Sewer Fund	Airport Fund	Total
LIABILITIES:					
Current Liabilities:					
Accounts Payable	$ 71,997.08	$ 3,531.33	$ 81,647.60	$ 4,747.44	$ 161,923.45
Accrued Wages Payable		3,347.38	3,321.40		6,668.78
Due to Other Fund					-
Customer Deposits		64,294.80			64,294.80
Other Long Term Debt Current		27,947.89	111,449.12		139,397.01
Total Current Liabilities	71,997.08	99,121.40	196,418.12	4,747.44	372,284.04
Noncurrent Liabilities:					
Accrued Leave Payable		5,366.61	2,720.55		8,087.16
Other Long-Term Debt		268,350.92	2,361,299.41		2,629,650.33
Total Noncurrent Liabilities	-	273,717.53	2,364,019.96		2,637,737.49
NET POSITION:					
Net Investment in Capital Assets	-	2,164,020.90	2,713,897.12	2,639,128.44	7,517,046.46
Restricted for:					
Deposits		-			-
Debt Service		-	-		-
Unrestricted	293,260.33	946,193.97	941,600.32	108,717.57	2,289,772.19
Total Net Position	293,260.33	3,110,214.87	3,655,497.44	2,747,846.01	9,806,818.65

MUNICIPALITY OF CANTON
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
PROPRIETARY FUNDS
For the Year Ended December 31, 2014

	Enterprise Funds				
	Liquor Fund	Water Fund	Sewer Fund	Airport Fund	Total
Operating Revenue:					
Charges for Goods and Services	$824,451.02	$ 548,069.87	$ 705,530.14	$ 43,748.90	$ 2,121,799.93
Lottery Sales	5,109.02				5,109.02
Total Operating Revenue	829,560.04	548,069.87	705,530.14	43,748.90	2,126,908.95
Operating Expenses:					
Personal Services		126,517.44	122,416.96		248,934.40
Other Current Expense	30,014.26	325,277.78	706,508.67	71,633.01	1,133,433.72
Materials (Cost of Goods Sold)	801,332.53				801,332.53
Depreciation		97,455.60	139,643.64	57,530.39	294,629.63
Total Operating Expenses	831,346.79	549,250.82	968,569.27	129,163.40	2,478,330.28
Operating Income (Loss)	(1,786.75)	(1,180.95)	(263,039.13)	(85,414.50)	(351,421.33)
Nonoperating Revenue (Expense):					
Federal Grant/Contributions		190,840.71	64,794.65	13,803.15	269,438.51
State Grant					-
Investment Earnings		3,522.55	26.02		3,548.57
Miscellaneous Revenue					-
Transfer In (out)	(100,000.00)			26,000.00	(74,000.00)
Interest Expense and Fiscal Charges		(10,794.80)	(56,857.69)		(67,652.49)
Total Nonoperating Revenue (Expense)	(100,000.00)	183,568.46	7,962.98	39,803.15	131,334.59
Change in Net Position	(101,786.75)	182,387.51	(255,076.15)	(45,611.35)	(220,086.74)
Net Position - Beginning	395,047.08	2,927,827.36	3,910,573.59	2,793,457.36	10,026,905.39
* Beginning N/P Adjustment					-
NET POSITION - ENDING	$293,260.33	$ 3,110,214.87	$ 3,655,497.44	$ 2,747,846.01	$ 9,806,818.65

MUNICIPALITY OF CANTON
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
For the Year Ended December 31, 2014

	Enterprise Funds				
	Liquor Fund	Water Fund	Sewer Fund	Airport Fund	Total
CASH FLOWS FROM OPERATING ACTIVITIES:					
Cash Receipts from Customers	$ 848,046.66	$ 554,617.14	$ 738,108.17	$ 44,620.86	$ 2,185,392.83
Cash Payments to Employees for Services	-	(128,416.42)	(126,482.39)	-	(254,898.81)
Payments from/to other Funds					$ -
Cash Payments to Suppliers of Goods and Services	(818,912.69)	(325,538.90)	(640,263.84)	(68,647.32)	(1,853,362.75)
Net Cash Provided (Used) by Operating Activities	29,133.97	100,661.82	(28,638.06)	(24,026.46)	77,131.27
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:					
Purchase of Capital Assets		(246,450.19)	(1,054,059.75)		(1,300,509.94)
Loss on Disposition of FA	11,466.88		22,110.89		33,577.77
Proceeds from Capital Debt/Contributions		190,840.71	64,794.65	13,803.15	269,438.51
Principal Paid on Capital Debt		(21,093.48)	581,740.06		560,646.58
Interest Paid on Capital Debt		(10,794.80)	(56,857.69)		(67,652.49)
Other Receipts/Transfers	(100,000.00)			26,000.00	(74,000.00)
Net Cash (Used) by Capital and Related Financing Activities	(88,533.12)	(87,497.76)	(442,271.84)	39,803.15	(578,499.57)
CASH FLOWS FROM INVESTING ACTIVITIES:					
Interest Earnings		3,522.55	26.02		3,548.57
Net Cash Provided by Investing Activities		3,522.55	26.02		3,548.57
Net Increase (Decrease) in Cash and Cash Equivalents	$ (59,399.15)	$ 16,686.61	$ (470,883.88)	$ 15,776.69	$ (497,819.73)

Cash and Cash Equivalents at Beginning of Year	$ 354,461.91	$ 828,503.96	$ 1,369,338.58	$ 87,938.57	$ 2,640,243.02
Cash and Cash Equivalents at End of Year	295,062.76	845,190.57	898,454.70	103,715.26	2,142,423.29
Net Increase (Decrease) in Cash and Cash Equivalents	$ (59,399.15)	$ 16,686.61	$ (470,883.88)	$ 15,776.69	$ (497,819.73)
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES:					
Operating Income (Loss)	$ (1,786.75)	$ (1,180.95)	$ (263,039.13)	$ (85,414.50)	$ (351,421.33)
Adjustments to Reconcile Operating Income to Net Cash Provided (Used) by Operating Activities:					
Depreciation/Amortization Expense	-	97,455.60	139,643.64	57,530.39	294,629.63
Change in Assets and Liabilities:					
Accounts and Other Receivables	18,486.62	6,547.27	32,578.03	871.96	58,483.88
Inventories	-	5,729.45	(340.91)	(1,609.75)	3,778.79
Accounts and Other Payables	12,434.10	(9,288.50)	66,585.74	4,595.44	74,326.78
Accrued Wages Payable	-	(30.43)	410.00	-	379.57
Accrued Leave Payable	-	(1,868.55)	(4,475.43)	-	(6,343.98)
Customer Deposits		3,297.93			3,297.93
Net Cash Provided (Used) by Operating Activities	$ 29,133.97	$ 100,661.82	$ (28,638.06)	$ (24,026.46)	$ 77,131.27

1. Summary of Significant Accounting Policies

a. Financial Reporting Entity:

The reporting entity of the Municipality of Canton consists of the primary government (which includes all of the funds, organizations, institutions, agencies, departments, and offices that make up the legal entity); those organizations for which the primary government is financially accountable; and other organizations for which the nature and significance of their relationship with the primary government are such that their exclusion would cause the financial reporting entity's financial statements to be misleading or incomplete.

Component units are legally separate organizations for which the elected officials of the primary government are financially accountable. The Municipality is financially accountable if its Governing Board appoints a voting majority of another organization's governing body and it has the ability to impose its will on that organization, or there is a potential for that organization to provide specific financial benefits to, or impose specific financial burdens on, the Municipality (primary government). The Municipality may also be financially accountable for another organization if that organization is fiscally dependent on the Municipality.

The Canton Housing and Redevelopment Commission is a proprietary fund-type, component unit and its financial statements have not been included in that of the primary government. The five members of the Commission are appointed by the Mayor, with the approval of the Governing Board. The Commission elects its own chairperson. The Governing Board, though, retains the statutory authority to approve or deny or otherwise modify the Commission's plans to construct low-income housing units, or to issue debt, which gives the Governing Board the ability to impose its will on the Commission. Separately issued financial statements of the Canton Housing and Redevelopment Commission may be obtained from the Canton Housing and Redevelopment Commission, 903 West Fifth, Canton, SD 57013.

b. Basis of Presentation:

Government-wide Financial Statements:

The Statement of Net Position and Statement of Activities display information about the reporting entity as a whole. They include all funds of the reporting entity, except for fiduciary funds. The statements distinguish between governmental and business-type activities. Governmental activities generally are financed through taxes, intergovernmental revenues, and other non-exchange revenues. Business-type activities are financed in whole or in part by fees charged to external parties for goods or services.

The statement of activities presents a comparison between direct expenses and program revenues for each segment of the business-type activities of the Municipality and for each function of the Municipality's governmental activities. Direct expenses are those that are specifically associated with a program or function and, therefore, are clearly identifiable to a particular function. Program revenues include (a) charges paid by recipients of goods and services offered by the programs and (b) grants and contributions that are restricted to meeting the operational or capital requirements of a particular program. Revenues that are not classified as program revenues, including all taxes, are presented as general revenues.

Fund Financial Statements:

Fund financial statements of the reporting entity are organized into funds, each of which is considered to be a separate accounting entity. Each fund is accounted for by providing a separate set of self-balancing accounts that constitute its assets, liabilities, fund equity, revenues, and expenditures/expenses. Funds are organized into three major categories: governmental, proprietary, and fiduciary. An emphasis is placed on major funds within the governmental and proprietary categories. A fund is considered major if it is the primary operating fund of the Municipality or it meets the following criteria:

- Total assets, liabilities, revenues, or expenditures/expenses of the individual governmental or enterprise fund are at least 10 percent of the corresponding total for all funds of that category or type, and

- Total assets, liabilities, revenues, or expenditures/expenses of the individual governmental or enterprise fund are at least 5 percent of the corresponding total for all governmental and enterprise funds combined, or

- Management has elected to classify one or more governmental or enterprise funds as major for consistency in reporting from year to year, or because of public interest in the fund's operations.

The funds of the Municipality financial reporting entity are described below:

Governmental Funds:

General Fund – the General Fund is the general operating fund of the Municipality. It is used to account for all financial resources except those required to be accounted for in another fund. The General Fund is always considered to be a major fund.

Special Revenue Funds – special revenue funds are used to account for the proceeds of specific revenue sources (other than trusts for individuals, private organizations, or other governments or for major capital projects) that are legally restricted to expenditures for specified purposes.

BBB Tax Fund-to account for the third penny sales tax revenue.

Library Fund – to account for library contributions, fines and other revenues and related expenditures. This is not a major fund.

Debt Service Funds – debt service funds are used to account for the accumulation of resources for, and the payment of, general long-term debt principal, interest, and related *costs.*

Capital Project Funds – capital projects funds are used to account for financial resources to be used for the acquisition or construction of major capital facilities (other than those financed by proprietary funds or trust funds for individuals, private organizations, or other governments).

Proprietary Funds:

Enterprise Funds – enterprise funds are used to account for operations (a) that are financed and operated in a manner similar to private business enterprises, where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the

general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes.

The enterprise funds do not apply any FASB Statements and Interpretations issued after November 30, 1989.

Liquor Fund - financed by liquor, beer and merchandise sales this fund accounts for the operation of the municipal liquor store. This is a major fund.

Water Fund - financed primarily by user charges this fund accounts for the construction and operation of the municipal waterworks system and related facilities. (SDCL 9-47-1) This is a major fund.

Sewer Fund - financed primarily by user charges this fund accounts for the construction and operation of the municipal sanitary sewer system and related facilities. (SDCL 9-48-2) This is a major fund.

Airport Fund - financed primarily by user charges this fund accounts for the construction and operation of the municipal airport system and related facilities. This is a major fund.

c. Measurement Focus and Basis of Accounting:

Measurement focus is a term used to describe "how" transactions are recorded within the various financial statements. Basis of accounting refers to "when" revenues and expenditures or expenses are recognized in the accounts and reported in the financial statements, regardless of the measurement focus.

Fiduciary Funds:

Fiduciary funds consist of the following sub-categories and are never considered to be major funds:

Agency Funds – Agency funds are custodial in nature (assets equal liabilities) and do not involve measurement of results of operations. Agency funds are used to account for the special assessments funds in progress.

Measurement Focus:

Government-wide Financial Statements:

In the government-wide Statement of Net Position and Statement of Activities, both governmental and business-type activities are presented using the economic resources measurement focus, applied on the accrual basis of accounting.

Fund Financial Statements:

In the fund financial statements, the "current financial resources" measurement focus and the modified accrual basis of accounting are applied to governmental while the "economic resources" measurement focus and the accrual basis of accounting are applied to the proprietary and fiduciary fund types.

Basis of Accounting:

Government-wide Financial Statements:

In the government-wide Statement of Net Position and Statement of Activities and the fund financial statements, governmental and business-type activities are presented using the accrual basis of accounting. Under the accrual basis of accounting, revenues and related assets are recorded when earned (usually when the right to receive cash vests); and, expenses and related liabilities are recorded when an obligation is incurred (usually when the obligation to pay cash in the future vests).

Fund Financial Statements:

All governmental funds are accounted for using the modified accrual basis of accounting. Their revenues, including property taxes, are recognized when they become measurable and available. "Available" means resources are collected or to be collected soon enough after the end of the fiscal year that they can be used to pay the bills of the current period. The accrual period does not exceed one bill-paying cycle, and for the Municipality of Canton, the length of that cycle is 30 days. The revenues that were accrued at December 31, 2014 are sales taxes and other receivables.

Expenditures are generally recognized when the related fund liability is incurred. Exceptions to this general rule include principal and interest on general long-term debt which are recognized when due.

All proprietary funds and fiduciary funds are accounted for using the accrual basis of accounting. Their revenues are recognized when they are earned, and their expenses are recognized when they are incurred.

d. Interfund Eliminations and Reclassifications:

Government-wide Financial Statements:

In the process of aggregating data for the government-wide financial statements, some amounts reported as interfund activity and balances in the fund financial statements have been eliminated or reclassified, as follows:

1 In order to minimize the grossing-up effect on assets and liabilities within the governmental and business-type activities columns of the primary government, amounts reported as interfund receivables and payables have been eliminated in the governmental and business-type activities columns, except for the net, residual amounts due between governmental and business-type activities, which are presented as Internal Balances.

2. In order to minimize the doubling-up effect on internal service fund activity, certain "centralized expenses" including an administrative overhead component, are charged as direct expenses to funds or programs in order to show all expenses that are associated with a service, program, department, or fund. When expenses are charged, in this manner, expense reductions occur in the General Fund, so that expenses are reported only in the function to which they relate.

Fund Financial Statements:

Noncurrent portions of long-term interfund receivables (reported in "Advance to" asset accounts) are equally offset by a fund balance reserve account which indicates that they do not constitute "available spendable resources" since they are not a component of net current assets. Current portions of interfund receivables (reported in "Due from" asset accounts) are considered "available spendable resources."

e. Capital Assets:

Capital assets include land, buildings, machinery and equipment, and all other tangible or intangible assets that are used in operations and that have initial useful lives extending beyond a single reporting period. *Infrastructure assets* are long-lived capital assets that normally are stationary in nature and normally can be preserved for significantly greater number of years than most capital assets.

The accounting treatment over capital assets depends on whether the assets are used in governmental fund operations or proprietary fund operations and whether they are reported in the government-wide or fund financial statements.

Government-Wide Statements

Capital assets are recorded at historical cost, or estimated cost, where actual cost could not be determined. Donated capital assets are valued at their estimated fair value on the date donated. Reported cost values include ancillary charges necessary to place the asset into its intended location and condition for use. Subsequent to initial capitalization, improvements or betterments that are significant and which extend the useful file of a capital asset are also capitalized.

The total December 31, 2014 balance of governmental activities capital assets and business-type capital assets are all valued at original cost.

Infrastructure assets used in general government operations, consisting of certain improvements other than buildings, including roads, bridges, sidewalks, drainage systems, and lighting systems, acquired prior to January 1, 2004, were not required to be capitalized by the Municipality. Infrastructure assets acquired since January 1, 2004 are recorded at cost, and classified as "Improvements Other than Buildings."

For governmental activities Capital Assets, construction-period interest is not capitalized, in accordance with USGAAP, while for capital assets used in business-type activities/proprietary fund's operations, construction period interest is capitalized in accordance with USGAAP.

Depreciation of all exhaustible capital assets is recorded as an allocation expense in the government-wide Statement of Activities, except for that portion related to common use assets for which allocation would be unduly complex, and which is reported as Unallocated Depreciation, with net capital assets reflected in the Statement of Net Assets. Accumulated depreciation is reported on the government-wide Statement of Net Assets and on each proprietary fund's Statement of Net Assets/Balance Sheet.

Capitalization thresholds (the dollar values above which asset acquisitions are added to the capital asset accounts), depreciation methods, and estimated useful lives of capital assets reported in the government-wide statements and proprietary funds are as follows:

	Capitalization Threshold	Depreciation Method	Estimated Useful Life
Land and land rights	ALL	NA	NA
Improvements other than buildings	$25,000	Straight Line	10-30 YRS
Buildings	$50,000	Straight Line	25-75 YRS
Machinery and Equipment	$5,000	Straight Line	5-50 YRS

Land is an inexhaustible capital asset and is not depreciated.

Fund Financial Statements

In the fund financial statements, capital assets used in governmental fund operations are accounted for as Capital Outlay expenditures of the appropriate governmental fund upon acquisition. Capital assets used in proprietary fund operations are accounted for on the accrual basis, the same as in the government-wide statements.

f. Long-Term Liabilities:

The accounting treatment of long-term liabilities depends on whether the assets are used in governmental fund operations or proprietary fund operations and whether they are reported in the government-wide or fund financial statements.

All long-term liabilities to be repaid from governmental and business-type resources are reported as liabilities in the government-wide statements. The long-term liabilities primarily consist of special assessment bonds, state revolving fund loans, promissory notes, certificates of participation and compensated absences.

In the fund financial statements, debt proceeds are reported as revenues (other financing sources), while payments of principal and interest are reported as expenditures when they become due. The accounting for proprietary fund long-term debt is on the accrual basis, the same in the fund statements as in the government-wide statements.

g. Program Revenues:

Program revenues derive directly from the program itself or from parties other than the Municipality's taxpayers or citizenry, as a whole. Program revenues are classified into three categories, as follows:

1. Charges for services – These arise from charges to customers, applicants, or others who purchase, use, or directly benefit from the goods, services, or privileges provided, or are otherwise directly affected by the services.

2. Program-specific operating grants and contributions – These arise from mandatory and voluntary non-exchange transactions with other governments, organizations, or individuals that are restricted for use in a particular program.

3. Program-specific capital grants and contributions – These arise from mandatory and voluntary non-exchange transactions with other governments, organizations, or individuals that are restricted for the acquisition of capital assets for use in a particular program.

h. Proprietary Funds Revenue and Expense Classifications:

In the proprietary fund's Statement of Activities, revenues and expenses are classified in a manner consistent with how they are classified in the Statement of Cash Flows. That is, transactions for which related cash flows are reported as capital and related financing activities, noncapital financing activities, or investing activities are not reported as components of operating revenues or expenses.

i. Cash and Cash Equivalents:

The Municipality pools the cash resources of its funds for cash management purposes. The proprietary funds essentially have access to the entire amount of their cash resources on demand. Accordingly, each proprietary fund's equity in the cash management pool is considered to be cash and cash equivalents for the purpose of the Statement of Cash Flows.

j. Equity Classifications:

Government-wide Statements:

Equity is classified as net assets and is displayed in three components

1. Investment in capital assets– Consists of capital assets, including restricted capital assets, net of accumulated depreciation (if applicable) and reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets.

2. Restricted net assets – Consists of net assets with constraints placed on their use either by (a) external groups such as creditors, grantors, contributors, or laws and regulations of other governments; or (b) law through constitutional provisions or enabling legislation.

3. Unrestricted net assets – All other net assets that do not meet the definition of "restricted" or "invested in capital assets, net of related debt."

Fund Financial Statements:

Governmental fund equity is classified as fund balance, and may distinguish between "Reserved" and "Unreserved" components. Proprietary fund equity is classified the same as in the government-wide financial statements. Fiduciary fund equity (except for Agency Funds, which have no fund equity) is reported as net assets held in trust for other purposes.

k. Application of Net Assets:

It is the Municipality's policy to first use restricted net assets, prior to the use of unrestricted net assets, when an expense is incurred for purposes for which both restricted and unrestricted net assets are available.

2. Deposits and Investments Credit Risk, Concentrations of Credit Risk and Interest Rate Risk:

The Municipality follows the practice of aggregating the cash assets of various funds to maximize cash management efficiency and returns. Various restrictions on deposits and investments are imposed by statutes. These restrictions are summarized below:

Deposits - The Municipality's cash deposits are made in qualified public depositories as defined by SDCL 4-6A-1, 7-20-1, 7-20-1.1 and 7-20-1.2, and may be in the form of demand or time deposits. Qualified depositories are required by SDCL 4-6A-3 to maintain at all times,

segregated from their other assets, eligible collateral having a value equal to at least 100 percent of the public deposit accounts which exceed deposit insurance such as the FDIC and NCUA. In lieu of pledging eligible securities, a qualified public depository may furnish irrevocable standby letters of credit issued by Federal Home Loan Banks accompanied by written evidence of that bank's public debt rating which may not be less than "AA" or a qualified public depository may furnish a corporate surety bond of a corporation authorized to do business in South Dakota.

Investments – In general, SDCL 4-5-6 permits Municipality funds to be invested only in (a) securities of the United States and securities guaranteed by the United States Government either directly or indirectly; or (b) repurchase agreements fully collateralized by securities described in (a) above; or in shares of an open-end, no-load fund administered by an investment company whose investments are in securities described in (a) above and repurchase agreements described in (b) above. Also, SDCL 4-5-9 requires investments to be in physical custody of the political subdivision or may be deposited in a safe keeping account with any bank or trust company designated by the political subdivision as its fiscal agent.
Credit Risk- State law limits eligible investments for the Municipality, as discussed above. The Municipality has no investment policy that would further limit its investment choices.

As of December 31, 2014, the Municipality had the following investments. All investments are in an internal deposit and investment pool.

External Investment Pools:	
SDFIT - Government Cash Reserves	$ 261,712.58
TOTAL INVESTMENTS	$ 261,712.58

The South Dakota Public Fund Investment Trust (SDFIT-GCR) is an external investment pool created for South Dakota local government investing. It is regulated by a nine-member board with representation from municipalities, school districts and counties. The net asset value of the SDFIT money market account (GCR) is kept at one dollar per share by adjusting the rate of return on a daily basis. Earnings are credited to each account on a monthly basis.

Concentration of Credit Risk- The Municipality places no limit on the amount that may be invested in any one issuer. All of the Municipality's investments are in the South Dakota Public Investment Trust.

Interest Rate Risk- The Municipality does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Assignment of Investment Income – State law allows income from deposits and investments to be credited to either the General Fund or the fund making the investment. The Municipality's policy is to credit all income from investments to the General Fund except for the Water and Sewer Fund Investments.

3. Receivables and Payables:

Receivables and Payables are not aggregated in these financial statements. The Municipality expects all receivables to be collected within one year.

4. Inventory:

Inventory in the General Fund consists of expendable supplies held for consumption. Supply inventories are recorded at cost.

Inventory acquired for resale in the proprietary funds is recorded as an asset when acquired. The consumption of inventories held for resale is charged to expense as it is consumed. Inventories held for resale are recorded at the lower of cost or market, on the first-in, first-out cost flow assumption.

Government-wide Financial Statements:

In the government-wide financial statements, inventory is recorded as an asset at the time of purchase, and charged to expense as it is consumed.

Fund Financial Statements:

In the fund financial statements, purchases of supply inventory items are recorded as an expenditure at the time individual inventory items are purchased. Reported inventories are equally offset by a fund balance reserve, which indicates that they do not constitute "available spendable resources" even though they are a component of net current assets.

5. Deferred Revenue:

Under the modified accrual basis of accounting, receivables may be measurable but not available. Available means collectible within the current period or soon enough thereafter to be used to pay liabilities of the current period. Reported deferred revenues are those where asset recognition criteria have been met but for which revenue recognition criteria have not been met.

6. Property Taxes:

Property taxes attach as an enforceable lien on property as of January 1 of each year. Taxes are levied on or before October 1 and payable in two installments on or before April 30 and October 31 of the following year.

The Municipality is permitted by several state statutes to levy varying amounts of taxes per $1,000 of taxable valuation on taxable real property in the Municipality.

7. Changes In Capital Assets

A summary of changes in capital assets for the year ended December 31, 2014 is as follows:

Governmental Activities	Balance 1/1/2014	Adjustments	Increases	Decreases	Balance 12/31/2014
Capital Assets, not being Depreciated					
Land	$ 290,166.00				$ 290,166.00
Construction Work in Progress	104,399.24	-	153,875.73	11,674.00	246,600.97
Total Capital Assets, not being depreciated	394,565.24	-	153,875.73	11,674.00	536,766.97
Capital Assets, being Depreciated					
Building	2,383,296.01	12,824.98	13,585.10		2,409,706.09
Improvements Other than Building	1,128,438.19	325,966.12	303,791.04	39,660.24	1,718,535.11
Machinery and Equipment	1,633,937.41		784,371.94	273,871.03	2,144,438.32
Library Books	338,791.10	(338,791.10)	-	-	-
Total Being Depreciated	5,484,462.71	-	1,101,748.08	313,531.27	6,272,679.52
Less Accumulated Depreciation for:					
Building	698,425.29		54,990.55		753,415.84
Improvements Other than Building	272,094.17	100,267.46	41,465.10	39,660.24	374,166.49
Machinery and Equipment	1,010,711.51		81,150.12	216,600.67	875,260.96
Library Books	100,267.46	(100,267.46)	-	-	-
Total Accumulated Depreciation	2,081,498.43	-	177,605.77	256,260.91	2,002,843.29
Total Governmental Activities Capital Assets, net	$ 3,797,529.52	$ -	$ 1,078,018.04	$ 68,944.36	$ 4,806,603.20
Depreciation Expense was charged to functions as follows:					
General Government					$ 33,685.37
Public Safety					44,172.01
Public Works					57,815.17
Culture and Recreation					41,933.18
Total Depreciation Expense-Governmental					$ 177,605.73

Business - Type Activities:	Balance 1/1/2014	Adjustments	Increases	Decreases	Balance 12/31/2014
Capital Assets, not being Depreciated					
Land	117,444.36			$ 600.00	116,844.36
CWIP	92,303.50	-	726,958.65	-	819,262.15
Total	209,747.86	-	726,958.65	600.00	936,106.51
Capital Assets, being Depreciated					
Building	444,264.06			60,068.96	384,195.10
Improvements Other than Building	11,217,714.32		489,095.89	67,236.59	11,639,573.62
Machinery and Equipment	577,535.04	-	83,316.06	7,986.87	652,864.23
Total	12,239,513.42	-	572,411.95	135,292.42	12,676,632.95
Less Accumulated Depreciation for:					
Building	89,332.26		8,050.56	49,202.08	48,180.74
Improvements Other than Building	2,778,219.57		248,269.72	45,125.70	2,981,363.59
Machinery and Equipment	266,778.85	-	38,309.35	7,986.87	297,101.33
Total Accumulated Depreciation	3,134,330.68	-	294,629.63	102,314.65	3,326,645.66
Total Business-Type Activities Capital Assets, net	$ 9,314,930.60				$10,286,093.80

Depreciation expense was charged to functions as follows:	
Liquor	$ -
Water	97,455.60
Sanitary Sewer	139,643.64
Airport	57,530.39
Total Depreciation Expense- Business-type Activities	$294,629.63

8. Long-Term Debt

A summary of changes in long-term debt follows:

	Beginning Balance	Additions	Retired	Ending Balance	Due within One Year
Primary Government:					
Governmental Activities:					
Notes Payable	9,506.21	3,000.00	3,224.32	9,281.89	3,554.90
OPEB	46,557.43	11,758.16		58,315.59	
Accrued Compensated Absences - Governmental Funds	86,754.64	1,479.03	1,289.51	86,944.16	
Total Governmental Activities	142,818.28	16,237.19	4,513.83	154,541.64	3,554.90
Business-Type Activities:					
Certificates of Participation	-			-	
State Revolving Loan	2,208,400.76	672,938.06	118,291.48	2,763,047.34	133,397.01
Accrued Compensated Absences - Business-Type Funds	14,431.14	1,131.45	1,475.43	14,087.16	
Total Business - Type Activities	2,222,831.90	674,069.51	119,766.91	2,777,134.50	133,397.01
Total Primary Government	$ 2,365,650.18	$ 690,306.70	$ 124,280.74	$ 2,931,676.14	$ 136,951.91

Debt payable at December 31, 2014 is comprised of the following:

State Revolving Loans

Drinking Water #1, maturing in 2024 with an interest rate of 3.5%. The payments are made from the Water Fund.	293,298.81
Clean Water #2, maturing in 2024 with an interest rate of 3.50%. The payments are made from the Sewer Fund.	351,920.58
Clean Water #3, maturing in 2031 with an interest rate of 3.00%. The payments are made from the Sewer Fund.	1,386,409.89
Clean Water #4, maturing in 2044 with and interest rate of 3.25%. The payments are made from the Sewer Fund.	731,418.36

Capital Lease:

Copier lease, maturing in 2017, with a payment of $276.43 per month. Payments to be made from the General Fund.	6,504.29
Copier lease, maturing in 2019, with a payment of $56.61 per month. Payments to be made from the General Fund.	2,777.60

Compensated Absences:

Vested sick leave, payable as used or on termination. Payments to be made from the General, Liquor, Water, and Sewer Funds.	101,031.32

The annual requirements to amortize all debt outstanding as of December 31, 2014, except for compensated absences are as follows:

Governmental Activities

Year Ending Dec 31,			Copier Capital Lease				Total	
			Principal	Interest			Principal	Interest
2015			3,554.92	441.56			3,554.92	441.56
2016			3,583.21	363.27			3,583.21	363.27
2017			1,111.48	120.70			1,111.48	120.70
2018			642.29	37.03			642.29	37.03
2019	-	-	389.99	6.53	-	-	389.99	6.53
TOTAL	-	-	9,281.89	969.09	-	-	9,281.89	969.09

Business-Type Activities

Year Ending Dec 31,	Certificates of Participation		State Revolving Loan		Total	
	Principal	Interest	Principal	Interest	Principal	Interest
2015			133,973.01	80,445.25	133,973.01	80,445.25
2016			141,563.53	81,939.59	141,563.53	81,939.59
2017			146,189.03	77,314.09	146,189.03	77,314.09
2018			150,966.53	72,536.59	150,966.53	72,536.59
2019			155,900.97	67,602.15	155,900.97	67,602.15
2020-2024			859,387.93	258,127.67	859,387.93	258,127.67
2025-2029			592,104.00	141,663.20	592,104.00	141,663.20
2030-2034			261,732.42	66,622.28	261,732.42	66,622.28
2035-Beyond			321,803.18	54,968.57	321,803.18	54,968.57
TOTAL	-	-	2,763,620.60	901,219.39	2,763,620.60	901,219.39

9. Segment Information for Enterprise Funds:

This requirement is effectively met by the statements in this report because all enterprise funds maintained by the municipality have been reported as major funds, and therefore, the required segment information has already been disclosed in the fund basic financial statements.

10. Restricted Net Assets:

The following table shows the net assets restricted for other purposes on the Statement of Net Assets:

Restriction	Restricted By	Amount
Debt Service	Debt Covenants	$ -
Insurance	Contract Agreement	67,416.39
Special Revenue	State Law	106,288.28
		-
Total		$173,704.67

11. Retirement Plan

All employees, except for part-time employees, participate in the South Dakota Retirement System (SDRS), a cost sharing, multiple employer public employee retirement system established to provide retirement benefits for employees of the State of South Dakota and its political subdivisions. The SDRS provides retirement, disability and survivor benefits. The right to receive retirement benefits vests after three years of credited service. Authority for establishing, administering and amending plan provisions are found in South Dakota Codified Law 3-12. The SDRS issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained by writing to the SDRS, P.O. Box 1098, Pierre, SD 57501-1098 or by calling (605) 773-3731.

General employees are required by state statute to contribute 6 percent of their salary to the plan, while public safety and judicial employees contribute at 8 percent and 9 percent, respectively. State statute also requires the employer to contribute an amount equal to the employee's contribution. State statute also requires the employer to make an additional contribution in the amount of 6.2 percent for any compensation exceeding the maximum taxable amount for social security for general employees only. The Municipality's share of contributions to the SDRS for the fiscal years ended December 31, 2014, 2013, and 2012 were $60,268.54, $56,201.12, and $56,120.41, respectively, equal to the required contributions each year.

12. Other Post Employment Benefits - Healthcare Plan:

Plan Description. Retiree Healthcare Plan is a single-employer defined benefit healthcare plan administered by the Municipality. The Retiree Healthcare Plan provides medical insurance benefits to eligible retirees and their spouses as permitted by South Dakota Codified Law 6-1-16. Benefit provisions were established and may be amended by governing board. The health plan does not issue separately stated stand-alone financial statements.

Funding Policy. The contribution requirements of plan members and the Municipality are established and may be amended by the governing board. An employee or spouse, who retires from the Municipality on or after the age of 55 and with are eligible for full retirement benefits through the South Dakota Retirement System, may be eligible for retiree health insurance coverage. Coverage ceases when the retiree attains the age of 65. The retiree is responsible for 100% of the full active premium rates for either single or family coverage. (pay-as-you-go basis).

Annual OPEB Cost and Net OPEB Obligation. The Municipality's annual other postemployment benefit (OPEB) cost is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities over a period not to exceed thirty years. The following table shows the financial components of the plan:

Annual Required Contribution (ARC)	$ 11,758.16
Interest on net OPEB obligation	0.00
Adjustment to annual required contribution	(0.00)
Annual OPEB Cost	$ 11,758.16
Contributions made	(0.00)
Increase (Decrease) in net OPEB obligation	$ 0.00
Net OPEB obligation – beginning of year	$ 46,557.43
Net OPEB obligation – end of year	$ 58,315.59

The Municipality's annual OPEB cost data and net OPEB obligation was as follows:

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
2014	$ 11,758.16	0%	$11,758.16
2013	$ 11,758.16	0%	$11,758.16

Funded Status and Funding Progress. As of December 31, 2012, the most recent actuarial valuation date, the plan's statistics were as follows:

Actuarial Accrued Liability		$ 53,194.00
Actuarial Value of Benefit Assets		0.00
Unfunded Actuarial Accrued Liability		$ 53,194.00
Funded Ratio		0%
Covered Payroll		$ 1,317,002.15
Unfunded Actuarial Accrued Liability as a		
Percentage of Covered payroll		4.09%

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

Actuarial Methods and Assumptions. Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

In the alternative measure method, actuarial valuation, the entry age method was used. The actuarial assumptions included a 5.0% rate of return and an annual healthcare cost trend rate of 10 percent initially, reduced by decrements to an ultimate rate of 5 percent after 10 years. Both rates include a 3 percent inflation assumption. The UAAL is being amortized as a level percentage of projected payroll on an open basis. The remaining amortization period at 2014 was 30 years.

13. Risk Management:

The city is exposed to various risks of loss related to tort; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. During the period ended December 31, 2014, the city managed its risks as follows:

Employee Health Insurance:

The city purchases health insurance for its employees from a commercial insurance carrier. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

Liability Insurance:
The Municipality joined the South Dakota Public Assurance Alliance, a public entity risk pool currently operating as a common risk management and insurance program for South Dakota local entities. The Municipality pays an annual premium to the pool to provide coverage for torts, thefts, errors and omissions, automobile and general liability.

The agreement with the South Dakota Public Assurance Alliance (SDPAA), a public risk pool currently operating as a common risk management and insurance program for South Dakota local government entities. The objective of the SDPAA is to administer and provide risk management services and risk sharing facilities to the members and to defend and protect the members against liability, to advise members on loss control guidelines and procedures, and provide them with risk management service, loss control and risk reduction information and obtain lower costs for that coverage. The Municipality's responsibility is to promptly report to and cooperate with the SDPAA to resolve any incident, which could result in a claim being made by or against the Municipality. The Municipality pays an annual premium, to provide liability coverage detailed below, under a claims-made policy and the premiums are accrued based on the ultimate cost of the experience to date of the SDPAA member, based in their exposure or type of coverage. The Municipality pays an annual premium to the pool to provide coverage for automobile and general liability insurance.

The agreement with the SDPPA provides that the above coverages will be provided to a $5,000,000 limit. Member premiums are used by the pool for payment of claims and to pay for reinsurance for claims in excess of $250,000 to the upper limit. A portion of the member premiums are also allocated to a cumulative reserve fund. The Municipality would be eligible to receive a refund for a percentage of the amount allocated to the cumulative reserve fund on the following basis:

End of Municipality's First Full Year	50%
End of Municipality's Second Full Year	60%
End of Municipality's Third Full Year	70%
End of Municipality's Fourth Full Year	80%
End of Municipality's Fifth Full Year	90%
End of Municipality's Sixth Full Year and Thereafter	100%

The Municipality carries a $500 deductible for official's liability coverage and $2,000 law enforcement liabilities.

The Municipality of Canton does not carry additional insurance to cover claims in excess of the upper limit. Settled claims resulting from these risks have never exceeded the liability coverage.

Workmen's Compensation:
The Municipality joined the South Dakota Municipal League Worker's Compensation Fund (Fund), a public risk pool currently operating as a common risk management and insurance program for the South Dakota local government entities. The objective of the Fund is to formulate, develop, and administer, on behalf of the member organizations, a program of worker's compensation coverage, to obtain lower costs for that coverage, and to develop a

comprehensive loss control program. The Municipality's responsibility is to initiate and maintain a safety program to give its employees safe and sanitary working conditions and to promptly report to and cooperate with the Fund to resolve any worker's compensation claims. The Municipality pays an annual premium, to provide worker's compensation coverage for its employees, under a retrospectively rated policy and the premiums are accrued based in the ultimate cost of the experience to date of the Fund members. Coverage limits are set by state statute. The pool pays the first $325,000 of any claim per individual. The pool has reinsurance, which covers up to an additional $1,675,000 per individual per incident.

The Municipality does not carry additional insurance to cover claims in excess of the upper limit. Settled claims from these risks have never exceeded the liability coverage.

Unemployment Benefits:
The city provides coverage for unemployment benefits by paying into the Unemployment Compensation Fund established by state law and managed by the State of South Dakota.

REQUIRED SUPPLEMENTARY INFORMATION
MUNICIPALITY OF CANTON
BUDGETARY COMPARISON SCHEDULE
GENERAL FUND
For the Year Ended December 31, 2014

	Budgeted Amounts		Actual Amounts (Budgetary Basis)	Variance Positive (Negative)
	Original	Final		
Revenues:				
Taxes:				
General Property Taxes	$ 1,194,100.00	$ 1,194,100.00	$ 1,181,697.94	$ (12,402.06)
General Sales and Use Taxes	850,000.00	850,000.00	963,330.70	113,330.70
Penalties and Interest on Delinquent Taxes			-	-
Licenses and Permits	18,550.00	18,550.00	32,217.90	13,667.90
Intergovernmental Revenue:				
Grants			170,788.15	170,788.15
State Shared Revenue:				
Liquor Tax Reversion	20,000.00	20,000.00	34,619.99	14,619.99
Motor Vehicle Licenses (5%)	8,000.00	8,000.00	17,718.09	9,718.09
Local Government Highway and Bridge Fund	60,000.00	60,000.00	67,942.68	7,942.68
County Shared Revenue:				
County Wheel Tax	5,000.00	5,000.00	16,795.64	11,795.64
Other	6,000.00	6,000.00		(6,000.00)
Charges for Goods and Services:				
General Government	229,000.00	229,000.00	262,728.94	33,728.94
Public Safety	4,800.00	4,800.00	1,712.00	(3,088.00)
Highways and Streets	14,150.00	14,150.00	6,103.80	(8,046.20)
Sanitation	23,000.00	23,000.00	11,710.40	(11,289.60)
Health	500.00	500.00	1,500.00	1,000.00
Culture and Recreation	48,500.00	48,500.00	35,932.62	(12,567.38)
Fines and Forfeits:				
Court Fines and Costs	1,000.00	1,000.00	1,120.35	120.35
Miscellaneous Revenue:				
Investment Earnings	26,000.00	26,000.00	18,308.10	(7,691.90)
Special Assessment Revenue	-	-	-	-
Contributions and Donations from Private Sources	2,000.00	2,000.00	8,624.43	6,624.43
Transfers	100,000.00	100,000.00	100,000.00	-
Other	12,000.00	12,000.00	79,564.66	67,564.66
Total Revenue	2,622,600.00	2,622,600.00	3,012,416.39	389,816.39
Expenditures:				
General Government:				
Legislative	24,850.00	24,850.00	17,439.06	7,410.94
Executive	221,750.00	221,750.00	198,668.94	23,081.06
Elections	3,600.00	3,600.00	1,946.21	1,653.79
Financial Administration	207,500.00	223,500.00	196,098.49	27,401.51
City Attorney	25,300.00	25,300.00	13,494.44	11,805.56
Other	86,700.00	109,700.00	84,112.65	25,587.35
Total General Government	569,700.00	608,700.00	511,759.79	96,940.21

REQUIRED SUPPLEMENTARY INFORMATION
MUNICIPALITY OF CANTON
BUDGETARY COMPARISON SCHEDULE
GENERAL FUND
For the Year Ended December 31, 2014

	Budgeted Amounts		Actual Amounts (Budgetary Basis)	Variance Positive (Negative)
	Original	Final		
Public Safety:				
Police	478,100.00	478,100.00	451,866.79	26,233.21
Fire	458,050.00	466,050.00	460,190.59	5,859.41
Total Public Safety	936,150.00	944,150.00	912,057.38	32,092.62
Public Works:				
Highways and Streets	859,950.00	1,864,950.00	1,074,018.90	790,931.10
Sanitation	62,500.00	112,500.00	100,382.10	12,117.90
Total Public Works	922,450.00	1,977,450.00	1,174,401.00	803,049.00
Health and Welfare:				
Health & Welfare	29,500.00	29,500.00	24,008.67	5,491.33
Total Health and Welfare	29,500.00	29,500.00	24,008.67	5,491.33
Culture and Recreation:				
Recreation	163,300.00	171,300.00	142,775.09	28,524.91
Parks	154,450.00	182,950.00	169,091.40	13,858.60
Libraries	217,145.00	217,145.00	184,932.19	32,212.81
Total Culture and Recreation	534,895.00	571,395.00	496,798.68	74,596.32
Conservation and Development:				
Economic Development and Assistance (Industrial Development)	22,150.00	22,150.00	17,080.00	5,070.00
Total Conservation and Development	22,150.00	22,150.00	17,080.00	5,070.00
Total Transfers	26,000.00	26,000.00	26,000.00	-
Total Expenditures	3,040,845.00	4,179,345.00	3,162,105.52	1,017,239.48
Excess of Revenue Over (Under) Expenditures	(418,245.00)	(1,556,745.00)	(149,689.13)	1,407,055.87
Net Change in Fund Balances	(418,245.00)	(1,556,745.00)	(149,689.13)	1,407,055.87
Fund Balance - Beginning	3,484,860.00	3,484,860.00	3,484,860.00	
Adjustment to Beginning F/B				
FUND BALANCE - ENDING	$ 3,066,615.00	$ 1,928,115.00	$ 3,335,170.87	$ 1,407,055.87

Foot Notes *

REQUIRED SUPPLEMENTARY INFORMATION
MUNICIPALITY OF CANTON
BUDGETARY COMPARISON SCHEDULE
BBB SALES TAX FUND
For the Year Ended December 31, 2014

	Budgeted Amounts		Actual Amounts (Budgetary Basis)	Variance Positive (Negative)
	Original	Final		
Revenues:				
Taxes:				
General Sales and Use Taxes	$ 35,000.00	$ 35,000.00	$ 50,660.32	$ 15,660.32
Total Revenue	35,000.00	35,000.00	50,660.32	15,660.32
Expenditures:				
Debt Service	-	-	-	-
Economic Development and Assistance (Industrial Developme	16,500.00	17,500.00	17,280.00	220.00
Total Expenditures	16,500.00	17,500.00	17,280.00	220.00
Net Change in Fund Balances	18,500.00	17,500.00	33,380.32	15,880.32
Fund Balance - Beginning	50,376.59	50,376.59	50,376.59	
FUND BALANCE - ENDING	$ 68,876.59	$ 67,876.59	$ 83,756.91	$ 15,880.32

MUNICIPALITY OF CANTON
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
For the Year Ended December 31, 2014

Federal Grantor/Pass-Through Grantor Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Expenditures 2014
Indirect Federal Funding:			
SD Department of Transportation,			
Highway Planning and Construction:			
Transportation Enhancement Projects	20.205		123,100.57
SD Department of Commerce and Regulation,			
State and Community Highway Safety	20.600		659.30
Alcohol Traffic Safety and Drunk Driving Prevention Incentive Grants	20.601		317.20
Total Department of Transportation			124,077.07
General Services Administration:			
Indirect Federal Funding:			
SD Federal Property Agency,			
Donation of Federal Surplus Personal Property **(Note 4)**	39.003		234.74
Total General Services Administration			234.74
Environmental Protection Agency			
Indirect Federal Funding:			
Capitalization Grant for Clean Water State Revolving Funds	66.458		341,497.00
Total Environmental Protection Agency			341,497.00
Homeland Security			
Indirect Federal Funding			
Disaster Grants	97.036		122,178.88
Total Homeland Security			122,178.88
GRAND TOTAL			$587,987.69

(NOTE: Determine and include any in-lieu-of type federal revenues in this statement.)

Note 1: This accompanying schedule of expenditures of federal awards includes the federal grant activity of the municipality and is presented on the modified accrual/full accrual basis of accounting unless otherwise noted. The information in this schedule is presented in accordance with the requirements of OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations. Therefore, some amounts presented in this schedule may differ from amounts presented in, or used in the preparation of, the the general purpose financial statements.

Note 2: Federal reimbursements are not based upon specific expenditures. Therefore, the amounts reported here represent cash received rather than federal expenditures.

Note 3: This represents a Major Federal Financial Assistance Program.

Note 4: The amount reported represents 23.3% of the original acquisition cost of the federal surplus property received by the municipality.

MUNICIPALITY OF CANTON
SCHEDULE OF CHANGES IN LONG-TERM DEBT
For the Year Ended December 31, 2014

Indebtedness	Long-Term Debt January 1, 2014	Add New Debt	Less Debt Retired	Long-Term Debt December 31, 2014
Governmental Long-Term Debt:				
231.01 General Obligation Bonds				
231.02 Revenue Bonds				
231.03 Special Assessment Bonds				
236 Advance from Other Funds				
237 Other Long-Term Liabilities	96,260.85	4,479.03	4,513.83	96,226.05
Enterprise Long-Term Debt: (only cash basis entities need to complete the enterprise section)				
231.01 General Obligation Bonds				
231.02 Revenue Bonds	2,208,400.76	672,938.06	118,291.48	2,763,047.34
231.03 Special Assessment Bonds				
235 Accrued Landfill Closure and Postclosure Care Costs				
236 Advance from Other Funds				
237 Other Long-Term Liabilities	14,431.14	1,131.45	1,475.43	14,087.16
Total	2,319,092.75	678,548.54	124,280.74	2,873,360.55

(Do not include interest in the above figures)

OBJ	OBJ Descr	2013 Amt	2014 Amt	2015 YTD Amt	2015 Budget	2016 Budget
FUND 602 Water Fund						
DEPT 4332 Water Billing Expense						
OBJ Alt Code 410 - Personnel Svcs						
411000	Salaries & Wages	$2,082.26	$2,542.40	$0.00	$0.00	$0.00
412000	Social Security	$0.00	$0.00	$0.00	$0.00	$0.00
413000	Retirement	$0.00	$0.00	$0.00	$0.00	$0.00
414000	Workmens Compensa	$0.00	$0.00	$0.00	$0.00	$0.00
415000	Group Insurance	$0.00	$0.00	$0.00	$0.00	$0.00
416000	Unemployment	$0.00	$0.00	$0.00	$0.00	$0.00
OBJ Alt Code 410 - Pers		$2,082.26	$2,542.40	$0.00	$0.00	$0.00
OBJ Alt Code 420- Other Current Expense						
421000	Insurance	$0.00	$4,282.14	$4,312.52	$4,000.00	$0.00
422000	Professional Services	$439.41	$471.61	$1,872.32	$1,500.00	$0.00
422100	Administration Fee	$35,000.00	$39,000.00	$0.00	$45,000.00	$0.00
423000	Publishing	$0.00	$0.00	$0.00	$100.00	$0.00
OBJ Alt Code 420- Other		$35,439.41	$43,753.75	$6,184.84	$50,600.00	$0.00
OBJ Alt Code 425 - Repairs & Maintenance						
425000	Repairs & Maintenanc	$390.00	$0.00	$397.50	$1,000.00	$0.00
OBJ Alt Code 425 - Repa		$390.00	$0.00	$397.50	$1,000.00	$0.00
OBJ Alt Code 426 - Supplies & Materials						
426100	Supplies & Materials	$1,274.68	$2,383.92	$2,021.03	$3,500.00	$0.00
426130	Office Supplies	$0.00	$0.00	$0.00	$100.00	$0.00
426170	Postage	$3,921.75	$4,350.82	$2,800.31	$5,000.00	$0.00
OBJ Alt Code 426 - Supp		$5,196.43	$6,734.74	$4,821.34	$8,600.00	$0.00
OBJ Alt Code 427 - Travel & Training						
427000	Travel & Training	$10.00	$0.00	$0.00	$200.00	$0.00
427100	Mileage	$0.00	$0.00	$0.00	$150.00	$0.00
427300	Registration Fees	$0.00	$0.00	$0.00	$100.00	$0.00
OBJ Alt Code 427 - Trav		$10.00	$0.00	$0.00	$450.00	$0.00
OBJ Alt Code 429 - Other Expense						
429100	Other Expense	$23.19	$19.35	$22.92	$600.00	$0.00
429120	RSVP Donation	$1,250.00	$1,250.00	$0.00	$0.00	$0.00
OBJ Alt Code 429 - Othe		$1,273.19	$1,269.35	$22.92	$600.00	$0.00
OBJ Alt Code 430 - Capital Expense						
434100	Computers & Softwar	$0.00	$9,584.15	$1,768.50	$2,500.00	$0.00
OBJ Alt Code 430 - Capit		$0.00	$9,584.15	$1,768.50	$2,500.00	$0.00
DEPT 4332 Water Billing Ex		$44,391.29	$63,884.39	$13,195.10	$63,750.00	$0.00

OBJ	OBJ Descr	2013 Amt	2014 Amt	2015 YTD Amt	2015 Budget	2016 Budget
DEPT 4335 Water Administration						
OBJ Alt Code 410 - Personnel Svcs						
411000	Salaries & Wages	$77,941.02	$90,170.54	$75,250.76	$96,000.00	$105,500.00
412000	Social Security	$5,878.43	$6,831.15	$5,430.83	$7,500.00	$8,000.00
413000	Retirement	$4,443.18	$5,134.62	$4,226.82	$5,500.00	$6,000.00
414000	Workmens Compensa	$90.14	$2,645.81	$2,959.49	$3,000.00	$3,000.00
415000	Group Insurance	$18,145.38	$27,769.54	$25,421.04	$18,500.00	$18,000.00
416000	Unemployment	$324.76	$291.93	$319.02	$500.00	$500.00
417000	Leave Payable Expen	-$430.31	$1,131.45	$0.00	$0.00	$0.00
OBJ Alt Code 410 - Pers		$106,392.60	$133,975.04	$113,607.96	$131,000.00	$141,000.00
OBJ Alt Code 420- Other Current Expense						
421000	Insurance	$11,465.08	$4,282.14	$4,481.27	$12,000.00	$16,000.00
422000	Professional Services	$35,300.94	$13,058.36	$54,003.86	$28,000.00	$29,500.00
422100	Administration Fee	$30,000.00	$34,000.00	$0.00	$37,000.00	$85,000.00
423000	Publishing	$404.26	$433.69	$818.96	$800.00	$900.00
424000	Rentals	$0.00	$0.00	$0.00	$200.00	$200.00
OBJ Alt Code 420- Other		$77,170.28	$51,774.19	$59,304.09	$78,000.00	$131,600.00
OBJ Alt Code 425 - Repairs & Maintenance						
425000	Repairs & Maintenanc	$31,424.72	$36,749.91	$18,499.25	$11,000.00	$12,000.00
425100	Motor Vehicle Repair	$0.00	$80.50	$0.00	$3,000.00	$3,000.00
425200	Equipment Repair &	$0.00	$0.00	$0.00	$7,000.00	$7,000.00
425210	Well Repair & Maint	$0.00	$5,603.52	$0.00	$30,000.00	$30,000.00
OBJ Alt Code 425 - Repa		$31,424.72	$42,433.93	$18,499.25	$51,000.00	$52,000.00
OBJ Alt Code 426 - Supplies & Materials						
426100	Supplies & Materials	$9,393.39	$49,255.85	$29,294.08	$50,000.00	$53,500.00
426110	Motor Vehicle Fuels	$4,773.10	$5,487.92	$3,308.61	$4,000.00	$6,500.00
426111	Motor Vehicle Oil	$532.01	$55.04	$225.56	$1,000.00	$1,000.00
426112	Tires	$2,767.97	$685.70	$923.46	$3,000.00	$3,000.00
426150	Chemicals	$17,897.81	$23,244.55	$16,947.87	$25,000.00	$25,000.00
426160	Uniforms	$1,534.38	$1,500.81	$1,564.53	$2,500.00	$2,500.00
426170	Postage	$958.93	$389.90	$887.18	$1,100.00	$6,100.00
OBJ Alt Code 426 - Supp		$37,857.59	$80,619.77	$53,151.29	$86,600.00	$97,600.00
OBJ Alt Code 427 - Travel & Training						
427000	Travel & Training	$847.41	$261.60	$755.50	$5,000.00	$5,000.00
427100	Mileage	$0.00	$165.13	$0.00	$500.00	$500.00
427300	Registration Fees	$1,135.00	$1,782.00	$675.00	$1,500.00	$2,000.00
OBJ Alt Code 427 - Trav		$1,982.41	$2,208.73	$1,430.50	$7,000.00	$7,500.00
OBJ Alt Code 428 - Utility Expense						
428100	Electricity	$60,417.04	$48,532.40	$44,972.30	$55,000.00	$55,000.00
428200	Heating	$2,247.18	$2,587.00	$1,147.48	$6,000.00	$6,000.00
428300	Telephone	$772.85	$898.60	$783.66	$2,500.00	$2,500.00
428320	Cellular Phone Servic	$805.44	$747.93	$778.18	$1,500.00	$1,500.00
428500	Garbage Fees	$268.75	$293.75	$233.75	$1,000.00	$1,000.00
OBJ Alt Code 428 - Utilit		$64,511.26	$53,059.68	$47,915.37	$66,000.00	$66,000.00
OBJ Alt Code 429 - Other Expense						
429100	Other Expense	$3,235.60	$128.25	$1,242.66	$6,600.00	$7,200.00
429420	Contingency Fund	$0.00	$0.00	$0.00	$1,500.00	$1,500.00
429999	Water Deposit Refund	$0.00	$0.00	$0.00	$0.00	$0.00
456000	Loss on Disposition of	$0.00	$0.00	$0.00	$0.00	$0.00
457000	Depreciation Expense	$91,513.96	$97,455.60	$0.00	$30,000.00	$30,000.00

OBJ	OBJ Descr	2013 Amt	2014 Amt	2015 YTD Amt	2015 Budget	2016 Budget
OBJ Alt Code 429 - Othe		$94,749.56	$97,583.85	$1,242.66	$38,100.00	$38,700.00
OBJ Alt Code 430 - Capital Expense						
431000	Land	$0.00	$0.00	$0.00	$10,000.00	$10,000.00
432000	Buildings	$0.00	$0.00	$0.00	$6,000.00	$6,000.00
433112	Water Improvements	$0.00	$0.00	$0.00	$420,000.00	$400,000.00
433114	Equipment Reserve	$0.00	$0.00	$0.00	$30,000.00	$30,000.00
434000	Machinery & Equipme	$15,390.72	$145.40	$12,192.84	$12,500.00	$12,500.00
434100	Computers & Softwar	$1,098.12	$10,399.63	$1,331.92	$2,500.00	$5,000.00
434300	Water Meters	$117.59	$7,155.57	$1,635.03	$2,000.00	$5,000.00
434310	Fire Hydranta	$0.00	$0.00	$0.00	$10,000.00	$10,000.00
435000	Furniture, etc.	$0.00	$0.00	$0.00	$15,000.00	$15,000.00
436300	Curb & Gutter Repair	$0.00	$0.00	$0.00	$2,000.00	$2,000.00
436400	Street Resurfacing	$0.00	$0.00	$0.00	$2,000.00	$2,000.00
436914	GSR Improvement Pr	$0.00	$6,010.64	$0.00	$10,000.00	$10,000.00
439000	Capital Improvements	$0.00	$0.00	$0.00	$80,000.00	$80,000.00
OBJ Alt Code 430 - Capit		$16,606.43	$23,711.24	$15,159.79	$602,000.00	$587,500.00
OBJ Alt Code 440 - Debt Service						
444100	SRF Loan - Principal P	$1,147.51	$0.00	$18,629.18	$24,000.00	$26,000.00
444110	SRF Loan - Interest P	$12,215.71	$10,794.80	$7,537.03	$12,000.00	$9,500.00
445100	Debt Leasing - Princip	$0.00	$0.00	$0.00	$0.00	$0.00
445110	Debt Leasing - Intere	$1,190.01	$0.00	$0.00	$0.00	$0.00
445120	Debt Leasing - Trust	$833.33	$0.00	$0.00	$0.00	$0.00
OBJ Alt Code 440 - Debt		$15,386.56	$10,794.80	$26,166.21	$36,000.00	$35,500.00
DEPT 4335 Water Administr		$446,081.41	$496,161.23	$336,477.12	$1,095,700.00	$1,157,400.00

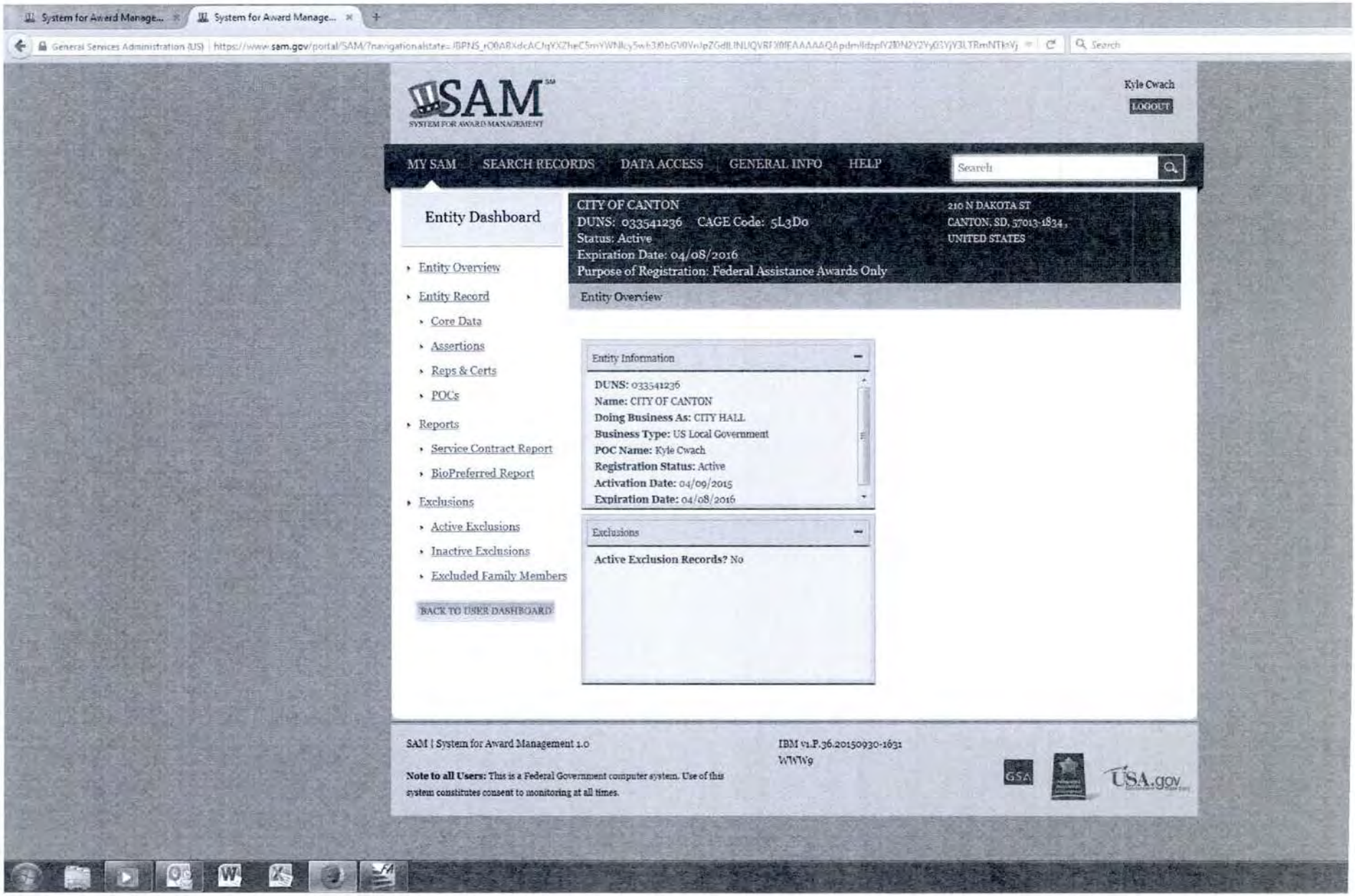
SRC	SRC Descr	2013 Amt	2014 Amt	2015 YTD Amt	2015 Budget	2016 Budget
FUND 602 Water Fund						
DEPT 3810 Water Revenues						
60100	Interest Revenue	$3,296.40	$3,522.55	$3,140.98	$3,000.00	$3,000.00
81100	Metered & Flat Rate Wat Sal	$567,809.98	$532,443.02	$471,488.88	$675,000.00	$650,000.00
81110	Unallocated Water Receipts	-$377.16	$3,873.05	$1,375.10	$0.00	$0.00
81200	Bulk Water Sales	$348.25	$287.55	$477.25	$400.00	$400.00
81300	Sale of Services and Supplie	$162.04	$0.00	$271.88	$1,000.00	$1,000.00
81400	Service Charges - Water	$0.00	$0.00	$0.00	$500.00	$500.00
81910	Water Hook-Up Fees	$1,729.46	$1,621.94	$3,075.00	$1,000.00	$1,000.00
81915	Water Meter Sales	$196.23	$1,912.60	$1,292.06	$0.00	$100.00
81920	Late Fees - Water	$6,830.00	$7,675.00	$6,621.74	$7,000.00	$7,000.00
81930	Interest Revenue	$0.00	$0.00	$0.00	$0.00	$0.00
81940	State Water Fees Collected	$0.00	-$13.37	$10.00	$0.00	$0.00
81960	Rental of Water Tower Spac	$3,689.67	$0.00	$0.00	$14,500.00	$14,500.00
81990	Other Water Revenues	$52,197.51	$270.08	$9,040.84	$1,000.00	$1,000.00
91300	Sale of General Fixed Assets	$0.00	$190,840.71	$0.00	$0.00	$0.00
DEPT 3810 Water Revenues		$635,882.38	$742,433.13	$496,793.73	$703,400.00	$678,500.00
FUND 602 Water Fund		$635,882.38	$742,433.13	$496,793.73	$703,400.00	$678,500.00

OBJ	OBJ Descr	2013 Amt	2014 Amt	2015 YTD Amt	2015 Budget	2016 Budget
FUND 602 Water Fund						
DEPT 4332 Water Billing Expense						
OBJ Alt Code 410 - Personnel Svcs						
411000	Salaries & Wages	$2,082.26	$2,542.40	$0.00	$0.00	$0.00
412000	Social Security	$0.00	$0.00	$0.00	$0.00	$0.00
413000	Retirement	$0.00	$0.00	$0.00	$0.00	$0.00
414000	Workmens Compensa	$0.00	$0.00	$0.00	$0.00	$0.00
415000	Group Insurance	$0.00	$0.00	$0.00	$0.00	$0.00
416000	Unemployment	$0.00	$0.00	$0.00	$0.00	$0.00
OBJ Alt Code 410 - Pers		$2,082.26	$2,542.40	$0.00	$0.00	$0.00
OBJ Alt Code 420- Other Current Expense						
421000	Insurance	$0.00	$4,282.14	$4,312.52	$4,000.00	$0.00
422000	Professional Services	$439.41	$471.61	$1,872.32	$1,500.00	$0.00
422100	Administration Fee	$35,000.00	$39,000.00	$0.00	$45,000.00	$0.00
423000	Publishing	$0.00	$0.00	$0.00	$100.00	$0.00
OBJ Alt Code 420- Other		$35,439.41	$43,753.75	$6,184.84	$50,600.00	$0.00
OBJ Alt Code 425 - Repairs & Maintenance						
425000	Repairs & Maintenanc	$390.00	$0.00	$397.50	$1,000.00	$0.00
OBJ Alt Code 425 - Repa		$390.00	$0.00	$397.50	$1,000.00	$0.00
OBJ Alt Code 426 - Supplies & Materials						
426100	Supplies & Materials	$1,274.68	$2,383.92	$2,021.03	$3,500.00	$0.00
426130	Office Supplies	$0.00	$0.00	$0.00	$100.00	$0.00
426170	Postage	$3,921.75	$4,350.82	$2,800.31	$5,000.00	$0.00
OBJ Alt Code 426 - Supp		$5,196.43	$6,734.74	$4,821.34	$8,600.00	$0.00
OBJ Alt Code 427 - Travel & Training						
427000	Travel & Training	$10.00	$0.00	$0.00	$200.00	$0.00
427100	Mileage	$0.00	$0.00	$0.00	$150.00	$0.00
427300	Registration Fees	$0.00	$0.00	$0.00	$100.00	$0.00
OBJ Alt Code 427 - Trav		$10.00	$0.00	$0.00	$450.00	$0.00
OBJ Alt Code 429 - Other Expense						
429100	Other Expense	$23.19	$19.35	$22.92	$600.00	$0.00
429120	RSVP Donation	$1,250.00	$1,250.00	$0.00	$0.00	$0.00
OBJ Alt Code 429 - Othe		$1,273.19	$1,269.35	$22.92	$600.00	$0.00
OBJ Alt Code 430 - Capital Expense						
434100	Computers & Softwar	$0.00	$9,584.15	$1,768.50	$2,500.00	$0.00
OBJ Alt Code 430 - Capit		$0.00	$9,584.15	$1,768.50	$2,500.00	$0.00
DEPT 4332 Water Billing Ex		$44,391.29	$63,884.39	$13,195.10	$63,750.00	$0.00

OBJ	OBJ Descr	2013 Amt	2014 Amt	2015 YTD Amt	2015 Budget	2016 Budget
DEPT 4335 Water Administration						
OBJ Alt Code 410 - Personnel Svcs						
411000	Salaries & Wages	$77,941.02	$90,170.54	$75,250.76	$96,000.00	$105,500.00
412000	Social Security	$5,878.43	$6,831.15	$5,430.83	$7,500.00	$8,000.00
413000	Retirement	$4,443.18	$5,134.62	$4,226.82	$5,500.00	$6,000.00
414000	Workmens Compensa	$90.14	$2,645.81	$2,959.49	$3,000.00	$3,000.00
415000	Group Insurance	$18,145.38	$27,769.54	$25,421.04	$18,500.00	$18,000.00
416000	Unemployment	$324.76	$291.93	$319.02	$500.00	$500.00
417000	Leave Payable Expen	-$430.31	$1,131.45	$0.00	$0.00	$0.00
OBJ Alt Code 410 - Pers		$106,392.60	$133,975.04	$113,607.96	$131,000.00	$141,000.00
OBJ Alt Code 420- Other Current Expense						
421000	Insurance	$11,465.08	$4,282.14	$4,481.27	$12,000.00	$16,000.00
422000	Professional Services	$35,300.94	$13,058.36	$54,003.86	$28,000.00	$29,500.00
422100	Administration Fee	$30,000.00	$34,000.00	$0.00	$37,000.00	$85,000.00
423000	Publishing	$404.26	$433.69	$818.96	$800.00	$900.00
424000	Rentals	$0.00	$0.00	$0.00	$200.00	$200.00
OBJ Alt Code 420- Other		$77,170.28	$51,774.19	$59,304.09	$78,000.00	$131,600.00
OBJ Alt Code 425 - Repairs & Maintenance						
425000	Repairs & Maintenanc	$31,424.72	$36,749.91	$18,499.25	$11,000.00	$12,000.00
425100	Motor Vehicle Repair	$0.00	$80.50	$0.00	$3,000.00	$3,000.00
425200	Equipment Repair &	$0.00	$0.00	$0.00	$7,000.00	$7,000.00
425210	Well Repair & Maint	$0.00	$5,603.52	$0.00	$30,000.00	$30,000.00
OBJ Alt Code 425 - Repa		$31,424.72	$42,433.93	$18,499.25	$51,000.00	$52,000.00
OBJ Alt Code 426 - Supplies & Materials						
426100	Supplies & Materials	$9,393.39	$49,255.85	$29,294.08	$50,000.00	$53,500.00
426110	Motor Vehicle Fuels	$4,773.10	$5,487.92	$3,308.61	$4,000.00	$6,500.00
426111	Motor Vehicle Oil	$532.01	$55.04	$225.56	$1,000.00	$1,000.00
426112	Tires	$2,767.97	$685.70	$923.46	$3,000.00	$3,000.00
426150	Chemicals	$17,897.81	$23,244.55	$16,947.87	$25,000.00	$25,000.00
426160	Uniforms	$1,534.38	$1,500.81	$1,564.53	$2,500.00	$2,500.00
426170	Postage	$958.93	$389.90	$887.18	$1,100.00	$6,100.00
OBJ Alt Code 426 - Supp		$37,857.59	$80,619.77	$53,151.29	$86,600.00	$97,600.00
OBJ Alt Code 427 - Travel & Training						
427000	Travel & Training	$847.41	$261.60	$755.50	$5,000.00	$5,000.00
427100	Mileage	$0.00	$165.13	$0.00	$500.00	$500.00
427300	Registration Fees	$1,135.00	$1,782.00	$675.00	$1,500.00	$2,000.00
OBJ Alt Code 427 - Trav		$1,982.41	$2,208.73	$1,430.50	$7,000.00	$7,500.00
OBJ Alt Code 428 - Utility Expense						
428100	Electricity	$60,417.04	$48,532.40	$44,972.30	$55,000.00	$55,000.00
428200	Heating	$2,247.18	$2,587.00	$1,147.48	$6,000.00	$6,000.00
428300	Telephone	$772.85	$898.60	$783.66	$2,500.00	$2,500.00
428320	Cellular Phone Servic	$805.44	$747.93	$778.18	$1,500.00	$1,500.00
428500	Garbage Fees	$268.75	$293.75	$233.75	$1,000.00	$1,000.00
OBJ Alt Code 428 - Utilit		$64,511.26	$53,059.68	$47,915.37	$66,000.00	$66,000.00
OBJ Alt Code 429 - Other Expense						
429100	Other Expense	$3,235.60	$128.25	$1,242.66	$6,600.00	$7,200.00
429420	Contingency Fund	$0.00	$0.00	$0.00	$1,500.00	$1,500.00
429999	Water Deposit Refund	$0.00	$0.00	$0.00	$0.00	$0.00
456000	Loss on Disposition of	$0.00	$0.00	$0.00	$0.00	$0.00
457000	Depreciation Expense	$91,513.96	$97,455.60	$0.00	$30,000.00	$30,000.00

OBJ	OBJ Descr	2013 Amt	2014 Amt	2015 YTD Amt	2015 Budget	2016 Budget
OBJ Alt Code 429 - Othe		$94,749.56	$97,583.85	$1,242.66	$38,100.00	$38,700.00
OBJ Alt Code 430 - Capital Expense						
431000	Land	$0.00	$0.00	$0.00	$10,000.00	$10,000.00
432000	Buildings	$0.00	$0.00	$0.00	$6,000.00	$6,000.00
433112	Water Improvements	$0.00	$0.00	$0.00	$420,000.00	$400,000.00
433114	Equipment Reserve	$0.00	$0.00	$0.00	$30,000.00	$30,000.00
434000	Machinery & Equipme	$15,390.72	$145.40	$12,192.84	$12,500.00	$12,500.00
434100	Computers & Softwar	$1,098.12	$10,399.63	$1,331.92	$2,500.00	$5,000.00
434300	Water Meters	$117.59	$7,155.57	$1,635.03	$2,000.00	$5,000.00
434310	Fire Hydranta	$0.00	$0.00	$0.00	$10,000.00	$10,000.00
435000	Furniture, etc.	$0.00	$0.00	$0.00	$15,000.00	$15,000.00
436300	Curb & Gutter Repair	$0.00	$0.00	$0.00	$2,000.00	$2,000.00
436400	Street Resurfacing	$0.00	$0.00	$0.00	$2,000.00	$2,000.00
436914	GSR Improvement Pr	$0.00	$6,010.64	$0.00	$10,000.00	$10,000.00
439000	Capital Improvements	$0.00	$0.00	$0.00	$80,000.00	$80,000.00
OBJ Alt Code 430 - Capit		$16,606.43	$23,711.24	$15,159.79	$602,000.00	$587,500.00
OBJ Alt Code 440 - Debt Service						
444100	SRF Loan - Principal P	$1,147.51	$0.00	$18,629.18	$24,000.00	$26,000.00
444110	SRF Loan - Interest P	$12,215.71	$10,794.80	$7,537.03	$12,000.00	$9,500.00
445100	Debt Leasing - Princip	$0.00	$0.00	$0.00	$0.00	$0.00
445110	Debt Leasing - Intere	$1,190.01	$0.00	$0.00	$0.00	$0.00
445120	Debt Leasing - Trust	$833.33	$0.00	$0.00	$0.00	$0.00
OBJ Alt Code 440 - Debt		$15,386.56	$10,794.80	$26,166.21	$36,000.00	$35,500.00
DEPT 4335 Water Administr		$446,081.41	$496,161.23	$336,477.12	$1,095,700.00	$1,157,400.00

SRC	SRC Descr	2013 Amt	2014 Amt	2015 YTD Amt	2015 Budget	2016 Budget
FUND 602 Water Fund						
DEPT 3810 Water Revenues						
60100	Interest Revenue	$3,296.40	$3,522.55	$3,140.98	$3,000.00	$3,000.00
81100	Metered & Flat Rate Wat Sal	$567,809.98	$532,443.02	$471,488.88	$675,000.00	$650,000.00
81110	Unallocated Water Receipts	-$377.16	$3,873.05	$1,375.10	$0.00	$0.00
81200	Bulk Water Sales	$348.25	$287.55	$477.25	$400.00	$400.00
81300	Sale of Services and Supplie	$162.04	$0.00	$271.88	$1,000.00	$1,000.00
81400	Service Charges - Water	$0.00	$0.00	$0.00	$500.00	$500.00
81910	Water Hook-Up Fees	$1,729.46	$1,621.94	$3,075.00	$1,000.00	$1,000.00
81915	Water Meter Sales	$196.23	$1,912.60	$1,292.06	$0.00	$100.00
81920	Late Fees - Water	$6,830.00	$7,675.00	$6,621.74	$7,000.00	$7,000.00
81930	Interest Revenue	$0.00	$0.00	$0.00	$0.00	$0.00
81940	State Water Fees Collected	$0.00	-$13.37	$10.00	$0.00	$0.00
81960	Rental of Water Tower Spac	$3,689.67	$0.00	$0.00	$14,500.00	$14,500.00
81990	Other Water Revenues	$52,197.51	$270.08	$9,040.84	$1,000.00	$1,000.00
91300	Sale of General Fixed Assets	$0.00	$190,840.71	$0.00	$0.00	$0.00
DEPT 3810 Water Revenues		$635,882.38	$742,433.13	$496,793.73	$703,400.00	$678,500.00
FUND 602 Water Fund		$635,882.38	$742,433.13	$496,793.73	$703,400.00	$678,500.00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SYSTEM FOR AWARD MANAGEMENT
Kyle Cwach
LOGOUT
MY SAM
SEARCH RECORDS
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Search
Entity Dashboard
Entity Overview
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Core Data
Assertions
Reps & Certs
POCs
Reports
Service Contract Report
BioPreferred Report
Exclusions
Active Exclusions
Inactive Exclusions
Excluded Family Members
BACK TO USER DASHBOARD
CITY OF CANTON
DUNS: 033541236 CAGE Code: 5L3D0
Status: Active
Expiration Date: 04/08/2016
Purpose of Registration: Federal Assistance Awards Only
210 N DAKOTA ST
CANTON, SD, 57013-1834 ,
UNITED STATES
Entity Overview
Entity Information
DUNS: 033541236
Name: CITY OF CANTON
Doing Business As: CITY HALL
Business Type: US Local Government
POC Name: Kyle Cwach
Registration Status: Active
Activation Date: 04/09/2015
Expiration Date: 04/08/2016
Exclusions
Active Exclusion Records? No
SAM | System for Award Management 1.0
IBM v1.P.36.20150930-1631
WWW9
Note to all Users: This is a Federal Government computer system. Use of this system constitutes consent to monitoring at all times.
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Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF LINCOLN

ANDY WILCOX

being first duly sworn on his oath says; that the Sioux Valley News is a legal weekly newspaper of general circulation as required by South Dakota Code of Nineteen Hundred Thirty-Nine, and any acts amendatory thereto, printed and published by the Sioux Valley News, Inc., in Canton, in said county and State, and has been such legal newspaper during the time hereinafter mentioned; that he is and during all of said time was publisher of said newspaper and has personal knowledge of the facts stated in this affidavit; that the advertisement headed:

City of Canton
Notice of Public Hearing

a printed copy of which is hereto attached, was printed and published in said newspaper for **ONE** successive week(s) upon the following dates, to-wit:

December 10, 2015

that the full amount of the fees charged for publishing the same to-wit: the sum of **$26.35** inures solely to the benefit of the publishers of said newspaper; that no agreement or understanding for any division of this sum has been made with any other person; and that no part of said sum has been agreed to be paid to any person whomsoever.

Ascribed and sworn to before me this **10th** day of **December, 2015.**

Notary Public, South Dakota

(Seal)

TERESA J. WILCOX NOTARY Seal PUBLIC STATE OF SOUTH DAKOTA

My Commission Expires
December 9, 2020

NOTICE OF PUBLIC HEARING
for the
DAKOTA STREET IMPROVEMENTS PROJECT-PHASE 1

Notice is hereby given that the City of Canton will hold a Public Hearing on December 21st, 2015, regarding drinking water and wastewater utility improvements to Dakota Street. The City is seeking up to $960,000 of funding from the Board of Water and Natural Resources for the drinking water improvements. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or a loan from the either the Drinking Water State Revolving Funds (SRF) Program. The expected Drinking Water SRF loan terms are 3 percent for 30 years, and the Board of Water and Natural Resources may forgive all or a portion of the loan principal.

The City is seeking up to $1,848,000 of funding from the Board of Water and Natural Resources for the wastewater improvements. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or a loan from the either the Clean Water State Revolving Funds (SRF) Program. The expected Clean Water SRF loan terms are 3.25 percent for 30 years, and the Board of Water and Natural Resources may forgive all or a portion of the loan principal.

The amount and source of funds will be determined by the Board of Water and Natural Resources when the applications are presented at a scheduled board meeting. The purpose of the public hearing is to discuss the proposed project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

This public hearing will be held at the following time, date and location:

7:00 P.M.
December 21st, 2015
Canton Depot (600 West Fifth Street, Canton, SD)
Viking Room (lower level)

In compliance with the Americans with Disabilities Act (ADA), if you need special assistance to participate in this hearing, please contact the Canton Finance Officer at (605) 987-2881. Anyone who is deaf, hard-of-hearing or speech-disabled may utilize Relay South Dakota at (800) 877-1113 (TTY/Voice). Notification 48 hours prior to the hearing will enable the City to make reasonable arrangements to ensure accessibility to this hearing.

Kyle Cwach
Canton Finance Officer

Published in the Sioux Valley news on December 10, 2015 at the total approximate cost of $26.35.

City of Canton

Public Hearing For DW-SRF & CW-SRF Applications
Dakota Street Improvements Project
7:00 PM, Monday, December 21st, 2015
Viking Room at the Canton Depot-600 West Fifth Street, Canton, SD

Please sign in:

NAME	ADDRESS / REPRESENTING
Lacey Schmeling	SECOG
[illegible] Adam	JSA
Larissa VanBeek	
David Miller	Canton Police Dept
Chuck Andresen	Canton

2.

City of Canton

Public Hearing For DW-SRF & CW-SRF Applications
Dakota Street Improvements Project
7:00 PM, Monday, December 21st, 2015
Viking Room at the Canton Depot-600 West Fifth Street, Canton, SD

Please sign in:

NAME	ADDRESS / REPRESENTING
Andy Wilcox	Sioux Valley News
Lynn Wilcox	412 West 5th Street
Scott Donelson	606 E Poplar

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City of Canton

Public Hearing For DW-SRF & CW-SRF Applications
Dakota Street Improvements Project
7:00 PM, Monday, December 21st, 2015
Viking Room at the Canton Depot-600 West Fifth Street, Canton, SD

Please sign in:

NAME	ADDRESS / REPRESENTING
Jeff Fossum	814 E 5 Canton City of Canton
Bill Thorson	503 N Lincoln City of Canton

4

City of Canton

Public Hearing For DW-SRF & CW-SRF Applications
Dakota Street Improvements Project
7:00 PM, Monday, December 21st, 2015
Viking Room at the Canton Depot-600 West Fifth Street, Canton, SD

Please sign in:

NAME	ADDRESS / REPRESENTING	
STEVE ZIEGLER	102 N. KIDDER ST.	CITY OF CANTON
Kristen Townsend	1700 Holiday Drive	City of Canton

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City of Canton

Public Hearing For DW-SRF & CW-SRF Applications
Dakota Street Improvements Project
7:00 PM, Monday, December 21st, 2015
Viking Room at the Canton Depot-600 West Fifth Street, Canton, SD

Please sign in:

NAME	ADDRESS / REPRESENTING	
Ryle Cundy	210 N. Dakota	City of Canton
Karen Lafflen	210 N Dakota	City of Canton
Chuck Smith	724 E. Walnut	City of Canton
John Derick	420 N. Milwaukee Ave	City of Canton
Shelly Eich	1015 N. Kidder	City of Canton
Richard S. Ekle	31 1/2 W. 3rd	City of Canton
Darrell Ash	910 Candy Ct	City of Canton

Unapproved

MINUTES OF CANTON CITY COMMISSION MEETING
DECEMBER 21, 2015

The Canton City Commission met at the Depot Viking Room, on Monday, December 21st, 2015 at 7:00 p.m. with the following members present: Commissioners Anderson, Devick, Eich, Ekle, Ziebarth and Mayor Smith.
Commissioner Toso, Townsend and Elrod were absent at the time of roll call.

Also present were Interim City Manager Cwach and Deputy Finance Officer Leffler.

Guests who signed in are as follows: Myron Adam, Lacey Schmeling, Bill Thorson, Jeff Fossum, David Miller, Larissa Van Beek, Andy Wilcox, Lucy Wilcox, Gert Havelaar, and Chuck Andreson.

The Pledge of Allegiance was recited.

CONSENT CALENDAR
Commissioner Devick moved and Commissioner Ziebarth seconded to approve the consent calendar consisting of the following: 1) to approve the minutes, from the December 4th, 2015 Special Meeting, December 5th Special Meeting, December 7th Regular Commission meeting, and December 10th Special Meeting and that they are signed and published; 2) to approve the warrants to be listed at the end of the minutes; 3) to approve the November month-end reports; and 4) to approve the agenda. Unanimous Approval.

VISITOR DIALOGUE:

Commissioner Townsend arrived.

SRF PUBLIC HEARING – DAKOTA STREET PROJECT
This being the time and place for a public hearing for the SRF Funding for the Dakota Street project. Mayor Smith opened the hearing. Myron Adam, JSA and Lacey Schmeling, SECOG were present to report on the process so far; concerning the need to do this project, the options, and costs involved and the applications for State Revolving Fund finances. There were no proponents, nor opponents to be heard. Mayor Smith closed the hearing and invited discussion from the Commissioners.
Commissioner Anderson moved and Commissioner Ziebarth seconded to approve the applications for the SRF funding, the Cost and Effectiveness Certification Form and the following Resolutions for the SRF funding, that the Resolutions be given a number and authorize the Mayor to sign the Resolutions, applications and the Cost and Effectiveness Certification Form. Unanimous Approval.

RESOLUTION NO. 1233

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the City of Canton (the "City") has determined it is necessary to proceed with improvements to its Wastewater System, including but not limited to Dakota Street-Phase I Project (the "Project"); and

WHEREAS, the City has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the City and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the City as follows:

1. The City hereby approves the submission of an Application for financial assistance in an amount not to exceed $1,648,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Mayor is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Mayor is hereby designated as the authorized representative of the City to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted in Canton, South Dakota, on this 21st day of December, 2015.

APPROVED:

_____
Charles Smith, Mayor
City of Canton

(Seal)

Attest: _____
City of Canton Finance Officer

RESOLUTION NO. 1234

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the City of Canton (the "City") has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to Dakota Street-Phase I Project (the "Project"); and

WHEREAS, the City has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the City and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the City as follows:

1. The City hereby approves the submission of an Application for financial assistance in an amount not to exceed $760,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Mayor is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Mayor is hereby designated as the authorized representative of the City to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted in Canton, South Dakota, on this 21st day of December, 2015.

APPROVED:

_____
Charles Smith, Mayor
City of Canton

(Seal)

Attest: _____
City of Canton Finance Officer

2016 SALARY RESOLUTION
Commissioner Devick moved and Commissioner Anderson seconded to approve the following 2016 Salary Resolution, that it be given a number, signed and published as required by State law. Unanimous Approval.

RESOLUTION # 1235

CITY OF CANTON
2016 PAYROLL RESOLUTION

WHEREAS, it is in the best interests of the City of Canton to pay a competitive wage to attract and retain the best employees to effectively and responsibly serve the community; and

WHEREAS, the City of Canton, as an employer, makes periodic adjustments to wages and compensation for inflation, regulatory requirements, and in comparison to other employers; and
WHEREAS, Full-Time Police Personnel's Hourly Rate is based on a work schedule of 2,184 hours/year, and all other City Full-time Personnel's Hourly Rate is based on a work schedule of 2,080 hours/year.
NOW, THEREFORE, BE IT RESOLVED, that the Governing Body of the City of Canton hereby approves and adopts the following wage rates for 2016 payment schedule

ELECTED OFFICIALS
Mayor: Charles Smith/$46.15/Bi-Weekly **City Commission:** Farrell Anderson/$46.15/Bi-Weekly; John Devick/$46.15/Bi-Weekly; Shelly Eich/$46.15/Bi-Weekly; Richard Ekle/$46.15/Bi-Weekly; Kari Elrod/$46.15/Bi-Weekly; Jonathan Toso/$46.15/Bi-Weekly; Kristen Townsend/$46.15/Bi-Weekly; Steve Ziebarth/46.15/Bi-Weekly

FULL-TIME/PART-TIME:
Building Inspector: Eric Eneboe/$25.00 per inspection plus mileage **Custodial**: Marge Buysman/$13.06; Ron Buysman/$13.06; **Finance**: Kyle Cwach/$35.56; Karen Leffler/$23.15; Tiffany VanDeKieft/$14.50 **General Government**: Larissa Van Beek/$15.86; Carol Mulder/$12.02 **Library**: Edith Nelson/$23.66; Jonette Chaon/$10.82; Levi Magnuson/$10.57; Laura Olson/$11.30; Tracey Zylstra/$13.47 **Parks & Recreation**: Mark Swier/$15.56 **Police**: David Miller/$32.34; David Jacobs/$24.66; Patrick McGawley/$18.52; Michael Meinzer/$18.52; Christine Reitsma/$19.93; Joseph Carlson/$18.02; Travis Johns/$18.02; Steve Lowry/$18.02 **Public Works**: Bill Thorson/$32.34; Ryan Vandemore/$22.36; Justin Blade/$17.82; Chris Krogmann/$15.19; Dalton Nelson/$8.94 **Rubble Site**: Gary Jones/$9.60; Laurie Gates/$9.03 **Snow Removal**: David Baldwin/$10.95; Craig Dittberner/$10.95; Kelly Eilers/$11.48; Sherman Gardner/$10.95; Andy McCann/$10.95; Gary Renli/$10.95; Dwaine Tiedemann/$10.95; **Water & Sewer:** Jeff Fossum/$29.19; Russell Doty/$15.19; Steve Erickson/$15.19

PROVIDED, HOWEVER, the City Manager may make wage increases for the completion of education requirements, for passing certification tests, for fulfillment of job requirements set at the date of employment, and the City Manager may make meritorious wage increases for Department Heads within the budgetary appropriation of the respective departments.

Dated at Canton, South Dakota this 21st day of December 2015.

FOR THE GOVERNING BODY OF THE
CITY OF CANTON, SOUTH DAKOTA

By _____
Charles Smith, Mayor

ATTEST:

By _____
Kyle Cwach, Finance Officer

Adopted: 12/21/2015
Publish: 12/31/2015

Published once at the approximate cost of _____.

2016 EMPLOYEE WELLNESS PROGRAM
Commissioner Ziebarth moved and Commissioner Townsend seconded to approve DakotaCare's year-long wellness program and the FITBIT program for 2016 and authorize the Mayor to sign. Commissioners Anderson, Devick, Eich, Townsend, Ziebarth, and Mayor Smith voted aye. Commissioner Ekle voted nay. Motion Carried.

SANFORD CANTON-INWOOD AMBULANCE LEASE AMENDMENT
Commissioner Devick moved and Commissioner Ziebarth seconded to approve the amendment increasing the rent to $150.00 for use of the Fire Hall. Unanimous Approval.

2016 FEE SCHEDULE
Commissioner Devick moved and Commissioner Eich seconded to approve the proposed changes to the 2016 Fee Schedule as recommended by the City Staff, as presented and on file. Unanimous Approval.

CWSRF CERTIFICATION OF PROJECT COMPLETION
Commissioner Ziebarth moved and Commissioner Devick seconded to approve the Certificate of Project Completion for the Beaver Creek Life Station Project and authorize the Mayor to sign. Unanimous Approval.

2015 AUDIT CONTRACT
Commissioner Devick moved and Commissioner Eich seconded to approve the Audit Engagement Letter for the 2015 Audit, as presented and on file, with the fee for $9,900.00 and authorize the Mayor to sign. Unanimous Approval.

CONNECTING KIDS CONTRACT FOR 2016
Commissioner Ziebarth moved and Commissioner Eich seconded to approve the contract for the Connecting Kids program for 2016, as presented and on file, and authorize the Mayor to sign. Unanimous Approval.

DIALOGUE

Interim City Manager Cwach commented on:

The City Offices will be closed on Thursday afternoon and Friday to observe the Christmas Holidays.

The Library and the rubble site will be closed as well.

City staff visited the holiday open houses last week.

Please have the Employee of the Year nominations in by December 31st, as well as the RSVP's for the City Employee Appreciation Banquet.

Commissioner Eich reported:

That she has received a phone call regarding the pickup of garbage by the garbage haulers before 6:00am.

Mayor Smith wished everyone a Merry Christmas and Happy New Year.

ADJOURN

FACILITIES PLAN

DAKOTA STREET PROJECT - PHASE 1

WATER DISTRIBUTION, SANITARY SEWER COLLECTION AND STORM SEWER FACILITY IMPROVEMENTS

DECEMBER 2015

Prepared By:

JSA ENGINEERS AND LAND SURVEYORS
Land Development · Municipal · Streets · Water · Sewer · GPS · Construction Staking

DAKOTA STREET PROJECT - PHASE 1

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WATER DISTRIBUTION, SANITARY SEWER COLLECTION AND STORM SEWER FACILITY IMPROVEMENTS

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I hereby certify that this plan, specification or report was prepared by me or under my direct personal supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

By _____
Myron Adam, PE/LS
Registration Number 6790

Date 12-23-15

1. Project Executive Summary

The City of Canton is planning to reconstruct approximately 2,700 lineal feet of Dakota Street from US Highway 18 (5th Street) to Lynn Avenue (Project) within the corporate limits of the community to improve the underground public utility infrastructure. Dakota Street is an existing concrete/asphalt street. The project generally includes the removal of the existing street section, replacement of the existing underground utilities, and the reconstruction of the roadway comprised of a concrete driving surface, curb and gutter, and sidewalks. Refer to the appendices for location maps and preliminary layout details for the project.

The existing water distribution system, sanitary sewer system and storm sewer system within the project corridor are in need of replacement due to the age of the existing infrastructure and, in the case of the water and storm sewer systems, due to undersized mains.

The existing sanitary sewer gravity collection system is comprised of VCP sewer mains, VCP and PVC service lines and brick and concrete manholes. Approximately 2,740 feet of existing sanitary sewer main will be replaced once the existing street surfacing is removed. The new sanitary collection system will be comprised of 8" diameter PVC mains and 4" or 6" diameter PVC sewer service lines. Eight new 48" diameter reinforced concrete pipe manholes will also be installed along the project corridor. A portion of the existing sanitary main will be deepened to allow sanitary service to expand to an undeveloped portion of the City. The additional flow from the undeveloped land will not make a significant impact to the downstream collection system and no increases in sanitary sewer pipes sizes are warranted.

The existing storm water system consists of approximately various sizes of storm sewer pipe (PVC, VCP and RCP) between 4th Street and 1st Street along Dakota Street. At 4th Street, a pair of 36" diameter pipes convey storm water to the east and then south, ultimately discharging into a drainage channel leading to the Big Sioux River. The proposed municipal storm sewer system is comprised of a combination of 3,135 feet of reinforced concrete pipe, 11 storm sewer junction boxes and 33 inlets. The storm sewer system is designed to carry the runoff from a 20% chance storm event. The proposed storm sewer system will extend from 5th Street to the north up to Lynn Avenue to reduce the spread of surface water draining down Dakota Street. The discharge point for the new storm sewer system will be the twin 36" diameter pipes at the intersection of 4th Street and Dakota Street. No downstream improvements to the City's storm sewer system are planned with this project.

There is currently water distribution main within the Dakota Street corridor along the entire project. Existing water mains range from 2" in diameter to 8" in diameter and are either cast iron, ductile iron, PVC or asbestos cement pipes. Approximately 2,840 feet of new 12" diameter PVC water main is proposed to replace the existing water main along Dakota Street. This new 12" PVC main will become a portion of the main connection between the City's ground storage reservoir located on the south edge of the community and the City's elevated storage tank located on the northern edge of the community. Other water system improvements along Dakota Street include the addition of several main line valves to properly isolate the water system and the addition of several new fire hydrants to replace existing hydrants with small diameter barrels and pipe leads.

Due to the presence of multiple underground utilities, both public and private, within the street corridor, the proposed method of installing the utilities is by typical open-cut trenching. Horizontal

directional drilling or boring/jacking trenchless techniques are not recommended methods because of the numerous unknown conflicts with various utilities within the project corridor.

Operation and maintenance costs as a result of completing the project are not expected to change appreciably. The City is currently providing operation and maintenance on the existing aging utilities to be replaced within the project corridor. Once the utilities are replaced with new materials, City staff will continue to operate and maintain the systems as before the project.

An analysis of the net present value of each option is provided in Section 4 of this report. The net present value compares the initial capital cost, operation and maintenance costs and salvage values of each option. From that analysis, the option with the lowest net present value is Option 1. A detailed line item estimate of project costs is provided elsewhere within this facilities plan.

OPTION 1 DAKOTA STREET PHASE 1 IMPROVEMENTS – TOTAL CAPITAL COST SUMMARY

Work Items	Construction Subtotal	Engineering and Construction Admin	Legal/ Administration	Totals
General	$ 379,000	$ 57,000	$ 15,000	$ 451,000
Surfacing	$ 961,000	$ 144,000	$ 38,000	$ 1,143,000
Erosion Control	$ 35,000	$ 5,000	$ 1,000	$ 41,000
Traffic Control	$ 14,000	$ 2,000	$ 1,000	$ 17,000
Street Lighting	$ 52,000	$ 8,000	$ 2,000	$ 62,000
Storm Sewer	$ 428,000	$ 64,000	$ 17,000	$ 509,000
Water Main	$ 339,000	$ 51,000	$ 14,000	$ 404,000
Sanitary Sewer Main	$ 152,000	$ 23,000	$ 6,000	$ 181,000
TOTAL COST:	$ 2,360,000	$ 354,000	$ 94,000	$ 2,808,000

Project Implementation Schedule

Item	Date
• Preliminary Design	Ongoing
• Initiate Final Design	January 2016
• Draft Plans to City for Review	November 2016
• Advertise	January 2017
• Bid Letting	February 2017
• Award Contracts	March 2017
• Begin Construction	April/May 2017
• Complete Construction	November 2017

2. Project Development

Dakota Street in Canton is in need of new underground utilities and subsequent resurfacing. The exhibits on the following pages illustrate the project area in relation to the region and community of Canton.

Standing Water in Curb Line and Surface Cracking

The existing roadway consists of a deteriorating asphalt/concrete two-lane urban street section with concrete curb and gutter. The majority of the functional drainage capacity of the existing curb and gutter has been eliminated due to various asphalt overlays on the street over the past years. Numerous reflective cracks, raveling and potholes are evident along the existing street. Several potholes of various degrees are present along the project corridor. The City has patched and filled deficiencies in the pavement surfacing for several ongoing years to extend the life of the street.

Asphalt Overlay Delaminating from Underlying Concrete

Storm water fails to drain down the gutter. The water sits in the gutter until draining down thru cracks in the surfacing. This condition accelerates the deterioration of the surrounding surfacing.

Portions of the existing asphalt overlay have eroded away from the underlying concrete leaving potholes in the driving surface and again, accelerating the deterioration of the surrounding pavement.

Existing Sidewalk along Dakota Street

There are existing concrete sidewalks along the majority of the project in varying conditions. A portion of the existing sidewalk is shown in the following photograph taken after a rain event. Severe cracking and surface deformation is noticeable, a potential hazard to pedestrians using the sidewalks. Other sidewalk deformities included cracked panels and misaligned joints either in the vertical or horizontal plane. Very few sidewalks at the street intersections meet current ADA guidelines pertinent to curb ramps, landings and detectable warning panels.
The overall condition of the street is best described as a street that has been overlayed and patched numerous times with various deformities creating poor driving conditions

Deteriorated Approach - Blocking Drainage Thru Approach

Storm Sewer:

The existing storm water system consists of various sizes of storm sewer pipe (PVC, VCP and RCP) between 4th Street and 1st Street along Dakota Street. At 4th Street, a pair of 36" diameter pipes convey storm water to the east and then south, eventually discharging to the Big Sioux River. The majority of the existing storm sewer system was installed with the original Dakota Street construction in approximately 1949. Various modifications and repairs to the existing storm sewer system have been made over the years.

The proposed municipal storm sewer system is comprised of a combination of reinforced concrete pipe, storm sewer junction boxes and inlets. The storm sewer system is designed to carry the runoff from a 20% chance storm event. The proposed storm sewer system will extend from 5th Street to the north up to Lynn Avenue to reduce the spread of surface water draining down Dakota Street. The discharge point for the new storm sewer system will be the twin 36" diameter pipes at the intersection of 4th Street and Dakota Street. No downstream improvements to the City's storm sewer system are planned with this project.

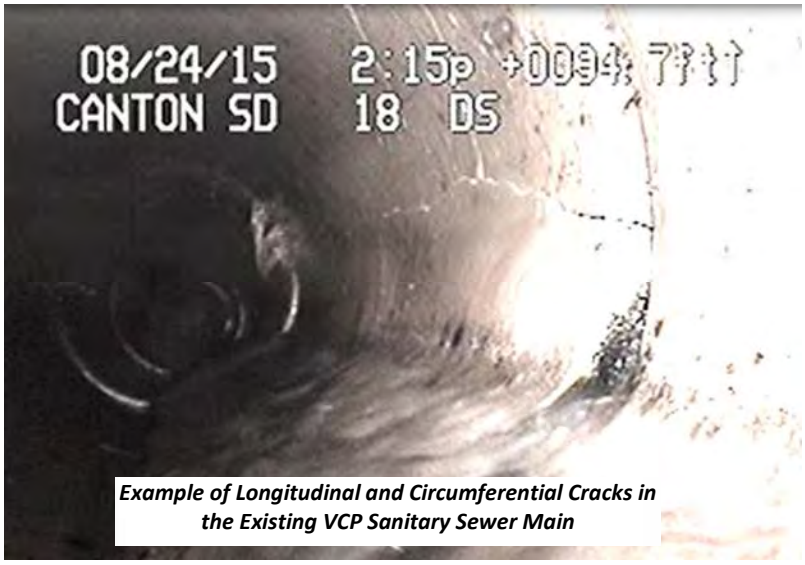
Sanitary Sewer:

There is existing 8" diameter VCP sanitary sewer main on Dakota Street between 5th Street and 3rd Street and between 2nd Street and Lynn Avenue. The existing age of the sanitary sewer main is not certain but is estimated to be seventy-five years old or older, being constructed about the same time as the original street construction of Dakota Street. The existing manholes are typically brick and mortar construction exhibiting signs of open joints and mortar degradation. The existing mains are vitrified clay pipe with numerous joints and longitudinal and circumferential cracking. Tree roots are evident in numerous joints and cracks.

Typical existing brick and mortar manholes

The City of Canton is planning to replace the aging VCP mains and related sanitary sewer service lines within the project limits. This replacement of the sanitary main and services will result in less infiltration into the City's wastewater collection system and provide a reliable, long-term improvement to the system as a whole.

A portion of the existing sanitary main will be deepened to allow sanitary service to expand to an undeveloped portion of the City. The additional flow from the undeveloped land will not make a significant impact to the downstream collection system and no increases in pipes sizes are warranted.



Example of Longitudinal and Circumferential Cracks in the Existing VCP Sanitary Sewer Main

Water Main:

There is currently water distribution main within the Dakota Street corridor along the entire project. Existing water mains range from 2" in diameter to 8" in diameter and are either cast iron, ductile iron, PVC or asbestos cement pipes. The age of the existing water system is approximately seventy-five years and older. Records were not found to accurately verify the true age. The approximated age is based upon local knowledge and original road construction plans.

Section of existing main illustrating tree roots growing through the pipe joints and cracks

A new 12" diameter PVC water main is proposed to replace the existing water main along Dakota Street. This new 12" PVC main will become a portion of the main connection between the City's ground storage reservoir located on the south edge of the community and the City's elevated storage tank located on the northern edge of the community. The City's hydraulic model of the distribution system indicates the proposed improvements to the water distribution system will impact a significant portion of the community by providing increased flows around the community. Other water system improvements along Dakota Street include the addition of several main line valves to properly isolate the water system and the addition of several new fire hydrants to replace existing hydrants with small barrels and pipe leads.

3. Environmental Considerations

In general, this section discusses the environmental resources within the project corridor. In review, the project corridor is Dakota Street between US Highway 18 and Lynn Avenue in Canton. Each alternative including the No Action alternative are addressed herein. This section identifies the existing conditions for each affected resource followed by potential direct impacts of the proposed alternatives and No Action alternative.

a. Floodplains

Existing Conditions: The City of Canton and Lincoln County participate in the National Flood Insurance Program. The project corridor contains no FEMA designated flood zones. The FIRM panel covering the project area is Panel 46083C0287 with an Effective Date of April 2, 2008.

Alternatives Impacts: Neither the No Action nor any of the project alternatives would have an impact on the FEMA designated flood zones.

b. Wetlands and Other Waters of the U.S.

Existing Conditions: A wetland survey along the project corridor was completed by Clark Engineering in 2014. No wetlands were found to be within the project limits.

Alternatives Impacts: Due to the absence of wetlands within the project corridor, neither the No Action nor any of the project alternatives would have wetland impacts.

c. Historical, Archaeological, Cultural Resources

Existing Conditions: Federal Agencies are required to determine if their projects impact historic properties that are listed on or eligible on the National Register of Historic Places (refer to Section 106 of the National Historic Preservation Act of 1966).

Patricia Downing with Prairie Lakes Archaeological Services performed a Level III cultural resources survey of the project corridor in June of 2014. The results of the survey indicated that no prehistoric, historic or architectural sites were found within the project corridor. It was recommended that a determination of No Historic Properties Affected be made for the project and that Section 106 Clearance be granted for the project. A copy of the Level III survey and the Cultural Resources Effects Assessment Summary are included in the appendices of this facilities plan.

Alternatives Impacts: Based on the Level III cultural resources survey, none of the project alternatives would have archaeological or cultural resources impacts. If evidence of any unrecorded or buried cultural resources is found during construction then all work should stop and the State Historic Preservation Officer should be notified of the find.

d. Noise

Existing Conditions: The project corridor falls within the City of Canton resulting in an existing level of noise due to the typical movement of vehicular and pedestrian traffic along the corridor.

Alternative Impacts: The No Action alternative would not impact the existing noise levels. The other project alternatives would not impact the long-term noise levels when compared to the existing noise levels. After construction, the project's function will be to move traffic through the corridor, the same as existing conditions.

For the other project alternatives, Best Management Practices will be employed to reduce the short-term noise levels typical of a construction project of this nature. BMPs will include not

allowing construction activities along the corridor in the early morning and evening hours nor on Sundays and holidays. The project alternatives will increase short-term noise levels but the implementing of the BMPs will lessen/minimize the short-term noise levels.

e. Agricultural Lands

Existing Conditions: Federal projects are required to minimize the conversion of farmland to nonagricultural uses (refer to Farmland Protection Act of 1981). Farmland is not present in the project corridor.

Alternative Impacts: Due to the absence of farmland within the project corridor, all alternatives will have no impacts to agricultural lands.

f. Wild and Scenic Rivers

The Wild and Scenic Rivers Act (and amendments thereto) describes the rivers designated on or eligible for the Wild and Scenic Rivers system. There are no such designated rivers within the project corridor. None of the project alternatives will have any impacts to wild and scenic rivers.

g. Fish and Wildlife Protection

Existing Conditions: Wildlife habitat within the project corridor consists of an urban area. In accordance with the Endangered Species Act (Section 7(c)), project information was provided to USFWS and SDGFP for consultation for the presence of threatened and endangered (T&E) species. A database of T&E species is maintained by the SDGFP.

The list of T&E species on the SDGFP database for Lincoln County was updated as of 8/10/2015. The list currently includes:

- Northern Redbelly Dace (State Threatened)
- Topeka Shiner (Federally Endangered)
- Lined Snake (State Endangered),
- Northern River Otter (State Threatened).

The Dace, Shiner and Otter are outside of the project corridor given the aquatic natures of the species. According to SDGFP information, the Lined Snake has a habitat consisting of open prairie hillsides and rocky, woodland areas and is generally found in extreme southeastern South Dakota including the majority of Lincoln County.

Alternative Impacts: The No Action alternative would have no impacts to T&E species or habitats.

For the Lined Snake, none of the proposed alternatives contain habit frequented by the Lined Snake so it is determined there will be no impact to the Lined Snake.

Letters received from USFWS and SDGFP dated 8/10/15 and 7/27/15, respectively, both indicate there will be no significant impacts on fish and wildlife resources due to the proposed project.

Copies of the correspondence with the agencies are provided in the appendices of this facilities plan.

h. Water Quality and Quantity

Existing Conditions: There are no waterways or related water systems within the project corridor. Storm water currently is collected in drainage inlets and is conveyed in a municipal storm sewer system. Overland storm water flow travels within urban street sections typically consisting of curb and gutter and paved street surfacing.

The existing sanitary sewer system consists of brick manholes and old vitrified clay pipe mains and service lines with numerous pipe joints showing visible signs of infiltration and root intrusion. Depending on the depth of the groundwater at any time there is potential for sanitary sewer flows to exfiltrate into the existing soil stratum and groundwater thru damaged portions of the pipe or non-functional pipe joints.

Alternative Impacts: The No Action alternative would have no impacts to water quality and quantity as this relates to the municipal storm sewer system. In regards to the sanitary sewer collections system, the existing system would continue to age and deteriorate likely increasing the frequency and quantity of sanitary sewer flows exfiltrating into the soils and groundwater.

The proposed alternatives would have no long-term impacts to water quality and quantity as this relates to the municipal storm sewer system. In regards to the sanitary sewer collection system, improvements to the collection system will eliminate or significantly decrease the potential of sanitary sewer flows exfiltrating into the soils and groundwater.

A Stormwater Pollution Prevention Plan (SWPPP) is required during construction of the selected alternative to prevent erosion. Requirements of the SWPPP include temporary and permanent erosion control measures and the reestablishing vegetation following construction. BMPs will be implemented to minimize impacts to adjacent and downstream areas.

i. Regulated Materials

Existing Conditions: Properties where hazardous materials have spilled or leaked into the soils may present a risk to the project due to the liability and potential high costs associated with cleanup. There may also be concerns over exposure to contaminants in the soils, groundwaters or surface waters.

A search of the SDDENR Spills database was conducted to determine the presence of any known spills in the project corridor. One site was identified (DENR # 93.307) located in the northwest quadrant of the US Hwy 18 and Dakota Street intersection which is generally located at the south end of the project corridor. The address of the property is 324 E. 5th Street. The site status has been closed as of June 16, 2003 (see attached documentation in the appendices).

Alternative Impacts: Neither the No Action alternative nor the other project alternatives would impact or be impacted by regulated materials. The project contractor should be made aware of the discovery of any oil drums or underground storage tanks or of any areas containing soil

staining or soils with objectionable odors. If such items are found, no additional work in the area shall take place until the SDDENR is contacted.

j. Air Quality

Existing Conditions: The U.S. Environmental Protection Agency (USEPA) regulates air quality impart by primary and secondary National Ambient Air Quality standards. Sioux Falls has a monitoring site tracking the concentrations of regulated pollutants including particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide and ozone. The project corridor is currently in attainment for ambient air quality as measured at the Sioux Falls monitoring site.

Alternative impacts: The No Action alternative would have no impacts on air quality. For other project alternatives, construction activities may result in short-term increases of air emissions. During construction, air emissions can be minimized by smooth traffic-flow patterns and implementation of dust control measures including regular watering schedules, if needed.

k. Mitigation Actions

Selected Alternative: The following mitigation items will be implemented as part of the selected alternative for the project construction.

- Floodplains. No FEMA regulated floodplains are within or impacted by the project.
- Wetlands and Other Waters of the U.S.. No wetlands or related Waters of the U.S. are within or are impacted by the project.
- Historical, Archaeological, Cultural Resources. If evidence of any unrecorded or buried cultural resources is found during construction then all work should stop and the State Historic Preservation Officer should be notified of the find.
- Noise. Best Management Practices will be employed to reduce the short-term noise levels typical of a construction project of this nature. BMPs will include not allowing construction activities along the corridor in the early morning and evening hours nor on Sundays and holidays.
- Agricultural Lands. No agricultural lands are impacted by the project.
- Wild and Scenic Rivers. No waterbody designated as or eligible for inclusion under the Wild and Scenic Rivers act is impacted by this project.
- Fish and Wildlife Protection. No T&E species are expected to be present or impacted by this project. If any T&E species are found on the project site during construction, the appropriate agencies will be notified.
- Water Quality and Quantity. Water quantity will not impacted by the selected alternative. NPDES regulations require erosion control measures be implemented. A SWPPP will be prepared for the project requiring the contractor to provide temporary

and permanent erosion control measures to minimize erosion and sediment runoff due to construction activities.

- Regulated Materials. The project contractor should be made aware of the discovery of any oil drums or underground storage tanks or of any areas containing soil staining or soils with objectionable odors during construction. If such items are found, no additional work in the area shall take place until the SDDENR is contacted.

- Air Quality. During construction, air emissions can be minimized by smooth traffic-flow patterns and implementation of dust control measures including regular watering schedules, if needed.

4. Alternative Development and Selection

Three project alternatives are discussed below:

- No Action Alternative
- Option 1: Open Trench Construction
- Option 2: Trenchless Technology Construction

a. No Action Alternative

Based on the deteriorating conditions of both the City's underground infrastructure and the existing street surfacing, it is not recommended that the City adopt the No Action alternative. If the No Action Alternative is selected, the following items, at a minimum, should be anticipated:

- Initially perform a mill and overlay of the existing street surface and remove and replace the worst sections of existing curb and gutter.
- In year ten, perform an overlay of the existing surface to extend the street life an additional five to eight years.
- In year fifteen, plan to totally reconstruct the street and utilities.

b. Option 1: Open Trench Construction

It is recommended the improvements to the water distribution system, sanitary sewer collection system and the storm sewer system be constructed utilizing typical open-trench construction techniques. Option 1 represents the most cost effective measure for the City to construct the project in its entirety. The existing street surfacing has deteriorated and the functional capacity of the existing gutters to convey stormwater has diminished due to previous overlays.

The estimated total capital project cost for Option 1 is $2,808,000. The general breakdown of costs is shown in the following table:

Summary of Project Costs – Option 1

Work Items	Construction Subtotal	Engineering and Construction Admin	Legal/ Administration	Totals
General	$ 379,000	$ 57,000	$ 15,000	$ 451,000
Surfacing	$ 961,000	$ 144,000	$ 38,000	$ 1,143,000
Erosion Control	$ 35,000	$ 5,000	$ 1,000	$ 41,000
Traffic Control	$ 14,000	$ 2,000	$ 1,000	$ 17,000
Street Lighting	$ 52,000	$ 8,000	$ 2,000	$ 62,000
Storm Sewer	$ 428,000	$ 64,000	$ 17,000	$ 509,000
Water Main	$ 339,000	$ 51,000	$ 14,000	$ 404,000
Sanitary Sewer Main	$ 152,000	$ 23,000	$ 6,000	$ 181,000
TOTAL COST:	$ 2,360,000	$ 354,000	$ 94,000	$ 2,808,000

Advantages:

- The existing street surfacing is in need of replacement. Due to the nature of the open trench technique, the majority of the existing surfacing will be removed to install the underground utilities. Replacing the existing street surfacing allows for recommended improvements to the storm water drainage system by increasing the capacity of the gutter system. Over the past years the capacity of the existing gutters has been minimized by overlays extending into the gutters to the face of the curb. The need to save the existing surfacing is not present with this project.
- All piping and appurtenant materials (valves, hydrants, fittings, manholes, and both water and sewer service lines) will be replaced with new materials likely extending the useful life of the utilities for fifty years or more.
- Sags in the existing sanitary sewer mains can be eliminated.
- Improved as-constructed records of underground facilities and soil conditions within the project corridor. Types, sizes, locations and depths of all private/public utilities can be accurately measured and recorded for future reference.
- Does not require cleaning of the sanitary sewer main prior to replacement nor the removal of tree roots or other debris form the sewer main.
- Ensure all required horizontal and vertical separation requirements are adhered to for the water main placement.

Disadvantages:

- Additional site restoration including increased amount of pavement removal and replacement necessary when compared to Option 2.
- Increases the level of short-term construction noise and emissions as compared to Option 2.
- Maximizes the potential for disturbing other private/public utilities during construction.
- Risk of job site injury inherently increases with deep open trenches as compared to Option 2.
- Longer construction time as compared to Option 2.

The costs for operating and maintaining the proposed water, sanitary and storm systems as well as replacing the systems in the future will be the same for both Option 1 and Option 2. There is no anticipated salvage value to the proposed systems once the systems have reached their respected useful lives.

c. Option 2: Trenchless Technology Construction

This option includes horizontal directional drilling of new water main, sanitary sewer main lining (CIPP), and sanitary manhole rehabilitation by lining. Due to the shallow depths of the proposed storm sewer system, this option includes the installation of the new storm sewer system by open trench construction.

The existing street surfacing along the project corridor needs to be replaced. Any surfacing that is not removed because of the trenchless installation will be removed and replaced by the City on a non-participating cost basis.

The estimated participating total capital project cost for Option 2 is $1,848,000 and the non-participating cost is $990,000. The total capital project cost to the City is estimated to be $2,838,000. The general breakdown of costs is shown in the following table:

Summary of Project Costs – Option 2

Work Items	Participating (DW and CW) Project Costs			NON-Participating Project Costs		
	Construction Subtotal	Engineering and Construction Admin	Totals	Construction Subtotal	Engineering and Construction Admin	Totals
General	$ 184,000	$ 27,500	$ 211,500	$ 175,000	$ 26,300	$ 201,300
Surfacing	$ 393,000	$ 55,700	$ 448,700	$ 585,000	$ 86,900	$ 671,900
Erosion Control	$ 16,000	$ 2,300	$ 18,300	$ 26,000	$ 3,800	$ 29,800
Traffic Control	$ 18,000	$ 2,800	$ 20,800	$ -	$ -	$ -
Street Lighting	$ -	$ -	$ -	$ 47,000	$ 7,000	$ 54,000
Storm Sewer	$ 388,000	$ 58,200	$ 446,200	$ -	$ -	$ -
Water Main	$ 375,000	$ 56,200	$ 431,200	$ -	$ -	$ -
Sanitary Sewer Main	$ 182,000	$ 27,300	$ 209,300	$ -	$ -	$ -
Legal/Administration	$ 62,000		$ 62,000	$ 33,000	$ -	$ 33,000
TOTAL COSTS:	$ 1,618,000	$ 230,000	$ 1,848,000	$ 866,000	$ 124,000	$ 990,000

Advantages:

- If the street was not in need of full replacement, Option 2 would reduce the amount of street surfacing requiring removal and replacement.
- Potential to reduce noise and emissions resulting from construction activities.
- Minimize the potential for disturbing other private/public utilities during construction.
- Increase job site safety by eliminating deep open trenches.
- Reduce construction time.

Disadvantages:

- Still requires substantial removal of existing street surfacing for installation of the storm sewer system, installation of new water main fittings, hydrants and valves, installation of new water service lines, and connections to the existing water system.
- Requires the sanitary sewer main to be cleaned and all roots and debris removed from the main prior to CIPP lining.
- This option does not replace the aging sanitary sewer service lines within the street right-of-way. The existing services are reinstated internal to the main after the pipe lining is completed.
- This option does not replace the aging water service lines within the street. Open trench excavation will be needed to tie-over each water service to the new HDD water main.
- CIPP lining of the existing sanitary sewer main will not eliminate any existing sags in the sewer main.

- In an urban established corridor with multiple utilities (both private and public), it is difficult to maintain required water main separations from the other utilities. For example, the new HDD water main will be immediately adjacent to or under existing storm sewer main that will be abandoned in place to save the cost of pavement removal. This will make future repairs on the water main more difficult.

The costs for operating and maintaining the proposed water, sanitary and storm systems as well as replacing the systems in the future will be the same for both Option 1 and Option 2. There is no anticipated salvage value to the proposed systems once the systems have reached their respected useful lives.

d. Net Present Worth Evaluation of Options

The following table represents the present worth of each of the three project options.

		Option 1	Option 2
	No Action Alternative	**Open Trench Construction**	**Trenchless Technology Construction**
Total Capital Cost	**$ 379,400**	**$ 2,808,000**	**$ 2,838,000**
Present Worth of Annual O&M	**$ 162,200**	**$ 136,200**	**$ 136,200**
Present Worth of Street Overlay at Year 10	**$ 188,000**	**$ -**	**$ -**
Present Worth of Total Reconstruct at Year 15	**$ 2,980,000**	**$ -**	**$ -**
Present Worth of Salvage Value	**$ -**	**$ -**	**$ -**
Net Present Value	**$ 3,709,600**	**$ 2,944,200**	**$ 2,974,200**

Assumptions and variables used in the above present value evaluation.

1. If No Action alternative is selected, at a minimum, a mill and overlay of the existing street is recommended to extend the life of the street. At some point within the twenty year design period, total reconstruction of the street and utilities should be anticipated and planned for.
2. Cost of construction inflation was assumed to be 4% annually.
3. The discount rate was assumed to be 3.519% which was obtained from the South Dakota Department of Legislative Audit.
4. Operation and maintenance costs were extrapolited from City budgetary numbers. Historical records of annual maintenance costs on a per street block or per underground utility were not available. Operation and maintenance costs were assumed to increase with the age of the street and utility.
5. A design period of 20 years was used.
6. The accounting procedure for the City sets the salvage value of street and underground utility assets at zero using straight line depreciation methods.

e. Nonmonetary Evaluation of Options

The following table contains several nonmonetary project factors that have been ranked for each of the three project options. This evaluation provides a qualitative means of evaluating each of the project options. The higher the ranking on a scale of 1 to 5 indicates a more positive or favorable condition.

Nonmonetary Factors				
No Action Alternative				
Option 1 - Open Trench Construction				
Option 2 - Trenchless Technology Construction				
	No Action	**Option 1**	**Option 2**	**General Comments**
National, Regional, State, or Local Priorities				
Region-specific considerations including water quality objectives/initiatives	2	5	5	Options 1 and 2 reduce infiltration by replacing deteriorating pipes.
Consolidation/regionalization	1	1	1	No option is part of a regionalization plan.
Reduce Contaminants	1	5	5	Options 1 and 2 reduce infiltration by replacing deteriorating pipes.
Technical Factors				
Project Location and Physical Aspects	2	5	5	Options 1 and 2 provide required separation clearances between utilities.
Project Reliability	2	5	5	Options 1 and 2 reduce occurrences of pipe failures.
Constructability	4	5	1	Existing corridor with several existing private/public utilities difficult for trenchless methods.
Presence of qualified personnel to operate and maintain infrastructure	5	5	5	Current City staff profient in O&M of all municipal utility systems.
Environmental Factors				
Floodplains	5	5	5	No option impacts FEMA identified floodplains.
Wetlands and other waters of the US	5	5	5	No option impacts identified wetlands or other waters of the US.
Historical, archaelogical, cultural resources	5	5	5	No option impacts identified cultural resources.
Noise	4	3	3	The length of temporary construction noise longer with Options 1 and 2.
Fish and wildlife protection	5	4	4	Options 1 and 2 require tree removals.
Water quality and quantity	2	5	5	Options 1 and 2 reduce infiltration by replacing deteriorating pipes.
Air quality	4	3	3	Temporary air emmissions from construction vehicles are greater with Options 1 and 2.
Opportunities for water conservation, reuse, and/or recapture	1	5	5	Options 1 and 2 reduce infiltration by replacing deteriorating pipes.
Socioeconomic Factors				
Project acceptability/affordability	2	5	4	Based on total project costs for each option.
Summation of Rating Factors	**50**	**71**	**66**	

Rating System
5: Most Favorable
4: Advantageous
3: Average
2: Detrimental
1: Least Favorable

5. Financing and User Fee Impact

Option 1 – Open Trench Construction is the recommended option at a total capital cost of $2,808,000. The proposed project financing and user rates impact are as follows:

Clean Water SRF Loan Rate: 3.25% for 30 year term User Impact: $5.45 per User per month	$1,648,000
Drinking Water SRF Loan Rate: 3.00% for 30 year term User Impact: $2.41 per User per month	$ 760,000
Community Access Grant	$ 400,000
Total Funding:	$2,808,000

The City is in the process of applying for other grant funding for the project. If additional grant funds were to be awarded to the City, the loan amounts and associated user impact fees would likely decrease accordingly with the value of the grant.

6. Public Participation

A public hearing to discuss the project was held at the City Commission Chambers in Canton on December 21, 2015. The "Notice to Public Hearing" was published in the City's legal newspaper at least ten days prior to the public hearing. A copy of the affidavit of publication as well as the minutes from the public meeting are enclosed in the appendices of this facilities plan. The following items were generally discussed at the public hearing:

- Project description and need
- Project alternatives and related present worth costs
- Proposed financing for the project (identify anticipated SRF loan amounts)
- Proposed revenue sources for repayment of loan funds
- Terms of the SRF loan(s)
- User rate impacts

7. APPENDICES

The following items are included in the appendices of this Facilities Plan:

a. SD DENR Cost and Effectiveness Certification Form

b. Itemized Present Worth Cost Estimates for Option 1

c. Itemized Present Worth Cost Estimates for Option 2

d. Cultural Resources Effects Assessment Summary

e. Correspondence with Reviewing Agencies

f. SD DENR No Further Action Letter Regarding Petroleum Spill (DENR # 93.307)

g. Notice of Public Hearing, Affidavit of Publication, and Public Hearing Minutes

h. Project Location Maps

i. Preliminary Plan and Profile Drawings

a. SD DENR Cost and Effectiveness Certification Form

Cost and Effectiveness Certification Form

This is to certify compliance with Subtitle A, Section 5002, Subsection 602(b)(13) of the Water Resources Reform Development Act of 2014 in that project has been studied and evaluated for the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is sought; and to the maximum extent practicable, the project or activity selected maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account (i) the cost of constructing the project; (ii) the cost of operating and maintaining the project over the life of the project; and (iii) the cost of replacing the project.

Applicant Name: City of Canton, South Dakota

Project Name: Dakota Street Project - Phase 1

We certify that the proposed project is in compliance as described above.

Applicant's Authorized Signatory

Signature:

Printed Name: Chuck Smith

Title: Mayor

Date: 12/21/15

Project Engineer

Signature:

Printed Name: Myron Adam

License #: SD 6790

Date: 12/21/15

b. Itemized Capital Project Cost Estimate for Option 1

Prepared by:
JSA Engineers/Land Surveyors
12/23/2015

Option 1 - Open Trench Construction
DAKOTA STREET IMPROVEMENTS - PHASE 1
(US HWY 18 TO LYNN STREET)
CANTON, SOUTH DAKOTA
PRELIMINARY PROJECT ESTIMATE

LINE ITEM	DESCRIPTION	UNITS	PHASE 1 TOTAL QUANTITY	UNIT PRICE	DW-SRF QUANTITY	DW-SRF PRICE	CW-SRF QUANTITY	CW-SRF PRICE	PHASE 1 TOTAL PRICE
	GENERAL								
1	MOBILIZATION	LS	1	$96,460.00	0.33	$31,831.80	0.67	$64,628.20	$96,460.00
2	CLEAR AND GRUB TREE	EACH	41	$500.00	13.53	$6,765.00	27.47	$13,735.00	$20,500.00
3	REMOVE TRAFFIC SIGN	EACH	25	$25.00	8.25	$206.25	16.75	$418.75	$625.00
4	REMOVE CONCRETE CURB AND GUTTER	FT	4275	$3.00	1410.75	$4,232.25	2864.25	$8,592.75	$12,825.00
5	REMOVE DROP INLET	EACH	10	$500.00	3.3	$1,650.00	6.7	$3,350.00	$5,000.00
6	REMOVE JUNCTION BOX	EACH	5	$500.00	1.65	$825.00	3.35	$1,675.00	$2,500.00
7	REMOVE SANITARY MANHOLE	EACH	9	$910.50	2.97	$2,704.19	6.03	$5,490.32	$8,194.50
8	REMOVE FIRE HYDRANT	EACH	6	$400.00	1.98	$792.00	4.02	$1,608.00	$2,400.00
9	REMOVE SANITARY SEWER PIPE	FT	2736	$5.00	902.88	$4,514.40	1833.12	$9,165.60	$13,680.00
10	REMOVE STORM SEWER PIPE	FT	1305	$10.00	430.65	$4,306.50	874.35	$8,743.50	$13,050.00
11	REMOVE WATER MAIN	FT	3167	$12.00	1045.11	$12,541.32	2121.89	$25,462.68	$38,004.00
12	REMOVE WATER VALVE	EACH	13	$105.00	4.29	$450.45	8.71	$914.55	$1,365.00
13	REMOVE ASPHALT CONCRETE COMPOSITE	SQ YD	1263	$2.00	416.79	$833.58	846.21	$1,692.42	$2,526.00
14	REMOVE PCC PAVEMENT	SQ YD	10345	$4.00	3413.85	$13,655.40	6931.15	$27,724.60	$41,380.00
15	REMOVE CONCRETE APPROACH PAVEMENT	SQ YD	1001	$4.00	330.33	$1,321.32	670.67	$2,682.68	$4,004.00
16	REMOVE CONCRETE SIDEWALK	SQ YD	3746	$3.00	1236.18	$3,708.54	2509.82	$7,529.46	$11,238.00
17	SALVAGE TRAFFIC SIGN AND RESET	EACH	25	$30.00	8.25	$247.50	16.75	$502.50	$750.00
18	SAW EXISTING ASPHALT	FT	446	$3.50	147.18	$515.13	298.82	$1,045.87	$1,561.00
19	SAW EXISTING PCC CONCRETE	FT	1160	$5.55	382.8	$2,124.54	777.2	$4,313.46	$6,438.00
20	UNCLASSIFIED EXCAVATION	CU YD	4131	$4.00	1363.23	$5,452.92	2767.77	$11,071.08	$16,524.00
21	UNCLASSIFIED EXCAVATION, DIGOUTS	CU YD	413	$6.00	136.29	$817.74	276.71	$1,660.26	$2,478.00
22	UNCLASSIFIED GRADE STABILIZATION	CU YD	1240	$7.00	409.2	$2,864.40	830.8	$5,815.60	$8,680.00
23	SCARIFY AND RECOMPACT SUBGRADE	SQ YD	12392	$0.56	4089.36	$2,290.04	8302.64	$4,649.48	$6,939.52
24	WATER FOR EMBANKMENT	MGAL	33	$8.00	10.89	$87.12	22.11	$176.88	$264.00
25	PLACING CONTRACTOR FURNISHED TOPSOIL	CU YD	886	$15.00	292.38	$4,385.70	593.62	$8,904.30	$13,290.00
26	INCIDENTAL WORK, GRADING	LS	1	$5,500.00	0.33	$1,815.00	0.67	$3,685.00	$5,500.00
27	INCIDENTAL WORK, UTILITIES	LS	1	$2,575.00	0.33	$849.75	0.67	$1,725.25	$2,575.00
28	LOCATING UTILITY	EACH	10	$100.00	3.3	$330.00	6.7	$670.00	$1,000.00
29	VERIFY UTILITY	EACH	10	$100.00	3.3	$330.00	6.7	$670.00	$1,000.00
	SURFACING								
30	WATER FOR GRANULAR MATERIAL	MGAL	149	$15.00	49.17	$737.55	99.83	$1,497.45	$2,235.00
31	BASE COURSE	TON	12409	$12.00	4094.97	$49,139.64	8314.03	$99,768.36	$148,908.00
32	GRAVEL CUSHION	TON	404	$12.00	133.32	$1,599.84	270.68	$3,248.16	$4,848.00
33	ASPHALT CONCRETE COMPOSITE	TON	223	$90.00	73.59	$6,623.10	149.41	$13,446.90	$20,070.00
34	8" NONREINFORCED PCC PAVEMENT	SQ YD	9217	$41.00	3041.61	$124,706.01	6175.39	$253,190.99	$377,897.00
35	CONCRETE CURB AND GUTTER - TYPE SF68	FT	4275	$16.00	1410.75	$22,572.00	2864.25	$45,828.00	$68,400.00
36	CONCRETE VALLEY CUTTER, 8" THICK	SQ YD	396	$65.00	130.68	$8,494.20	265.32	$17,245.80	$25,740.00
37	8" PCC FILLET SECTION	SQ YD	369	$75.00	121.77	$9,132.75	247.23	$18,542.25	$27,675.00
38	6" PCC APPROACH PAVEMENT	SQ YD	386	$46.45	127.38	$5,916.80	258.62	$12,012.90	$17,929.70
39	8" PCC APPROACH PAVEMENT	SQ YD	615	$50.00	202.95	$10,147.50	412.05	$20,602.50	$30,750.00
40	4" CONCRETE SIDEWALK	SQ FT	21539	$4.05	7107.87	$28,786.87	14431.13	$58,446.08	$87,232.95
41	6" CONCRETE SIDEWALK	SQ FT	2600	$4.40	858	$3,775.20	1742	$7,664.80	$11,440.00
42	8" CONCRETE SIDEWALK	SQ FT	1225	$4.80	404.25	$1,940.40	820.75	$3,939.60	$5,880.00
43	MSE RETAINING WALL	LS	1	$25,000.00	0.33	$8,250.00	0.67	$16,750.00	$25,000.00
44	GEOTEXTILE FABRIC FOR SUBGRADE STABILIZATION	SQ YD	12392	$2.50	4089.36	$10,223.40	8302.64	$20,756.60	$30,980.00
45	DETECTABLE WARNING SURFACE	SQ FT	224	$44.00	73.92	$3,252.48	150.08	$6,603.52	$9,856.00
	EROSION CONTROL								
46	WATER FOR VEGETATION	MGAL	287	$3.72	94.71	$352.32	192.29	$715.32	$1,067.64
47	SPECIAL PERMANENT SEED MIXTURE 1	LB	222	$15.00	73.26	$1,098.90	148.74	$2,231.10	$3,330.00
48	FERTILIZING	LB	74	$0.70	24.42	$17.09	49.58	$34.71	$51.80
49	BONDED FIBER MATRIX	TON	1.5	$2,400.00	0.495	$1,188.00	1.005	$2,412.00	$3,600.00
50	3" CALIPER DECIDUOUS TREE, FURNISH AND PLANT	EACH	40	$370.00	13.2	$4,884.00	26.8	$9,916.00	$14,800.00
51	WEED CONTROL	LS	1	$210.00	0.33	$69.30	0.67	$140.70	$210.00
52	INLET PROTECTION	EACH	50	$70.75	16.5	$1,167.38	33.5	$2,370.13	$3,537.50
53	SWEEPING	HOUR	25	$130.00	8.25	$1,072.50	16.75	$2,177.50	$3,250.00
54	TEMPORARY VEHICLE TRACKING CONTROL	EACH	2	$569.68	0.66	$375.99	1.34	$763.37	$1,139.36
55	CONCRETE WASHOUT AREA	EACH	1	$810.77	0.33	$267.55	0.67	$543.22	$810.77
	TRAFFIC CONTROL								
56	TRAFFIC CONTROL	UNIT	7000	$1.20	2310	$2,772.00	4690	$5,628.00	$8,400.00
57	TRAFFIC CONTROL MISCELLANEOUS	LS	1	$5,000.00	0.33	$1,650.00	0.67	$3,350.00	$5,000.00
	STREET LIGHTING								
58	BREAKAWAY BASE LUMINAIRE POLE WITH ARM - 35' HEIGHT	EACH	7	$3,900.00	2.31	$9,009.00	4.69	$18,291.00	$27,300.00
59	2' DIAMETER FOOTING	EACH	7	$100.00	2.31	$231.00	4.69	$469.00	$700.00
60	TIE TO EXISTING CONDUIT	EACH	1	$100.00	0.33	$33.00	0.67	$67.00	$100.00
61	2" RIGID CONDUIT, SCHEDULE 40	FT	1842	$2.78	607.86	$1,689.85	1234.14	$3,430.91	$5,120.76
62	2" RIGID CONDUIT, SCHEDULE 80	FT	468	$10.36	154.44	$1,600.00	313.56	$3,248.48	$4,848.48

Option 1 - Open Trench Construction
DAKOTA STREET IMPROVEMENTS - PHASE 1
(US HWY 18 TO LYNN STREET)
CANTON, SOUTH DAKOTA
PRELIMINARY PROJECT ESTIMATE

LINE ITEM	DESCRIPTION	UNITS	PHASE 1 TOTAL QUANTITY	UNIT PRICE	DW-SRF QUANTITY	DW-SRF PRICE	CW-SRF QUANTITY	CW-SRF PRICE	PHASE 1 TOTAL PRICE
63	STREET LIGHT WIRE	FT	2168	$4.00	715.44	$2,861.76	1452.56	$5,810.24	$8,672.00
	STORM SEWER								
64	18" RCP CLASS 3, FURNISH	FT	855	$25.07	0	$0.00	855	$21,434.85	$21,434.85
65	18" RCP, INSTALL	FT	855	$29.43	0	$0.00	855	$25,162.65	$25,162.65
66	24" RCP CLASS 3, FURNISH	FT	351	$33.79	0	$0.00	351	$11,860.29	$11,860.29
67	24" RCP, INSTALL	FT	351	$29.43	0	$0.00	351	$10,329.93	$10,329.93
68	30" RCP CLASS 3, FURNISH	FT	1559	$48.51	0	$0.00	1559	$75,627.09	$75,627.09
69	30" RCP, INSTALL	FT	1559	$31.61	0	$0.00	1559	$49,279.99	$49,279.99
70	36" RCP CLASS 3, FURNISH	FT	370	$76.30	0	$0.00	370	$28,231.00	$28,231.00
71	36" RCP, INSTALL	FT	370	$34.88	0	$0.00	370	$12,905.60	$12,905.60
72	STANDARD STORM SEWER JUNCTION BOX, TYPE 1	EACH	11	$3,000.00	0	$0.00	11	$33,000.00	$33,000.00
73	STANDARD STORM SEWER INLET, TYPE B1	EACH	2	$1,000.00	0	$0.00	2	$2,000.00	$2,000.00
74	STANDARD 10' - 0" S.F. SUMP TYPE STORM SEWER INLET	EACH	31	$3,000.00	0	$0.00	31	$93,000.00	$93,000.00
75	TYPE B FRAME AND GRATE	EACH	2	$664.40	0	$0.00	2	$1,328.80	$1,328.80
76	TYPE Y MANHOLE FRAME AND LID	EACH	31	$400.00	0	$0.00	31	$12,400.00	$12,400.00
77	MANHOLE FRAME AND COVER	EACH	11	$498.65	0	$0.00	11	$5,485.15	$5,485.15
78	ADJUST MANHOLE	EACH	11	$528.58	0	$0.00	11	$5,814.38	$5,814.38
	WATERMAIN								
79	TRENCH STABILIZATION	TON	50	$25.00	50	$1,250.00	0	$0.00	$1,250.00
80	SELECT FILL	TON	100	$15.00	100	$1,500.00	0	$0.00	$1,500.00
81	4" C900 DR18 PVC WATERMAIN	FT	169	$20.25	169	$3,422.25	0	$0.00	$3,422.25
82	6" C900 DR18 PVC WATERMAIN	FT	333	$22.35	333	$7,442.55	0	$0.00	$7,442.55
83	8" C900 DR18 PVC WATERMAIN	FT	492	$25.62	492	$12,605.04	0	$0.00	$12,605.04
84	12" C900 DR18 PVC WATERMAIN	FT	2839	$38.00	2839	$107,882.00	0	$0.00	$107,882.00
85	6" GATE VALVE WITH BOX	EACH	6	$1,060.00	6	$6,360.00	0	$0.00	$6,360.00
86	8" GATE VALVE WITH BOX	EACH	10	$1,500.00	10	$15,000.00	0	$0.00	$15,000.00
87	12" GATE VALVE WITH BOX	EACH	12	$2,490.65	12	$29,887.80	0	$0.00	$29,887.80
88	VALVE BOX ADJUSTMENTS	EACH	28	$200.00	28	$5,600.00	0	$0.00	$5,600.00
89	4" MJ ELBOW 45 DEGREE	EACH	8	$150.00	8	$1,200.00	0	$0.00	$1,200.00
90	6" MJ ELBOW 45 DEGREE	EACH	6	$250.00	6	$1,500.00	0	$0.00	$1,500.00
91	8" MJ ELBOW 45 DEGREE	EACH	2	$298.00	2	$596.00	0	$0.00	$596.00
92	12" MJ ELBOW 45 DEGREE	EACH	2	$446.45	2	$892.90	0	$0.00	$892.90
93	12" X 6" MJ TEE	EACH	6	$527.95	6	$3,167.70	0	$0.00	$3,167.70
94	12" X 8" MJ TEE	EACH	2	$550.00	2	$1,100.00	0	$0.00	$1,100.00
95	12" X 12" MJ TEE	EACH	2	$787.09	2	$1,574.18	0	$0.00	$1,574.18
96	8" X 4" MJ REDUCER	EACH	6	$238.17	6	$1,429.02	0	$0.00	$1,429.02
97	8" X 6" MJ REDUCER	EACH	3	$250.70	3	$752.10	0	$0.00	$752.10
98	12" X 8" MJ CROSS	EACH	4	$1,100.00	4	$4,400.00	0	$0.00	$4,400.00
99	12" MJ PLUG	EACH	2	$300.00	2	$600.00	0	$0.00	$600.00
100	4" MJ OVERSIZED SLEEVE	EACH	6	$300.00	6	$1,800.00	0	$0.00	$1,800.00
101	6" MJ OVERSIZED SLEEVE	EACH	3	$360.00	3	$1,080.00	0	$0.00	$1,080.00
102	8" MJ OVERSIZED SLEEVE	EACH	1	$410.00	1	$410.00	0	$0.00	$410.00
103	4" MJ RETAINER GLAND	EACH	34	$36.24	34	$1,232.16	0	$0.00	$1,232.16
104	6" MJ RETAINER GLAND	EACH	45	$75.00	45	$3,375.00	0	$0.00	$3,375.00
105	8" MJ RETAINER GLAND	EACH	45	$68.86	45	$3,098.70	0	$0.00	$3,098.70
106	12" MJ RETAINER GLAND	EACH	60	$116.33	60	$6,979.80	0	$0.00	$6,979.80
107	WATERMAIN ADJUSTMENT	EACH	4	$1,500.00	4	$6,000.00	0	$0.00	$6,000.00
108	FIRE HYDRANT	EACH	6	$3,100.00	6	$18,600.00	0	$0.00	$18,600.00
109	TEMPORARY FIRE HYDRANT	EACH	5	$1,535.00	5	$7,675.00	0	$0.00	$7,675.00
110	CUT AND TIE TO EXISTING WATERMAIN	EACH	11	$1,312.08	11	$14,432.88	0	$0.00	$14,432.88
111	4" WATERMAIN BEDDING	FT	169	$3.27	169	$552.63	0	$0.00	$552.63
112	6" WATERMAIN BEDDING	FT	333	$4.00	333	$1,332.00	0	$0.00	$1,332.00
113	8" WATERMAIN BEDDING	FT	492	$4.00	492	$1,968.00	0	$0.00	$1,968.00
114	12" WATERMAIN BEDDING	FT	2839	$4.70	2839	$13,343.30	0	$0.00	$13,343.30
115	12" X 1" WATER SERVICE TAP, SADDLE, AND CORP. STOP	EACH	9	$500.00	9	$4,500.00	0	$0.00	$4,500.00
116	1" COPPER SERVICE LINE	FT	242	$25.00	242	$6,050.00	0	$0.00	$6,050.00
117	1" CURB BOX WITH VALVE	EACH	9	$300.00	9	$2,700.00	0	$0.00	$2,700.00
118	WATER SERVICE RECONNECT	EACH	9	$400.00	9	$3,600.00	0	$0.00	$3,600.00
	SANITARY SEWER								
119	TRENCH STABILIZATION MATERIAL	TON	50	$25.00	0	$0.00	50	$1,250.00	$1,250.00
120	TEMPORARY SEWER BYPASS	LS	1	$5,000.00	0	$0.00	1	$5,000.00	$5,000.00
121	8" SANITARY SEWER PIPE 6' - 8' DEEP	FT	437	$24.00	0	$0.00	437	$10,488.00	$10,488.00
122	8" SANITARY SEWER PIPE 8' - 10' DEEP	FT	753	$26.00	0	$0.00	753	$19,578.00	$19,578.00
123	8" SANITARY SEWER PIPE 10' - 12' DEEP	FT	598	$30.00	0	$0.00	598	$17,940.00	$17,940.00
124	8" SANITARY SEWER PIPE 12' - 14' DEEP	FT	229	$34.00	0	$0.00	229	$7,786.00	$7,786.00
125	8" SANITARY SEWER PIPE 14' - 16' DEEP	FT	162	$40.00	0	$0.00	162	$6,480.00	$6,480.00
126	8" SANITARY SEWER PIPE 16' - 18' DEEP	FT	162	$48.00	0	$0.00	162	$7,776.00	$7,776.00

Prepared by:
JSA Engineers/Land Surveyors
12/23/2015

Option 1 - Open Trench Construction
DAKOTA STREET IMPROVEMENTS - PHASE 1
(US HWY 18 TO LYNN STREET)
CANTON, SOUTH DAKOTA
PRELIMINARY PROJECT ESTIMATE

LINE ITEM	DESCRIPTION	UNITS	PHASE 1 TOTAL QUANTITY	UNIT PRICE	DW-SRF QUANTITY	DW-SRF PRICE	CW-SRF QUANTITY	CW-SRF PRICE	PHASE 1 TOTAL PRICE
127	8" SANITARY SEWER PIPE 18' - 20' DEEP	FT	395	$60.00	0	$0.00	395	$23,700.00	$23,700.00
128	8" SEWER COUPLINGS	EACH	11	$275.00	0	$0.00	11	$3,025.00	$3,025.00
129	48" MANHOLE 6' - 8' DEEP	EACH	2	$1,800.00	0	$0.00	2	$3,600.00	$3,600.00
130	48" MANHOLE 8' - 10' DEEP	EACH	2	$2,000.00	0	$0.00	2	$4,000.00	$4,000.00
131	48" MANHOLE 10' - 12' DEEP	EACH	1	$2,200.00	0	$0.00	1	$2,200.00	$2,200.00
132	48" MANHOLE 12' - 14' DEEP	EACH	1	$2,400.00	0	$0.00	1	$2,400.00	$2,400.00
133	48" MANHOLE 16' - 18' DEEP	EACH	1	$2,800.00	0	$0.00	1	$2,800.00	$2,800.00
134	48" MANHOLE 18' - 20' DEEP	EACH	1	$3,200.00	0	$0.00	1	$3,200.00	$3,200.00
135	8" BOOTS FOR MANHOLE	EACH	24	$110.00	0	$0.00	24	$2,640.00	$2,640.00
136	ADJUST MANHOLE	EACH	8	$528.58	0	$0.00	8	$4,228.64	$4,228.64
137	MANHOLE FRAME AND COVER	EACH	8	$498.65	0	$0.00	8	$3,989.20	$3,989.20
138	EXTERNAL FRAME SEAL	EACH	8	$320.80	0	$0.00	8	$2,566.40	$2,566.40
139	MANHOLE CONSTRUCTION PLATE MARKER	EACH	8	$203.22	0	$0.00	8	$1,625.76	$1,625.76

	DW-SRF TOTALS	CW-SRF TOTALS	TOTAL PHASE 1
Preliminary Construction Estimate:	**$745,000**	**$1,414,000**	**$2,159,000**
Engineering/Construction Admin:	**$117,000**	**$237,000**	**$354,000**
Legal Administration:	**$31,000**	**$62,000**	**$93,000**
Contingencies:	**$67,000**	**$135,000**	**$202,000**
Project Total Estimate:	**$960,000**	**$1,848,000**	**$2,808,000**

c. Itemized Capital Project Cost Estimate for Option 2

Prepared by:
JSA Engineers/Land Surveyors
12/23/2015

Option 2 - Trenchless Technologies
DAKOTA STREET IMPROVEMENTS - PHASE 1
(US HWY 18 TO LYNN STREET)
CANTON, SOUTH DAKOTA
PRELIMINARY PROJECT ESTIMATE

LINE ITEM	DESCRIPTION	UNITS	UNIT PRICE	PHASE 1 TOTAL QUANTITY	DW-SRF QUANTITY	DW-SRF PRICE	CW-SRF QUANTITY	CW-SRF PRICE	NON-PARTICIPATING QUANTITY	NON-PARTICIPATING TOTAL PRICE	PHASE 1 TOTAL PRICE
	GENERAL										
1	MOBILIZATION	LS	$125,000.00	1	0.25	$31,250.00	0.5	$62,500.00	0.25	$31,250.00	$125,000.00
2	CLEAR AND GRUB TREE	EACH	$500.00	41	0	$0.00	0	$0.00	41	$20,500.00	$20,500.00
3	REMOVE TRAFFIC SIGN	EACH	$25.00	25	8.25	$206.25	16.75	$418.75	0	$0.00	$625.00
4	REMOVE CONCRETE CURB AND GUTTER	FT	$3.00	4275	750	$2,250.00	1525	$4,575.00	2000	$6,000.00	$12,825.00
5	REMOVE DROP INLET	EACH	$500.00	10	3.3	$1,650.00	6.7	$3,350.00	0	$0.00	$5,000.00
6	REMOVE JUNCTION BOX	EACH	$500.00	5	0	$0.00	5	$2,500.00	0	$0.00	$2,500.00
7	REMOVE FIRE HYDRANT	EACH	$400.00	6	6	$2,400.00	0	$0.00	0	$0.00	$2,400.00
8	REMOVE STORM SEWER PIPE	FT	$10.00	1305	0	$0.00	1305	$13,050.00	0	$0.00	$13,050.00
9	REMOVE WATER MAIN	FT	$12.00	3167	520	$6,240.00	0	$0.00	2647	$31,764.00	$38,004.00
10	REMOVE WATER VALVE	EACH	$105.00	13	13	$1,365.00	0	$0.00	0	$0.00	$1,365.00
11	REMOVE ASPHALT CONCRETE COMPOSITE	SQ YD	$2.00	1263	42	$84.00	83	$166.00	1138	$2,276.00	$2,526.00
12	REMOVE PCC PAVEMENT	SQ YD	$4.00	10345	1320	$5,280.00	2680	$10,720.00	6345	$25,380.00	$41,380.00
13	REMOVE CONCRETE APPROACH PAVEMENT	SQ YD	$4.00	1001	76	$304.00	154	$616.00	771	$3,084.00	$4,004.00
14	REMOVE CONCRETE SIDEWALK	SQ YD	$3.00	3776	100	$300.00	200	$600.00	3476	$10,428.00	$11,328.00
15	SALVAGE TRAFFIC SIGN AND RESET	EACH	$30.00	25	8.25	$247.50	16.75	$502.50	0	$0.00	$750.00
16	SAW EXISTING ASPHALT	FT	$3.50	446	147	$514.50	299	$1,046.50	0	$0.00	$1,561.00
17	SAW EXISTING PCC CONCRETE	FT	$5.55	1160	383	$2,125.65	777	$4,312.35	0	$0.00	$6,438.00
18	UNCLASSIFIED EXCAVATION	CU YD	$4.00	4131	0	$0.00	0	$0.00	4131	$16,524.00	$16,524.00
19	UNCLASSIFIED EXCAVATION, DIGOUTS	CU YD	$6.00	413	13	$78.00	27	$162.00	373	$2,238.00	$2,478.00
20	UNCLASSIFIED GRADE STABILIZATION	CU YD	$7.00	1240	40	$280.00	80	$560.00	1120	$7,840.00	$8,680.00
21	SCARIFY AND RECOMPACT SUBGRADE	SQ YD	$0.56	24784	4089	$2,289.84	8303	$4,649.68	12392	$6,939.52	$13,879.04
22	WATER FOR EMBANKMENT	MGAL	$8.00	33	0	$0.00	0	$0.00	33	$264.00	$264.00
23	PLACING CONTRACTOR FURNISHED TOPSOIL	CU YD	$15.00	886	146	$2,190.00	297	$4,455.00	443	$6,645.00	$13,290.00
24	INCIDENTAL WORK, GRADING	LS	$8,500.00	1.15	0.2	$1,700.00	0.45	$3,825.00	0.5	$4,250.00	$9,775.00
25	INCIDENTAL WORK, UTILITIES	LS	$2,575.00	1	0.33	$849.75	0.67	$1,725.25	0	$0.00	$2,575.00
26	LOCATING UTILITY	EACH	$150.00	10	3	$450.00	7	$1,050.00	0	$0.00	$1,500.00
27	VERIFY UTILITY	EACH	$150.00	10	3	$450.00	7	$1,050.00	0	$0.00	$1,500.00
	SURFACING										
28	WATER FOR GRANULAR MATERIAL	MGAL	$15.00	149	19	$285.00	39	$585.00	91	$1,365.00	$2,235.00
29	BASE COURSE	TON	$15.00	12409	1597	$23,955.00	3243	$48,645.00	7569	$113,535.00	$186,135.00
30	GRAVEL CUSHION	TON	$12.00	404	13	$156.00	27	$324.00	364	$4,368.00	$4,848.00
31	ASPHALT CONCRETE COMPOSITE	TON	$90.00	223	74	$6,660.00	149	$13,410.00		$0.00	$20,070.00
32	8" NONREINFORCED PCC PAVEMENT	SQ YD	$46.00	9217	1186	$54,556.00	2409	$110,814.00	5622	$258,612.00	$423,982.00
33	CONCRETE CURB AND GUTTER - TYPE SF68	FT	$16.00	4275	751	$12,016.00	1524	$24,384.00	2000	$32,000.00	$68,400.00
34	CONCRETE VALLEY CUTTER, 8" THICK	SQ YD	$65.00	396	131	$8,515.00	265	$17,225.00	0	$0.00	$25,740.00
35	8" PCC FILLET SECTION	SQ YD	$75.00	369	122	$9,150.00	247	$18,525.00	0	$0.00	$27,675.00
36	6" PCC APPROACH PAVEMENT	SQ YD	$46.45	386	76	$3,530.20	154	$7,153.30	156	$7,246.20	$17,929.70
37	8" PCC APPROACH PAVEMENT	SQ YD	$50.00	615	0	$0.00	0	$0.00	615	$30,750.00	$30,750.00
38	4" CONCRETE SIDEWALK	SQ FT	$4.05	21539	891	$3,608.55	1809	$7,326.45	18839	$76,297.95	$87,232.95
39	6" CONCRETE SIDEWALK	SQ FT	$4.40	2600	0	$0.00	0	$0.00	2600	$11,440.00	$11,440.00
40	8" CONCRETE SIDEWALK	SQ FT	$4.80	1225	0	$0.00	0	$0.00	1225	$5,880.00	$5,880.00
41	MSE RETAINING WALL	LS	$25,000.00	1	0	$0.00	0	$0.00	1	$25,000.00	$25,000.00
42	GEOTEXTILE FABRIC FOR SUBGRADE STABILIZATION	SQ YD	$2.50	12392	1597	$3,992.50	3243	$8,107.50	7552	$18,880.00	$30,980.00
43	DETECTABLE WARNING SURFACE	SQ FT	$44.00	224	74	$3,256.00	150	$6,600.00	0	$0.00	$9,856.00
	EROSION CONTROL										
44	WATER FOR VEGETATION	MGAL	$15.00	287	47	$705.00	96	$1,440.00	144	$2,160.00	$4,305.00
45	SPECIAL PERMANENT SEED MIXTURE 1	LB	$35.00	222	37	$1,295.00	74	$2,590.00	111	$3,885.00	$7,770.00
46	FERTILIZING	LB	$1.00	74	12	$12.00	25	$25.00	37	$37.00	$74.00
47	BONDED FIBER MATRIX	TON	$3,500.00	1.5	0.25	$875.00	0.5	$1,750.00	0.75	$2,625.00	$5,250.00
48	3" CALIPER DECIDUOUS TREE, FURNISH AND PLANT	EACH	$370.00	40	0	$0.00	0	$0.00	40	$14,800.00	$14,800.00
49	WEED CONTROL	LS	$210.00	1	0.17	$35.70	0.33	$69.30	0.5	$105.00	$210.00
50	INLET PROTECTION	EACH	$70.75	50	16.5	$1,167.38	33.5	$2,370.13	0	$0.00	$3,537.50
51	SWEEPING	HOUR	$130.00	25	3	$390.00	7	$910.00	15	$1,950.00	$3,250.00
52	TEMPORARY VEHICLE TRACKING CONTROL	EACH	$569.68	2	0.7	$398.78	1.3	$740.58	0	$0.00	$1,139.36
53	CONCRETE WASHOUT AREA	EACH	$810.77	1	0.33	$267.55	0.67	$543.22	0	$0.00	$810.77
	TRAFFIC CONTROL										
54	TRAFFIC CONTROL	UNIT	$1.20	7000	2310	$2,772.00	4690	$5,628.00	0	$0.00	$8,400.00
55	TRAFFIC CONTROL MISCELLANEOUS	LS	$10,000.00	1	0.33	$3,300.00	0.67	$6,700.00	0	$0.00	$10,000.00
	STREET LIGHTING										
56	BREAKAWAY BASE LUMINAIRE POLE WITH ARM - 35' HEIGHT	EACH	$3,900.00	7	0	$0.00	0	$0.00	7	$27,300.00	$27,300.00
57	2' DIAMETER FOOTING	EACH	$100.00	7	0	$0.00	0	$0.00	7	$700.00	$700.00
58	TIE TO EXISTING CONDUIT	EACH	$100.00	1	0	$0.00	0	$0.00	1	$100.00	$100.00
59	2" RIGID CONDUIT, SCHEDULE 40	FT	$2.78	1842	0	$0.00	0	$0.00	1842	$5,120.76	$5,120.76
60	2" RIGID CONDUIT, SCHEDULE 80	FT	$10.36	468	0	$0.00	0	$0.00	468	$4,848.48	$4,848.48
61	STREET LIGHT WIRE	FT	$4.00	2168	0	$0.00	0	$0.00	2168	$8,672.00	$8,672.00
	STORM SEWER										
62	18" RCP CLASS 3, FURNISH	FT	$25.07	855	0	$0.00	855	$21,434.85	0	$0.00	$21,434.85
63	18" RCP, INSTALL	FT	$29.43	855	0	$0.00	855	$25,162.65	0	$0.00	$25,162.65
64	24" RCP CLASS 3, FURNISH	FT	$33.79	351	0	$0.00	351	$11,860.29	0	$0.00	$11,860.29
65	24" RCP, INSTALL	FT	$29.43	351	0	$0.00	351	$10,329.93	0	$0.00	$10,329.93
66	30" RCP CLASS 3, FURNISH	FT	$48.51	1559	0	$0.00	1559	$75,627.09	0	$0.00	$75,627.09
67	30" RCP, INSTALL	FT	$31.61	1559	0	$0.00	1559	$49,279.99	0	$0.00	$49,279.99
68	36" RCP CLASS 3, FURNISH	FT	$76.30	370	0	$0.00	370	$28,231.00	0	$0.00	$28,231.00
69	36" RCP, INSTALL	FT	$34.88	370	0	$0.00	370	$12,905.60	0	$0.00	$12,905.60
70	STANDARD STORM SEWER JUNCTION BOX, TYPE 1	EACH	$3,000.00	11	0	$0.00	11	$33,000.00	0	$0.00	$33,000.00
71	STANDARD STORM SEWER INLET, TYPE B1	EACH	$1,000.00	2	0	$0.00	2	$2,000.00	0	$0.00	$2,000.00
72	STANDARD 10' - 0" S.F. SUMP TYPE STORM SEWER INLET	EACH	$3,000.00	31	0	$0.00	31	$93,000.00	0	$0.00	$93,000.00
73	TYPE B FRAME AND GRATE	EACH	$664.40	2	0	$0.00	2	$1,328.80	0	$0.00	$1,328.80

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12/23/2015

Option 2 - Trenchless Technologies
DAKOTA STREET IMPROVEMENTS - PHASE 1
(US HWY 18 TO LYNN STREET)
CANTON, SOUTH DAKOTA
PRELIMINARY PROJECT ESTIMATE

LINE ITEM	DESCRIPTION	UNITS	UNIT PRICE	PHASE 1 TOTAL QUANTITY	DW-SRF QUANTITY	DW-SRF PRICE	CW-SRF QUANTITY	CW-SRF PRICE	NON-PARTICIPATING QUANTITY	NON-PARTICIPATING TOTAL PRICE	PHASE 1 TOTAL PRICE
74	TYPE Y MANHOLE FRAME AND LID	EACH	$400.00	31	0	$0.00	31	$12,400.00	0	$0.00	$12,400.00
75	MANHOLE FRAME AND COVER	EACH	$498.65	11	0	$0.00	11	$5,485.15	0	$0.00	$5,485.15
76	ADJUST MANHOLE	EACH	$528.58	11	0	$0.00	11	$5,814.38	0	$0.00	$5,814.38
	WATERMAIN										
77	TRENCH STABILIZATION	TON	$25.00	20	20	$500.00	0	$0.00	0	$0.00	$500.00
78	SELECT FILL	TON	$15.00	20	20	$300.00	0	$0.00	0	$0.00	$300.00
79	4" C900 DR18 PVC WATERMAIN	FT	$20.25	169	169	$3,422.25	0	$0.00	0	$0.00	$3,422.25
80	6" C900 DR18 PVC WATERMAIN	FT	$22.35	333	333	$7,442.55	0	$0.00	0	$0.00	$7,442.55
81	8" C900 DR18 PVC WATERMAIN	FT	$25.62	492	492	$12,605.04	0	$0.00	0	$0.00	$12,605.04
82	12" C900 DR18 PVC WATERMAIN	FT	$45.00	520	520	$23,400.00	0	$0.00	0	$0.00	$23,400.00
83	12" C900 DR18 PVC WATERMAIN - HDD	FT	$65.00	2319	2319	$150,735.00	0	$0.00	0	$0.00	$150,735.00
84	6" GATE VALVE WITH BOX	EACH	$1,060.00	6	6	$6,360.00	0	$0.00	0	$0.00	$6,360.00
85	8" GATE VALVE WITH BOX	EACH	$2,000.00	10	10	$20,000.00	0	$0.00	0	$0.00	$20,000.00
86	12" GATE VALVE WITH BOX	EACH	$3,000.00	12	12	$36,000.00	0	$0.00	0	$0.00	$36,000.00
87	VALVE BOX ADJUSTMENTS	EACH	$200.00	28	28	$5,600.00	0	$0.00	0	$0.00	$5,600.00
88	4" MJ ELBOW 45 DEGREE	EACH	$150.00	8	8	$1,200.00	0	$0.00	0	$0.00	$1,200.00
89	6" MJ ELBOW 45 DEGREE	EACH	$250.00	6	6	$1,500.00	0	$0.00	0	$0.00	$1,500.00
90	8" MJ ELBOW 45 DEGREE	EACH	$298.00	2	2	$596.00	0	$0.00	0	$0.00	$596.00
91	12" MJ ELBOW 45 DEGREE	EACH	$446.45	2	2	$892.90	0	$0.00	0	$0.00	$892.90
92	12" X 6" MJ TEE	EACH	$527.95	6	6	$3,167.70	0	$0.00	0	$0.00	$3,167.70
93	12" X 8" MJ TEE	EACH	$550.00	2	2	$1,100.00	0	$0.00	0	$0.00	$1,100.00
94	12" X 12" MJ TEE	EACH	$787.09	2	2	$1,574.18	0	$0.00	0	$0.00	$1,574.18
95	8" X 4" MJ REDUCER	EACH	$238.17	6	6	$1,429.02	0	$0.00	0	$0.00	$1,429.02
96	8" X 6" MJ REDUCER	EACH	$250.70	3	3	$752.10	0	$0.00	0	$0.00	$752.10
97	12" X 8" MJ CROSS	EACH	$1,100.00	4	4	$4,400.00	0	$0.00	0	$0.00	$4,400.00
98	12" MJ PLUG	EACH	$300.00	2	2	$600.00	0	$0.00	0	$0.00	$600.00
99	4" MJ OVERSIZED SLEEVE	EACH	$300.00	6	6	$1,800.00	0	$0.00	0	$0.00	$1,800.00
100	6" MJ OVERSIZED SLEEVE	EACH	$360.00	3	3	$1,080.00	0	$0.00	0	$0.00	$1,080.00
101	8" MJ OVERSIZED SLEEVE	EACH	$410.00	1	1	$410.00	0	$0.00	0	$0.00	$410.00
102	4" MJ RETAINER GLAND	EACH	$36.24	34	34	$1,232.16	0	$0.00	0	$0.00	$1,232.16
103	6" MJ RETAINER GLAND	EACH	$75.00	45	45	$3,375.00	0	$0.00	0	$0.00	$3,375.00
104	8" MJ RETAINER GLAND	EACH	$68.86	45	45	$3,098.70	0	$0.00	0	$0.00	$3,098.70
105	12" MJ RETAINER GLAND	EACH	$116.33	60	60	$6,979.80	0	$0.00	0	$0.00	$6,979.80
106	WATERMAIN ADJUSTMENT	EACH	$1,500.00	4	4	$6,000.00	0	$0.00	0	$0.00	$6,000.00
107	FIRE HYDRANT	EACH	$3,600.00	6	6	$21,600.00	0	$0.00	0	$0.00	$21,600.00
108	TEMPORARY FIRE HYDRANT	EACH	$1,535.00	5	5	$7,675.00	0	$0.00	0	$0.00	$7,675.00
109	CUT AND TIE TO EXISTING WATERMAIN	EACH	$1,312.08	11	11	$14,432.88	0	$0.00	0	$0.00	$14,432.88
110	4" WATERMAIN BEDDING	FT	$3.27	169	169	$552.63	0	$0.00	0	$0.00	$552.63
111	6" WATERMAIN BEDDING	FT	$4.00	333	333	$1,332.00	0	$0.00	0	$0.00	$1,332.00
112	8" WATERMAIN BEDDING	FT	$4.00	492	492	$1,968.00	0	$0.00	0	$0.00	$1,968.00
113	12" WATERMAIN BEDDING	FT	$4.70	520	520	$2,444.00	0	$0.00	0	$0.00	$2,444.00
114	12" X 1" WATER SERVICE TAP, SADDLE, AND CORP. STOP	EACH	$500.00	9	9	$4,500.00	0	$0.00	0	$0.00	$4,500.00
115	1" COPPER SERVICE LINE	FT	$25.00	242	242	$6,050.00	0	$0.00	0	$0.00	$6,050.00
116	1" CURB BOX WITH VALVE	EACH	$300.00	9	9	$2,700.00	0	$0.00	0	$0.00	$2,700.00
117	WATER SERVICE RECONNECT	EACH	$400.00	9	9	$3,600.00	0	$0.00	0	$0.00	$3,600.00
	SANITARY SEWER										
118	FRP REHABILITATION MANHOLE LINER	EA	$5,500.00	8	0	$0.00	8	$44,000.00	0	$0.00	$44,000.00
119	SANITARY SEWER TEMPORARY BYPASS	LS	$8,000.00	1	0	$0.00	1	$8,000.00	0	$0.00	$8,000.00
120	MANHOLE BENCH AND INVERT RECONSTRUCT	EA	$1,000.00	8	0	$0.00	8	$8,000.00	0	$0.00	$8,000.00
121	CLEAN AND TELEVISE SANITARY SEWER MAIN	FT	$2.00	2736	0	$0.00	2736	$5,472.00	0	$0.00	$5,472.00
122	8" CIPP SEWER LINING WITH POST TV INSPECTION	FT	$32.00	2736	0	$0.00	2736	$87,552.00	0	$0.00	$87,552.00
123	REMOVE PROTRUDING TAPS IN SEWER MAIN	EA	$500.00	5	0	$0.00	5	$2,500.00	0	$0.00	$2,500.00
124	SERVICE TAP REINSTATEMENT	EA	$200.00	9	0	$0.00	9	$1,800.00	0	$0.00	$1,800.00
125	POINT EXCAVATION AND REPAIR	EA	$2,500.00	5	0	$0.00	5	$12,500.00	0	$0.00	$12,500.00
126	ADJUST MANHOLE	EACH	$528.58	8	0	$0.00	8	$4,228.64	0	$0.00	$4,228.64
127	MANHOLE FRAME AND COVER	EACH	$498.65	8	0	$0.00	8	$3,989.20	0	$0.00	$3,989.20
128	EXTERNAL FRAME SEAL	EACH	$320.80	8	0	$0.00	8	$2,566.40	0	$0.00	$2,566.40
129	MANHOLE CONSTRUCTION PLATE MARKER	EACH	$203.22	8	0	$0.00	8	$1,625.76	0	$0.00	$1,625.76
						DW- SRF TOTALS		**CW-SRF TOTALS**		**NON-PARTICIPATING TOTALS**	**TOTAL PHASE 1**
	Preliminary Construction Estimate (Includes 10% Costruction Contingencies):					$578,000		$978,000		$833,000	$2,389,000
	Legal/Administration (4%):					$23,000		$39,000		$33,000	$95,000
	Engineering/Construction Admin:					$76,000		$154,000		$124,000	$354,000
	Project Total Estimate:					$677,000		$1,171,000		$990,000	$2,838,000

d. Cultural Resources Effects Assessment Summary

CULTURAL RESOURCES EFFECTS ASSESSMENT SUMMARY

Applicant City of Canton, SD Project Contact Kyle Cwach, Interim City Manager
Address 210 N. Dakota St., Canton, SD 57013 Telephone Number 605.987.2881

Legal Location of Project Dakota Street from US Hwy 18 (5th Street) to Lynn Ave, City of Canton
City Canton County Lincoln Project No. 92140

Project Description The City of Canton is planning to reconstruct approximately 2,700 lineal feet of Dakota Street from US Highway 18 (5th Street) to Lynn Avenue (Project) within the corporate limits of the community to improve the underground public utility infrastructure. Dakota Street is an existing concrete/asphalt street. The project work will be within the previously disturbed street right-of-way. City utilities (water main, sanitary sewer main and storm sewer main) will also be replaced with the project.

For projects that involve new construction on vacant land please include information as to what previously occupied the site and whether that site has any known historic or archaeological significance.

Please describe below or attach information supporting the determination of effect.
Attached is Level III Cultural Resources Reconnaissance Survey documentation from Patricia Downing, Principal Investigator for Prairie Lakes Archaeological Services relating to the Project.

A map showing the project location is required. Drawings or photographs may also be helpful.

Please indicate the effect the project will have on cultural resources based on the review performed:

X No Historic Properties Affected: There are no historic properties present or the undertaking will not affect any properties eligible for or listed in the National Register of Historic Preservation.

_____ No Adverse Effect: This property is listed in or eligible for the National Register of Historic Places. This project will have no adverse effect upon the historic significance of the property because the proposed undertaking meets the Secretary of the Interior's Standards for the Treatment of Historic Properties.

_____ Adverse Effect: This property is listed in or eligible for eligible for the National Register of Historic Places. This project will have an adverse effect upon the historic significance of the property. (Attach proposed mitigation measures that may minimize the adverse effect.)

Prepared by: Kyle Cwach Date 12-24-15

DETERMINATION OF EFFECTS

I have reviewed the project description and the information provided concerning historical and cultural effects of this project. Based on that review, the Department of Environment and Natural Resources concurs with the applicant's determination of the effects that the construction of this project will have on historical or cultural resources. Additionally, if historical or cultural resources are discovered during project construction, the contractor is required to cease construction and notify the State Historical Preservation Officer.

Approved by: _____ Date _____
SD Department of Environment and Natural Resources

PRAIRIE LAKES ARCHAEOLOGICAL SERVICES
126665 East Shore Drive, Aberdeen, SD 57401
Phone/FAX: (605) 225-4573

June 27, 2014

A LETTER FORMAT REPORT OF A LEVEL III CULTURAL RESOURCES RECONNAISSANCE SURVEY FOR NORTH DAKOTA STREET IMPROVEMENTS AT CANTON IN LINCOLN COUNTY, SOUTH DAKOTA

The City of Canton plans to improve approximately one mile of Dakota Street on the north side of town (refer to Figure 1). Current plans call for the majority of construction to occur within the existing 66' road ROW. The project area is in the Lower Big Sioux Archaeological Region along the section line of T98N R49W Sections 13 and 14.

A records search was completed by Jane Watts of the State Archaeological Research Center on May 16, 2014. A very small portion of the project tract intersects a previously recorded highway improvement study conducted by M. Gilbert in 2001 (ALN-0074). Four additional surveys have been recorded within one mile of the project location. The studies include two surveys for road improvements (Wardlow 1990 ALN-0023 & Fosha 1993 ALN-0039), an examination for a bridge replacement (Bruce 2010 ALN-0225) and a study for a sewer interceptor main (Winham 1988 ALN-0012).

Seventeen structures have been recorded as possibly within the project corridor. The structures are dwellings within the City of Canton (refer to Figure 2). Four of the dwellings are considered eligible for listing on the National Register of Historic Places; eight are considered ineligible for listing; and five have not been evaluated. Information regarding the structures is summarized in Table 1.

Three sites and 238 additional structures have been recorded within one mile of the project corridor. Sites include two historic artifact scatters and the Chicago, Milwaukee, St. Paul & Pacific Railroad. Structures include two bridges and 236 structures within the City of Canton. The railroad (39LN2007), Bridge 42-163-17 (LN00000210) and 39 structures in Canton are eligible for listing on the National Register of Historic Places. One structure in Canton is eligible for listing on the State Register of Historic Places. 126 structures are not eligible for listing on the National Register of Historic Places. The remaining sites and structures have not been evaluated. Information regarding the sites and structures is summarized in Table 2.

I visited the project location on June 24, 2014. The survey area is located on a gently rolling plain northwest of the Big Sioux River valley. The land is surrounded by small drainages and seasonal wetlands (refer to Figure 1). The parent soil is glacial till. The survey area is primarily clayey alluvium soils. The native vegetation was tall grass prairie.

A 200' wide corridor was examined along the rural portions of the road while a 100' wide corridor was examined through the urban areas. Approximately eleven acres were examined by pedestrian transects at twelve meter intervals to identify cultural resources. Two-thirds of the survey area has been cultivated and has a surface visibility of seventy

percent. The remaining one-third of the survey area has been developed for residential or commercial use.

No prehistoric, historic or architectural sites were found within the project corridor and the probability of finding additional cultural resources is minimal. It is recommended that a determination of No Historic Properties Affected be made for the project and that Section 106 Clearance be granted for the project to proceed as planned. If evidence of any unrecorded or buried cultural resources is found during construction, then activities should stop and the State Historic Preservation Officer should be notified of the find.

Sincerely,

Patricia Downing
Principal Investigator

Table 1.
Structures identified as possibly within project corridor

SHPO ID	T-R-Sec	ID	Property Name	Property address	Date of Construction	DOE
LN00000231	98N-49W-24	6126	House	415 E 1st. Street	c. 1931	Not Eligible
LN00000071	98N-49W-14	6315	House	323 N. Lincoln	1900	Not Eligible
LN00000135	98N-49W-23	6445	House	320 E. 4th Street	1901	Not Eligible
LN00000234	98N-49W-24	6467	James & Ida Lewis house	404 E. 1st. Street	1909	NR Eligible
LN00000216	98N-49W-13	6512	Sioux Falls Army Barracks	Dakota Street	1947	Not Eligible
LN00000242	98N-49W-24	6517	House	426 E 2nd Street	c. 1916	Not Eligible
LN00000280	98N-49W-14	6590	House	603 N. Dakota St.	c. 1912	NR Eligible
LN00000276	98N-49W-13	6683	House	215 N. Dakota St.	c. 1919	Not Eligible
LN00000277	98N-49W-13	6684	Methodist parsonage	223 N. Dakota St.	1909	Unevaluated
LN00000278	98N-49W-14	6685	House	318 N. Dakota St.	c. 1890's	NR Eligible
LN00000279	98N-49W-14	6686	House	419 N. Dakota St.	1922	Not Eligible
LN00000283	98N-49W-14	6690	Fee House	621 N. Dakota St.	1948	Unevaluated
LN00000594	98N-49W-14	9137	Kennedy Rose Inn	903 N. Dakota St.	1917	NR Eligible
LN00000073	98N-49W-14	24332	House	310 N. Lincoln St.	c. 1917	Not Eligible
LN00000593	98N-49W-13	8946	House	Dakota Street	1885	Unevaluated
	98N-49W-14	6689	House	615 N. Dakota St.	c. 1900	Unevaluated
	98N-49W-13	6591	Holliston House		1923	Unevaluated

Table 2.
Sites and structures recorded within one mile of the project corridors

Section #	Number	Description	NRHP status
98N-49W-23	39LN0101	Historic artifact scatter	Unevaluated
98N-49W-23	39LN0102	Historic artifact scatter	Unevaluated
98N-49W-23 98N-49W-24 98N-49W-14 98N-49W-11	39LN2007	Chicago, Milwaukee, St. Paul & Pacific Railroad	Eligible
98N-49W-14	LN00000210	Bridge #42-163-17	Eligible
98N-49W-24	LN00000275	North Street Bridge	Not eligible
98N-49W-13 98N-49W-14 98N-49W-23 98N-49W-24	Various	236 buildings in City of Canton	Various

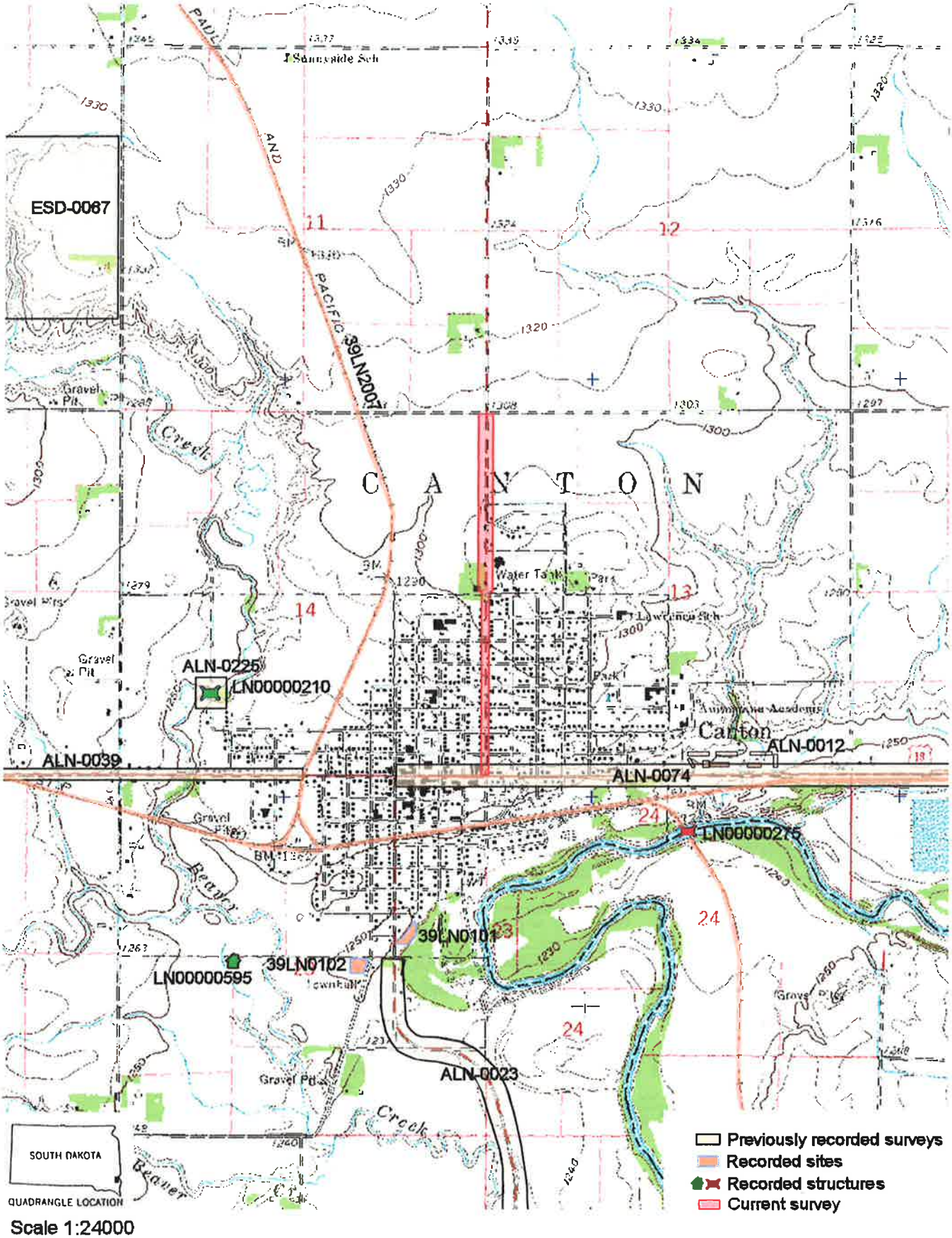


Figure 1. Area examined for Dakota Street reconstruction at T98N R49W Sections 13 & 14 on USGS 7.5' Quadrangle: CANTON in Lincoln County, South Dakota

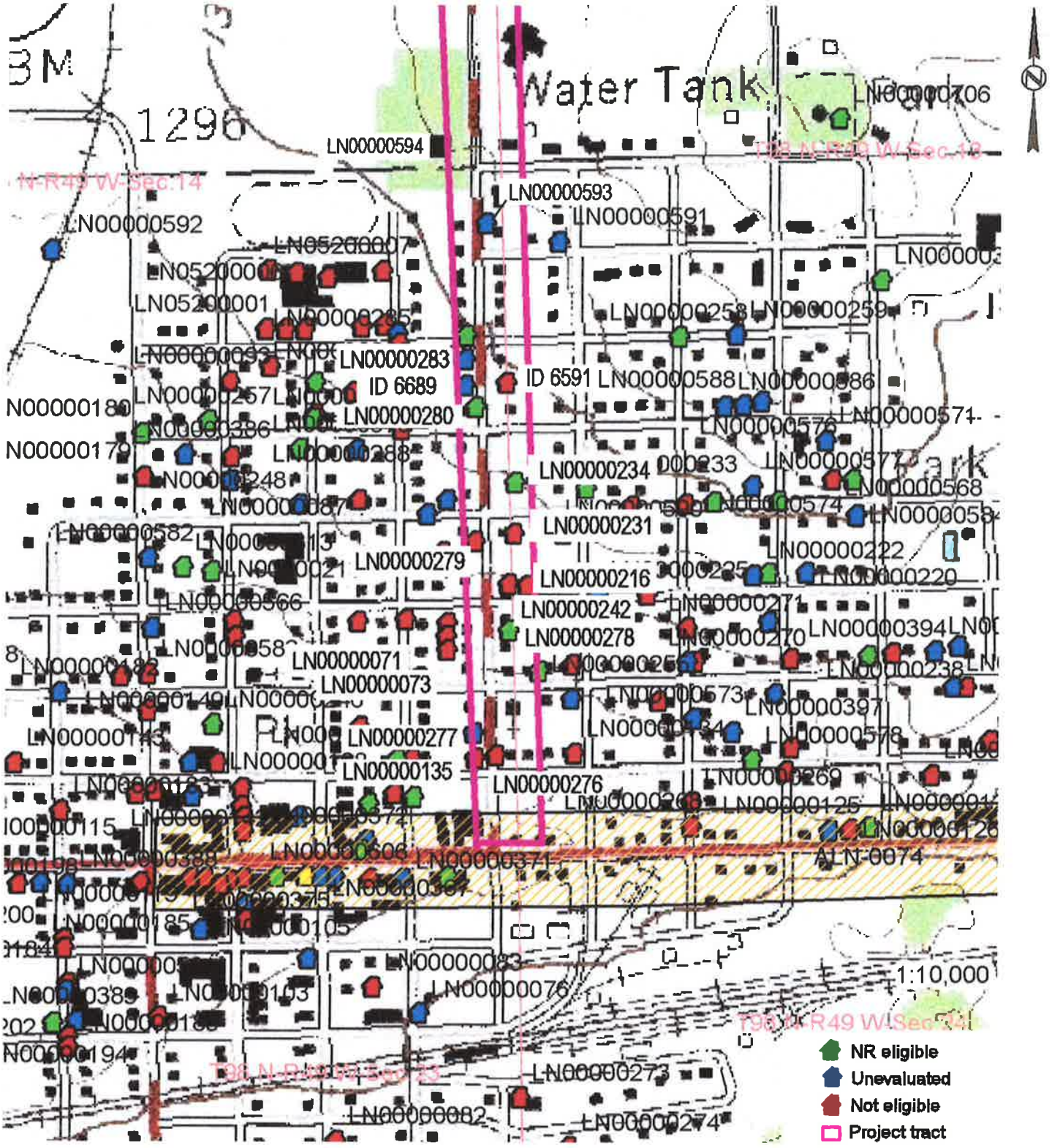
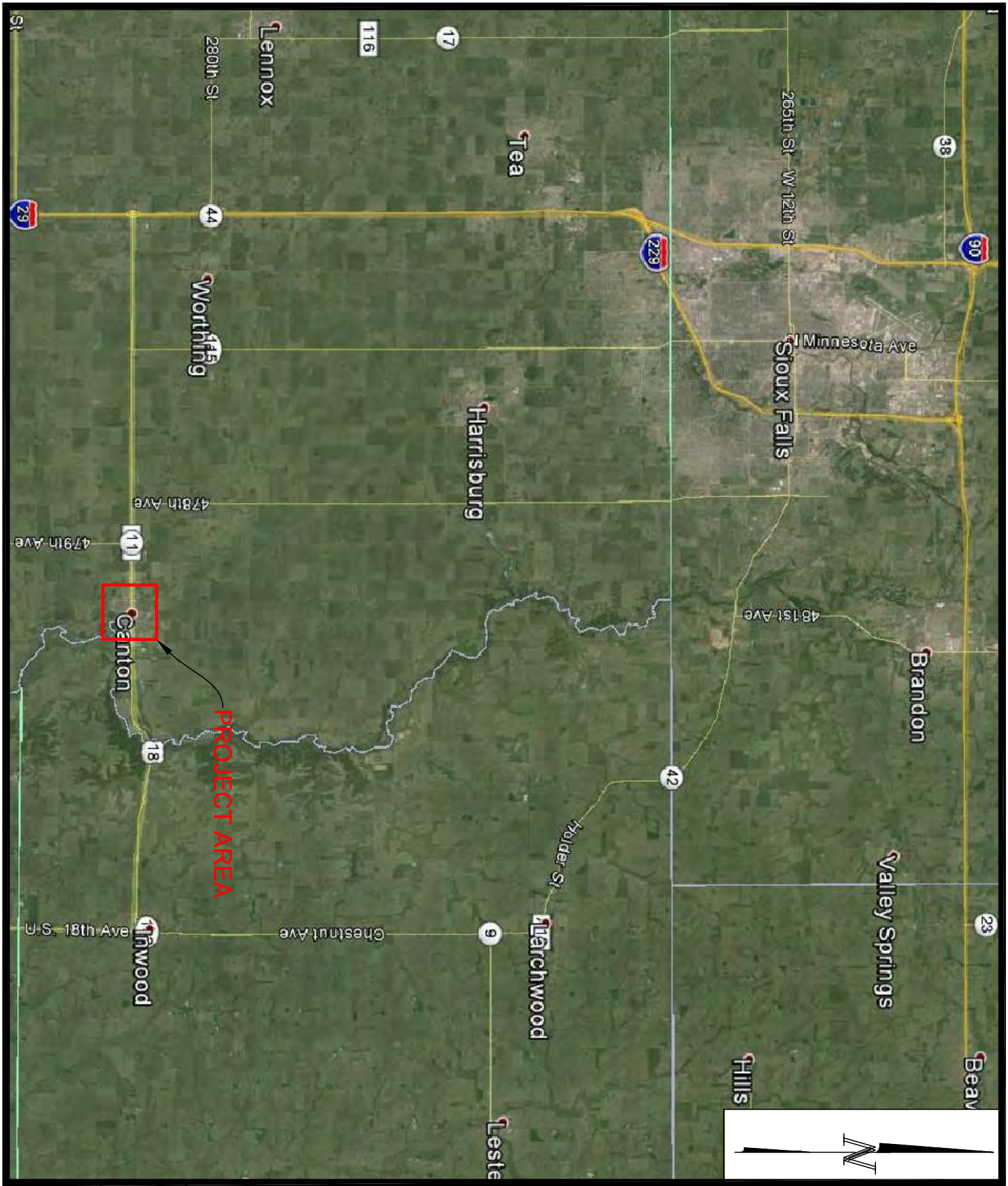


Figure 2. Structures identified as possibly within the survey area along Dakota Street in Canton, South Dakota

PROJECT LOCATION MAPS

Prepared by:
JSA Engineers/Land Surveyors
Sioux Falls, South Dakota



N. DAKOTA STREET PHASE 1

DESIGNED BY: DMC
DRAWN BY: DMC
CHECKED BY: MKA
ACAD FILE: DAKOTA STREET...REGIONAL MAP EXHIBIT.DWG
DATE: JULY 17, 2015

N. DAKOTA STREET

PHASE 1
CANTON, SOUTH DAKOTA

SHEET NO.
A-1

A-1

SHEET NO.

N. DAKOTA STREET PHASE 1

DESIGNED BY: DMC
DRAWN BY: DMC
CHECKED BY: MKA
ACAD FILE: DAKOTA STREET...REGIONAL MAP EXHIBIT.DWG
DATE: JULY 17, 2015

N. DAKOTA STREET

PHASE 1

CANTON, SOUTH DAKOTA

e. Correspondence with Reviewing Agencies

RECEIVED
JUL 27 2015
U.S. FISH & WILDLIFE SERVICE

JSA ENGINEERS AND LAND SURVEYORS
Land Development · Municipal · Streets · Water · Sewer · GPS · Construction Staking

July 22, 2015

Mr. Scott Larson
US Fish and Wildlife Service
420 S. Garfield Avenue, Suite 400
Pierre, SD 57502

RE: **Dakota Street Improvements – Phase 1**
US Highway 18 to Lynn Avenue
City of Canton, South Dakota (JSA Project # 92140)

Dear Mr. Larson:

In 2016 the City of Canton plans to reconstruct approximately 2,700 feet of Dakota Street within the corporate limits of the community. A regional and a community location map are attached to this correspondence for your reference. The City is currently applying for various loans and grants for project funding. The City intends to fund the project with a combination of local cash funds, State Revolving loan funds (CW-SRF and DW-SRF), Community Access Grant funds, and Transportation Alternative Program (TAP) funds.

Dakota Street is an existing street in an established, mainly residential, neighborhood. The existing street consists of curb and gutter and concrete surfacing with varying degrees of asphalt overlays. The City plans to replace the existing sanitary sewer system, water distribution system and municipal storm sewer system within the project corridor due to the deteriorated conditions and limited capacities of the existing systems. The existing street surfacing including sidewalks and driveways will be removed and replaced as well. The new street surfacing will be concrete pavement. Disturbed areas outside of the paving will be revegetated with seed or sod.

It is anticipated that the project will be bid in February or March of 2016 with construction activities beginning in the spring of 2016. The project is anticipated to be substantially complete in the fall of 2016. Please contact us if your agency has any concerns within the project area or if there is a need for your agency to review the construction plans.

Sincerely,

JSA Engineers/Land Surveyors

Myron Adam, PE/LS
Project Manager

Attachments: Project Location Maps

This constitutes a report of the Department of the Interior prepared in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). We have reviewed and have NO OBJECTION to this proposed project.

8/10/15
Date

Scott Larson
Field Supervisor

6810 S. Lyncrest Avenue · Suite 101 · Sioux Falls, South Dakota 57108-2515 · 605-367-1036 · Fax 605-367-1002

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

REPLY TO
ATTENTION OF

July 31, 2015

Planning, Programs, and Project Management Division

Mr. Myron Adam
JSA Engineers and Land Surveyors
6810 S. Lyncrest Avenue, Suite 101
Sioux Falls, South Dakota 57108

Dear Mr. Adam:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated July 22, 2015 (received July 28, 2015) regarding the environmental review of Phase One of the Dakota Street Improvements Project, located between U.S. Highway 18 to Lynn Avenue, in Canton, South Dakota in Lincoln County (JSA Project # 92140). We offer the following comments for your consideration:

Your plans should be coordinated with the state water quality office that has jurisdiction within the area where the project is located to ensure compliance with federal and state water quality standards and regulations mandated by the Clean Water Act and administered by the U.S. Environmental Protection Agency. Please coordinate with the South Dakota Department of Environment & Natural Resources concerning state water quality programs.

If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks regarding fish and wildlife resources. In addition, the South Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

Since the proposed project does not appear to be located within Corps owned or operated lands, your plans should be submitted to the local floodplain administrator for review and approval prior to construction. It should be ensured that the proposed project is in compliance with the floodplain management criteria of Lincoln County and the State of South Dakota. In addition, please coordinate with the following floodplain management office:

South Dakota Division of Emergency Management
Attention: Mr. Marc Macy
118 W. Capitol Avenue
Pierre, South Dakota 57501
Telephone: 605-773-3231
Fax: 605-773-3580
Email: marc.macy@state.sd.us

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (http://www.nwo.usace.army.mil/Missions/RegulatoryProgram.aspx) to determine if this project requires a 404 permit. For a detailed review of the permit requirements, preliminary and final project plans should be sent to:

U.S. Army Corps of Engineers
Pierre Regulatory Office
Attention: Mr. Steve Naylor, CENWO-OD-R-SD
28563 Powerhouse Road, Room 120
Pierre, South Dakota 57501

If you have any questions, please contact Ms. Amanda Ciurej of my staff at (402) 995-2897 or amanda.k.ciurej@usace.army.mil and reference PD# 6710 in the subject line.

Sincerely,

Eric A. Laux
Chief, Environmental Resources and Missouri River Recovery Program Plan Formulation Section

DEPARTMENT OF GAME, FISH, AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

July 27, 2015

Mr. Myron Adam
JSA Engineers and Land Surveyors
6810 S. Lyncrest Ave, Suite 101
Sioux Falls, SD 57108-2515

RE: Dakota Street Reconstruction
Canton, South Dakota

Dear Mr. Adam:

The South Dakota Department of Game, Fish and Parks has reviewed the above project involving the reconstruction of approximately 2,700 feet of Dakota Street in the City of Canton, South Dakota.

At this time, the project described will have no impacts on fish and wildlife resources. However, if the project design changes or if new information becomes available, please submit the changes for review.

If you have any questions please contact me at 605.773.6208.

Sincerely,

Leslie Murphy
Senior Biologist

USDA

United States Department of Agriculture

August 18, 2015

Myron Adams, PE/LS
JSA Engineers and Land Surveyors
6810 S Lyncrest Av. Suite 101
Sioux Falls, SD 57108-2515

RE: Environmental Review for
Dakota Street Improvements – Phase 1
US Highway 18 to Lynn Avenue
Canton, SD (JSA Project # 92140

Dear Mr Adams:

Thank you for the opportunity to provide Farmland Protection Policy Act (FPPA) review of this project. The project as outlined will have **no effect** on prime or important farmland.

If you have any questions, please contact me at (605) 348-2889 ext. 104.

Sincerely,

TIMOTHY NORDQUIST
NRCS Conservation Agronomist

Natural Resources Conservation Service
414 E Stumer Road, Suite 700
Voice: 605.348.2889 ext 104 Fax: 855.256.2553
An Equal Opportunity Provider and Employer

JSA ENGINEERS AND LAND SURVEYORS
Land Development · Municipal · Streets · Water · Sewer · GPS · Construction Staking

July 22, 2015

Leslie Murphy
SD Department of Game, Fish and Parks
Joe Foss Building - 523 East Capitol
Pierre, SD 57501

RE: **Dakota Street Improvements – Phase 1**
US Highway 18 to Lynn Avenue
City of Canton, South Dakota (JSA Project # 92140)

Dear Ms. Murphy:

In 2016 the City of Canton plans to reconstruct approximately 2,700 feet of Dakota Street within the corporate limits of the community. A regional and a community location map are attached to this correspondence for your reference. The City is currently applying for various loans and grants for project funding. The City intends to fund the project with a combination of local cash funds, State Revolving loan funds (CW-SRF and DW-SRF), Community Access Grant funds, and Transportation Alternative Program (TAP) funds.

Dakota Street is an existing street in an established, mainly residential, neighborhood. The existing street consists of curb and gutter and concrete surfacing with varying degrees of asphalt overlays. The City plans to replace the existing sanitary sewer system, water distribution system and municipal storm sewer system within the project corridor due to the deteriorated conditions and limited capacities of the existing systems. The existing street surfacing including sidewalks and driveways will be removed and replaced as well. The new street surfacing will be concrete pavement. Disturbed areas outside of the paving will be revegetated with seed or sod.

It is anticipated that the project will be bid in February or March of 2016 with construction activities beginning in the spring of 2016. The project is anticipated to be substantially complete in the fall of 2016. Please contact us if your agency has any concerns within the project area or if there is a need for your agency to review the construction plans.

Sincerely,

JSA Engineers/Land Surveyors

Myron Adam, PE/LS
Project Manager

Attachments: Project Location Maps

6810 S. Lyncrest Avenue · Suite 101 · Sioux Falls, South Dakota 57108-2515 · 605-367-1036 · Fax 605-367-1002

JSA ENGINEERS AND LAND SURVEYORS
Land Development · Municipal · Streets · Water · Sewer · GPS · Construction Staking

July 22, 2015

US Army Corps of Engineers, Omaha District
Planning Division
Attn: CENWO-PM-AE
106 South 15th Street
Omaha, NE 68102-4901

RE: **Dakota Street Improvements – Phase 1**
US Highway 18 to Lynn Avenue
City of Canton, South Dakota (JSA Project # 92140)

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Sincerely,

JSA Engineers/Land Surveyors

Myron Adam, PE/LS
Project Manager

Attachments: Project Location Maps

6810 S. Lyncrest Avenue · Suite 101 · Sioux Falls, South Dakota 57108-2515 · 605-367-1036 · Fax 605-367-1002

JSA ENGINEERS AND LAND SURVEYORS
Land Development · Municipal · Streets · Water · Sewer · GPS · Construction Staking

July 22, 2015

Mr. Scott Larson
US Fish and Wildlife Service
420 S. Garfield Avenue, Suite 400
Pierre, SD 57502

RE: **Dakota Street Improvements – Phase 1**
US Highway 18 to Lynn Avenue
City of Canton, South Dakota (JSA Project # 92140)

Dear Mr. Larson:

In 2016 the City of Canton plans to reconstruct approximately 2,700 feet of Dakota Street within the corporate limits of the community. A regional and a community location map are attached to this correspondence for your reference. The City is currently applying for various loans and grants for project funding. The City intends to fund the project with a combination of local cash funds, State Revolving loan funds (CW-SRF and DW-SRF), Community Access Grant funds, and Transportation Alternative Program (TAP) funds.

Dakota Street is an existing street in an established, mainly residential, neighborhood. The existing street consists of curb and gutter and concrete surfacing with varying degrees of asphalt overlays. The City plans to replace the existing sanitary sewer system, water distribution system and municipal storm sewer system within the project corridor due to the deteriorated conditions and limited capacities of the existing systems. The existing street surfacing including sidewalks and driveways will be removed and replaced as well. The new street surfacing will be concrete pavement. Disturbed areas outside of the paving will be revegetated with seed or sod.

It is anticipated that the project will be bid in February or March of 2016 with construction activities beginning in the spring of 2016. The project is anticipated to be substantially complete in the fall of 2016. Please contact us if your agency has any concerns within the project area or if there is a need for your agency to review the construction plans.

Sincerely,

JSA Engineers/Land Surveyors

Myron Adam, PE/LS
Project Manager

Attachments: Project Location Maps

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JSA ENGINEERS AND LAND SURVEYORS
Land Development · Municipal · Streets · Water · Sewer · GPS · Construction Staking

July 22, 2015

State Soil Scientist
USDA-NRCS-Federal Building
200 Fourth Street SW
Huron, SD 57350-2475

RE: **Dakota Street Improvements – Phase 1**
US Highway 18 to Lynn Avenue
City of Canton, South Dakota (JSA Project # 92140)

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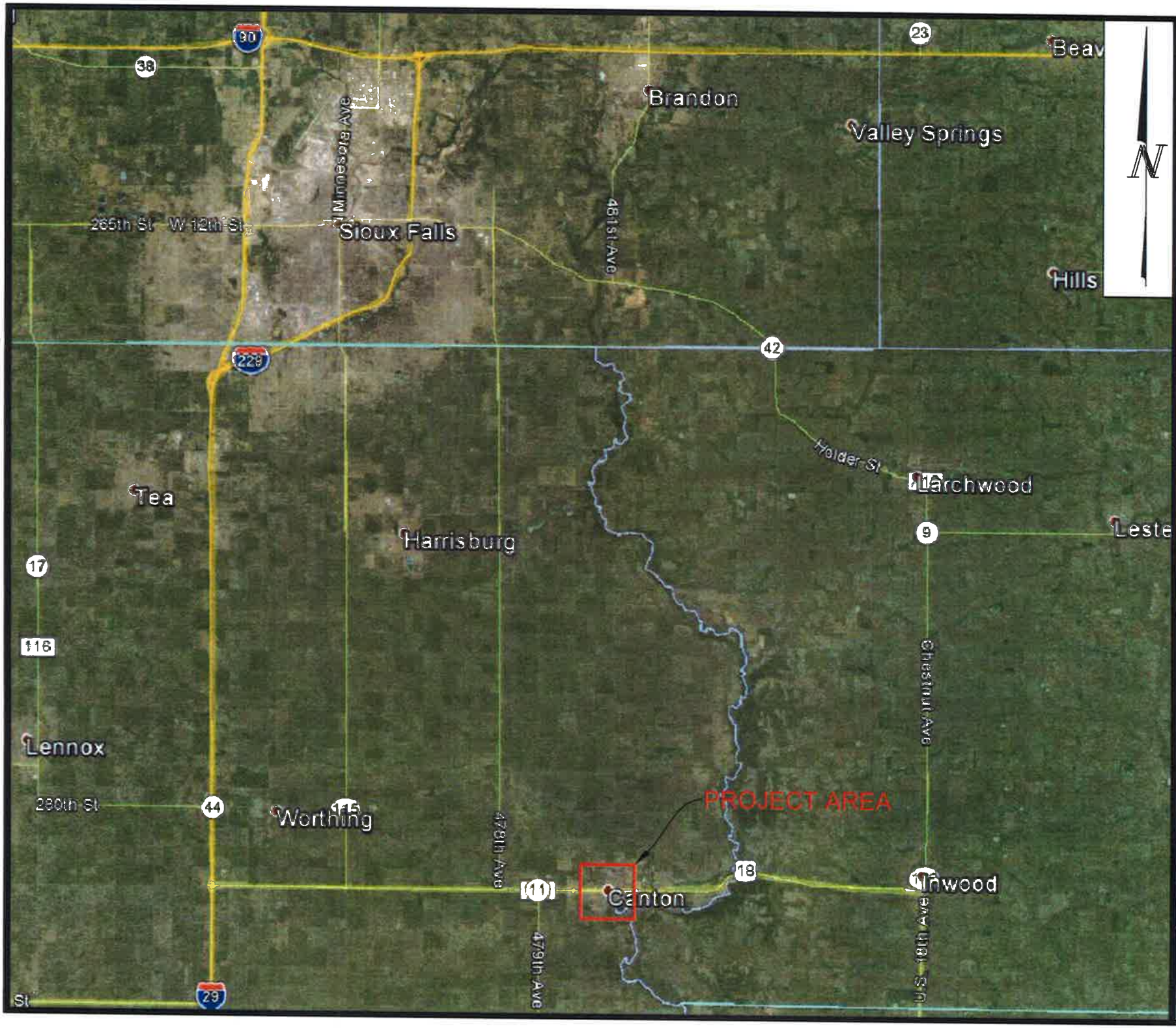


N. DAKOTA STREET

PHASE 1

CANTON, SOUTH DAKOTA

N. DAKOTA STREET PHASE 1

DESIGNED BY: DMC
DRAWN BY: DMC
CHECKED BY: MKA
ACAD FILE: DAKOTA STREET - REGIONAL MAP EXHIBIT.DWG
DATE: JULY 17, 2015

JSA

SHEET NO.

A-1

N. DAKOTA STREET PHASE 1

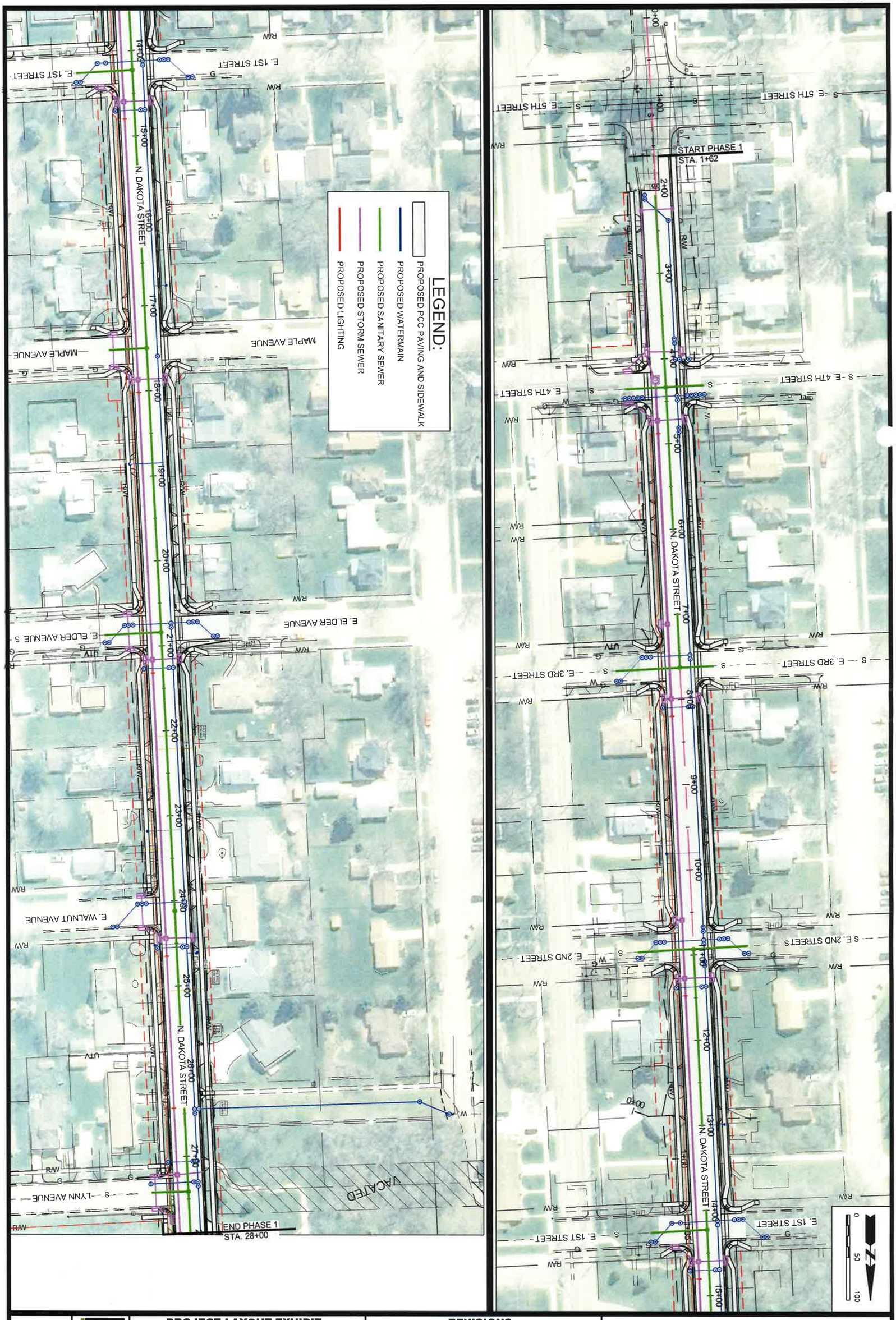
DESIGNED BY: DMC
DRAWN BY: DMC
CHECKED BY: MKA
ACAD FILE: DAKOTA STREET...REGIONAL MAP EXHIBIT.DWG
DATE: JULY 17, 2015

SHEET NO. A-1

N. DAKOTA STREET

PHASE 1

CANTON, SOUTH DAKOTA



PROJECT LAYOUT EXHIBIT

DESIGNED BY: DMC
DRAWN BY: DMC
CHECKED BY: MKA
ACAD FILE: 92140-DAKOTA STREET EXHIBIT...AND SCHOOLS
DATE: 7/2/2015

REVISIONS

REVISION 1:	BY:	DATE:
REVISION 2:	BY:	DATE:
REVISION 3:	BY:	DATE:
REVISION 4:	BY:	DATE:
REVISION 5:	BY:	DATE:

DAKOTA STREET - PHASE 1

E. 5TH STREET (US HWY 18) TO LYNN AVENUE
CANTON, SOUTH DAKOTA

SHEET NO. B-1
Sheet Series

f. SD DENR No Further Action Regarding Petroleum Spill (DENR # 93.307)

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

June 16, 2003

Chuck Springman
Eastern Farmers Coop
PO Box 155
Lennox, SD 57039 - 0155

RE: No Further Action at former United Pride Station, 324 East 5th Street, Canton, SD - **DENR # 93.307**

Dear Mr. Springman:

Staff from the South Dakota Department of Environment and Natural Resources (DENR) have reviewed the available information on the tank release at the above referenced property in Canton, South Dakota and determined active cleanup and monitoring can stop. As a result of this determination, DENR is placing this release case in the No Further Action category. This release has not been cleaned to state ground water quality standards; but DENR has determined, based on information submitted by your environmental consultant, there is no current risk to human health or further risk to the environment.

If future problems arise from remaining contamination from this release, Eastern Farmers Coop will be responsible for conducting additional assessment or remediation. Eastern Farmers Coop may also be responsible for further assessment and cleanup actions if the use of this property or adjacent affected properties changes which increases the risk to human health and the environment from contamination left with this release. The No Further Action designation will be recorded in DENR's release database and can be found at our internet website.

All monitoring wells associated with this site must be properly abandoned in accordance with DENR's Well Construction Standards ARSD 74:02:04 and written documentation must be submitted to DENR showing the wells have been properly abandoned. If you have questions or concerns about your site's No Further Action designation, please contact Scott Bickler of my staff at (605) 362-3500. Thank you for your cooperation in protecting South Dakota's water resources.

Sincerely,

Steven M. Pirner
Secretary

cy: Dennis Rounds, PRCF
Mike Meyer, Geotek
Harold Timmerman, Lincoln County Emergency Management
Scott Bickler, DENR Sioux Falls
Palmer Ericksen, Public Works Director, City of Canton
Gordon Greenwaldt

g. Notice of Public Hearing, Affidavit of Publication, and Public Hearing Minutes

Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF LINCOLN

ANDY WILCOX

being first duly sworn on his oath says; that the Sioux Valley News is a legal weekly newspaper of general circulation as required by South Dakota Code of Nineteen Hundred Thirty-Nine, and any acts amendatory thereto, printed and published by the Sioux Valley News, Inc., in Canton, in said county and State, and has been such legal newspaper during the time hereinafter mentioned; that he is and during all of said time was publisher of said newspaper and has personal knowledge of the facts stated in this affidavit; that the advertisement headed:

City of Canton
Notice of Public Hearing

a printed copy of which is hereto attached, was printed and published in said newspaper for **ONE** successive week(s) upon the following dates, to-wit:

December 10, 2015

that the full amount of the fees charged for publishing the same to-wit: the sum of **$26.35** inures solely to the benefit of the publishers of said newspaper; that no agreement or understanding for any division of this sum has been made with any other person; and that no part of said sum has been agreed to be paid to any person whomsoever.

Ascribed and sworn to before me this **10th** day of **December, 2015.**

Notary Public, South Dakota

(Seal)

TERESA J. WILCOX NOTARY Seal PUBLIC STATE OF SOUTH DAKOTA

My Commission Expires
December 9, 2020

NOTICE OF PUBLIC HEARING
for the
DAKOTA STREET IMPROVEMENTS PROJECT-PHASE 1

Notice is hereby given that the City of Canton will hold a Public Hearing on December 21st, 2015, regarding drinking water and wastewater utility improvements to Dakota Street. The City is seeking up to $960,000 of funding from the Board of Water and Natural Resources for the drinking water improvements. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or a loan from the either the Drinking Water State Revolving Funds (SRF) Program. The expected Drinking Water SRF loan terms are 3 percent for 30 years, and the Board of Water and Natural Resources may forgive all or a portion of the loan principal.

The City is seeking up to $1,848,000 of funding from the Board of Water and Natural Resources for the wastewater improvements. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or a loan from the either the Clean Water State Revolving Funds (SRF) Program. The expected Clean Water SRF loan terms are 3.25 percent for 30 years, and the Board of Water and Natural Resources may forgive all or a portion of the loan principal.

The amount and source of funds will be determined by the Board of Water and Natural Resources when the applications are presented at a scheduled board meeting. The purpose of the public hearing is to discuss the proposed project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

This public hearing will be held at the following time, date and location:

7:00 P.M.
December 21st, 2015
Canton Depot (600 West Fifth Street, Canton, SD)
Viking Room (lower level)

In compliance with the Americans with Disabilities Act (ADA), if you need special assistance to participate in this hearing, please contact the Canton Finance Officer at (605) 987-2881. Anyone who is deaf, hard-of-hearing or speech-disabled may utilize Relay South Dakota at (800) 877-1113 (TTY/Voice). Notification 48 hours prior to the hearing will enable the City to make reasonable arrangements to ensure accessibility to this hearing.

Kyle Cwach
Canton Finance Officer

Published in the Sioux Valley news on December 10, 2015 at the total approximate cost of $26.35.

Unapproved

MINUTES OF CANTON CITY COMMISSION MEETING
DECEMBER 21, 2015

The Canton City Commission met at the Depot Viking Room, on Monday, December 21st, 2015 at 7:00 p.m. with the following members present: Commissioners Anderson, Devick, Eich, Ekle, Ziebarth and Mayor Smith.
Commissioner Toso, Townsend and Elrod were absent at the time of roll call.

Also present were Interim City Manager Cwach and Deputy Finance Officer Leffler.

Guests who signed in are as follows: Myron Adam, Lacey Schmeling, Bill Thorson, Jeff Fossum, David Miller, Larissa Van Beek, Andy Wilcox, Lucy Wilcox, Gert Havelaar, and Chuck Andreson.

The Pledge of Allegiance was recited.

CONSENT CALENDAR
Commissioner Devick moved and Commissioner Ziebarth seconded to approve the consent calendar consisting of the following: 1) to approve the minutes, from the December 4th, 2015 Special Meeting, December 5th Special Meeting, December 7th Regular Commission meeting, and December 10th Special Meeting and that they are signed and published; 2) to approve the warrants to be listed at the end of the minutes; 3) to approve the November month-end reports; and 4) to approve the agenda. Unanimous Approval.

VISITOR DIALOGUE:

Commissioner Townsend arrived.

SRF PUBLIC HEARING – DAKOTA STREET PROJECT
This being the time and place for a public hearing for the SRF Funding for the Dakota Street project. Mayor Smith opened the hearing. Myron Adam, JSA and Lacey Schmeling, SECOG were present to report on the process so far; concerning the need to do this project, the options, and costs involved and the applications for State Revolving Fund finances. There were no proponents, nor opponents to be heard. Mayor Smith closed the hearing and invited discussion from the Commissioners.
Commissioner Anderson moved and Commissioner Ziebarth seconded to approve the applications for the SRF funding, the Cost and Effectiveness Certification Form and the following Resolutions for the SRF funding, that the Resolutions be given a number and authorize the Mayor to sign the Resolutions, applications and the Cost and Effectiveness Certification Form. Unanimous Approval.

RESOLUTION NO. 1233

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the City of Canton (the "City") has determined it is necessary to proceed with improvements to its Wastewater System, including but not limited to Dakota Street-Phase I Project (the "Project"); and

WHEREAS, the City has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the City and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the City as follows:

1. The City hereby approves the submission of an Application for financial assistance in an amount not to exceed $1,648,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Mayor is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Mayor is hereby designated as the authorized representative of the City to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted in Canton, South Dakota, on this 21st day of December, 2015.

APPROVED:

_____
Charles Smith, Mayor
City of Canton

(Seal)

Attest: _____
City of Canton Finance Officer

RESOLUTION NO. 1234

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the City of Canton (the "City") has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to Dakota Street-Phase I Project (the "Project"); and

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WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the City and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the City as follows:

1. The City hereby approves the submission of an Application for financial assistance in an amount not to exceed $760,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Mayor is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Mayor is hereby designated as the authorized representative of the City to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted in Canton, South Dakota, on this 21st day of December, 2015.

APPROVED:

_____
Charles Smith, Mayor
City of Canton

(Seal)

Attest: _____
City of Canton Finance Officer

2016 SALARY RESOLUTION
Commissioner Devick moved and Commissioner Anderson seconded to approve the following 2016 Salary Resolution, that it be given a number, signed and published as required by State law. Unanimous Approval.

RESOLUTION # 1235

CITY OF CANTON
2016 PAYROLL RESOLUTION

WHEREAS, it is in the best interests of the City of Canton to pay a competitive wage to attract and retain the best employees to effectively and responsibly serve the community; and

WHEREAS, the City of Canton, as an employer, makes periodic adjustments to wages and compensation for inflation, regulatory requirements, and in comparison to other employers; and
WHEREAS, Full-Time Police Personnel's Hourly Rate is based on a work schedule of 2,184 hours/year, and all other City Full-time Personnel's Hourly Rate is based on a work schedule of 2,080 hours/year.
NOW, THEREFORE, BE IT RESOLVED, that the Governing Body of the City of Canton hereby approves and adopts the following wage rates for 2016 payment schedule

ELECTED OFFICIALS
Mayor: Charles Smith/$46.15/Bi-Weekly **City Commission:** Farrell Anderson/$46.15/Bi-Weekly; John Devick/$46.15/Bi-Weekly; Shelly Eich/$46.15/Bi-Weekly; Richard Ekle/$46.15/Bi-Weekly; Kari Elrod/$46.15/Bi-Weekly; Jonathan Toso/$46.15/Bi-Weekly; Kristen Townsend/$46.15/Bi-Weekly; Steve Ziebarth/46.15/Bi-Weekly

FULL-TIME/PART-TIME:
Building Inspector: Eric Eneboe/$25.00 per inspection plus mileage **Custodial**: Marge Buysman/$13.06; Ron Buysman/$13.06; **Finance**: Kyle Cwach/$35.56; Karen Leffler/$23.15; Tiffany VanDeKieft/$14.50 **General Government**: Larissa Van Beek/$15.86; Carol Mulder/$12.02 **Library**: Edith Nelson/$23.66; Jonette Chaon/$10.82; Levi Magnuson/$10.57; Laura Olson/$11.30; Tracey Zylstra/$13.47 **Parks & Recreation**: Mark Swier/$15.56 **Police**: David Miller/$32.34; David Jacobs/$24.66; Patrick McGawley/$18.52; Michael Meinzer/$18.52; Christine Reitsma/$19.93; Joseph Carlson/$18.02; Travis Johns/$18.02; Steve Lowry/$18.02 **Public Works**: Bill Thorson/$32.34; Ryan Vandemore/$22.36; Justin Blade/$17.82; Chris Krogmann/$15.19; Dalton Nelson/$8.94 **Rubble Site**: Gary Jones/$9.60; Laurie Gates/$9.03 **Snow Removal**: David Baldwin/$10.95; Craig Dittberner/$10.95; Kelly Eilers/$11.48; Sherman Gardner/$10.95; Andy McCann/$10.95; Gary Renli/$10.95; Dwaine Tiedemann/$10.95; **Water & Sewer:** Jeff Fossum/$29.19; Russell Doty/$15.19; Steve Erickson/$15.19

PROVIDED, HOWEVER, the City Manager may make wage increases for the completion of education requirements, for passing certification tests, for fulfillment of job requirements set at the date of employment, and the City Manager may make meritorious wage increases for Department Heads within the budgetary appropriation of the respective departments.

Dated at Canton, South Dakota this 21st day of December 2015.

FOR THE GOVERNING BODY OF THE
CITY OF CANTON, SOUTH DAKOTA

By _____
Charles Smith, Mayor

ATTEST:

By _____
Kyle Cwach, Finance Officer

Adopted: 12/21/2015
Publish: 12/31/2015

Published once at the approximate cost of _____.

2016 EMPLOYEE WELLNESS PROGRAM
Commissioner Ziebarth moved and Commissioner Townsend seconded to approve DakotaCare's year-long wellness program and the FITBIT program for 2016 and authorize the Mayor to sign. Commissioners Anderson, Devick, Eich, Townsend, Ziebarth, and Mayor Smith voted aye. Commissioner Ekle voted nay. Motion Carried.

SANFORD CANTON-INWOOD AMBULANCE LEASE AMENDMENT
Commissioner Devick moved and Commissioner Ziebarth seconded to approve the amendment increasing the rent to $150.00 for use of the Fire Hall. Unanimous Approval.

2016 FEE SCHEDULE
Commissioner Devick moved and Commissioner Eich seconded to approve the proposed changes to the 2016 Fee Schedule as recommended by the City Staff, as presented and on file. Unanimous Approval.

CWSRF CERTIFICATION OF PROJECT COMPLETION
Commissioner Ziebarth moved and Commissioner Devick seconded to approve the Certificate of Project Completion for the Beaver Creek Life Station Project and authorize the Mayor to sign. Unanimous Approval.

2015 AUDIT CONTRACT
Commissioner Devick moved and Commissioner Eich seconded to approve the Audit Engagement Letter for the 2015 Audit, as presented and on file, with the fee for $9,900.00 and authorize the Mayor to sign. Unanimous Approval.

CONNECTING KIDS CONTRACT FOR 2016
Commissioner Ziebarth moved and Commissioner Eich seconded to approve the contract for the Connecting Kids program for 2016, as presented and on file, and authorize the Mayor to sign. Unanimous Approval.

DIALOGUE

Interim City Manager Cwach commented on:

The City Offices will be closed on Thursday afternoon and Friday to observe the Christmas Holidays.

The Library and the rubble site will be closed as well.

City staff visited the holiday open houses last week.

Please have the Employee of the Year nominations in by December 31st, as well as the RSVP's for the City Employee Appreciation Banquet.

Commissioner Eich reported:

That she has received a phone call regarding the pickup of garbage by the garbage haulers before 6:00am.

Mayor Smith wished everyone a Merry Christmas and Happy New Year.

ADJOURN

Commissioner Devick moved and Commissioner Eich seconded to adjourn. Unanimous Approval.

_____

Karen K. Leffler
Deputy Finance Officer

WARRANTS:

RESOLUTION NO. 1234

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Adopted in Canton, South Dakota, on this 21st day of December, 2015.

APPROVED:

Charles Smith, Mayor
City of Canton

(Seal)

Attest:
City of Canton Finance Officer

RESOLUTION NO. 1233

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Adopted in Canton, South Dakota, on this 21st day of December, 2015.

APPROVED:

Charles Smith, Mayor
City of Canton

(Seal)

Attest:
City of Canton Finance Officer

City of Canton

Public Hearing For DW-SRF & CW-SRF Applications
Dakota Street Improvements Project
7:00 PM, Monday, December 21st, 2015
Viking Room at the Canton Depot-600 West Fifth Street, Canton, SD

Please sign in:

NAME	ADDRESS / REPRESENTING
Lacey Schmeling	SECOG
Brian Adam	JSA
Larissa VanBeek	
David Miller	Canton Police Dept
Chuck Andresen	Canton

2

City of Canton

Public Hearing For DW-SRF & CW-SRF Applications
Dakota Street Improvements Project
7:00 PM, Monday, December 21st, 2015
Viking Room at the Canton Depot-600 West Fifth Street, Canton, SD

Please sign in:

NAME	ADDRESS / REPRESENTING
Andy Wilcox	Sioux Valley News
Lucy Wilcox	412 west 5th Street
Jeri Donelson	606 E Poplar

3

City of Canton

Public Hearing For DW-SRF & CW-SRF Applications
Dakota Street Improvements Project
7:00 PM, Monday, December 21st, 2015
Viking Room at the Canton Depot-600 West Fifth Street, Canton, SD

Please sign in:

NAME	ADDRESS / REPRESENTING
Jeff Fossum	814 E 5 Canton City of Canton
Bill Thorson	503 N Lincoln City of Canton

4

#0875

City of Canton

Public Hearing For DW-SRF & CW-SRF Applications
Dakota Street Improvements Project
7:00 PM, Monday, December 21st, 2015
Viking Room at the Canton Depot-600 West Fifth Street, Canton, SD

Please sign in:

NAME	ADDRESS / REPRESENTING	
STEVE ZIEBARTH	102 N. KIDDER ST.	CITY OF CANTON
Kristen Townsend	1700 Holiday Drive	City of Canton

5

City of Canton

Public Hearing For DW-SRF & CW-SRF Applications
Dakota Street Improvements Project
7:00 PM, Monday, December 21st, 2015
Viking Room at the Canton Depot-600 West Fifth Street, Canton, SD

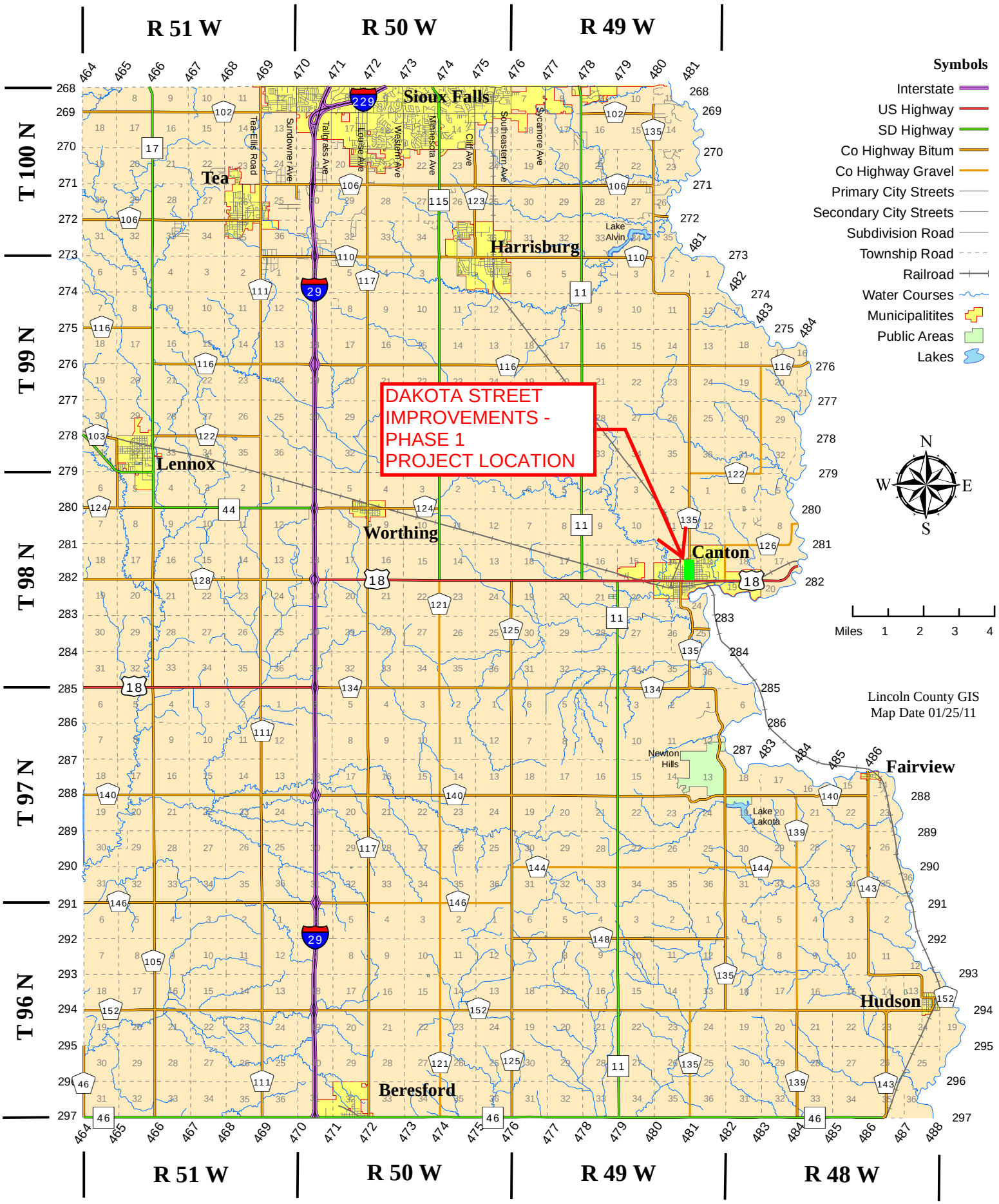
Please sign in:

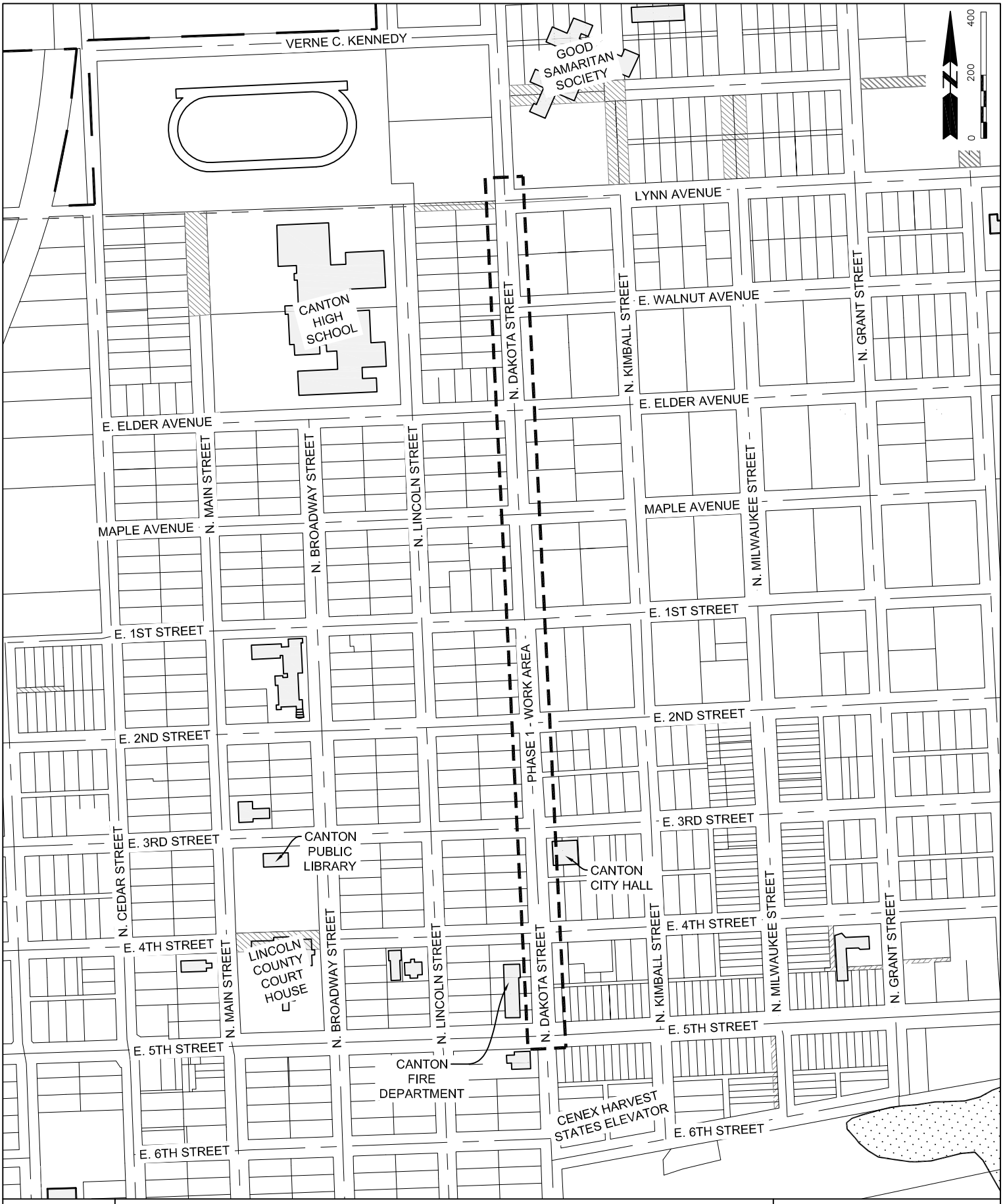
NAME	ADDRESS / REPRESENTING	
Ryle Cwach	210 N. Dakota	City of Canton
Karen Leffler	210 N Dakota	City of Canton
Chuck Smith	724 E. Walnut	City of Canton
John Devick	420 N. Milwaukee Ave	City of Canton
Shelby Eich	1015 N. Kidder	City of Canton
Richard S. Eble	31 W. 3rd	City of Canton
Jarrell Ard	910 Candy Ct	City of Canton

h. Project Location Map

Lincoln County

Roads





Sheet No.
1 OF 1

EXHIBIT A
DAKOTA STREET
PHASE 1
THE CITY OF CANTON,
SOUTH DAKOTA

JSA ENGINEERS AND LAND SURVEYORS
6810 S. Lyncrest Ave, Suite 101 Sioux Falls South Dakota 57108-2515
Phone: (605)367-1036 Fax: (605)367-1002

PROJECT: 92140
DATE: 7-3-2015
DESIGNED BY: DMC
DRAWN BY: DMC
CHECKED BY: MKA
DRAWING: 92140-DAKOTA
STREET EXHIBIT PHASE 1

i. Preliminary Plan and Profile Drawings

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE

BEGIN PHASE 1

FIRE/AMBULANCE STATION

CITY OF CANTON
101 N. DAKOTA STREET

CHARLES AND HOLLY MOLSTAD
215 N. DAKOTA STREET

E. 5TH STREET

E. 4TH STREET

N. DAKOTA STREET

FIRST AMERICAN BANK
402 E. 5TH STREET

JACQUELINE ZOMER
120 N. DAKOTA STREET

CHAD AND CHRISTI TIESZEN
128 N. DAKOTA STREET

JAMES ESSER
404 E. 4TH STREET

0+00 1+00 2+00 3+00 4+00 5+00

B1#1 B1#2 DI#1 DI#2 DI#3 DI#4 DI#5 DI#6 SMH#1 JB#1 JB#2

12" W 8" S 18"SS 12"D 18"SS 24"SS 36"SS 10"D 24"D 30"D

R/W

0 20 40 FT

PRELIMINARY
(NOT FOR CONSTRUCTION)
3/30/2015

REVISIONS

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PLAN VIEW

DESIGNED BY: DMC
DRAWN BY: DMC
CHECKED BY: MKA
ACAD FILE: PLAN & PROFILE.dwg
DATE: 1/12/2015

JSA

SHEET NO.
I-1
Sheet Series

0 20 40 FT

BI#1
B1 INLET
STA 2+25.00 - -18.8'Lt
RIM = 1262.17
18" RCP OIE (E) = 1258.32
DEPTH = 3.8'

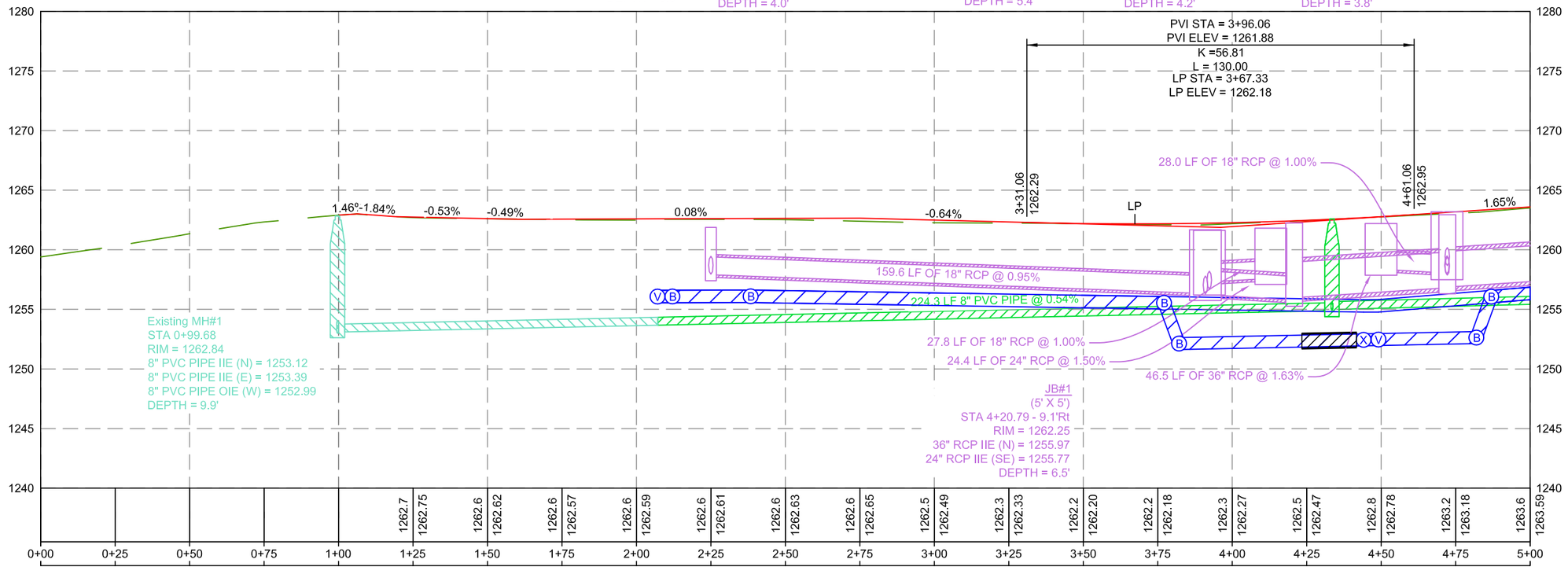
B1#2
B1 INLET
STA 2+25.00 - 18.8'Rt
RIM = 1261.88
18" RCP IIE (W) = 1257.95
18" RCP OIE (N) = 1257.90
DEPTH = 4.0'

DI#1
(10' X 3')
STA 3+91.02 - 20.5'Rt
RIM = 1261.68
18" RCP IIE (S) = 1256.32
18" RCP IIE (W) = 1256.29
18" RCP IIE (NE) = 1257.28
24" RCP OIE (NW) = 1256.24
DEPTH = 5.4'

DI#2
(10' X 3')
STA 3+92.33 - -20.5'Lt
RIM = 1261.48
18" RCP OIE (E) = 1256.70
DEPTH = 4.9'

DI#3
(10' X 3')
STA 4+12.98 - 44.0'Rt
RIM = 1261.81
18" RCP OIE (SW) = 1257.60
DEPTH = 4.2'

DI#4
(10' X 3')
STA 4+49.98 - 44.0'Rt
RIM = 1262.21
18" RCP OIE (NW) = 1258.36
DEPTH = 3.8'



Existing MH#1
STA 0+99.68
RIM = 1262.84
8" PVC PIPE IIE (N) = 1253.12
8" PVC PIPE IIE (E) = 1253.39
8" PVC PIPE OIE (W) = 1252.99
DEPTH = 9.9'

JB#1
(5' X 5')
STA 4+20.79 - 9.1'Rt
RIM = 1262.25
36" RCP IIE (N) = 1255.97
24" RCP IIE (SE) = 1255.77
DEPTH = 6.5'

SMH#1
STA 4+33.50 - 0.0'
RIM = 1262.57
8" PVC Pipe IIE (N) = 1254.99
8" PVC Pipe IIE (E) = 1254.93
8" PVC Pipe IIE (W) = 1254.93
8" PVC Pipe OIE (S) = 1254.89
DEPTH = 7.7'

PRELIMINARY
(NOT FOR CONSTRUCTION)
3/30/2015

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE

REVISIONS
REVISION 1: Text BY: BY DATE: DATE
REVISION 2: Text BY: BY DATE: DATE
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REVISION 5: Text BY: BY DATE: DATE

PROFILE VIEW
DESIGNED BY: DMC
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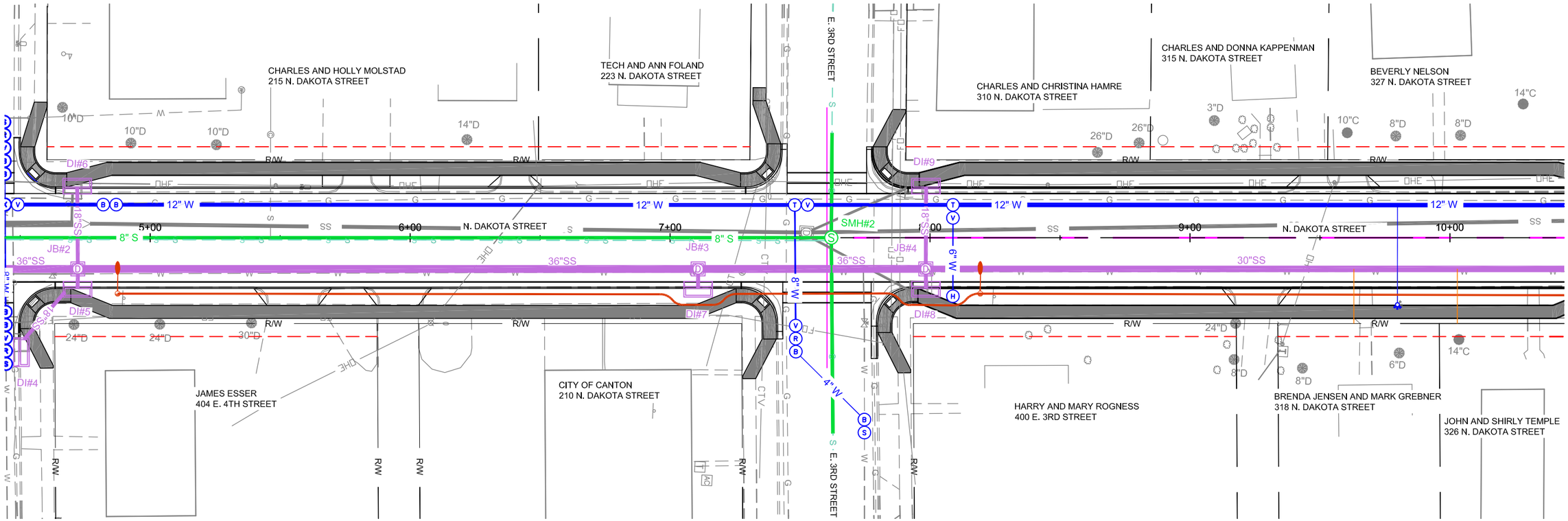
SHEET NO.
I-2
Sheet Series

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE



PRELIMINARY
(NOT FOR CONSTRUCTION)
3/30/2015

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REVISION 3: Text	BY:	DATE:
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PLAN VIEW

DESIGNED BY: DMC
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CHECKED BY: MKA
ACAD FILE: PLAN & PROFILE.dwg
DATE: 1/12/2015

SHEET NO.
I-3
Sheet Series

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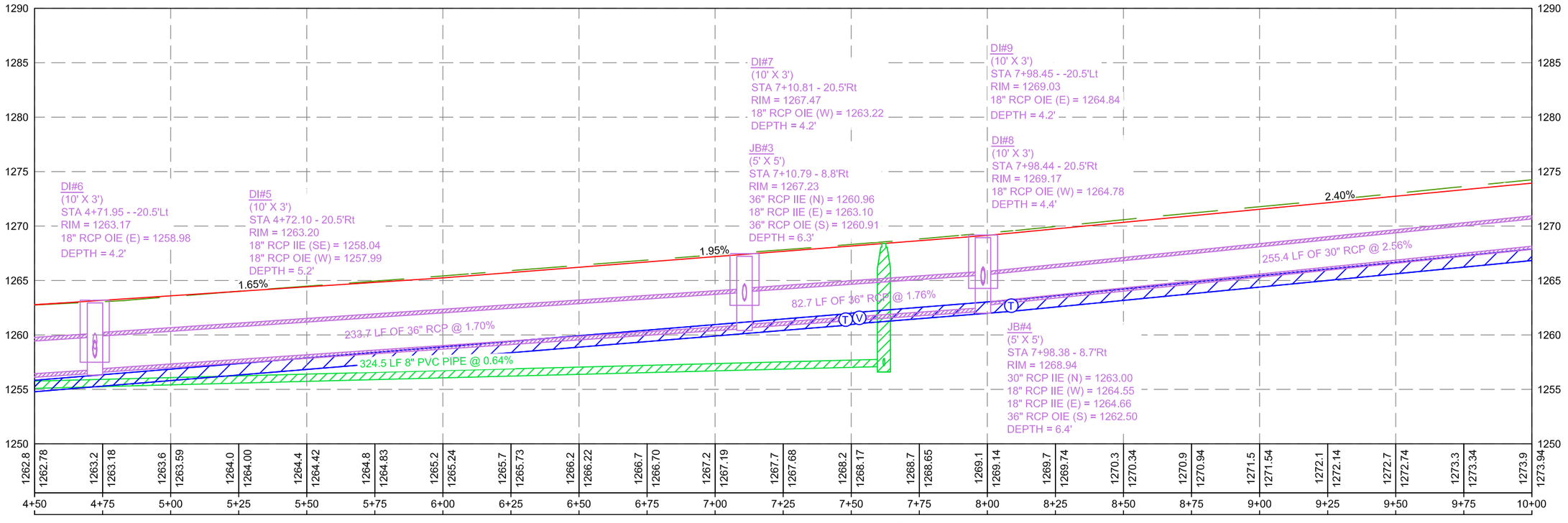

JB#2
(5' X 5')
STA 4+72.19 - 9.5'Rt
RIM = 1262.94
36" RCP IIE (N) = 1256.86
18" RCP IIE (W) = 1258.68
18" RCP IIE (E) = 1257.88
36" RCP OIE (S) = 1256.81
DEPTH = 6.1'

SMH#2
STA 7+62.01 - 0.0'
RIM = 1268.40
8" PVC Pipe IIE (E) = 1257.15
8" PVC Pipe IIE (W) = 1257.20
8" PVC Pipe OIE (S) = 1257.10
DEPTH = 11.3'

PRELIMINARY
(NOT FOR CONSTRUCTION)
3/30/2015

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE

REVISIONS

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REVISION 2: Text	BY: BY	DATE: DATE
REVISION 3: Text	BY: BY	DATE: DATE
REVISION 4: Text	BY: BY	DATE: DATE
REVISION 5: Text	BY: BY	DATE: DATE

PROFILE VIEW

DESIGNED BY: DMC
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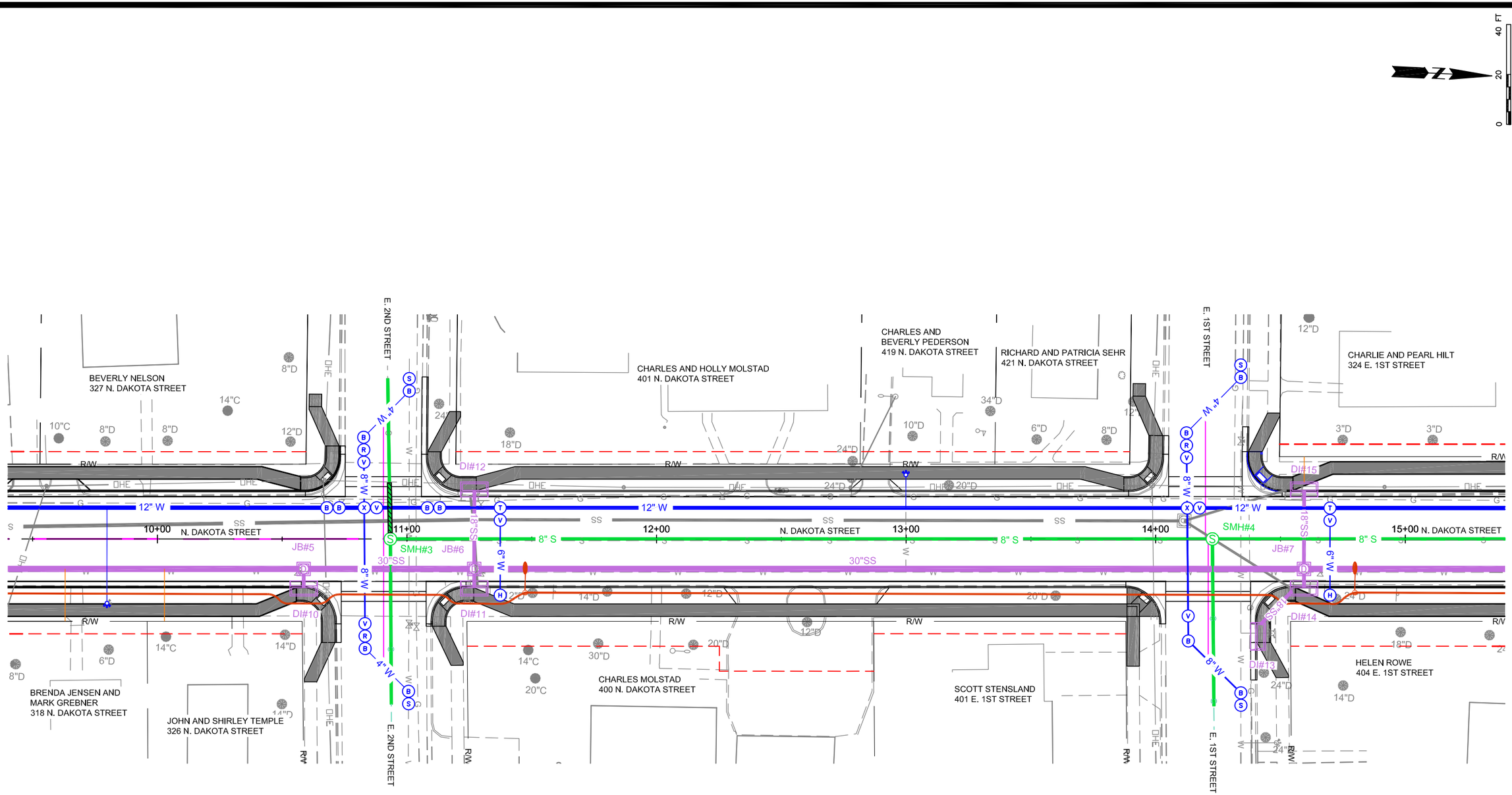
ACAD FILE: PLAN & PROFILE.dwg
DATE: 1/12/2015

SHEET NO.
I-4
Sheet Series



PRELIMINARY
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3/30/2015

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE

REVISIONS

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REVISION 3: Text	BY: BY	DATE: DATE
REVISION 4: Text	BY: BY	DATE: DATE
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PLAN VIEW

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DATE: 1/12/2015

SHEET NO.
I-5
Sheet Series

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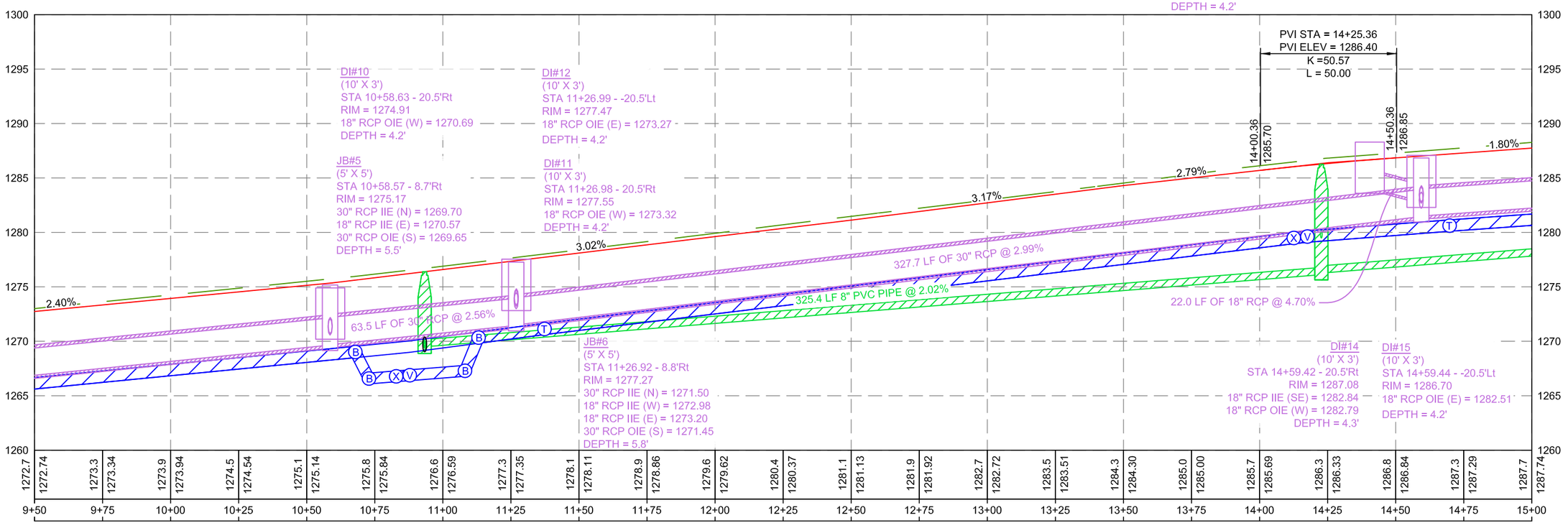

SMH#3
STA 10+93.32 - 0.0'
RIM = 1276.39
8" PVC Pipe IIE (N) = 1269.50
8" PVC Pipe IIE (E) = 1269.38
8" PVC Pipe IIE (W) = 1269.38
DEPTH = 7.0'

SMH#4
STA 14+22.68 - 0.0'
RIM = 1286.27
8" PVC Pipe IIE (N) = 1276.26
8" PVC Pipe IIE (E) = 1279.48
8" PVC Pipe OIE (S) = 1276.16
DEPTH = 10.1'

PRELIMINARY
(NOT FOR CONSTRUCTION)
3/30/2015

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE

REVISIONS

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REVISION 2: Text	BY: BY	DATE: DATE
REVISION 3: Text	BY: BY	DATE: DATE
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REVISION 5: Text	BY: BY	DATE: DATE

PROFILE VIEW

DESIGNED BY: DMC
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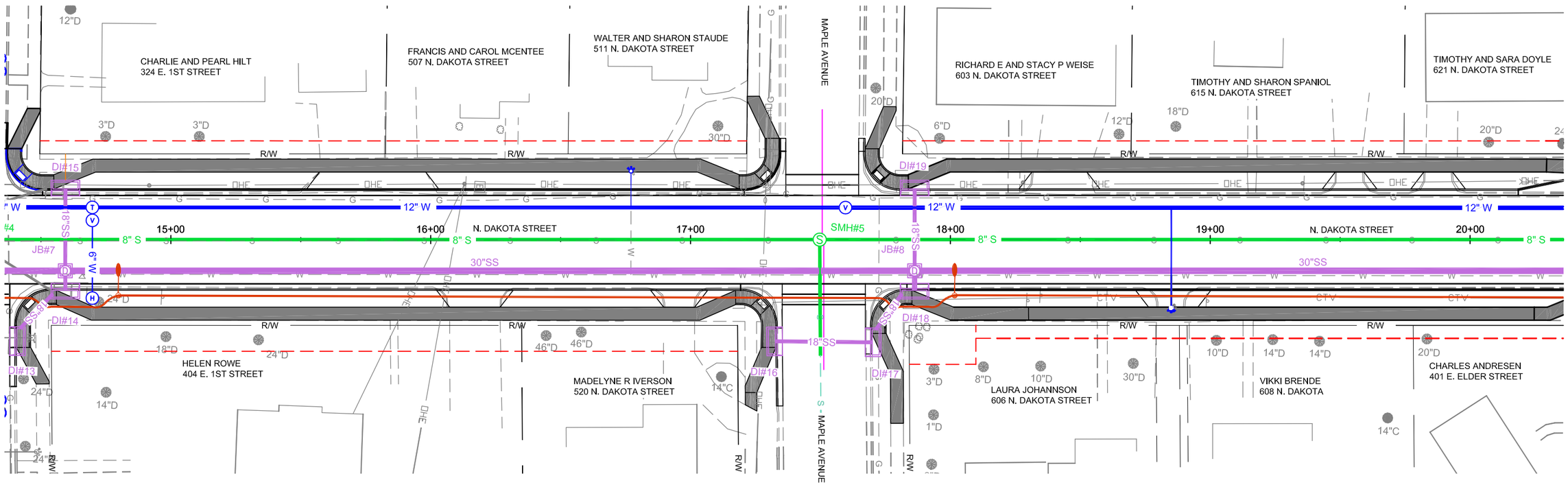
ACAD FILE: PLAN & PROFILE.dwg
DATE: 1/12/2015

SHEET NO.
I-6
Sheet Series

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE



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PLAN VIEW

DESIGNED BY: DMC
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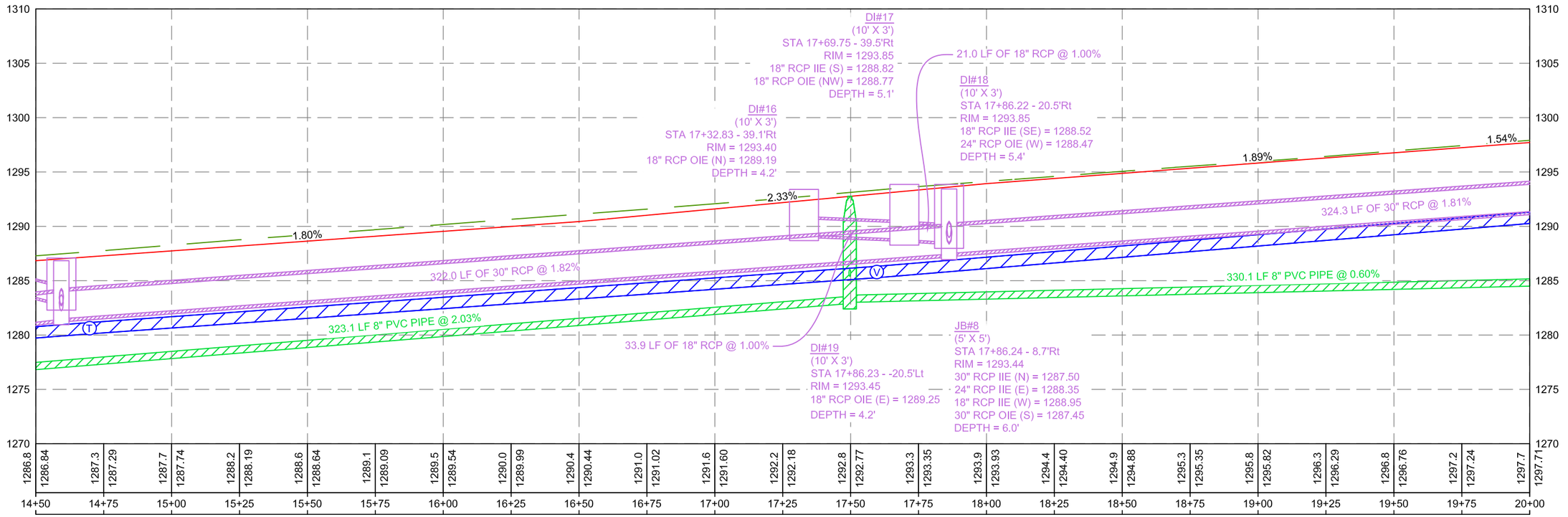
DATE: 1/12/2015

PRELIMINARY
(NOT FOR CONSTRUCTION)
3/30/2015

SHEET NO.
I-7
Sheet Series



PRELIMINARY
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3/30/2015

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE

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REVISION 3: Text	BY: BY	DATE: DATE
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REVISION 5: Text	BY: BY	DATE: DATE

PROFILE VIEW

DESIGNED BY: DMC
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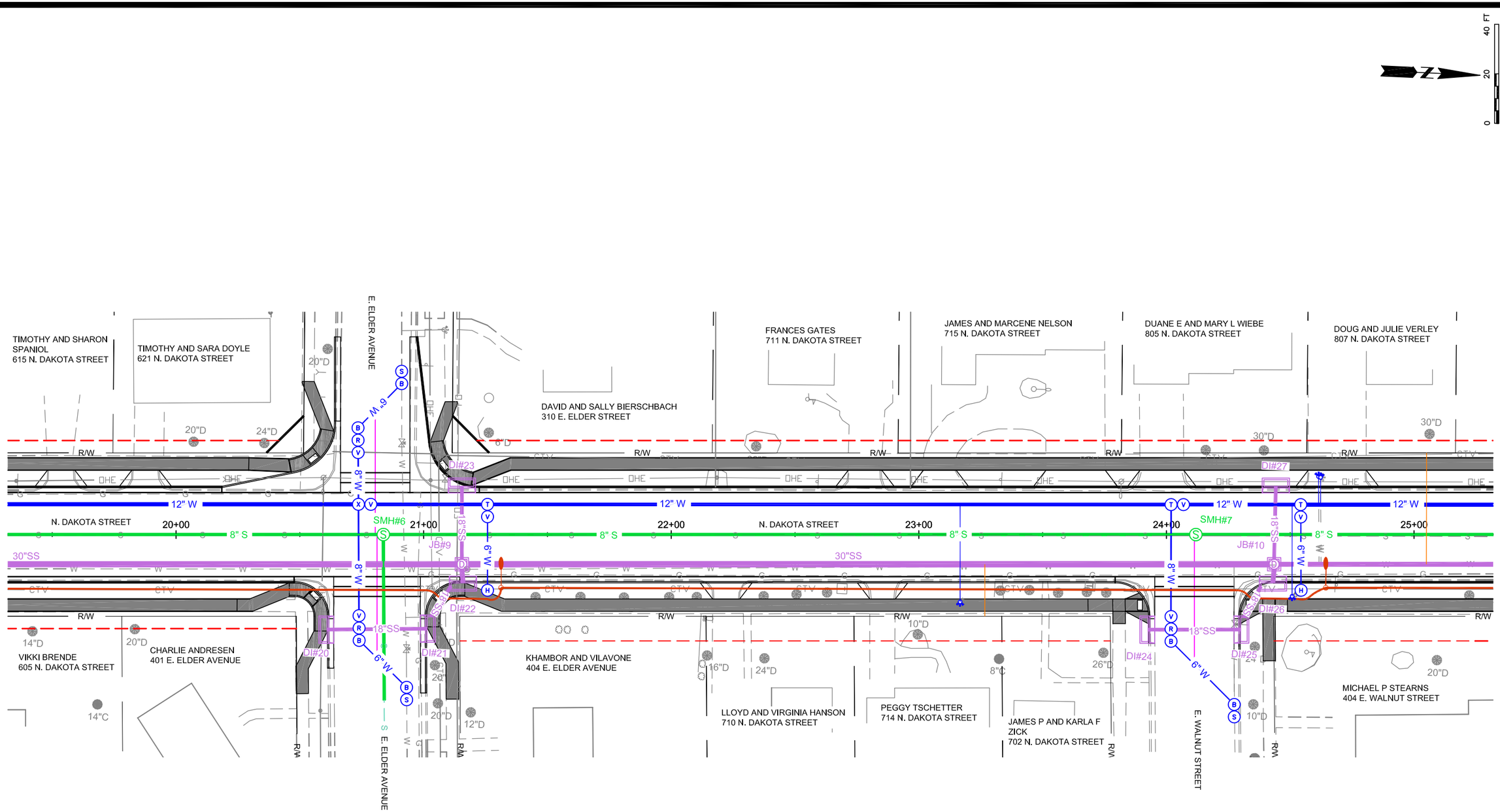
ACAD FILE: PLAN & PROFILE.dwg
DATE: 1/12/2015

SHEET NO.
I-8
Sheet Series



PRELIMINARY
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3/30/2015

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE

REVISIONS

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REVISION 1: Text	BY: BY	DATE: DATE
REVISION 2: Text	BY: BY	DATE: DATE
REVISION 3: Text	BY: BY	DATE: DATE
REVISION 4: Text	BY: BY	DATE: DATE
REVISION 5: Text	BY: BY	DATE: DATE

PLAN VIEW

DESIGNED BY: DMC
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CHECKED BY: MKA
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DATE: 1/12/2015

JSA

SHEET NO.
I-9
Sheet Series

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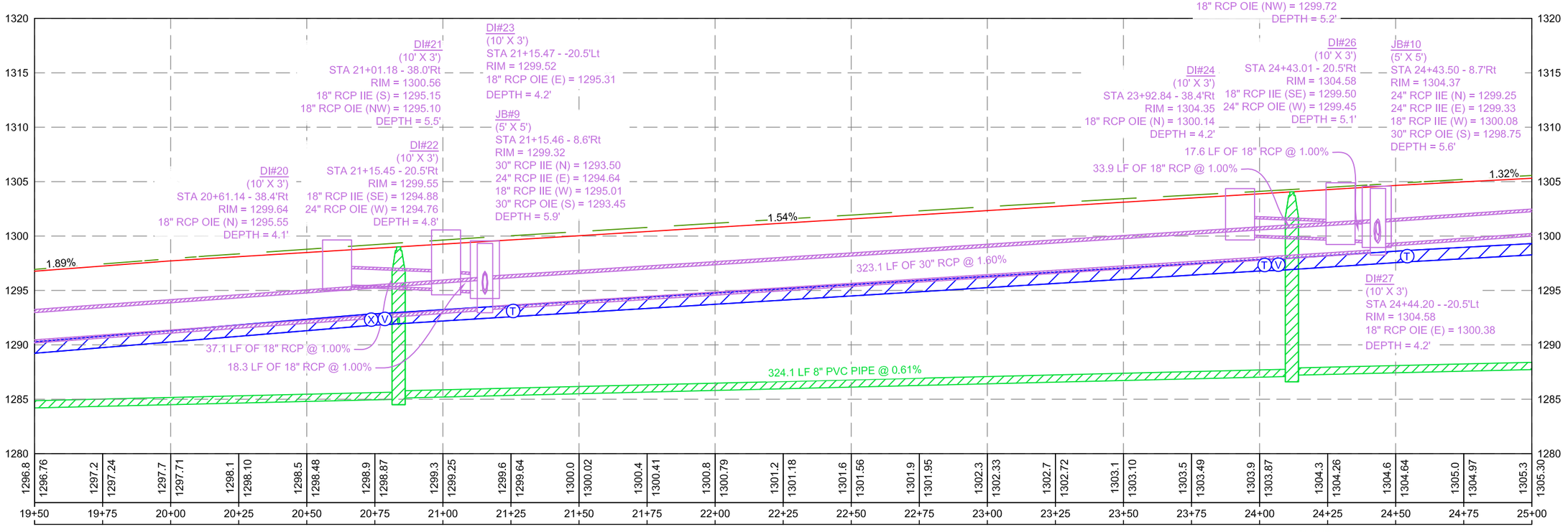

SMH#6
STA 20+83.74 - 0.0'
RIM = 1299.00
8" PVC Pipe IIE (N) = 1285.10
8" PVC Pipe IIE (E) = 1291.86
8" PVC Pipe OIE (S) = 1285.00
DEPTH = 14.0'

SMH#7
STA 24+11.88 - 0.0'
RIM = 1304.06
8" PVC Pipe IIE (N) = 1287.20
8" PVC Pipe OIE (S) = 1287.10
DEPTH = 17.0'

PRELIMINARY
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3/30/2015

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE

REVISIONS

	BY:	DATE:
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REVISION 2: Text	BY: BY	DATE: DATE
REVISION 3: Text	BY: BY	DATE: DATE
REVISION 4: Text	BY: BY	DATE: DATE
REVISION 5: Text	BY: BY	DATE: DATE

PROFILE VIEW

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SHEET NO.
I-10
Sheet Series

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE

N

0 20 40 FT

END PHASE 1

DOUG AND JULIE VERLEY
807 N. DAKOTA STREET

GARY M JOHNSON
813 N. DAKOTA STREET

CITY OF CANTON
200.60.01.014

DAVID AMUNDSON
200.60.01.015

VACATED

DAVID AMUNDSON
903 N. DAKOTA STREET

MICHAEL P STEARNS
404 E. WALNUT STREET

JOE B SKILES LIVING TRUST
814 N. DAKOTA STREET

EVANGELICAL LUTHERAN
GOOD SAMARITAN SOCIETY
200.50.13.208

EVANGELICAL LUTHERAN
GOOD SAMARITAN SOCIETY
200.50.13.207

N. DAKOTA STREET

LYNN AVENUE

SMH#8

DI#25 DI#26 DI#27 DI#28 DI#29 DI#30 DI#31

JB#10 JB#11

25+00 26+00 27+00 28+00 29+00 30+00

PRELIMINARY
(NOT FOR CONSTRUCTION)
3/30/2015

REVISIONS

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REVISION 2: Text	BY: BY	DATE: DATE
REVISION 3: Text	BY: BY	DATE: DATE
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REVISION 5: Text	BY: BY	DATE: DATE

PLAN VIEW

DESIGNED BY: DMC
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DATE: 1/12/2015

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Sheet Series

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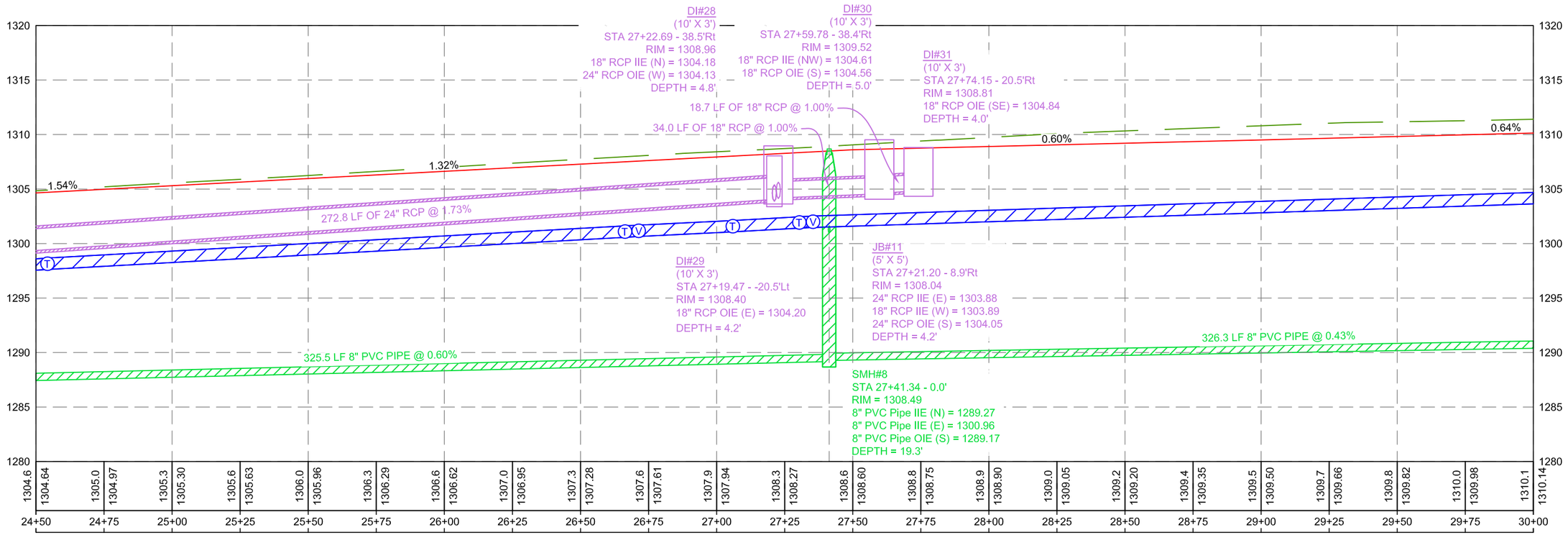

PRELIMINARY
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3/30/2015

N. DAKOTA STREET IMPROVEMENTS

5TH STREET TO 281ST STREET
CANTON, SOUTH DAKOTA

SURFACE

REVISIONS

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REVISION 2: Text	BY: BY	DATE: DATE
REVISION 3: Text	BY: BY	DATE: DATE
REVISION 4: Text	BY: BY	DATE: DATE
REVISION 5: Text	BY: BY	DATE: DATE

PROFILE VIEW

DESIGNED BY: DMC
DRAWN BY: DMC
CHECKED BY: MKA
ACAD FILE: PLAN & PROFILE.dwg
DATE: 1/12/2015

SHEET NO.
1-12
Sheet Series

WRAP REVIEW SHEET
DRINKING WATER FACILITIES FUNDING APPLICATION
APPLICANT: CITY OF DELL RAPIDS

Project Title:	10th Street and Highway 115 Improvements Projects
Funding Requested:	$705,000
Total Project Cost:	$705,000
Project Description:	Dell Rapids is proposing to replace cast iron water mains at the intersection of SD Highway 115, Old Highway 77, and 4th Street with approximately 1,900 feet of 6- and 8-inch PVC lines. The city is also proposing to replace just over 800 feet of cast iron water main with 6- and 8-inch PVC waterline on a portion of 10th Street near the hospital.
Alternatives Evaluated:	The "No Action" alternative was rejected because the existing water mains are very old and in poor condition. The SD DOT plans to reconstruct Highway 115 during the 2016 and 2017 construction seasons, and the city plans to replace these utilities prior to that construction. Alternative 2 proposes to replace the waterlines in the Highway 115 area by open cut methods. Blasting and rock excavation may be required due to bedrock. Alternative 3 proposes to replace water mains and appurtenances on a portion 10th Street. The city selected Alternatives 2 and 3.
Implementation Schedule:	Design of the project would begin in the summer of 2016 with construction starting in the fall of 2016 and continuing through 2017.
Service Population:	3,700
Current Domestic Rate:	$34.85 per 5,000 gallons usage

Interest Rate: 3.25% Term: 30 years Security: System Revenue

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If funding is provided as all loan, Dell Rapids would have 84% coverage based on the current rate of $34.85/5,000 gallons. Dell Rapids would need to increase the rate by approximately 7% to $37.10/5,000 gallons to provide 110% coverage.

10% Funding Subsidy:	$70,500 subsidy with a loan of $634,500.
Coverage at 10% Subsidy:	Based on a 10% subsidy and a loan of $634,500, Dell Rapids would have 87% coverage based on the current rate of $34.85/5,000 gallons. Dell Rapids would need to increase the rate by approximately 6.2% to $36.85/5,000 gallons to provide 110% coverage.

20% Funding Subsidy:	$141,000 subsidy with a loan of $564,000.
Coverage at 20% Subsidy:	Based on a 20% subsidy and a loan of $564,000, Dell Rapids would have 89% coverage based on the current rate of $34.85/5,000 gallons. Dell Rapids would need to increase the rate by approximately 5.5% to $36.60/5,000 gallons to provide 110% coverage.

25% Funding Subsidy:	$176,250 subsidy with a loan of $528,750.
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $528,750, Dell Rapids would have 90% coverage based on the current rate of $34.85/5,000 gallons. Dell Rapids would need to increase the rate by approximately 5.2% to $36.50/5,000 gallons to provide 110% coverage.

ENGINEERING REVIEW COMPLETED BY: JIM ANDERSON

FINANCIAL REVIEW COMPLETED BY: DAVE RUHNKE

SECOG
SOUTH EASTERN COUNCIL OF GOVERNMENTS
SOUTH DAKOTA

RECEIVED
JAN 04 2015
Division of Financial
& Technical Assistance

December 31, 2015

Andy Bruels
SD-DENR
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

Dear Mr. Bruels:

Enclosed, please find the Drinking Water Facilities Funding Application for the City of Dell Rapids 2016 10th Street and Highway 115 project. Included with the general application are the following appendices:

Appendix A – Supplemental Signed Application Forms including the Certification of Needs Categories, and Certification Regarding Debarment, Suspension, and Other Responsibility Matters.
Appendix B – Signed Application Resolution
Appendix C – User Rate Ordinances
Appendix D – Amortization of Existing Debt
Appendix E – Capacity Assessment
Appendix F – 2014 Financial Statements
Appendix G – 2015 Budget
Appendix H – 2016 Budget
Appendix I – Public Hearing Notice, Sign-In Sheet and Minutes
Appendix J – Facilities Plan
Appendix K – SAM Registration

Should the Department have questions or comments pertaining to this application, please contact the engineer listed in the application or me.

Sincerely,

Janice Gravning

Janice Gravning
Accountant

Enclosures

cc: City of Dell Rapids
East Dakota Water Development District

500 N. Western Ave. Suite 100 • Sioux Falls, SD 57104
Phone: 605.367.5390 • Fax: 605.367.5394
Website: www.secog.org • E-mail: janice@secog.org
Lynne Keller Forbes, Executive Director

Drinking Water Facilities Funding Application

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:	Proposed Funding Package	
City of Dell Rapids		
Address: PO Box 10 Dell Rapids, SD 57022	Requested Funding	$705,000
	Local Cash	
	Other:	
Subapplicant:	Other:	
DUNS Number: 170381602	Other:	
	TOTAL	$705,000

Project Title: 2016 10th Street and Highway 115 Improvements Project

Description:

The City of Dell Rapids is proposing improvements to its drinking water system in two locations in the community.

At the intersection of Highway 115, Old Highway 77 and 4th Street, old cast iron water mains will be replaced with approximately 1,900 feet of 6" and 8" DR18 water main pipe. SD DOT plans to reconstruct SD Highway 115 through Dell Rapids in 2017, and replacement of the utilities prior to the SD DOT project will result in a cost savings since most surfacing repairs will be addressed with the SD DOT project. The Highway 115 portion of this project will cost approximately $465,000.

The 10th Street portion of the project consists of the replacement of 800 feet of old cast iron water main with new 6" and 8" C900 DR18 water main pipe. The 10th Street portion of this project will cost approximately $240,000.

The City has a drinking water reserve fund. The City's current rate for 5,000 gallons of drinking water is $31.85 a month.

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Scott Fiegen, Mayor		12-30-15
Name & Title of Authorized Signatory (Typed)	Signature	Date

Professional Consultants

Application Prepared By: South Eastern Council of Governments

Contact Person: Janice Gravning

Mailing Address: 500 N. Western Avenue, Suite 100

City, State, and Zip: Sioux Falls, SD 57104

Telephone Number: (605) 367-5390 Fax: (605) 367-5394

Email address: janice@secog.org

Consulting Engineering Firm: DGR Engineering

Contact Person: Lance Mayer, P.E.

Mailing Address: 2909 E. 57th Street, Suite 101

City, State, and Zip: Sioux Falls, SD 57108

Telephone Number: (605) 339-4157 Fax: (605) 339-4175

Email address: lmayer@dgrnet.com

Legal Counsel's Firm: Vogt Brown Merry & Hammer

Contact Person: Dean Hammer

Mailing Address: 301 E. 4th Street, Suite 1

City, State, and Zip: Dell Rapids, SD 57022

Telephone Number: (605) 428-5444 Fax: (605) 428-0107

Email address: drlaw@siouxvalley.net

Bond Counsel's Firm: Davenport, Evans, Hurwitz & Smith, LLP

Contact Person: Doug Hajek

Mailing Address: 206 W. 14th St., PO Box 1030

City, State, and Zip: Sioux Falls, SD 57101-1030

Telephone Number: (605) 336-2880 Fax: (605) 335-3639

Email address: dhajek@dehs.com

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel	$10,916					$10,916
D. Other - SECOG	$6,000					$6,000
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$54,293					$54,293
B. Project Inspection Fees	$54,293					$54,293
C. Other	$10,916					$10,916
4. Construction & Improvements	$465,625					$465,625
5. Equipment						
6. Contractual Services						
7. Other						
8. Other Misc & Rounding	$26,176					$26,176
9. Subtotal (Lines 1-8)	$628,219					$628,219
10. Contingencies	$76,781					$76,781
11. Total (Lines 9 and 10)	$705,000					$705,000
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)			
Other (Explain) DWSRF / CWFCP		$705,000	March 25, 2016
Other (Explain)			
Other (Explain)			
Total		$705,000	$705,000

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

10th STREET & HWY 115 - DWSRF

General Information

The month and day your fiscal year begins: January 1st

Population Served Current: 3,700 2010 3,633 2000 2,980

Top three employers within 30 miles	Number of Employees	Type of Business
Sanford Health	8571	Health Care
Avera Health	6259	Health Care
John Morrell & Company	3350	Meat Processor

Repayment Information

Interest rate you are applying for: 3.25% Term: 30

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☒ 2. Revenue Bond
- ☐ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan.
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year	2003	2006	2012	2012	2014	
Purpose	DW-01 System Improvements	DW-02 4th Street Project	DW-03 15th Street Phase 1	DW-04 Water Meters	DW-05 15thStreet Phase 2	
Security Pledged	DW Revenue	DW Revenue	DW Revenue	DW Revenue	DW Surcharge	
Amount	$621,000	$162,263	$428,698	$270,000	$625,058	
Maturity Date (mmm/yyyy)	1/2025	1/2027	10/2032	10/2022	1/2035	
Debt Holder	BWNR	BWNR	BWNR	BWNR	BWNR	
Debt Coverage Requirement	110%	110%	110%	110%	110%	
Avg. Annual Required Payment	$43,113	$11,065	$28,583	$30,227	$41,674	
Outstanding Balance	$307,779	$96,134	$379,538	$195,260	$607,737	

Comments:

10th STREET + HWY 115 DWSRF

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$506,183	$695,119	$499,156	$476,200	$476,200	$476,200
Surcharge Fees			$44,514	$40,000	$40,000	$40,000
Other (Explain)			$9,349	$7,500	$7,500	$7,500
Operating Expenses						
Personal Services	($126,327)	($145,005)	($141,560)	($166,795)	($171,799)	($176,953)
Chemical, Material & Supplies	($195,847)	($272,031)	($198,328)	($183,900)	($189,417)	($195,100)
Electric & Other Utilities			($17,760)	($16,800)	($17,304)	($17,823)
Other (Explain)			($30,343)	($32,500)	($33,475)	($34,479)
Operating Net Cash	$184,009	$278,083	$165,028	$123,705	$111,705	$99,345
Nonoperating Cash Flow						
Interest Revenue	$1,310	$1,081	$1,352	$1,300	$1,300	$1,300
Transfers In (Explain)	$814,102	$52,829				
Fixed Asset Purchases	($810,318)	($3,452)	($295,779)			
Transfers Out (Explain)						
Principal Debt Payments	($75,813)	($78,101)	($97,771)	($108,579)	($109,795)	($127,426)
Interest Debt Payments	($37,175)	($34,886)	($69,666)	($48,084)	($44,868)	($64,293)
Other (Explain)		$38,333	$95,023	$54,000	$54,000	$54,000
Nonoperating Net Cash	($107,894)	($24,196)	($366,841)	($101,363)	($99,363)	($136,419)
Increase (Decrease) Cash	$76,115	$253,887	($201,813)	$22,342	$12,342	($37,074)
Beginning Cash Balance	$821,621	$897,736	$1,151,623	$949,810	$972,152	$984,494
Ending Cash Balance	$897,736	$1,151,623	$949,810	$972,152	$984,494	$947,420
Restricted Balance	0	$112,987	$200,644	$189,870	$187,870	$224,926
Unrestricted Balance	$897,736	$1,038,636	$749,166	$782,282	$796,624	$722,494

Explanations

Transfers In - Capital Contributions, Capital Debt and Grant Proceeds, Gain on Sale of FA
Other Non-operating - Water Tower Cellular Lease
2014 - Numbers are from audit report draft
2015 - Numbers are from internally prepared financial statements
2016 - Numbers are from 2016 budget
2017 & 2018 - Assumes no increase in revenue and a 3% increase in expenses

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: [X] Incorporated Municipality or Sanitary District

or

[ ] Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic	$34.85		1,148	4,503 gallons
Business	$34.85		224	8,683 gallons
Other:				
Other:				

Are fees based on usage or flat rate? usage

When is proposed fee scheduled to take effect? N/A

When did the current fee take effect? January 2013

What was the fee prior to the current rate? $31.18

Four Largest Customers	Type of Business	% of System Revenue
H2ose It	Car Wash	7%
Orchard Hills	Assisted Living/Nursing Home	5%
DNRC	Nursing Home	5%
Dells Materials	Ready Mix Concrete	5%

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$705,000
Treatment	
Storage	
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$705,000

Scott Fiegen, Mayor

Name & Title of Authorized Representative

Signature of Authorized Representative

12-30-15

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Scott Fiegen, Mayor

Name & Title of Authorized Representative

Signature of Authorized Representative

12-30-15
Date

☐ I am unable to certify to the above statements. Attached is my explanation

RESOLUTION NO. 2015-18

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the City of Dell Rapids (the "City") has determined it is necessary to proceed with improvements to its Drinking Water System, including but not limited to 2016 10th Street and Highway 115 Improvements Project (the "Project"); and

WHEREAS, the City has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the City and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the City as follows:

1. The City hereby approves the submission of an Application for financial assistance in an amount not to exceed $705,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Mayor is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Mayor is hereby designated as the authorized representative of the City to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at Dell Rapids, South Dakota, this 7th day of December 2015.

APPROVED:

Mayor
City of Dell Rapids

(Seal)

Attest: _____
City Finance Officer

ORDINANCE NO. 764

ORDINANCE OF CITY OF DELL RAPIDS, SOUTH DAKOTA TO APPROVE A SURCHARGE APPLICABLE TO USERS OF THE DRINKING WATER SYSTEM IN ORDER TO REPAY A SURCHARGE REVENUE BOND IN THE PRINCIPAL AMOUNT OF $897,000.

WHEREAS, the City of Dell Rapids, South Dakota (the "City") has determined that it is necessary to make certain modifications and improvements to the City's drinking water system (the "System"); and

WHEREAS, in order to pay for a portion of the cost of such improvements, including engineering costs, legal and financing costs, and other related costs, the City Council has determined that it is necessary and advisable for the City to issue and sell the City's Drinking Water Surcharge Revenue Bond in the amount of $897,000 (the "Bond"), and adopted Resolution No. 2012-19 (the "Bond Resolution") to authorize the issuance of the Bond to the South Dakota Conservancy District, acting through the Board of Water and Natural Resources (the "SDCD"), in accordance with a loan agreement to be entered into by the City and the SDCD (the "Loan Agreement"); and

WHEREAS, in order to generate revenues to pay the principal, interest and administrative surcharge on the Bond, the City has proposed to adopt a drinking water surcharge pursuant to SDCL 9-40-15 (the "Surcharge") and to impose such charge on all users benefiting from the System.

NOW, THEREFORE, BE IT ORDAINED by the City of Dell Rapids, South Dakota as follows:

1. From and after January 1, 2013, the users of the System will be charged a Surcharge as set forth on the Exhibit A attached hereto. The City Council may, by Ordinance, adjust the amount of the Surcharge (a) if the City Council determines that federal or state assistance allows the City to reduce the principal amount of the Bond, or (b) as necessary to repay Bond principal over a period of 20 years, together with interest thereon at an interest rate of 2.50% per annum, plus an administrative expense surcharge of .50%, and maintain the debt service coverage ratio specified in the Loan Agreement.

2. The revenues collected from the Surcharge must be segregated from all other funds of the City, and are pledged to secure the Bond. Until adequate provision has been made for the debt service on the Bond, Surcharge revenues may not be used for any other purpose other than for the repayment thereof. The Bond will be payable solely from such segregated revenues, and not from the general revenues of the City, but the City may from time to time advance moneys from its general revenues to make payments on the Bond. Any moneys so advanced must be repaid from Surcharge collections within one year of the date of such advance.

3. This Ordinance will be effective on the 20th day after publication thereof, unless suspended by referendum.

Dated at City of Dell Rapids, South Dakota, this 20th day of August, 2012.

_____
Mayor

ATTEST:

_____
City Finance Officer

ORDINANCE 812

AN ORDINANCE OF THE CITY OF DELL RAPIDS, SOUTH DAKOTA, PROVIDING THAT THE REVISED ORDINANCES OF THE CITY OF DELL RAPIDS, SOUTH DAKOTA, BE AMENDED BY REVISING SECTION 21-37; PROVIDING A CHANGE TO WATER RATES PUMPED AND DELIVERED TO LOCATIONS OUTSIDE OF CITY LIMITS,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DELL RAPIDS, SOUTH DAKOTA:

Section 1. Effective January 1, 2015, Sec. 21-37 of the Revised Ordinances of the City of Dell Rapids, South Dakota, is hereby amended to read as follows:

"Sec. 21-37. Water rates.

Beginning with the December 20, 2014 water billing, the following rates are hereby established:

(1) For water pumped and delivered to locations within the city limits of the city, the base rate shall be ten dollars ($10.00), plus four dollars and thirty seven cents ($4.37) for each one thousand (1,000) gallons or part thereof metered per month.

(2) For water pumped and delivered to locations outside the city limits of the city, the rate shall be as follows:

a. For water pumped and delivered to locations outside city limits of the city, the base rate shall be ten dollars ($10.00), plus four dollars and thirty seven ($4.37) for each one thousand (1,000) gallons or part thereof metered per month for the first 50,000 gallons used.

b. For each one thousand (1,000) gallons or fraction thereof above fifty thousand (50,000) gallons of water used, the rate of six dollars and forty-nine cents ($6.49) per one thousand (1,000) gallons or fraction thereof will charged for water used.

(3) Bulk water rates for water purchased in bulk and handled by the user shall be five dollars and eighty-two cents ($5.82) per one thousand (1,000) gallons."

Adopted this 17th day of November, 2014.

FOR THE GOVERNING BODY OF THE
CITY OF DELL RAPIDS, SOUTH DAKOTA

(MUNICIPAL SEAL)

By_____
Scott Fiegen, Mayor

ATTEST:

By_____
Claire Baartman, Finance Officer

First Reading: November 3, 2014
Second Reading and Adoption: November 17, 2014
Publication: November 26, 2014
Effective Date: December 20, 2014

DW #1

AMORTIZATION SCHEDUL.

Principal	Loan Date	Maturity	Loan No	Call / Coll	Account	Officer	Initials
$621,000.00	4/30/03	01-15-2025					

References in the shaded area are for Lender's use only and do not limit the applicability of this document to any particular loan or item.
Any item above containing "***" has been omitted due to text length limitations.

Borrower: City of Dell Rapids– Drinking Water # 1
PO Box 10
Dell Rapids, SD 57022-0010

Lender: THE FIRST NATIONAL BANK IN SIOUX FALLS
AS TRUSTEE FOR SOUTH DAKOTA DEPARTMENT
OF ENVIRONMENT AND NATURAL RESOURCES
PIERRE, SD 57501

West 2nd St Water Main

Disbursement Date:
Interest Rate: 3.500

Repayment Schedule: Installment
Calculation Method: 30 /360 U.S. Rule

602-4334-44200 602-4334-44100

Payment Number	Payment Date	Payment Amount	Interest Paid **	Principal Paid	Remaining Balance
1	04-15-2005	10,778.35	2,656.50	8,121.85	612,878.15
2	07-15-2005	10,778.35	5,362.68	5,415.67	607,462.48
3	10-15-2005	10,778.35	5,315.30	5,463.05	601,999.43
2005 TOTALS:		**32,335.05**	**13,334.48**	**19,000.57**	
4	01-15-2006	10,778.35	5,267.49	5,510.86	596,488.57
5	04-15-2006	10,778.35	5,219.28	5,559.07	590,929.50
6	07-15-2006	10,778.35	5,170.63	5,607.72	585,321.78
7	10-15-2006	10,778.35	5,121.56	5,656.79	579,664.99
2006 TOTALS:		**43,113.40**	**20,778.96**	**22,334.44**	
8	01-15-2007	10,778.35	5,072.07	5,706.28	573,958.71
9	04-15-2007	10,778.35	5,022.14	5,756.21	568,202.50
10	07-15-2007	10,778.35	4,971.77	5,806.58	562,395.92
11	10-15-2007	10,778.35	4,920.97	5,857.38	556,538.54
2007 TOTALS:		**43,113.40**	**19,986.95**	**23,126.45**	
12	01-15-2008	10,778.35	4,869.71	5,908.64	550,629.90
13	04-15-2008	10,778.35	4,818.01	5,960.34	544,669.56
14	07-15-2008	10,778.35	4,765.86	6,012.49	538,657.07
15	10-15-2008	10,778.35	4,713.25	6,065.10	532,591.97
2008 TOTALS:		**43,113.40**	**19,166.83**	**23,946.57**	
16	01-15-2009	10,778.35	4,660.18	6,118.17	526,473.80
17	04-15-2009 #319108	10,778.35	4,606.65	6,171.70	520,302.10
18	07-15-2009 pd	10,778.35	4,552.64	6,225.71	514,076.39
19	10-15-2009 pd	10,778.35	4,498.17	6,280.18	507,796.21
2009 TOTALS:		**43,113.40**	**18,317.64**	**24,795.76**	
20	01-15-2010 pd	10,778.35	4,443.21	6,335.14	501,461.07
21	04-15-2010 pd	10,778.35	4,387.79	6,390.56	495,070.51
22	07-15-2010 ✓	10,778.35	4,331.87	6,446.48	488,624.03
23	10-15-2010 ✓	10,778.35	4,275.46	6,502.89	482,121.14
2010 TOTALS:		**43,113.40**	**17,438.33**	**25,675.07**	
24	01-15-2011 ✓	10,778.35	4,218.56	6,559.79	475,561.35
25	04-15-2011 ✓	10,778.35	4,161.16	6,617.19	468,944.16
26	07-15-2011 ✓	10,778.35	4,103.26	6,675.09	462,269.07
27	10-15-2011 ✓	10,778.35	4,044.85	6,733.50	455,535.57
2011 TOTALS:		**43,113.40**	**16,527.83**	**26,585.57**	
28	01-15-2012 ✓	10,778.35	3,985.94	6,792.41	448,743.16
29	04-15-2012 ✓	10,778.35	3,926.50	6,851.85	441,891.31
30	07-15-2012 ✓	10,778.35	3,866.55	6,911.80	434,979.51
31	10-15-2012 ✓	10,778.35	3,806.07	6,972.28	428,007.23
2012 TOTALS:		**43,113.40**	**15,585.06**	**27,528.34**	
32	01-15-2013 ✓	10,778.35	3,745.06	7,033.29	420,973.94
33	04-15-2013 ✓	10,778.35	3,683.53	7,094.82	413,879.12
34	07-15-2013 ✓	10,778.35	3,621.44	7,156.91	406,722.21
35	10-15-2013 ✓	10,778.35	3,558.82	7,219.53	399,502.68
2013 TOTALS:		**43,113.40**	**14,608.85**	**28,504.55**	
36	01-15-2014 ✓	10,778.35	3,495.65	7,282.70	392,219.98
37	04-15-2014 ✓	10,778.35	3,431.92	7,346.43	384,873.55
38	07-15-2014 ✓	10,778.35	3,367.65	7,410.70	377,462.85
39	10-15-2014 ✓	10,778.35	3,302.80	7,475.55	369,987.30

** INTEREST PAID also includes Admin Surcharge amounts.

DW #1
2nd St

AMORTIZATION SCHEDULE (Continued)

(602-4334-44200 (602-4384-44100

			Interest	Principal	
2014 TOTALS:		**43,113.40**	**13,598.02**	**29,515.38**	
40	01-15-2015	10,778.35	3,237.38	7,540.97	362,446.33
41	04-15-2015	10,778.35	3,171.41	7,606.94	354,839.39
42	07-15-2015	10,778.35	3,104.84	7,673.51	347,165.88
43	10-15-2015	10,778.35	3,037.71	7,740.64	339,425.24
2015 TOTALS:		**43,113.40**	**12,551.34**	**30,562.06**	
44	01-15-2016	10,778.35	2,969.97	7,808.38	331,616.86
45	04-15-2016	10,778.35	2,901.64	7,876.71	323,740.15
46	07-15-2016	10,778.35	2,832.73	7,945.62	315,794.53
47	10-15-2016	10,778.35	2,763.20	8,015.15	307,779.38
2016 TOTALS:		**43,113.40**	**11,467.54**	**31,645.86**	
48	01-15-2017	10,778.35	2,693.07	8,085.28	299,694.10
49	04-15-2017	10,778.35	2,622.33	8,156.02	291,538.08
50	07-15-2017	10,778.35	2,550.95	8,227.40	283,310.68
51	10-15-2017	10,778.35	2,478.97	8,299.38	275,011.30
2017 TOTALS:		**43,113.40**	**10,345.32**	**32,768.08**	
52	01-15-2018	10,778.35	2,406.35	8,372.00	266,639.30
53	04-15-2018	10,778.35	2,333.09	8,445.26	258,194.04
54	07-15-2018	10,778.35	2,259.20	8,519.15	249,674.89
55	10-15-2018	10,778.35	2,184.66	8,593.69	241,081.20
2018 TOTALS:		**43,113.40**	**9,183.30**	**33,930.10**	
56	01-15-2019	10,778.35	2,109.46	8,668.89	232,412.31
57	04-15-2019	10,778.35	2,033.61	8,744.74	223,667.57
58	07-15-2019	10,778.35	1,957.09	8,821.26	214,846.31
59	10-15-2019	10,778.35	1,879.90	8,898.45	205,947.86
2019 TOTALS:		**43,113.40**	**7,980.06**	**35,133.34**	
60	01-15-2020	10,778.35	1,802.05	8,976.30	196,971.56
61	04-15-2020	10,778.35	1,723.50	9,054.85	187,916.71
62	07-15-2020	10,778.35	1,644.27	9,134.08	178,782.63
63	10-15-2020	10,778.35	1,564.35	9,214.00	169,568.63
2020 TOTALS:		**43,113.40**	**6,734.17**	**36,379.23**	
64	01-15-2021	10,778.35	1,483.72	9,294.63	160,274.00
65	04-15-2021	10,778.35	1,402.40	9,375.95	150,898.05
66	07-15-2021	10,778.35	1,320.36	9,457.99	141,440.06
67	10-15-2021	10,778.35	1,237.60	9,540.75	131,899.31
2021 TOTALS:		**43,113.40**	**5,444.08**	**37,669.32**	
68	01-15-2022	10,778.35	1,154.12	9,624.23	122,275.08
69	04-15-2022	10,778.35	1,069.90	9,708.45	112,566.63
70	07-15-2022	10,778.35	984.96	9,793.39	102,773.24
71	10-15-2022	10,778.35	899.27	9,879.08	92,894.16
2022 TOTALS:		**43,113.40**	**4,108.25**	**39,005.15**	
72	01-15-2023	10,778.35	812.82	9,965.53	82,928.63
73	04-15-2023	10,778.35	725.63	10,052.72	72,875.91
74	07-15-2023	10,778.35	637.66	10,140.69	62,735.22
75	10-15-2023	10,778.35	548.93	10,229.42	52,505.80
2023 TOTALS:		**43,113.40**	**2,725.04**	**40,388.36**	
76	01-15-2024	10,778.35	459.43	10,318.92	42,186.88
77	04-15-2024	10,778.35	369.14	10,409.21	31,777.67
78	07-15-2024	10,778.35	278.05	10,500.30	21,277.37
79	10-15-2024	10,778.35	186.18	10,592.17	10,685.20
2024 TOTALS:		**43,113.40**	**1,292.80**	**41,820.60**	
80	01-15-2025	10,778.35	93.15	10,685.20	0.00
2025 TOTALS:		**10,778.35**	**93.15**	**10,685.20**	
TOTALS:		**862,268.00**	**241,268.00**	**621,000.00**	

NOTICE: This is an estimated loan amortization schedule. Actual amounts may vary if payments are made on different dates or in different amounts.

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DW #2

AMORTIZATION SCHEDULE

Principal	Loan Date	Maturity	Loan No	Call / Coll	Account	Officer	Initials
$162,263.00	3-31-06	01-15-2027					

References in the shaded area are for Lender's use only and do not limit the applicability of this document to any particular loan or item.
Any item above containing "***" has been omitted due to text length limitations.

Borrower: City of Dell Rapids–Drinking Water # 2
PO Box 10
Dell Rapids, SD 57022-0010

4th Draft

Lender: THE FIRST NATIONAL BANK IN SIOUX FALLS
AS TRUSTEE FOR SOUTH DAKOTA DEPARTMENT
OF ENVIRONMENT AND NATURAL RESOURCES
PIERRE, SD 57501

Disbursement Date:
Interest Rate: 3.250

Repayment Schedule: Installment
Calculation Method: 30 /360 U.S. Rule

602-4334-44200 602-4334-44100

Payment Number	Payment Date	Payment Amount	Interest Paid **	Principal Paid	Remaining Balance
1	04-15-2007	2,766.34	1,318.38	1,447.96	160,815.04
2	07-15-2007	2,766.34	1,306.62	1,459.72	159,355.32
3	10-15-2007	2,766.34	1,294.77	1,471.57	157,883.75
2007 TOTALS:		**8,299.02**	**3,919.77**	**4,379.25**	
4	01-15-2008	2,766.34	1,282.80	1,483.54	156,400.21
5	04-15-2008	2,766.34	1,270.75	1,495.59	154,904.62
6	07-15-2008	2,766.34	1,258.60	1,507.74	153,396.88
7	10-15-2008	2,766.34	1,246.35	1,519.99	151,876.89
2008 TOTALS:		**11,065.36**	**5,058.50**	**6,006.86**	
8	01-15-2009	2,766.34	1,234.00	1,532.34	150,344.55
9	04-15-2009 #3808	2,766.34	1,221.55	1,544.79	148,799.76
10	07-15-2009	2,766.34	1,209.00	1,557.34	147,242.42
11	10-15-2009 pd	2,766.34	1,196.34	1,570.00	145,672.42
2009 TOTALS:		**11,065.36**	**4,860.89**	**6,204.47**	
12	01-15-2010 pd	2,766.34	1,183.59	1,582.75	144,089.67
13	04-15-2010 pd	2,766.34	1,170.73	1,595.61	142,494.06
14	07-15-2010 ✓	2,766.34	1,157.77	1,608.57	140,885.49
15	10-15-2010	2,766.34	1,144.69	1,621.65	139,263.84
2010 TOTALS:		**11,065.36**	**4,656.78**	**6,408.58**	
16	01-15-2011 ✓	2,766.34	1,131.52	1,634.82	137,629.02
17	04-15-2011 ✓	2,766.34	1,118.24	1,648.10	135,980.92
18	07-15-2011 ✓	2,766.34	1,104.84	1,661.50	134,319.42
19	10-15-2011 ✓	2,766.34	1,091.35	1,674.99	132,644.43
2011 TOTALS:		**11,065.36**	**4,445.95**	**6,619.41**	
20	01-15-2012 ✓	2,766.34	1,077.73	1,688.61	130,955.82
21	04-15-2012 ✓	2,766.34	1,064.02	1,702.32	129,253.50
22	07-15-2012 ✓	2,766.34	1,050.18	1,716.16	127,537.34
23	10-15-2012 ✓	2,766.34	1,036.24	1,730.10	125,807.24
2012 TOTALS:		**11,065.36**	**4,228.17**	**6,837.19**	
24	01-15-2013 ✓	2,766.34	1,022.19	1,744.15	124,063.09
25	04-15-2013 ✓	2,766.34	1,008.01	1,758.33	122,304.76
26	07-15-2013 ✓	2,766.34	993.73	1,772.61	120,532.15
27	10-15-2013 ✓	2,766.34	979.32	1,787.02	118,745.13
2013 TOTALS:		**11,065.36**	**4,003.25**	**7,062.11**	
28	01-15-2014 ✓	2,766.34	964.80	1,801.54	116,943.59
29	04-15-2014 ✓	2,766.34	950.17	1,816.17	115,127.42
30	07-15-2014 ✓	2,766.34	935.41	1,830.93	113,296.49
31	10-15-2014 ✓	2,766.34	920.53	1,845.81	111,450.68
2014 TOTALS:		**11,065.36**	**3,770.91**	**7,294.45**	
32	01-15-2015 ✓	2,766.34	905.54	1,860.80	109,589.88
33	04-15-2015 ✓	2,766.34	890.42	1,875.92	107,713.96
34	07-15-2015 ✓	2,766.34	875.17	1,891.17	105,822.79
35	10-15-2015 ✓	2,766.34	859.82	1,906.52	103,916.27
2015 TOTALS:		**11,065.36**	**3,530.95**	**7,534.41**	
36	01-15-2016	2,766.34	844.31	1,922.03	101,994.24
37	04-15-2016	2,766.34	828.71	1,937.63	100,056.61
38	07-15-2016	2,766.34	812.96	1,953.38	98,103.23
39	10-15-2016	2,766.34	797.09	1,969.25	96,133.98

** INTEREST PAID also includes Admin Surcharge amounts.

AMORTIZATION SCHEDULE
(Continued)

2016 TOTALS:		**11,065.36**	**3,283.07**	**7,782.29**	
40	01-15-2017	2,766.34	781.09	1,985.25	94,148.73
41	04-15-2017	2,766.34	764.95	2,001.39	92,147.34
42	07-15-2017	2,766.34	748.70	2,017.64	90,129.70
43	10-15-2017	2,766.34	732.30	2,034.04	88,095.66
2017 TOTALS:		**11,065.36**	**3,027.04**	**8,038.32**	
44	01-15-2018	2,766.34	715.78	2,050.56	86,045.10
45	04-15-2018	2,766.34	699.12	2,067.22	83,977.88
46	07-15-2018	2,766.34	682.32	2,084.02	81,893.86
47	10-15-2018	2,766.34	665.39	2,100.95	79,792.91
2018 TOTALS:		**11,065.36**	**2,762.61**	**8,302.75**	
48	01-15-2019	2,766.34	648.31	2,118.03	77,674.88
49	04-15-2019	2,766.34	631.11	2,135.23	75,539.65
50	07-15-2019	2,766.34	613.76	2,152.58	73,387.07
51	10-15-2019	2,766.34	596.27	2,170.07	71,217.00
2019 TOTALS:		**11,065.36**	**2,489.45**	**8,575.91**	
52	01-15-2020	2,766.34	578.64	2,187.70	69,029.30
53	04-15-2020	2,766.34	560.86	2,205.48	66,823.82
54	07-15-2020	2,766.34	542.95	2,223.39	64,600.43
55	10-15-2020	2,766.34	524.87	2,241.47	62,358.96
2020 TOTALS:		**11,065.36**	**2,207.32**	**8,858.04**	
56	01-15-2021	2,766.34	506.67	2,259.67	60,099.29
57	04-15-2021	2,766.34	488.31	2,278.03	57,821.26
58	07-15-2021	2,766.34	469.80	2,296.54	55,524.72
59	10-15-2021	2,766.34	451.13	2,315.21	53,209.51
2021 TOTALS:		**11,065.36**	**1,915.91**	**9,149.45**	
60	01-15-2022	2,766.34	432.33	2,334.01	50,875.50
61	04-15-2022	2,766.34	413.36	2,352.98	48,522.52
62	07-15-2022	2,766.34	394.25	2,372.09	46,150.43
63	10-15-2022	2,766.34	374.97	2,391.37	43,759.06
2022 TOTALS:		**11,065.36**	**1,614.91**	**9,450.45**	
64	01-15-2023	2,766.34	355.54	2,410.80	41,348.26
65	04-15-2023	2,766.34	335.96	2,430.38	38,917.88
66	07-15-2023	2,766.34	316.21	2,450.13	36,467.75
67	10-15-2023	2,766.34	296.30	2,470.04	33,997.71
2023 TOTALS:		**11,065.36**	**1,304.01**	**9,761.35**	
68	01-15-2024	2,766.34	276.23	2,490.11	31,507.60
69	04-15-2024	2,766.34	256.00	2,510.34	28,997.26
70	07-15-2024	2,766.34	235.60	2,530.74	26,466.52
71	10-15-2024	2,766.34	215.04	2,551.30	23,915.22
2024 TOTALS:		**11,065.36**	**982.87**	**10,082.49**	
72	01-15-2025	2,766.34	194.31	2,572.03	21,343.19
73	04-15-2025	2,766.34	173.42	2,592.92	18,750.27
74	07-15-2025	2,766.34	152.34	2,614.00	16,136.27
75	10-15-2025	2,766.34	131.11	2,635.23	13,501.04
2025 TOTALS:		**11,065.36**	**651.18**	**10,414.18**	
76	01-15-2026	2,766.34	109.70	2,656.64	10,844.40
77	04-15-2026	2,766.34	88.11	2,678.23	8,166.17
78	07-15-2026	2,766.34	66.35	2,699.99	5,466.18
79	10-15-2026	2,766.34	44.41	2,721.93	2,744.25
2026 TOTALS:		**11,065.36**	**308.57**	**10,756.79**	
80	01-15-2027	2,766.34	22.09	2,744.25	0.00
2027 TOTALS:		**2,766.34**	**22.09**	**2,744.25**	
TOTALS:		**221,307.20**	**59,044.20**	**162,263.00**	

NOTICE: This is an estimated loan amortization schedule. Actual amounts may vary if payments are made on different dates or in different amounts.

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DW #3

AMORTIZATION SCHEDULE

Principal	Loan Date	Maturity	Loan No	Call / Coll	Account	Officer	Initials
$428,698.00	4-15-11	10-15-2032					

References in the boxes above are for Lender's use only and do not limit the applicability of this document to any particular loan or item.
Any item above containing "***" has been omitted due to text length limitations.

Borrower: Dell Rapids – Drinking Water 3

Lender: THE FIRST NATIONAL BANK IN SIOUX FALLS
/SD DENR

PIERRE, SD

15th Street - Phase 1

602-4334-44200

602-4334-44100

Disbursement Date:
Interest Rate: 3.000

Repayment Schedule: Installment
Calculation Method: 30 /360 U.S. Rule

Payment Number	Payment Date	Payment Amount	Interest ** Paid	Principal Paid	Remaining Balance
1	01-15-2013	7,145.63	3,215.23	3,930.40	424,767.60
2	04-15-2013	7,145.63	3,185.76	3,959.87	420,807.73
3	07-15-2013	7,145.63	3,156.05	3,989.58	416,818.15
4	10-15-2013	7,145.63	3,126.14	4,019.49	412,798.66
2013 TOTALS:		**28,582.52**	**12,683.18**	**15,899.34**	
5	01-15-2014	7,145.63	3,095.99	4,049.64	408,749.02
6	04-15-2014	7,145.63	3,065.62	4,080.01	404,669.01
7	07-15-2014	7,145.63	3,035.02	4,110.61	400,558.40
8	10-15-2014	7,145.63	3,004.18	4,141.45	396,416.95
2014 TOTALS:		**28,582.52**	**12,200.81**	**16,381.71**	
9	01-15-2015	7,145.63	2,973.13	4,172.50	392,244.45
10	04-15-2015	7,145.63	2,941.83	4,203.80	388,040.65
11	07-15-2015	7,145.63	2,910.31	4,235.32	383,805.33
12	10-15-2015	7,145.63	2,878.54	4,267.09	379,538.24
2015 TOTALS:		**28,582.52**	**11,703.81**	**16,878.71**	
13	01-15-2016	7,145.63	2,846.54	4,299.09	375,239.15
14	04-15-2016	7,145.63	2,814.29	4,331.34	370,907.81
15	07-15-2016	7,145.63	2,781.81	4,363.82	366,543.99
16	10-15-2016	7,145.63	2,749.08	4,396.55	362,147.44
2016 TOTALS:		**28,582.52**	**11,191.72**	**17,390.80**	
17	01-15-2017	7,145.63	2,716.10	4,429.53	357,717.91
18	04-15-2017	7,145.63	2,682.89	4,462.74	353,255.17
19	07-15-2017	7,145.63	2,649.41	4,496.22	348,758.95
20	10-15-2017	7,145.63	2,615.69	4,529.94	344,229.01
2017 TOTALS:		**28,582.52**	**10,664.09**	**17,918.43**	
21	01-15-2018	7,145.63	2,581.72	4,563.91	339,665.10
22	04-15-2018	7,145.63	2,547.49	4,598.14	335,066.96
23	07-15-2018	7,145.63	2,513.00	4,632.63	330,434.33
24	10-15-2018	7,145.63	2,478.26	4,667.37	325,766.96
2018 TOTALS:		**28,582.52**	**10,120.47**	**18,462.05**	
25	01-15-2019	7,145.63	2,443.25	4,702.38	321,064.58
26	04-15-2019	7,145.63	2,407.99	4,737.64	316,326.94
27	07-15-2019	7,145.63	2,372.45	4,773.18	311,553.76
28	10-15-2019	7,145.63	2,336.65	4,808.98	306,744.78
2019 TOTALS:		**28,582.52**	**9,560.34**	**19,022.18**	
29	01-15-2020	7,145.63	2,300.59	4,845.04	301,899.74
30	04-15-2020	7,145.63	2,264.25	4,881.38	297,018.36
31	07-15-2020	7,145.63	2,227.63	4,918.00	292,100.36
32	10-15-2020	7,145.63	2,190.76	4,954.87	287,145.49
2020 TOTALS:		**28,582.52**	**8,983.23**	**19,599.29**	
33	01-15-2021	7,145.63	2,153.59	4,992.04	282,153.45
34	04-15-2021	7,145.63	2,116.15	5,029.48	277,123.97
35	07-15-2021	7,145.63	2,078.43	5,067.20	272,056.77
36	10-15-2021	7,145.63	2,040.42	5,105.21	266,951.56
2021 TOTALS:		**28,582.52**	**8,388.59**	**20,193.93**	
37	01-15-2022	7,145.63	2,002.14	5,143.49	261,808.07
38	04-15-2022	7,145.63	1,963.56	5,182.07	256,626.00

** INTEREST PAID also includes Admin Surcharge amts

39	07-15-2022	7,145.63	1,924.70	5,220.93	251,405.07
40	10-15-2022	7,145.63	1,885.53	5,260.10	246,144.97
2022 TOTALS:		**28,582.52**	**7,775.93**	**20,806.59**	
41	01-15-2023	7,145.63	1,846.09	5,299.54	240,845.43
42	04-15-2023	7,145.63	1,806.34	5,339.29	235,506.14
43	07-15-2023	7,145.63	1,766.30	5,379.33	230,126.81
44	10-15-2023	7,145.63	1,725.95	5,419.68	224,707.13
2023 TOTALS:		**28,582.52**	**7,144.68**	**21,437.84**	
45	01-15-2024	7,145.63	1,685.30	5,460.33	219,246.80
46	04-15-2024	7,145.63	1,644.35	5,501.28	213,745.52
47	07-15-2024	7,145.63	1,603.10	5,542.53	208,202.99
48	10-15-2024	7,145.63	1,561.52	5,584.11	202,618.88
2024 TOTALS:		**28,582.52**	**6,494.27**	**22,088.25**	
49	01-15-2025	7,145.63	1,519.64	5,625.99	196,992.89
50	04-15-2025	7,145.63	1,477.45	5,668.18	191,324.71
51	07-15-2025	7,145.63	1,434.93	5,710.70	185,614.01
52	10-15-2025	7,145.63	1,392.11	5,753.52	179,860.49
2025 TOTALS:		**28,582.52**	**5,824.13**	**22,758.39**	
53	01-15-2026	7,145.63	1,348.95	5,796.68	174,063.81
54	04-15-2026	7,145.63	1,305.48	5,840.15	168,223.66
55	07-15-2026	7,145.63	1,261.68	5,883.95	162,339.71
56	10-15-2026	7,145.63	1,217.54	5,928.09	156,411.62
2026 TOTALS:		**28,582.52**	**5,133.65**	**23,448.87**	
57	01-15-2027	7,145.63	1,173.09	5,972.54	150,439.08
58	04-15-2027	7,145.63	1,128.29	6,017.34	144,421.74
59	07-15-2027	7,145.63	1,083.17	6,062.46	138,359.28
60	10-15-2027	7,145.63	1,037.69	6,107.94	132,251.34
2027 TOTALS:		**28,582.52**	**4,422.24**	**24,160.28**	
61	01-15-2028	7,145.63	991.89	6,153.74	126,097.60
62	04-15-2028	7,145.63	945.73	6,199.90	119,897.70
63	07-15-2028	7,145.63	899.23	6,246.40	113,651.30
64	10-15-2028	7,145.63	852.39	6,293.24	107,358.06
2028 TOTALS:		**28,582.52**	**3,689.24**	**24,893.28**	
65	01-15-2029	7,145.63	805.18	6,340.45	101,017.61
66	04-15-2029	7,145.63	757.63	6,388.00	94,629.61
67	07-15-2029	7,145.63	709.73	6,435.90	88,193.71
68	10-15-2029	7,145.63	661.45	6,484.18	81,709.53
2029 TOTALS:		**28,582.52**	**2,933.99**	**25,648.53**	
69	01-15-2030	7,145.63	612.82	6,532.81	75,176.72
70	04-15-2030	7,145.63	563.83	6,581.80	68,594.92
71	07-15-2030	7,145.63	514.46	6,631.17	61,963.75
72	10-15-2030	7,145.63	464.73	6,680.90	55,282.85
2030 TOTALS:		**28,582.52**	**2,155.84**	**26,426.68**	
73	01-15-2031	7,145.63	414.62	6,731.01	48,551.84
74	04-15-2031	7,145.63	364.14	6,781.49	41,770.35
75	07-15-2031	7,145.63	313.27	6,832.36	34,937.99
76	10-15-2031	7,145.63	262.04	6,883.59	28,054.40
2031 TOTALS:		**28,582.52**	**1,354.07**	**27,228.45**	
77	01-15-2032	7,145.63	210.41	6,935.22	21,119.18
78	04-15-2032	7,145.63	158.39	6,987.24	14,131.94
79	07-15-2032	7,145.63	105.99	7,039.64	7,092.30
80	10-15-2032	7,145.63	53.33	7,092.30	0.00
2032 TOTALS:		**28,582.52**	**528.12**	**28,054.40**	
TOTALS:		**571,650.40**	**142,952.40**	**428,698.00**	

NOTICE: This is an estimated loan amortization schedule. Actual amounts may vary if payments are made on different dates or in different amounts.

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EXHIBIT A

SURCHARGE SCHEDULE
(Pursuant to Resolution No. 2012-19)

1. Imposition and Purpose of Surcharge. Pursuant to Ordinance No. 764 (the "Surcharge Ordinance"), the City of Dell Rapids, South Dakota (the "City") does hereby establish a surcharge (the "Surcharge") payable by each user of the Drinking water system (the "System") in order to generate revenue to pay principal and interest on the City's Drinking Water Surcharge Revenue Bond, Series 2012 (the "Bond"), as more fully described in the loan agreement executed in connection therewith (the "Loan Agreement"). The Surcharge will be set at a level which, assuming a 110% debt service coverage requirement as required under the Loan Agreement, will produce income at the times and in amounts sufficient to pay when due the principal of and interest on the Bond and all other payments as may be required under the Loan Agreement.

2. Series 2012 Surcharge Rate. It has been found that all users of the System will benefit from the System improvements paid for in part from the proceeds of the Bond, and that the Surcharge is found to be equitable for the services provided by such improvements. Therefore, the Surcharge will be applicable to all users of the System, current and future.

The rate to be charged to all customers served, subject to adjustment as described in the Surcharge Ordinance, will be as follows:

$3.00 per month, commencing January 1, 2013 and billable February 1, 2013.

The Surcharge will be included in each System customer's monthly bill. Nothing contained herein requires the Surcharge be indicated on the billing, but the Surcharge segregation will be indicated on the books of the City.

3. Surcharge Bond Not to Create Constitutional Indebtedness. The charges provided herein are for the purpose of paying the Bond, which will not constitute indebtedness within the meaning of the South Dakota Constitutional Chapter XIII, Section 4.

ORDINANCE 812

AN ORDINANCE OF THE CITY OF DELL RAPIDS, SOUTH DAKOTA, PROVIDING THAT THE REVISED ORDINANCES OF THE CITY OF DELL RAPIDS, SOUTH DAKOTA, BE AMENDED BY REVISING SECTION 21-37; PROVIDING A CHANGE TO WATER RATES PUMPED AND DELIVERED TO LOCATIONS OUTSIDE OF CITY LIMITS,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DELL RAPIDS, SOUTH DAKOTA:

Section 1. Effective January 1, 2015, Sec. 21-37 of the Revised Ordinances of the City of Dell Rapids, South Dakota, is hereby amended to read as follows:

"Sec. 21-37. Water rates.

Beginning with the December 20, 2014 water billing, the following rates are hereby established:

(1) For water pumped and delivered to locations within the city limits of the city, the base rate shall be ten dollars ($10.00), plus four dollars and thirty seven cents ($4.37) for each one thousand (1,000) gallons or part thereof metered per month.

(2) For water pumped and delivered to locations outside the city limits of the city, the rate shall be as follows:

a. For water pumped and delivered to locations outside city limits of the city, the base rate shall be ten dollars ($10.00), plus four dollars and thirty seven ($4.37) for each one thousand (1,000) gallons or part thereof metered per month for the first 50,000 gallons used.

b. For each one thousand (1,000) gallons or fraction thereof above fifty thousand (50,000) gallons of water used, the rate of six dollars and forty-nine cents ($6.49) per one thousand (1,000) gallons or fraction thereof will charged for water used.

(3) Bulk water rates for water purchased in bulk and handled by the user shall be five dollars and eighty-two cents ($5.82) per one thousand (1,000) gallons."

Adopted this 17th day of November, 2014.

FOR THE GOVERNING BODY OF THE
CITY OF DELL RAPIDS, SOUTH DAKOTA

(MUNICIPAL SEAL)

By_____
Scott Fiegen, Mayor

ATTEST:

By_____
Claire Baartman, Finance Officer

First Reading: November 3, 2014
Second Reading and Adoption: November 17, 2014
Publication: November 26, 2014
Effective Date: December 20, 2014

DW #4

AMORTIZATION SCHEDULE

Principal	Loan Date	Maturity	Loan No	Call / Coll	Account	Officer	Initials
$270,000.00	4/27/17	10-15-2022					

References in the boxes above are for Lender's use only and do not limit the applicability of this document to any particular loan or item.
Any item above containing "***" has been omitted due to text length limitations.

Borrower: Dell Rapids - Drinking Water #4
Total Advances $300,000.00
Principal Forgiveness $30,000.00
Principal Payments $0.00
Galaxy Water Meters

Lender: THE FIRST NATIONAL BANK IN SIOUX FALLS
/SD DENR
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PIERRE, SD

Disbursement Date:
Interest Rate: 2.250

Repayment Schedule: Installment
Calculation Method: 30 /360 U.S. Rule

602-4334-44200 602-4334-4400

Payment Number	Payment Date	Payment Amount	Interest Paid **	Principal Paid	Remaining Balance
1	01-15-2013	7,556.71	1,518.75	6,037.96	263,962.04
2	04-15-2013	7,556.71	1,484.78	6,071.93	257,890.11
3	07-15-2013	7,556.71	1,450.63	6,106.08	251,784.03
4	10-15-2013	7,556.71	1,416.29	6,140.42	245,643.61
2013 TOTALS:		**30,226.84**	**5,870.45**	**24,356.39**	
5	01-15-2014	7,556.71	1,381.74	6,174.97	239,468.64
6	04-15-2014	7,556.71	1,347.01	6,209.70	233,258.94
7	07-15-2014	7,556.71	1,312.09	6,244.62	227,014.32
8	10-15-2014	7,556.71	1,276.95	6,279.76	220,734.56
2014 TOTALS:		**30,226.84**	**5,317.79**	**24,909.05**	
9	01-15-2015	7,556.71	1,241.63	6,315.08	214,419.48
10	04-15-2015	7,556.71	1,206.11	6,350.60	208,068.88
11	07-15-2015	7,556.71	1,170.39	6,386.32	201,682.56
12	10-15-2015	7,556.71	1,134.47	6,422.24	195,260.32
2015 TOTALS:		**30,226.84**	**4,752.60**	**25,474.24**	
13	01-15-2016	7,556.71	1,098.33	6,458.38	188,801.94
14	04-15-2016	7,556.71	1,062.02	6,494.69	182,307.25
15	07-15-2016	7,556.71	1,025.47	6,531.24	175,776.01
16	10-15-2016	7,556.71	988.74	6,567.97	169,208.04
2016 TOTALS:		**30,226.84**	**4,174.56**	**26,052.28**	
17	01-15-2017	7,556.71	951.80	6,604.91	162,603.13
18	04-15-2017	7,556.71	914.64	6,642.07	155,961.06
19	07-15-2017	7,556.71	877.28	6,679.43	149,281.63
20	10-15-2017	7,556.71	839.71	6,717.00	142,564.63
2017 TOTALS:		**30,226.84**	**3,583.43**	**26,643.41**	
21	01-15-2018	7,556.71	801.93	6,754.78	135,809.85
22	04-15-2018	7,556.71	763.93	6,792.78	129,017.07
23	07-15-2018	7,556.71	725.72	6,830.99	122,186.08
24	10-15-2018	7,556.71	687.30	6,869.41	115,316.67
2018 TOTALS:		**30,226.84**	**2,978.88**	**27,247.96**	
25	01-15-2019	7,556.71	648.65	6,908.06	108,408.61
26	04-15-2019	7,556.71	609.80	6,946.91	101,461.70
27	07-15-2019	7,556.71	570.72	6,985.99	94,475.71
28	10-15-2019	7,556.71	531.43	7,025.28	87,450.43
2019 TOTALS:		**30,226.84**	**2,360.60**	**27,866.24**	
29	01-15-2020	7,556.71	491.91	7,064.80	80,385.63
30	04-15-2020	7,556.71	452.17	7,104.54	73,281.09
31	07-15-2020	7,556.71	412.20	7,144.51	66,136.58
32	10-15-2020	7,556.71	372.02	7,184.69	58,951.89
2020 TOTALS:		**30,226.84**	**1,728.30**	**28,498.54**	
33	01-15-2021	7,556.71	331.61	7,225.10	51,726.79
34	04-15-2021	7,556.71	290.96	7,265.75	44,461.04
35	07-15-2021	7,556.71	250.09	7,306.62	37,154.42
36	10-15-2021	7,556.71	209.00	7,347.71	29,806.71
2021 TOTALS:		**30,226.84**	**1,081.66**	**29,145.18**	
37	01-15-2022	7,556.71	167.66	7,389.05	22,417.66
38	04-15-2022	7,556.71	126.10	7,430.61	14,987.05

** INTEREST PAID also includes Admin Surcharge amts

39	07–15–2022	7,556.71	84.30	7,472.41	7,514.64
40	10–15–2022	7,556.71	42.07	7,514.64	0.00
2022 TOTALS:		**30,226.84**	**420.13**	**29,806.71**	
TOTALS:		**302,268.40**	**32,268.40**	**270,000.00**	

NOTICE: This is an estimated loan amortization schedule. Actual amounts may vary if payments are made on different dates or in different amounts.

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DW-05

AMORTIZATION SCHEDULE

Principal	Loan Date	Maturity	Loan No	Call / Coll	Account	Officer	Initials
$625,058.00		01-15-2035					

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Any item above containing "***" has been omitted due to text length limitations.

Borrower: Dell Rapids - Drinking Water #5
Total Advances $866,931.00
Principal Forgiveness $241,873.00
Principal Payments $0.00

Lender: THE FIRST NATIONAL BANK IN SIOUX FALLS
/SD DENR
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PIERRE, SD

Principal Advance:	$625,058.00
Amount Financed:	$625,058.00
Finance Charge:	$208,430.15
APR:	3.0000%
Total Principal:	$625,058.00
Total Interest:	$208,430.15
Total of Payments:	$833,488.15

Payment Schedule

Description	Date	Frequency	Number	Amount
Regular Payment	Apr 15, 2015	Quarterly	79	$10,418.61
Regular Payment	Jan 15, 2035	Quarterly	1	$10,417.96

Interest Payment also includes
Admin Surcharge amounts

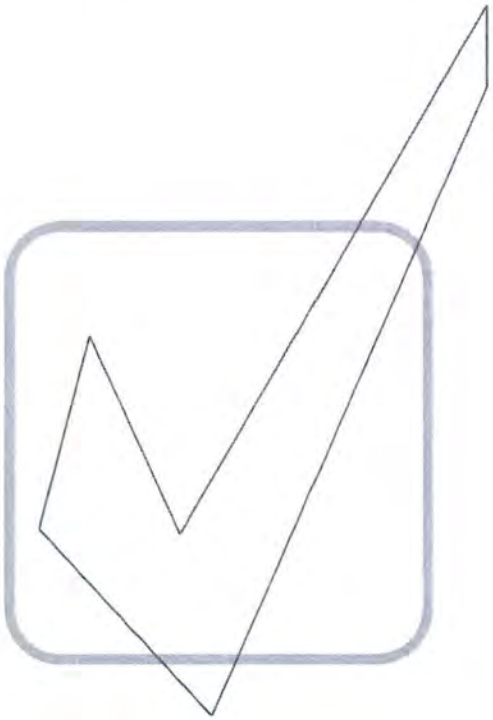
Amortization Schedule

Date	Description	Total Payment	P&I Payment	Principal Payment	Interest Payment	Principal Balance
Jan 15, 2015	Beginning Balance					625,058.00
Apr 15, 2015	Regular Payment	10,418.61	10,418.61	5,730.67	4,687.94	619,327.33
Jul 15, 2015	Regular Payment	10,418.61	10,418.61	5,773.65	4,644.96	613,553.68
Oct 15, 2015	Regular Payment	10,418.61	10,418.61	5,816.95	4,601.66	607,736.73
2015 Totals		**31,255.83**	**31,255.83**	**17,321.27**	**13,934.56**	
Jan 15, 2016	Regular Payment	10,418.61	10,418.61	5,860.58	4,558.03	601,876.15
Apr 15, 2016	Regular Payment	10,418.61	10,418.61	5,904.53	4,514.08	595,971.62
Jul 15, 2016	Regular Payment	10,418.61	10,418.61	5,948.82	4,469.79	590,022.80
Oct 15, 2016	Regular Payment	10,418.61	10,418.61	5,993.43	4,425.18	584,029.37
2016 Totals		**41,674.44**	**41,674.44**	**23,707.36**	**17,967.08**	
Jan 15, 2017	Regular Payment	10,418.61	10,418.61	6,038.38	4,380.23	577,990.99
Apr 15, 2017	Regular Payment	10,418.61	10,418.61	6,083.67	4,334.94	571,907.32
Jul 15, 2017	Regular Payment	10,418.61	10,418.61	6,129.30	4,289.31	565,778.02
Oct 15, 2017	Regular Payment	10,418.61	10,418.61	6,175.27	4,243.34	559,602.75
2017 Totals		**41,674.44**	**41,674.44**	**24,426.62**	**17,247.82**	
Jan 15, 2018	Regular Payment	10,418.61	10,418.61	6,221.58	4,197.03	553,381.17
Apr 15, 2018	Regular Payment	10,418.61	10,418.61	6,268.25	4,150.36	547,112.92
Jul 15, 2018	Regular Payment	10,418.61	10,418.61	6,315.26	4,103.35	540,797.66
Oct 15, 2018	Regular Payment	10,418.61	10,418.61	6,362.62	4,055.99	534,435.04
2018 Totals		**41,674.44**	**41,674.44**	**25,167.71**	**16,506.73**	
Jan 15, 2019	Regular Payment	10,418.61	10,418.61	6,410.34	4,008.27	528,024.70
Apr 15, 2019	Regular Payment	10,418.61	10,418.61	6,458.42	3,960.19	521,566.28
Jul 15, 2019	Regular Payment	10,418.61	10,418.61	6,506.86	3,911.75	515,059.42
Oct 15, 2019	Regular Payment	10,418.61	10,418.61	6,555.66	3,862.95	508,503.76
2019 Totals		**41,674.44**	**41,674.44**	**25,931.28**	**15,743.16**	
Jan 15, 2020	Regular Payment	10,418.61	10,418.61	6,604.83	3,813.78	501,898.93
Apr 15, 2020	Regular Payment	10,418.61	10,418.61	6,654.36	3,764.25	495,244.57
Jul 15, 2020	Regular Payment	10,418.61	10,418.61	6,704.27	3,714.34	488,540.30
Oct 15, 2020	Regular Payment	10,418.61	10,418.61	6,754.55	3,664.06	481,785.75
2020 Totals		**41,674.44**	**41,674.44**	**26,718.01**	**14,956.43**	
Jan 15, 2021	Regular Payment	10,418.61	10,418.61	6,805.21	3,613.40	474,980.54
Apr 15, 2021	Regular Payment	10,418.61	10,418.61	6,856.25	3,562.36	468,124.29
Jul 15, 2021	Regular Payment	10,418.61	10,418.61	6,907.67	3,510.94	461,216.62
Oct 15, 2021	Regular Payment	10,418.61	10,418.61	6,959.48	3,459.13	454,257.14
2021 Totals		**41,674.44**	**41,674.44**	**27,528.61**	**14,145.83**	
Jan 15, 2022	Regular Payment	10,418.61	10,418.61	7,011.68	3,406.93	447,245.46
Apr 15, 2022	Regular Payment	10,418.61	10,418.61	7,064.26	3,354.35	440,181.20
Jul 15, 2022	Regular Payment	10,418.61	10,418.61	7,117.25	3,301.36	433,063.95
Oct 15, 2022	Regular Payment	10,418.61	10,418.61	7,170.63	3,247.98	425,893.32
2022 Totals		**41,674.44**	**41,674.44**	**28,363.82**	**13,310.62**	
Jan 15, 2023	Regular Payment	10,418.61	10,418.61	7,224.41	3,194.20	418,668.91

Apr 15, 2023	Regular Payment	10,418.61	10,418.61	7,278.59	3,140.02	411,390.32
Jul 15, 2023	Regular Payment	10,418.61	10,418.61	7,333.18	3,085.43	404,057.14
Oct 15, 2023	Regular Payment	10,418.61	10,418.61	7,388.18	3,030.43	396,668.96
2023 Totals		**41,674.44**	**41,674.44**	**29,224.36**	**12,450.08**	
Jan 15, 2024	Regular Payment	10,418.61	10,418.61	7,443.59	2,975.02	389,225.37
Apr 15, 2024	Regular Payment	10,418.61	10,418.61	7,499.41	2,919.20	381,725.96
Jul 15, 2024	Regular Payment	10,418.61	10,418.61	7,555.66	2,862.95	374,170.30
Oct 15, 2024	Regular Payment	10,418.61	10,418.61	7,612.33	2,806.28	366,557.97
2024 Totals		**41,674.44**	**41,674.44**	**30,110.99**	**11,563.45**	
Jan 15, 2025	Regular Payment	10,418.61	10,418.61	7,669.42	2,749.19	358,888.55
Apr 15, 2025	Regular Payment	10,418.61	10,418.61	7,726.94	2,691.67	351,161.61
Jul 15, 2025	Regular Payment	10,418.61	10,418.61	7,784.89	2,633.72	343,376.72
Oct 15, 2025	Regular Payment	10,418.61	10,418.61	7,843.28	2,575.33	335,533.44
2025 Totals		**41,674.44**	**41,674.44**	**31,024.53**	**10,649.91**	
Jan 15, 2026	Regular Payment	10,418.61	10,418.61	7,902.10	2,516.51	327,631.34
Apr 15, 2026	Regular Payment	10,418.61	10,418.61	7,961.37	2,457.24	319,669.97
Jul 15, 2026	Regular Payment	10,418.61	10,418.61	8,021.08	2,397.53	311,648.89
Oct 15, 2026	Regular Payment	10,418.61	10,418.61	8,081.24	2,337.37	303,567.65
2026 Totals		**41,674.44**	**41,674.44**	**31,965.79**	**9,708.65**	
Jan 15, 2027	Regular Payment	10,418.61	10,418.61	8,141.85	2,276.76	295,425.80
Apr 15, 2027	Regular Payment	10,418.61	10,418.61	8,202.91	2,215.70	287,222.89
Jul 15, 2027	Regular Payment	10,418.61	10,418.61	8,264.43	2,154.18	278,958.46
Oct 15, 2027	Regular Payment	10,418.61	10,418.61	8,326.42	2,092.19	270,632.04
2027 Totals		**41,674.44**	**41,674.44**	**32,935.61**	**8,738.83**	
Jan 15, 2028	Regular Payment	10,418.61	10,418.61	8,388.86	2,029.75	262,243.18
Apr 15, 2028	Regular Payment	10,418.61	10,418.61	8,451.78	1,966.83	253,791.40
Jul 15, 2028	Regular Payment	10,418.61	10,418.61	8,515.17	1,903.44	245,276.23
Oct 15, 2028	Regular Payment	10,418.61	10,418.61	8,579.03	1,839.58	236,697.20
2028 Totals		**41,674.44**	**41,674.44**	**33,934.84**	**7,739.60**	
Jan 15, 2029	Regular Payment	10,418.61	10,418.61	8,643.38	1,775.23	228,053.82
Apr 15, 2029	Regular Payment	10,418.61	10,418.61	8,708.20	1,710.41	219,345.62
Jul 15, 2029	Regular Payment	10,418.61	10,418.61	8,773.51	1,645.10	210,572.11
Oct 15, 2029	Regular Payment	10,418.61	10,418.61	8,839.31	1,579.30	201,732.80
2029 Totals		**41,674.44**	**41,674.44**	**34,964.40**	**6,710.04**	
Jan 15, 2030	Regular Payment	10,418.61	10,418.61	8,905.61	1,513.00	192,827.19
Apr 15, 2030	Regular Payment	10,418.61	10,418.61	8,972.40	1,446.21	183,854.79
Jul 15, 2030	Regular Payment	10,418.61	10,418.61	9,039.69	1,378.92	174,815.10
Oct 15, 2030	Regular Payment	10,418.61	10,418.61	9,107.49	1,311.12	165,707.61
2030 Totals		**41,674.44**	**41,674.44**	**36,025.19**	**5,649.25**	
Jan 15, 2031	Regular Payment	10,418.61	10,418.61	9,175.80	1,242.81	156,531.81
Apr 15, 2031	Regular Payment	10,418.61	10,418.61	9,244.62	1,173.99	147,287.19
Jul 15, 2031	Regular Payment	10,418.61	10,418.61	9,313.95	1,104.66	137,973.24

Oct 15, 2031	Regular Payment	10,418.61	10,418.61	9,383.81	1,034.80	128,589.43
2031 Totals		**41,674.44**	**41,674.44**	**37,118.18**	**4,556.26**	
Jan 15, 2032	Regular Payment	10,418.61	10,418.61	9,454.18	964.43	119,135.25
Apr 15, 2032	Regular Payment	10,418.61	10,418.61	9,525.09	893.52	109,610.16
Jul 15, 2032	Regular Payment	10,418.61	10,418.61	9,596.53	822.08	100,013.63
Oct 15, 2032	Regular Payment	10,418.61	10,418.61	9,668.50	750.11	90,345.13
2032 Totals		**41,674.44**	**41,674.44**	**38,244.30**	**3,430.14**	
Jan 15, 2033	Regular Payment	10,418.61	10,418.61	9,741.02	677.59	80,604.11
Apr 15, 2033	Regular Payment	10,418.61	10,418.61	9,814.07	604.54	70,790.04
Jul 15, 2033	Regular Payment	10,418.61	10,418.61	9,887.68	530.93	60,902.36
Oct 15, 2033	Regular Payment	10,418.61	10,418.61	9,961.84	456.77	50,940.52
2033 Totals		**41,674.44**	**41,674.44**	**39,404.61**	**2,269.83**	
Jan 15, 2034	Regular Payment	10,418.61	10,418.61	10,036.55	382.06	40,903.97
Apr 15, 2034	Regular Payment	10,418.61	10,418.61	10,111.83	306.78	30,792.14
Jul 15, 2034	Regular Payment	10,418.61	10,418.61	10,187.66	230.95	20,604.48
Oct 15, 2034	Regular Payment	10,418.61	10,418.61	10,264.07	154.54	10,340.41
2034 Totals		**41,674.44**	**41,674.44**	**40,600.11**	**1,074.33**	
Jan 15, 2035	Regular Payment	10,417.96	10,417.96	10,340.41	77.55	
2035 Totals		**10,417.96**	**10,417.96**	**10,340.41**	**77.55**	
Grand Total		**833,488.15**	**833,488.15**	**625,058.00**	**208,430.15**	

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: City of Dell Rapids

Prepared by: Justin Weiland
City Administrator

Phone #: 605-428-3595

Date: December 7, 2015

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µg/L: micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** _____	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** _____	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 1 mg/d	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 45% higher	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** 3 days	☑	☐	☐	☐
Have you been able to provide adequate volumes of water during drought cycles?	☑	☐	☐	☐
Have you had to restrict usage at any time for any reason? ***Please specify:*** _____	☐	☑	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:*** _____	☐	☑	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.***	☑	☐	☐	☐
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☑ ***growing,*** ☐ ***declining, or*** ☐ ***stable.***	☑	☐	☐	☐
Does your source have additional water available for appropriation?	☐	☐	☑	☐
Do you have a water right? ***Water right permit number(s):*** _____	☐	☑	☐	☐
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☐	☐	☐	☑
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☑	☐	☐	☐
Do you have a contract to purchase water? ***If yes, with whom?*** MCWC	☑	☐	☐	☐
Are you currently staying within your contract?	☑	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☑	☐	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☐	☑	☐	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☐	☐	☐	☑
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** _____	☐	☐	☐	☑
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** Big Sioux Aquifer	☑	☐	☐	☐
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☐	☐	☐	☑

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☐ **Yes** ☑ **No**

(If you checked "No", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☐	☐
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☐	☐
Are repair parts available?	☐	☐	☐	☐
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:*** _____	☐	☐	☐	☐
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☐	☐
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☐	☐
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:*** _____	☐	☐	☐	☐
Do you have the capability to add coagulant before the filter?	☐	☐	☐	☐

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☐	☐	☐	☑
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** _____	☐	☐	☐	☑
Is your well(s) constructed according to current South Dakota regulations?	☐	☐	☐	☑
Do you have a source water protection plan?	☑	☐	☐	☐
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☐	☐	☐	☑

Disinfection

Do you disinfect? ☐ **Yes** ☐ **No** ***(If "No", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** _____ ***How often?*** _____ ***Disinfectant used:*** _____	☐	☐	☐	☑
Do you have back-up equipment? ***Type:*** _____	☐	☐	☐	☑
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** _____	☐	☐	☐	☑
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** _____ ***Total Chlorine Residual:*** _____ (if using chloramines)	☑	☐	☐	☐

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☑
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☑

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☐	☐	☐	☑
Are chemicals used for treatment properly stored and secure?	☐	☐	☐	☑
Does the water system track chemical usage? (i.e. a sudden	☐	☐	☐	☑

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping

Condition of Pumping Equipment	**Yes**	**No**	**Unknown**	**NA**
Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** _____	☑	☐	☐	☐
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☑	☐	☐	☐
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☑	☐	☐	☐
Standby/Emergency Power Equipment	**Yes**	**No**	**Unknown**	**NA**
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☑	☐	☐	☐
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☑	☐	☐	☐
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☐	☐	☐	☐

Infrastructure - Storage

Storage Capacity	**Yes**	**No**	**Unknown**	**NA**
Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:*** _____	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** 250,000 gallons	☑	☐	☐	☐
Security Measures	**Yes**	**No**	**Unknown**	**NA**
Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☑	☐	☐	☐
Are access hatches locked?	☑	☐	☐	☐
Is the tank and the immediate surrounding area fenced?	☐	☑	☐	☐
Control Systems				
Is there a high and low water level signal system to control the pumps?	☑	☐	☐	☐

Is there a drain valve or hydrant to allow for draining of the tank?	☑	☐	☐	☐
Tank Maintenance	**Yes**	**No**	**Unknown**	**NA**
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☑	☐	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☑	☐	☐	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:*** Annually	☑	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☑	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☑	☐	☐	☐
Are all valves exercised and lubricated periodically?	☑	☐	☐	☐
Is the system free of severe "water hammer" problems?	☑	☐	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☑	☐	☐	☐
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month?	☑	☐	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 12 %	☑	☐	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 75 psi	☑	☐	☐	☐
Do you have a routine leak detection and repair program?	☑	☐	☐	☐
Are all sources of supply and customers metered?	☑	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☑	☐	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☑	☐	☐	☐

Are any inspections for cross-connections performed?	☑	☐	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☑	☐	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☑	☐	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** 70%	☑	☐	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☑	☐	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☑	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☑	☐	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** approx 25 ***Most common complaint:*** Class II Water Treatment, Cl	☑	☐	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☑	☐	☐	☐

The Management Portion of your System

Please mark the appropriate box: Yes, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** Class II Water Treatment, Class II Water Distribution, Class II WW Treatment, Class II WW Collection	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** _____	☑	☐	☐	☐

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☑	☐	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☑	☐	☐	☐
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications?	☑	☐	☐	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☑	☐	☐	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☑	☐	☐	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☑	☐	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☑	☐	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☑	☐	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** 10 years	☑	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☑	☐	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☑	☐	☐
Do you know what to do in the event of a violation?	☑	☐	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☑	☐	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☐	☐	☐	☑
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☑	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☑	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** Larry Schildhauer, Public Works Director	☑	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☑	☐	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☑	☐	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☑	☐	☐	☐
Do you have written operating procedures for both routine and emergency system operations?	☑	☐	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☑	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☑	☐	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☑	☐	☐	☐

Maintenance	Yes	No	Unknown	NA
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☑	☐	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☑	☐	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☑	☐	☐	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☑	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☑	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☑	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** Capital Improvement Plan	☑	☐	☐	☐
Does the system have reserve funds available in the event of an emergency?	☑	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☑	☐	☐	☐
Do you have a process for scheduling and committing to capital projects?	☑	☐	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☑	☐	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☑	☐	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** Annually	☑	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☑	☐	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** $8.81 + 4.02/1,000 + 3.00 surcharg (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***:	☐	☑	☐	☐
Does the rate structure assure proportionality among users?	☑	☐	☐	☐
Do you have procedures for billing and collection?	☑	☐	☐	☐
Is your billing collection rate greater than 95%?	☑	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☑	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☑	☐	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☑	☐	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☑	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☐	☑	☐	☐
Do you employ standardized accounting and tracking systems?	☑	☐	☐	☐
Do you track budget performance?	☑	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☑	☐	☐	☐
Are financial management recordkeeping systems organized?	☑	☐	☐	☐
Are controls exercised over expenditures?	☐	☐	☑	☐
Are controls exercised to keep from exceeding your budget?	☑	☐	☐	☐
Are there purchasing procedures?	☑	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☑	☐	☐	☐

8.3.16.1.1

Financial Spreadsheet

Applicant: City of Dell Rapids

Completed by: Janice Gravning

Date: 12/23/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	**$897,736**	**$1,088,430**	**$886,617**	**$908,959**	**$921,301**
2. Cash Receipts:					
a. Unmetered Rev - Surcharge	$47,406	$44,514	$40,000	$40,000	$40,000
b. Metered Water Revenue	$519,180	$499,156	$476,200	$476,200	$476,200
c. Other Water Revenue	$9,252	$9,349	$7,500	$7,500	$7,500
d. Total Water Revenues (2a through 2c)	**$575,838**	**$553,019**	**$523,700**	**$523,700**	**$523,700**
e. Connection Fees					
f. Interest and Dividend Income	$1,239	$1,352	$1,300	$1,300	$1,300
g. Other -Sale of Investments					
h. Total Cash Revenues (2d through 2g)	**$577,077**	**$554,371**	**$525,000**	**$525,000**	**$525,000**
i. Transfers in/Additional Rev Needed	$48,926				
j. Loans, Grants orother Cash					
Received from Interfund Services					
Due from Other Funds					
Water Tower Cellular Lease	$41,061	$95,023	$54,000	$54,000	$54,000
3. Total Cash Receipts (2h through 2j)	**$667,064**	**$649,394**	**$579,000**	**$579,000**	**$579,000**
4. Total Cash Available (1+3)	**$1,564,800**	**$1,737,824**	**$1,465,617**	**$1,487,959**	**$1,500,301**
5. Operating Expenses					
a. Salaries and Wages	$144,913	$105,377	$124,000	$127,720	$131,552
b. Employee Pensions and Benefits		$36,183	$42,795	$44,079	$45,401
c. Purchased Water		$132,459	$130,000	$133,900	$137,917
d. Purchased Power					
e. Fuel for Power Productin		$17,760	$16,800	$17,304	$17,823
f. Chemicals, mat'ls, supplies	$116,717				
g. Materials and Supplies		$51,834	$35,500	$36,565	$37,662
h. Engineering Services		$10,849	$10,500	$10,815	$11,140
i. Contractual Services - Other					
j. Equip. Rent/Real Property					
k. Transportation Expenses					
l. Laboratory					
m. Insurance		$3,186	$7,900	$8,137	$8,381
n. Regulatory Commission Expenses					
o. Advertising					
p. Other	$97,457	$12,321	$25,700	$26,471	$27,265
q. Total Cash O&M Expenses (5a through 5p)	**$359,087**	**$369,969**	**$393,195**	**$404,991**	**$417,141**
r. Replacement Expenditures		$18,022	$6,800	$7,004	$7,214
s. Total OM&R Expenditures (5q+5r)	**$359,087**	**$387,991**	**$399,995**	**$411,995**	**$424,355**
t. Loan Principal/Capital Lease Payments	$78,101	$97,771	$108,579	$109,795	$127,426
u. Loan Interest Payments	$34,888	$69,666	$48,084	$44,868	$64,293
v. Transfers Out	$4,294				
w. Capital Purchases (specify):		$295,779			
Due to Other Funds					
x. Other					
6. Total Cash Paid Out (5s through 5x)	**$476,370**	**$851,207**	**$556,658**	**$566,658**	**$616,074**
7. Ending Cash Position (4 - 6)	**$1,088,430**	**$886,617**	**$908,959**	**$921,301**	**$884,227**

Financial Spreadsheet

Applicant: City of Dell Rapids

Completed by: Janice Gravning

Date: 12/23/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts	1372	1372	1372	1372	1372
9. Avg Annual User Charge Account (2d/8)	$419.71	$403.08	$381.71	$381.71	$381.71
10. Coverage Ratio (2h-5s)/(5t+5u)	1.93	0.99	0.80	0.73	0.52
11. Operating Ratio (2d/5s)	1.60	1.43	1.31	1.27	1.23
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve					
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other					
13. Total Reserves (12a through 12e)	$0	$0	$0	$0	$0
14. Year End Operating Cash (7 - 13)	**$1,088,430**	**$886,617**	**$908,959**	**$921,301**	**$884,227**

MUNICIPALITY OF DELL RAPIDS
STATEMENT OF NET POSITION
DECEMBER 31, 2014

WORKING DRAFT
For Discussion Purposes Only

	Primary Government		
	Governmental Activities	Business-Type Activities	Total
ASSETS:			
Cash and Cash Equivalents	$ 3,020,308	$ 2,272,095	$ 5,292,403
Receivables	303,231	347,501	650,732
Restricted Assets:			
Deposits	40,625		40,625
Capital Assets:			
Land and Construction in Progress	2,339,693	1,060,135	3,399,828
Other Capital Assets, Net of Depreciation	6,962,495	7,961,736	14,924,231
TOTAL ASSETS	$ 12,666,352	$ 11,641,467	$ 24,307,819
LIABILITIES:			
Accounts Payable	$ 201,750	$ 248,090	$ 449,840
Other Current Liabilities	24,331	86,627	110,958
Noncurrent Liabilities:			
Due Within One Year	-	240,097	240,097
Due in More than One Year	19,544	5,429,068	5,448,612
TOTAL LIABILITIES	245,625	6,003,882	6,249,507
NET POSITION:			
Net Investment in Capital Assets	9,302,188	3,390,622	12,692,810
Restricted for:			
Library Building	203,582		203,582
Library Fines	1,498		1,498
City Promotion	190,311		190,311
Insurance Cumulative Reserve	40,625		40,625
Unrestricted	2,682,523	2,246,963	4,929,486
TOTAL NET POSITION	12,420,727	5,637,585	18,058,312
TOTAL LIABILITIES AND NET POSITION	$ 12,666,352	$ 11,641,467	$ 24,307,819

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF DELL RAPIDS
STATEMENT OF ACTIVITIES
YEAR ENDED DECEMBER 31, 2014

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants and Contributions	Net (Expense) Revenue and Changes in Net Assets: Primary Government: Governmental Activities	Net (Expense) Revenue and Changes in Net Assets: Primary Government: Business-Type Activities	Net (Expense) Revenue and Changes in Net Assets: Primary Government: Total
Primary Government:							
Governmental Activities:							
General Government	$ 371,156	$ 3,690	$ ~~62,490~~ 24,490	$ -	$ (305,066)	$ -	$ (305,066)
Public Safety	368,810	32,113			(336,697)		(336,697)
Public Works	656,748	26,730	83,917	253	(545,848)		(545,848)
Health and Welfare	48,594				(48,594)		(48,594)
Culture and Recreation	376,636	32,869	38,000	50,986	(292,781)		(292,781)
Conservation and Development	253,732				(253,732)		(253,732)
Total Governmental Activities	2,075,676	95,402	146,317	51,239	(1,782,718)	-	(1,782,718)
Business-type Activities:							
Water	535,153	566,586		47,619		79,052	79,052
Wastewater	475,230	537,595	22,012			84,377	84,377
Liquor	958,115	1,059,498				101,383	101,383
Total Business-type Activities:	1,968,498	2,163,679	22,012	47,619	-	264,812	264,812
TOTAL PRIMARY GOVERNMENT	$ 4,044,174	$ 2,259,081	$ 168,329	$ 98,858	(1,782,718)	264,812	(1,517,906)
General Revenues:							
Taxes:							
Property Taxes					962,500		962,500
Sales Tax					987,496		987,496
State Shared Revenues					45,824		45,824
Unrestricted Investment Earnings					4,569	2,857	7,426
Miscellaneous Revenue					175,421	102,856	278,277
Transfers					3,520	(3,520)	-
Total General Revenues and Transfers					2,179,330	102,193	2,281,523
Change in Net Position					396,612	367,005	763,617
Net Position-Beginning					12,024,115	5,270,580	17,294,695
NET POSITION - ENDING					$ 12,420,727	$ 5,637,585	$ 18,058,312

The notes to the financial statements are an integral part of this statement.

WORKING DRAFT
For Discussion Purposes

MUNICIPALITY OF DELL RAPIDS
BALANCE SHEET
GOVERNMENTAL FUNDS
DECEMBER 31, 2014

WORKING DRAFT
For Discussion Purposes Only

	General Fund	Library Building Fund	Nonmajor Funds	Governmental Funds
ASSETS:				
Cash and Cash Equivalents	$ 1,692,266	$ 605,695	$ 71,422	$ 2,369,383
Taxes Receivable - Delinquent	13,981			13,981
Accounts Receivable, Net	16,439			16,439
Special Assessments Receivable - Current	3,611			3,611
Special Assessments Receivable - Delinquent	2,474			2,474
Special Assessments Receivable - Deferred	3,770			3,770
Interest Receivable - Special Assessments	460			460
Notes Receivable			238,600	238,600
Deposits	40,625			40,625
Due from Library Building Fund	258,120			258,120
Due from State Government	23,509		387	23,896
TOTAL ASSETS	$ 2,055,255	$ 605,695	$ 310,409	$ 2,971,359
LIABILITIES AND FUND BALANCES:				
Liabilities:				
Accounts Payable	$ 57,757	$ 143,993	$ -	$ 201,750
Due to General Fund		258,120		258,120
Accrued Wages Payable	22,037			22,037
Accrued Taxes Payable	2,294			2,294
TOTAL LIABILITIES	82,088	402,113	-	484,201
DEFERRED INFLOWS OF RESOURCES:				
Unavailable Revenue - Property Taxes	13,981			13,981
Unavailable Revenue - Special Assessments	10,315			10,315
TOTAL DEFERRED INFLOWS OF RESOURCES	24,296	-	-	24,296
Fund Balances:				
Nonspendable				
Deposits	40,625			40,625
Restricted				
City Promotion			190,311	190,311
Library Fines			1,498	1,498
Library Building		203,582		203,582
Assigned for City Promotion			118,600	118,600
Unassigned	1,908,246			1,908,246
TOTAL FUND BALANCES	1,948,871	203,582	310,409	2,462,862
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND FUND BALANCES	$ 2,055,255	$ 605,695	$ 310,409	$ 2,971,359

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF DELL RAPIDS
RECONCILIATION OF THE GOVERNMENTAL FUNDS BALANCE
SHEET TO THE STATEMENT OF NET POSITION
DECEMBER 31, 2014

WORKING DRAFT
For Discussion Purposes Only

Total Fund Balances - Governmental Funds			$ 2,462,862
Amounts reported for governmental activities in the statement of net assets are different because:			
Capital assets used in governmental activities are not current financial resources and therefore are not reported in the funds.			8,963,618
Assets such as taxes receivable and special assessment receivables are not available to pay for current period expenditures and therefore are deferred in the funds.			
Property Taxes	$	13,981	
Special Assessments		10,315	
			24,296
Long-term liabilities, including bonds payable and accrued leave payable are not due and payable in the current period and therefore are not reported in the funds.			
Accrued Leave	$	19,544	
Total long-term liabilities			(19,544)
Internal service funds are used by management to charge the cost of activities to individual funds. The assets and liabilities of internal service funds are included in governmental activities in the statement of net position.			989,495
Net Position - Governmental Activities			$ 12,420,727

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF DELL RAPIDS
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
YEAR ENDED DECEMBER 31, 2014

WORKING DRAFT
For Discussion Purposes Only

	General Fund	Library Building Fund	Nonmajor Funds	Governmental Funds
REVENUES:				
Taxes:				
General Property Taxes	$ 957,206	$ -	$ -	$ 957,206
General Sales and Use Taxes	937,431		50,065	987,496
Amusement Taxes	396			396
Penalties and Interest on Delinquent Taxes	731			731
Licenses and Permits	29,505			29,505
Intergovernmental Revenue	192,141			192,141
Charges for Goods and Services	60,734			60,734
Fines and Forfeits	2,914		2,250	5,164
Special Assessments	5,263		7,001	12,264
Investment Earnings	3,345	404	93	3,842
Contributions from Private Sources	35	49,853	1,098	50,986
Miscellaneous Revenue	36,490		35	36,525
TOTAL REVENUE	2,226,191	50,257	60,542	2,336,990
EXPENDITURES:				
Current:				
General Government	354,990			354,990
Public Safety	338,716			338,716
Public Works	431,102			431,102
Health and Welfare	48,594			48,594
Culture and Recreation	278,978	6,641	4,489	290,108
Conservation and Development	214,996		38,736	253,732
Capital Outlay	146,745	1,144,811		1,291,556
TOTAL EXPENDITURES	1,814,121	1,151,452	43,225	3,008,798
Excess of Revenue Over (Under) Expenditures	412,070	(1,101,195)	17,317	(671,808)
Other Financing Sources:				
Sale of Municipal Property			16	16
Transfer In	116,331	847,000		963,331
Transfer Out	(942,000)		(17,811)	(959,811)
Compensation for Losses	6,780			6,780
TOTAL OTHER FINANCING SOURCES (USES)	(818,889)	847,000	(17,795)	10,316
Net Changes in Fund Balance	(406,819)	(254,195)	(478)	(661,492)
Fund Balance - Beginning	2,355,690	457,777	310,887	3,124,354
FUND BALANCE - ENDING	$ 1,948,871	$ 203,582	$ 310,409	$ 2,462,862

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF DELL RAPIDS
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES AND CHANGES
IN FUND BALANCES TO THE STATEMENT OF ACTIVITIES
YEAR ENDED DECEMBER 31, 2014

WORKING DRAFT
For Discussion Purposes Only

Net Change in Fund Balances - Total Governmental Funds	$ (661,492)
Amounts reported for governmental activities in the statement of activities are different because:	
This amount represents capital asset purchases which are reported as expenditures on the fund financial statements but increase assets on the government wide statements.	1,291,556
This amount represents the current year depreciation expense reported in the statement of activities which is not reported on the fund financial statements because it does not require the use of current financial resources.	(299,618)
The fund financial statement governmental fund property tax accruals differ from the government wide statement property tax accruals in that the fund financial statements require the amounts to be "available".	4,167
Governmental funds report special assessments as revenue when "available", but the statement of activities includes the full amount of special assessments as revenue upon completion of the project at the point when an enforceable legal claim arises.	(12,011)
Governmental funds recognize expenditures for amounts of compensated absences actually paid to employees with current financial resources during the fiscal year. Amounts of compensated absences earned by employees are not recognized in the funds. In the statement of activities, expenses for these benefits are recognized when the employees earn leave credits.	3,347
Internal service funds are used by management to charge the cost of certain activities to individual funds. The net revenue (expense) of the internal service funds is reported with governmental activities.	70,663
Change in Net Assets of Governmental Activities	$ 396,612

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF DELL RAPIDS
BALANCE SHEET
PROPRIETARY FUNDS
DECEMBER 31, 2014

WORKING DRAFT
For Discussion Purposes Only

	Enterprise Funds				Internal Service Fund
	Water Fund	Wastewater Fund	Liquor Fund	Totals	
ASSETS:					
Current Assets:					
Cash and Cash Equivalents	$ 1,151,623	$ 937,229	$ 183,243	$ 2,272,095	$ 650,925
Accounts Receivable, Net	42,120	46,770	107,780	196,670	
Due from Other Government		150,149		150,149	
Interest Receivable	405	277		682	
Total Current Assets	1,194,148	1,134,425	291,023	2,619,596	650,925
Noncurrent Assets:					
Capital Assets:					
Land	45,128	37,029	3,000	85,157	
Buildings	2,625,463	3,780,845	154,977	6,561,285	
Improvements Other than Buildings	1,715,342	2,111,830		3,827,172	
Machinery and Equipment	546,197	59,185	58,571	663,953	846,498
Construction Work in Progress	-	974,978		974,978	
Less: Accumulated Depreciation	(1,607,391)	(1,284,727)	(198,556)	(3,090,674)	(507,928)
Total Noncurrent Assets	3,324,739	5,679,140	17,992	9,021,871	338,570
TOTAL ASSETS	$ 4,518,887	$ 6,813,565	$ 309,015	$ 11,641,467	$ 989,495
LIABILITIES:					
Current Liabilities:					
Accounts Payable	$ 10,102	$ 139,694	$ 98,294	$ 248,090	$ -
Customer Deposits	5,460			5,460	
Accrued Interest Payable	29,543	38,004		67,547	
Accrued Wages Payable	6,442	6,329		12,771	
Accrued Taxes Payable	419	430		849	
Bonds Payable Current:					
Revenue	97,771	142,326		240,097	
Total Current Liabilities	149,737	326,783	98,294	574,814	-
Noncurrent Liabilities:					
Revenue Bonds Payable	1,625,877	3,765,275		5,391,152	
Accrued Leave Payable	18,958	18,958		37,916	
Total Noncurrent Liabilities	1,644,835	3,784,233	-	5,429,068	-
NET POSITION:					
Net Investment in Capital Assets	1,601,091	1,771,539	17,992	3,390,622	338,570
Unrestricted Net Position	1,123,224	931,010	192,729	2,246,963	650,925
Total Net Position	2,724,315	2,702,549	210,721	5,637,585	989,495
TOTAL LIABILITIES AND NET POSITION	$ 4,518,887	$ 6,813,565	$ 309,015	$ 11,641,467	$ 989,495

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF DELL RAPIDS
STATEMENT OF REVENUES, EXPENSES AND CHANGES IN FUND NET POSITION
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2014

WORKING DRAFT
For Discussion Purposes

	Enterprise Funds				Internal Service Fund
	Water Fund	Wastewater Fund	Liquor Fund	Totals	
Operating Revenue:					
Charges for Goods and Services	$ 519,180	$ 537,595	$ 1,017,768	$ 2,074,543	$ 132,100
Revenue Dedicated to Servicing Debt	47,406			47,406	
Lottery Sales			41,730	41,730	
Miscellaneous	9,253	44,051		53,304	
TOTAL OPERATING REVENUE	575,839	581,646	1,059,498	2,216,983	132,100
Operating Expenses:					
Personal Services	149,899	145,424		295,323	
Other Current Expense	97,557	114,783	3,026	215,366	
Materials	116,717		951,850	1,068,567	
Depreciation	112,483	116,373	3,239	232,095	63,164
TOTAL OPERATING EXPENSES	476,656	376,580	958,115	1,811,351	63,164
Operating Income (Loss)	99,183	205,066	101,383	405,632	68,936
Nonoperating Revenue (Expense):					
Operating Grants		22,012		22,012	
Investment Earnings	1,486	1,055	316	2,857	727
Rental Revenue	41,061		15,000	56,061	
Sale of Surplus Property	1,568			1,568	1,000
Interest Expense and Fiscal Charges	(58,498)	(98,650)		(157,148)	
Other	(4,296)	(3,780)		(8,076)	
TOTAL NONOPERATING REVENUE (EXPENSE)	(18,679)	(79,363)	15,316	(82,726)	1,727
Income (Loss) Before Contributions and Transfers	80,504	125,703	116,699	322,906	70,663
Capital Contributions	47,619			47,619	
Transfers In		95,000		95,000	
Transfers Out			(98,520)	(98,520)	
Change in Net Position	128,123	220,703	18,179	367,005	70,663
Net Position - Beginning	2,596,192	2,481,846	192,542	5,270,580	918,832
NET POSITION - ENDING	$ 2,724,315	$ 2,702,549	$ 210,721	$ 5,637,585	$ 989,495

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF DELL RAPIDS
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
DECEMBER 31, 2014

WORKING DRAFT
For Discussion Purposes Only

	Enterprise Funds				
	Water Fund	Wastewater Fund	Liquor Fund	Total	Internal Service Fund
Cash Flows from Operating Activities:					
Receipts from Customers	$ 695,119	$ 563,864	$ 1,170,375	$ 2,429,358	$ -
Payments to Employees for Services	(145,005)	(140,659)		(285,664)	
Payments to Suppliers of Goods and Services	(272,031)	(66,687)	(1,055,891)	(1,394,609)	
Receipts for Interfund Services Provided				-	132,100
Net Cash Provided (Used) by Operating Activities	278,083	356,518	114,484	749,085	132,100
Cash Flows from Noncapital Financing Activities:					
Transfers from Other Funds	-	95,000	(98,520)	(3,520)	
Net Cash Provided (Used) by Noncapital Financing Activities	-	95,000	(98,520)	(3,520)	-
Cash Flows from Capital and Related Financing Activities:					
Proceeds from Capital Debt	52,829	1,007,254		1,060,083	
Purchase of Capital Assets	(3,452)	(999,150)		(1,002,602)	-
Principal Paid on Capital Debt	(78,101)	(121,407)		(199,508)	
Interest Paid on Capital Debt	(34,886)	(77,079)		(111,965)	
Other Receipts	38,333	18,233	15,000	71,566	
Net Cash Provided (Used) by Capital and Related Financing Activities	(25,277)	(172,149)	15,000	(182,426)	-
Cash Flows from Investing Activities:					
Interest Earnings	1,081	778	316	2,175	728
Net Cash Provided by Investing Activities	1,081	778	316	2,175	728
Net Increase (Decrease) in Cash and Cash Equivalents	253,887	280,147	31,280	565,314	132,828
Cash and Cash Equivalents at Beginning of Year	897,736	657,082	151,963	1,706,781	518,097
Cash and Cash Equivalents at End of Year	$ 1,151,623	$ 937,229	$ 183,243	$ 2,272,095	$ 650,925
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES:					
Operating Income (Loss)	$ 99,183	$ 205,066	$ 101,383	$ 405,632	$ 68,936
Net Cash Provided (Used) by Operating Activities:					
Depreciation Expense	112,483	116,373	3,240	232,096	63,164
Change in Assets and Liabilities:					
Receivables	1,378	1,008	110,877	113,263	
Due From Other Governments	117,852	(18,790)		99,062	
Customer Deposits	50			50	
Accounts and Other Payables	(57,757)	48,096	(101,016)	(110,677)	
Accrued Leave Payable	2,047	2,047		4,094	
Accrued Taxes Payable	419	414			
Accrued Wages Payable	2,428	2,304		4,732	
Net Cash Provided (Used) by Operating Activities	$ 278,083	$ 356,518	$ 114,484	$ 749,085	$ 132,100
Noncash Investing, Capital and Financing Activities:					
Debt Forgiveness	$ 47,620				

The notes to the financial statements are an integral part of this statement.

ANNUAL REPORT FOR CITY OF DELL RAPIDS
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2014

	GOVERNMENTAL FUNDS					
	General Fund	Library Building Fund	Gross Receipts Fund	Library Fines Fund	Debt Service Fund	Total Governmental Funds
Beginning Balance	$ 2,481,512.33	$ 457,776.50	$ 58,899.36	$ 2,586.95	$ 10,800.65	$ 3,011,575.79
Revenues and Other Sources:						
Property Taxes	957,206.18	-	-	-	-	957,206.18
General Sales and Use Taxes	998,975.21	-	53,925.13	-	-	1,052,900.34
Amusement Taxes	396.00	-	-	-	-	396.00
Penalties and Interest on Delinquent Taxes	731.22	-	-	-	-	731.22
Licenses and Permits	29,504.50	-	-	-	-	29,504.50
Federal Grants	24,399.59	-	-	-	-	24,399.59
Federal Shared Revenue	38,000.00	-	-	-	-	38,000.00
State Shared Revenue:						
Bank Franchise Tax	25,220.01	-	-	-	-	25,220.01
Motor Vehicle Commercial Prorate	2,958.61	-	-	-	-	2,958.61
Liquor Tax Reversion	20,604.41	-	-	-	-	20,604.41
Motor Vehicle Licenses (5%)	24,581.75	-	-	-	-	24,581.75
Local Government Highway and Bridge Fund	50,881.39	-	-	-	-	50,881.39
County Shared Revenue:						
County Wheel Tax	5,495.50	-	-	-	-	5,495.50
Charges for Goods and Services:						
General Government	1,000.00	-	-	-	-	1,000.00
Public Safety	135.00	-	-	-	-	135.00
Highways and Streets	13,444.34	-	-	-	-	13,444.34
Culture and Recreation	32,869.22	-	-	-	-	32,869.22
Other	13,285.21	-	-	-	-	13,285.21
Court Fines and Costs	286.00	-	-	-	-	286.00
Forfeits	102.56	-	-	-	-	102.56
Parking Meter Fines	2,085.00	-	-	-	-	2,085.00
Library	-	-	-	2,250.06	-	2,250.06
Other Fines and Forfeits	440.00	-	-	-	-	440.00
Investment Earnings	3,770.38	403.71	68.25	0.34	9.31	4,251.99
Rentals	2,400.00	-	-	-	-	2,400.00
Special Assessments	5,262.82	-	-	-	7,001.48	12,264.30
Contributions and Donations						

ANNUAL REPORT FOR CITY OF DELL RAPIDS
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2014

	GOVERNMENTAL FUNDS					
	General Fund	Library Building Fund	Gross Receipts Fund	Library Fines Fund	Debt Service Fund	Total Governmental Funds
from Private Sources	35.00	49,853.35	-	1,097.86	-	50,986.21
Sale of Municipal Property	-	-	-	15.70	-	15.70
Compensation for Loss or Damage to Capital Assets	6,780.19	-	-	-	-	6,780.19
Other	20,321.20	-	-	35.68	-	20,356.88
Total Revenue and Other Sources	2,281,171.29	50,257.06	53,993.38	3,399.64	7,010.79	2,395,832.16
Expenditures and Other Uses:						
Legislative	44,536.35	-	-	-	-	44,536.35
Executive	143,548.71	-	-	-	-	143,548.71
Financial Administration	93,780.88	-	-	-	-	93,780.88
Other General Government	75,047.01	-	-	-	-	75,047.01
Police	240,650.40	-	-	-	-	240,650.40
Fire	56,129.17	-	-	-	-	56,129.17
Protective Inspection	40,298.30	-	-	-	-	40,298.30
Highways and Streets	424,142.46	-	-	-	-	424,142.46
Sanitation	5,610.85	-	-	-	-	5,610.85
Transit	44,523.80	-	-	-	-	44,523.80
Health	6,820.67	-	-	-	-	6,820.67
Humane Society	1,769.74	-	-	-	-	1,769.74
Ambulance	40,000.00	-	-	-	-	40,000.00
Recreation	86,862.26	-	-	-	-	86,862.26
Parks	127,467.69	-	-	-	-	127,467.69
Libraries	151,241.53	5,011.66	-	4,488.95	-	160,742.14
Economic Development and Assistance (Industrial Development)	214,995.63	-	38,736.25	-	-	253,731.88
Capital Outlay	-	1,011,273.99	-	-	-	1,011,273.99
Total Expenditures and Other Uses	1,797,425.45	1,016,285.65	38,736.25	4,488.95	-	2,856,936.30
Transfers In (Out)	(825,668.56)	847,000.00	-	-	(17,811.44)	3,520.00
Increase/Decrease in Fund Balance	(341,922.72)	(119,028.59)	15,257.13	(1,089.31)	(10,800.65)	(457,584.14)
Ending Balance:						
Nonspendable	40,624.89	-	-	-	-	40,624.89
Restricted	-	338,747.91	74,156.49	-	-	412,904.40
Assigned	-	-	238,600.00	-	-	238,600.00
Unassigned	1,992,817.52	-	-	1,497.64	-	1,994,315.16

ANNUAL REPORT FOR CITY OF DELL RAPIDS
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2014

	GOVERNMENTAL FUNDS					
	General Fund	Library Building Fund	Gross Receipts Fund	Library Fines Fund	Debt Service Fund	Total Governmental Funds
Governmental Long-term Debt						

PROPRIETARY FUNDS	Liquor Fund	Water Fund	Wastewater Fund
Beginning Balance	192,541.58	2,516,282.88	2,478,224.97
Revenues	1,074,765.18	690,761.15	567,064.37
Expenses	958,113.69	530,067.99	499,337.64
Transfers In (Out)	(98,520.00)	-	95,000.00
Ending Balance:			
Net Investment in Capital Assets	17,992.08	1,601,091.54	1,960,826.33
Restricted for Debt Service	-	112,988.12	198,485.60
Unrestricted	192,680.99	957,339.69	457,209.16
Long-term Debt	-	1,723,647.49	3,648,697.33

The preceding financial data does not include fiduciary funds or component units. Information pertaining to those activities may be obtained by contacting the municipal finance officer at 605-428-3595

Municipal funds are deposited as follows:

Depository	Amount
Home Federal	3,908,008.37
1st National Bank	1,222,858.42

Exhibit III

MUNICIPALITY OF DELL RAPIDS
BALANCE SHEET
GOVERNMENTAL FUNDS
December 31, 2014

		General Fund	Library Building Fund	Nonmajor Governmental Funds	Total Governmental Funds
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES:					
Assets:					
	Cash and Cash Equivalents	$ 1,820,452.96	$ 605,695.01	$ 71,407.01	$ 2,497,554.98
110	Taxes Receivable--Delinquent	150,957.46	-	-	150,957.46
115	Accounts Receivable, Net	2,601.33	-	-	2,601.33
121	Special Assessments Receivable--Current	3,610.70	-	-	3,610.70
122	Special Assessments Receivable--Delinquent	2,473.98	-	-	2,473.98
123	Special Assessments Receivable--Deferred	3,770.47	-	-	3,770.47
125	Interest Receivable--Special Assessments	460.32	-	-	460.32
128	Notes Receivable	-	-	238,600.00	238,600.00
132	Due from State Governments	85,053.00	-	4,247.12	89,300.12
154	Deposits	40,624.89	-	-	40,624.89
Total Assets		2,110,005.11	605,695.01	314,254.13	3,029,954.25
Deferred Outflows of Resources:					
198	Other Deferred Outflows of Resources	$ -	$ -	$ -	$ -
Total Deferred Outflows of Resources:		-	-	-	-
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES:		$ 2,110,005.11	$ 605,695.01	$ 314,254.13	$ 3,029,954.25
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND FUND BALANCES:					
Liabilities:					
202	Accounts Payable	$ 57,638.81	$ 266,947.10	$ -	$ 324,585.91
216	Accrued Wages Payable	5,341.72	-	-	5,341.72
217	Accrued Taxes Payable	2,225.31	-	-	2,225.31
Total Liabilities		65,205.84	266,947.10	-	332,152.94

Exhibit III

MUNICIPALITY OF DELL RAPIDS
BALANCE SHEET
GOVERNMENTAL FUNDS
December 31, 2014

	General Fund	Library Building Fund	Nonmajor Governmental Funds	Total Governmental Funds
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES:				
Deferred Inflows of Resources:				
245 Unavailable Revenue-Property Taxes	1,041.39	-	-	1,041.39
246 Unavailable Revenue-Special Assessments	10,315.47	-	-	10,315.47
Total Deferred Inflows of Resources:	11,356.86	-	-	11,356.86
Fund Balances:				
263 Nonspendable	40,624.89	-	-	40,624.89
264 Restricted	-	338,747.91	74,156.49	412,904.40
266 Assigned	-	-	238,600.00	238,600.00
267 Unassigned	1,992,817.52	-	1,497.64	1,994,315.16
Total Fund Balances	2,033,442.41	338,747.91	314,254.13	2,686,444.45
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND FUND BALANCES	$ 2,110,005.11	$ 605,695.01	$ 314,254.13	$ 3,029,954.25

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF DELL RAPIDS **Exhibit IV**

STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES

GOVERNMENTAL FUNDS

For the Year Ended December 31, 2014

	General Fund	Library Building Fund	Nonmajor Governmental Funds	Total Governmental Funds
Revenues:				
310 Taxes:				
311 General Property Taxes	$ 957,206.18	$ -	$ -	$ 957,206.18
313 General Sales and Use Taxes	998,975.21	-	53,925.13	1,052,900.34
315 Amusement Taxes	396.00	-	-	396.00
319 Penalties and Interest on Delinquent Taxes	731.22	-	-	731.22
320 Licenses and Permits	29,504.50	-	-	29,504.50
330 Intergovernmental Revenue:				
331 Federal Grants	24,399.59	-	-	24,399.59
332 Federal Shared Revenue	38,000.00	-	-	38,000.00
335 State Shared Revenue:				
335.01 Bank Franchise Tax	25,220.01	-	-	25,220.01
335.02 Motor Vehicle Commercial Prorate	2,958.61	-	-	2,958.61
335.03 Liquor Tax Reversion	20,604.41	-	-	20,604.41
335.04 Motor Vehicle Licenses (5%)	24,581.75	-	-	24,581.75
335.08 Local Government Highway and Bridge Fund	50,881.39	-	-	50,881.39
338.03 County Wheel Tax	5,495.50	-	-	5,495.50
340 Charges for Goods and Services:				
341 General Government	1,000.00	-	-	1,000.00
342 Public Safety	135.00	-	-	135.00
343 Highways and Streets	13,444.34	-	-	13,444.34
346 Culture and Recreation	32,869.22	-	-	32,869.22
349 Other	13,285.21	-	-	13,285.21
350 Fines and Forfeits:				

MUNICIPALITY OF DELL RAPIDS **Exhibit IV**

STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES

GOVERNMENTAL FUNDS

For the Year Ended December 31, 2014

	General Fund	Library Building Fund	Nonmajor Governmental Funds	Total Governmental Funds
351 Court Fines and Costs	286.00	-	-	286.00
352 Animal Control Fines	102.56	-	-	102.56
353 Parking Meter Fines	2,085.00	-	-	2,085.00
354 Library	-	-	2,250.06	2,250.06
359 Other	440.00	-	-	440.00
360 Miscellaneous Revenue:				
361 Investment Earnings	3,770.38	403.71	77.90	4,251.99
362 Rentals	2,400.00	-	-	2,400.00
363 Special Assessments	5,262.82	-	7,001.48	12,264.30
367 Contributions and Donations from Private Sources	35.00	49,853.35	1,097.86	50,986.21
369 Other	20,321.20	-	35.68	20,356.88
Total Revenue	2,274,391.10	50,257.06	64,388.11	2,389,036.27
Expenditures:				
410 General Government:				
411 Legislative	44,536.35	-	-	44,536.35
412 Executive	143,548.71	-	-	143,548.71
414 Financial Administration	93,780.88	-	-	93,780.88
419 Other	75,047.01	-	-	75,047.01
Total General Government	356,912.95	-	-	356,912.95
420 Public Safety:				
421 Police	240,650.40	-	-	240,650.40
422 Fire	56,129.17	-	-	56,129.17
423 Protective Inspection	40,298.30	-	-	40,298.30
Total Public Safety	337,077.87	-	-	337,077.87
430 Public Works:				

MUNICIPALITY OF DELL RAPIDS **Exhibit IV**

STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES

GOVERNMENTAL FUNDS

For the Year Ended December 31, 2014

	General Fund	Library Building Fund	Nonmajor Governmental Funds	Total Governmental Funds
431 Highways and Streets	424,142.46	-	-	424,142.46
432 Sanitation	5,610.85	-	-	5,610.85
439 Transit	44,523.80	-	-	44,523.80
Total Public Works	474,277.11	-	-	474,277.11
440 Health and Welfare:				
441 Health	6,820.67	-	-	6,820.67
444 Humane Society	1,769.74	-	-	1,769.74
446 Ambulance	40,000.00	-	-	40,000.00
Total Health and Welfare	48,590.41	-	-	48,590.41
450 Culture and Recreation:				
451 Recreation	86,862.26	-	-	86,862.26
452 Parks	127,467.69	-	-	127,467.69
455 Libraries	151,241.53	5,011.66	4,488.95	160,742.14
Total Culture and Recreation	365,571.48	5,011.66	4,488.95	375,072.09
460 Conservation and Development:				
465 Economic Development and Assistance (Industrial Development)	214,995.63	-	38,736.25	253,731.88
Total Conservation and Development	214,995.63	-	38,736.25	253,731.88
485 Capital Outlay		1,011,273.99	-	1,011,273.99
Total Expenditures	1,797,425.45	1,016,285.65	43,225.20	2,856,936.30
Excess of Revenues Over (Under) Expenditures	476,965.65	(966,028.59)	21,162.91	(467,900.03)

MUNICIPALITY OF DELL RAPIDS **Exhibit IV**

STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES

GOVERNMENTAL FUNDS

For the Year Ended December 31, 2014

	General Fund	Library Building Fund	Nonmajor Governmental Funds	Total Governmental Funds
Other Financing Sources (Uses):				
391.01 Transfers In	116,331.44	847,000.00	-	963,331.44
391.03 Sale of Municipal Property	-	-	15.70	15.70
391.04 Compensation for Loss or Damage to Capital Assets	6,780.19	-	-	6,780.19
511 Transfers Out (Enter as Negative)	(942,000.00)	-	(17,811.44)	(959,811.44)
Total Other Financing Sources (Uses)	(818,888.37)	847,000.00	(17,795.74)	10,315.89
Net Change in Fund Balances	(341,922.72)	(119,028.59)	3,367.17	(457,584.14)
Fund Balance - Beginning	2,481,512.33	457,776.50	72,286.96	3,011,575.79
Adjustments:				
Prior year Auditor adjustments	(106,147.20)	-	238,600.00	132,452.80
Adjusted Fund Balance - Beginning	2,375,365.13	457,776.50	310,886.96	3,144,028.59
FUND BALANCE- ENDING	$ 2,033,442.41	$ 338,747.91	$ 314,254.13	$ 2,686,444.45

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF DELL RAPIDS
STATEMENT OF NET POSITION
PROPRIETARY FUNDS
December 31, 2014

Exhibit V

	Enterprise Funds				
	Liquor Fund	Water Fund	Wastewater Fund	Totals	Internal Service Funds
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES:					
Current Assets:					
Cash and Cash Equivalents	$ 183,194.93	$ 1,088,181.72	$ 974,090.40	$ 2,245,467.05	$ 650,924.92
115 Accounts Receivable, Net	107,779.73	42,119.40	46,769.56	196,668.69	-
135 Interest Receivable	-	405.35	276.72	682.07	-
Total Current Assets	290,974.66	1,130,706.47	1,021,136.68	2,442,817.81	650,924.92
Noncurrent Assets:					
107.1 Restricted Cash and Cash Equivalents	-	5,460.00	-	5,460.00	-
Capital Assets:					
160 Land	3,000.00	45,128.25	37,029.48	85,157.73	-
162 Buildings	154,977.23	2,625,463.19	3,780,845.27	6,561,285.69	-
164 Improvements Other Than Buildings	-	1,415,341.71	2,121,142.13	3,536,483.84	-
166 Machinery and Equipment	58,571.17	546,197.26	59,184.95	663,953.38	845,998.57
168 Construction Work in Progress	-	-	729,235.40	729,235.40	
Less: Accumulated Depreciation (Credit)	(198,556.32)	(1,439,391.38)	(1,284,912.89)	(2,922,860.59)	(507,928.16)
190 Intangible Assets	-	300,000.00	-	300,000.00	-
191 Accumulated Amortization (Credit)	-	(168,000.00)	-	(168,000.00)	-
Total Noncurrent Assets	17,992.08	3,330,199.03	5,442,524.34	8,790,715.45	338,070.41
Total Assets	308,966.74	4,460,905.50	6,463,661.02	11,233,533.26	988,995.33
Deferred Outflows of Resources:					
198 Other Deferred Outflows of Resources				-	
Total Deferred Outflows of Resources:	-	-	-	-	-
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES:	308,966.74	4,460,905.50	6,463,661.02	11,233,533.26	988,995.33
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND FUND BALANCES:					
Current Liabilities:					
202 Accounts Payable	$ 98,293.67	$ 10,102.07	$ 139,694.01	$ 248,089.75	$ -
215 Accrued Interest Payable	-	29,542.53	38,003.85	67,546.38	-
216 Accrued Wages Payable	-	1,356.93	1,356.93	2,713.86	-

MUNICIPALITY OF DELL RAPIDS
STATEMENT OF NET POSITION
PROPRIETARY FUNDS
December 31, 2014

Exhibit V

	Enterprise Funds				
	Liquor Fund	Water Fund	Wastewater Fund	Totals	Internal Service Funds
217 Accrued Taxes Payable	-	419.03	429.71	848.74	-
220 Customer Deposits	-	5,460.00	-	5,460.00	-
226.02 Revenue	-	97,770.69	142,326.32	240,097.01	-
Total Current Liabilities	98,293.67	144,651.25	321,810.82	564,755.74	-
Noncurrent Liabilities:					
231 Bonds Payable:					
231.02 Revenue	-	1,625,876.80	3,506,371.01	5,132,247.81	-
233 Accrued Leave Payable	-	18,958.10	18,958.10	37,916.20	-
Total Noncurrent Liabilities	-	1,644,834.90	3,525,329.11	5,170,164.01	-
Total Liabilities	98,293.67	1,789,486.15	3,847,139.93	5,734,919.75	-
Deferred Inflows of Resources:					
247 Other Deferred Inflows of Resources	-	-	-	-	-
Total Deferred Inflows of Resources:	-	-	-	-	-
NET POSITION:					
253.10 Net Investment in Capital Assets	17,992.08	1,601,091.54	1,960,826.33	3,579,909.95	338,570.41
253.20 Restricted for:					
253.21 Revenue Bond Debt Service	-	112,988.12	198,485.60	311,473.72	-
253.90 Unrestricted	192,680.99	957,339.69	457,209.16	1,607,229.84	650,424.92
Total Net Position	210,673.07	2,671,419.35	2,616,521.09	5,498,613.51	988,995.33
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	$ 308,966.74	$ 4,460,905.50	$ 6,463,661.02	$ 11,233,533.26	$ 988,995.33

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF DELL RAPIDS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN FUND NET POSITION
PROPRIETARY FUNDS
For the Year Ended December 31, 2014

	Enterprise Funds				
	Liquor Fund	Water Fund	Wastewater Fund	Totals	Internal Service Funds
Operating Revenue:					
370/380 Charges for Goods and Services	$ 1,017,768.32	$ 519,180.13	$ 537,594.56	$ 2,074,543.01	$ -
Revenue Dedicated to Servicing Debt	-	47,406.00	-	47,406.00	-
380.05 Lottery Sales	41,729.60	-	-	41,729.60	-
369 Miscellaneous	-	9,251.82	6,598.66	15,850.48	-
Total Operating Revenue	1,059,497.92	575,837.95	544,193.22	2,179,529.09	-
Operating Expenses:					
410 Personal Services	-	144,913.00	140,552.54	285,465.54	-
420 Other Current Expense	3,024.73	97,456.83	140,575.79	241,057.35	-
426.2 Materials (Cost of Goods Sold)	951,849.75	116,716.56	-	1,068,566.31	-
457 Depreciation	3,239.21	112,483.33	119,559.31	235,281.85	63,164.38
Total Operating Expenses	958,113.69	471,569.72	400,687.64	1,830,371.05	63,164.38
Operating Income (Loss)	101,384.23	104,268.23	143,505.58	349,158.04	(63,164.38)
Nonoperating Revenue (Expense):					
330 Operating Grants	-	71,057.00	22,012.47	93,069.47	-
361 Investment Earnings	267.26	1,237.88	858.68	2,363.82	727.81
362 Rental Revenue	15,000.00	41,060.65	-	56,060.65	132,100.00
442 Interest Expense (Enter as Negative)	-	(58,498.27)	(98,650.00)	(157,148.27)	-
(492)366 Gain (Loss) on Disposition of Assets	-	1,567.67	-	1,567.67	-
(429)369.01 Other	-	(4,294.40)	(3,780.58)	(8,074.98)	-
Total Nonoperating Revenue (Expense)	15,267.26	52,130.53	(79,559.43)	(12,161.64)	132,827.81
Income (Loss) Before Contributions, Special Items, Extraordinary Items and Transfers	116,651.49	156,398.76	63,946.15	336,996.40	69,663.43
391.1 Transfers In	-	-	95,000.00	95,000.00	-
511 Transfers Out (Enter as Negative)	(98,520.00)	-	-	(98,520.00)	-
Change in Net Position	18,131.49	156,398.76	158,946.15	333,476.40	69,663.43
Net Position - Beginning	192,541.58	2,516,282.88	2,478,224.97	5,187,049.43	919,331.90
Adjustments:					
Prior year Auditor adjustments	-	(1,262.29)	(20,650.03)	(21,912.32)	-
Adjusted Net Position - Beginning	192,541.58	2,515,020.59	2,457,574.94	5,165,137.11	919,331.90

MUNICIPALITY OF DELL RAPIDS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN FUND NET POSITION
PROPRIETARY FUNDS
For the Year Ended December 31, 2014

		Enterprise Funds				
		Liquor Fund	Water Fund	Wastewater Fund	Totals	Internal Service Funds
59	NET POSITION - ENDING	$ 210,673.07	$ 2,671,419.35	$ 2,616,521.09	$ 5,498,613.51	$ 988,995.33
60						
63	The notes to the financial statements are an integral part of this statement.					

MUNICIPALITY OF DELL RAPIDS
COMBINING BALANCE SHEET
NONMAJOR GOVERNMENTAL FUNDS
December 31, 2014

	Gross Receipts Fund	Library Fines Fund	Debt Service Fund	Total Nonmajor Governmental Funds
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES:				
Assets:				
Cash and Cash Equivalents	$ 69,909.37	$ 1,497.64	$ -	$ 71,407.01
128 Notes Receivable	238,600.00	-	-	238,600.00
132 Due from State Government	4,247.12	-	-	4,247.12
Total Assets	312,756.49	1,497.64	-	314,254.13
Deferred Outflows of Resources:				
198 Other Deferred Outflows of Resources	-	-	-	-
Total Deferred Outflows of Resources:	-	-	-	-
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES:	312,756.49	1,497.64	-	314,254.13
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND FUND BALANCES:				
Liabilities:				
202 Accounts Payable	-	-	-	-
Total Liabilities	-	-	-	-
Deferred Inflows of Resources:				
245 Unavailable Revenue-Property Taxes	-	-	-	-
246 Unavailable Revenue-Special Assessments	-	-	-	-
Total Deferred Inflows of Resources:	-	-	-	-
Fund Balances:				
264 Restricted	74,156.49	-	-	74,156.49
266 Assigned	238,600.00	-	-	238,600.00
267 Unassigned	-	1,497.64	-	1,497.64
Total Fund Balances	312,756.49	1,497.64	-	314,254.13
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND FUND BALANCES	$ 312,756.49	$ 1,497.64	$ -	$ 314,254.13

MUNICIPALITY OF DELL RAPIDS
COMBINING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES
NONMAJOR GOVERNMENTAL FUNDS
For the Year Ended December 31, 2014

	Gross Receipts Fund	Library Fines Fund	Debt Service Fund	Total Nonmajor Governmental Funds
Revenues:				
310 Taxes:				
313 General Sales and Use Taxes	$ 53,925.13	$ -	$ -	$ 53,925.13
350 Fines and Forfeits:				
354 Library	-	2,250.06	-	2,250.06
360 Miscellaneous Revenue:				
361 Investment Earnings	68.25	0.34	9.31	77.90
363 Special Assessments	-	-	7,001.48	7,001.48
367 Contributions and Donations from Private Sources	-	1,097.86	-	1,097.86
369 Other	-	35.68	-	35.68
Total Revenue	53,993.38	3,383.94	7,010.79	64,388.11
Expenditures:				
450 Culture and Recreation:				
455 Libraries	-	4,488.95	-	4,488.95
Total Culture and Recreation	-	4,488.95	-	4,488.95
460 Conservation and Development:				
465 Economic Development and Assistance (Industrial Development)	38,736.25	-	-	38,736.25
Total Conservation and Development	38,736.25	-	-	38,736.25
Total Expenditures	38,736.25	4,488.95	-	43,225.20

MUNICIPALITY OF DELL RAPIDS
COMBINING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES
NONMAJOR GOVERNMENTAL FUNDS
For the Year Ended December 31, 2014

	Gross Receipts Fund	Library Fines Fund	Debt Service Fund	Total Nonmajor Governmental Funds
Excess of Revenues Over (Under) Expenditures	15,257.13	(1,105.01)	7,010.79	21,162.91
Other Financing Sources (Uses):				
391.03 Sale of Municipal Property	-	15.70	-	15.70
511 Transfers Out (Enter as Negative)	-	-	(17,811.44)	(17,811.44)
Total Other Financing Sources (Uses)	-	15.70	(17,811.44)	(17,795.74)
Net Change in Fund Balances	15,257.13	(1,089.31)	(10,800.65)	3,367.17
Fund Balance - Beginning	58,899.36	2,586.95	10,800.65	72,286.96
Adjustments:				
Prior year Auditor adjustments	238,600.00	-	-	238,600.00
Adjusted Fund Balance - Beginning	297,499.36	2,586.95	10,800.65	310,886.96
FUND BALANCE- ENDING	$ 312,756.49	$ 1,497.64	$ 0.00	$ 314,254.13

MUNICIPALITY OF DELL RAPIDS
SCHEDULE OF CHANGES IN LONG-TERM DEBT
For the Year Ended December 31, 2014

Indebtedness	Long-Term Debt January 1, 2014	Add New Debt	Less Debt Retired	Long-Term Debt December 31, 2014
Enterprise Long-Term Debt:				
231.02 Revenue Bonds	$ 4,894,559.10	$ 748,349.84	$ 270,564.12	$ 5,372,344.82
Total	$ 4,894,559.10	$ 748,349.84	$ 270,564.12	$ 5,372,344.82

(Do not include interest in the above figures)

11-20-15 4:08 PM G/L BUDGET REPORT

2015 BUDGET

BUDGET : 15-2015 BUDGET
FUND : 101 GENERAL FUND
ITEMS PRINTED: ANNUAL BUDGET AMOUNTS

ACCOUNT NO#	===== ACCOUNT NAME ======	ANNUAL BUDGET
101-31101	GENERAL PROPERTY TAXES	1,012,801.00CR
101-31102	PRIOR YEARS' PROPERTY TAXES	2,000.00CR
101-31107	MOBILE HOME TAX	200.00CR
101-31108	PRIOR YEARS TAX ON MOBILE HOME	0.00
101-31300	SALES TAX	800,000.00CR
101-31500	AMUSEMENT LICENSES	400.00CR
101-31800	TAX DEED REVENUE	0.00
101-31900	PENALTY & INTEREST PRIOR YEARS	1,000.00CR
101-32010	MALT BEVERAGE LICENSES	1,450.00CR
101-32020	LIQUOR LICENCES	7,000.00CR
101-32025	GOLF CART LICENSE	0.00
101-32030	PET LICENSES	400.00CR
101-32040	BUILDING PERMITS	10,000.00CR
101-32050	GARBAGE HAULERS' LICENCES	800.00CR
101-32060	BICYCLE LICENSES	0.00
101-32070	PEDDLERS LICENSE	500.00CR
101-32080	CONCESSION STAND PERMIT	0.00
101-32090	OUTDOOR DANCE PERMITS	300.00CR
101-33000	INTERGOVERNMENTAL REVENUE	0.00
101-33110	FED TRANS GRANT-5311-UM3684	25,240.96CR
101-33111	FED REC TRAILS PROG GRANT	0.00
101-33113	TITLE IIIB TRANSIT FUNDS	1,131.00CR
101-33114	5309 FEDERAL FUNDS-UM03	0.00
101-33400	STATE GRANTS	0.00
101-33501	BANK FRANCHISE TAX	25,000.00CR
101-33502	PORT OF ENTRY	2,000.00CR
101-33503	LIQUOR TAX REVERSION	17,000.00CR
101-33504	MOTOR VEHICLE LICENSES	12,000.00CR
101-33506	FIRE INSURANCE PREMIUM REV	0.00
101-33508	LOCAL GOVT HIGHWAY & BRIDGE	30,000.00CR
101-33520	STATE SHARED OTHER	500.00CR
101-33803	COUNTY WHEEL TAX	4,000.00CR
101-33899	COUNTY SHARED - OTHER	0.00
101-33900	OTHER INTERGOVENMENTAL	2,000.00CR
101-34101	ZONING & SUBDIVISION FEES	500.00CR
101-34299	PUBLIC SAFETY - OTHER	0.00
101-34402	MOWING & SNOW REMOVAL	800.00CR
101-34403	RUBBLE SITE CHARGES	8,000.00CR
101-34502	ANIMAL CONTROL	0.00
101-34602	SWIMMING POOL FEES	20,000.00CR
101-34603	RECREATIONAL FEES	600.00CR
101-34604	SWIMMING POOL CONCESSIONS	5,000.00CR
101-34692	PARKS & RECREATION DONATIONS	0.00
101-34693	SWIMMING LESSONS	7,000.00CR
101-34699	OTHER - RECREATION	0.00
101-34900	OTHER INCOME - TRANSIT	9,000.00CR
101-35100	COURT FINES & COSTS	750.00CR
101-35200	ANIMAL CONTROL FINES	0.00
101-35300	PARKING FINES	1,000.00CR
101-35900	OTHER FINES & FORFEITS-NSF	300.00CR
	PAGE TOTAL:	2,008,672.96CR

602- drinking water
604- wastewater

BUDGET : 15-2015 BUDGET
FUND : 602 WATER FUND
ITEMS PRINTED: ANNUAL BUDGET AMOUNTS

ACCOUNT NO#	===== ACCOUNT NAME ======	ANNUAL BUDGET
602-33402	WATER FACILITY CONST GRANT	0.00
602-33403	WATER FACILITY CONST GRANT	0.00
602-35900	LATE CHARGES	6,000.00CR
602-36100	INTEREST EARNED	1,500.00CR
602-36300	15TH ST SPECIAL ASSESSMENTS	0.00
602-36600	GAIN ON SALE OF CAPITAL ASSETS	0.00
602-36900	OTHER REVENUE - RECONNECTS	1,500.00CR
602-38101	METERED WATER SALES	474,000.00CR
602-38102	BULK WATER SALES	200.00CR
602-38103	SALE OF MATERIALS	4,000.00CR
602-38104	TAP FEE	0.00
602-38107	WATER TOWER CELLULAR LEASE	54,000.00CR
602-38120	15TH ST SURCHARGE	40,000.00CR
602-38199	MISCELLANEOUS REVENUE	0.00
602-39101	TRANSFER FROM WATER RESERVE	266,518.00CR
602-39103	SALE OF MUNICIPAL PROPERTY	0.00
602-39104	COMP FOR LOSS OR DAMAGE TO CA	0.00
602-39107	CAPITAL CONTRIBUTIONS	0.00
602-39124	WATER REVENUE BOND	0.00
602-39125	15TH ST- PHASE 2-(DW#5)-SRF	0.00
	PAGE TOTAL:	847,718.00CR
	TOTAL REVENUES:	847,718.00CR

BUDGET : 15-2015 BUDGET
FUND : 602 WATER FUND
ITEMS PRINTED: ANNUAL BUDGET AMOUNTS

ACCOUNT NO#	===== ACCOUNT NAME ======	ANNUAL BUDGET
602-4331-42510	EQUIPMENT REPAIR & MAINTENANCE	0.00
602-4331-42540	OTHER REPAIR & MAINTENANCE	0.00
602-4331-42610	SUPPLIES	1,000.00
602-4331-42620	WATER PURCHASED	121,000.00
602-4331-42900	OTHER	0.00
602-4334-41100	WAGES	105,685.00
602-4334-41120	OVERTIME	1,000.00
602-4334-41200	FICA	8,161.00
602-4334-41300	RETIREMENT	6,402.00
602-4334-41400	WORKERS' COMPENSATION	3,000.00
602-4334-41500	HEALTH/DENTAL INSURANCE	21,102.00
602-4334-42100	INSURANCE	3,500.00
602-4334-42200	PROFESSIONAL SERVICES & FEES	10,000.00
602-4334-42210	TESTING	200.00
602-4334-42300	PUBLISHING & ADVERTISING	500.00
602-4334-42400	EQUIPMENT REPLACEMENT	18,000.00
602-4334-42500	REPAIR & MAINTENANCE	20,000.00
602-4334-42610	SUPPLIES	30,000.00
602-4334-42680	UNIFORMS	0.00
602-4334-42700	TRAVEL & TRAINING	300.00
602-4334-42800	UTILITIES	14,000.00
602-4334-42900	OTHER	0.00
602-4334-43100	LAND	0.00
602-4334-43200	BUILDINGS & STRUCTURES	0.00
602-4334-43300	15TH STREET IMPROVEMENTS	0.00
602-4334-43301	15TH STREET PHASE TWO	200,000.00
602-4334-43340	SE EXTENTION - GARFIELD AVE	0.00
602-4334-43400	FURNITURE & MINOR EQUIPMENT	2,000.00
602-4334-43410	COMPUTER SOFTWARE	0.00
602-4334-43420	NORTHVIEW/10TH ST IMPROVEMENTS	0.00
602-4334-43430	NEW INDUSTRIAL STREET	0.00
602-4334-43440	10TH STREET	0.00
602-4334-44100	PRINCIPAL	104,460.00
602-4334-44200	INTEREST	51,700.00
602-4334-44900	TRANSFER TO EQUIP REPLACEMENT	0.00
602-4334-45300	TRANSFER TO WATER RESERVE	2,000.00
602-4334-45700	DEPRECIATION	85,000.00
602-4334-45900	LOSS ON DISPOSE OF CAP ASSETS	0.00
602-4335-41100	WAGES	20,200.00
602-4335-41200	FICA	1,546.00
602-4335-41300	RETIREMENT	1,212.00
602-4335-41400	WORKERS' COMPENSATION	20.00
602-4335-41500	INSURANCE	4,400.00
602-4335-41600	UNEMPLOYMENT COMPENSATION	30.00
602-4335-42100	INSURANCE	0.00
602-4335-42200	PROFESSIONAL SERVICES & FEES	500.00
602-4335-42300	PUBLISHING AND ADVERTISING	0.00
602-4335-42510	EQUIPMENT REPAIR & MAINTENANCE	800.00
602-4335-42610	SUPPLIES	3,000.00
	PAGE TOTAL:	840,718.00

11-20-15 4:06 PM G/L BUDGET REPORT

2016 BUDGET

BUDGET : 16-2016 BUDGET
FUND : 101 GENERAL FUND
ITEMS PRINTED: ANNUAL BUDGET AMOUNTS

ACCOUNT NO#	===== ACCOUNT NAME ======	ANNUAL BUDGET
101-31101	GENERAL PROPERTY TAXES	1,038,154.49CR
101-31102	PRIOR YEARS' PROPERTY TAXES	2,000.00CR
101-31107	MOBILE HOME TAX	200.00CR
101-31108	PRIOR YEARS TAX ON MOBILE HOME	0.00
101-31300	SALES TAX	850,000.00CR
101-31500	AMUSEMENT LICENSES	400.00CR
101-31800	TAX DEED REVENUE	0.00
101-31900	PENALTY & INTEREST PRIOR YEARS	1,000.00CR
101-32010	MALT BEVERAGE LICENSES	1,450.00CR
101-32020	LIQUOR LICENCES	7,000.00CR
101-32025	GOLF CART LICENSE	0.00
101-32030	PET LICENSES	400.00CR
101-32040	BUILDING PERMITS	10,000.00CR
101-32050	GARBAGE HAULERS' LICENCES	800.00CR
101-32060	BICYCLE LICENSES	0.00
101-32070	PEDDLERS LICENSE	500.00CR
101-32080	CONCESSION STAND PERMIT	0.00
101-32090	OUTDOOR DANCE PERMITS	300.00CR
101-33000	INTERGOVERNMENTAL REVENUE	0.00
101-33110	FED TRANS GRANT-5311-UM3684	27,928.00CR
101-33111	FED REC TRAILS PROG GRANT	116,000.00CR
101-33113	TITLE IIIB TRANSIT FUNDS	1,131.00CR
101-33114	5309 FEDERAL FUNDS-UM03	0.00
101-33400	STATE GRANTS	900,000.00CR
101-33501	BANK FRANCHISE TAX	25,000.00CR
101-33502	PORT OF ENTRY	2,000.00CR
101-33503	LIQUOR TAX REVERSION	17,000.00CR
101-33504	MOTOR VEHICLE LICENSES	15,000.00CR
101-33506	FIRE INSURANCE PREMIUM REV	0.00
101-33508	LOCAL GOVT HIGHWAY & BRIDGE	30,000.00CR
101-33520	STATE SHARED OTHER	500.00CR
101-33803	COUNTY WHEEL TAX	4,000.00CR
101-33899	COUNTY SHARED - OTHER	0.00
101-33900	OTHER INTERGOVENMENTAL	2,000.00CR
101-34101	ZONING & SUBDIVISION FEES	500.00CR
101-34299	PUBLIC SAFETY - OTHER	0.00
101-34402	MOWING & SNOW REMOVAL	800.00CR
101-34403	RUBBLE SITE CHARGES	8,000.00CR
101-34502	ANIMAL CONTROL	0.00
101-34602	SWIMMING POOL FEES	20,000.00CR
101-34603	RECREATIONAL FEES	600.00CR
101-34604	SWIMMING POOL CONCESSIONS	5,000.00CR
101-34692	PARKS & RECREATION DONATIONS	0.00
101-34693	SWIMMING LESSONS	7,000.00CR
101-34699	OTHER - RECREATION	0.00
101-34900	OTHER INCOME - TRANSIT	6,500.00CR
101-35100	COURT FINES & COSTS	750.00CR
101-35200	ANIMAL CONTROL FINES	0.00
101-35300	PARKING FINES	2,000.00CR
101-35900	OTHER FINES & FORFEITS-NSF	300.00CR
	PAGE TOTAL:	3,104,213.49CR

602- drinking water
604- wastewater

BUDGET : 16-2016 BUDGET
FUND : 602 WATER FUND
ITEMS PRINTED: ANNUAL BUDGET AMOUNTS

ACCOUNT NO#	===== ACCOUNT NAME ======	ANNUAL BUDGET
602-33402	WATER FACILITY CONST GRANT	0.00
602-33403	WATER FACILITY CONST GRANT	0.00
602-35900	LATE CHARGES	6,000.00CR
602-36100	INTEREST EARNED	1,300.00CR
602-36300	15TH ST SPECIAL ASSESSMENTS	0.00
602-36600	GAIN ON SALE OF CAPITAL ASSETS	0.00
602-36900	OTHER REVENUE - RECONNECTS	1,500.00CR
602-38101	METERED WATER SALES	474,000.00CR
602-38102	BULK WATER SALES	200.00CR
602-38103	SALE OF MATERIALS	2,000.00CR
602-38104	TAP FEE	0.00
602-38107	WATER TOWER CELLULAR LEASE	54,000.00CR
602-38120	15TH ST SURCHARGE	40,000.00CR
602-38199	MISCELLANEOUS REVENUE	0.00
602-39101	TRANSFER FROM WATER RESERVE	62,657.56CR
602-39103	SALE OF MUNICIPAL PROPERTY	0.00
602-39104	COMP FOR LOSS OR DAMAGE TO CA	0.00
602-39107	CAPITAL CONTRIBUTIONS	0.00
602-39124	WATER REVENUE BOND	240,000.00CR
602-39125	15TH ST- PHASE 2-(DW#5)-SRF	0.00
	PAGE TOTAL:	881,657.56CR
	TOTAL REVENUES:	881,657.56CR

ACCOUNT NO#	===== ACCOUNT NAME ======	ANNUAL BUDGET
602-4331-42510	EQUIPMENT REPAIR & MAINTENANCE	0.00
602-4331-42540	OTHER REPAIR & MAINTENANCE	0.00
602-4331-42610	SUPPLIES	1,000.00
602-4331-42620	WATER PURCHASED	130,000.00
602-4331-42900	OTHER	0.00
602-4334-41100	WAGES	102,000.00
602-4334-41120	OVERTIME	1,000.00
602-4334-41200	FICA	8,161.00
602-4334-41300	RETIREMENT	6,402.00
602-4334-41400	WORKERS' COMPENSATION	3,000.00
602-4334-41500	HEALTH/DENTAL INSURANCE	21,102.00
602-4334-42100	INSURANCE	3,500.00
602-4334-42200	PROFESSIONAL SERVICES & FEES	10,000.00
602-4334-42210	TESTING	200.00
602-4334-42300	PUBLISHING & ADVERTISING	500.00
602-4334-42400	EQUIPMENT REPLACEMENT	6,000.00
602-4334-42500	REPAIR & MAINTENANCE	20,000.00
602-4334-42610	SUPPLIES	30,000.00
602-4334-42680	UNIFORMS	0.00
602-4334-42700	TRAVEL & TRAINING	300.00
602-4334-42800	UTILITIES	14,000.00
602-4334-42900	OTHER	0.00
602-4334-43100	LAND	0.00
602-4334-43200	BUILDINGS & STRUCTURES	0.00
602-4334-43300	15TH STREET IMPROVEMENTS	0.00
602-4334-43301	15TH STREET PHASE TWO	0.00
602-4334-43340	SE EXTENTION - GARFIELD AVE	0.00
602-4334-43400	FURNITURE & MINOR EQUIPMENT	2,000.00
602-4334-43410	COMPUTER SOFTWARE	0.00
602-4334-43420	NORTHVIEW/10TH ST IMPROVEMENTS	0.00
602-4334-43430	NEW INDUSTRIAL STREET	0.00
602-4334-43440	10TH STREET	240,000.00
602-4334-44100	PRINCIPAL	106,578.59
602-4334-44200	INTEREST	48,083.97
602-4334-44900	TRANSFER TO EQUIP REPLACEMENT	0.00
602-4334-45300	TRANSFER TO WATER RESERVE	2,000.00
602-4334-45700	DEPRECIATION	85,000.00
602-4334-45900	LOSS ON DISPOSE OF CAP ASSETS	0.00
602-4335-41100	WAGES	22,000.00
602-4335-41200	FICA	1,760.00
602-4335-41300	RETIREMENT	1,320.00
602-4335-41400	WORKERS' COMPENSATION	20.00
602-4335-41500	INSURANCE	4,400.00
602-4335-41600	UNEMPLOYMENT COMPENSATION	30.00
602-4335-42100	INSURANCE	0.00
602-4335-42200	PROFESSIONAL SERVICES & FEES	500.00
602-4335-42300	PUBLISHING AND ADVERTISING	0.00
602-4335-42510	EQUIPMENT REPAIR & MAINTENANCE	800.00
602-4335-42610	SUPPLIES	3,000.00
	PAGE TOTAL:	874,657.56

CUSTOMER NUMBER:	127016	Argus Leader Media	
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DELL RAPIDS CITY
PO BOX 10
DELL RAPIDS SD 57022

DETACH THIS STUB AND RETURN WITH PAYMENT — PAYMENT DUE UPON RECEIPT

AFFIDAVIT OF PUBLICATION-
Customer Number: 127016 DELL RAPIDS CITY
Invoice Number: 879679

Argus Leader Media
AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA
COUNTY OF MINNEHAHA } ss

Linda Schulte being duly sworn, says: That the **Dell Rapids Tribune** is, and during all the times hereinafter mentioned was, a weekly legal newspaper as defined by SDCL 17-2-2.1 through 17-2-2.4, as amended published at Dell Rapids, Minnehaha County, South Dakota; that affiant is and during all of said times, was an employee of the publisher of such newspaper and has personal knowledge of the facts stated in this affidavit; that the notice, order or advertisement, a printed copy of which is hereto attached, was published in said newspaper upon

Wednesday ,the 25 day of November 2015 ,

_____ the _____ day of _____ 2015 ,

_____ ,the _____ day of _____ 2015 ,

_____ ,the _____ day of _____ 2015 ,

_____ ,the _____ day of _____ 2015 ,

and that $34.09 was charged for publishing the same

Linda Schulte

Subscribed and sworn to before me 11/25/2015 .

Betty Gates

Notary Public, South Dakota

My Commission expires March 11, 2016

BETTY GATES
NOTARY PUBLIC SOUTH DAKOTA
SEAL SEAL

NOTICE OF PUBLIC HEARING for the CITY OF DELL RAPIDS 10th STREET and HWY 115 PROJECT

Notice is hereby given that the Town of Dell Rapids will hold a Public Hearing on December 7th, 2015, regarding improvements to the Wastewater and Drinking Water Systems. The Town is seeking up to $1,742,000 of funding from the Board of Water and Natural Resources for improvements in two locations to the Wastewater and Water Utility Systems. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or loans from the Drinking Water State Revolving Fund (SRF) and Clean Water State Revolving Fund (SRF) Programs. The expected Drinking Water SRF and Clean Water SRF loan terms are 3.25 percent for 30 years, and the Board of Water and Natural Resources may forgive all or a portion of the loan principal. The amount and source of funds will be determined by the Board of Water and Natural Resources when the application is presented at a scheduled board meeting. The

City of Dell Rapids

Public Hearing For CW-SRF and DW-SRFApplications
10th Street and Highway 115 Project
7:30 PM, Monday, December 7, 2015
Dell Rapids City Hall

Please sign in:

NAME	ADDRESS / REPRESENTING
	City of Dell Rapids
Dean Harvey	City Attorney Dell Rapids
Thomas J. Early	Council Member, City of Dell Rapids
Greg Hall	council member Dell Rapids
	101 E 12th St Dells
	Council Member, Dell Rapids
	DGR Engineering
Michael J. Peraets	city Council
	Counsel member
	City Council
	City Council
	600 E 7th St Dell Rapids
	607 E 4TH ST DELL RAPIDS
Jesse Christen	Dell Rapids Tribune
	City council
Darin Boardman	City of Dell Rapids
Janice Browning	SECOG

DELL RAPIDS CITY COUNCIL MINUTES
Monday, December 7, 2015 at 7:30

Mayor Fiegen called the Dell Rapids City Council meeting to order at 7:30 p.m. at the City Hall Council Chambers. The Roll was called finding the following members present: Mike Geraets, Mike Sterud, Mary Klockman, Mark Crisp, Tom Earley, Lee Burggraff, Gary Haak and Dave Sommerfeld.
Staff present: Administrator Justin Weiland, Finance Officer Claire Baartman, and City Attorney Dean Hammer

Pledge of Allegiance was recited.

Approval of Agenda: Burggraff motioned to approve the agenda, seconded by Haak. Motion carried.

Approval of Minutes November 16, 2015 Regular Session:
Geraets requested Dave Sommerfeld be listed as absent. Mayor Fiegen noted the Sioux Falls Humane Society 2016 Contract should be changed from 2061 to 2016. Mayor Fiegen also noted 'Christmas at the Dells' was misspelled in the minutes. Earley motioned to approve the minutes of the regular session on November 16, 2015, with the changes stated as above, seconded by Crisp. Motion carried.

Approval of Minutes November 23, 2015 Special Session:
Geraets requested Earley be added to those present and Miles be removed. Geraets also requested the following be added: During the discuss of the motion made by Councilman Earley and before the roll call vote was taken Councilman Geraets asked Public Works Director Larry Schildhauer if he felt current city staff could handle the additional responsibilities of the SBR system. Mr. Schildhauer replied that with additional training he was confident that the present staff could handle the additional responsibility. Sommerfeld motioned to approve the minuets of the special session on November 23, 2015, with the changes as stated above, seconded by Geraets. Motion carried.

Visitors to be Heard: None

Public Hearing – Ordinance No. 826: Re-Zone Lot 6 of Herding Addition From NRC: Natural Resource Conservation District to B-2: General Business District – First Reading
Sommerfeld motioned to approve Ordinance No. 826, Seconded by Klockman. Motion carried. Burggraff abstained.

Public Hearing – DENR State Water Plan Loan Application Resolutions

A.) 2015-18: 10th Street/HWY 115 Project Drinking Water Application
Janice Gravning with SECOG addressed the Council and answered questions. The City, with SECOG's assistance, will be submitting applications to the Department of Environment & Natural Resources (DENR) for a $705,000 Drinking Water State Revolving Fund (DW-SRF) Loan for the 10th Street and Highway 115 Project. The interest Rate for the loan is 3.25% for a term of 30 years. Burggraff motioned to approve Resolution 2015-18, seconded by Haak. Motion carried.

B.) 2015-19: 10th Street/HWY 115 Project Clean Water Application
Janice Gravning with SECOG addressed the Council and answered questions. The City, with SECOG's assistance, will be submitting applications to the Department of Environment & Natural Resources (DENR) for a $1,037,000 Clean Water State Revolving Fund (CW-SRF)

Loan. The interest Rate for the loan is 3.25% for a term of 30 years. Haak motioned to approve Resolution 2015-19, seconded by Sommerfeld. Motion Carried.

C.) **2015-20: Waste Water Treatement Facility Clean Water Application**
Janice Gravning with SECOG addressed the Council and answered questions. Trent with DGR was also available to answer questions from the Council. The City, with SECOG's assistance, will be submitting an application to the Department of Environment & Natural Resources (DENR) for a $5,758,000 Clean Water State Revolving Fund (CW-SRF) Loan for the Wastewater Treatment Facility Project. The interest rate for the loan is 3.25% for a 30 year term. Sommerfeld motioned to approve Resolution 2015-20, seconded by Crisp. Motion carried.

Old Business
Ordinance No. 822 – Accept Referendum Petitions/Set Election Date

Accept Referendum - The floor was open to community members for questions. The questions revolved around what the referendum petition was for. City Administrator Weiland stated that the petitions received by the City of Dell Rapids were a formal, written request that Ordinance 822, as passed by the governing board of the municipality on October 19th, 2015, be submitted to the voters for their approval or rejection. Crisp motioned to accept the referendum petitions, seconded by sommerfeld. Motion carried.

Set Election Date – Crisp motioned to set the election date to coincide with the Municipal Election on April 12, 2016, seconded by Sommerfeld. Motion Carried.

Resolution No. 2015-13: 2016 Grand Opera House Operating Agreement
Burggraff motioned to table, seconded by Haak. Motion Carried.

Ordinance No. 825 Amend Section 21-39 Increase the Deposit for Water Service – 2nd Reading and Adoption
The Ordinance reflects a new deposit of $125.00 for renting or leasing property. Haak motioned to approve the 2nd reading of Ordinance No. 825, seconded by Klockman. Roll Call: Geraets – Aye, Sterud – Aye, Klockman – Aye, Crisp – Aye, Earley – Aye, Burggraff – Aye, Haak – Aye, Sommerfeld – Aye. Motion Carried 8-0.

New Business
Fire Department 2016 Agreement –
The City established a service agreement with the Dell Rapids Fire Department in 2013. This agreement for 2016 remains the same as 2015 with the contribution to the Fire Department set at $43,558.00.Burggraff moved to approve, seconded by Earley. Motion carried.

Minnehaha County Sherriff Department 2016 Agreement –
Minnehaha County gave notice prior to the 2016 Budget acceptance of a 2.8% increase for 2016 services. The Council discussed the agreement and asked questions on the service provided. Haak motioned to approve the 2016 agreement, seconded by Sterud. Motion carried.

Ordinance No. 827: Waste Water Rate Increase – First Reading

The City Council approved a 20% increase in sewer rates in the 2016 adopted budget. The Council agreed to the rate increase because of the impending wastewater treatment facility project. This increase will be the first of a phased in increase to cover the costs of the new treatment facility. The total increase will not be known until the City receives the final funding package from the DENR. The increase recommended is as follows:

- Increase base rate from $15.25 to $18.34.
- Increase per 1,000 gallons rate from $4.22 to $5.06
- Total increase 5,000 gallon user $7.26 per month.

Haak motioned to approve the first reading of Ordinance No. 827, seconded by Sommerfeld. Motion carried.

Chamber of Commerce Update

Dan Ahlers with the Chamber of Commerce addressed the Council. Mr. Ahlers updated the Council on their most recent accomplishments and events and provided plans for upcoming Chamber activities and events. The Chamber produces a newsletter for Chamber members, Christmas at the Dells was a bigger success than prior years, and they have holiday punch cards distributed in the community for a chance to win a Samsung Galaxy Tablet (purchased locally). The Chamber is also in the process of lining up vendors and entertainment for Quarry Days 2016 as well as working on a Shop Local Campaign.

Hwy 115 Project Phase 2 – T&C's Intersection Design

Mike Park of T&C's addressed the Council and has requested the Council consider the design for the south side of his property at the intersection of 4th Street and Hwy 115. Mr. Park is concerned that with the angle of the intersection large trucks and semis will have a hard time accessing the gas tanks if the entrance is reduced in size. However, Mr. Park is in favor of dressing up the corner and is willing to consider other types of curb such as rollover or gutter type curbs. Administration has had conversations with the DOT and it is their opinion that a 50 foot approach provides all the access that is needed and is the largest they allow anywhere in the state. The difference with this area is that it is within the City's jurisdiction. As such, they will follow the City's direction to a certain extent. The City and the DOT will need to work together to come to a mutual agreement on the T&C entrance footage. Burggraff motioned to work with the DOT to leave T&C's entrance as wide as it currently is to allow adequate access for Semi's and other large vehicles, seconded by Sommerfeld. Motion carried.

HWY 115 Project – DOT Temporary Construction Easements

The DOT is seeking signature of temporary construction easements on the following three properties 1.) City Shop, 2.) Dells Drive Overlook area 3.) leaf drop property. The DOT is offering $1,315.00 for the temporary easements which expire one year after the project is completed. Burggraff motioned to approve signature of the three requested temporary construction easements, seconded by Klockman. Motion carried.

Christmas Eve – City Hall Hours

Recommend the Council discusss and make a decision whether or not to allow the closure of the City officer on December 24th at 12:00 noon. Haak motioned to allow City Hall to close at 12:00 noon and the City employees to take 4 hours accrued vacation time, seconded by Sommerfeld. Motion carried.

Claims Payable

Earley moved to approve the claims as presented, seconded by Sommerfeld. Motion carried.

A-OX WELDING SUPPLY COMPANY, INC	NOVEMBER CYLINDER RENTAL	GENERAL FUND	28.27
ARGUS LEADER	NOVEMBER BILL	GENERAL FUND	691.54
BAARTMAN, CLAIRE	REIMB. FOR DUMP TRUCK LICE	GENERAL FUND	14.00
BEAL DISTRIBUTING, INC	NOVEMBER MALT	LIQUOR FUND	26,479.36
BORNS GROUP	NOVEMBER BILLING	WATER FUND	303.87
	NOVEMBER BILLING	WASTEWATER FUND	303.87
CEDAR SHORE RESORT	SAFETY TRAINING	GENERAL FUND	110.45
CENGAGE LEARNING, INC	2 BOOKS	GENERAL FUND	54.96
CITY OF DELL RAPIDS	NOVEMBER WATER BILL	GENERAL FUND	168.29
DAKOTA BEVERAGE CO, INC.	NOVEMBER MALT	LIQUOR FUND	17,550.21
DAKOTA SUPPLY GROUP	WATER SUPPLIES	WATER FUND	1,010.66
DAKOTA TECHNOLOGY CONSULTING	CH MANAGED SERVICES/BACKUP	GENERAL FUND	1,106.02
DELL RAPIDS ACE	STREET SUPPLIES	GENERAL FUND	144.06
	WATER SUPPLIES	WATER FUND	26.46
DELL RAPIDS LUMBER COMPANY	STREET SUPPLIES	GENERAL FUND	5.96
DELLS ELECTRIC, INC	STREET R&M	GENERAL FUND	192.00
	SEWER R&M	WASTEWATER FUND	107.94
DELLS FARM & TIRE	STREET R&M	GENERAL FUND	35.00
	TRANSIT ROTATE TIRES	GENERAL FUND	30.00
DELLS MATERIALS	STREET SUPPLIES	GENERAL FUND	96.00
DELTA DENTAL	DENTAL INS	GENERAL FUND	419.25
	DENTAL INS	WATER FUND	115.13
	DENTAL INS	WASTEWATER FUND	115.12
DGR	QUARTZITE STREET IMPROVEME	GENERAL FUND	7,878.00
	MISCELLANEOUS ENGINEERING	GENERAL FUND	240.00
	HWY 115 UTILITY REPPLACEME	WATER FUND	1,540.75
	HWY 115 UTILITY REPPLACEME	WASTEWATER FUND	1,540.75
	NORTHVIEW/10TH STREET	WASTEWATER FUND	1,439.63
	WWTF IMPROVEMENTS	WASTEWATER FUND	6,327.00
ED'S PRODUCE	STREET DEPARTMENT GLOVES	GENERAL FUND	121.00
EFTPS	FEDERAL WITHHOLDING	GENERAL FUND	7,194.84
	FEDERAL WITHHOLDING	WATER FUND	2,026.13
	FEDERAL WITHHOLDING	WASTEWATER FUND	2,026.16
ENTRINGER BACKHOE & TRENCHING, LLC	WATER R&M	WATER FUND	714.12
FIRST BANK CARD	CITY CAR - FUEL	GENERAL FUND	59.22
	BOOKS/SUPPLIES	GENERAL FUND	228.76
	OFFICE/SHOP SUPPLIES	GENERAL FUND	148.49
	OFFICE/SHOP SUPPLIES	WATER FUND	37.12
	OFFICE/SHOP SUPPLIES	WASTEWATER FUND	37.12
GARBAGE N MORE	DECEMBER GARBAGE SERVICE	GENERAL FUND	75.00
GEOTEK ENGINEERING & TESTING SERVICES,	QUARTZITE STREET	GENERAL FUND	2,537.50

	WWTF IMPROVEMENTS	WASTEWATER FUND	1,480.00
GLOBAL DISTRIBUTING	NOVEMBER LIQUOR	LIQUOR FUND	425.50
GOLDEN WEST TELECOMMUNICATIONS	NOVEMBER PHONE BILL	GENERAL FUND	428.31
	NOVEMBER PHONE BILL	LIQUOR FUND	46.09
	NOVEMBER PHONE BILL	WATER FUND	170.28
	NOVEMBER PHONE BILL	WASTEWATER FUND	211.05
GRUIS, KARLA	CLEAN CH/LIB	GENERAL FUND	960.00
HANSON LOGOWEAR INC	CLOTHING	GENERAL FUND	62.28
HD SUPPLY WATERWORKS	WATER SUPPLIES	WATER FUND	465.84
J D'S HOUSE OF TROPHIES	EARLEY NAME PLATE	GENERAL FUND	11.25
JOHNSON BROTHERS FAMOUS BRANDS INC	NOVEMBER LIQUOR	LIQUOR FUND	10,320.41
LG EVERIST, INC	SALT/SAND	GENERAL FUND	2,357.70
	SALT/SAND	GENERAL FUND	2,931.82
	STREET - CRUSHED ROAD STON	GENERAL FUND	356.76
	STREET SUPPLIES	GENERAL FUND	372.77
	STREET - CRUSHED ROAD STON	GENERAL FUND	271.67
LINWELD, INC	STREET SUPPLIES	GENERAL FUND	38.70
MIDAMERICAN ENERGY COMPANY	UTILITY BILL	GENERAL FUND	212.86
	UTILITY BILL	WATER FUND	14.99
	UTILITY BILL	WASTEWATER FUND	14.99
MINNEHAHA COMMUNITY WATER, CORP	NOVEMBER SHOP WATER	GENERAL FUND	12.17
	NOVEMBER WATER 6,057K @1.4	WATER FUND	8,843.22
	NOVEMBER SHOP WATER	WATER FUND	12.17
	NOVEMBER SHOP WATER	WASTEWATER FUND	12.16
MINNEHAHA COUNTY REGISTER OF DEEDS	REGISTER OF DEEDS	GENERAL FUND	90.00
NAPA AUTO PARTS	STREET SUPPLIES	GENERAL FUND	188.21
NORTHERN TRUCK EQUIPMENT CORP.	SNOW SUPPLIES	GENERAL FUND	500.82
PENWORTHY	BOOKS	GENERAL FUND	451.41
REPUBLIC NATIONAL DISTRIBUTING CO	LIQUOR 2ND HALF NOVEMBER	LIQUOR FUND	9,043.61
ROEMEN'S AUTOMOTIVE	TRANSIT BUS - OIL CHG AND	GENERAL FUND	137.10
SCHADE VINEYARD	NOVEMBER WINE	LIQUOR FUND	528.00
SCHUNEMAN EQUIPMENT COMPANY	SNOW SUPPLIES	GENERAL FUND	196.90
SD STATE TREASURER, DEPT OF REVENUE	OCTOBER RECREATION TAX	GENERAL FUND	119.86
	LOTTERY 11.01.15-11.15.15	LIQUOR FUND	1,459.37
SDRS SUPPLEMENTAL RETIREMENT PLAN	ROTH RETIREMENT	GENERAL FUND	290.00
	ROTH RETIREMENT	WATER FUND	50.00
	ROTH RETIREMENT	WASTEWATER FUND	50.00
SEATING AND ATHLETIC FACILITY ENTERPRI	RICKEMAN FIELD - GRANDSTAN	GENERAL FUND	58,112.00
SOUTH DAKOTA RETIREMENT SYSTEM	RETIREMENT	GENERAL FUND	3,387.49
	RETIREMENT	WATER FUND	999.22
	RETIREMENT	WASTEWATER FUND	999.21
SOUTH EASTERN COUNCIL OF GOVERNMENTS	2016 SECOG DUES	GENERAL FUND	4,870.00
STAN HOUSTON EQUIP.CO.INC.	WATER SUPPLIES	WATER FUND	475.00

THOMPSON REUTERS, PROFESSIONAL SOFTWAR	CS FA SYSTEM - PAYMENT 1 O	GENERAL FUND	1,012.30
A.J. SWANSON	A.J. SWANSON: KOMMES ATTY	GENERAL FUND	2,054.89
PRAIRIE BERRY WINERY	NOV WINE	LIQUOR FUND	714.00
WILDERMUTH, PAUL	CLOTHING	WATER FUND	97.97
	CLOTHING	WASTEWATER FUND	97.97
XCEL ENERGY	NOV UTILITY BILL	GENERAL FUND	3,762.32
	NOV UTILITY BILL	WATER FUND	621.85
	NOV UTILITY BILL	WASTEWATER FUND	573.11
PAYROLL EXPENSES	11/01/2015 - 11/30/2015	GENERAL FUND	31,436.93
		WATER FUND	8,326.63
		WASTEWATER FUND	8,326.65
			48,090.21

Administrator Report:

Personnel Annual Review(s) - Update: Public Works Director Schildhauer conducted personnel performance reviews for Public Works Equipment Operators, Paul Wildermuth, Les Fennicle and Chris Mergen. Based on performance Administrator Weiland and PW Director Schildhauer are recommending the following merit increases; Paul Wildermuth currently $18.60 per hour recommend 2% increase to $18.97, Les Fenicle currently $23.22 per hour recommend 2% increase to $23.66, and Chris Megen currently $17.70 per hour recommend 2% increase to $18.05. Each effective to anniversary dates of November 11th, November 14th, and November 10th, respectively. We thank these employees for their hard work and for their service making our community better.

SE Sewer Extension Connection District: The City has identified approximately 70 properties to connect to the SE sewer extension. Notice of hearings will be published, and hearings will be held for the property owners the first part of 2016.

10th Street Project – DOT Community Access Grant: The City has successfully received a $400,000 Community Access Grant from the Department of Transportation for the 10th Street project. Administration is working with Lance Mayer (DGR) to distribute the grant proceeds across the project and determine how this will affect the property owners. City Administration plans to present a proposed assessment plan to the Council at the December 21st meeting. Following approval from the Council Administration will communicate these newly proposed assessments with the property owners and begin the assessment process.

Xcel Energy Community Grant: The City was successful at obtaining a grant award of $6,250.00 from Xcel Energy to assist the City with the costs associated with the construction of Quartzite Street. Administration applied for the annual grant in October and wanted to take the opportunity to provide Xcel with a thank you and recognition for their grant. Administration also wanted to ask the Council if they wanted to keep the grant for the City or potentially forward the funds to the Economic Development Corporation to cover their costs associated with Quartzite Street and their recent efforts to attract Midwest Fresh Logistics. Sommerfeld motioned to forward the funds to the Dell Rapids EDC, seconded by Geraets. Motion carried.

Motion to adjourn at 9:22 by Burggraff, second by Haak. Motion carried.

Jean Crowe
LOGOUT

SAM.gov will be down for scheduled maintenance Saturday 10/31/2015 from 6:00 PM to 11:30 PM (EDT).

Entity Dashboard

Entity Overview

- Entity Record
- Core Data
- Assertions
- Reps & Certs
- POCs
- Reports
- Service Contract Report
- BioPreferred Report
- Exclusions
- Active Exclusions
- Inactive Exclusions
- Excluded Family Members

RETURN TO SEARCH

Dell Rapids, City Of
DUNS: 170381602 CAGE Code: 5HE93
Status: Active

302 E 4th St
Dell Rapids, SD, 57022-1926,
UNITED STATES

Expiration Date: 10/27/2016
Purpose of Registration: Federal Assistance Awards Only

Entity Overview

Entity Information

Name: Dell Rapids, City Of
Doing Business As: City Hall
Business Type: US Local Government
POC Name: Claire Baartman
Registration Status: Active
Activation Date: 10/28/2015
Expiration Date: 10/27/2016

Exclusions

Active Exclusion Records? No

Note to all Users: This is a Federal Government computer system. Use of this system constitutes consent to monitoring at all times.

Facilities Plan
for
2016 Drinking Water
and
Clean Water Improvements

Dell Rapids, South Dakota

December 2015

DGR Project No. 662070

FACILITIES PLAN
FOR
2016 DRINKING WATER
AND
CLEAN WATER IMPROVEMENTS

DELL RAPIDS, SOUTH DAKOTA

I hereby certify that this plan, specification
or report was prepared by me or under my direct
supervision and that I am a duly
Registered Professional Engineer under the
laws of the State of South Dakota.

By_____

Gabriel, G Laber, P.E.
Registration No. 9236

DGR Engineering

Rock Rapids, IA • Sioux Falls, SD • Sioux City, IA • Ankeny, IA
(712) 472-2531 (605) 339-4157 (712) 266-1554 (515) 963-3488

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INTRODUCTION

BACKGROUND INFORMATION

The City of Dell Rapids has authorized the preparation of this Facilities Plan to address the needs for improvements to the City's sanitary sewer, water main and storm sewer systems. This plan describes the utility infrastructure needs relating to these projects.

SCOPE OF WORK

The South Dakota Department of Transportation (SDDOT) plans to reconstruct SD Highway 115 through Dell Rapids in 2017. The City needs to replace their utilities in this area before the road is reconstructed.

There have been a number of water quality complaints over the last few years all along 10th Street and the nearby areas including the hospital. The City needs to replace the cast iron water main to correct this problem. There is also clay sanitary sewer and brick manholes that will be replaced at the same time.

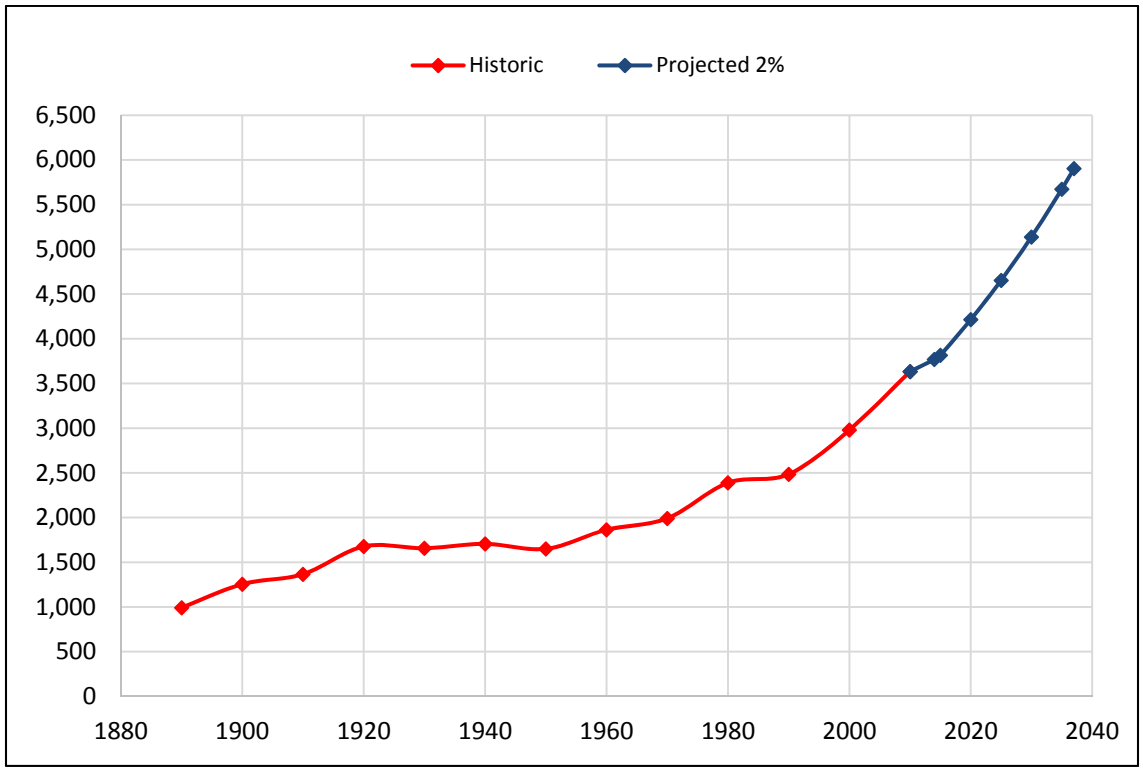
COMMUNITY INFORMATION

LOCATION

The City of Dell Rapids is located along South Dakota Highway 115 approximately twenty miles north of Sioux Falls, South Dakota and approximately three miles east of Interstate 29.

POPULATION STATISTICS

The 2010 census data indicated a population of 3,633 for Dell Rapids. The City has averaged a 1.9% growth rate between the years 1990 - 2010. Because of the proximity to Sioux Falls, it is felt that the population will continue to increase as the Sioux Falls Metropolitan area continues to grow. An average growth rate of 2.0% has been projected forward and shown in the following figure.



Population Trend

EXISTING AND FUTURE CONDITIONS

PROJECTED NEED AND PLANNING AREA IDENTIFICATION

SD Highway 115 Utility Improvements

The South Dakota Department of Transportation (SDDOT) plans to reconstruct SD Highway 115 through Dell Rapids from the Colton Road, approximately 2 miles south of Dell Rapids, to Interstate 29, approximately 3 miles west of Dell Rapids. The SDDOT plans to construct this project in two phases, the first taking place in 2016 from the Colton Road to the Big Sioux River and the second taking place in 2017 from the Big Sioux River to Interstate 29. In the 2017 portion, there are a number of old and dilapidated water mains and sanitary sewer mains that will be in the area of construction. The City plans to replace these utilities, along with improving the drainage in the adjacent area, to facilitate existing needs and reduce maintenance costs related to the age and condition of the existing infrastructure. Coordination with the SDDOT as part of their project will significantly reduce the costs to replace these utilities in the future.

10th Street

There have been a number of water quality complaints over the last few years all along 10th Street and the nearby areas including the hospital. Due to these issues, the City plans to replace the water mains in this area with new PVC along with performing sanitary sewer installation and replacement to facilitate the City's needs. Replacing these old asbestos cement and cast iron water mains along with replacing the existing brick manholes and vitrified clay pipe sanitary sewer mains will help reduce maintenance costs related to the age and condition of the existing infrastructure.

EXISTING WASTEWATER FLOWS

Historical wastewater flow data as measured at the main lift station that pumps all the City's wastewater to the treatment system was provided by the City for the years 2010 to 2015. This data is summarized in the following table.

Historic Wastewater Flows

	2010		2011		2012		2013		2014		2015	
	Total Flow	Ave Flow	Total Flow	Ave Flow	Total Flow	Ave Flow	Total Flow	Ave Flow	Total Flow	Ave Flow	Total Flow	Ave Flow
Month	(gal)	(gpd)	(gal)	(gpd)	(gal)	(gpd)	(gal)	(gpd)	(gal)	(gpd)	(gal)	(gpd)
January	0	0	6,287,000	202,806	5,039,000	162,548	5,566,000	179,548	5,261,000	169,710	5,172,000	166,839
February	0	0	6,208,000	221,714	2,344,700		5,260,000	187,857	4,754,000	169,786	4,512,000	161,143
March	0	0	10,395,000	346,500	6,212,000	200,387	5,802,000	187,161	5,804,000	187,226	5,506,000	177,613
April	0	0	9,715,000	323,833	6,692,000	223,067	5,553,000	191,483	5,356,000	178,533	5,323,000	177,433
May	936,000		10,091,000	336,367	9,510,000	306,774	6,190,000	199,677	5,372,000	179,067	6,114,000	197,226
June	3,702,000	123,400	9,018,000	322,071	7,309,000	243,633	6,545,000	218,167	9,147,000	304,900	5,813,000	200,448
July	6,349,000	204,806	14,935,000	481,774	6,224,000	200,774	5,746,000	185,355	5,492,000	196,143	5,987,000	206,448
August	7,671,000	247,452	8,939,000	288,355	5,891,000	190,032	5,531,000	178,419	5,800,000	187,097	6,390,000	206,129
September	17,142,000	591,103	2,049,000		5,391,000	179,700	4,999,000	166,633	5,312,000	183,172	5,201,000	185,750
October	8,292,000	267,484	0		5,319,000	177,300	5,212,000	168,129	5,258,000	169,613	5,592,000	180,387
November	7,117,000	237,233	3,244,000		5,225,000	174,167	5,058,000	168,600	5,057,000	168,567	5,503,000	189,759
December	6,824,000	220,129	5,770,000	186,129	5,341,000	172,290	5,273,000	170,097	5,275,000	170,161	1,667,000	
Total	58,033,000		86,651,000		70,497,700		66,735,000		67,888,000		62,780,000	
Average		270,230		301,061		202,788		183,427		188,665		186,289
Max Month		591,103		481,774		306,774		218,167		304,900		206,448

A review of the main lift station records since May 2010 determined an average daily flow of 222,077 gpd. This results in an average per capita flow of 61 gallons per capita per day (gpcpd).

WASTEWATER EFFLUENT LIMITATIONS

This is a collection system project and therefore, will have no impact to the City's effluent limitations. The City is planning a separate treatment system project that will address their issues with effluent violations.

INFILTRATION AND INFLOW (I/I)

Infiltration and inflow (I&I) exists within all sanitary sewer systems. Wastewater that flows to a City's treatment system contains domestic waste, commercial waste and clear water. I&I is considered clear water. Infiltration is clear water that seeps through cracks and joints of pipe and manholes. Inflow is clear water that comes from sumps pumps, storm sewer inlets and roof drains that are connected to the sanitary sewer system. Clear water entering through open pick manholes is also considered inflow.

Chapter 1.C.2 of the South Dakota Recommended Design Criteria Manual states that "Projected wastewater flows for a community could be calculated by using 80 percent of the actual water consumption". It can be assumed that during the winter months of December, January and February that 100% of the metered water at the customer will go down the sewer because the customer isn't watering their lawn or washing vehicles. Historic metered water sales indicate an average metered water usage of 201,752 gpd or 53 gpcpd.

The amount of I&I that is going to the treatment system can be determined by comparing the billed water records to the main lift station records. Comparing these two numbers results in an I&I rate of 20,325 gpd (222,077 – 201,752).

There are no specific areas in town that create an abnormal amount of clear water intrusion; however, as the system ages, this situation is likely to worsen. In recent years, the City of Dell Rapids has replaced old sewer lines in the southern portion of town where infiltration and inflow

was known to be a problem. Such replacement projects have helped to reduce the infiltration and inflow into the City's sanitary sewer system. The City has an ordinance prohibiting the connection of a sump pump to the sanitary sewer collection system. This ordinance also prohibits any type of storm water collection system to discharge into the sanitary sewer collection system.

The City's sanitary sewer maintenance program includes scheduled jetting and cleaning of portions of the collection system. Flat sewer segments or troublesome areas are jetted every two to three months. Sewer segments with heavy flows at moderate grades are jetted annually. Sewer segments that have not historically accumulated debris are jetted every two or three years.

FUTURE WASTEWATER CONDITIONS

It is anticipated that the City of Dell Rapids will continue to grow based on their proximity to the City of Sioux Falls and the Interstate 90 and Interstate 29 corridor. The proposed improvements will reduce infiltration and inflow and provide more capacity to allow for growth.

The Population Statistics Section indicated a 2% annual population increase going forward. The projected wastewater flows based on this population growth are shown in the following table. The historic flows recorded at the main lift station indicated a per capita flow of 61 gpcpd. The amount of I&I was determined to be 20,325 gpd or 5 gpcpd. Chapter 1.C.2 of the South Dakota Recommended Design Criteria Manual states 75 gpcpd shall be used for communities with flows less than 1,000,000 gpd. Therefore, the calculated I&I rate will be increased to 14 gpcpd to bring the total flows to 75.

Wastewater Flows

	Current	Future
	2015	2035
Population	3,817	5,674
Wastewater Flow (gpcpd)	61	61
Infiltration & Inflow (gpd)	20,324	79,436
	253,161	425,550

EXISTING WATER USAGE

The City of Dell Rapids purchases all of their water from Minnehaha Community Water Corporation (MCWC). The historic water records for the years of 2011 through 2015 are shown in the following table.

Water Usage

	2011		2012				2013			
	Purchased		Purchased		Sold		Purchased		Sold	
	Total Flow	Ave Flow	Total Flow	Ave Flow	Total Flow	Ave Flow	Total Flow	Ave Flow	Total Flow	Ave Flow
Month	(gal)	(gpd)	(gal)	(gpd)	(gal)	(gpd)	(gal)	(gpd)	(gal)	(gpd)
January			7,041,000	227,129			7,013,000	226,226	6,060,400	195,497
February			6,413,000	221,138			6,372,000	227,571	5,519,700	197,132
March			6,752,000	217,806			6,705,000	216,290	5,262,500	169,758
April			7,287,000	242,900			6,435,000	214,500	5,659,300	188,643
May			8,468,000	273,161			7,687,000	247,968	5,286,900	170,545
June			11,500,000	383,333			8,444,000	281,467	7,645,100	254,837
July			16,030,000	517,097	12,582,600	405,890	13,381,000	431,645	10,626,500	342,790
August			10,751,000	346,806	11,807,900	380,900	11,627,000	375,065	10,450,000	337,097
September	8,323,000	277,433	9,994,000	333,133	9,447,000	314,900	9,997,000	333,233	11,392,000	379,733
October	7,567,000	244,097	7,892,000	254,581	8,046,400	259,561	7,329,000	236,419	6,996,700	225,700
November	6,319,000	210,633	6,546,000	218,200	6,006,800	200,227	6,419,000	213,967	5,871,700	195,723
December	6,677,000	215,387	6,671,000	215,194	8,640,000	278,710	6,559,000	211,581	5,541,300	178,752
Total	28,886,000		105,345,000		56,530,700		97,968,000		86,312,100	
Average (gpd)		236,888		287,540		306,698		267,994		236,351
Average (gpcpd)		65		78		84		72		64
Max Month	8,323,000		16,030,000		12,582,600		13,381,000		11,392,000	
Water Loss (%)							12%			

	2014				2015			
	Purchased		Sold		Purchased		Sold	
	Total Flow	Ave Flow	Total Flow	Ave Flow	Total Flow	Ave Flow	Total Flow	Ave Flow
Month	(gal)	(gpd)	(gal)	(gpd)	(gal)	(gpd)	(gal)	(gpd)
January	6,523,000	210,419	6,020,600	194,213	6,921,000	223,258	5,840,700	188,410
February	6,057,000	216,321	5,673,100	202,611	5,952,000	212,571	5,664,600	202,307
March	6,857,000	221,194	5,161,500	166,500	6,609,000	213,194	5,132,600	165,568
April	7,112,000	237,067	5,769,200	192,307	6,850,000	228,333	6,121,200	204,040
May	8,622,000	278,129	6,081,900	196,190	8,464,000	273,032	7,259,600	234,181
June	8,059,000	268,633	7,615,400	253,847	8,899,000	296,633	7,712,900	257,097
July	13,222,000	426,516	9,950,400	320,981	11,053,000	356,548	9,247,800	298,316
August	10,165,000	327,903	10,599,900	341,932	9,116,000	294,065	9,445,100	304,681
September	7,577,000	252,567	7,255,200	241,840	8,597,000	286,567	8,325,200	277,507
October	7,096,000	228,903	5,940,900	191,642	7,318,000	236,065	6,899,900	222,577
November	6,465,000	215,500	5,895,700	196,523	6,170,000	205,667	5,815,900	193,863
December	6,630,000	213,871	5,522,300	178,139	1,931,000	62,290		
Total	94,385,000		81,486,100		87,880,000		77,465,500	
Average (gpd)		258,085		223,060		256,903		231,686
Average (gpcpd)		69		60		68		61
Max Month	13,222,000		10,599,900		11,053,000		9,445,100	
Water Loss (%)	14%				10%			

Based on the historic records the water purchased average 71 gpcpd. This is slightly lower than the average of 81 gpcpd that is stated by Mays in the Water Distribution Systems Handbook. The table also indicates the average water loss is 12% which is under the industry recommended maximum of 15%.

EVALUATION OF DISTRIBUTION, STORAGE AND TREATMENT SYSTEMS

The City of Dell Rapids does not operate a water treatment system. The water supply for the City of Dell Rapids is secured from MCWC and delivered to the City by means of a dedicated main line from the rural water system's water treatment plant located to the south and west of the City. The City of Dell Rapids is currently contracted with MCWC for a maximum of 730 gpm which results in 1,051,200 gpd. The historic peak day purchased by the City was 628,000 gpd. The current contract with MCWC is adequate to meet the peak day demand.

The City constructed a new 500,000 gallon elevated storage tank at the southwest corner of 15th Street and Clark Avenue in 2004. Therefore, the water storage does not to be addressed.

The City has several areas of the water distribution system that consist of cast iron and asbestos cement. These projects will continue to be implemented to replace these outdated lines with new PVC.

WATER COMPLIANCE ISSUES

Currently, the City does not have any compliance issues with the water system.

FUTURE WATER CONDITIONS

It is anticipated that the City of Dell Rapids will continue to grow based on their proximity to the City of Sioux Falls and the Interstate 90 and Interstate 29 corridor. The proposed improvements will replace cast iron water main which will improve the capacity of the system and reduce maintenance.

The Population Statistics Section indicated a 2% annual population increase going forward. Based on this growth an average day usage of 402,854gpd (5,674 x 71) can be projected. The peak day also needs to be calculated. The Water Distribution Systems Handbook by Mays states that the U.S. range of maximum day to average day is 1.5 – 3.5:1. A review of the historic water usage records determined a recommended peaking factor of 2.48. This results in a future peak day of

999,078 gal (2.48 x 71 x 5,674). The current contract with MCWC is adequate to meet the future peak day demand.

DEVELOPMENT OF ALTERNATIVES

DEVELOPMENT OF ALTERNATIVES

The following alternatives were development to correct the deficiencies that were identified. Each alternative includes a description of the project, location map, cost estimate and present worth analysis. The cost estimates include construction, contingencies, engineering, testing, legal and financing.

PRESENT WORTH ANALYSIS

When analyzing the capital cost for each alternate, it is also worthwhile to consider the present worth analysis. The reason for this is because the lowest capital cost alternative may not be the most cost effective when operation and maintenance are taken into consideration. In addition, the SD DENR requires that a present worth analysis be completed for each alternative. For the purpose of this plan, the present worth analysis considers the capital cost, salvage value, and operation and maintenance over a 20 year period with an interest rate of 3%.

ALTERNATIVE #1 - NO ACTION

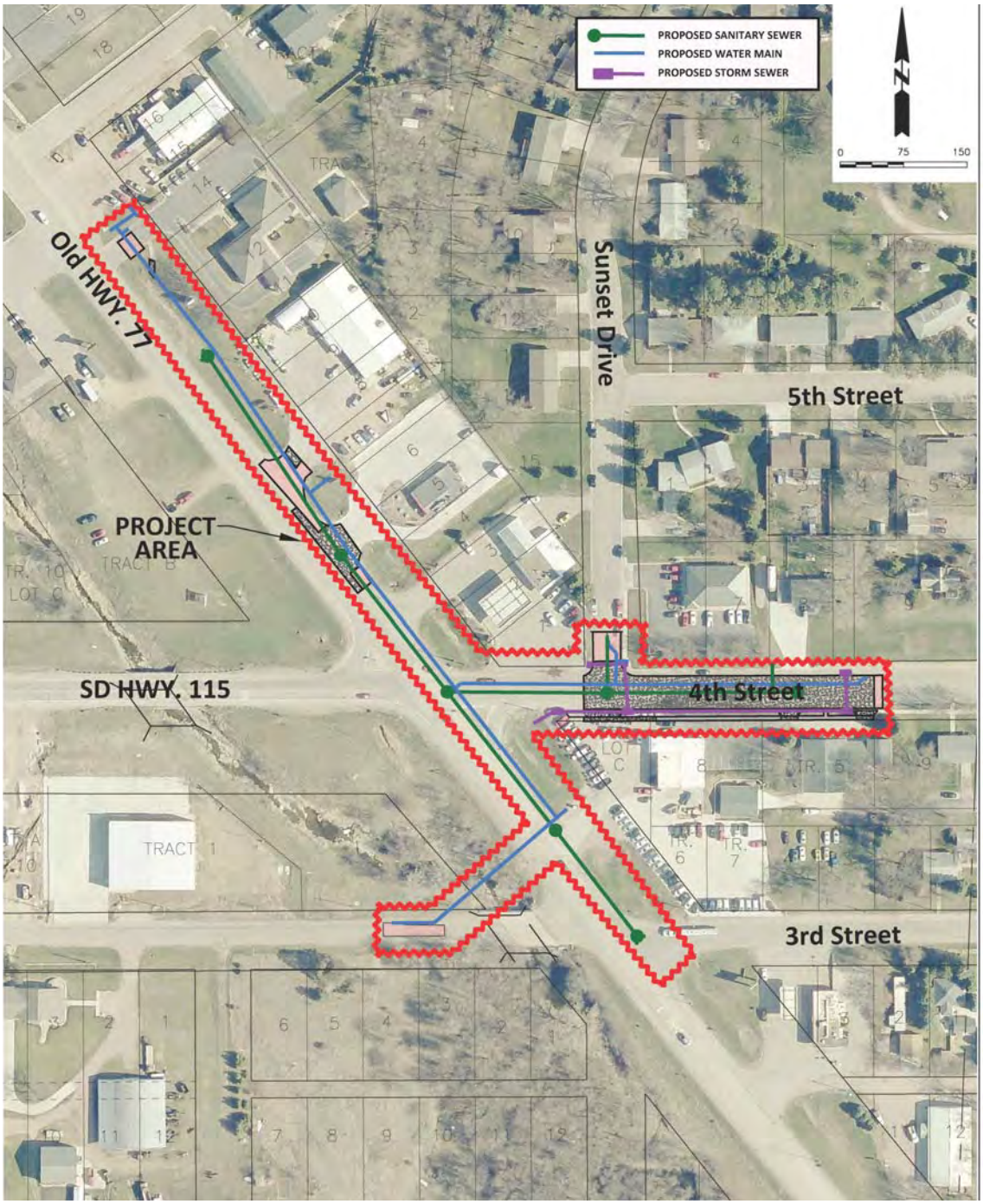
The “No Action” alternative would consist of no improvements at this time and would not correct any of the deficiencies with the existing utilities.

ALTERNATIVE #2 – SD HIGHWAY 115 UTILITY IMPROVEMENTS

The old cast iron water mains in this area will be replaced with approximately 1,900 feet of new 6” and 8” C900 DR18 water main pipe and will be installed by open-cut-trenching. Due to the presence of bedrock, blasting and rock excavation may be required. Installation of this main will begin on the west side of Rocky Run Creek at 3rd Street, cross the waterway, and will tie into existing lines on 4th Street, Sunset Drive, and Spring Meadow Drive.

A proposed 12” PVC sanitary sewer with appurtenances is planned to be installed by open-cut trenching. Due to the presence of bedrock, blasting may be required. Installation of the sanitary

sewer will begin at the intersection of 3rd Street and SD Highway 115 and continue north approximately 900 feet along SD115 and Old 77 and another 500 feet east on 4th Street. The following pages show a general location of the proposed improvements, cost estimate and present worth analysis for this alternative.



SD Highway 115 Utility Improvements

Cost Estimate for Alternative #2

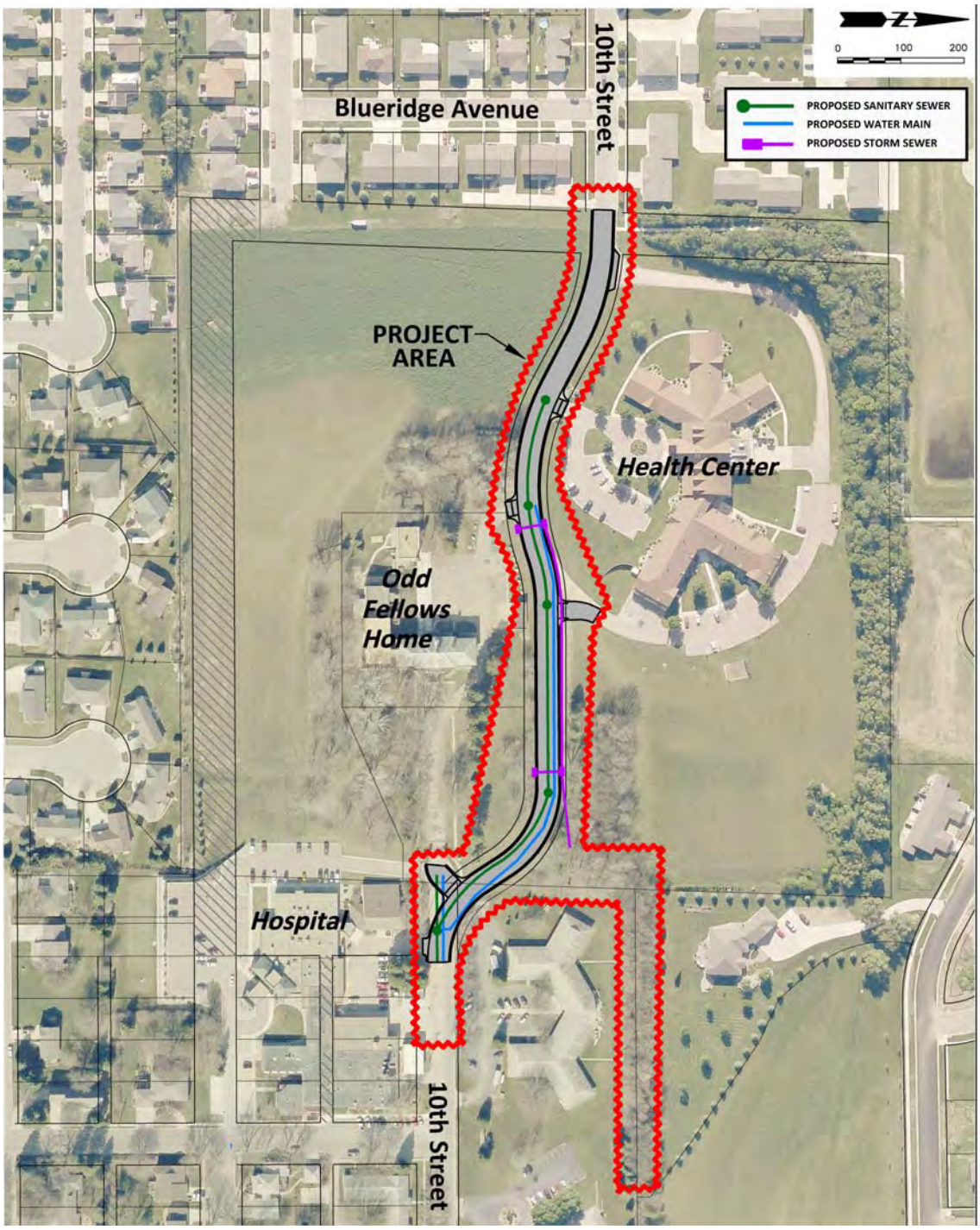
Item		Est		Unit	Total	CW SRF Eligible		DW SRF Eligible		SRF Ineligible	
Number	Description	Qty	Unit	Cost	Cost	UNITS	TOTAL	UNITS	TOTAL	UNITS	TOTAL
1	Mobilization	1	L.S.	45,000.00	45,000.00	0.53	24,030.00	0.402	18,090.00	0.064	2,880.00
2	Traffic Control	1	L.S.	10,000.00	10,000.00	0.50	5,000.00	0.50	5,000.00	0.00	0.00
3	Remove, Sawcut, and Dispose of Pavement	3,300	SQYD	5.00	16,500.00	1,762	8,811.00	1,327	6,633.00	211	1,056.00
4	Remove Existing Utilities	1	L.S.	10,000.00	10,000.00	0.50	5,000.00	0.50	5,000.00	0.00	0.00
5	Clear and Grub Tree	6	EACH	500.00	3,000.00	0	0.00	6	3,000.00	0	0.00
6	Incidental Work (Grading)	1	L.S.	5,000.00	5,000.00	0.53	2,670.00	0.40	2,010.00	0.06	320.00
7	Incidental Work (Utilities)	1	L.S.	5,000.00	5,000.00	0.50	2,500.00	0.50	2,500.00	0.00	0.00
8	Unclassified Excavation	1,100	CUYD	8.00	8,800.00	587	4,699.20	442	3,537.60	70	563.20
9	Contractor Furnished Select Fill	250	CUYD	10.00	2,500.00	125	1,250.00	125	1,250.00	0	0.00
10	Rock Excavation	200	CUYD	350.00	70,000.00	100	35,000.00	100	35,000.00	0	0.00
11	6" Scarify and Recompact Subgrade	3,100	SQYD	2.00	6,200.00	1,655	3,310.80	1,246	2,492.40	198	396.80
12	Aggregrate Base Course	1,700	TON	15.00	25,500.00	908	13,617.00	683	10,251.00	109	1,632.00
13	Geotextile Fabric	1,000	SY	3.00	3,000.00	534	1,602.00	402	1,206.00	64	192.00
14	Asphalt Concrete Composite	220	TON	100.00	22,000.00	110	11,000.00	110	11,000.00	0	0.00
15	8" Non Reinforced Concrete Pavement	1,900	SY	45.00	85,500.00	713	32,062.50	713	32,062.50	475	21,375.00
16	Dowel Bars	1,200	EACH	10.00	12,000.00	450	4,500.00	450	4,500.00	300	3,000.00
17	8" Curb and Gutter	710	L.FT	20.00	14,200.00	710	14,200.00	0	0.00	0	0.00
18	6" Curb and Gutter	110	L.FT	15.00	1,650.00	110	1,650.00	0	0.00	0	0.00
19	6" Concrete (Driveway/Approach)	200	SY	40.00	8,000.00	0	0.00	0	0.00	200	8,000.00
20	4" Concrete Sidewalk	1,000	SQFT	4.00	4,000.00	0	0.00	0	0.00	1,000	4,000.00
21	6" Concrete Sidewalk	820	SQFT	5.00	4,100.00	0	0.00	0	0.00	820	4,100.00
22	Storm Sewer RCP	600	L.FT	100.00	60,000.00	600	60,000.00	0	0.00	0	0.00
23	Inlets and Junction Boxes	6	EACH	3,000.00	18,000.00	6	18,000.00	0	0.00	0	0.00
24	Connect to Existing Storm Sewer	1	EACH	500.00	500.00	1	500.00	0	0.00	0	0.00
25	Granular Material	600	TON	10.00	6,000.00	600	6,000.00	0	0.00	0	0.00
26	6" C900 DR 18 Water Main w/Bedding Material	160	L.FT	25.00	4,000.00	0	0.00	160	4,000.00	0	0.00
27	8" C900 DR 18 Water Main w/Bedding Material	1,500	L.FT	30.00	45,000.00	0	0.00	1,500	45,000.00	0	0.00
28	8" Restrained Joint Water Main w/Bedding Material	200	L.FT	40.00	8,000.00	0	0.00	200	8,000.00	0	0.00
29	6" MJ Gate Valve/Box	5	EACH	1,300.00	6,500.00	0	0.00	5	6,500.00	0	0.00
30	8" MJ Gate Valve/Box	9	EACH	1,600.00	14,400.00	0	0.00	9	14,400.00	0	0.00
31	6" MJ Long Sleeve	5	EACH	400.00	2,000.00	0	0.00	5	2,000.00	0	0.00
32	6" MJ Bend	2	EACH	400.00	800.00	0	0.00	2	800.00	0	0.00
33	8" MJ Bend	8	EACH	500.00	4,000.00	0	0.00	8	4,000.00	0	0.00
34	6"x6" MJ Tee	1	EACH	450.00	450.00	0	0.00	1	450.00	0	0.00
35	8"x6" MJ Tee	4	EACH	500.00	2,000.00	0	0.00	4	2,000.00	0	0.00
36	8"x8" MJ Tee	4	EACH	550.00	2,200.00	0	0.00	4	2,200.00	0	0.00
37	8"x6" MJ Reducer	5	EACH	500.00	2,500.00	0	0.00	5	2,500.00	0	0.00
38	8" MJ Cap	1	EACH	250.00	250.00	0	0.00	1	250.00	0	0.00
39	Standard Hydrant	4	EACH	3,000.00	12,000.00	0	0.00	4	12,000.00	0	0.00
40	Connect to Existing Water Main	5	EACH	1,000.00	5,000.00	0	0.00	5	5,000.00	0	0.00
41	Water Service	8	EACH	2,500.00	20,000.00	0	0.00	8	20,000.00	0	0.00
42	8" PVC Sanitary Sewer w/Bedding Material	500	L.FT	40.00	20,000.00	500	20,000.00	0	0.00	0	0.00
43	12" PVC Sanitary Sewer w/Bedding Material	900	L.FT	50.00	45,000.00	900	45,000.00	0	0.00	0	0.00
44	48" Sanitary Manhole w/ Frame and Lid	7	EACH	4,000.00	28,000.00	7	28,000.00	0	0.00	0	0.00
45	Sanitary Sewer Service	7	EACH	2,500.00	17,500.00	7	17,500.00	0	0.00	0	0.00
46	PVC Sewer Wye	7	EACH	200.00	1,400.00	7	1,400.00	0	0.00	0	0.00
47	Connect to Existing Sanitary Sewer	6	EACH	500.00	3,000.00	6	3,000.00	0	0.00	0	0.00
48	Topsoil and Terrace Grading	1	L.S.	20,000.00	20,000.00	0.50	10,000.00	0.50	10,000.00	0.00	0.00
49	Seeding and Erosion Control	1	L.S.	30,000.00	30,000.00	0.50	15,000.00	0.50	15,000.00	0.00	0.00
				Subtotal:	$740,450.00		395,302.50		297,632.50		47,515.00
				Contingencies (20%):	$148,550.00		79,325.70		59,717.10		9,507.20
				Construction Subtotal:	**$889,000.00**		**474,628.20**		**357,349.60**		**57,022.20**
				Engineering & Admin:	$178,000.00		95,052.00		71,556.00		11,392.00
				Geotechnical/Testing Services:	$18,000.00		9,612.00		7,236.00		1,152.00
				Admin/Legal (2%):	$18,000.00		9,612.00		7,236.00		1,152.00
				Financing (5%):	$44,000.00		23,496.00		17,688.00		2,816.00
				Miscellaneous:	$9,000.00		4,806.00		3,618.00		576.00
				Total Estimated Project Cost:	**$1,156,000.00**		**617,206.20**		**464,683.60**		**74,110.20**

Present Worth for Alternative #2

Capital Cost Description	Price	Salvage Value	Present Worth of Salvage Value	Net Present Worth
Mobilization	$45,000	$0	$0	$45,000
Traffic Control	$10,000	$0	$0	$10,000
Remove, Sawcut, and Dispose of Pavement	$16,500	$0	$0	$16,500
Remove Existing Utilities	$10,000	$0	$0	$10,000
Clear and Grub Tree	$3,000	$0	$0	$3,000
Incidental Work (Grading)	$5,000	$0	$0	$5,000
Incidental Work (Utilities)	$5,000	$0	$0	$5,000
Unclassified Excavation	$8,800	$0	$0	$8,800
Contractor Furnished Select Fill	$2,500	$0	$0	$2,500
Rock Excavation	$70,000	$0	$0	$70,000
6" Scarify and Recompact Subgrade	$6,200	$0	$0	$6,200
Aggregrate Base Course	$25,500	$15,300	$8,471	$17,029
Geotextile Fabric	$3,000	$1,800	$997	$2,003
Asphalt Concrete Composite	$22,000	$13,200	$7,309	$14,691
8" Non Reinforced Concrete Pavement	$85,500	$51,300	$28,404	$57,096
Dowel Bars	$12,000	$7,200	$3,986	$8,014
8" Curb and Gutter	$14,200	$8,520	$4,717	$9,483
6" Curb and Gutter	$1,650	$990	$548	$1,102
6" Concrete (Driveway/Approach)	$8,000	$4,800	$2,658	$5,342
4" Concrete Sidewalk	$4,000	$2,400	$1,329	$2,671
6" Concrete Sidewalk	$4,100	$2,460	$1,362	$2,738
Storm Sewer RCP	$60,000	$36,000	$19,932	$40,068
Inlets and Junction Boxes	$18,000	$10,800	$5,980	$12,020
Connect to Existing Storm Sewer	$500	$0	$0	$500
Granular Material	$6,000	$3,600	$1,993	$4,007
6" C900 DR 18 Water Main w/Bedding Material	$4,000	$2,400	$1,329	$2,671
8" C900 DR 18 Water Main w/Bedding Material	$45,000	$27,000	$14,949	$30,051
8" Restrained Joint Water Main w/Bedding Material	$8,000	$4,800	$2,658	$5,342
6" MJ Gate Valve/Box	$6,500	$3,900	$2,159	$4,341
8" MJ Gate Valve/Box	$14,400	$8,640	$4,784	$9,616
6" MJ Long Sleeve	$2,000	$1,200	$664	$1,336
6" MJ Bend	$800	$480	$266	$534
8" MJ Bend	$4,000	$2,400	$1,329	$2,671
6"x6" MJ Tee	$450	$270	$149	$301
8"x6" MJ Tee	$2,000	$1,200	$664	$1,336
8"x8" MJ Tee	$2,200	$1,320	$731	$1,469
8"x6" MJ Reducer	$2,500	$1,500	$831	$1,669
8" MJ Cap	$250	$150	$83	$167
Standard Hydrant	$12,000	$7,200	$3,986	$8,014
Connect to Existing Water Main	$5,000	$0	$0	$5,000
Water Service	$20,000	$12,000	$6,644	$13,356
8" PVC Sanitary Sewer w/Bedding Material	$20,000	$12,000	$6,644	$13,356
12" PVC Sanitary Sewer w/Bedding Material	$45,000	$27,000	$14,949	$30,051
48" Sanitary Manhole w/ Frame and Lid	$28,000	$16,800	$9,302	$18,698
Sanitary Sewer Service	$17,500	$10,500	$5,814	$11,686
PVC Sewer Wye	$1,400	$840	$465	$935
Connect to Existing Sanitary Sewer	$3,000	$0	$0	$3,000
Topsoil and Terrace Grading	$20,000	$0	$0	$20,000
Seeding and Erosion Control	$30,000	$0	$0	$30,000
Remaining Capital Costs	$415,550	$0	$0	$415,550
Total Construction Cost	**$1,156,000**	**$299,970**	**$166,086**	**$989,914**
Annual Operation and Maintenance Cost				
Description	**Annual Cost**			**Net Present Worth**
Equipment	$1,000			$14,877
Supplies	$750			$11,158
Utilities	$0			$0
Labor	$2,000			$29,755
Total Annual Cost	**$3,750**			**$55,791**
			Total Net Present Worth	**$1,045,704**

ALTERNATIVE #3 – 10th STREET

Just over 800 feet of old cast iron water main and appurtenances (over 80 years old in some areas) will be replaced with a combination of new 6" and 8" C900 DR18 water main pipe. Approximately 1,000 feet of the existing vitrified clay sanitary sewer pipe and brick manholes will also be replaced along with providing drainage improvements as needed in this area. The existing asphalt street surfacing will be removed to install these utilities by open trench methods. The asphalt will be replaced to depths similar to that of the existing surfacing. The following pages show a general location of the proposed improvements, cost estimate and present worth analysis for this alternative.



10th Street Improvements

Cost Estimate for Alternative #3

Item		Est		Unit	Total	CW SRF Eligible		DW SRF Eligible		SRF Ineligible	
Number	Description	Qty	Unit	Cost	Cost	UNITS	TOTAL	UNITS	TOTAL	UNITS	TOTAL
1	Mobilization	1	L.S.	50,000.00	50,000.00	0.32	16,000.00	0.28	14,000.00	0.40	20,000.00
2	Traffic Control	1	L.S.	6,000.00	6,000.00	0.50	3,000.00	0.50	3,000.00	0.00	0.00
3	Remove, Sawcut, & Dispose of Existing Pvmt	3,400	SQYD	5.00	17,000.00	1,088	5,440.00	952	4,760.00	1,360	6,800.00
4	Clearing - Tree Removal	1	L.S.	15,000.00	15,000.00	0.32	4,800.00	0.28	4,200.00	0.40	6,000.00
5	Incidental Work (Grading)	1	L.S.	5,000.00	5,000.00	0.32	1,600.00	0.28	1,400.00	0.40	2,000.00
6	Incidental Work (Utilities)	1	L.S.	5,000.00	5,000.00	0.32	1,600.00	0.28	1,400.00	0.40	2,000.00
7	Unclassified Excavation	4,400	CUYD	5.00	22,000.00	1,408	7,040.00	1,232	6,160.00	1,760	8,800.00
8	Unclassified Excavation - Grade Stabilization	250	CUYD	8.00	2,000.00	80	640.00	70	560.00	100	800.00
9	8" Scarify and Recompact	6,000	SQYD	1.00	6,000.00	1,920	1,920.00	1,680	1,680.00	2,400	2,400.00
10	Geotextile Fabric	3,000	SQYD	3.00	9,000.00	960	2,880.00	840	2,520.00	1,200	3,600.00
11	Aggregate Base Course	4,200	TON	15.00	63,000.00	1,344	20,160.00	1,176	17,640.00	1,680	25,200.00
12	6" Concrete Pavement (Fillet/Valley Gutter)	130	SQYD	70.00	9,100.00	42	2,912.00	36	2,548.00	52	3,640.00
13	6" Concrete Pavement (Driveway Approach)	130	SQYD	50.00	6,500.00	42	2,080.00	36	1,820.00	52	2,600.00
14	Asphalt Concrete Composite	1,650	TON	80.00	132,000.00	528	42,240.00	462	36,960.00	660	52,800.00
15	Curb and Gutter - 6" Thick	2,600	L.FT	15.00	39,000.00	2,600	39,000.00	0	0.00	0	0.00
16	4" Concrete Sidewalk	13,000	SQFT	4.00	52,000.00	0	0.00	0	0.00	13,000	52,000.00
17	6" Concrete Sidewalk	630	SQFT	6.00	3,780.00	0	0.00	0	0.00	630	3,780.00
18	Detectable Warning Panel	70	SQFT	60.00	4,200.00	0	0.00	0	0.00	70	4,200.00
19	RECON Retaining Wall	1,200	SQFT	55.00	66,000.00	0	0.00	0	0.00	1,200	66,000.00
20	Salvage/Furnish and Place Topsoil	900	CUYD	10.00	9,000.00	288	2,880.00	252	2,520.00	360	3,600.00
21	Permanent Seeding (Quality Green Turf Mix)	300	LB	15.00	4,500.00	96	1,440.00	84	1,260.00	120	1,800.00
22	Hydromulching	2	TON	2,500.00	5,500.00	1	1,760.00	1	1,540.00	1	2,200.00
23	Temporary low flow silt fence	1,000	L.FT	5.00	5,000.00	320	1,600.00	280	1,400.00	400	2,000.00
24	Silt fence inlet protection	4	EACH	100.00	400.00	1	128.00	1	112.00	2	160.00
25	Inlet protection	4	EACH	100.00	400.00	1	128.00	1	112.00	2	160.00
26	Vehicle tracking control	2	EACH	1,000.00	2,000.00	1	640.00	1	560.00	1	800.00
27	9" erosion control wattles	100	L.FT	5.00	500.00	32	160.00	28	140.00	40	200.00
28	Drainage Ditch	600	L.FT	40.00	24,000.00	600	24,000.00	0	0.00	0	0.00
29	24" RCP, CL3	64	L.FT	70.00	4,480.00	64	4,480.00	0	0.00	0	0.00
30	24" RCP, CL3 FES	1	EACH	700.00	700.00	1	700.00	0	0.00	0	0.00
31	18" RCP, CL3	480	L.FT	60.00	28,800.00	480	28,800.00	0	0.00	0	0.00
32	15" RCP, CL3	40	L.FT	50.00	2,000.00	40	2,000.00	0	0.00	0	0.00
33	Inlets and Junction Boxes	4	EACH	3,000.00	12,000.00	4	12,000.00	0	0.00	0	0.00
34	Granular Material	150	TON	15.00	2,250.00	150	2,250.00	0	0.00	0	0.00
35	6" C900 DR18 Water Main	1,020	L.FT	26.00	26,520.00	0	0.00	1,020	26,520.00	0	0.00
36	6" Water Main Bedding Material	1,020	L.FT	4.00	4,080.00	0	0.00	1,020	4,080.00	0	0.00
37	6" MJ Gate Valve/Box	9	EACH	1,200.00	10,800.00	0	0.00	9	10,800.00	0	0.00
38	6" MJ Bends	4	EACH	350.00	1,400.00	0	0.00	4	1,400.00	0	0.00
39	6"x6" MJ Tee	7	EACH	500.00	3,500.00	0	0.00	7	3,500.00	0	0.00
40	6" MJ Cap/Plug	2	EACH	250.00	500.00	0	0.00	2	500.00	0	0.00
41	6" MJ Long Sleeve	2	EACH	350.00	700.00	0	0.00	2	700.00	0	0.00
42	Standard Fire Hydrant	3	EACH	3,200.00	9,600.00	0	0.00	3	9,600.00	0	0.00
43	Trench Stabilization Material	20	TON	30.00	600.00	0	0.00	20	600.00	0	0.00
44	Connect to Existing Water Main	4	EACH	1,000.00	4,000.00	0	0.00	4	4,000.00	0	0.00
45	8" PVC Sanitary Sewer w/Bedding Material	1,000	L.FT	40.00	40,000.00	1,000	40,000.00	0	0.00	0	0.00
46	48" Sanitary Manhole w/ Frame and Lid	4	EACH	4,000.00	16,000.00	4.00	16,000.00	0.00	0.00	0.00	0.00
47	Connect to Existing Sanitary Sewer	3	EACH	1,000.00	3,000.00	3.00	3,000.00	0.00	0.00	0.00	0.00
				Subtotal:	$734,810.00		293,278.00		167,992.00		273,540.00
				Contingencies (10%):	$74,190.00		29,676.00		17,063.70		27,450.30
				Construction Subtotal:	**$809,000.00**		**322,954.00**		**185,055.70**		**300,990.30**
				Engineering & Admin:	$161,000.00		64,400.00		37,030.00		59,570.00
				Geotechnical/Testing Services:	$16,000.00		6,400.00		3,680.00		5,920.00
				Admin/Legal (2%):	$16,000.00		6,400.00		3,680.00		5,920.00
				Financing (5%):	$40,000.00		16,000.00		9,200.00		14,800.00
				Miscellaneous:	$8,000.00		3,200.00		1,840.00		2,960.00
				Total Estimated Project Cost:	**$1,050,000.00**		**419,354.00**		**240,485.70**		**390,160.30**

Present Worth for Alternative #3

Capital Cost Description	Price	Salvage Value	Present Worth of Salvage Value	Net Present Worth
Mobilization	$50,000	$0	$0	$50,000
Traffic Control	$6,000	$0	$0	$6,000
Remove, Sawcut, & Dispose of Existing Pvmt	$17,000	$0	$0	$17,000
Clearing - Tree Removal	$15,000	$0	$0	$15,000
Incidental Work (Grading)	$5,000	$0	$0	$5,000
Incidental Work (Utilities)	$5,000	$0	$0	$5,000
Unclassified Excavation	$22,000	$0	$0	$22,000
Unclassified Excavation - Grade Stabilization	$2,000	$0	$0	$2,000
8" Scarify and Recompact	$6,000	$0	$0	$6,000
Geotextile Fabric	$9,000	$5,400	$2,990	$6,010
Aggregate Base Course	$63,000	$37,800	$20,929	$42,071
6" Concrete Pavement (Fillet/Valley Gutter)	$9,100	$5,460	$3,023	$6,077
6" Concrete Pavement (Driveway Approach)	$6,500	$3,900	$2,159	$4,341
Asphalt Concrete Composite	$132,000	$79,200	$43,851	$88,149
Curb and Gutter - 6" Thick	$39,000	$23,400	$12,956	$26,044
4" Concrete Sidewalk	$52,000	$31,200	$17,275	$34,725
6" Concrete Sidewalk	$3,780	$2,268	$1,256	$2,524
Detectable Warning Panel	$4,200	$2,520	$1,395	$2,805
RECON Retaining Wall	$66,000	$39,600	$21,926	$44,074
Salvage/Furnish and Place Topsoil	$9,000	$0	$0	$9,000
Permanent Seeding (Quality Green Turf Mix)	$4,500	$0	$0	$4,500
Hydromulching	$5,500	$0	$0	$5,500
Temporary low flow silt fence	$5,000	$0	$0	$5,000
Silt fence inlet protection	$400	$0	$0	$400
Inlet protection	$400	$0	$0	$400
Vehicle tracking control	$2,000	$0	$0	$2,000
9" erosion control wattles	$500	$0	$0	$500
Drainage Ditch	$24,000	$14,400	$7,973	$16,027
24" RCP, CL3	$4,480	$2,688	$1,488	$2,992
24" RCP, CL3 FES	$700	$420	$233	$467
18" RCP, CL3	$28,800	$17,280	$9,568	$19,232
15" RCP, CL3	$2,000	$1,200	$664	$1,336
Inlets and Junction Boxes	$12,000	$7,200	$3,986	$8,014
Granular Material	$2,250	$1,350	$747	$1,503
6" C900 DR18 Water Main	$26,520	$15,912	$8,810	$17,710
6" Water Main Bedding Material	$4,080	$2,448	$1,355	$2,725
6" MJ Gate Valve/Box	$10,800	$6,480	$3,588	$7,212
6" MJ Bends	$1,400	$840	$465	$935
6"x6" MJ Tee	$3,500	$2,100	$1,163	$2,337
6" MJ Cap/Plug	$500	$0	$0	$500
6" MJ Long Sleeve	$700	$420	$233	$467
Standard Fire Hydrant	$9,600	$5,760	$3,189	$6,411
Trench Stabilization Material	$600	$0	$0	$600
Connect to Existing Water Main	$4,000	$0	$0	$4,000
8" PVC Sanitary Sewer w/Bedding Material	$40,000	$24,000	$13,288	$26,712
48" Sanitary Manhole w/ Frame and Lid	$16,000	$9,600	$5,315	$10,685
Connect to Existing Sanitary Sewer	$3,000	$0	$0	$3,000
Remaining Capital Costs	$315,190	$0	$0	$315,190
Total Construction Cost	**$1,050,000**	**$342,846**	**$189,826**	**$860,174**
Annual Operation and Maintenance Cost				
Description	**Annual Cost**			**Net Present Worth**
Equipment	$1,000			$14,877
Supplies	$750			$11,158
Utilities	$0			$0
Labor	$2,000			$29,755
Total Annual Cost	**$3,750**			**$55,791**
			Total Net Present Worth	**$915,965**

EVALUATION OF ALTERNATIVES

ALTERNATIVE EVALUATION

Alternative #1 – No Action is not recommended. This alternative will not address any of the negative deficiencies that were identified.

Alternative #2 – SD Highway 115 Utility Improvements is recommended. This alternative will replaced the utilities that have outlived their useful life before the SD DOT reconstructs the road. Replacement of these utilities prior to the SD DOT project will also save the City money because most of the surfacing repairs will be addressed with the SD DOT project.

Alternative #3 – 10th Street Improvements is recommended. Replacement of the cast iron water main will help address water complaint issues. The clay pipe and brick manholes will also be replaced and will reduce I&I.

EVALUATION OF MONETARY COSTS

A summary of the project costs for the recommended alternatives are shown in the following table.

Total Project Cost Summary

Alternative	CW SRF	DW SRF	Ineligible	Total
#2 - SD HWY 115 Utility Imp	$617,000	$465,000	$74,000	$1,156,000
#3 - 10th Street Improvements	$420,000	$240,000	$390,000	$1,050,000
	$1,037,000	$705,000	$464,000	$2,206,000

DEMONSTRATION OF FINANCIAL CAPACITY

The City plans to increase both water and sewer rates to assist with financing this project. Further information on project financing and utility rates may be found in the application.

CAPITAL FINANCING PLAN

Payment for the proposed improvements will be by a combination of loan monies and local funds. The City has not received any funding (grants, etc.) to date for these projects; however, any grants or principal forgiveness received would offset the amount of loans needed to fund these projects. For estimating purposes, the table below showing repayment options does not include any grant funds.

Capital Financing Plan

Funding Source	CW SRF
Local Cash	$464,000
CW SRF Loan	$1,037,000
DW SRF Loan	$705,000
Grant Money	$0
	$2,206,000

ENVIRONMENTAL EVALUATION

Environmental Information

Climate: Because of its mid-continental position and its location near the paths of many cyclonic storms, eastern South Dakota has a markedly continental climate with extreme summer heat, extreme winter cold, and rapid fluctuation of temperature. Temperatures of 100 degrees Fahrenheit or more are not uncommon during summer months, but as they are ordinarily accompanied by low humidity, they are less oppressive than are such temperatures in the States farther east. Temperatures fall below zero frequently from December to February, and at times these low temperatures are accompanied by strong winds. The average annual precipitation for the area is 26.0 inches.

Topography: The terrain in and near the City generally slopes from the north to the south towards the Big Sioux River.

Geology and Soils: The majority of the area is dominated by the La Prairie silt loam along with Moody and Moody-Nora silty clay loams as identified by the Soil Conservation Service. The La Prairie silt loam is a moderately well drained, medium textured soil in alluvial sediments on nearly level flood plains. It has a substratum of stratified sand, silt, and gravel and is subject to flooding. The Moody silty clay loam is a well-drained, medium-textured and moderately fine textured soil in loess on uplands. It has a substratum of silt loam but in places rock is at a depth of about 40 inches. This soil is subject to runoff and erosion at gentle slopes. The Moody-Nora silty clay loams are medium-textured and moderately fine textured soils on loessal uplands. These soils are highly erosive and their strength against shearing is low when they are saturated.

The Estelline silt loam as identified by the Soil Conservation Service is also present in the City. The Estelline silt loam consists of moderately well drained, medium-textured soil on stream terraces in loess about 28 to 50 inches thick that overlies sand and gravel. Shallow bedrock is also prevalent in this area.

Surface Water Hydrology: Surface water from storm runoff flows into storm sewer and roadside ditches until it reaches the Big Sioux River. The terrain in the project areas vary with land slopes ranging from relatively flat to near ten percent.

Ground Water Hydrology: Aquifers in the Dell Rapids area are defined by the Sioux Quartzite formations. The Sioux Quartzite formations are typically first encountered anywhere between land surface and depths greater than 300 feet. The Sioux Quartzite is generally not an aquifer material. Locally, the Sioux Quartzite may yield water from fractures or porous areas. This information was obtained from the South Dakota Department of Environment and Natural Resources, Division of Financial and Technical Assistance.

Historical and Archaeological Sites

Existing Conditions: There are no historical or archeological sites that are known to presently exist within the area which is to be affected by this project.

Cumulative Impacts: Since there are no historical or archeological sites that are known to exist within the area affected by this project, no impact to any historical or archaeological sites will occur. Furthermore, there are no known historical or archeological sites in the area adjoining this project for which other projects which are interconnected to this project may develop in the future. Therefore, no such impact is expected to be initiated or to accumulate from this proposed project. However, if any unidentified cultural resources are encountered, construction in the vicinity of these resources will be carefully managed to minimize any potential affects to these areas. If any historical or archaeological artifacts are encountered, work in that portion of the project will be halted and the appropriate state agencies notified.

Floodplains and Wetlands

Existing Conditions: There are no existing floodplains identified along the project, according to the published Flood Insurance Rate Map (FIRM) for Minnehaha County, South Dakota and Incorporated Areas (Map Number 46099C0104D) effective September 2, 2009. There are no existing major wetlands contained within the project area according to the National Wetlands Inventory Maps (Appendix C) online at http://wetlands.fws.gov/.

Cumulative Impacts. Since there are no existing major wetlands in the project area, the proposed project will not have any impacts on such wetlands. If any unidentified wetlands should be encountered during the construction process, construction will be rerouted to avoid crossing or displacing the wetlands if possible. No fill will be added to any major natural wetlands, should they be encountered. Other projects may occur in the future which are interconnected to this project. Any impacts to floodplains and wetlands will be evaluated and controlled similar to this project, such that no cumulative impacts to floodplains or wetlands will occur.

Agricultural Lands

Existing Conditions: Existing land use around the projects consists of paved rural and urban sections, gravel and curb and gutter. There is no agricultural land adjacent to the projects.

Cumulative Impacts: This project will not alter the existing land use within the right-of-way.

Wild and Scenic Rivers

Existing Conditions: The Big Sioux River is in the vicinity of the project and will be unaffected as a result of this project.

Cumulative Impacts: With a segment of the project being located within the vicinity of the Big Sioux River, erosion control measures such as inlet protection, installation of silt fences, construction of storm water detention berms, mulching, and seeding of disturbed areas will be implemented to minimize runoff from the construction site. The Contractor will be required to dispose of flushing and/or disinfected water in a manner that will prevent water from reaching any stream, lake or flowing waterway and shall ensure that no damage to the natural environment or wildlife occurs. De-chlorination chemicals shall be used at water discharge points where required to prevent environmental damage.

Fish and Wildlife Protection

Existing Conditions: There are no small streams that provide fish habitat entering the Big Sioux River near the project area. Wildlife inhabits the project area, but there are no game preserves, national forests, or any known endangered or rare species which presently exist within the project area.

Cumulative Impacts: Since there are no areas of fish and/or wildlife habitat, game preserves, national forests, or any known endangered or rare species in the project area, no cumulative impacts are anticipated from this project or any future projects which may interconnect to this project. Should any rare or endangered species be encountered at any time, the appropriate agencies will be contacted for consultation.

Water Quality and Quantity

Existing Conditions: The Big Sioux River is located approximately one-half mile south of the project area. Due to this distance there will be minimal impact to the water quality from this segment.

Cumulative Impacts: No impact is anticipated to accumulate from this project. During this project and future projects, groundwater and surface water will be protected from environmental impacts through erosion control measures. Drinking water quality will be maintained by observing proper separation distances between water mains and sanitary sewer mains. The minimum separation distances and construction requirements are given in Chapter II "Sewers" of the *Recommended Design Criteria Manual for Wastewater Collection and Treatment Facilities* prepared by the South Dakota Department of Environment and Natural Resources.

Miscellaneous Issues

Existing Conditions: Items considered under this category include air quality, noise, and solid waste management. No long term impacts to the existing conditions of air quality, noise, and solid waste management are expected to result from this project.

Cumulative Impacts: Any future projects which interconnect to this project will be of similar character to this project. Therefore, no long term impacts to air quality, noise, and solid waste management are expect to accumulate from this project or future projects which interconnect to this project. Short term issues related to air quality, noise, and solid waste management generally exist to some extent on nearly every construction project. This project and future projects will not include any long-term air emissions. Short-term effects on air quality include dust and construction equipment exhaust and will be similar to air quality impacts of present farming equipment within the region. No major sources of noise are anticipated, with the exception of minor disturbances created by construction equipment. This noise would be similar to noise created by normal farming operations and truck traffic within the region. A small amount of solid wastes will be generated by construction activities, primarily in the form of packaging materials removed from equipment and materials which will be incorporated into the work.

Dust suppression will be provided as needed through the use of watering vehicles. Noise from construction equipment will be minimized through the use of appropriate mufflers and other noise devices. Construction equipment must meet all appropriate OSHA, State and Federal laws

regarding emissions and noise. Work will normally be limited to daylight hours, Monday through Saturday. Solid waste materials will be disposed of in approved landfills or by other methods approved by local and state regulations.

VIEWS OF THE PUBLIC AND CONCERNED INTEREST GROUPS

See the appendix for the responses from various review agencies. SECOG assisted with the public hearing. Minutes from the public hearing will be placed in the appendix upon receipt.

SELECTED PLAN, DESCRIPTION AND IMPLEMENTATION ARRANGEMENT

JUSTIFICATION AND DESCRIPTION OF SELECTED PLAN

A no action alternative delays making the inevitable improvements for the community until conditions worsen to a point where the City has to act immediately due to some unforeseen circumstance. Project costs go up with time and waiting to do these improvements will only increase the cost of the projects due to inflation as well as duplicate construction costs to install underground facilities where the SD DOT will reconstruct the road. It is recommended that Alternatives #2 and #3 described in this facilities plan be adopted by the City for the proposed Clean Water and Drinking Water Improvements.

DESIGN OF SELECTED PLAN

The display maps with the alternatives provide the preliminary layout of the proposed projects. Further analysis and design will be performed for these projects during the final design phase of the project and prior to construction of the project. The plans will be designed by DGR and submitted to the appropriate funding agencies for review.

COST ESTIMATES FOR THE SELECTED PLAN

Detailed project cost estimates for each alternative are provided in the Development of Alternatives Section.

ENVIRONMENTAL IMPACTS OF SELECTED PLAN

The impact of these projects on the environment will be minimized during construction by a variety of methods. The utility trenches will be brought back to existing grade and shaped to the proposed cross sections. The disturbed areas will be seeded or re-paved to prevent erosion. Other erosion control features such as storm water inlet protection, silt fences, vehicle tracking stations, etc. will be utilized in all construction areas. Groundwater and surface water will be protected during the

flushing and disinfecting of newly installed water mains. The contractor shall dispose of flushing and/or disinfected water in a manner which shall prevent water from reaching any stream, lake or flowing stream and shall assure that no damage to the natural environment or wildlife occurs. De-chlorination chemicals shall be used at water discharge points where required to prevent environmental damage.

Other environmental impacts relating to this type of construction project include air quality, noise and solid waste management. This project will not include any long term air omissions. Short term effects on air quality arise from emissions from the construction equipment and the potential for dust. Construction equipment must meet OSHA, State and Federal law regarding air and noise emissions. Dust will be controlled during the project with the use of watering trucks. Solid waste materials emanating from this construction site will be disposed of at an approved sanitary landfill.

ARRANGEMENTS FOR IMPLEMENTATION

Operation and Maintenance Requirements

Replacement of the existing cast iron water mains and clay sanitary sewer will reduce the operational and maintenance cost of the water and sewer utilities.

USER IMPACTS

The City plans to increase sewer rates to fund this project. The current sewer rate is a monthly minimum of $15.28 plus a usage charge of $4.22 per thousand gallons. The City does utilize winter averaging for the months of March through August. The current charge for 5,000 gallons is $36.38. The City would need to raise their sewer rates $3.50 per month to cover the debt service payment based on an interest rate of 3.25% for 30 years.

The City plans to increase water rates to fund this project. The current water rate is a monthly minimum of $13.00 plus a usage charge of $4.37 per thousand gallons. The current charge for 5,000 gallons is $34.85. The City would need to raise their water rates $3.00 per month to cover the debt service payment based on an interest rate of 3.0% for 20 years.

LAND ACQUISITIONS

No land is required to be purchased for the proposed project improvements. Temporary construction easements may also be needed along the project route to provide the Contractor with sufficient space to operate and will be determined during the final design.

IMPLEMENTATION SCHEDULE

SRF Funding Application:	January 1, 2016
Funding Package Announced:	March 2016
Final Plans Complete:	May 2016
Bid Letting:	May 2016
Start Construction:	June 2016
Finish Construction:	October 2017

REFERENCES

Health Research Inc., (2012). Recommended Standards for Water Works, Albany, New York

Mays, Larry W., (2000). Water Distribution Systems Handbook, (New York, NY: McGraw Hill), pp.

South Dakota Department of Environment and Natural Resources, (March 1991). Recommended Design Criteria Manual Wastewater Collection and Treatment Facilities, Pierre, SD: Division of Environmental Services.

South Dakota Department of Environment and Natural Resources, (July 1979). Criteria for Design of Public Water Supply Facilities in South Dakota, Albany, New York

Appendix A

Environmental Assessment Letters

662070.6

November 30, 2015

SD DENR
Air Quality
Attention: Brad Schultz
Joe Foss Building
523 E. Capitol Ave
Pierre, SD 57501

RE: Air Quality Comments
Infrastructure Improvements
Dell Rapids, South Dakota

Dear Mr. Schultz:

The purpose of this letter is to provide you with a brief description and location maps for the above referenced projects. The City of Dell Rapids is located in Minnehaha County and is applying for project funding through South Dakota's Clean and Drinking Water State Revolving Fund Programs. Please review the enclosed information and provide us with your comments or concerns regarding these projects.

The City of Dell Rapids is planning on the following improvements (see attached exhibits):

1. 10th Street: The scope of work for the 10th Street Improvements includes gravity sewer, water main and storm sewer installation. Replacement of the surfacing is also planned. Construction of this project is being driven by the need to improve city utility service and improve the street section. A map showing the proposed project area is enclosed.

2. SD HWY 115: The scope of work for the SD HWY 115 project consists of the replacement of the existing sanitary sewer and water main. An existing water main under Rocky Run Creek will also be replaced. All disturbed areas will be shaped to match the existing grades and no fill will be added. Construction of this project is being driven by the SD DOT reconstructing SD HWY 115. A map showing the proposed project area is enclosed.

3. Wastewater Treatment Improvements: The City is under a compliance order to make improvements to their treatment system. The City plans to build a new treatment system on the existing site and replace the existing outfall line. A map showing the proposed project area is enclosed.

DGR Engineering — 2909 East 57th Street — Suite 101 — Sioux Falls, SD 57108
phone: 605.339.4157 — fax: 605.339.4175 — dgr.com

Thank you for providing us with your comments regarding these projects. If you have any questions, please contact us.

Sincerely,

DGR Engineering

Gabriel Laber, PE
Project Manager
gabriel.laber@dgr.com

Enclosures: maps

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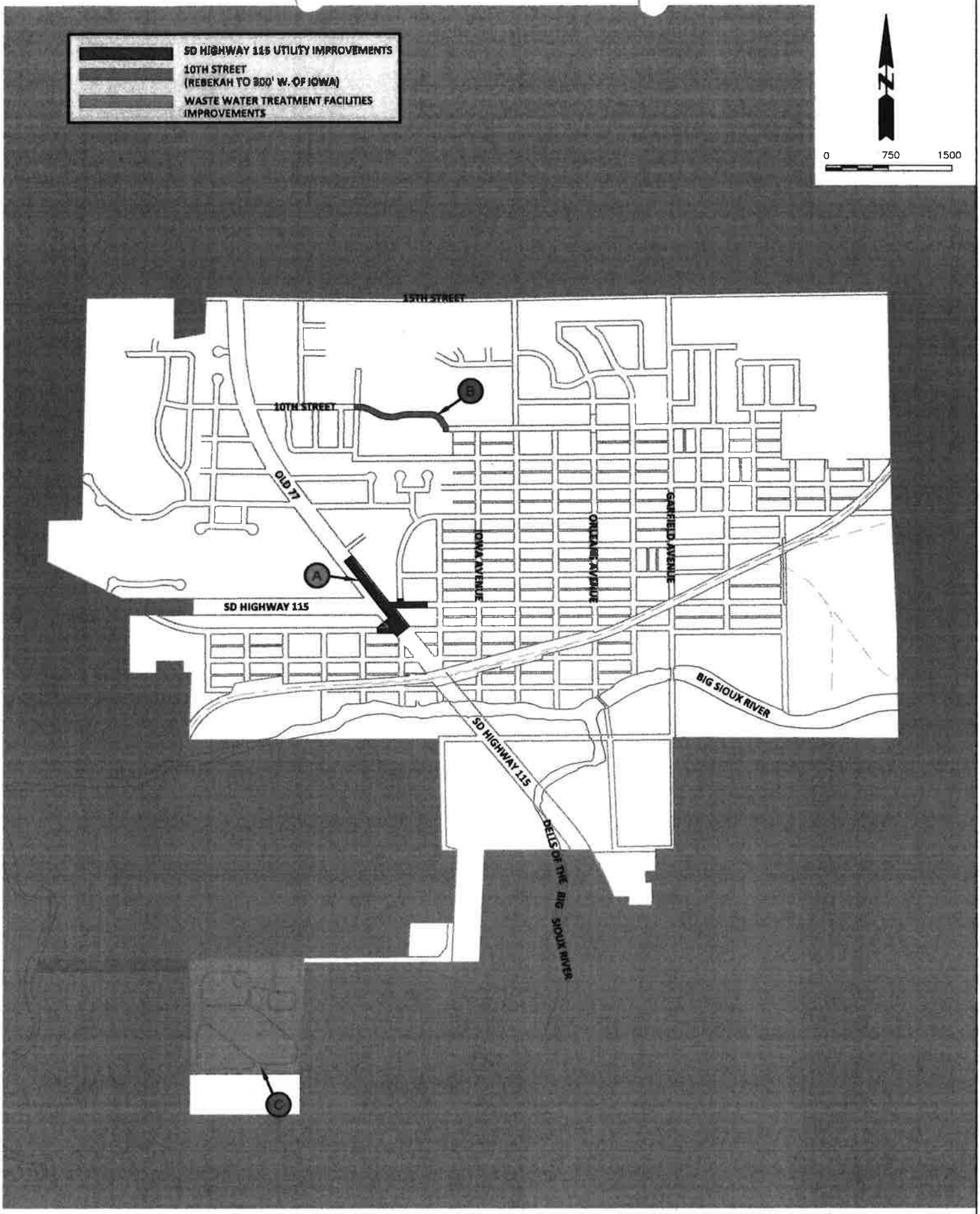


P:\665\54\30\665430DWG\665430 - LOCATION MAP.DWG

REV	DATE	DESCRIPTION

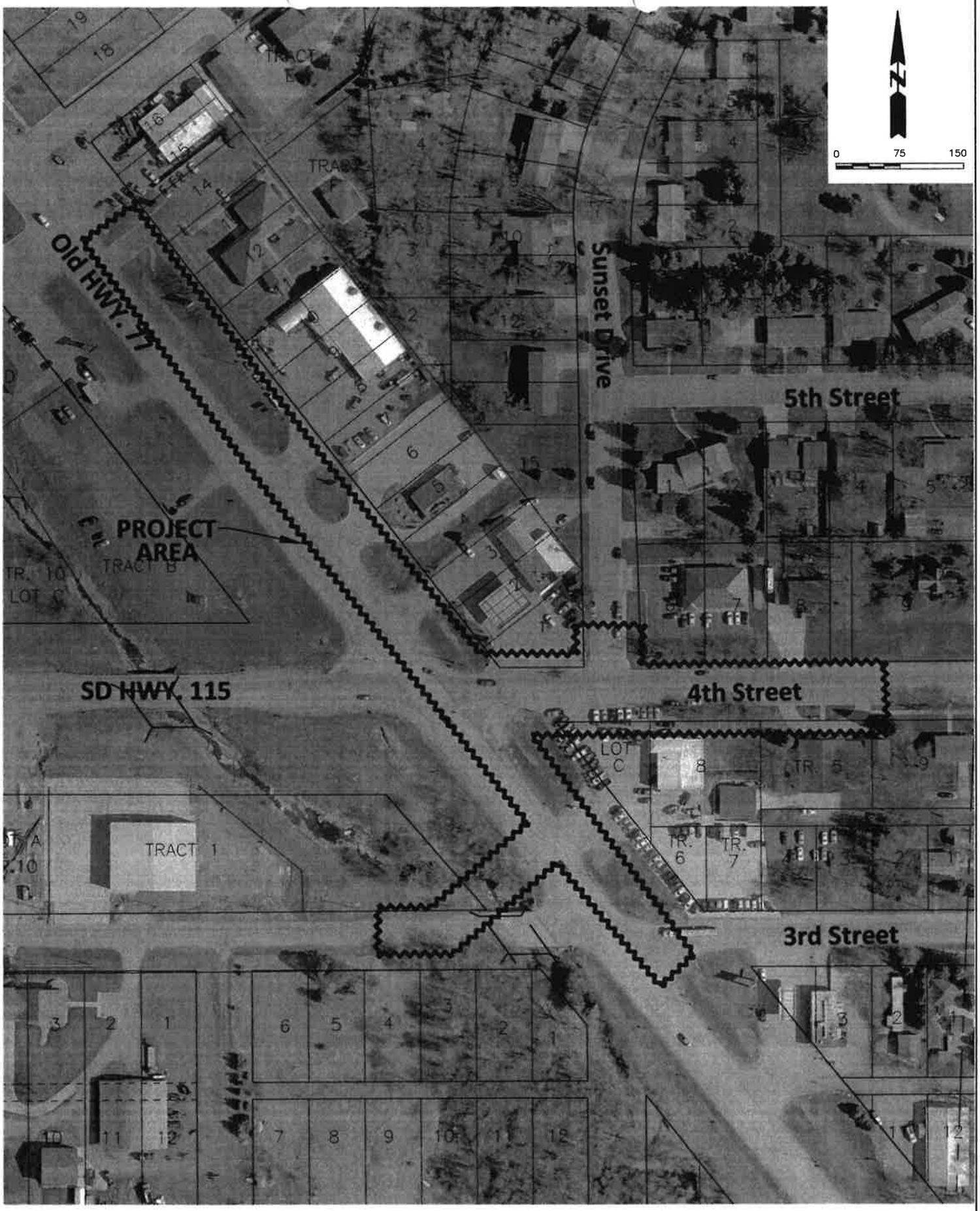
DGR ENGINEERING

Project Manager:	TEB
Designer:	LWM
Project Number:	665010
Phone:	(605) 339-4157

2016 DRINKING WATER & CLEAN WATER IMPROVEMENTS
DELL RAPIDS, SD

LOCATION MAP

EXHIBIT 1



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REV	DATE	DESCRIPTION

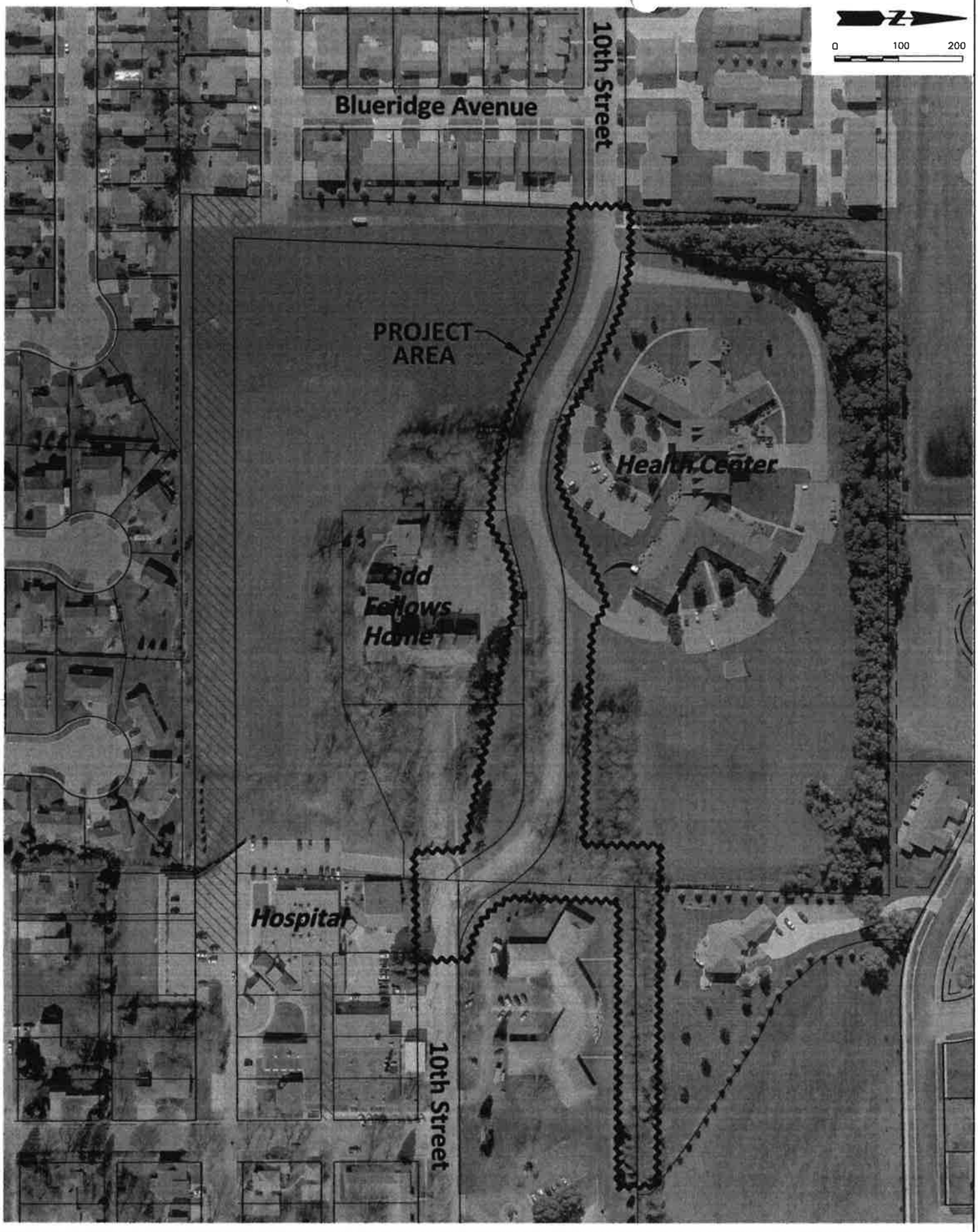
DGR ENGINEERING

Project Manager:	LWM
Designer:	LWM
Project Number:	662070
Phone:	(605) 339-4157

SD HIGHWAY 115
UTILITY IMPROVEMENTS
DELL RAPIDS, SD

PROJECT LOCATION

EXHIBIT A



REV	DATE	DESCRIPTION

DGR ENGINEERING

Project Manager:	LWM
Designer:	LWM
Project Number:	661110
Phone:	(605) 339-4157

10th STREET
(REBEKAH TO 300' W. OF IOWA)
STREET & UTILITY
IMPROVEMENTS
DELL RAPIDS, SD

PROJECT LOCATION

EXHIBIT B

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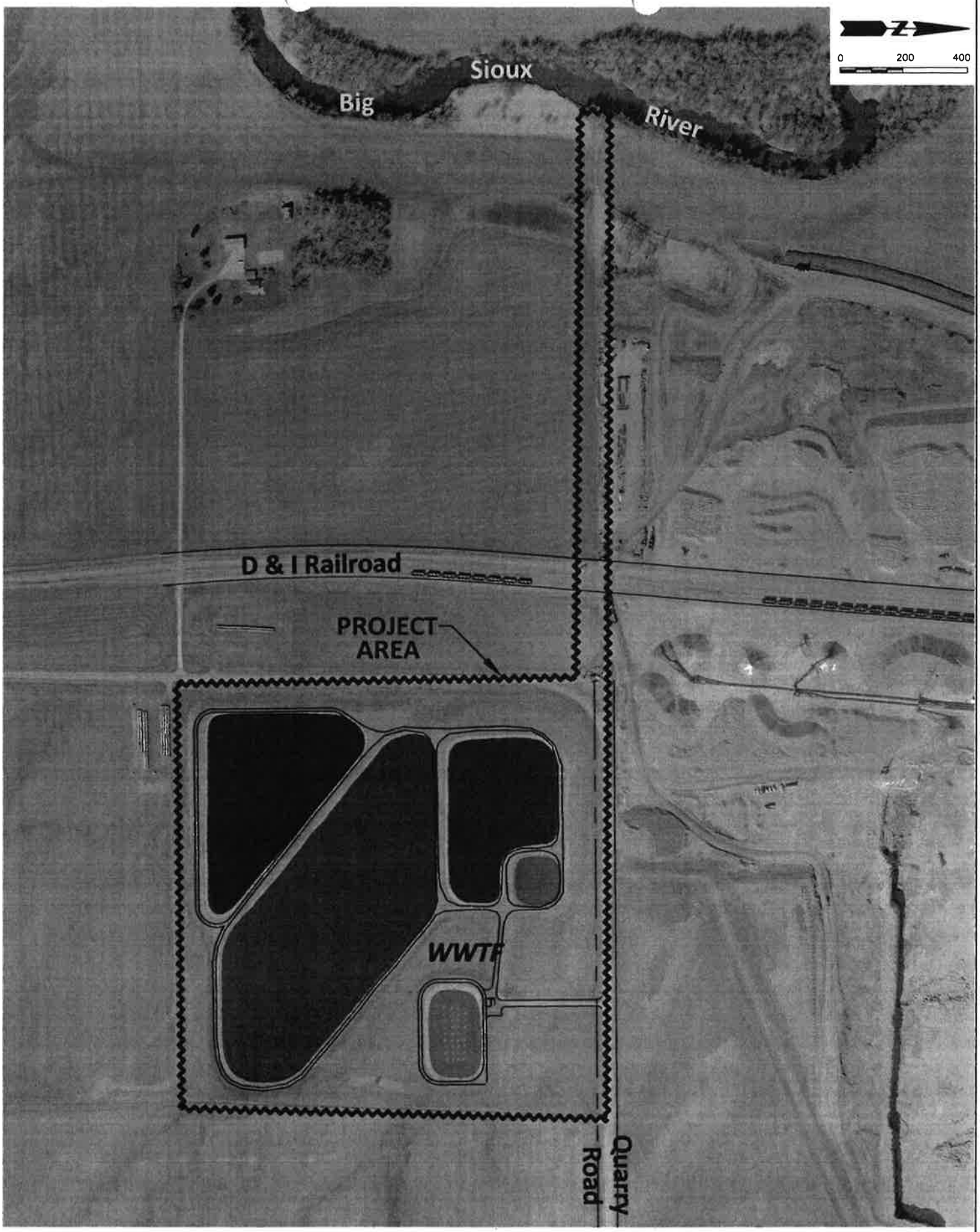

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REV	DATE	DESCRIPTION

DGR ENGINEERING

Project Manager:	GGL
Designer:	GGL
Project Number:	665430
Phone:	(605) 339-4157

WASTE WATER TREATMENT FACILITIES IMPROVEMENTS
DELL RAPIDS, SD

PROJECT LOCATION

EXHIBIT C

RECEIVED
DEC 0 3 2015
AIR QUALITY
PROGRAM

DGR ENGINEERING

November 30, 2015

SD DENR
Air Quality
Attention: Brad Schultz
Joe Foss Building
523 E. Capitol Ave
Pierre, SD 57501

AIR QUALITY DETERMINATION
It appears, based on the information, that the project will have little or no impact on the air quality in this area. This project is approved.
Approved By: Jack Ballestro
Date: 12-4-15
(605) 773-6038 Fax: (605) 773-5286
South Dakota Department of Environment
And Natural Resources

RE: Air Quality Comments
Infrastructure Improvements
Dell Rapids, South Dakota

Dear Mr. Schultz:

The purpose of this letter is to provide you with a brief description and location maps for the above referenced projects. The City of Dell Rapids is located in Minnehaha County and is applying for project funding through South Dakota's Clean and Drinking Water State Revolving Fund Programs. Please review the enclosed information and provide us with your comments or concerns regarding these projects.

The City of Dell Rapids is planning on the following improvements (see attached exhibits):

1. 10th Street: The scope of work for the 10th Street Improvements includes gravity sewer, water main and storm sewer installation. Replacement of the surfacing is also planned. Construction of this project is being driven by the need to improve city utility service and improve the street section. A map showing the proposed project area is enclosed.

2. SD HWY 115: The scope of work for the SD HWY 115 project consists of the replacement of the existing sanitary sewer and water main. An existing water main under Rocky Run Creek will also be replaced. All disturbed areas will be shaped to match the existing grades and no fill will be added. Construction of this project is being driven by the SD DOT reconstructing SD HWY 115. A map showing the proposed project area is enclosed.

3. Wastewater Treatment Improvements: The City is under a compliance order to make improvements to their treatment system. The City plans to build a new treatment system on the existing site and replace the existing outfall line. A map showing the proposed project area is enclosed.

DGR Engineering — 2909 East 57th Street — Suite 101 — Sioux Falls, SD 57108
phone: 605.339.4157 — fax: 605.339.4175 — dgr.com
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DEPARTMENT OF GAME, FISH, AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

December 3, 2015

Mr. Gabriel Laber
DGR Engineering, Inc.
2909 E. 57th Street
Suite 101
Sioux Falls, SD 57108

RE: Infrastructure Improvements
Dell Rapids, South Dakota

Dear Mr. Laber:

The South Dakota Department of Game, Fish and Parks, Division of Wildlife, has reviewed the above referenced project involving improvements to the gravity sewer, water main and storm sewer system in the City of Dell Rapids, South Dakota.

At this time, the project described will have no impacts on fish and wildlife resources. However, if the project design changes or if new information becomes available, please submit the changes for review.

If you have any questions, please contact me at 605.773.6208.

Sincerely,

Leslie Murphy
Senior Biologist

RECEIVED
DEC 0 3 2015
Dept. of Environment and
Natural Resources
Waste Management

DGR ENGINEERING

November 30, 2015

SD DENR
Waste Management
Attention: Vonni Kallemeyn
Joe Foss Building
523 E. Capitol Ave
Pierre, SD 57501

Waste Management Determination
Hazardous Waste/Solid Waste/Asbestos
It appears, based on the information provided, that this project will have little or no impact on the waste management in this area.
Approved By: Vonni Kallemeyn
Date: 12-4-15
South Dakota Department of Environment & Natural Resources
Phone: (605) 773-3153 Fax: (605) 773-6035

RE: Waste Management Comments
Infrastructure Improvements
Dell Rapids, South Dakota

Dear Ms. Kallemeyn:

The purpose of this letter is to provide you with a brief description and location maps for the above referenced projects. The City of Dell Rapids is located in Minnehaha County and is applying for project funding through South Dakota's Clean and Drinking Water State Revolving Fund Programs. Please review the enclosed information and provide us with your comments or concerns regarding these projects.

The City of Dell Rapids is planning on the following improvements (see attached exhibits):

1. 10th Street: The scope of work for the 10th Street Improvements includes gravity sewer, water main and storm sewer installation. Replacement of the surfacing is also planned. Construction of this project is being driven by the need to improve city utility service and improve the street section. A map showing the proposed project area is enclosed.

2. SD HWY 115: The scope of work for the SD HWY 115 project consists of the replacement of the existing sanitary sewer and water main. An existing water main under Rocky Run Creek will also be replaced. All disturbed areas will be shaped to match the existing grades and no fill will be added. Construction of this project is being driven by the SD DOT reconstructing SD HWY 115. A map showing the proposed project area is enclosed.

3. Wastewater Treatment Improvements: The City is under a compliance order to make improvements to their treatment system. The City plans to build a new treatment system on the existing site and replace the existing outfall line. A map showing the proposed project area is enclosed.

Thank you for providing us with your comments regarding these projects. If you have any questions, please contact us.

Sincerely,

DGR Engineering

Gabriel Laber, PE
Project Manager
gabriel.laber@dgr.com

Enclosures: maps

RECEIVED
DEC 0 3 2015
Drinking Water Program

DGR ENGINEERING

November 30, 2015

SD DENR
Drinking Water
Attention: Mark Mayer
Joe Foss Building
523 E. Capitol Ave
Pierre, SD 57501

DRINKING WATER PROJECT INFORMATION
It appears, based on the information provided, that this project will not have adverse environmental effects to drinking water in this area. This project is approved.
Approved by:
Date: 12-3-15 ID No.: 20151277
605-773-3754 Fax 605-773-5286
SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

RE: Drinking Water Comments
Infrastructure Improvements
Dell Rapids, South Dakota

Dear Mr. Mayer:

The purpose of this letter is to provide you with a brief description and location maps for the above referenced projects. The City of Dell Rapids is located in Minnehaha County and is applying for project funding through South Dakota's Clean and Drinking Water State Revolving Fund Programs. Please review the enclosed information and provide us with your comments or concerns regarding these projects.

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3. Wastewater Treatment Improvements: The City is under a compliance order to make improvements to their treatment system. The City plans to build a new treatment system on the existing site and replace the existing outfall line. A map showing the proposed project area is enclosed.

DGR Engineering — 2909 East 57th Street — Suite 101 — Sioux Falls, SD 57108
phone: 605.339.4157 — fax: 605.339.4175 — dgr.com

Thank you for providing us with your comments regarding these projects. If you have any questions, please contact us.

Sincerely,

DGR Engineering

Gabriel Laber, PE
Project Manager
gabriel.laber@dgr.com

Enclosures: maps

Appendix B

Minutes from Public Hearing

Appendix C

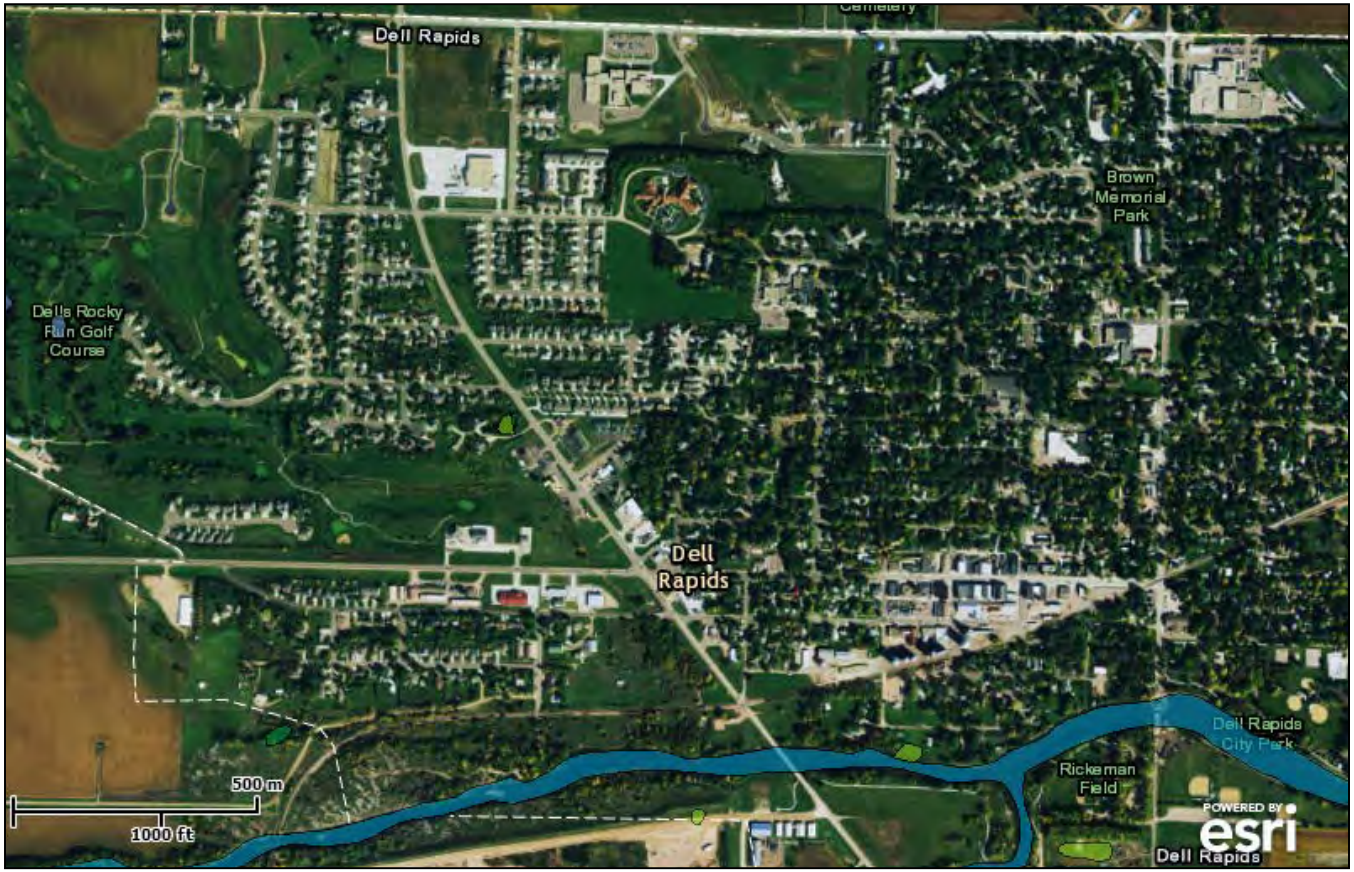
Wetlands Map

U.S. Fish and Wildlife Service

National Wetlands Inventory

Wetlands Map

Dec 9, 2015



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

WRAP REVIEW SHEET
DRINKING WATER FACILITIES FUNDING APPLICATION
APPLICANT: CITY OF MILLER

Project Title:	Water Distribution – Phase I
Funding Requested:	$2,199,000
Other Funding:	$1,000 – USDA Rural Development
Total Project Cost:	$2,200,000
Project Description:	The City of Miller is experiencing problems with its water distribution system. Phase I of this project will replace 7,300 feet of 6-inch water main, 1,000 feet of 8-inch water main and 850 feet of 10-inch water main. This project will also replace all appurtenances associated with replaced water main. The proposed project includes resurfacing an alley due to a recent water main replacement.
Alternatives Evaluated:	"Do Nothing" is not recommended as it does not correct the deteriorating conditions that face the City's water system. "Abandon Wells" alternative would abandon the city's three inoperable wells and associated structures. This alternative is not recommended until Phase III. "Well Improvements" alternative involves rehabilitating the city's existing wells to an operable status. This alternative was not chosen in favor of the Abandon Wells alternative. "Water Distribution Phase II and III" alternatives would replace various lower priority water mains throughout the city. These improvements are not recommended until the Phase I work is completed. "Replace Remaining ACP" alternative proposes to replace all remaining Asbestos Cement Pipe that was not addressed in previous phases.
Implementation Schedule:	The City of Miller plans to advertise bids for this project in January 2017 with a completion date of November 2017.
Service Population:	1,461
Current Domestic Rate:	$50.00 per 5,000 gallons usage

Interest Rate: 3.0% Term: 30 years Security: Project Surcharge

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan the city of Miller would have to establish a surcharge of approximately $12.30. When added to current rate of $50.00/5,000 gallons residents would be paying $62.30/5,000 gallons.

25% Funding Subsidy:	$550,000 subsidy with a loan of $1,650,000.
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $1,650,000 the city of Miller would have to establish a surcharge of approximately $9.25 thereby paying a rate of $59.25/5,000 gallons.

50% Funding Subsidy:	$1,100,000 subsidy with a loan of $1,100,000.
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $1,100,000 the city of Miller would have to establish a surcharge of approximately $6.15 thereby paying a rate of $56.15/5,000 gallons.

75% Funding Subsidy:	$1,650,000 subsidy with a loan of $550,000.
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $1,650,000 for the city of Miller would have to establish a surcharge of approximately $3.10 thereby paying a rate of $53.10/5,000 gallons.

ENGINEERING REVIEW COMPLETED BY: DREW HUISKEN

FINANCIAL REVIEW COMPLETED BY: JON PESCHONG

RECEIVED
JAN 04 2015
Division of Financial
& Technical Assistance

CITY OF MILLER, SOUTH DAKOTA

WATER IMPROVEMENTS

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DRINKING WATER FACILITIES FUNDING APPLICATION

PREPARED BY:
NORTHEAST COUNCIL OF GOVERNMENTS
DECEMBER 2015

Drinking Water Facilities Funding Application

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:	Proposed Funding Package	
Miller		
Address: 120 West 2nd St. Miller, SD 57362-1316	Requested Funding	$2,199,000
	Local Cash	
	Other: USDA-RD	$1,000
Subapplicant:	Other:	
DUNS Number: 071365993	Other:	
	TOTAL	$2,200,000

Project Title: Miller Water Distribution - Phase I

Description:

The City of Miller is experiencing problems with its waterline distribution system. Phase I of this project is replacing approximately 7,260 linear feet of 6" water main, 1000 linear feet of 8" water main and 850 linear feet of 10" water main. This also includes replacing gate valves, curb stops and fire hydrants in the Phase I area. A map of the Phase I area is attached. Current water rates include a base rate of $26.06 plus $3.94 surcharge. Each 1,000 gallons also has a four dollar per thousand gallon charge. Total rate per 5,000 gallons is $50.00 for residential customers.

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Ron Blachford, Mayor
Name & Title of Authorized Signatory (Typed)

Signature

12/2/15
Date

Professional Consultants

Application Prepared By: NECOG

Contact Person: Ted Dickey

Mailing Address: 416 Production St. N., Ste #1

City, State, and Zip: Aberdeen, SD 57401

Telephone Number: (605) 626-2595 Fax: (605) 626-2975

Email address: ted@necog.org

Consulting Engineering Firm: SPN & Associates

Contact Person: Camden Hofer

Mailing Address: 2100 N Sanborn Blvd.

City, State, and Zip: Mitchell, SD 57301

Telephone Number: (605) 996-7761 Fax:

Email address: chofer@spn-assoc.com

Legal Counsel's Firm: Riter Rogers Wattier & Northrup LLP

Contact Person: Jerry L Wattier

Mailing Address: 319 S Coteau St

City, State, and Zip: Pierre, SD 57501

Telephone Number: 605-224-5825 Fax:

Email address: rrwb@riterlaw.com

Bond Counsel's Firm: Meierhenry Sargent LLP

Contact Person: Todd Meierhenry

Mailing Address: 315 S. Phillips Avenue

City, State, and Zip: Sioux Falls, SD 57104

Telephone Number: (605) 336-3075 Fax:

Email address: todd@meierhenrylaw.com

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B USDA-RD	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel	$35,500	$1,000				$36,500
D. Other						
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$126,000					$126,000
B. Project Inspection Fees	$210,900					$210,900
C. Other						
4. Construction & Improvements	$1,660,800					$1,660,800
5. Equipment						
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$2,033,200	$1,000				$2,034,200
10. Contingencies	$165,800					$165,800
11. Total (Lines 9 and 10)	$2,199,000	$1,000				$2,200,000
12. Total %	99.95%	0.05%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)			
Other (Explain) DENR DWSRF		$2,199,000	March 25, 2016
Other (Explain) USDA-RD		$1,000	March 24, 2016
Other (Explain)			
Total		$2,200,000	$2,200,000

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other USDA-RD	$1,000	3.125%	40	$44	Water Surcharge Revenue Bond
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: Jan. 1

Population Served Current: 1,461 2010 1,488 2000 1,533

Top three employers within 30 miles	Number of Employees	Type of Business
Data Trak	170	Medical Coding
Miller School District	82	Education
Hand County Memorial Hospital	60	Hospital

Repayment Information

Interest rate you are applying for: 3% Term: 30

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☒ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan.
5. Cultural Resources Effects Assessment Summary for SRF Projects.
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year	2009	2007				
Purpose	New Water Tower	Water Meters				
Security Pledged	Water Surcharge Revenue Bon	Water Revenue Bond				
Amount	$765,000	$255,200				
Maturity Date (mmm/yyyy)	Oct/2049	10/2019				
Debt Holder	USDA-RD	Conservancy District				
Debt Coverage Requirement	110%	110%				
Avg. Annual Required Payment	$36,456	$25,849				
Outstanding Balance	$722,571	$103,916				

Comments:

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2013	2014	2015	2016	2017	2018
Operating Revenue						
Base Fees	$452,836	$445,250	$493,000	$517,222	$532,739	$548,721
Surcharge Fees	$36,456	$36,456	$38,000	$38,000	$164,384	$164,384
Other (Explain)			$5,500	$4,900	$5,000	$5,000
Operating Expenses						
Personal Services	($114,071)	($98,960)	($139,950)	($145,600)	($149,968)	($154,467)
Chemical, Material & Supplies	($188,221)	($191,726)	($250,000)	($250,000)	($260,000)	($260,000)
Electric & Other Utilities	($64,632)	($75,263)	($59,500)	($61,250)	($63,088)	($64,980)
Other (Explain)						
Operating Net Cash	$122,368	$115,757	$87,050	$103,272	$229,067	$238,658
Nonoperating Cash Flow						
Interest Revenue	$207	$236	$500	$500	$500	$500
Transfers In (Explain)						
Fixed Asset Purchases		($39,194)	($20,000)	($20,000)	($20,000)	($20,000)
Transfers Out (Explain)						
Principal Debt Payments	($37,529)	($28,382)	($34,000)	($38,000)	($101,731)	($94,674)
Interest Debt Payments	($31,238)	($28,461)	($28,500)	($28,000)	($93,905)	($95,862)
Other (Explain)						
Nonoperating Net Cash	($68,560)	($95,801)	($82,000)	($85,500)	($215,136)	($210,036)
Increase (Decrease) Cash	$53,808	$19,956	$5,050	$17,772	$13,931	$28,622
Beginning Cash Balance	$141,591	$195,399	$215,355	$220,405	$238,177	$252,108
Ending Cash Balance	$195,399	$215,355	$220,405	$238,177	$252,108	$280,730
Restricted Balance	$43,303	$51,014	$51,000	$51,000	$196,000	$196,000
Unrestricted Balance	$152,096	$164,341	$169,405	$187,177	$42,177	$84,730

Explanations

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: [X] Incorporated Municipality or Sanitary District

or

[ ] Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic	$50.00	$63.00	707	
Business	$64.30	$77.30	124	
Other:				
Other:				

Are fees based on usage or flat rate? Usage

When is proposed fee scheduled to take effect? 7/2016

When did the current fee take effect? 1/2016

What was the fee prior to the current rate? 48.50

Four Largest Customers	Type of Business	% of System Revenue
City Buildings	Municipal	3%
Wilbur Ellis	Agriculture	3%
Hand County Memorial Hospi	Hospital	2%
Miller School District	School	2%

Property Tax Information

(Complete section only if General Obligation bond is pledged to repay your loan.)

Three year valuation trend:

Year	_____	_____	_____
Assessed Valuation	_____	_____	_____

Three year levies and collection trend:

Year	_____	_____	_____
Amount Levied	_____	_____	_____
Collected	_____	_____	_____

Five Largest Taxpayers	Description	Assessed Valuation
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Comments:

General Fund Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Sales Tax Information

(Complete section only if sales tax is pledged to repay your loan.)

Sales tax revenue history for the most current fifteen months:

Month/Year	Amount Collected

Comments:

Sales Tax Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

Facilities Plan Checklist

Before submitting the application, please take a few moments to complete the following checklist. Addressing these items prior to submitting the application will expedite the review process.

Drinking Water Facilities Plan document can be found at http://denr.sd.gov/dfta/wwf/dwsrf/dwfunding.aspx

Checklist of SRF Facilities Plan Requirements

Have the following items been addressed?

- Submission of a Facilities Plan to the department that addresses those items found in the Water Facilities Plan document. ☒
- A public hearing held discussing the project and the use of an SRF loan to finance the project. ☒
- Minutes of the public hearing prepared and submitted to the department's engineer for inclusion into the final Facilities Plan. ☒
- The affidavit of publication of the public hearing received and submitted to the department's engineer for inclusion into the final Facilities Plan. ☒
- The four review agencies contacted and responses received for inclusion into the final Facilities Plan. ☐
- The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. ☐

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$2,200,000
Treatment	
Storage	
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$2,200,000

Ron Blachford, Mayor

Name & Title of Authorized Representative

Signature of Authorized Representative

12-29-15

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Ron Blachford, Mayor

Name & Title of Authorized Representative

Ronald Blachford

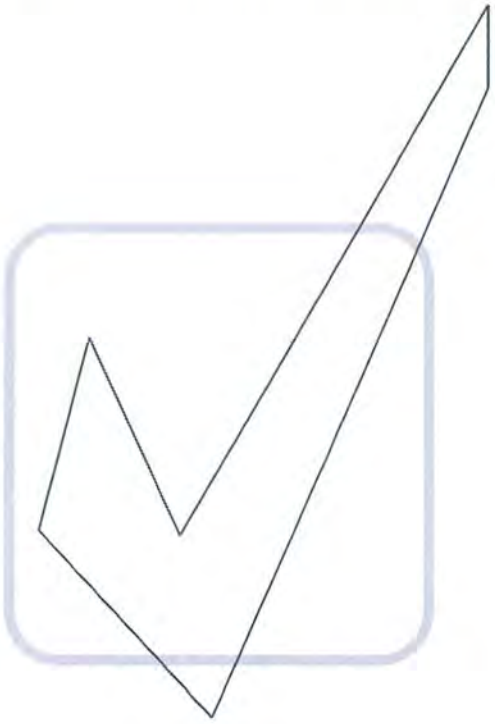
Signature of Authorized Representative

12-29-15

Date

☐ I am unable to certify to the above statements. Attached is my explanation

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: City of Miller

Prepared by: Sheila Coss, Finance Officer
James Bonebright, Water Superintendent

Phone #: 6058532705

Date: 12/29/2015

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µg/L: micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** 185,697.74 gallons	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 480,000 gallons	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 504,000 gal/day	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** not sure	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** _____	☐	☐	☑	☐
Have you been able to provide adequate volumes of water during drought cycles?	☑	☐	☐	☐
Have you had to restrict usage at any time for any reason? ***Please specify:*** water restrictions	☑	☐	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:*** _____	☐	☑	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.***	☑	☐	☐	☐
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☐ ***growing,*** ☐ ***declining, or*** ☐ ***stable.***	☐	☑	☐	☐
Does your source have additional water available for appropriation?	☑	☐	☐	☐
Do you have a water right? ***Water right permit number(s):*** _____	☐	☑	☐	☐
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☐	☐	☑	☐
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☑	☐	☐	☐
Do you have a contract to purchase water? ***If yes, with whom?*** Mid Dakota Rural Water	☑	☐	☐	☐
Are you currently staying within your contract?	☑	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☑	☐	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☐	☑	☐	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☑	☐	☐	☐
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** _____	☐	☐	☐	☑
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** Dakota Aquifer	☑	☐	☐	☐
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☐	☑	☐	☐

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☐ **Yes** ☑ **No**

(If you checked "No", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☐	☐
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☐	☐
Are repair parts available?	☐	☐	☐	☐
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:*** _____	☐	☐	☐	☐
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☐	☐
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☐	☐
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:*** _____	☐	☐	☐	☐
Do you have the capability to add coagulant before the filter?	☐	☐	☐	☐

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☐	☑	☐	☐
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** _____	☐	☐	☐	☐
Is your well(s) constructed according to current South Dakota regulations?	☐	☐	☐	☐
Do you have a source water protection plan?	☐	☐	☐	☐
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☐	☐	☐	☐

Disinfection

Do you disinfect? ☐ **Yes** ☑ **No** ***(If "No", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** _____ ***How often?*** _____ ***Disinfectant used:*** _____	☐	☐	☐	☐
Do you have back-up equipment? ***Type:*** _____	☐	☐	☐	☐
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** _____	☐	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** _____ ***Total Chlorine Residual:*** _____ (if using chloramines)	☐	☐	☐	☐

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☐
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☐

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☐	☐	☐	☐
Are chemicals used for treatment properly stored and secure?	☐	☐	☐	☐
Does the water system track chemical usage? (i.e. a sudden	☐	☐	☐	☐

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping

Condition of Pumping Equipment	**Yes**	**No**	**Unknown**	**NA**
Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** Weekly	☑	☐	☐	☐
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☑	☐	☐	☐
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☑	☐	☐	☐
Standby/Emergency Power Equipment	**Yes**	**No**	**Unknown**	**NA**
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☑	☐	☐	☐
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☑	☐	☐	☐
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☑	☐	☐	☐

Infrastructure - Storage

Storage Capacity	**Yes**	**No**	**Unknown**	**NA**
Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:*** 96hrs	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** 300,000 gal	☑	☐	☐	☐
Security Measures	**Yes**	**No**	**Unknown**	**NA**
Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☑	☐	☐	☐
Are access hatches locked?	☑	☐	☐	☐
Is the tank and the immediate surrounding area fenced?	☐	☑	☐	☐
Control Systems				
Is there a high and low water level signal system to control the pumps?	☑	☐	☐	☐

Is there a drain valve or hydrant to allow for draining of the tank?	☑	☐	☐	☐
Tank Maintenance	**Yes**	**No**	**Unknown**	**NA**
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☑	☐	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☑	☐	☐	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:*** yearly	☑	☐	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☑	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☑	☐	☐	☐
Are all valves exercised and lubricated periodically?	☑	☐	☐	☐
Is the system free of severe "water hammer" problems?	☐	☐	☑	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☐	☐	☐	☑
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month?	☑	☐	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 30% %	☐	☑	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 52 psi	☑	☐	☐	☐
Do you have a routine leak detection and repair program?	☐	☑	☐	☐
Are all sources of supply and customers metered?	☑	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☐	☑	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☑	☐	☐	☐

Are any inspections for cross-connections performed?	☑	☐	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☐	☑	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☑	☐	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** 95%	☑	☐	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☑	☐	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☐	☑	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☑	☐	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** _____ ***Most common complaint:*** Class 2	☐	☑	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☐	☑	☐	☐

The Management Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** Class 2	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** SDARWS & Engineers	☑	☐	☐	☐

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☑	☐	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☑	☐	☐	☐
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications?	☑	☐	☐	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☐	☐	☑	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☑	☐	☐	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☑	☐	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☑	☐	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☑	☐	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** 5 years	☑	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☐	☑	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☑	☐	☐
Do you know what to do in the event of a violation?	☑	☐	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☑	☐	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☐	☑	☐	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☑	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☑	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** James Bonebright/ Ron Blachford	☑	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☑	☐	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☑	☐	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☑	☐	☐	☐
Do you have written operating procedures for both routine and emergency system operations?	☑	☐	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☑	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☑	☐	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☑	☐	☐	☐

Maintenance	Yes	No	Unknown	NA
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☐	☑	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☑	☐	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☑	☐	☐	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☑	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☑	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☑	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** Reserve for Equipment, Capitol Improvement	☑	☐	☐	☐
Does the system have reserve funds available in the event of an emergency?	☑	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☐	☑	☐	☐
Do you have a process for scheduling and committing to capital projects?	☑	☐	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☑	☐	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☐	☑	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** Yearly	☑	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☐	☑	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** $30.00 minimum plus $4.00/1000 gallon (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***:	☐	☑	☐	☐
Does the rate structure assure proportionality among users?	☑	☐	☐	☐
Do you have procedures for billing and collection?	☑	☐	☐	☐
Is your billing collection rate greater than 95%?	☑	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☑	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☑	☐	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☑	☐	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☑	☐	☐
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☐	☑	☐	☐
Do you employ standardized accounting and tracking systems?	☑	☐	☐	☐
Do you track budget performance?	☑	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☐	☑	☐	☐
Are financial management recordkeeping systems organized?	☑	☐	☐	☐
Are controls exercised over expenditures?	☑	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☑	☐	☐	☐
Are there purchasing procedures?	☑	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☑	☐	☐	☐

Financial Spreadsheet

Applicant: City of Miller
Completed by: Sheila Coss
Date: 12/29/15

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	$195,399	$216,355	$221,405	$239,177	$258,864
2. Cash Receipts:					
a. Unmetered Water Revenue					
b. Metered Water Revenue	$481,706	$531,000	$555,222	$697,173	$713,105
c. Other Water Revenue		$5,500	$4,900	$5,000	$5,000
d. Total Water Revenues (2a through 2c)	$481,706	$536,500	$560,122	$702,173	$718,105
e. Connection Fees					
f. Interest and Dividend Income	$236	$500	$500	$500	$500
g. Other Income					
h. Total Cash Revenues (2d through 2g)	$481,942	$537,000	$560,622	$702,673	$718,605
i. Transfers in/Additional Rev Needed					
j. Loans, Grants or other Cash				$2,200,000	
Please specify					
Sale of Municipal Property	$367				
3. Total Cash Receipts (2h through 2j)	$482,309	$537,000	$560,622	$2,902,673	$718,605
4. Total Cash Available (1+3)	$677,708	$753,355	$782,027	$3,141,850	$977,469
5. Operating Expenses					
a. Salaries and wages	$98,960	$105,000	$108,000	$111,000	$114,000
b. Employee Pensions and Benefits		$30,200	$32,800	$34,000	$36,000
c. Purchased Water	$178,739	$200,000	$200,000	$205,000	$205,000
d. Purchased Power	$18,000	$18,000	$15,000	$16,000	$17,000
e. Fuel for Power Production	$5,500	$5,500	$5,500	$5,500	$5,500
f. Chemicals					
g. Materials and Supplies	$25,000	$25,000	$25,000	$25,000	$25,000
h. Engineering Services	$5,000	$5,000	$5,000	$5,000	$5,000
i. Contractual Services – Other	$1,000	$1,000	$1,000	$1,000	$1,000
j. Equip. Rent/Real Property	$20,000	$20,000	$20,000	$20,000	$20,000
k. Transportation Expenses	$2,500	$2,500	$1,900	$2,000	$2,100
l. Laboratory					
m. Insurance	$4,750	$4,750	$4,800	$4,850	$4,900
n. Regulatory Commission Expenses					
o. Advertising		$1,000	$1,000	$1,000	$1,000
p. Miscellaneous	$6,500	$6,500	$6,850	$7,000	$7,250
q. Total Cash O&M Expenses (5a through 5p)	$365,949	$424,450	$426,850	$437,350	$443,750
r. Replacement Expenditures		$25,000	$25,000	$25,000	$25,000
s. Total OM&R Expenditures (5q+5r)	$365,949	$449,450	$451,850	$462,350	$468,750
t. Loan Principal/Capital Lease Payments	$25,843	$34,000	$38,000	$101,731	$99,274
u. Loan Interest Payments	$30,000	$28,500	$28,000	$93,905	$95,862
v. Transfers Out					
w. Capital Purchases (specify):					
New truck for Water Department	$39,561				
Capital Improvement		$20,000	$25,000	$2,225,000	$25,000
x. Other					
6. Total Cash Paid Out (5s through 5x)	$461,353	$531,950	$542,850	$2,882,986	$688,886
7. Ending Cash Position (4 - 6)	$216,355	$221,405	$239,177	$258,864	$288,583

Financial Spreadsheet

Applicant: City of Miller
Completed by: Sheila Coss
Date: 12/29/15

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
8. Number of Customer Accounts	831	831	825	825	820
9. Avg Annual User Charge Account (2d/8)	$580	$646	$679	$851	
10. Coverage Ratio (2h-5s)/(5t+5u)					
11. Operating Ratio (2d/5s)					
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve					
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other					
13. Total Reserves (12a through 12e)					
14. Year End Operating Cash (7 – 13)					

USER NAME PASSWORD

LOG IN

Forgot Username? Forgot Password?

Create an Account

Entity Dashboard

Entity Overview

- Entity Record
- Core Data
- Assertions
- Reps & Certs
- POCs
- Reports
- Service Contract Report
- BioPreferred Report
- Exclusions
- Active Exclusions
- Inactive Exclusions
- Excluded Family Members

RETURN TO SEARCH

MILLER, CITY OF
DUNS: 071365993 CAGE Code: 3QEL8
Status: Active

120 W 2ND ST
MILLER, SD, 57362-1318
UNITED STATES

Expiration Date: 03/30/2016
Purpose of Registration: Federal Assistance Awards Only

Entity Overview

Entity Information

Name: MILLER, CITY OF
Doing Business As: POLICE STATION
Business Type: US Local Government
POC Name: Shannon Speck
Registration Status: Active
Activation Date: 03/31/2015
Expiration Date: 03/30/2016

Exclusions

Active Exclusion Records? No

SAM | System for Award Management 1.0

Note to all Users: This is a Federal Government computer system. Use of this system constitutes consent to monitoring at all times.

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WWW3

RESOLUTION

RESOLUTION NO. 2015-12

RESOLUTION AUTHORIZING AN APPLICATION FOR FINANCIAL ASSISTANCE, AUTHORIZING THE EXECUTION AND SUBMITTAL OF THE APPLICATION, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE TO CERTIFY AND SIGN PAYMENT REQUESTS.

WHEREAS, the City of Miller (the "City") has determined it is necessary to proceed with improvements to its Water System, including but not limited to replacing the water distribution system (the "Project"); and

WHEREAS, the City has determined that financial assistance will be necessary to undertake the Project and an application for financial assistance to the South Dakota Board of Water and Natural Resources (the "Board") will be prepared; and

WHEREAS, it is necessary to designate an authorized representative to execute and submit the Application on behalf of the City and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the City as follows:

1. The City hereby approves the submission of an Application for financial assistance in an amount not to exceed $2,200,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The Mayor is hereby authorized to execute the Application and submit it to the South Dakota Board of Water and Natural Resources, and to execute and deliver such other documents and perform all acts necessary to effectuate the Application for financial assistance.

3. The Mayor is hereby designated as the authorized representative of the City to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

Adopted at Miller, South Dakota, this 29 day of December 2015.

APPROVED:

Mayor
City of Miller

(Seal)

Attest: _____
City Finance Officer

PRIOR YEAR'S AUDITS

CITY OF MILLER

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KOHLMAN, BIERSCHBACH & ANDERSON, LLP

CERTIFIED PUBLIC ACCOUNTANTS

PARTNERS
ROY R FAUTH, CPA
DAVID S ANDERSON, CPA
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WITH OFFICES IN
MOBRIDGE, SOUTH DAKOTA
LEMMON, SOUTH DAKOTA

INDEPENDENT ACCOUNTANTS' COMPILATION REPORT

City Council
City of Miller
109 East Commercial Avenue
Miller, South Dakota 57442

We have compiled the accompanying statement of net position - modified cash basis, the balance sheet - modified cash basis of the governmental funds, and the statement of net position - modified cash basis of the proprietary funds of the City of Miller, South Dakota, as of December 31, 2013, and the related statement of activities - modified cash basis, the statement of revenues, expenditures and changes in fund balances - modified cash basis for governmental funds, and the statement of revenues, expenses, and changes in fund net position - modified cash basis for proprietary funds for the year then ended, and the accompanying supplementary information contained in the budgetary comparison schedule - budgetary basis for the governmental fund and the schedule of changes in long-term debt, which are presented only for supplementary analysis purposes, included in the accompanying prescribed form. We have not audited or reviewed the financial statements included in the accompanying prescribed form and, accordingly, do not express an opinion or provide any assurance about whether the financial statements are in accordance with the form prescribed by the Department of Legislative Audit of the State of South Dakota.

Management is responsible for the preparation and fair presentation of the financial statements included in the form prescribed by the Department of Legislative Audit of the State of South Dakota and for designing, implementing, and maintaining internal control relevant to the preparation and fair presentation of the financial statements.

Our responsibility is to conduct the compilation in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. The objective of a compilation is to assist management in presenting financial information in the form of financial statements without undertaking to obtain or provide any assurance that there are no material modifications that should be made to the financial statements.

Management has elected to omit substantially all of the disclosures ordinarily included in financial statements prepared in accordance with the modified cash basis of accounting. If the omitted disclosures were included in the financial statements, they might influence the user's conclusions about the City's assets, liabilities, net position, revenues, and expenses. Accordingly, the financial statements are not designed for those who are not informed about such matters.

The budgetary comparison information and the schedule of changes in long-term debt on pages 12 through 14 of the prescribed forms are presented for purposes of additional analysis and are not a required part of the basic financial statements. The supplementary information has been compiled from information that is the representation of management. We have not audited or reviewed the supplementary information and, accordingly, we do not express an opinion or provide any assurance on such supplementary information.

The financial statements included in the accompanying prescribed form are presented in accordance with the requirements of the Department of Legislative Audit of the State of South Dakota, and are not intended to be a presentation in accordance with the modified cash basis of accounting.

This report is intended solely for the information and use of the Department of Legislative Audit of the State of South Dakota and is not intended to be and should not be used by anyone other than this specified party.

Kohlman, Bierschbach & Anderson, LLP

February 17, 2014

CITY OF MILLER
STATEMENT OF NET POSITION - MODIFIED CASH BASIS
December 31, 2013

	Primary Government		
	Governmental Activities	Business-Type Activities	Total
ASSETS:			
Cash and Cash Equivalents	71,828.00	1,536,374.00	1,608,202.00
Investments		59,896.00	59,896.00
Restricted Assets:			
Cash and cash equivalents	202,185.00	866,592.00	1,068,777.00
Investments			0.00
TOTAL ASSETS	274,013.00	2,462,862.00	2,736,875.00
NET POSITION:			
Restricted for: (See Note ___)			
Capital Projects Purposes		233,545.00	233,545.00
Debt Service Purposes	202,185.00	633,047.00	835,232.00
Permanently Restricted Purposes			
Expendable			0.00
Non-Expendable			0.00
Other Purposes			0.00
Unrestricted (Deficit)	71,828.00	1,596,270.00	1,668,098.00
TOTAL NET POSITION	274,013.00	2,462,862.00	2,736,875.00

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CITY OF MILLER
STATEMENT OF ACTIVITIES - MODIFIED CASH BASIS
Year Ended December 31, 2013

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants and Contributions	Net (Expense) Revenue and Changes in Net Position: Primary Government: Governmental Activities	Net (Expense) Revenue and Changes in Net Position: Primary Government: Business-Type Activities	Net (Expense) Revenue and Changes in Net Position: Primary Government: Total
Primary Government:							
Governmental Activities:							
General Government	163,446.00	22,596.00			(140,850.00)		(140,850.00)
Public Safety	338,748.00	2,434.00		4,422.00	(331,892.00)		(331,892.00)
Public Works	495,671.00	8,000.00	78,398.00	40,715.00	(368,558.00)		(368,558.00)
Health and Welfare	2,000.00	75.00			(1,925.00)		(1,925.00)
Culture and Recreation	107,093.00	13,276.00			(93,817.00)		(93,817.00)
Conservation and Development	132,156.00				(132,156.00)		(132,156.00)
Intergovernmental Expenditures					0.00		0.00
Miscellaneous Expenditures					0.00		0.00
**Capital Outlay - Unallocated					0.00		0.00
*Interest on Long-Term Debt	28,693.00				(28,693.00)		(28,693.00)
Total Governmental Activities	1,267,807.00	46,381.00	78,398.00	45,137.00	(1,097,891.00)		(1,097,891.00)
Business-type Activities:							
Water	435,691.00	489,292.00				53,601.00	53,601.00
Sewer	173,993.00	228,031.00				54,038.00	54,038.00
Electric	3,263,457.00	1,975,321.00				(1,288,136.00)	(1,288,136.00)
Airport						0.00	0.00
Total Business-Type Activities	3,873,141.00	2,692,644.00	0.00	0.00		(1,180,497.00)	(1,180,497.00)
Total Primary Government	5,140,948.00	2,739,025.00	78,398.00	45,137.00	(1,097,891.00)	(1,180,497.00)	(2,278,388.00)
	General Revenues:						
	Taxes:						
	Property Taxes				326,269.00		326,269.00
	Sales Taxes				795,354.00		795,354.00
	State Shared Revenues				11,549.00		11,549.00
	Grants and Contributions not Restricted to Specific Programs				2,522.00		2,522.00
	Unrestricted Investment Earnings				576.00	2,435.00	3,011.00
	Debt Issued						0.00
	Miscellaneous Revenue				34,854.00		34,854.00
	Special Items					195,177.00	195,177.00
	Extraordinary Items						0.00
	Transfers				(1,286.00)	1,286.00	0.00
	Total General Revenues, Special Items, Extraordinary Items and Transfers				1,169,838.00	198,898.00	1,368,736.00
	Change in Net Position				71,947.00	(981,599.00)	(909,652.00)
	Net Position-Beginning				202,066.00	3,444,461.00	3,646,527.00
	Adjustments:						0.00
	Adjusted Net Position-Beginning				202,066.00	3,444,461.00	3,646,527.00
	NET POSITION-ENDING				274,013.00	2,462,862.00	2,736,875.00

* The Municipality does not have interest expense related to the functions presented above. This amount includes indirect interest expense on general long-term debt.

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CITY OF MILLER
BALANCE SHEET - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
December 31, 2013

	General Fund
ASSETS:	
Cash and Cash Equivalents	71,828.00
106 Cash with Fiscal Agent	
151 Investments	
107.1 Restricted Cash and Cash Equivalents	202,185.00
107.2 Restricted Investments	
TOTAL ASSETS	274,013.00
FUND BALANCES:	
263 Nonspendable	
264 Restricted	202,185.00
265 Committed	
266 Assigned	10,000.00
267 Unassigned	61,828.00
TOTAL FUND BALANCES	274,013.00

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CITY OF MILLER
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
Year Ended December 31, 2013

	General Fund
Revenues:	
310 Taxes:	
311 General Property Taxes	325,426.00
312 Airflight Property Tax	
313 General Sales and Use Taxes	795,354.00
314 Gross Receipts Business Taxes	
315 Amusement Taxes	
316 911 Telephone Surcharge	
317 Excise Tax	
318 Tax Deed Revenue	
319 Penalties and Interest on Delinquent Taxes	843.00
Total Taxes	1,121,623.00
320 Licenses and Permits	11,562.00
330 Intergovernmental Revenue:	
331 Federal Grants	12,475.00
332 Federal Shared Revenue	
333 Federal Payments in Lieu of Taxes	
334 State Grants	32,662.00
335 State Shared Revenue:	
335.01 Bank Franchise Tax	1,700.00
335.02 Motor Vehicle Commercial Prorate	5,934.00
335.03 Liquor Tax Reversion	9,849.00
335.04 Motor Vehicle Licenses (5%)	23,516.00
335.06 Fire Insurance Premiums Reversion	
335.07 Liquor License Reversion	
335.08 Local Government Highway and Bridge Fund	
335.09 911 Remittances	
335.20 Other	
336 State Payments in Lieu of Taxes	
338 County Shared Revenue:	
338.01 County Road Tax (25%)	4,323.00

CITY OF MILLER
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
Year Ended December 31, 2013

	General Fund
338.02 County Highway and Bridge Reserve Tax (25%)	44,625.00
338.03 County Wheel Tax	
338.99 Other	
339 Other Intergovernmental Revenues	2,784.00
Total Intergovernmental Revenue	137,868.00
340 Charges for Goods and Services:	
341 General Government	38.00
342 Public Safety	1,862.00
343 Highways and Streets	7,629.00
344 Sanitation	371.00
345 Health	75.00
346 Culture and Recreation	13,276.00
347 Ambulance	
348 Cemetery	
349 Other	
Total Charges for Goods and Services	23,251.00
350 Fines and Forfeits:	
351 Court Fines and Costs	572.00
352 Animal Control Fines	
353 Parking Meter Fines	
354 Library	
359 Other	
Total Fines and Forfeits	572.00
360 Miscellaneous Revenue:	
361 Investment Earnings	576.00
362 Rentals	10,996.00
363 Special Assessments	
364 Maintenance Assessments	
367 Contributions and Donations from Private Sources	2,522.00
368 Liquor Operating Agreement Income	

CITY OF MILLER
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
Year Ended December 31, 2013

	General Fund
369 Other	22,118.00
Total Miscellaneous Revenue	36,212.00
Total Revenue	1,331,088.00
Expenditures:	
410 General Government:	
411 Legislative	28,318.00
412 Executive	
413 Elections	36.00
414 Financial Administration	111,656.00
419 Other	23,436.00
Total General Government	163,446.00
420 Public Safety:	
421 Police	291,422.00
422 Fire	29,197.00
423 Protective Inspection	
429 Other Protection	
Total Public Safety	320,619.00
430 Public Works:	
431 Highways and Streets	290,812.00
432 Sanitation	
433 Water	
434 Electricity	
435 Airport	60,279.00
436 Parking Facilities	
437 Cemeteries	
438 Natural Gas	
439 Transit	
Total Public Works	351,091.00
440 Health and Welfare:	
441 Health	
442 Home Health	

CITY OF MILLER
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
Year Ended December 31, 2013

	General Fund
443 Mental Health Centers	
444 Humane Society	
445 Drug Education	
446 Ambulance	
447 Hospitals, Nursing Homes and Rest Homes	
449 Other	2,000.00
Total Health and Welfare	2,000.00
450 Culture and Recreation:	
451 Recreation	76,214.00
452 Parks	29,279.00
455 Libraries	
456 Auditorium	
457 Historical Preservation	
458 Museums	1,600.00
Total Culture and Recreation	107,093.00
460 Conservation and Development:	
463 Urban Redevelopment and Housing	156.00
465 Economic Development and Assistance (Industrial Development)	132,000.00
466 Economic Opportunity	
Total Conservation and Development	132,156.00
470 Debt Service	191,402.00
480 Intergovernmental Expenditures	
485 Capital Outlay	
490 Miscellaneous:	
491 Judgments and Losses	
492 Other Expenditures	
499 Liquor Operating Agreements	

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CITY OF MILLER
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
Year Ended December 31, 2013

	General Fund
Total Miscellaneous	0.00
Total Expenditures	1,267,807.00
Excess of Revenues Over (Under) Expenditures	63,281.00
Other Financing Sources (Uses):	
391.01 Transfers In	1,508.00
511 Transfers Out	(1,286.00)
513 Payments to Refunded Debt Escrow Agent	
391.03 Sale of Municipal Property	
391.04 Compensation for Loss or Damage to Capital Assets	9,952.00
391.20 Long-Term Debt Issued	
Total Other Financing Sources (Uses)	10,174.00
391.06 (514) Special Items	
391.05 (515) Extraordinary Items	
Net Change in Fund Balance	73,455.00
Fund Balance - Beginning	200,558.00
Adjustments:	
Adjusted Fund Balance - Beginning	200,558.00
FUND BALANCE- ENDING	274,013.00

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CITY OF MILLER
Reconciliation of the Statement of Revenues, Expenditures and Changes in Fund Balances to the Statement of Activities
Year Ended December 31, 2013

Net Change in Fund Balances - Total Governmental Funds	73,455.00
Amounts reported for governmental activities in the statement of activities are different because:	
Internal service funds are used by management to charge the costs of certain activities, such as insurance to individual funds. The net revenue (expense) of the internal service funds is reported with governmental activities.	(1,508.00)
Change in Net Position of Governmental Activities	71,947.00

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CITY OF MILLER
STATEMENT OF NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
December 31, 2013

	Enterprise Funds			
	Water Fund	Sewer Fund	Electric Fund	Totals
ASSETS:				
Current Assets:				
Cash and Cash Equivalents	152,096.00	301,478.00	1,082,800.00	1,536,374.00
106 Cash with Fiscal Agent				0.00
151 Investments			59,896.00	59,896.00
Total Current Assets	152,096.00	301,478.00	1,142,696.00	1,596,270.00
Noncurrent Assets:				
107.1 Restricted Cash and Cash Equivalents	43,303.00		823,289.00	866,592.00
107.2 Restricted Investments				0.00
Total Noncurrent Assets	43,303.00	0.00	823,289.00	866,592.00
TOTAL ASSETS	195,399.00	301,478.00	1,965,985.00	2,462,862.00
NET POSITION:				
253.20 Restricted for:				
253.21 Revenue Bond Debt Service	43,303.00		589,744.00	633,047.00
253.22 Revenue Bond Retirement				0.00
253.23 Revenue Bond Contingency				0.00
253.24 Special Assessment Bond Guarantee				0.00
253.25 Special Assessment Bond Sinking				0.00
253.26 Equipment Repair and/or Replacement				0.00
253.27 Landfill Closure and Post Closure Costs				0.00
253.28 Permanently Restricted Purposes				0.00
253.29 Construction			233,545.00	233,545.00
253.90 Unrestricted	152,096.00	301,478.00	1,142,696.00	1,596,270.00
TOTAL NET POSITION	195,399.00	301,478.00	1,965,985.00	2,462,862.00

CITY OF MILLER
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
Year Ended December 31, 2013

	Enterprise Funds					
	Water Fund	Sewer Fund	Electric Fund	Airport Fund	Totals	Internal Service Funds
Operating Revenue:						
370/380 Charges for Goods and Services	489,292.00	228,031.00	1,975,321.00		2,692,644.00	
Revenue Dedicated to Servicing Debt					0.00	
380.05 Lottery Sales					0.00	
369 Miscellaneous					0.00	
Total Operating Revenue	489,292.00	228,031.00	1,975,321.00	0.00	2,692,644.00	0.00
Operating Expenses:						
410 Personal Services	114,071.00	93,905.00	237,170.00		445,146.00	
420 Other Current Expense	64,632.00	67,894.00	82,088.00		214,614.00	
426.2 Materials	188,221.00		1,271,879.00		1,460,100.00	
430 Capital Assets		12,194.00	1,096,134.00		1,108,328.00	
Total Operating Expenses	366,924.00	173,993.00	2,687,271.00	0.00	3,228,188.00	0.00
Operating Income (Loss)	122,368.00	54,038.00	(711,950.00)	0.00	(535,544.00)	0.00
Nonoperating Revenue (Expense):						
330 Operating Grants					0.00	
361 Investment Earnings	207.00	297.00	1,931.00		2,435.00	
362 Rental Revenue					0.00	
441 Debt Service (Principal)	(37,529.00)		(105,000.00)		(142,529.00)	
442 Interest Expense (Enter as Negative)	(31,238.00)		(471,186.00)		(502,424.00)	
391.03 Sale of Municipal Property					0.00	
391.20 Long-Term Debt Issued					0.00	
(429)369.01 Other			195,177.00		195,177.00	
Total Nonoperating Revenue (Expense)	(68,560.00)	297.00	(379,078.00)	0.00	(447,341.00)	0.00

CITY OF MILLER
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
Year Ended December 31, 2013

	Enterprise Funds					
	Water Fund	Sewer Fund	Electric Fund	Airport Fund	Totals	Internal Service Funds
Income (Loss) Before Contributions, Special Items, Extraordinary Items and Transfers	53,808.00	54,335.00	(1,091,028.00)	0.00	(982,885.00)	0.00
391.07 Capital Contributions					0.00	
391.1 Transfers In				1,286.00	1,286.00	
511 Transfers Out (Enter as Negative)					0.00	(1,508.00)
391.06 (514) Special Items					0.00	
391.05 (515) Extraordinary Items					0.00	
Change in Net Position	53,808.00	54,335.00	(1,091,028.00)	1,286.00	(981,599.00)	(1,508.00)
Net Position - Beginning	141,591.00	247,143.00	3,057,013.00	(1,286.00)	3,444,461.00	1,508.00
Adjustments:						
					0.00	
					0.00	
Adjusted Net Position - Beginning	141,591.00	247,143.00	3,057,013.00	(1,286.00)	3,444,461.00	1,508.00
NET POSITION - ENDING	195,399.00	301,478.00	1,965,985.00	0.00	2,462,862.00	0.00

See Independent Accountants' Compilation Report

CITY OF MILLER
BUDGETARY COMPARISON SCHEDULE - BUDGETARY BASIS
GENERAL FUND
Year Ended December 31, 2013

	Budgeted Amounts		Actual Amounts	Variance with Final Budget
	Original	Final	(Budgetary Basis)	Positive (Negative)
Revenues:				
310 Taxes:				
311 General Property Taxes	307,750.00	307,750.00	325,426.00	17,676.00
312 Airflight Property Tax				0.00
313 General Sales and Use Taxes	549,550.00	549,550.00	795,354.00	245,804.00
314 Gross Receipts Business Taxes				0.00
315 Amusement Taxes				0.00
316 911 Telephone Surcharge				0.00
317 Excise Tax				0.00
318 Tax Deed Revenue				0.00
319 Penalties and Interest on Delinquent Taxes	600.00	600.00	843.00	243.00
Total Taxes	857,900.00	857,900.00	1,121,623.00	263,723.00
320 Licenses and Permits	21,575.00	21,575.00	11,562.00	(10,013.00)
330 Intergovernmental Revenue:				
331 Federal Grants	3,000.00	15,475.00	12,475.00	(3,000.00)
332 Federal Shared Revenue				0.00
333 Federal Payments in Lieu of Taxes				0.00
334 State Grants		33,698.00	32,662.00	(1,036.00)
335 State Shared Revenue:				
335.01 Bank Franchise Tax	1,500.00	1,500.00	1,700.00	200.00
335.02 Motor Vehicle Commercial Prorate	7,000.00	7,000.00	5,934.00	(1,066.00)
335.03 Liquor Tax Reversion	9,000.00	9,000.00	9,849.00	849.00
335.04 Motor Vehicle Licenses (5%)	16,000.00	16,000.00	23,516.00	7,516.00
335.06 Fire Insurance Premiums Reversion				0.00
335.07 Liquor License Reversion				0.00
335.08 Local Government Highway and Bridge Fund				0.00
335.09 911 Remittances				0.00
335.20 Other				0.00
336 State Payments in Lieu of Taxes				0.00
338 County Shared Revenue:				
338.01 County Road Tax (25%)	5,000.00	5,000.00	4,323.00	(677.00)
338.02 County Highway and Bridge Reserve Tax (25%)	35,000.00	35,000.00	44,625.00	9,625.00
338.03 County Wheel Tax				0.00
338.99 Other				0.00
339 Other Intergovernmental Revenues	2,200.00	2,200.00	2,784.00	584.00
Total Intergovernmental Revenue	78,700.00	124,873.00	137,868.00	12,995.00

CITY OF MILLER
BUDGETARY COMPARISON SCHEDULE - BUDGETARY BASIS
GENERAL FUND
Year Ended December 31, 2013

	Budgeted Amounts		Actual Amounts	Variance with Final Budget
	Original	Final	(Budgetary Basis)	Positive (Negative)
340 Charges for Goods and Services:				
341 General Government	100.00	100.00	38.00	(62.00)
342 Public Safety	3,000.00	3,000.00	1,862.00	(1,138.00)
343 Highways and Streets	4,500.00	4,500.00	7,629.00	3,129.00
344 Sanitation	100.00	100.00	371.00	271.00
345 Health	200.00	200.00	75.00	(125.00)
346 Culture and Recreation	16,350.00	16,350.00	13,276.00	(3,074.00)
347 Ambulance				0.00
348 Cemetery				0.00
349 Other				0.00
Total Charges for Goods and Services	24,250.00	24,250.00	23,251.00	(999.00)
350 Fines and Forfeits:				
351 Court Fines and Costs	250.00	250.00	572.00	322.00
352 Animal Control Fines				0.00
353 Parking Meter Fines				0.00
354 Library				0.00
359 Other				0.00
Total Fines and Forfeits	250.00	250.00	572.00	322.00
360 Miscellaneous Revenue:				
361 Investment Earnings	1,800.00	1,800.00	576.00	(1,224.00)
362 Rentals	5,460.00	5,460.00	10,996.00	5,536.00
363 Special Assessments				0.00
364 Maintenance Assessments				0.00
367 Contributions and Donations from Private Sources	2,500.00	2,500.00	2,522.00	22.00
368 Liquor Operating Agreement Income				0.00
369 Other	9,290.00	9,290.00	22,118.00	12,828.00
Total Miscellaneous Revenue	19,050.00	19,050.00	36,212.00	17,162.00
Total Revenue	1,001,725.00	1,047,898.00	1,331,088.00	283,190.00
Expenditures:				
410 General Government:				
411 Legislative	30,020.00	30,020.00	28,318.00	1,702.00
411.5 Contingency	10,000.00	10,000.00		
Amount Transferred (Enter as Negative)		(10,000.00)		0.00
412 Executive	17,080.00	17,080.00		17,080.00
413 Elections	1,500.00	1,500.00	36.00	1,464.00
414 Financial Administration	104,780.00	106,209.00	111,656.00	(5,447.00)
419 Other	21,950.00	23,379.00	23,436.00	(57.00)
Total General Government	185,330.00	178,188.00	163,446.00	14,742.00

See Independent Accountants' Compilation Report

CITY OF MILLER
BUDGETARY COMPARISON SCHEDULE - BUDGETARY BASIS
GENERAL FUND
Year Ended December 31, 2013

	Budgeted Amounts		Actual Amounts	Variance with Final Budget
	Original	Final	(Budgetary Basis)	Positive (Negative)
420 Public Safety:				0.00
421 Police	274,890.00	288,275.00	291,422.00	(3,147.00)
422 Fire	24,850.00	26,279.00	29,197.00	(2,918.00)
423 Protective Inspection				0.00
429 Other Protection	500.00	500.00		500.00
Total Public Safety	300,240.00	315,054.00	320,619.00	(5,565.00)
430 Public Works:				
431 Highways and Streets	335,600.00	335,600.00	290,812.00	44,788.00
432 Sanitation				0.00
433 Water				0.00
434 Electricity				0.00
435 Airport	0.00	42,143.00	60,279.00	(18,136.00)
436 Parking Facilities				0.00
437 Cemeteries				0.00
438 Natural Gas				0.00
439 Transit				0.00
Total Public Works	335,600.00	377,743.00	351,091.00	26,652.00
440 Health and Welfare:				
441 Health				0.00
442 Home Health				0.00
443 Mental Health Centers				0.00
444 Humane Society				0.00
445 Drug Education				0.00
446 Ambulance				0.00
447 Hospitals, Nursing Homes and Rest Homes				0.00
449 Other	2,300.00	3,728.00	2,000.00	1,728.00
Total Health and Welfare	2,300.00	3,728.00	2,000.00	1,728.00
450 Culture and Recreation:				
451 Recreation	85,599.00	85,599.00	76,214.00	9,385.00
452 Parks	22,400.00	23,828.00	29,279.00	(5,451.00)
455 Libraries				0.00
456 Auditorium				0.00
457 Historical Preservation				0.00
458 Museums	1,600.00	1,600.00	1,600.00	0.00
Total Culture and Recreation	109,599.00	111,027.00	107,093.00	3,934.00
460 Conservation and Development:				
463 Urban Redevelopment and Housing			156.00	(156.00)
465 Economic Development and Assistance (Industrial Development)	132,000.00	132,000.00	132,000.00	0.00
466 Economic Opportunity				0.00

CITY OF MILLER
BUDGETARY COMPARISON SCHEDULE - BUDGETARY BASIS
GENERAL FUND
Year Ended December 31, 2013

	Budgeted Amounts		Actual Amounts	Variance with Final Budget
	Original	Final	(Budgetary Basis)	Positive (Negative)
Total Conservation and Development	132,000.00	132,000.00	132,156.00	(156.00)
470 Debt Service			191,402.00	(191,402.00)
480 Intergovernmental Expenditures				0.00
490 Miscellaneous:				
491 Judgments and Losses				0.00
492 Other Expenditures				0.00
499 Liquor Operating Agreements				0.00
Total Miscellaneous	0.00	0.00	0.00	0.00
Total Expenditures	1,065,069.00	1,117,740.00	1,267,807.00	(150,067.00)
Excess of Revenues Over (Under) Expenditures	(63,344.00)	(69,842.00)	63,281.00	133,123.00
Other Financing Sources (Uses):				
391.01 Transfers In	65,000.00	65,000.00	1,508.00	(63,492.00)
511 Transfers Out (Enter as Negative)			(1,286.00)	(1,286.00)
513 Payments to Refunded Debt Escrow Agent (Enter as Negative)				0.00
391.03 Sale of Municipal Property				0.00
391.04 Compensation for Loss or Damage to Capital Assets		6,498.00	9,952.00	3,454.00
391.20 General Long-Term Debt Issued				0.00
Total Other Financing Sources (Uses)	65,000.00	71,498.00	10,174.00	(61,324.00)
391.06 (514) Special Items				0.00
391.05 (515) Extraordinary Items				0.00
Net Change in Fund Balances	1,656.00	1,656.00	73,455.00	71,799.00
Fund Balance - Beginning	200,558.00	200,558.00	200,558.00	
Adjustments:				
Adjusted Fund Balance - Beginning	200,558.00	200,558.00	200,558.00	0.00
FUND BALANCE - ENDING	202,214.00	202,214.00	274,013.00	71,799.00

See Independent Accountants' Compilation Report

CITY OF MILLER
SCHEDULE OF CHANGES IN LONG-TERM DEBT
Year Ended December 31, 2013

Indebtedness	Long-Term Debt January 1, 2013	Add New Debt	Less Debt Retired	Long-Term Debt December 31, 2013
Governmental Long-Term Debt:				
231.01 General Obligation Bonds				
231.02 Revenue Bonds	665,111.00		137,006.00	528,105.00
231.03 Special Assessment Bonds				
236 Advance from Other Funds				
237 Other Long-Term Liabilities	83,658.00		25,702.00	57,956.00
238 Net OPEB Obligation				
Enterprise Long-Term Debt: (only cash basis entities need to complete the enterprise section)				
231.01 General Obligation Bonds				
231.02 Revenue Bonds	7,950,191.00		142,530.00	7,807,661.00
231.03 Special Assessment Bonds				
235 Accrued Landfill Closure and Postclosure Care Costs				
236 Advance from Other Funds				
237 Other Long-Term Liabilities				
238 Net OPEB Obligation				
Total	8,698,960.00	0.00	305,238.00	8,393,722.00

(Do not include interest in the above figures)

CITY OF MILLER

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KOHLMAN, BIERSCHBACH & ANDERSON, LLP
CERTIFIED PUBLIC ACCOUNTANTS

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WITH AN OFFICE IN
MOBRIDGE, SOUTH DAKOTA

INDEPENDENT ACCOUNTANTS' COMPILATION REPORT

City Council
City of Miller
109 East Commercial Avenue
Miller, South Dakota 57442

We have compiled the accompanying statement of net position - modified cash basis, the balance sheet - modified cash basis of the governmental funds, and the statement of net position - modified cash basis of the proprietary funds of the City of Miller, South Dakota, as of December 31, 2014, and the related statement of activities - modified cash basis, the statement of revenues, expenditures and changes in fund balances - modified cash basis for governmental funds, and the statement of revenues, expenses, and changes in fund net position - modified cash basis for proprietary funds for the year then ended, and the accompanying supplementary information contained in the budgetary comparison schedule - budgetary basis for the general fund and the schedule of changes in long-term debt, included in the accompanying prescribed form. We have not audited or reviewed the financial statements included in the accompanying prescribed form and, accordingly, do not express an opinion or provide any assurance about whether the financial statements are in accordance with the form prescribed by the Department of Legislative Audit of the State of South Dakota.

Management is responsible for the preparation and fair presentation of the financial statements included in the form prescribed by the Department of Legislative Audit of the State of South Dakota and for designing, implementing, and maintaining internal control relevant to the preparation and fair presentation of the financial statements.

Our responsibility is to conduct the compilation in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. The objective of a compilation is to assist management in presenting financial information in the form of financial statements without undertaking to obtain or provide any assurance that there are no material modifications that should be made to the financial statements.

Management has elected to omit substantially all of the disclosures ordinarily included in financial statements prepared in accordance with the modified cash basis of accounting. If the omitted disclosures were included in the financial statements, they might influence the user's conclusions about the City's assets, liabilities, net position, revenues, and expenses. Accordingly, the financial statements are not designed for those who are not informed about such matters.

The budgetary comparison information and the schedule of changes in long-term debt on pages 12 through 14 of the prescribed forms are presented for purposes of additional analysis and are not a required part of the basic financial statements. The supplementary information has been compiled from information that is the representation of management. We have not audited or reviewed the supplementary information and, accordingly, do not express an opinion or provide any assurance on such supplementary information.

The financial statements included in the accompanying prescribed form are presented in accordance with the requirements of the Department of Legislative Audit of the State of South Dakota, and are not intended to be a presentation in accordance with the modified cash basis of accounting.

This report is intended solely for the information and use of the Department of Legislative Audit of the State of South Dakota and is not intended to be and should not be used by anyone other than this specified party.

Kohlman, Bierschbach & Anderson, LLP

February 9, 2015

CITY OF MILLER
STATEMENT OF NET POSITION - MODIFIED CASH BASIS
DECEMBER 31, 2014

	Primary Government		
	Governmental Activities	Business-Type Activities	Total
ASSETS:			
Cash and Cash Equivalents	138,600.00	1,475,327.00	1,613,927.00
Investments		60,126.00	60,126.00
Restricted Assets:			
Cash and cash equivalents	210,044.00	679,805.00	889,849.00
Investments			0.00
TOTAL ASSETS	348,644.00	2,215,258.00	2,563,902.00
NET POSITION:			
Restricted for: (See Note ___)			
Capital Projects Purposes	31,321.00		31,321.00
Debt Service Purposes	209,364.00	679,805.00	889,169.00
Permanently Restricted Purposes			
Expendable			0.00
Non-Expendable			0.00
Other Purposes	680.00		680.00
Unrestricted (Deficit)	107,279.00	1,535,453.00	1,642,732.00
TOTAL NET POSITION	348,644.00	2,215,258.00	2,563,902.00

See Independent Accountants' Compilation Report

CITY OF MILLER
STATEMENT OF ACTIVITIES - MODIFIED CASH BASIS
YEAR ENDED DECEMBER 31, 2014

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants and Contributions	Net (Expense) Revenue and Changes in Net Position: Primary Government: Governmental Activities	Net (Expense) Revenue and Changes in Net Position: Primary Government: Business-Type Activities	Net (Expense) Revenue and Changes in Net Position: Primary Government: Total
Primary Government:							
Governmental Activities:							
General Government	188,747.00	26,093.00			(162,654.00)		(162,654.00)
Public Safety	333,964.00	347.00	7,307.00	870.00	(325,440.00)		(325,440.00)
Public Works	577,166.00	11,460.00	98,048.00	112,496.00	(355,162.00)		(355,162.00)
Health and Welfare	2,000.00	75.00			(1,925.00)		(1,925.00)
Culture and Recreation	103,533.00	16,218.00			(87,315.00)		(87,315.00)
Conservation and Development	132,569.00			680.00	(131,889.00)		(131,889.00)
Intergovernmental Expenditures					0.00		0.00
Miscellaneous Expenditures					0.00		0.00
**Capital Outlay - Unallocated					0.00		0.00
*Interest on Long-Term Debt	21,966.00				(21,966.00)		(21,966.00)
Total Governmental Activities	1,359,945.00	54,193.00	105,355.00	114,046.00	(1,086,351.00)		(1,086,351.00)
Business-type Activities:							
Water	461,353.00	481,706.00				20,353.00	20,353.00
Sewer	339,197.00	450,519.00				111,322.00	111,322.00
Electric	2,738,308.00	2,148,060.00				(590,248.00)	(590,248.00)
Total Business-Type Activities	3,538,858.00	3,080,285.00	0.00	0.00		(458,573.00)	(458,573.00)
Total Primary Government	4,898,803.00	3,134,478.00	105,355.00	114,046.00	(1,086,351.00)	(458,573.00)	(1,544,924.00)
General Revenues:							
Taxes:							
Property Taxes					338,711.00		338,711.00
Sales Taxes					769,861.00		769,861.00
State Shared Revenues					12,361.00		12,361.00
Grants and Contributions not Restricted to Specific Programs					3,188.00		3,188.00
Unrestricted Investment Earnings					628.00	1,918.00	2,546.00
Debt Issued							0.00
Miscellaneous Revenue					28,233.00	217,051.00	245,284.00
Special Items							0.00
Extraordinary Items							0.00
Transfers							0.00
Total General Revenues, Special Items, Extraordinary Items and Transfers					1,152,982.00	218,969.00	1,371,951.00
Change in Net Position					66,631.00	(239,604.00)	(172,973.00)
Net Position-Beginning					282,013.00	2,454,862.00	2,736,875.00
Adjustments:							
							0.00
Adjusted Net Position-Beginning					282,013.00	2,454,862.00	2,736,875.00
NET POSITION-ENDING					348,644.00	2,215,258.00	2,563,902.00

* The Municipality does not have interest expense related to the functions presented above. This amount includes indirect interest expense on general long-term debt.

** This amount excludes the capital purchases that are included in the direct expenses of the various functions. See Note ____.

See Independent Accountants' Compilation Report

CITY OF MILLER
BALANCE SHEET - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
DECEMBER 31, 2014

	General Fund	Capital Improvement Fund	Total Governmental Funds
ASSETS:			
Cash and Cash Equivalents	107,279.00	31,321.00	138,600.00
106 Cash with Fiscal Agent			0.00
151 Investments			0.00
107.1 Restricted Cash and Cash Equivalents	210,044.00		210,044.00
107.2 Restricted Investments			0.00
TOTAL ASSETS	317,323.00	31,321.00	348,644.00
FUND BALANCES:			
263 Nonspendable			0.00
264 Restricted	210,044.00	31,321.00	241,365.00
265 Committed			0.00
266 Assigned			0.00
267 Unassigned	107,279.00		107,279.00
TOTAL FUND BALANCES	317,323.00	31,321.00	348,644.00

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CITY OF MILLER
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
YEAR ENDED DECEMBER 31, 2014

	General Fund	Capital Improvement Fund	Total Governmental Funds
Revenues:			
310 Taxes:			
311 General Property Taxes	338,004.00		338,004.00
312 Airflight Property Tax			0.00
313 General Sales and Use Taxes	769,861.00		769,861.00
314 Gross Receipts Business Taxes			0.00
315 Amusement Taxes			0.00
316 911 Telephone Surcharge			0.00
317 Excise Tax			0.00
318 Tax Deed Revenue			0.00
319 Penalties and Interest on Delinquent Taxes	707.00		707.00
Total Taxes	1,108,572.00	0.00	1,108,572.00
320 Licenses and Permits	14,529.00		14,529.00
330 Intergovernmental Revenue:			
331 Federal Grants	60,097.00		60,097.00
332 Federal Shared Revenue			0.00
333 Federal Payments in Lieu of Taxes			0.00
334 State Grants	20,677.00		20,677.00
335 State Shared Revenue:			
335.01 Bank Franchise Tax	1,783.00		1,783.00
335.02 Motor Vehicle Commercial Prorate	7,080.00		7,080.00
335.03 Liquor Tax Reversion	10,578.00		10,578.00
335.04 Motor Vehicle Licenses (5%)	24,827.00		24,827.00
335.06 Fire Insurance Premiums Reversion			0.00
335.08 Local Government Highway and Bridge Fund	50,754.00		50,754.00
335.09 911 Remittances			0.00
335.20 Other			0.00
336 State Payments in Lieu of Taxes			0.00
338 County Shared Revenue:			
338.01 County Road Tax (25%)	4,323.00		4,323.00

CITY OF MILLER
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
YEAR ENDED DECEMBER 31, 2014

	General Fund	Capital Improvement Fund	Total Governmental Funds
338.02 County Highway and Bridge Reserve Tax (25%)	963.00		963.00
338.03 County Wheel Tax			0.00
338.99 Other			0.00
339 Other Intergovernmental Revenues	2,865.00		2,865.00
Total Intergovernmental Revenue	183,947.00	0.00	183,947.00
340 Charges for Goods and Services:			
341 General Government	142.00		142.00
342 Public Safety	220.00		220.00
343 Highways and Streets	11,235.00		11,235.00
344 Sanitation	225.00		225.00
345 Health	75.00		75.00
346 Culture and Recreation	16,218.00		16,218.00
347 Ambulance			0.00
348 Cemetery			0.00
349 Other			0.00
Total Charges for Goods and Services	28,115.00	0.00	28,115.00
350 Fines and Forfeits:			
351 Court Fines and Costs	127.00		127.00
352 Animal Control Fines			0.00
353 Parking Meter Fines			0.00
354 Library			0.00
359 Other			0.00
Total Fines and Forfeits	127.00	0.00	127.00
360 Miscellaneous Revenue:			
361 Investment Earnings	628.00		628.00
362 Rentals	11,422.00		11,422.00
363 Special Assessments			0.00
364 Maintenance Assessments			0.00
367 Contributions and Donations from Private Sources	3,868.00	50,000.00	53,868.00

CITY OF MILLER
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
YEAR ENDED DECEMBER 31, 2014

	General Fund	Capital Improvement Fund	Total Governmental Funds
368 Liquor Operating Agreement Income			0.00
369 Other	16,964.00		16,964.00
Total Miscellaneous Revenue	32,882.00	50,000.00	82,882.00
Total Revenue	1,368,172.00	50,000.00	1,418,172.00
Expenditures:			
410 General Government:			
411 Legislative	30,428.00		30,428.00
412 Executive			0.00
413 Elections			0.00
414 Financial Administration	130,780.00		130,780.00
419 Other	27,539.00		27,539.00
Total General Government	188,747.00	0.00	188,747.00
420 Public Safety:			
421 Police	292,587.00		292,587.00
422 Fire	23,032.00		23,032.00
423 Protective Inspection			0.00
429 Other Protection			0.00
Total Public Safety	315,619.00	0.00	315,619.00
430 Public Works:			
431 Highways and Streets	325,537.00		325,537.00
432 Sanitation			0.00
433 Water			0.00
434 Electricity			0.00
435 Airport	82,854.00	18,679.00	101,533.00
436 Parking Facilities			0.00
437 Cemeteries			0.00
438 Natural Gas			0.00
439 Transit			0.00
Total Public Works	408,391.00	18,679.00	427,070.00

CITY OF MILLER
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
YEAR ENDED DECEMBER 31, 2014

	General Fund	Capital Improvement Fund	Total Governmental Funds
440 Health and Welfare:			
441 Health			0.00
442 Home Health			0.00
443 Mental Health Centers			0.00
444 Humane Society			0.00
445 Drug Education			0.00
446 Ambulance			0.00
447 Hospitals, Nursing Homes and Rest Homes			0.00
449 Other	2,000.00		2,000.00
Total Health and Welfare	2,000.00	0.00	2,000.00
450 Culture and Recreation:			
451 Recreation	81,370.00		81,370.00
452 Parks	20,563.00		20,563.00
455 Libraries			0.00
456 Auditorium			0.00
457 Historical Preservation			0.00
458 Museums	1,600.00		1,600.00
Total Culture and Recreation	103,533.00	0.00	103,533.00
460 Conservation and Development:			
463 Urban Redevelopment and Housing	569.00		569.00
465 Economic Development and Assistance (Industrial Development)	132,000.00		132,000.00
466 Economic Opportunity			0.00
Total Conservation and Development	132,569.00	0.00	132,569.00
470 Debt Service	190,407.00		190,407.00
480 Intergovernmental Expenditures			0.00
485 Capital Outlay			0.00

CITY OF MILLER
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
YEAR ENDED DECEMBER 31, 2014

	General Fund	Capital Improvement Fund	Total Governmental Funds
490 Miscellaneous:			
491 Judgments and Losses			0.00
492 Other Expenditures			0.00
499 Liquor Operating Agreements			0.00
Total Miscellaneous	0.00	0.00	0.00
Total Expenditures	1,341,266.00	18,679.00	1,359,945.00
Excess of Revenues Over (Under) Expenditures	26,906.00	31,321.00	58,227.00
Other Financing Sources (Uses):			
391.01 Transfers In	1,508.00		1,508.00
511 Transfers Out			0.00
513 Payments to Refunded Debt Escrow Agent			0.00
391.03 Sale of Municipal Property	8,404.00		8,404.00
391.04 Compensation for Loss or Damage to Capital Assets			0.00
391.20 Long-Term Debt Issued			0.00
Total Other Financing Sources (Uses)	9,912.00	0.00	9,912.00
391.06 (514) Special Items			0.00
391.05 (515) Extraordinary Items			0.00
Net Change in Fund Balance	36,818.00	31,321.00	68,139.00
Fund Balance - Beginning	280,505.00	0.00	280,505.00
Adjustments:			
			0.00
			0.00
Adjusted Fund Balance - Beginning	280,505.00	0.00	280,505.00
FUND BALANCE- ENDING	317,323.00	31,321.00	348,644.00

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CITY OF MILLER
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES TO THE STATEMENT OF ACTIVITIES
YEAR ENDED DECEMBER 31, 2014

Net Change in Fund Balances - Total Governmental Funds	68,139.00
Amounts reported for governmental activities in the statement of activities are different because:	
This amount represents capital asset purchases which are reported as expenditures on the fund financial statements but increase assets on the government wide statements.	
The receipt of donated capital assets is not reported on the fund statements, but is reported as a program revenue on the government wide statements.	
Payment of principal on long-term debt is an expenditure in the governmental funds but the payment reduces long-term liabilities in the statement of net assets.	
G.O Bond $	
Revenue Bond $	
Sp. Assess. Bond $	
Other Long-Term $	
The issuance of long-term debt is an other financing source in the fund statements but an increase in long-term liabilities on the government wide statements.	( )
G.O. Bond $	
Revenue Bond $	
Sp. Assess. Bond $	
Other Long-Term $	
Governmental funds recognize expenditures for amounts of compensated absences actually paid to employees with current financial resources during the fiscal year. Amounts of compensated absences earned by employees are not recognized in the funds. In the statement of activities, expenses for these benefits are recognized when the employees earn leave credits.	
Vacation Leave $	
Sick Leave $	
Other Leave Types $	
(To arrive at the totals add amount earned and deduct amounts taken, hence, "change in" balance for the year, increase (decrease))	
Internal service funds are used by management to charge the costs of certain activities, such as insurance to individual funds. The net revenue (expense) of the internal service funds is reported with governmental activities.	(1,508.00)
Supplies acquired are an expenditure on the fund statements when purchased but are expensed on the statement of activities when consumed. This amount represents the "change in" inventory of supplies. Increase (decrease)	
Change in Net Position of Governmental Activities	66,631.00

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CITY OF MILLER
STATEMENT OF NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
DECEMBER 31, 2014

	Enterprise Funds			
	Water Fund	Sewer Fund	Electric Fund	Totals
ASSETS:				
Current Assets:				
Cash and Cash Equivalents	165,341.00	404,898.00	905,088.00	1,475,327.00
106 Cash with Fiscal Agent				0.00
151 Investments			60,126.00	60,126.00
Total Current Assets	165,341.00	404,898.00	965,214.00	1,535,453.00
Noncurrent Assets:				
107.1 Restricted Cash and Cash Equivalents	51,014.00		628,791.00	679,805.00
107.2 Restricted Investments				0.00
Total Noncurrent Assets	51,014.00	0.00	628,791.00	679,805.00
TOTAL ASSETS	216,355.00	404,898.00	1,594,005.00	2,215,258.00
NET POSITION:				
253.20 Restricted for:				
253.21 Revenue Bond Debt Service	51,014.00		628,791.00	679,805.00
253.22 Revenue Bond Retirement				0.00
253.23 Revenue Bond Contingency				0.00
253.24 Special Assessment Bond Guarantee				0.00
253.25 Special Assessment Bond Sinking				0.00
253.26 Equipment Repair and/or Replacement				0.00
253.27 Landfill Closure and Post Closure Costs				0.00
253.28 Permanently Restricted Purposes				0.00
253.29 Other purposes				0.00
253.90 Unrestricted	165,341.00	404,898.00	965,214.00	1,535,453.00
TOTAL NET POSITION	216,355.00	404,898.00	1,594,005.00	2,215,258.00

See Independent Accountants' Compilation Report

CITY OF MILLER
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2014

	Enterprise Funds				
	Water Fund	Sewer Fund	Electric Fund	Totals	Internal Service Funds
Operating Revenue:					
370/380 Charges for Goods and Services	481,706.00	450,519.00	2,148,060.00	3,080,285.00	
Revenue Dedicated to Servicing Debt				0.00	
380.05 Lottery Sales				0.00	
369 Miscellaneous				0.00	
Total Operating Revenue	481,706.00	450,519.00	2,148,060.00	3,080,285.00	0.00
Operating Expenses:					
410 Personal Services	98,960.00	97,343.00	233,358.00	429,661.00	
420 Other Current Expense	75,263.00	45,541.00	69,680.00	190,484.00	
426.2 Materials	191,726.00		1,437,688.00	1,629,414.00	
430 Capital Assets	39,561.00	196,313.00	414,021.00	649,895.00	
Total Operating Expenses	405,510.00	339,197.00	2,154,747.00	2,899,454.00	0.00
Operating Income (Loss)	76,196.00	111,322.00	(6,687.00)	180,831.00	0.00
Nonoperating Revenue (Expense):					
330 Operating Grants				0.00	
361 Investment Earnings	236.00	98.00	1,584.00	1,918.00	
362 Rental Revenue				0.00	
441 Debt Service (Principal)	(27,382.00)		(115,000.00)	(142,382.00)	
442 Interest Expense (Enter as Negative)	(28,461.00)		(468,561.00)	(497,022.00)	
391.03 Sale of Municipal Property	367.00		20,309.00	20,676.00	
391.20 Long-Term Debt Issued				0.00	
(429)369.01 Other			196,375.00	196,375.00	
Total Nonoperating Revenue (Expense)	(55,240.00)	98.00	(365,293.00)	(420,435.00)	0.00

CITY OF MILLER
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2014

	Enterprise Funds				
	Water Fund	Sewer Fund	Electric Fund	Totals	Internal Service Funds
Income (Loss) Before Contributions, Special Items, Extraordinary Items and Transfers	20,956.00	111,420.00	(371,980.00)	(239,604.00)	0.00
391.07 Capital Contributions				0.00	
391.1 Transfers In				0.00	
511 Transfers Out (Enter as Negative)				0.00	(1,508.00)
391.06 (514) Special Items				0.00	
391.05 (515) Extraordinary Items				0.00	
Change in Net Position	20,956.00	111,420.00	(371,980.00)	(239,604.00)	(1,508.00)
Net Position - Beginning	195,399.00	293,478.00	1,965,985.00	2,454,862.00	1,508.00
Adjustments:					
				0.00	
				0.00	
Adjusted Net Position - Beginning	195,399.00	293,478.00	1,965,985.00	2,454,862.00	1,508.00
NET POSITION - ENDING	216,355.00	404,898.00	1,594,005.00	2,215,258.00	0.00

CITY OF MILLER
BUDGETARY COMPARISON SCHEDULE - BUDGETARY BASIS
GENERAL FUND
YEAR ENDED DECEMBER 31, 2014

	Budgeted Amounts		Actual Amounts	Variance with Final Budget
	Original	Final	(Budgetary Basis)	Positive (Negative)
Revenues:				
310 Taxes:				
311 General Property Taxes	322,750.00	322,750.00	338,004.00	15,254.00
312 Airflight Property Tax				0.00
313 General Sales and Use Taxes	760,000.00	760,000.00	769,861.00	9,861.00
314 Gross Receipts Business Taxes				0.00
315 Amusement Taxes				0.00
316 911 Telephone Surcharge				0.00
317 Excise Tax				0.00
318 Tax Deed Revenue				0.00
319 Penalties and Interest on Delinquent Taxes	600.00	600.00	707.00	107.00
Total Taxes	1,083,350.00	1,083,350.00	1,108,572.00	25,222.00
320 Licenses and Permits	10,425.00	10,425.00	14,529.00	4,104.00
330 Intergovernmental Revenue:				
331 Federal Grants	0.00	51,466.00	60,097.00	8,631.00
332 Federal Shared Revenue				0.00
333 Federal Payments in Lieu of Taxes				0.00
334 State Grants	0.00	19,518.00	20,677.00	1,159.00
335 State Shared Revenue:				
335.01 Bank Franchise Tax	1,500.00	1,500.00	1,783.00	283.00
335.02 Motor Vehicle Commercial Prorate	7,000.00	7,000.00	7,080.00	80.00
335.03 Liquor Tax Reversion	10,000.00	10,000.00	10,578.00	578.00
335.04 Motor Vehicle Licenses (5%)	16,000.00	16,000.00	24,827.00	8,827.00
335.06 Fire Insurance Premiums Reversion				0.00
335.08 Local Government Highway and Bridge Fund	40,000.00	40,000.00	50,754.00	10,754.00
335.09 911 Remittances				0.00
335.20 Other				0.00
336 State Payments in Lieu of Taxes				0.00
338 County Shared Revenue:				
338.01 County Road Tax (25%)	4,000.00	4,000.00	4,323.00	323.00
338.02 County Highway and Bridge Reserve Tax (25%)			963.00	963.00
338.03 County Wheel Tax				0.00
338.99 Other				0.00
339 Other Intergovernmental Revenues	2,200.00	2,200.00	2,865.00	665.00
Total Intergovernmental Revenue	80,700.00	151,684.00	183,947.00	32,263.00

CITY OF MILLER
BUDGETARY COMPARISON SCHEDULE - BUDGETARY BASIS
GENERAL FUND
YEAR ENDED DECEMBER 31, 2014

	Budgeted Amounts		Actual Amounts	Variance with Final Budget
	Original	Final	(Budgetary Basis)	Positive (Negative)
340 Charges for Goods and Services:				
341 General Government			142.00	142.00
342 Public Safety	1,500.00	1,500.00	220.00	(1,280.00)
343 Highways and Streets	4,500.00	4,500.00	11,235.00	6,735.00
344 Sanitation	250.00	250.00	225.00	(25.00)
345 Health	200.00	200.00	75.00	(125.00)
346 Culture and Recreation	16,350.00	16,350.00	16,218.00	(132.00)
347 Ambulance				0.00
348 Cemetery				0.00
349 Other				0.00
Total Charges for Goods and Services	22,800.00	22,800.00	28,115.00	5,315.00
350 Fines and Forfeits:				
351 Court Fines and Costs	250.00	250.00	127.00	(123.00)
352 Animal Control Fines				0.00
353 Parking Meter Fines				0.00
354 Library				0.00
359 Other				0.00
Total Fines and Forfeits	250.00	250.00	127.00	(123.00)
360 Miscellaneous Revenue:				
361 Investment Earnings	350.00	350.00	628.00	278.00
362 Rentals	10,914.00	10,914.00	11,422.00	508.00
363 Special Assessments				0.00
364 Maintenance Assessments				0.00
367 Contributions and Donations from Private Sources	2,500.00	2,500.00	3,868.00	1,368.00
368 Liquor Operating Agreement Income				0.00
369 Other	31,000.00	31,000.00	16,964.00	(14,036.00)
Total Miscellaneous Revenue	44,764.00	44,764.00	32,882.00	(11,882.00)
Total Revenue	1,242,289.00	1,313,273.00	1,368,172.00	54,899.00
Expenditures:				
410 General Government:				
411 Legislative	30,270.00	30,428.00	30,428.00	0.00
411.5 Contingency	25,000.00	25,000.00		
Amount Transferred (Enter as Negative)		(10,361.00)		14,639.00
412 Executive				0.00
413 Elections	1,500.00	1,500.00		1,500.00
414 Financial Administration	140,419.00	140,679.00	130,780.00	9,899.00
419 Other	27,300.00	27,539.00	27,539.00	0.00
Total General Government	224,489.00	214,785.00	188,747.00	26,038.00

See Independent Accountants' Compilation Report

CITY OF MILLER
BUDGETARY COMPARISON SCHEDULE - BUDGETARY BASIS
GENERAL FUND
YEAR ENDED DECEMBER 31, 2014

	Budgeted Amounts		Actual Amounts	Variance with Final Budget
	Original	Final	(Budgetary Basis)	Positive (Negative)
420 Public Safety:				0.00
421 Police	286,620.00	293,178.00	292,587.00	591.00
422 Fire	31,050.00	31,050.00	23,032.00	8,018.00
423 Protective Inspection				0.00
429 Other Protection	1,000.00	1,000.00		1,000.00
Total Public Safety	318,670.00	325,228.00	315,619.00	9,609.00
430 Public Works:				
431 Highways and Streets	340,590.00	351,731.00	325,537.00	26,194.00
432 Sanitation				0.00
433 Water				0.00
434 Electricity				0.00
435 Airport	29,175.00	83,500.00	82,854.00	646.00
436 Parking Facilities				0.00
437 Cemeteries				0.00
438 Natural Gas				0.00
439 Transit				0.00
Total Public Works	369,765.00	435,231.00	408,391.00	26,840.00
440 Health and Welfare:				
441 Health				0.00
442 Home Health				0.00
443 Mental Health Centers				0.00
444 Humane Society				0.00
445 Drug Education				0.00
446 Ambulance				0.00
447 Hospitals, Nursing Homes and Rest Homes				0.00
449 Other			2,000.00	(2,000.00)
Total Health and Welfare	0.00	0.00	2,000.00	(2,000.00)
450 Culture and Recreation:				
451 Recreation	68,375.00	76,870.00	81,370.00	(4,500.00)
452 Parks	29,550.00	29,550.00	20,563.00	8,987.00
455 Libraries				0.00
456 Auditorium				0.00
457 Historical Preservation				0.00
458 Museums			1,600.00	(1,600.00)
Total Culture and Recreation	97,925.00	106,420.00	103,533.00	2,887.00
460 Conservation and Development:				
463 Urban Redevelopment and Housing	400.00	569.00	569.00	0.00
465 Economic Development and Assistance (Industrial Development)	140,100.00	140,100.00	132,000.00	8,100.00
466 Economic Opportunity				0.00
Total Conservation and Development	140,500.00	140,669.00	132,569.00	8,100.00

CITY OF MILLER
BUDGETARY COMPARISON SCHEDULE - BUDGETARY BASIS
GENERAL FUND
YEAR ENDED DECEMBER 31, 2014

	Budgeted Amounts		Actual Amounts	Variance with Final Budget
	Original	Final	(Budgetary Basis)	Positive (Negative)
470 Debt Service	192,800.00	192,800.00	190,407.00	2,393.00
480 Intergovernmental Expenditures				0.00
490 Miscellaneous:				
491 Judgments and Losses				0.00
492 Other Expenditures				0.00
499 Liquor Operating Agreements				0.00
Total Miscellaneous	0.00	0.00	0.00	0.00
Total Expenditures	1,344,149.00	1,415,133.00	1,341,266.00	73,867.00
Excess of Revenues Over (Under) Expenditures	(101,860.00)	(101,860.00)	26,906.00	128,766.00
Other Financing Sources (Uses):				
391.01 Transfers In	96,860.00	96,860.00	1,508.00	(95,352.00)
511 Transfers Out (Enter as Negative)				0.00
513 Payments to Refunded Debt Escrow Agent (Enter as Negative)				0.00
391.03 Sale of Municipal Property	5,000.00	5,000.00	8,404.00	3,404.00
391.04 Compensation for Loss or Damage to Capital Assets				0.00
391.20 General Long-Term Debt Issued				0.00
Total Other Financing Sources (Uses)	101,860.00	101,860.00	9,912.00	(91,948.00)
391.06 (514) Special Items				0.00
391.05 (515) Extraordinary Items				0.00
Net Change in Fund Balances	0.00	0.00	36,818.00	36,818.00
Fund Balance - Beginning	280,505.00	280,505.00	280,505.00	0.00
Adjustments:				
Adjusted Fund Balance - Beginning	280,505.00	280,505.00	280,505.00	0.00
FUND BALANCE - ENDING	280,505.00	280,505.00	317,323.00	36,818.00

See Independent Accountants' Compilation Report

CITY OF MILLER
SCHEDULE OF CHANGES IN LONG-TERM DEBT
YEAR ENDED DECEMBER 31, 2014

Indebtedness	Long-Term Debt January 01, 2014	Add New Debt	Less Debt Retired	Long-Term Debt December 31, 2014
Governmental Long-Term Debt:				
231.01 General Obligation Bonds				
231.02 Revenue Bonds	528,106.00		142,310.00	385,796.00
231.03 Special Assessment Bonds				
236 Advance from Other Funds				
237 Other Long-Term Liabilities	57,924.00		26,132.00	31,792.00
238 Net OPEB Obligation				
Enterprise Long-Term Debt: (only cash basis entities need to complete the enterprise section)				
231.01 General Obligation Bonds				
231.02 Revenue Bonds	7,807,661.00		142,382.00	7,665,279.00
231.03 Special Assessment Bonds				
235 Accrued Landfill Closure and Postclosure Care Costs				
236 Advance from Other Funds				
237 Other Long-Term Liabilities				
238 Net OPEB Obligation				
Total	8,393,691.00	0.00	310,824.00	8,082,867.00

(Do not include interest in the above figures)

BUDGET

GLREVNRP 10/29/15 CITY OF MILLER PAGE 1
REVENUE 3:54 Water REVENUE REPORT OPER: SC
CALENDAR 10/2015, FISCAL 10/2015

ACCOUNT NUMBER	ACCOUNT TITLE	FISCAL ESTIMATE	PTD BALANCE	YTD BALANCE	PERCENT RECVD	UNCOLLECTED
602-3810-3311	FEDERAL GRANTS	.00	.00	.00	.00	.00
602-3810-3341	STATE GRANTS	.00	.00	.00	.00	.00
602-3810-3611	INTEREST EARNED	500.00	.00	188.52	37.70	311.48
602-3810-3811	METERED WATER SALES	493,000.00	49,009.42	395,560.78	80.24	97,439.22
602-3810-3812	BULK WATER SALES	500.00	.00	1,830.88	366.18	1,330.88-
602-3810-3813	SALE OF SUPPLIES/SERVICE	2,000.00	53.70	2,680.36	134.02	680.36-
602-3810-3814	WATER TAP FEE	1,000.00	1,168.57	1,918.57	191.86	918.57-
602-3810-3815	WATER SURCH REV	38,000.00	3,270.91	32,495.99	85.52	5,504.01
602-3810-3818	WATER HOOK UP	500.00	20.00	90.00	18.00	410.00
602-3810-3819	OTHER WATER REVENUE	1,000.00	500.00	850.00	85.00	150.00
602-3810-3912	LONG-TERM DEBT ISSUED	.00	.00	.00	.00	.00
602-3810-3913	SALE OF MUN. PROPERTY	500.00	.00	.00	.00	500.00
602-3810-3914	COMP FOR LOSS & DAMAGE	.00	.00	.00	.00	.00
	WATER TOTAL	537,000.00	54,022.60	435,615.10	81.12	101,384.90
	WATER TOTAL	537,000.00	54,022.60	435,615.10	81.12	101,384.90

Water

CITY OF MILLER
REVENUE & EXPENSE REPORT
CALENDAR 10/2015, FISCAL 10/2015

ACCOUNT NUMBER	ACCOUNT TITLE	MTD BALANCE	YTD BALANCE	BUDGET	DIFFERENCE
602-4335-4110	REGULAR SALARY	8,181.39	78,468.55	105,000.00	26,531.45
602-4335-4120	FICA	594.07	5,684.73	8,000.00	2,315.27
602-4335-4130	RETIREMENT	490.88	4,708.05	6,300.00	1,591.95
602-4335-4140	WORK COMP. INS.	.00	.00	2,700.00	2,700.00
602-4335-4150	GROUP HEALTH INS.	1,150.35	11,550.15	13,000.00	1,449.85
602-4335-4151	GROUP LIFE INS.	11.95	120.61	200.00	79.39
602-4335-4210	PROP & LIAB INS	.00	4,074.69	4,750.00	675.31
602-4335-4220	ENGINEER FEES	.00	.00	5,000.00	5,000.00
602-4335-4221	OTHER PROF FEES	23.28	819.54	1,000.00	180.46
602-4335-4231	PUBLISH ORDS & NOTICES	.00	570.90	1,000.00	429.10
602-4335-4251	REPAIRS & MAINTENANCE	34.98	9,791.62	25,000.00	15,208.38
602-4335-4261	OPERATE SUPPLY & MATERIAL	3,854.39	29,738.54	25,000.00	4,738.54-
602-4335-4262	WATER PURCHASED	16,167.24	153,714.49	200,000.00	46,285.51
602-4335-4265	FUEL	116.69	1,621.03	5,500.00	3,878.97
602-4335-4270	CONFERENCE FEES	.00	322.34	1,000.00	677.66
602-4335-4271	LODGING EXPENSE	.00	225.31	1,000.00	774.69
602-4335-4272	MEAL EXPENSE	.00	55.50	200.00	144.50
602-4335-4273	MILEAGE EXPENSE	.00	90.53	300.00	209.47
602-4335-4281	UTILITIES	619.45	8,167.82	18,000.00	9,832.18
602-4335-4282	TELEPHONE	44.96	396.99	750.00	353.01
602-4335-4290	OTHER EXPENSE	108.14	121.39	750.00	628.61
602-4335-4292	MEMBERSHIPS & DUES	.00	1,075.00	1,750.00	675.00
602-4335-4321	CAPITAL IMPROVEMENT	.00	9,000.00	20,000.00	11,000.00
602-4335-4345	VEHICLE & MACHINERY	.00	.00	3,000.00	3,000.00
602-4335-4350	FURNITURE/OFFICE EQUIPMENT	.00	44.29	250.00	205.71
602-4335-4382	RESERVE-EQUIPMENT	.00	7,127.61	20,000.00	12,872.39
602-4335-4410	PRINCIPAL	925.10	32,023.24	34,000.00	1,976.76
602-4335-4420	INTEREST	2,112.90	24,205.88	28,500.00	4,294.12
	WATER TOTAL	34,435.77	383,718.80	531,950.00	148,231.20
602-5111-5111	TRANSFERS OUT	.00	.00	.00	.00
	TRANSFER OUT TOTAL	.00	.00	.00	.00
	WATER TOTAL	34,435.77	383,718.80	531,950.00	148,231.20

ACCOUNT NUMBER	ACCOUNT TITLE	MTD BALANCE	YTD BALANCE	BUDGET	DIFFERENCE
602-3810-3311	FEDERAL GRANTS	.00	.00	.00	.00
602-3810-3341	STATE GRANTS	.00	.00	.00	.00
602-3810-3611	INTEREST EARNED	.00	.00	500.00	500.00
602-3810-3811	METERED WATER SALES	.00	.00	517,222.00	517,222.00
602-3810-3812	BULK WATER SALES	.00	.00	500.00	500.00
602-3810-3813	SALE OF SUPPLIES/SERVICE	.00	.00	2,000.00	2,000.00
602-3810-3814	WATER TAP FEE	.00	.00	1,000.00	1,000.00
602-3810-3815	WATER SURCH REV	.00	.00	38,000.00	38,000.00
602-3810-3818	WATER HOOK UP	.00	.00	400.00	400.00
602-3810-3819	OTHER WATER REVENUE	.00	.00	1,000.00	1,000.00
602-3810-3912	LONG-TERM DEBT ISSUED	.00	.00	.00	.00
602-3810-3913	SALE OF MUN. PROPERTY	.00	.00	.00	.00
602-3810-3914	COMP FOR LOSS & DAMAGE	.00	.00	.00	.00
	WATER TOTAL	.00	.00	560,622.00	560,622.00
	WATER TOTAL	.00	.00	560,622.00	560,622.00

GLBUDGRP 10/29/15 EXPENSES 3:52

Water

CITY OF MILLER
BUDGET REPORT
CALENDAR 1/2016, FISCAL 1/2016

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	PTD BALANCE	YTD BALANCE	PERCENT EXPENDED	UNEXPENDED
602-4335-4110	REGULAR SALARY	108,000.00	.00	.00	.00	108,000.00
602-4335-4120	FICA	8,300.00	.00	.00	.00	8,300.00
602-4335-4130	RETIREMENT	6,500.00	.00	.00	.00	6,500.00
602-4335-4140	WORK COMP. INS.	2,800.00	.00	.00	.00	2,800.00
602-4335-4150	GROUP HEALTH INS.	15,000.00	.00	.00	.00	15,000.00
602-4335-4151	GROUP LIFE INS.	200.00	.00	.00	.00	200.00
602-4335-4210	PROP & LIAB INS	4,800.00	.00	.00	.00	4,800.00
602-4335-4220	ENGINEER FEES	5,000.00	.00	.00	.00	5,000.00
602-4335-4221	OTHER PROF FEES	1,000.00	.00	.00	.00	1,000.00
602-4335-4231	PUBLISH ORDS & NOTICES	1,000.00	.00	.00	.00	1,000.00
602-4335-4251	REPAIRS & MAINTENANCE	25,000.00	.00	.00	.00	25,000.00
602-4335-4261	OPERATE SUPPLY & MATERIAL	25,000.00	.00	.00	.00	25,000.00
602-4335-4262	WATER PURCHASED	200,000.00	.00	.00	.00	200,000.00
602-4335-4265	FUEL	5,500.00	.00	.00	.00	5,500.00
602-4335-4270	CONFERENCE FEES	750.00	.00	.00	.00	750.00
602-4335-4271	LODGING EXPENSE	700.00	.00	.00	.00	700.00
602-4335-4272	MEAL EXPENSE	150.00	.00	.00	.00	150.00
602-4335-4273	MILEAGE EXPENSE	300.00	.00	.00	.00	300.00
602-4335-4281	UTILITIES	15,000.00	.00	.00	.00	15,000.00
602-4335-4282	TELEPHONE	600.00	.00	.00	.00	600.00
602-4335-4290	OTHER EXPENSE	500.00	.00	.00	.00	500.00
602-4335-4292	MEMBERSHIPS & DUES	1,750.00	.00	.00	.00	1,750.00
602-4335-4321	CAPITAL IMPROVEMENT	25,000.00	.00	.00	.00	25,000.00
602-4335-4345	VEHICLE & MACHINERY	3,000.00	.00	.00	.00	3,000.00
602-4335-4350	FURNITURE/OFFICE EQUIPMENT	1,000.00	.00	.00	.00	1,000.00
602-4335-4382	RESERVE-EQUIPMENT	20,000.00	.00	.00	.00	20,000.00
602-4335-4410	PRINCIPAL	38,000.00	.00	.00	.00	38,000.00
602-4335-4420	INTEREST	28,000.00	.00	.00	.00	28,000.00
	WATER TOTAL	542,850.00	.00	.00	.00	542,850.00
602-5111-5111	TRANSFERS OUT	.00	.00	.00	.00	.00
	TRANSFER OUT TOTAL	.00	.00	.00	.00	.00
	WATER TOTAL	542,850.00	.00	.00	.00	542,850.00

USER RATE ORDINANCE

COST ESTIMATES AND MAP

Water Distribution Phase 1

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$118,000.00	$118,000.00
2	Pulverize and Salvage Existing Asphalt	13,800	SY	$3.50	$48,300.00
3	Remove Sidewalk	360	SY	$3.50	$1,260.00
4	Full Depth Concrete Saw Cut	1,200	FT	$10.00	$12,000.00
5	Full Depth Asphalt Saw Cut	410	FT	$5.00	$2,050.00
6	Remove and Dispose Existing Valve and Box	35	EA	$250.00	$8,750.00
7	Remove and Dispose Existing Fire Hydrant	12	EA	$350.00	$4,200.00
8	Directional Boring 10" Water Main	150	FT	$100.00	$15,000.00
9	Directional Boring 6" Water Main	120	FT	$80.00	$9,600.00
10	6" Water Main	7,260	FT	$28.00	$203,280.00
11	8" Water Main	1,000	FT	$32.00	$32,000.00
12	10" Water Main	850	FT	$40.00	$34,000.00
13	Fire Hydrant	23	EA	$3,200.00	$73,600.00
14	6" PVC Fire Hydrant Lead	460	FT	$28.00	$12,880.00
15	6" Gate Valve	69	EA	$1,100.00	$75,900.00
16	8" Gate Valve	5	EA	$1,500.00	$7,500.00
17	10" Gate Valve	2	EA	$2,500.00	$5,000.00
18	Miscellaneous Fittings and Connections	1	LS	$100,600.00	$100,600.00
19	1" Curb Stop w/Box	134	EA	$240.00	$32,160.00
20	2" Curb Stop w/ Box	5	EA	$450.00	$2,250.00
21	1" Service Line	4,422	LF	$25.00	$110,550.00
22	2" Service Line	165	LF	$32.00	$5,280.00
23	4" Concrete Sidewalk	3,240	SF	$6.00	$19,440.00
24	Place Recycled Asphalt	13,800	SY	$2.00	$27,600.00
25	Fine Grading of Base Material	13,800	SY	$1.00	$13,800.00
26	Gravel Base or Surfacing	6,700	TN	$22.00	$147,400.00
27	Asphalt Paving	2,600	TN	$120.00	$312,000.00
28	Blotter Coat Surfacing	5,200	SY	$8.00	$41,600.00
29	Traffic Control	1	LS	$15,000.00	$15,000.00
30	Erosion Control	1	LS	$4,000.00	$4,000.00
31	Incidental Construction	1	LS	$96,400.00	$96,400.00
				Subtotal	$1,591,400.00
				Contingencies	$159,100.00
				Total Construction Cost	$1,750,500.00
				Legal and Administration Cost	$35,000.00
				Design Engineering	$112,500.00
				Bidding Phase Engineering	$10,000.00
				Construction Engineering	$202,500.00
				Total Project Cost	$2,110,500.00

Alley Surfacing

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$4,900.00	$4,900.00
2	Asphalt Saw Cut	14	LF	$5.00	$70.00
3	Concrete Saw Cut	225	LF	$8.00	$1,800.00
4	Remove and Dispose of Asphalt	20	SY	$4.00	$80.00
5	Remove and Dispose of Concrete	754	SF	$1.50	$1,131.00
6	Remove and Salvage Gravel Surfacing	720	SY	$3.00	$2,160.00
7	Unclassified Excavation	117	CY	$15.00	$1,755.00
8	Spreading and Fine Grading of Base Material	610	SY	$3.00	$1,830.00
9	Concrete Curb and Gutter	50	LF	$40.00	$2,000.00
10	3-Foot Concrete Valley Gutter	295	LF	$20.00	$5,900.00
11	Concrete Paving	1,210	SF	$12.00	$14,520.00
12	Gravel Base Course	280	TN	$24.00	$6,720.00
13	Asphalt Concrete Pavement	110	TN	$135.00	$14,850.00
14	Salvage and Reset Inlet Grate	1	EA	$500.00	$500.00
15	Adjust Water Valve or Curb Stop to Grade	11	EA	$300.00	$3,300.00
16	Miscellaneous Traffic Control	1	LS	$4,000.00	$4,000.00
17	Inlet Protection	1	EA	$500.00	$500.00
18	Seeding and Fertilizing	1	LS	$500.00	$500.00
				Subtotal	$66,516.00
				Contingencies	$6,700.00
				Total Construction Cost	$73,216.00
				Legal and Administration Cost	$1,500.00
				Design Engineering	$0.00
				Bidding Phase Engineering	$3,500.00
				Construction Engineering	$8,400.00
				Total Project Cost	$86,616.00

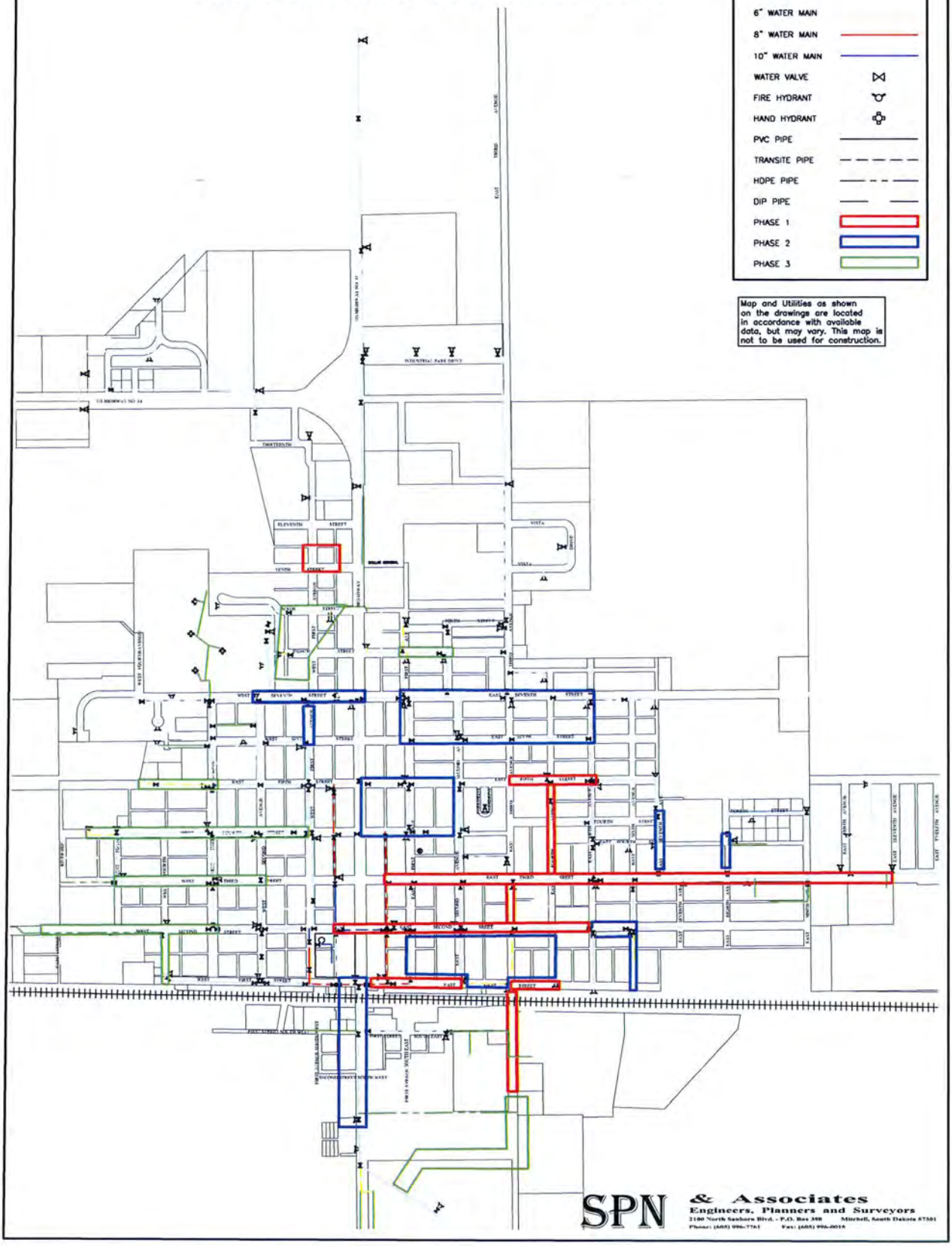
WATER MAP
CITY OF
MILLER
HAND COUNTY, SOUTH DAKOTA

SCALE: 1" = 800'

LEGEND

- 2" WATER MAIN
- 4" WATER MAIN
- 6" WATER MAIN
- 8" WATER MAIN
- 10" WATER MAIN
- WATER VALVE
- FIRE HYDRANT
- HAND HYDRANT
- PVC PIPE
- TRANSITE PIPE
- HDPE PIPE
- DIP PIPE
- PHASE 1
- PHASE 2
- PHASE 3

Map and Utilities as shown on the drawings are located in accordance with available data, but may vary. This map is not to be used for construction.



SPN & Associates
Engineers, Planners and Surveyors
2100 North Sanborn Blvd. - P.O. Box 398 Mitchell, South Dakota 57301
Phone: (605) 996-7761 Fax: (605) 996-0014

AMORTIZATION SCHEDULE

11/24/2009

City of Miller

Pmnt #	Issue Date: Start of Period	Interest Rate	Scheduled Balance	Actual Balance	Scheduled Payment	Interest Portion	Principal Portion	Issuer: Additional Principal
1	11/24/11	3.5000%	765,000.00	765,000.00	(3,038.00)	(2,231.25)	(806.75)	UCH 29648 P/20/11
2	12/24/11	3.5000%	764,195.58	764,193.25	(3,038.00)	(2,228.90)	(809.10)	NSO W Hand rail
3	01/24/12	3.5000%	763,388.81	763,384.15	(3,038.00)	(2,226.54)	(811.46)	
4	02/24/12	3.5000%	762,579.69	762,572.68	(3,038.00)	(2,224.17)	(813.83)	
5	03/24/12	3.5000%	761,768.21	761,758.85	(3,038.00)	(2,221.80)	(816.20)	
6	04/24/12	3.5000%	760,954.36	760,942.65	(3,038.00)	(2,219.42)	(818.58)	
7	05/24/12	3.5000%	760,138.14	760,124.07	(3,038.00)	(2,217.03)	(820.97)	
8	06/24/12	3.5000%	759,319.54	759,303.10	(3,038.00)	(2,214.63)	(823.37)	
9	07/24/12	3.5000%	758,498.55	758,479.73	(3,038.00)	(2,212.23)	(825.77)	
10	08/24/12	3.5000%	757,675.16	757,653.96	(3,038.00)	(2,209.82)	(828.18)	
11	09/24/12	3.5000%	756,849.38	756,825.79	(3,038.00)	(2,207.41)	(830.59)	
12	10/24/12	3.5000%	756,021.18	755,995.19	(3,038.00)	(2,204.99)	(833.01)	
13	11/24/12	3.5000%	755,190.57	755,162.18	(3,038.00)	(2,202.56)	(835.44)	
14	12/24/12	3.5000%	754,357.54	754,326.74	(3,038.00)	(2,200.12)	(837.88)	
15	01/24/13	3.5000%	753,522.08	753,488.86	(3,038.00)	(2,197.68)	(840.32)	
16	02/24/13	3.5000%	752,684.18	752,648.53	(3,038.00)	(2,195.22)	(842.78)	MW
17	03/24/13	3.5000%	751,843.83	751,805.76	(3,038.00)	(2,192.77)	(845.23)	4.2013
18	04/24/13	3.5000%	751,001.04	750,960.52	(3,038.00)	(2,190.30)	(847.70)	✓
19	05/24/13	3.5000%	750,155.79	750,112.83	(3,038.00)	(2,187.83)	(850.17)	✓
20	06/24/13	3.5000%	749,308.07	749,262.66	(3,038.00)	(2,185.35)	(852.65)	✓
21	07/24/13	3.5000%	748,457.86	748,410.00	(3,038.00)	(2,182.86)	(855.14)	✓
22	08/24/13	3.5000%	747,605.21	747,554.87	(3,038.00)	(2,180.37)	(857.63)	✓
23	09/24/13	3.5000%	746,750.05	746,697.24	(3,038.00)	(2,177.87)	(860.13)	✓
24	10/24/13	3.5000%	745,892.40	745,837.10	(3,038.00)	(2,175.36)	(862.64)	✓
25	11/24/13	3.5000%	745,032.25	744,974.46	(3,038.00)	(2,172.84)	(865.16)	✓
26	12/24/13	3.5000%	744,169.59	744,109.30	(3,038.00)	(2,170.32)	(867.68)	✓
27	01/24/14	3.5000%	743,304.41	743,241.62	(3,038.00)	(2,167.79)	(870.21)	✓
28	02/24/14	3.5000%	742,436.71	742,371.41	(3,038.00)	(2,165.25)	(872.75)	✓
29	03/24/14	3.5000%	741,566.48	741,498.66	(3,038.00)	(2,162.70)	(875.30)	✓
30	04/24/14	3.5000%	740,693.71	740,623.36	(3,038.00)	(2,160.15)	(877.85)	✓
31	05/24/14	3.5000%	739,818.39	739,745.52	(3,038.00)	(2,157.59)	(880.41)	✓
32	06/24/14	3.5000%	738,940.53	738,865.11	(3,038.00)	(2,155.02)	(882.98)	✓
33	07/24/14	3.5000%	738,060.10	737,982.13	(3,038.00)	(2,152.45)	(885.55)	
34	08/24/14	3.5000%	737,177.10	737,096.58	(3,038.00)	(2,149.87)	(888.14)	
35	09/24/14	3.5000%	736,291.53	736,208.44	(3,038.00)	(2,147.27)	(890.73)	
36	10/24/14	3.5000%	735,403.37	735,317.72	(3,038.00)	(2,144.68)	(893.32)	
37	11/24/14	3.5000%	734,512.63	734,424.39	(3,038.00)	(2,142.07)	(895.93)	
38	12/24/14	3.5000%	733,619.28	733,528.46	(3,038.00)	(2,139.46)	(898.54)	
39	01/24/15	3.5000%	732,723.34	732,629.92	(3,038.00)	(2,136.84)	(901.16)	
40	02/24/15	3.5000%	731,824.77	731,728.76	(3,038.00)	(2,134.21)	(903.79)	
41	03/24/15	3.5000%	730,923.59	730,824.97	(3,038.00)	(2,131.57)	(906.43)	
42	04/24/15	3.5000%	730,019.78	729,918.54	(3,038.00)	(2,128.93)	(909.07)	
43	05/24/15	3.5000%	729,113.33	729,009.47	(3,038.00)	(2,126.28)	(911.72)	
44	06/24/15	3.5000%	728,204.24	728,097.75	(3,038.00)	(2,123.62)	(914.38)	
45	07/24/15	3.5000%	727,292.50	727,183.37	(3,038.00)	(2,120.95)	(917.05)	
46	08/24/15	3.5000%	726,378.10	726,266.32	(3,038.00)	(2,118.28)	(919.72)	
47	09/24/15	3.5000%	725,461.03	725,346.60	(3,038.00)	(2,115.59)	(922.41)	
48	10/24/15	3.5000%	724,541.28	724,424.19	(3,038.00)	(2,112.90)	(925.10)	
49	11/24/15	3.5000%	723,618.86	723,499.09	(3,038.00)	(2,110.21)	(927.79)	
50	12/24/15	3.5000%	722,693.74	722,571.30	(3,038.00)	(2,107.50)	(930.50)	
51	01/24/16	3.5000%	721,765.92	721,640.80	(3,038.00)	(2,104.79)	(933.21)	
52	02/24/16	3.5000%	720,835.40	720,707.58	(3,038.00)	(2,102.06)	(935.94)	
53	03/24/16	3.5000%	719,902.17	719,771.65	(3,038.00)	(2,099.33)	(938.67)	
54	04/24/16	3.5000%	718,966.21	718,832.98	(3,038.00)	(2,096.60)	(941.40)	
55	05/24/16	3.5000%	718,027.52	717,891.58	(3,038.00)	(2,093.85)	(944.15)	
56	06/24/16	3.5000%	717,086.10	716,947.43	(3,038.00)	(2,091.10)	(946.90)	
57	07/24/16	3.5000%	716,141.93	716,000.53	(3,038.00)	(2,088.33)	(949.67)	
58	08/24/16	3.5000%	715,195.00	715,050.86	(3,038.00)	(2,085.57)	(952.44)	
59	09/24/16	3.5000%	714,245.32	714,098.43	(3,038.00)	(2,082.79)	(955.21)	
60	10/24/16	3.5000%	713,292.86	713,143.21	(3,038.00)	(2,080.00)	(958.00)	
61	11/24/16	3.5000%	712,337.63	712,185.21	(3,038.00)	(2,077.21)	(960.79)	

11/24/2009

City of Miller

Issue Date

Issuer

Pmnt #	Start of Period	Interest Rate	Scheduled Balance	Actual Balance	Scheduled Payment	Interest Portion	Principal Portion	Additional Principal
62	12/24/16	3.5000%	711,379.60	711,224.42	(3,038.00)	(2,074.40)	(963.60)	
63	01/24/17	3.5000%	710,418.79	710,260.83	(3,038.00)	(2,071.59)	(966.41)	
64	02/24/17	3.5000%	709,455.17	709,294.42	(3,038.00)	(2,068.78)	(969.22)	
65	03/24/17	3.5000%	708,488.75	708,325.19	(3,038.00)	(2,065.95)	(972.05)	
66	04/24/17	3.5000%	707,519.50	707,353.14	(3,038.00)	(2,063.11)	(974.89)	
67	05/24/17	3.5000%	706,547.43	706,378.26	(3,038.00)	(2,060.27)	(977.73)	
68	06/24/17	3.5000%	705,572.52	705,400.53	(3,038.00)	(2,057.42)	(980.58)	
69	07/24/17	3.5000%	704,594.76	704,419.94	(3,038.00)	(2,054.56)	(983.44)	
70	08/24/17	3.5000%	703,614.16	703,436.50	(3,038.00)	(2,051.69)	(986.31)	
71	09/24/17	3.5000%	702,630.70	702,450.19	(3,038.00)	(2,048.81)	(989.19)	
72	10/24/17	3.5000%	701,644.36	701,461.01	(3,038.00)	(2,045.93)	(992.07)	
73	11/24/17	3.5000%	700,655.16	700,468.93	(3,038.00)	(2,043.03)	(994.97)	
74	12/24/17	3.5000%	699,663.06	699,473.97	(3,038.00)	(2,040.13)	(997.87)	
75	01/24/18	3.5000%	698,668.07	698,476.10	(3,038.00)	(2,037.22)	(1,000.78)	
76	02/24/18	3.5000%	697,670.18	697,475.32	(3,038.00)	(2,034.30)	(1,003.70)	
77	03/24/18	3.5000%	696,669.38	696,471.63	(3,038.00)	(2,031.38)	(1,006.62)	
78	04/24/18	3.5000%	695,665.66	695,465.00	(3,038.00)	(2,028.44)	(1,009.56)	
79	05/24/18	3.5000%	694,659.02	694,455.44	(3,038.00)	(2,025.50)	(1,012.51)	
80	06/24/18	3.5000%	693,649.43	693,442.94	(3,038.00)	(2,022.54)	(1,015.46)	
81	07/24/18	3.5000%	692,636.91	692,427.48	(3,038.00)	(2,019.58)	(1,018.42)	
82	08/24/18	3.5000%	691,621.42	691,409.06	(3,038.00)	(2,016.61)	(1,021.39)	
83	09/24/18	3.5000%	690,602.98	690,387.67	(3,038.00)	(2,013.63)	(1,024.37)	
84	10/24/18	3.5000%	689,581.57	689,363.30	(3,038.00)	(2,010.64)	(1,027.36)	
85	11/24/18	3.5000%	688,557.18	688,335.94	(3,038.00)	(2,007.65)	(1,030.35)	
86	12/24/18	3.5000%	687,529.80	687,305.59	(3,038.00)	(2,004.64)	(1,033.36)	
87	01/24/19	3.5000%	686,499.42	686,272.23	(3,038.00)	(2,001.63)	(1,036.37)	
88	02/24/19	3.5000%	685,466.04	685,235.86	(3,038.00)	(1,998.60)	(1,039.40)	
89	03/24/19	3.5000%	684,429.64	684,196.46	(3,038.00)	(1,995.57)	(1,042.43)	
90	04/24/19	3.5000%	683,390.22	683,154.03	(3,038.00)	(1,992.53)	(1,045.47)	
91	05/24/19	3.5000%	682,347.77	682,108.57	(3,038.00)	(1,989.48)	(1,048.52)	
92	06/24/19	3.5000%	681,302.28	681,060.05	(3,038.00)	(1,986.43)	(1,051.57)	
93	07/24/19	3.5000%	680,253.74	680,008.47	(3,038.00)	(1,983.36)	(1,054.64)	
94	08/24/19	3.5000%	679,202.14	678,953.83	(3,038.00)	(1,980.28)	(1,057.72)	
95	09/24/19	3.5000%	678,147.48	677,896.11	(3,038.00)	(1,977.20)	(1,060.80)	
96	10/24/19	3.5000%	677,089.74	676,835.31	(3,038.00)	(1,974.10)	(1,063.90)	
97	11/24/19	3.5000%	676,028.91	675,771.41	(3,038.00)	(1,971.00)	(1,067.00)	
98	12/24/19	3.5000%	674,964.99	674,704.41	(3,038.00)	(1,967.89)	(1,070.11)	
99	01/24/20	3.5000%	673,897.96	673,634.30	(3,038.00)	(1,964.77)	(1,073.23)	
100	02/24/20	3.5000%	672,827.83	672,561.07	(3,038.00)	(1,961.64)	(1,076.36)	
101	03/24/20	3.5000%	671,754.57	671,484.71	(3,038.00)	(1,958.50)	(1,079.50)	
102	04/24/20	3.5000%	670,678.18	670,405.20	(3,038.00)	(1,955.35)	(1,082.65)	
103	05/24/20	3.5000%	669,598.65	669,322.55	(3,038.00)	(1,952.19)	(1,085.81)	
104	06/24/20	3.5000%	668,515.98	668,236.74	(3,038.00)	(1,949.02)	(1,088.98)	
105	07/24/20	3.5000%	667,430.15	667,147.77	(3,038.00)	(1,945.85)	(1,092.15)	
106	08/24/20	3.5000%	666,341.14	666,055.61	(3,038.00)	(1,942.66)	(1,095.34)	
107	09/24/20	3.5000%	665,248.97	664,960.28	(3,038.00)	(1,939.47)	(1,098.53)	
108	10/24/20	3.5000%	664,153.61	663,861.74	(3,038.00)	(1,936.26)	(1,101.74)	
109	11/24/20	3.5000%	663,055.05	662,760.01	(3,038.00)	(1,933.05)	(1,104.95)	
110	12/24/20	3.5000%	661,953.29	661,655.06	(3,038.00)	(1,929.83)	(1,108.17)	
111	01/24/21	3.5000%	660,848.31	660,546.88	(3,038.00)	(1,926.60)	(1,111.40)	
112	02/24/21	3.5000%	659,740.11	659,435.48	(3,038.00)	(1,923.35)	(1,114.65)	
113	03/24/21	3.5000%	658,628.68	658,320.83	(3,038.00)	(1,920.10)	(1,117.90)	
114	04/24/21	3.5000%	657,514.01	657,202.94	(3,038.00)	(1,916.84)	(1,121.16)	
115	05/24/21	3.5000%	656,396.09	656,081.78	(3,038.00)	(1,913.57)	(1,124.43)	
116	06/24/21	3.5000%	655,274.91	654,957.35	(3,038.00)	(1,910.29)	(1,127.71)	
117	07/24/21	3.5000%	654,150.45	653,829.64	(3,038.00)	(1,907.00)	(1,131.00)	
118	08/24/21	3.5000%	653,022.72	652,698.64	(3,038.00)	(1,903.70)	(1,134.30)	
119	09/24/21	3.5000%	651,891.70	651,564.35	(3,038.00)	(1,900.40)	(1,137.60)	
120	10/24/21	3.5000%	650,757.38	650,426.74	(3,038.00)	(1,897.08)	(1,140.92)	
121	11/24/21	3.5000%	649,619.75	649,285.82	(3,038.00)	(1,893.75)	(1,144.25)	
122	12/24/21	3.5000%	648,478.80	648,141.57	(3,038.00)	(1,890.41)	(1,147.59)	

11/24/2009 City of Miller

Pmnt #	Start of Period	Interest Rate	Scheduled Balance	Actual Balance	Scheduled Payment	Interest Portion	Principal Portion	Additional Principal
	Issue Date							Issuer
123	01/24/22	3.5000%	647,334.52	646,993.99	(3,038.00)	(1,887.07)	(1,150.93)	
124	02/24/22	3.5000%	646,186.91	645,843.05	(3,038.00)	(1,883.71)	(1,154.29)	
125	03/24/22	3.5000%	645,035.95	644,688.76	(3,038.00)	(1,880.34)	(1,157.66)	
126	04/24/22	3.5000%	643,881.63	643,531.10	(3,038.00)	(1,876.97)	(1,161.03)	
127	05/24/22	3.5000%	642,723.95	642,370.07	(3,038.00)	(1,873.58)	(1,164.42)	
128	06/24/22	3.5000%	641,562.89	641,205.65	(3,038.00)	(1,870.18)	(1,167.82)	
129	07/24/22	3.5000%	640,398.44	640,037.83	(3,038.00)	(1,866.78)	(1,171.22)	
130	08/24/22	3.5000%	639,230.60	638,866.61	(3,038.00)	(1,863.36)	(1,174.64)	
131	09/24/22	3.5000%	638,059.35	637,691.97	(3,038.00)	(1,859.93)	(1,178.07)	
132	10/24/22	3.5000%	636,884.69	636,513.90	(3,038.00)	(1,856.50)	(1,181.50)	
133	11/24/22	3.5000%	635,706.59	635,332.40	(3,038.00)	(1,853.05)	(1,184.95)	
134	12/24/22	3.5000%	634,525.07	634,147.46	(3,038.00)	(1,849.60)	(1,188.40)	
135	01/24/23	3.5000%	633,340.09	632,959.05	(3,038.00)	(1,846.13)	(1,191.87)	
136	02/24/23	3.5000%	632,151.66	631,767.18	(3,038.00)	(1,842.65)	(1,195.35)	
137	03/24/23	3.5000%	630,959.77	630,571.84	(3,038.00)	(1,839.17)	(1,198.83)	
138	04/24/23	3.5000%	629,764.39	629,373.00	(3,038.00)	(1,835.67)	(1,202.33)	
139	05/24/23	3.5000%	628,565.53	628,170.68	(3,038.00)	(1,832.16)	(1,205.84)	
140	06/24/23	3.5000%	627,363.18	626,964.84	(3,038.00)	(1,828.65)	(1,209.35)	
141	07/24/23	3.5000%	626,157.32	625,755.49	(3,038.00)	(1,825.12)	(1,212.88)	
142	08/24/23	3.5000%	624,947.94	624,542.61	(3,038.00)	(1,821.58)	(1,216.42)	
143	09/24/23	3.5000%	623,735.03	623,326.19	(3,038.00)	(1,818.03)	(1,219.97)	
144	10/24/23	3.5000%	622,518.58	622,106.23	(3,038.00)	(1,814.48)	(1,223.52)	
145	11/24/23	3.5000%	621,298.59	620,882.70	(3,038.00)	(1,810.91)	(1,227.09)	
146	12/24/23	3.5000%	620,075.04	619,655.61	(3,038.00)	(1,807.33)	(1,230.67)	
147	01/24/24	3.5000%	618,847.92	618,424.94	(3,038.00)	(1,803.74)	(1,234.26)	
148	02/24/24	3.5000%	617,617.22	617,190.68	(3,038.00)	(1,800.14)	(1,237.86)	
149	03/24/24	3.5000%	616,382.93	615,952.82	(3,038.00)	(1,796.53)	(1,241.47)	
150	04/24/24	3.5000%	615,145.05	614,711.35	(3,038.00)	(1,792.91)	(1,245.09)	
151	05/24/24	3.5000%	613,903.55	613,466.26	(3,038.00)	(1,789.28)	(1,248.72)	
152	06/24/24	3.5000%	612,658.43	612,217.53	(3,038.00)	(1,785.63)	(1,252.37)	
153	07/24/24	3.5000%	611,409.68	610,965.17	(3,038.00)	(1,781.98)	(1,256.02)	
154	08/24/24	3.5000%	610,157.28	609,709.15	(3,038.00)	(1,778.32)	(1,259.68)	
155	09/24/24	3.5000%	608,901.24	608,449.47	(3,038.00)	(1,774.64)	(1,263.36)	
156	10/24/24	3.5000%	607,641.53	607,186.11	(3,038.00)	(1,770.96)	(1,267.04)	
157	11/24/24	3.5000%	606,378.14	605,919.07	(3,038.00)	(1,767.26)	(1,270.74)	
158	12/24/24	3.5000%	605,111.07	604,648.33	(3,038.00)	(1,763.56)	(1,274.44)	
159	01/24/25	3.5000%	603,840.31	603,373.89	(3,038.00)	(1,759.84)	(1,278.16)	
160	02/24/25	3.5000%	602,565.84	602,095.73	(3,038.00)	(1,756.11)	(1,281.89)	
161	03/24/25	3.5000%	601,287.65	600,813.84	(3,038.00)	(1,752.37)	(1,285.63)	
162	04/24/25	3.5000%	600,005.73	599,528.22	(3,038.00)	(1,748.62)	(1,289.38)	
163	05/24/25	3.5000%	598,720.08	598,238.84	(3,038.00)	(1,744.86)	(1,293.14)	
164	06/24/25	3.5000%	597,430.67	596,945.71	(3,038.00)	(1,741.09)	(1,296.91)	
165	07/24/25	3.5000%	596,137.51	595,648.80	(3,038.00)	(1,737.31)	(1,300.69)	
166	08/24/25	3.5000%	594,840.57	594,348.11	(3,038.00)	(1,733.52)	(1,304.48)	
167	09/24/25	3.5000%	593,539.85	593,043.62	(3,038.00)	(1,729.71)	(1,308.29)	
168	10/24/25	3.5000%	592,235.33	591,735.33	(3,038.00)	(1,725.89)	(1,312.11)	
169	11/24/25	3.5000%	590,927.02	590,423.23	(3,038.00)	(1,722.07)	(1,315.93)	
170	12/24/25	3.5000%	589,614.88	589,107.29	(3,038.00)	(1,718.23)	(1,319.77)	
171	01/24/26	3.5000%	588,298.92	587,787.52	(3,038.00)	(1,714.38)	(1,323.62)	
172	02/24/26	3.5000%	586,979.12	586,463.90	(3,038.00)	(1,710.52)	(1,327.48)	
173	03/24/26	3.5000%	585,655.47	585,136.42	(3,038.00)	(1,706.65)	(1,331.35)	
174	04/24/26	3.5000%	584,327.96	583,805.07	(3,038.00)	(1,702.76)	(1,335.24)	
175	05/24/26	3.5000%	582,996.58	582,469.84	(3,038.00)	(1,698.87)	(1,339.13)	
176	06/24/26	3.5000%	581,661.31	581,130.71	(3,038.00)	(1,694.96)	(1,343.04)	
177	07/24/26	3.5000%	580,322.15	579,787.67	(3,038.00)	(1,691.05)	(1,346.95)	
178	08/24/26	3.5000%	578,979.09	578,440.72	(3,038.00)	(1,687.12)	(1,350.88)	
179	09/24/26	3.5000%	577,632.10	577,089.84	(3,038.00)	(1,683.18)	(1,354.82)	
180	10/24/26	3.5000%	576,281.19	575,735.02	(3,038.00)	(1,679.23)	(1,358.77)	
181	11/24/26	3.5000%	574,926.34	574,376.24	(3,038.00)	(1,675.26)	(1,362.74)	
182	12/24/26	3.5000%	573,567.54	573,013.51	(3,038.00)	(1,671.29)	(1,366.71)	
183	01/24/27	3.5000%	572,204.77	571,646.80	(3,038.00)	(1,667.30)	(1,370.70)	

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City of Miller

Pmnt #	Issue Date: Start of Period	Interest Rate	Scheduled Balance	Actual Balance	Scheduled Payment	Interest Portion	Principal Portion	Issuer: Additional Principal
184	02/24/27	3.5000%	570,838.03	570,276.10	(3,038.00)	(1,663.31)	(1,374.69)	
185	03/24/27	3.5000%	569,467.30	568,901.41	(3,038.00)	(1,659.30)	(1,378.70)	
186	04/24/27	3.5000%	568,092.58	567,522.70	(3,038.00)	(1,655.27)	(1,382.73)	
187	05/24/27	3.5000%	566,713.84	566,139.98	(3,038.00)	(1,651.24)	(1,386.76)	
188	06/24/27	3.5000%	565,331.08	564,753.22	(3,038.00)	(1,647.20)	(1,390.80)	
189	07/24/27	3.5000%	563,944.29	563,362.41	(3,038.00)	(1,643.14)	(1,394.86)	
190	08/24/27	3.5000%	562,553.46	561,967.55	(3,038.00)	(1,639.07)	(1,398.93)	
191	09/24/27	3.5000%	561,158.57	560,568.63	(3,038.00)	(1,634.99)	(1,403.01)	
192	10/24/27	3.5000%	559,759.61	559,165.62	(3,038.00)	(1,630.90)	(1,407.10)	
193	11/24/27	3.5000%	558,356.57	557,758.52	(3,038.00)	(1,626.80)	(1,411.20)	
194	12/24/27	3.5000%	556,949.44	556,347.31	(3,038.00)	(1,622.68)	(1,415.32)	
195	01/24/28	3.5000%	555,538.20	554,931.99	(3,038.00)	(1,618.55)	(1,419.45)	
196	02/24/28	3.5000%	554,122.85	553,512.55	(3,038.00)	(1,614.41)	(1,423.59)	
197	03/24/28	3.5000%	552,703.37	552,088.96	(3,038.00)	(1,610.26)	(1,427.74)	
198	04/24/28	3.5000%	551,279.75	550,661.22	(3,038.00)	(1,606.10)	(1,431.90)	
199	05/24/28	3.5000%	549,851.98	549,229.31	(3,038.00)	(1,601.92)	(1,436.08)	
200	06/24/28	3.5000%	548,420.04	547,793.23	(3,038.00)	(1,597.73)	(1,440.27)	
201	07/24/28	3.5000%	546,983.93	546,352.96	(3,038.00)	(1,593.53)	(1,444.47)	
202	08/24/28	3.5000%	545,543.62	544,908.49	(3,038.00)	(1,589.32)	(1,448.68)	
203	09/24/28	3.5000%	544,099.12	543,459.81	(3,038.00)	(1,585.09)	(1,452.91)	
204	10/24/28	3.5000%	542,650.41	542,006.90	(3,038.00)	(1,580.85)	(1,457.15)	
205	11/24/28	3.5000%	541,197.46	540,549.75	(3,038.00)	(1,576.60)	(1,461.40)	
206	12/24/28	3.5000%	539,740.28	539,088.35	(3,038.00)	(1,572.34)	(1,465.66)	
207	01/24/29	3.5000%	538,278.86	537,622.70	(3,038.00)	(1,568.07)	(1,469.93)	
208	02/24/29	3.5000%	536,813.16	536,152.76	(3,038.00)	(1,563.78)	(1,474.22)	
209	03/24/29	3.5000%	535,343.20	534,678.54	(3,038.00)	(1,559.48)	(1,478.52)	
210	04/24/29	3.5000%	533,868.94	533,200.02	(3,038.00)	(1,555.17)	(1,482.83)	
211	05/24/29	3.5000%	532,390.39	531,717.19	(3,038.00)	(1,550.84)	(1,487.16)	
212	06/24/29	3.5000%	530,907.52	530,230.03	(3,038.00)	(1,546.50)	(1,491.50)	
213	07/24/29	3.5000%	529,420.33	528,738.53	(3,038.00)	(1,542.15)	(1,495.85)	
214	08/24/29	3.5000%	527,928.80	527,242.69	(3,038.00)	(1,537.79)	(1,500.21)	
215	09/24/29	3.5000%	526,432.92	525,742.48	(3,038.00)	(1,533.42)	(1,504.58)	
216	10/24/29	3.5000%	524,932.68	524,237.89	(3,038.00)	(1,529.03)	(1,508.97)	
217	11/24/29	3.5000%	523,428.06	522,728.92	(3,038.00)	(1,524.63)	(1,513.37)	
218	12/24/29	3.5000%	521,919.05	521,215.55	(3,038.00)	(1,520.21)	(1,517.79)	
219	01/24/30	3.5000%	520,405.65	519,697.76	(3,038.00)	(1,515.79)	(1,522.21)	
220	02/24/30	3.5000%	518,887.82	518,175.54	(3,038.00)	(1,511.35)	(1,526.65)	
221	03/24/30	3.5000%	517,365.57	516,648.89	(3,038.00)	(1,506.89)	(1,531.11)	
222	04/24/30	3.5000%	515,838.89	515,117.78	(3,038.00)	(1,502.43)	(1,535.57)	
223	05/24/30	3.5000%	514,307.74	513,582.21	(3,038.00)	(1,497.95)	(1,540.05)	
224	06/24/30	3.5000%	512,772.14	512,042.16	(3,038.00)	(1,493.46)	(1,544.54)	
225	07/24/30	3.5000%	511,232.05	510,497.61	(3,038.00)	(1,488.95)	(1,549.05)	
226	08/24/30	3.5000%	509,687.47	508,948.56	(3,038.00)	(1,484.43)	(1,553.57)	
227	09/24/30	3.5000%	508,138.39	507,395.00	(3,038.00)	(1,479.90)	(1,558.10)	
228	10/24/30	3.5000%	506,584.79	505,836.90	(3,038.00)	(1,475.36)	(1,562.64)	
229	11/24/30	3.5000%	505,026.65	504,274.26	(3,038.00)	(1,470.80)	(1,567.20)	
230	12/24/30	3.5000%	503,463.98	502,707.06	(3,038.00)	(1,466.23)	(1,571.77)	
231	01/24/31	3.5000%	501,896.74	501,135.29	(3,038.00)	(1,461.64)	(1,576.36)	
232	02/24/31	3.5000%	500,324.93	499,558.93	(3,038.00)	(1,457.05)	(1,580.95)	
233	03/24/31	3.5000%	498,748.54	497,977.98	(3,038.00)	(1,452.44)	(1,585.56)	
234	04/24/31	3.5000%	497,167.55	496,392.41	(3,038.00)	(1,447.81)	(1,590.19)	
235	05/24/31	3.5000%	495,581.95	494,802.22	(3,038.00)	(1,443.17)	(1,594.83)	
236	06/24/31	3.5000%	493,991.73	493,207.40	(3,038.00)	(1,438.52)	(1,599.48)	
237	07/24/31	3.5000%	492,396.87	491,607.92	(3,038.00)	(1,433.86)	(1,604.14)	
238	08/24/31	3.5000%	490,797.35	490,003.78	(3,038.00)	(1,429.18)	(1,608.82)	
239	09/24/31	3.5000%	489,193.17	488,394.95	(3,038.00)	(1,424.49)	(1,613.51)	
240	10/24/31	3.5000%	487,584.31	486,781.44	(3,038.00)	(1,419.78)	(1,618.22)	
241	11/24/31	3.5000%	485,970.76	485,163.22	(3,038.00)	(1,415.06)	(1,622.94)	
242	12/24/31	3.5000%	484,352.51	483,540.28	(3,038.00)	(1,410.33)	(1,627.67)	
243	01/24/32	3.5000%	482,729.53	481,912.60	(3,038.00)	(1,405.58)	(1,632.42)	
244	02/24/32	3.5000%	481,101.82	480,280.18	(3,038.00)	(1,400.82)	(1,637.18)	

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City of Miller

Pmnt #	Issue Date: Start of Period	Interest Rate	Scheduled Balance	Actual Balance	Scheduled Payment	Interest Portion	Principal Portion	Issuer: Additional Principal
245	03/24/32	3.5000%	479,469.36	478,643.00	(3,038.00)	(1,396.04)	(1,641.96)	
246	04/24/32	3.5000%	477,832.14	477,001.04	(3,038.00)	(1,391.25)	(1,646.75)	
247	05/24/32	3.5000%	476,190.15	475,354.29	(3,038.00)	(1,386.45)	(1,651.55)	
248	06/24/32	3.5000%	474,543.36	473,702.74	(3,038.00)	(1,381.63)	(1,656.37)	
249	07/24/32	3.5000%	472,891.77	472,046.38	(3,038.00)	(1,376.80)	(1,661.20)	
250	08/24/32	3.5000%	471,235.37	470,385.18	(3,038.00)	(1,371.96)	(1,666.04)	
251	09/24/32	3.5000%	469,574.14	468,719.14	(3,038.00)	(1,367.10)	(1,670.90)	
252	10/24/32	3.5000%	467,908.05	467,048.23	(3,038.00)	(1,362.22)	(1,675.78)	
253	11/24/32	3.5000%	466,237.11	465,372.46	(3,038.00)	(1,357.34)	(1,680.66)	
254	12/24/32	3.5000%	464,561.30	463,691.79	(3,038.00)	(1,352.43)	(1,685.57)	
255	01/24/33	3.5000%	462,880.60	462,006.23	(3,038.00)	(1,347.52)	(1,690.48)	
256	02/24/33	3.5000%	461,195.00	460,315.75	(3,038.00)	(1,342.59)	(1,695.41)	
257	03/24/33	3.5000%	459,504.48	458,620.33	(3,038.00)	(1,337.64)	(1,700.36)	
258	04/24/33	3.5000%	457,809.03	456,919.98	(3,038.00)	(1,332.68)	(1,705.32)	
259	05/24/33	3.5000%	456,108.63	455,214.66	(3,038.00)	(1,327.71)	(1,710.29)	
260	06/24/33	3.5000%	454,403.27	453,504.37	(3,038.00)	(1,322.72)	(1,715.28)	
261	07/24/33	3.5000%	452,692.95	451,789.09	(3,038.00)	(1,317.72)	(1,720.28)	
262	08/24/33	3.5000%	450,977.63	450,068.81	(3,038.00)	(1,312.70)	(1,725.30)	
263	09/24/33	3.5000%	449,257.31	448,343.51	(3,038.00)	(1,307.67)	(1,730.33)	
264	10/24/33	3.5000%	447,531.97	446,613.18	(3,038.00)	(1,302.62)	(1,735.38)	
265	11/24/33	3.5000%	445,801.60	444,877.80	(3,038.00)	(1,297.56)	(1,740.44)	
266	12/24/33	3.5000%	444,066.18	443,137.36	(3,038.00)	(1,292.48)	(1,745.52)	
267	01/24/34	3.5000%	442,325.70	441,391.84	(3,038.00)	(1,287.39)	(1,750.61)	
268	02/24/34	3.5000%	440,580.15	439,641.24	(3,038.00)	(1,282.29)	(1,755.71)	
269	03/24/34	3.5000%	438,829.50	437,885.52	(3,038.00)	(1,277.17)	(1,760.83)	
270	04/24/34	3.5000%	437,073.75	436,124.69	(3,038.00)	(1,272.03)	(1,765.97)	
271	05/24/34	3.5000%	435,312.88	434,358.72	(3,038.00)	(1,266.88)	(1,771.12)	
272	06/24/34	3.5000%	433,546.87	432,587.60	(3,038.00)	(1,261.71)	(1,776.29)	
273	07/24/34	3.5000%	431,775.71	430,811.31	(3,038.00)	(1,256.53)	(1,781.47)	
274	08/24/34	3.5000%	429,999.38	429,029.85	(3,038.00)	(1,251.34)	(1,786.66)	
275	09/24/34	3.5000%	428,217.87	427,243.18	(3,038.00)	(1,246.13)	(1,791.87)	
276	10/24/34	3.5000%	426,431.17	425,451.31	(3,038.00)	(1,240.90)	(1,797.10)	
277	11/24/34	3.5000%	424,639.26	423,654.21	(3,038.00)	(1,235.66)	(1,802.34)	
278	12/24/34	3.5000%	422,842.11	421,851.87	(3,038.00)	(1,230.40)	(1,807.60)	
279	01/24/35	3.5000%	421,039.73	420,044.27	(3,038.00)	(1,225.13)	(1,812.87)	
280	02/24/35	3.5000%	419,232.09	418,231.40	(3,038.00)	(1,219.84)	(1,818.16)	
281	03/24/35	3.5000%	417,419.18	416,413.24	(3,038.00)	(1,214.54)	(1,823.46)	
282	04/24/35	3.5000%	415,600.98	414,589.78	(3,038.00)	(1,209.22)	(1,828.78)	
283	05/24/35	3.5000%	413,777.48	412,761.00	(3,038.00)	(1,203.89)	(1,834.11)	
284	06/24/35	3.5000%	411,948.66	410,926.88	(3,038.00)	(1,198.54)	(1,839.46)	
285	07/24/35	3.5000%	410,114.50	409,087.42	(3,038.00)	(1,193.17)	(1,844.83)	
286	08/24/35	3.5000%	408,275.00	407,242.59	(3,038.00)	(1,187.79)	(1,850.21)	
287	09/24/35	3.5000%	406,430.13	405,392.38	(3,038.00)	(1,182.39)	(1,855.61)	
288	10/24/35	3.5000%	404,579.88	403,536.78	(3,038.00)	(1,176.98)	(1,861.02)	
289	11/24/35	3.5000%	402,724.23	401,675.76	(3,038.00)	(1,171.55)	(1,866.45)	
290	12/24/35	3.5000%	400,863.17	399,809.31	(3,038.00)	(1,166.11)	(1,871.89)	
291	01/24/36	3.5000%	398,996.68	397,937.42	(3,038.00)	(1,160.65)	(1,877.35)	
292	02/24/36	3.5000%	397,124.75	396,060.08	(3,038.00)	(1,155.18)	(1,882.82)	
293	03/24/36	3.5000%	395,247.36	394,177.25	(3,038.00)	(1,149.68)	(1,888.32)	
294	04/24/36	3.5000%	393,364.49	392,288.93	(3,038.00)	(1,144.18)	(1,893.82)	
295	05/24/36	3.5000%	391,476.14	390,395.11	(3,038.00)	(1,138.65)	(1,899.35)	
296	06/24/36	3.5000%	389,582.27	388,495.76	(3,038.00)	(1,133.11)	(1,904.89)	
297	07/24/36	3.5000%	387,682.88	386,590.88	(3,038.00)	(1,127.56)	(1,910.44)	
298	08/24/36	3.5000%	385,777.95	384,680.43	(3,038.00)	(1,121.98)	(1,916.02)	
299	09/24/36	3.5000%	383,867.46	382,764.42	(3,038.00)	(1,116.40)	(1,921.60)	
300	10/24/36	3.5000%	381,951.40	380,842.81	(3,038.00)	(1,110.79)	(1,927.21)	
301	11/24/36	3.5000%	380,029.76	378,915.60	(3,038.00)	(1,105.17)	(1,932.83)	
302	12/24/36	3.5000%	378,102.50	376,982.78	(3,038.00)	(1,099.53)	(1,938.47)	
303	01/24/37	3.5000%	376,169.63	375,044.31	(3,038.00)	(1,093.88)	(1,944.12)	
304	02/24/37	3.5000%	374,231.12	373,100.19	(3,038.00)	(1,088.21)	(1,949.79)	
305	03/24/37	3.5000%	372,286.96	371,150.40	(3,038.00)	(1,082.52)	(1,955.48)	

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Issue Date — Issuer

Pmnt #	Start of Period	Interest Rate	Scheduled Balance	Actual Balance	Scheduled Payment	Interest Portion	Principal Portion	Additional Principal
306	04/24/37	3.5000%	370,337.12	369,194.92	(3,038.00)	(1,076.82)	(1,961.18)	
307	05/24/37	3.5000%	368,381.60	367,233.74	(3,038.00)	(1,071.10)	(1,966.90)	
308	06/24/37	3.5000%	366,420.37	365,266.84	(3,038.00)	(1,065.36)	(1,972.64)	
309	07/24/37	3.5000%	364,453.43	363,294.20	(3,038.00)	(1,059.61)	(1,978.39)	
310	08/24/37	3.5000%	362,480.75	361,315.80	(3,038.00)	(1,053.84)	(1,984.16)	
311	09/24/37	3.5000%	360,502.31	359,331.64	(3,038.00)	(1,048.05)	(1,989.95)	
312	10/24/37	3.5000%	358,518.10	357,341.69	(3,038.00)	(1,042.25)	(1,995.75)	
313	11/24/37	3.5000%	356,528.11	355,345.94	(3,038.00)	(1,036.43)	(2,001.57)	
314	12/24/37	3.5000%	354,532.31	353,344.37	(3,038.00)	(1,030.59)	(2,007.41)	
315	01/24/38	3.5000%	352,530.69	351,336.95	(3,038.00)	(1,024.73)	(2,013.27)	
316	02/24/38	3.5000%	350,523.23	349,323.69	(3,038.00)	(1,018.86)	(2,019.14)	
317	03/24/38	3.5000%	348,509.92	347,304.55	(3,038.00)	(1,012.97)	(2,025.03)	
318	04/24/38	3.5000%	346,490.74	345,279.52	(3,038.00)	(1,007.07)	(2,030.93)	
319	05/24/38	3.5000%	344,465.66	343,248.58	(3,038.00)	(1,001.14)	(2,036.86)	
320	06/24/38	3.5000%	342,434.68	341,211.73	(3,038.00)	(995.20)	(2,042.80)	
321	07/24/38	3.5000%	340,397.78	339,168.93	(3,038.00)	(989.24)	(2,048.76)	
322	08/24/38	3.5000%	338,354.93	337,120.17	(3,038.00)	(983.27)	(2,054.73)	
323	09/24/38	3.5000%	336,306.13	335,065.44	(3,038.00)	(977.27)	(2,060.73)	
324	10/24/38	3.5000%	334,251.35	333,004.71	(3,038.00)	(971.26)	(2,066.74)	
325	11/24/38	3.5000%	332,190.58	330,937.97	(3,038.00)	(965.24)	(2,072.76)	
326	12/24/38	3.5000%	330,123.80	328,865.21	(3,038.00)	(959.19)	(2,078.81)	
327	01/24/39	3.5000%	328,050.99	326,786.40	(3,038.00)	(953.13)	(2,084.87)	
328	02/24/39	3.5000%	325,972.13	324,701.53	(3,038.00)	(947.05)	(2,090.95)	
329	03/24/39	3.5000%	323,887.21	322,610.57	(3,038.00)	(940.95)	(2,097.05)	
330	04/24/39	3.5000%	321,796.21	320,513.52	(3,038.00)	(934.83)	(2,103.17)	
331	05/24/39	3.5000%	319,699.11	318,410.35	(3,038.00)	(928.70)	(2,109.30)	
332	06/24/39	3.5000%	317,595.89	316,301.05	(3,038.00)	(922.54)	(2,115.46)	
333	07/24/39	3.5000%	315,486.54	314,185.59	(3,038.00)	(916.37)	(2,121.63)	
334	08/24/39	3.5000%	313,371.04	312,063.97	(3,038.00)	(910.19)	(2,127.81)	
335	09/24/39	3.5000%	311,249.37	309,936.15	(3,038.00)	(903.98)	(2,134.02)	
336	10/24/39	3.5000%	309,121.50	307,802.14	(3,038.00)	(897.76)	(2,140.24)	
337	11/24/39	3.5000%	306,987.44	305,661.89	(3,038.00)	(891.51)	(2,146.49)	
338	12/24/39	3.5000%	304,847.15	303,515.41	(3,038.00)	(885.25)	(2,152.75)	
339	01/24/40	3.5000%	302,700.61	301,362.66	(3,038.00)	(878.97)	(2,159.03)	
340	02/24/40	3.5000%	300,547.82	299,203.63	(3,038.00)	(872.68)	(2,165.32)	
341	03/24/40	3.5000%	298,388.74	297,038.31	(3,038.00)	(866.36)	(2,171.64)	
342	04/24/40	3.5000%	296,223.37	294,866.67	(3,038.00)	(860.03)	(2,177.97)	
343	05/24/40	3.5000%	294,051.68	292,688.70	(3,038.00)	(853.68)	(2,184.32)	
344	06/24/40	3.5000%	291,873.66	290,504.38	(3,038.00)	(847.30)	(2,190.70)	
345	07/24/40	3.5000%	289,689.29	288,313.68	(3,038.00)	(840.91)	(2,197.09)	
346	08/24/40	3.5000%	287,498.54	286,116.59	(3,038.00)	(834.51)	(2,203.49)	
347	09/24/40	3.5000%	285,301.41	283,913.10	(3,038.00)	(828.08)	(2,209.92)	
348	10/24/40	3.5000%	283,097.87	281,703.18	(3,038.00)	(821.63)	(2,216.37)	
349	11/24/40	3.5000%	280,887.90	279,486.82	(3,038.00)	(815.17)	(2,222.83)	
350	12/24/40	3.5000%	278,671.48	277,263.99	(3,038.00)	(808.69)	(2,229.31)	
351	01/24/41	3.5000%	276,448.60	275,034.67	(3,038.00)	(802.18)	(2,235.82)	
352	02/24/41	3.5000%	274,219.24	272,798.86	(3,038.00)	(795.66)	(2,242.34)	
353	03/24/41	3.5000%	271,983.37	270,556.52	(3,038.00)	(789.12)	(2,248.88)	
354	04/24/41	3.5000%	269,740.98	268,307.64	(3,038.00)	(782.56)	(2,255.44)	
355	05/24/41	3.5000%	267,492.06	266,052.21	(3,038.00)	(775.99)	(2,262.01)	
356	06/24/41	3.5000%	265,236.57	263,790.19	(3,038.00)	(769.39)	(2,268.61)	
357	07/24/41	3.5000%	262,974.51	261,521.58	(3,038.00)	(762.77)	(2,275.23)	
358	08/24/41	3.5000%	260,705.84	259,246.35	(3,038.00)	(756.14)	(2,281.86)	
359	09/24/41	3.5000%	258,430.56	256,964.49	(3,038.00)	(749.48)	(2,288.52)	
360	10/24/41	3.5000%	256,148.65	254,675.97	(3,038.00)	(742.80)	(2,295.20)	
361	11/24/41	3.5000%	253,860.07	252,380.77	(3,038.00)	(736.11)	(2,301.89)	
362	12/24/41	3.5000%	251,564.83	250,078.88	(3,038.00)	(729.40)	(2,308.60)	
363	01/24/42	3.5000%	249,262.89	247,770.28	(3,038.00)	(722.66)	(2,315.34)	
364	02/24/42	3.5000%	246,954.23	245,454.94	(3,038.00)	(715.91)	(2,322.09)	
365	03/24/42	3.5000%	244,638.84	243,132.85	(3,038.00)	(709.14)	(2,328.86)	
366	04/24/42	3.5000%	242,316.70	240,803.99	(3,038.00)	(702.35)	(2,335.66)	

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City of Miller

Pmnt #	Start of Period	Interest Rate	Scheduled Balance	Actual Balance	Scheduled Payment	Interest Portion	Principal Portion	Additional Principal
	Issue Date							Issuer
367	05/24/42	3.5000%	239,987.79	238,468.34	(3,038.00)	(695.53)	(2,342.47)	
368	06/24/42	3.5000%	237,652.08	236,125.87	(3,038.00)	(688.70)	(2,349.30)	
369	07/24/42	3.5000%	235,309.56	233,776.57	(3,038.00)	(681.85)	(2,356.15)	
370	08/24/42	3.5000%	232,960.21	231,420.42	(3,038.00)	(674.98)	(2,363.02)	
371	09/24/42	3.5000%	230,604.00	229,057.39	(3,038.00)	(668.08)	(2,369.92)	
372	10/24/42	3.5000%	228,240.92	226,687.48	(3,038.00)	(661.17)	(2,376.83)	
373	11/24/42	3.5000%	225,870.96	224,310.65	(3,038.00)	(654.24)	(2,383.76)	
374	12/24/42	3.5000%	223,494.07	221,926.89	(3,038.00)	(647.29)	(2,390.71)	
375	01/24/43	3.5000%	221,110.26	219,536.17	(3,038.00)	(640.31)	(2,397.69)	
376	02/24/43	3.5000%	218,719.49	217,138.49	(3,038.00)	(633.32)	(2,404.68)	
377	03/24/43	3.5000%	216,321.75	214,733.81	(3,038.00)	(626.31)	(2,411.69)	
378	04/24/43	3.5000%	213,917.02	212,322.12	(3,038.00)	(619.27)	(2,418.73)	
379	05/24/43	3.5000%	211,505.27	209,903.39	(3,038.00)	(612.22)	(2,425.78)	
380	06/24/43	3.5000%	209,086.49	207,477.61	(3,038.00)	(605.14)	(2,432.86)	
381	07/24/43	3.5000%	206,660.65	205,044.75	(3,038.00)	(598.05)	(2,439.95)	
382	08/24/43	3.5000%	204,227.74	202,604.80	(3,038.00)	(590.93)	(2,447.07)	
383	09/24/43	3.5000%	201,787.73	200,157.73	(3,038.00)	(583.79)	(2,454.21)	
384	10/24/43	3.5000%	199,340.61	197,703.52	(3,038.00)	(576.64)	(2,461.36)	
385	11/24/43	3.5000%	196,886.35	195,242.16	(3,038.00)	(569.46)	(2,468.54)	
386	12/24/43	3.5000%	194,424.93	192,773.61	(3,038.00)	(562.26)	(2,475.74)	
387	01/24/44	3.5000%	191,956.33	190,297.87	(3,038.00)	(555.04)	(2,482.96)	
388	02/24/44	3.5000%	189,480.53	187,814.90	(3,038.00)	(547.79)	(2,490.21)	
389	03/24/44	3.5000%	186,997.51	185,324.70	(3,038.00)	(540.53)	(2,497.47)	
390	04/24/44	3.5000%	184,507.25	182,827.23	(3,038.00)	(533.25)	(2,504.75)	
391	05/24/44	3.5000%	182,009.72	180,322.47	(3,038.00)	(525.94)	(2,512.06)	
392	06/24/44	3.5000%	179,504.91	177,810.42	(3,038.00)	(518.61)	(2,519.39)	
393	07/24/44	3.5000%	176,992.80	175,291.03	(3,038.00)	(511.27)	(2,526.73)	
394	08/24/44	3.5000%	174,473.35	172,764.29	(3,038.00)	(503.90)	(2,534.10)	
395	09/24/44	3.5000%	171,946.56	170,230.19	(3,038.00)	(496.50)	(2,541.50)	
396	10/24/44	3.5000%	169,412.40	167,688.70	(3,038.00)	(489.09)	(2,548.91)	
397	11/24/44	3.5000%	166,870.85	165,139.79	(3,038.00)	(481.66)	(2,556.34)	
398	12/24/44	3.5000%	164,321.88	162,583.44	(3,038.00)	(474.20)	(2,563.80)	
399	01/24/45	3.5000%	161,765.48	160,019.65	(3,038.00)	(466.72)	(2,571.28)	
400	02/24/45	3.5000%	159,201.63	157,448.37	(3,038.00)	(459.22)	(2,578.78)	
401	03/24/45	3.5000%	156,630.29	154,869.59	(3,038.00)	(451.70)	(2,586.30)	
402	04/24/45	3.5000%	154,051.46	152,283.30	(3,038.00)	(444.16)	(2,593.84)	
403	05/24/45	3.5000%	151,465.10	149,689.46	(3,038.00)	(436.59)	(2,601.41)	
404	06/24/45	3.5000%	148,871.21	147,088.05	(3,038.00)	(429.01)	(2,608.99)	
405	07/24/45	3.5000%	146,269.74	144,479.06	(3,038.00)	(421.40)	(2,616.60)	
406	08/24/45	3.5000%	143,660.69	141,862.46	(3,038.00)	(413.77)	(2,624.23)	
407	09/24/45	3.5000%	141,044.03	139,238.22	(3,038.00)	(406.11)	(2,631.89)	
408	10/24/45	3.5000%	138,419.73	136,606.33	(3,038.00)	(398.44)	(2,639.56)	
409	11/24/45	3.5000%	135,787.79	133,966.77	(3,038.00)	(390.74)	(2,647.26)	
410	12/24/45	3.5000%	133,148.16	131,319.50	(3,038.00)	(383.02)	(2,654.98)	
411	01/24/46	3.5000%	130,500.84	128,664.52	(3,038.00)	(375.27)	(2,662.73)	
412	02/24/46	3.5000%	127,845.79	126,001.79	(3,038.00)	(367.51)	(2,670.49)	
413	03/24/46	3.5000%	125,183.01	123,331.30	(3,038.00)	(359.72)	(2,678.28)	
414	04/24/46	3.5000%	122,512.45	120,653.01	(3,038.00)	(351.90)	(2,686.10)	
415	05/24/46	3.5000%	119,834.11	117,966.92	(3,038.00)	(344.07)	(2,693.93)	
416	06/24/46	3.5000%	117,147.95	115,272.99	(3,038.00)	(336.21)	(2,701.79)	
417	07/24/46	3.5000%	114,453.96	112,571.20	(3,038.00)	(328.33)	(2,709.67)	
418	08/24/46	3.5000%	111,752.11	109,861.53	(3,038.00)	(320.43)	(2,717.57)	
419	09/24/46	3.5000%	109,042.39	107,143.96	(3,038.00)	(312.50)	(2,725.50)	
420	10/24/46	3.5000%	106,324.75	104,418.47	(3,038.00)	(304.55)	(2,733.45)	
421	11/24/46	3.5000%	103,599.20	101,685.02	(3,038.00)	(296.58)	(2,741.42)	
422	12/24/46	3.5000%	100,865.69	98,943.60	(3,038.00)	(288.59)	(2,749.41)	
423	01/24/47	3.5000%	98,124.21	96,194.19	(3,038.00)	(280.57)	(2,757.43)	
424	02/24/47	3.5000%	95,374.73	93,436.75	(3,038.00)	(272.52)	(2,765.48)	
425	03/24/47	3.5000%	92,617.24	90,671.28	(3,038.00)	(264.46)	(2,773.54)	
426	04/24/47	3.5000%	89,851.70	87,897.73	(3,038.00)	(256.37)	(2,781.63)	
427	05/24/47	3.5000%	87,078.09	85,116.10	(3,038.00)	(248.26)	(2,789.74)	

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City of Miller

Pmnt #	Issue Date: Start of Period	Interest Rate	Scheduled Balance	Actual Balance	Scheduled Payment	Interest Portion	Principal Portion	Issuer: Additional Principal
428	06/24/47	3.5000%	84,296.40	82,326.36	(3,038.00)	(240.12)	(2,797.88)	
429	07/24/47	3.5000%	81,506.59	79,528.48	(3,038.00)	(231.96)	(2,806.04)	
430	08/24/47	3.5000%	78,708.65	76,722.43	(3,038.00)	(223.77)	(2,814.23)	
431	09/24/47	3.5000%	75,902.54	73,908.21	(3,038.00)	(215.57)	(2,822.43)	
432	10/24/47	3.5000%	73,088.25	71,085.77	(3,038.00)	(207.33)	(2,830.67)	
433	11/24/47	3.5000%	70,265.76	68,255.11	(3,038.00)	(199.08)	(2,838.92)	
434	12/24/47	3.5000%	67,435.03	65,416.19	(3,038.00)	(190.80)	(2,847.20)	
435	01/24/48	3.5000%	64,596.04	62,568.98	(3,038.00)	(182.49)	(2,855.51)	
436	02/24/48	3.5000%	61,748.77	59,713.48	(3,038.00)	(174.16)	(2,863.84)	
437	03/24/48	3.5000%	58,893.20	56,849.64	(3,038.00)	(165.81)	(2,872.19)	
438	04/24/48	3.5000%	56,029.30	53,977.45	(3,038.00)	(157.43)	(2,880.57)	
439	05/24/48	3.5000%	53,157.05	51,096.89	(3,038.00)	(149.03)	(2,888.97)	
440	06/24/48	3.5000%	50,276.42	48,207.92	(3,038.00)	(140.61)	(2,897.39)	
441	07/24/48	3.5000%	47,387.38	45,310.52	(3,038.00)	(132.16)	(2,905.84)	
442	08/24/48	3.5000%	44,489.93	42,404.68	(3,038.00)	(123.68)	(2,914.32)	
443	09/24/48	3.5000%	41,584.02	39,490.36	(3,038.00)	(115.18)	(2,922.82)	
444	10/24/48	3.5000%	38,669.63	36,567.54	(3,038.00)	(106.66)	(2,931.34)	
445	11/24/48	3.5000%	35,746.75	33,636.20	(3,038.00)	(98.11)	(2,939.89)	
446	12/24/48	3.5000%	32,815.34	30,696.30	(3,038.00)	(89.53)	(2,948.47)	
447	01/24/49	3.5000%	29,875.37	27,747.83	(3,038.00)	(80.93)	(2,957.07)	
448	02/24/49	3.5000%	26,926.84	24,790.76	(3,038.00)	(72.31)	(2,965.69)	
449	03/24/49	3.5000%	23,969.70	21,825.07	(3,038.00)	(63.66)	(2,974.34)	
450	04/24/49	3.5000%	21,003.94	18,850.73	(3,038.00)	(54.98)	(2,983.02)	
451	05/24/49	3.5000%	18,029.53	15,867.71	(3,038.00)	(46.28)	(2,991.72)	
452	06/24/49	3.5000%	15,046.45	12,875.99	(3,038.00)	(37.56)	(3,000.45)	
453	07/24/49	3.5000%	12,054.66	9,875.54	(3,038.00)	(28.80)	(3,009.20)	
454	08/24/49	3.5000%	9,054.15	6,866.35	(3,038.00)	(20.03)	(3,017.97)	
455	09/49	3.5000%	6,044.88	3,848.37	(3,038.00)	(11.22)	(3,026.78)	
456	10/49	3.5000%	3,026.84	821.60	(823.99)	(2.40)	(821.60)	
457			-	-	-	-	-	
458			-	-	-	-	-	
459			-	-	-	-	-	
460			-	-	-	-	-	
461			-	-	-	-	-	
462			-	-	-	-	-	
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468			-	-	-	-	-	
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471			-	-	-	-	-	
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476			-	-	-	-	-	
477			-	-	-	-	-	
478			-	-	-	-	-	
477			-	-	-	-	-	
478			-	-	-	-	-	

PUBLIC HEARING NOTICE

UNAPPROVED
CITY OF MILLER
CITY COUNCIL MEETING
DECEMBER 29, 2015

The City Council met in special session at City Hall at 12:00 p.m. on Tuesday, December 29, 2015.

MEMBERS PRESENT: Mayor Ron Blachford, Aldermen Gale Auch, Jim Odegaard, Tony Rangel, Tom Winsell, Joe Zeller and Alderwoman Mary Johnson.

CALL TO ORDER: Mayor Blachford called the meeting to order.

Pledge of Allegiance was said by all present.

AGENDA: Motion by Alderman Odegaard, seconded by Alderman Rangel to approve the agenda with the addition of remodeling the finance office. All members voted aye. Motion carried.

APPROVAL OF BILLS: Motion by Alderwoman Johnson, seconded by Alderman Auch to approve the bills with the addition of $3,692.85 to Builder's Cashway and $1,161.45 to Taser International. All members voted aye. Motion carried.

PUBLIC HEARING

A public hearing was held at 12:05 to review the project funding applications for the water, sewer and storm sewer projects. Ted Dickey, NECOG, presented the following information:

A project is needed to provide adequate water service to the City of Miller. All alternatives were looked at by the city and the engineer. The city is proposing to replace a portion of its water distribution system. The city is in the process of applying for funding from the South Dakota Department of Environment and Natural Resources for a Drinking Water State Revolving Fund and the United States Department of Agriculture – Rural Development. The most that would be borrowed from the SRF loan would be $2,200,000.00 with repayment through a water surcharge. The note will be for up to 3.25% at a term no greater than 30 years. If the proposed project financing is borrowed at the full amount, rate and term, the water rates would increase from $50.00 to $63.00 per 5,000 gallons. This is an increase of $13.00. Motion by Alderman Rangel, seconded by Alderman Auch to approve Resolution 2015-12 Water System Funding Application. Roll Call vote: Alderman Rangel – aye; Alderman Odegaard – aye; Alderman Zeller – aye; Alderwoman Johnson – aye; Alderman Winsell – aye; Alderman Auch – aye. Motion carried.

A project is needed to provide adequate wastewater and storm sewer service to the City of Miller. All alternatives were looked at by the city and the engineer. The city is proposing to replace a portion of its wastewater and storm sewer collection system. The city is in the process of applying for funding from the South Dakota Department of Environment and Natural Resources for a Clean Water State Revolving Fund and the United States Department of Agriculture – Rural Development. The most that would be borrowed would be $6,500,000 with repayment through a sewer surcharge and a possible property tax assessment. The note will be for up to 3.25% at a term no greater than 30 years. If the proposed project financing is borrowed at the full amount, rate and term, the wastewater rates would increase from $31.65 to $69.15 this is an increase of $37.50. Motion by Alderman Odegaard, seconded by Alderwoman Johnson to approve Resolution 2015-11 Sewer, Storm Sewer Funding Application. Roll Call vote: Alderman Rangel – aye; Alderman Odegaard – aye; Alderman Zeller – aye; Alderwoman Johnson – aye; Alderman Winsell – aye; Alderman Auch – aye. Motion carried.

There will be a DENR meeting on March 24 to approve the funding applications. City of Miller employees and/or council members are requested to be present at said meeting.

Motion by Alderman Rangel, seconded by Alderwoman Johnson to forego the actual second readings of Ordinances 667, 668, 669 and 670 in their entirety. All members voted aye. Motion carried.

2nd Reading of Ordinance #667 – Recodification: Motion by Alderwoman Johnson, seconded by Alderman Rangel to approve the second reading of Ordinance #667 – Recodification. Roll Call vote: Alderman Rangel – aye; Alderman Odegaard – aye; Alderman Zeller – aye; Alderwoman Johnson – aye; Alderman Winsell – aye; Alderman Auch – aye. Motion carried.

2nd Reading of Ordinance #668 – Electric Utility Due Dates: Motion by Alderman Rangel, seconded Alderman Odegaard to approve the second reading of Ordinance #668 – Electric Utility Due Dates. Roll Call vote: Alderman Rangel – aye; Alderman Odegaard – aye; Alderman Zeller – aye; Alderwoman Johnson – aye; Alderman Winsell – aye; Alderman Auch – aye. Motion carried.

2nd Reading of Ordinance #669 – Water Utility Due Dates: Motion by Alderwoman Johnson, seconded by Alderman Zeller to approve the second reading of Ordinance #669 – Water Utility Due Dates. Roll Call vote: Alderman Rangel – aye; Alderman Odegaard – aye; Alderman Zeller – aye; Alderwoman Johnson – aye; Alderman Winsell – aye; Alderman Auch – aye. Motion carried.

2nd Reading of Ordinance #670 – Fee Schedule Update: Motion by Alderman Auch, seconded Alderman Rangel to approve the second reading of Ordinance #670 – Fee Schedule Update. Roll Call vote: Alderman Rangel – aye; Alderman Odegaard – aye; Alderman Zeller – aye; Alderwoman Johnson – aye; Alderman Winsell – aye; Alderman Auch – aye. Motion carried.

Resolution 2015-10 – Contingency Transfer: Motion by Alderman Auch, seconded by Alderman Rangel to approve Resolution 2015-10 – Contingency Transfer. Said resolution will be published separately in *The Miller Press*. Roll Call vote: Alderman Rangel – aye; Alderman Odegaard – aye; Alderman Zeller – aye; Alderwoman Johnson – aye; Alderman Winsell – aye; Alderman Auch – aye. Motion carried.

2016 Cost of Living Increases: Motion by Alderman Zeller, seconded by Alderwoman Johnson to approve a 2% cost of living increase to all employees. Alderwoman Johnson had compiled a history of the wage increases for each city position. Roll Call vote: Alderman Rangel – aye; Alderman Odegaard – aye; Alderman Zeller – aye; Alderwoman Johnson – aye; Alderman Winsell – aye; Alderman Auch – aye. Motion carried.

Remodel Finance Office: Alderman Rangel stated that the budget for the building fund still has over $7,600.00. He would like to start insulating and building walls in the finance office for efficiency purposes. Joe Zeller gave a rough estimate of supplies that will be needed to start the project.

Camden Hofer, SPN, did an overview of the Facility Plan for the water, wastewater and storm sewer project proposals. He reviewed the approximate timeline and costs for each of the three phases of the proposed projects. Mr. Hofer will provide a power point to show pictures of our current system at the Farm and Home Show January 15-16.

Motion by Alderman Zeller, seconded by Alderman Auch to adjourn the meeting. There being no further business, the meeting was adjourned at 2:33 p.m. All members voted aye. Motion carried.

_____
Ronald Blachford, Mayor

_____
Sheila Coss, Finance Officer

LEGAL NOTICE OF RECEIPT
Copy of the official proceedings
was received on:_____
Published once at the
approximate cost of:_____

Bills December 2015 (3)

A & B Business Solutions	Supplies	$15.79
Aberdeen Chrysler Center	'12 Charger Repairs	$1,865.37
Associated Supply Co, Inc	Supplies	$51.27
Builders Cashway Inc	Estimate	$3,692.85
Chief Supply Corporation	Supplies	$153.42
City Street Department	Reimb from Water Dept	$17,955.27
Data Technologies Inc	W-2/1099 Forms	$104.33
Ed Roehr Safety Products	Taser Cartridge	$423.43
Fastenal Company	Supplies	$52.75
Northwest Pipe Fittings	Manhole Frame/Cover	$435.44
Oakley Farm & Ranch Supply	Diesel Treat/Grease	$22.98
Oakley Repair	Powersteering Repair	$274.63
Overhead Door Company - Pierre	Repair Garage Door	$2,140.92
SD Dept of Health	Tests	$60.00
Taser International	Taser	$1,161.45
Tony's Repair	Service	$119.80
TrueNorth Steel	Supplies	$172.44
Ultramax	Ammunition	$480.50
Venture Communications	Service	$65.00
**** Paid Total ****		$29,247.64

Payroll by Department: 12/29/2015

	Department	w/o OT	OT	Total
41110	COUNCIL	2,199.46		2,199.46
41410	FINANCE OFFICE	870.34		870.34
41910	BUILDING	629.00		629.00
42110	POLICE	7,510.22	166.43	7,676.65
43110	STREET	3,916.87	425.24	4,342.11
43210	SEWER	4,553.23	629.73	5,182.96
43310	WATER	4,553.20	629.71	5,182.91
43410	ELECTRIC	6,873.11	422.10	7,295.21
		$31,105.43	$2,273.21	$33,378.64

AFFIDAVIT OF PUBLICATION
The Miller Press

STATE OF SOUTH DAKOTA)
)SS
County of Hand)

Michael G. Caviness of said county being first duly sworn, on oath, says that he is the publisher of *The Miller Press*, a weekly newspaper published in Miller, said County of Hand by Hand County Publishing Co., Inc. and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has been published within said County for fifty weeks next prior to the publication of the notice, herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the

Notice of Public Hearing for the City of Miller Phase I Water, Wastewater and Storm Sewer

a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once each week for 1 successive week(s), on the day of each week on which said newspaper was regularly published, to wit:

12/16 2015; _____ 20___

_____ 20___; _____ 20___

_____ 20___; _____ 20___

that the full amount of the fees for the publication of the annexed notice is

$ 19.15

Michael G. Caviness, Publisher

Subscribed and sworn to before me this 4 day of Jan 2016.

Janet L. Kittelson, Notary Public
My Commission expires: 6-26-19

City announces public hearing

Notice of Public Hearing for the City of Miller Phase I Water, Wastewater, and Storm Sewer Improvements Project

The City of Miller is proposing to make repairs to the sewer and storm sewer system. The City will be submitting a Clean Water State Revolving Fund Application in the amount of $6,757,000 to the Department of Environment and Natural Resources. The funding may be awarded in the form of a grant, loan, or a principal forgiveness loan; any portion of the loan that is not forgiven will have a term of up to 30 years at a rate of up to 3.25%. The amount and source of funds will be determined by the Board of Water and Natural Resources when the application is presented at a schedule board meeting. The purpose of the public hearing is to discuss the proposed project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

The City of Miller is also proposing to make repairs to the drinking water distribution system by replacing ACP lines with PVC. The City will be submitting a Drinking Water State Revolving Fund Application in the amount of $2,205,000 to the Department of Environment and Natural Resources. The funding may be awarded in the form of a grant, loan, or a principal forgiveness loan; any portion of the loan that is not forgiven will have a term of up to 30 years at a rate of up to 3.25%. The amount and source of funds will be determined by the Board of Water and Natural Resources when the application is presented at a schedule board meeting. The purpose of the public hearing is to discuss the proposed project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

The public hearing will be held at the City Hall @ 12:05pm on December 29, 2015.

Published 12-16-15 at the total approxiamte cost of $_19.15.

NORTHEAST COUNCIL OF GOVERNMENTS

P.O. BOX 1985 ABERDEEN, SD 57402-1985

FACILITY PLAN

for the

WASTEWATER, STORM WATER DRAINAGE AND WATER SYSTEMS

IN

MILLER, SOUTH DAKOTA

PROJECT #14141

DECEMBER 2015

SPN & Associates
ENGINEERS-PLANNERS- SURVEYORS
2100 NORTH SANBORN BLVD, P.O. BOX 398
MITCHELL, SOUTH DAKOTA 57301
PHONE 605-996-7761 FAX 605-996-0015

Facility Plan for the

Wastewater, Storm Water Drainage and Water Systems

in

Miller, South Dakota

Project Number: 14141

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

By Camden Hofer
Camden A. Hofer, P.E.

Registration No. SD #8322

Date 12-21-15

REG. NO. 8322 CAMDEN A. HOFER

SCHMUCKER, PAUL, NOHR & ASSOCIATES
CONSULTING ENGINEERS - SURVEYORS
2100 NORTH SANBORN BLVD., PO BOX 398
MITCHELL, SOUTH DAKOTA 57301

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1 INTRODUCTION

1.1 PURPOSE

The City of Miller has contracted with the engineering firm of Schmucker, Paul, Nohr and Associates (SPN) to complete an investigation of its existing wastewater system, storm water drainage system and water system. The intent of the study is to identify and quantify problems that exist within these systems for the City.

The results of the completed study are presented in this Facility Plan. The Facility Plan contains the information with which the City Council of Miller can base cost-effective decisions relating to the necessary improvements to its wastewater collection and treatment systems. The City Council will, after appropriate public input, determine the best options to make any needed improvements that are identified in the Facility Plan.

The purpose of this report is to provide the City with a overall plan which will assist the City in prioritizing the necessary improvements needed for the existing infrastructure. Preliminary opinions of costs for the said improvements are provided to assist the City in their decision-making. This report can be used for budgeting purposes and to support applications for applicable funding sources.

1.2 SCOPE

The scope of work for the wastewater system, storm water drainage system and water system evaluation and study includes:

1) Completing an update of available population data and related information for the purpose of projecting future population trends within the City's service area boundaries.
2) A review of the wastewater pump operation, water purchases, water sales and wastewater treatment plant discharge records.
3) An analysis of the wastewater collection system to identify potential sources and quantities of infiltration/inflow into the wastewater collection system based on a comparison of the available wastewater pumping records at the lift station, the recorded water sales, flow monitoring and the available precipitation event data.

4) Installation of a portable continuous flow recorder in one of the manholes upstream from the treatment facility for the purpose of gathering wastewater flow data.

5) An analysis of the potential for wastewater inflow via smoke testing. Using information collected during the smoke testing of the wastewater collection system, there will be an attempt to determine the location of potential excessive inflow sources.

6) Completing an analysis of the existing water supply system relating to source capacity.

7) Completing an analysis of the existing water distribution system related to storage, water losses in the system, identification of system age, evaluation of current water pressures and fire flow capacities and evaluating the current and future needs.

8) Determining the current wastewater loadings on the wastewater treatment facility and projecting the future wastewater loadings on the wastewater treatment facility using available records along with the above information and analyses.

9) Reviewing the wastewater discharge permit requirements; reviewing the history compliance of the City's wastewater treatment system with the requirements; and evaluating future compliance based on future population projections.

10) An evaluation of the capability of the current systems to meet present and future needs and requirements.

11) Identifying and analyzing requirements of governmental authorities having jurisdiction to approve the design of the project and participating in consultations with such authorities.

12) Preparation of a general economic analysis of Miller's requirements applicable to various alternatives.

13) Identification of current and potential future areas of development in and adjacent to the Client's service area.

1.3 AUTHORIZATION

The firm of Schmucker, Paul, Nohr and Associates was authorized by the governing body of the City of Miller to prepare the wastewater system Facility Plan for funding purposes. The following report presents the findings and conclusions resulting from the authorized study.

2 COMMUNITY DESCRIPTION

2.1 GENERAL INFORMATION

The City of Miller is located in central Hand County, South Dakota, at the intersection of SD Highway 45 and US Highway 14 as indicated on Figure 2.1. The City of Miller was incorporated in 1905. The City has an aldermanic type of government consisting of a Mayor and six council members. These elected representatives hire and oversee staff who manage the day-to-day activities and municipal enterprises undertaken by the City.

Hand County is in the east central part of South Dakota. It has a total surface area of approximately 919,040 acres. Other communities located within the county include Ree Heights, St. Lawrence and Wessington. General livestock and farming are the major sources of income within the county, with about 94 percent of the total acreage of the county devoted to crop production. Corn, soybeans, hay and wheat are the main crops. Miller is a typical rural community that serves the surrounding agricultural area as a retail trade center that provides limited shopping and other essential services.

2.2 POPULATION CHARACTERISTICS

Miller's population is 1,489 according to the 2010 census. The 2010 Census indicates Miller's median age was 51.2 years as compared to the state's median age of 36.9. At the time census data was gathered, 33.2 percent of its population was over the age of 65. In comparison, the state's population that is over the age of 65 is 14.3 percent.

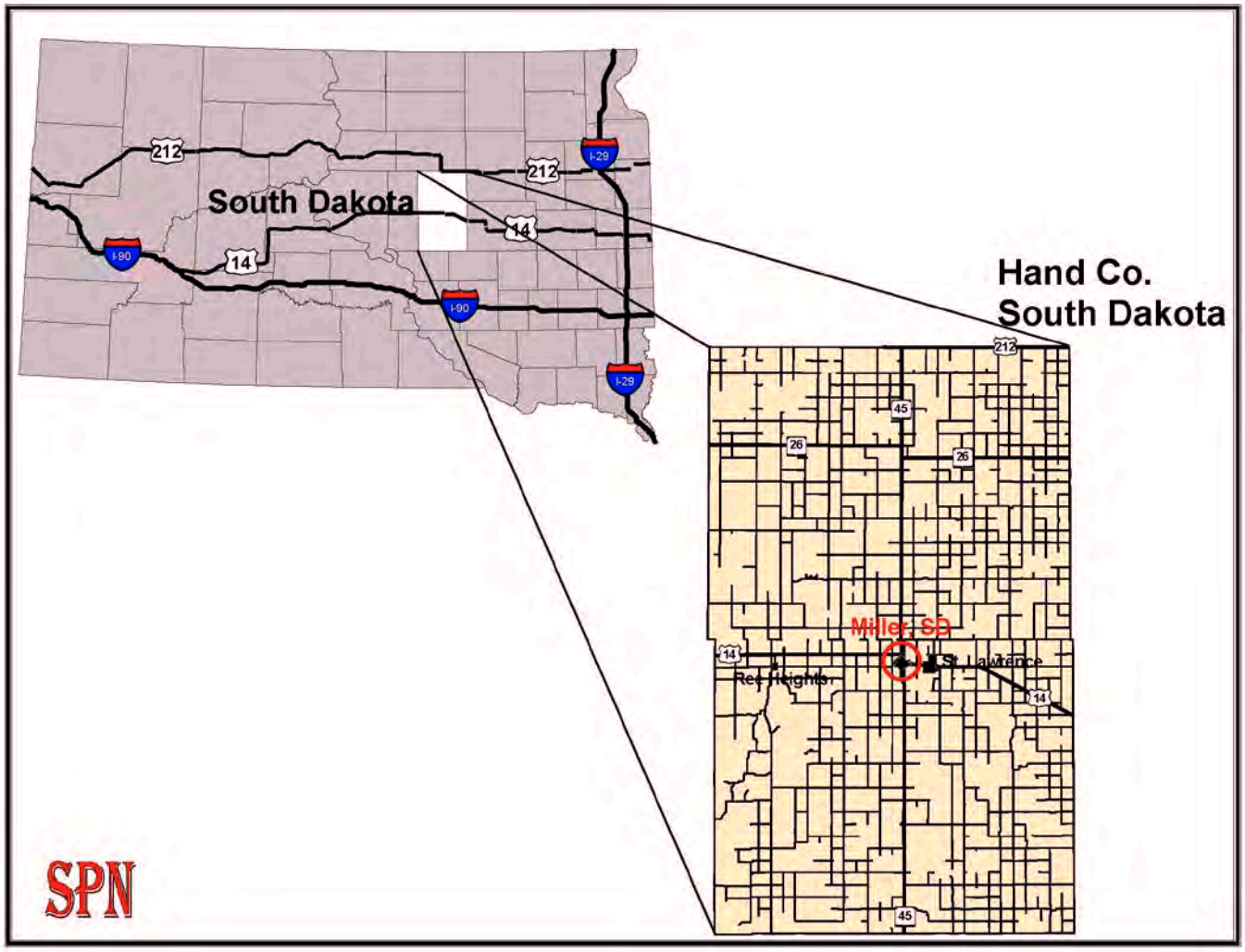


Figure 2.1: Location Map

Data from a 2013 American Community Survey indicates that the community's median household income of $40,192 is lower than South Dakota's median household income of $49,495. At the time the census data was gathered, about 7.1 percent of the families living in the community had incomes at or below the poverty level while 9.1 percent of the families living in South Dakota fell into this category.

2.3 POPULATION PROJECTIONS

The 2010 Census Bureau data indicates a population for Miller of 1,489. Figure 2.2 shows the Census Bureau population data from 1890 to 2010 and presents the projected population for the community through the year 2040. As shown by the historical data,

the population climbed until 1970 and then has declined since. The decline in recent years is typical for rural communities such as Miller. This can be accredited to the size of the typical farming family decreasing. The decline in population has slowed and it is projected that the population should stabilize near the current population.

As with all communities of similar size, there are always efforts to entice new industrial and commercial enterprises into locating in Miller. Even though this possibility exists, it is not anticipated that significant population growth would occur. As a result, the 2010 census population of 1,489 will be utilized in determining the current and projected demands as they relate to the wastewater system.

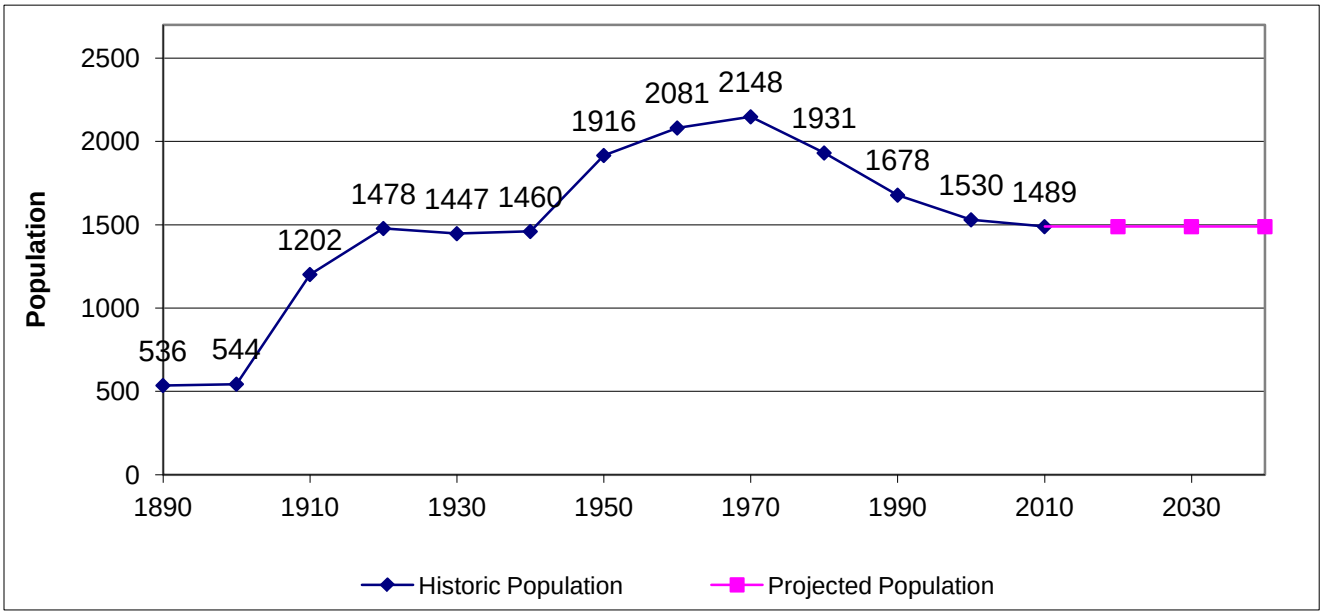


Figure 2.2: Historic and Projected Population

2.4 TOPOGRAPHY / CLIMATE

Hand County lies within the James River Basin where streams flow southwest to the Missouri River. The elevations of the county range from 2,000 feet above sea level in the Ree Hills area to 1,350 feet in the northeast part of the county. The western and southern parts of the county are in the Missouri Coteau and the northeastern and east-central parts are in the James River Lowland.

The area's climate is generally described as a continental climate. Winters are relatively long and cold while summers are fair and warm. Most of the precipitation occurs during the warm period of late spring and early summer. Approximately 75% of the total annual precipitation falls between April and September. Normal precipitation for the area is 18.24 inches annually.

2.5 ENVIRONMENTAL REVIEW INFORMATION

As part of the environmental assessment requirement for the facility planning process, the project sponsor is required to contact various state and federal agencies. Environmental assessment letters will be sent to the following agencies. A copy of the letter requesting comments will be included in Appendix A along with the associated comment letters and future related correspondence.

2.5.1 Historic and Archaeological Sites

Upon completion of an application for funding through one or more of various funding agencies, a letter will be sent to the funding agency describing the proposed project location and construction activities as well as a general description of the existing conditions as found within the project limits. An internet search for historic properties in the area was completed on nps.gov and history.sd.gov. The following locations were identified in Miller and are shown in Figure 2.3:

- Miller Ree Creek Bridge, west edge of Miller
- South Dakota Department of Transportation Bridge #30-257-400, local road over Sand Creek
- Hand County Courthouse and Jail, 415 West First Avenue, Miller
- Mack Jones House, 315 E 3rd Avenue, Miller

Figure 2.3: Historic Sites

2.5.2 Floodplains and Wetlands

The US Fish and Wildlife Service, the US Army Corps of Engineers and the South Dakota Department of Game, Fish and Parks were contacted for input related to the proposed improvements. No floodplains or wetlands in the area are expected to be impacted due to the project. The Federal Emergency Management Agency (FEMA) website was searched for a flood hazard evaluation. A flood hazard map has been prepared for Miller and is shown in Figure 2.4.

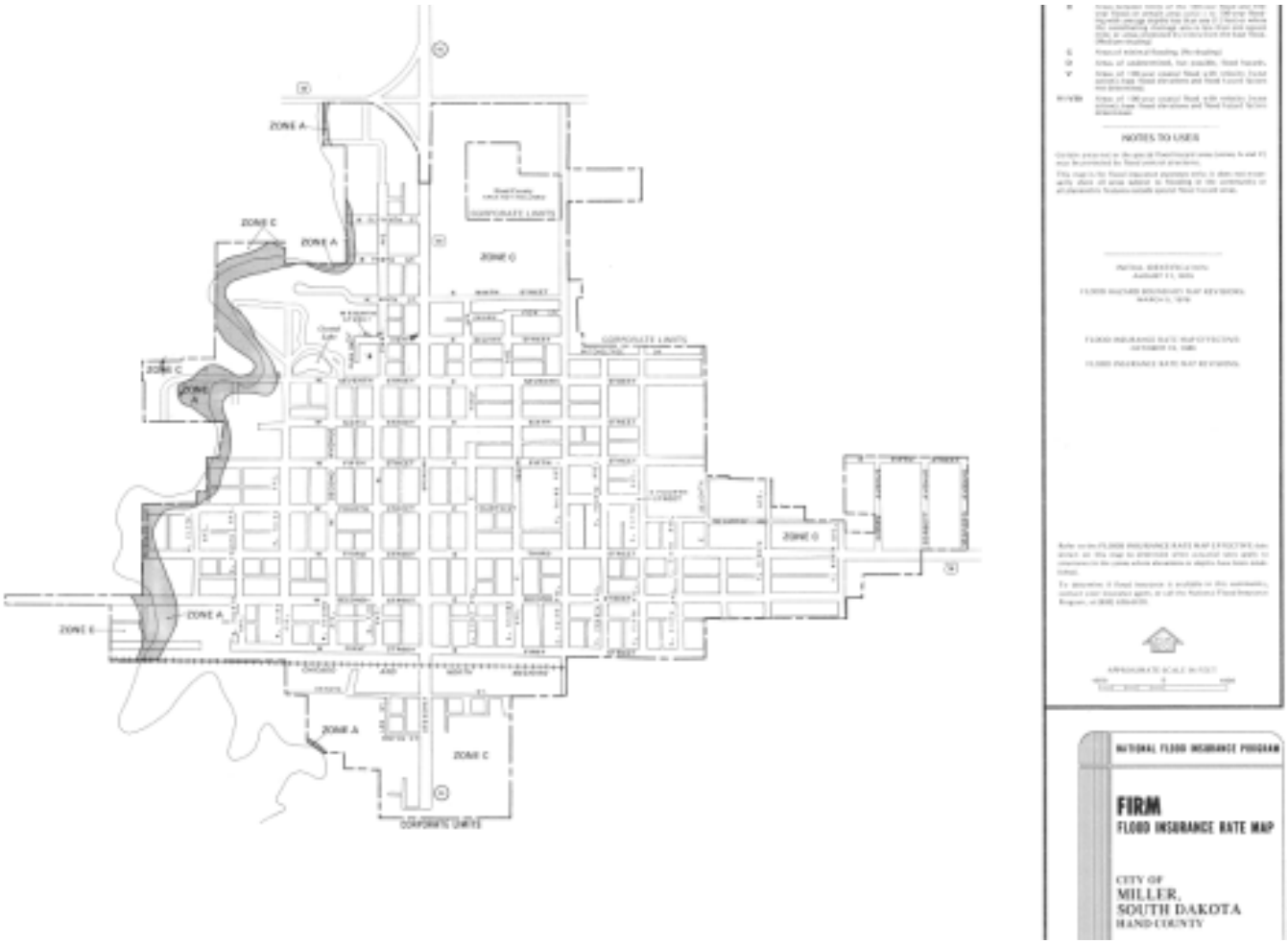


Figure 2.4: Flood Hazard Map from FEMA

The U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on wetlands. Correspondence related to these contacts will be placed in Appendix A upon receipt. A wetland map was created on the US Fish and Wildlife website for Miller and is shown in Figure 2.5. No impact on wetlands is expected due to this project since the work is planned in City rights-of-way or in previously disturbed areas.

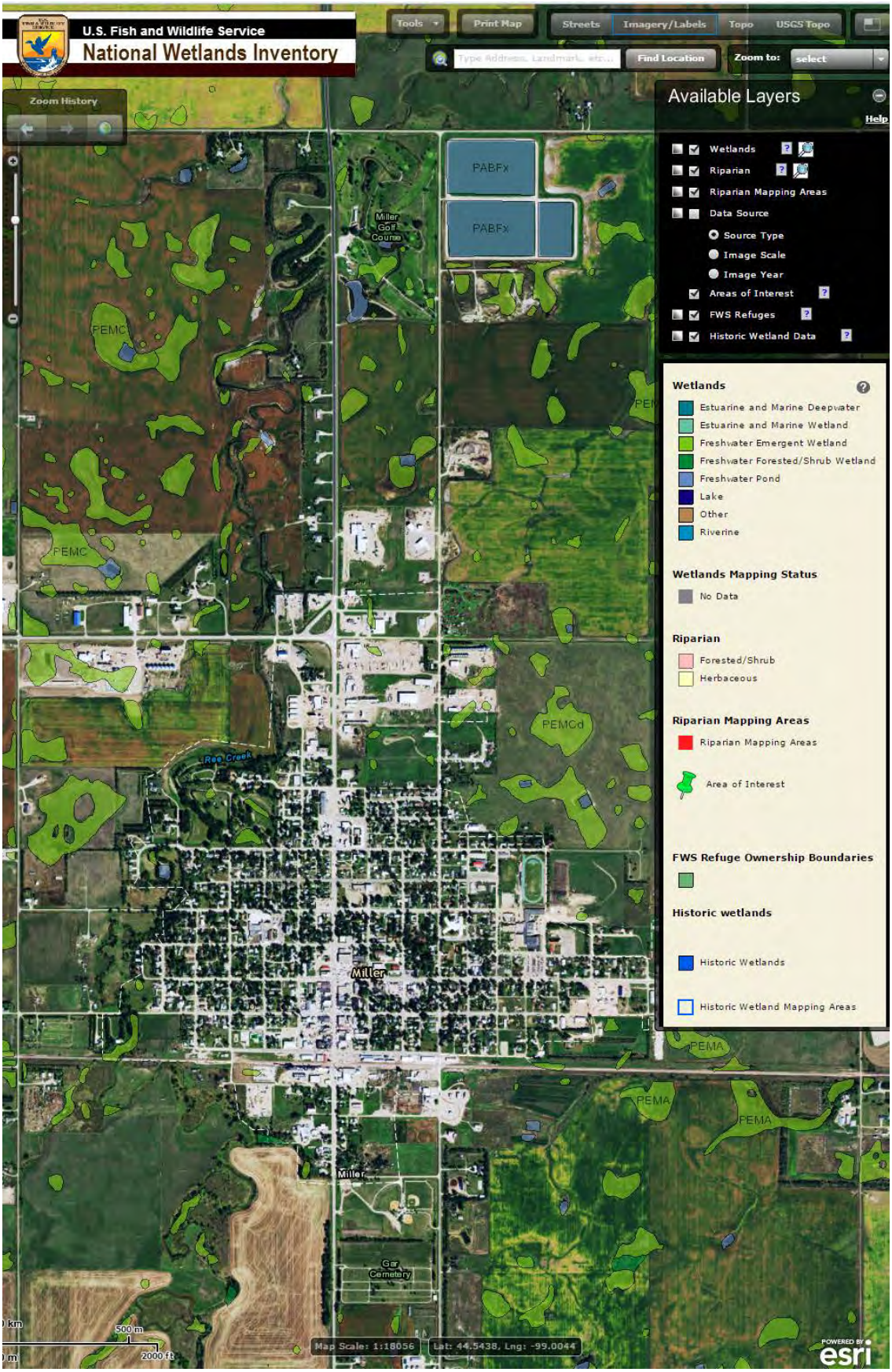


Figure 2.5: Wetland Map

2.5.3 Agricultural Lands

The US Department of Agriculture's State Soils Scientist was contacted for input on the proposed improvements. No significant impact on agricultural lands is expected since the proposed project will take place within the City limits or in previously disturbed areas.

2.5.4 Wild and Scenic Rivers

There are no designated wild and scenic rivers in the area. Therefore, the proposed improvements will have no impact on this resource.

2.5.5 Water Quality and Quantity

The South Dakota Department of Environment and Natural Resources was contacted for input on the proposed improvements. No impact on water quality and quantity is expected due to the project.

2.5.6 Endangered Species and Critical Habitat

The U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks were contacted for the purpose of soliciting input related to potential impacts on endangered species and critical habitat which might result from construction of the proposed improvements. No impact on critical endangered species or critical habitat is expected due to this project since the project will take place in City rights-of-way or in previously disturbed areas. According to the U.S. Fish and Wildlife Service website the Whooping Crane and the Topeka Shiner have been identified as endangered species that live in the Miller area.

2.6 Direct and Indirect Impacts

Negative environmental impacts which may be expected during a project of this nature include, but are not necessarily limited to, soil erosion, noise pollution, traffic obstruction, and increased surface runoff due to trench dewatering operations. However, such impacts are temporary and will not significantly affect the environment over the long term.

Positive environmental impacts include enhanced human health and safety and more efficient delivery of municipal water. Such impacts are of long-term value to the residents of Miller and Hand County.

2.7 Mitigation Adverse Impacts

Adverse impacts will be minimized to the greatest extent possible by the implementation of accepted cautionary measures. Temporary and permanent erosion control will be included in construction contracts. Appropriate permits will be secured prior to the discharge of any trench dewatering or storm waters, and protection of public health, safety and welfare will be incorporated into the specifications and contract documents. Additionally, should any permanent adverse impacts result from the project, mitigating measures will be followed to the satisfaction of the appropriate review agency.

3 WASTEWATER SYSTEM ANALYSIS

3.1 SANITARY SEWER

The City of Miller currently provides water and sewer service to approximately 765 connections. The core of the existing collection system was constructed sometime during or prior to 1963 and has been updated and extended to provide service for new development. There are approximately 181 manholes in the system. The existing system is shown in Figure 3.1. The sewer system consists of various sizes of vitrified clay pipe (VCP), polyvinyl chloride (PVC) pipe and cast iron pipe (CIP) as shown below:

Diameter	Type	Total (ft)
4	PVC	200
6	PVC	951
6	VCP	5,568
6	DIP	194
8	PVC	12,873
8	VCP	25,878
10	PVC	1,015
10	VCP	471
12	PVC	1,490
12	VCP	2,038
15	PVC	1,153
15	VCP	687
18	PVC	1,070
18	VCP	14,991
24	VCP	2,537
		71,115

Approximately 73 percent of the sewer system is composed of VCP. The VCP has been found to have numerous widespread deficiencies that range from differential settling, joint offsets, separated joints, collapsed pipe, sags, cracks, root build-up and other issues. The mainline sewer's intersections with the sewer services are relatively consistent throughout the City for poor structural conditions and allowing infiltration.

SANITARY SEWER MAP
CITY OF
MILLER

SCALE: 1" = 800'

LEGEND

- 4" SEWER MAIN
- 6" SEWER MAIN
- 8" SEWER MAIN
- 10" SEWER MAIN
- 12" SEWER MAIN
- 15" SEWER MAIN
- 18" SEWER MAIN
- 24" SEWER MAIN
- MAHNOLE (S)
- CLEANOUT (C)
- PVC PIPE
- RCP Pipe
- VCP Pipe

Map and Utilities as shown on the drawings are located in accordance with available data, but may vary. This map is not to be used for construction.

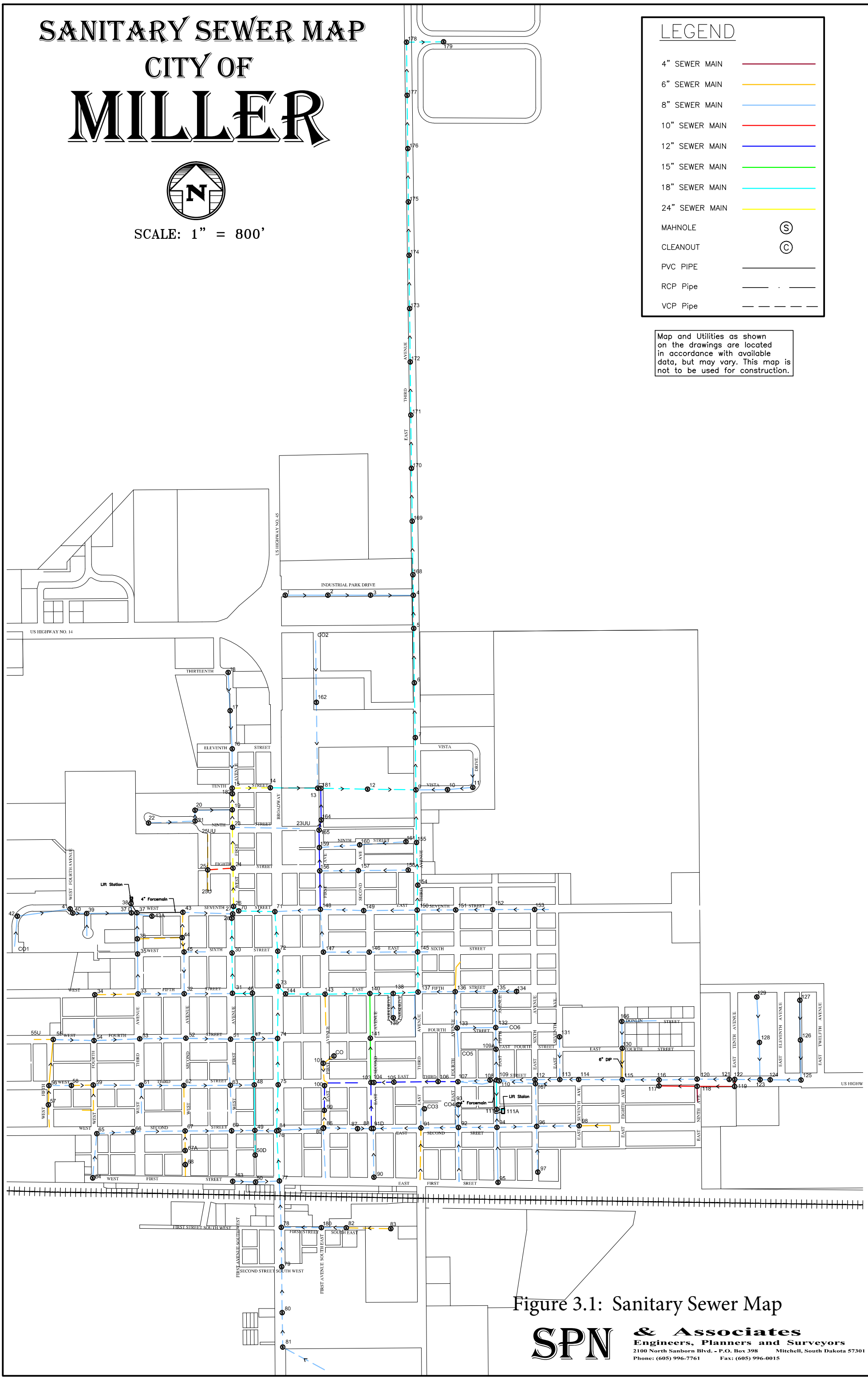


Figure 3.1: Sanitary Sewer Map

SPN & Associates
Engineers, Planners and Surveyors
2100 North Sanborn Blvd. - P.O. Box 398 Mitchell, South Dakota 57301
Phone: (605) 996-7761 Fax: (605) 996-0015

It is believed that, at one time, the functions of the sanitary and storm sewer systems were combined into one pipe network which required relatively large diameter piping. The larger diameter piping allowed the installation to be completed at a flatter slope which helped deal with the flat terrain over which the sewer had to travel. Many sewer sections have been found to be at slopes which are less than recommended for proper operation and maintenance. The east lift station will most likely need to be replaced to provide for a greater depth that will be required when installing the new sewer lines.

There is approximately 194 feet of eight-inch CIP on the east side of the City that should be replaced since CIP corrodes and is a poor conduit for wastewater. The sanitary sewer includes approximately 182 manholes. The original manholes associated with the VCP sewer are generally in poor condition. Some manholes are constructed of brick, concrete block or a combination of the two. The City has been relining the worst of the manholes during the last few years.

The sanitary sewer flows by gravity to two lift stations. The east lift station is located between East Second Street and East Third Street on Fifth Avenue. The lift station serves approximately 73 sewer connections. This lift station was constructed in 1998 and is a dry well / wet well type that uses duplex two-horsepower pumps. The wastewater is pumped through approximately 420 feet of four-inch PVC force main to a manhole on East Third Street west of Fifth Avenue.

The west lift station is located near the intersection of West Seventh Street and Third Avenue. This lift station serves approximately 37 sewer connections. The west lift station pumps the wastewater through approximately 525 feet of four-inch PVC force main to a manhole located west of the lift station on West Seventh Street and Second Avenue. The west lift station was constructed in 1998 and uses submersible duplex three-horsepower pumps.

3.1.1 TV Inspection Results

In 2014 and 2015, the City hired companies to clean and inspect the sanitary sewer system. Each sewer section that is considered deficient was assigned a priority rating based on the degree of the deficiencies identified. Figure 3.2 shows a map of the sewer system based on the priority rating. Sections with a rating of one require replacement as soon as possible due to a major threat of collapse or line blockage.

SANITARY SEWER MAP
CITY OF
MILLER

SCALE: 1" = 800'

LEGEND

- 4" SEWER MAIN
- 6" SEWER MAIN
- 8" SEWER MAIN
- 10" SEWER MAIN
- 12" SEWER MAIN
- 15" SEWER MAIN
- 18" SEWER MAIN
- 24" SEWER MAIN
- MANHOLE (S)
- CLEANOUT (C)
- PVC PIPE
- VCP PIPE
- PRIORITY 1
- PRIORITY 2
- PRIORITY 3
- POINT REPAIR

Map and Utilities as shown on the drawings are located in accordance with available data, but may vary. This map is not to be used for construction.

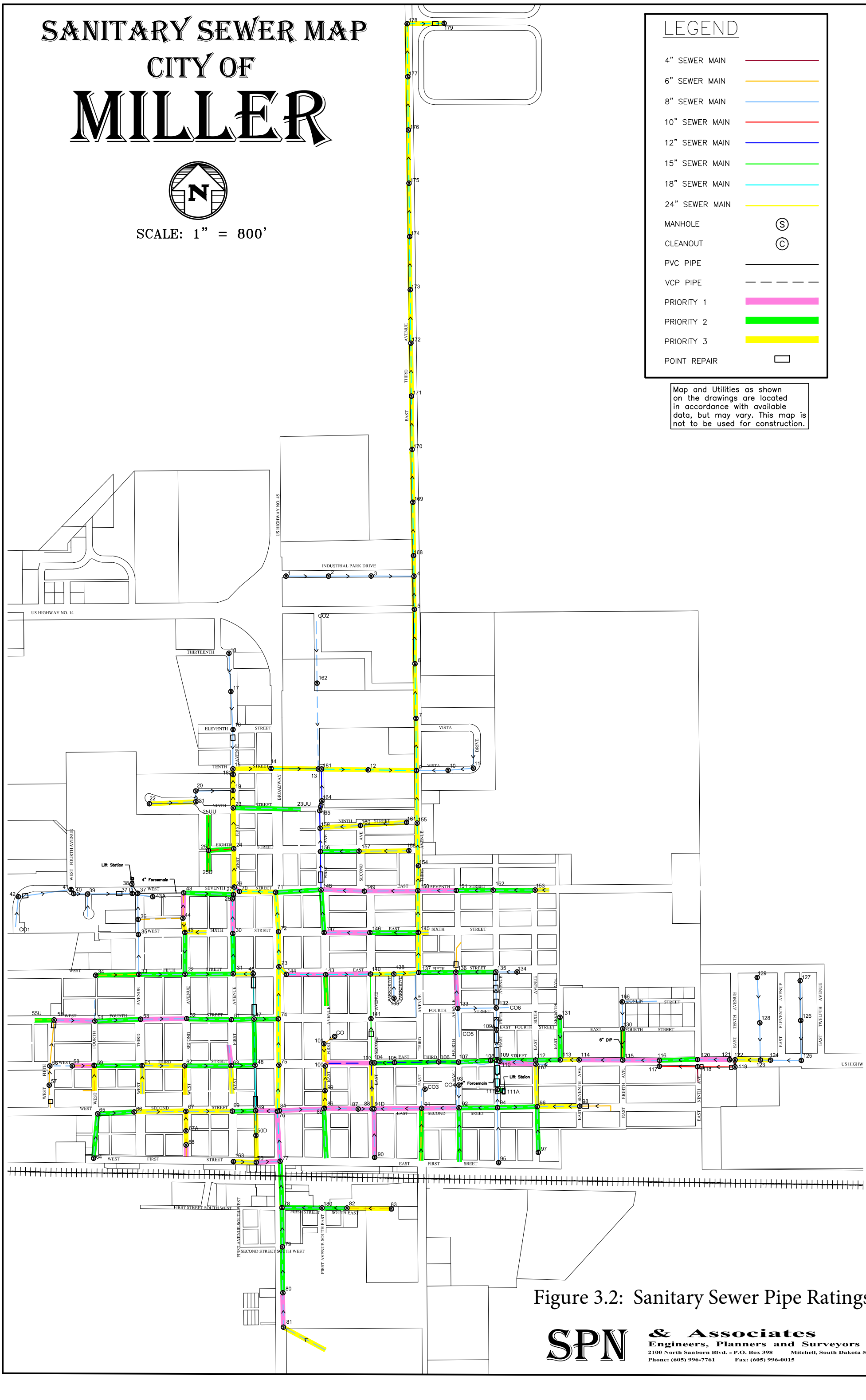


Figure 3.2: Sanitary Sewer Pipe Ratings

SPN & Associates
Engineers, Planners and Surveyors
2100 North Sanborn Blvd. - P.O. Box 398 Mitchell, South Dakota 57301
Phone: (605) 996-7761 Fax: (605) 996-0015

Sections with a rating of two require replacement because of sags, offset or separated joints, major cracked pipe and other issues. Sections with a priority rating of three are composed of clay pipe in good condition or with minor deficiencies such as light sags, small cracks or other similar issues. Point repairs are also shown in the figure that require a location of pipe to be replaced due to a significant sag, offset, crushed pipe or other issue. Refer to the TV Inspection Evaluation in Appendix B for more details. Table 3.1 provides the length of each size and type of pipe under each category. Example photographs for different priority types are shown in Figures 3.3 and 3.4.

Table 3.1: TV Inspection Summary

Diameter	Type	Total (ft)	Priority 1 (ft)	Priority 2 (ft)	Priority 3 (ft)	Point Repair (ft)	No Action (ft)
4	PVC	200	0	0	0	20	180
6	PVC	951	0	0	0	50	901
6	VCP	5,568	545	2,250	1,831	0	507
6	DIP	194	0	194	0	0	0
8	PVC	12,873	0	0	565	100	11,368
8	VCP	25,878	6,138	12,191	5,322	34	1,031
10	PVC	1,015	0	0	0	50	965
10	VCP	471	221	250	0	0	0
12	PVC	1,490	363	0	0	110	1,017
12	VCP	2,038	393	837	808	0	0
15	PVC	1,153	0	59	0	114	980
15	VCP	687	0	387	300	0	0
18	PVC	1,070	0	0	0	403	454
18	VCP	14,991	1,607	555	11,302	20	470
24	VCP	2,537	0	0	2,537	0	0
		71,115	9,267	16,723	22,665	901	17,873

Top of Pipe Gone on East 2nd Street

Broken Elbow on West Second Avenue

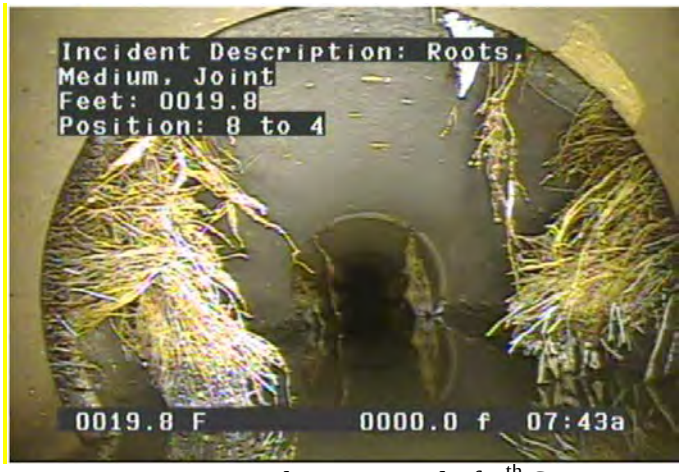
Open Service on West 1st Street

Pipe Broken and Severe Blockage at Lagoon

Pipe Caving in on West 1st Street

Pipe Gone and Water Gushing on Highway 14

Figure 3.3: Example Photographs of Priority 1 Issues



Roots in Joint on the West End of 4th Street

Protruding Service on 1st Avenue

Severe Sag on West 4th Street

Broken Pipe on the West End of 4th Street

Figure 3.4: Example Photographs of Priority 2 Issues

The results of the recent TV Inspection included video of each manhole. Approximately 109 manholes, or 64 percent, require attention. Of these manholes 16, or nine percent, should be completely replaced due to very poor structural condition. The remaining manholes that require attention could be lined to rehabilitate the manholes for continued use. The Figure 3.5 shows examples of manhole conditions.

Manhole 14 - Deteriorated Concrete

Manhole 61 - Rough Bench and Exposed Bar

Manhole 50 - Invert Plugged

Manhole 180 - Loose Block and Brick

Manhole 30 - Brick Construction

Manhole 74 - Bricks Missing

Figure 3.5: Example Photographs of Manhole Issues

3.1.2 Smoke Testing

The sewer system was tested for potential inflow sources in June and July of 2010. The entire City was tested except for an area on Industrial Park Drive and in the alley west of Broadway between Third Street and Fifth Street where manholes were covered with asphalt.

In general, smoke testing the VCP portions of the sewer system gave evidence of being in poor condition. Many of the manholes observed were partially clogged or submerged. Many homes did not show smoke at the roof vents which indicated poor sewer drainage.

Approximately nine abandoned services, three broken or leaking foundations or drain tile, one low manhole that could be collecting water, five broken cleanouts and 13 areas that were believed to have sags or partial blockages were located during testing. A drain tile was found connected directly to the sewer on the southwest corner of West Fourth Avenue and West Third Street. Two storm sewer inlets were found connected to the sanitary sewer on Broadway south of Third Street. Since the time that the smoke testing was completed, the City has fixed some of the minor issues that were identified. The major issues with the storm sewer inlets and drain tile that are connected to the sanitary sewer should be removed.

3.2 WASTEWATER FLOW ANALYSIS

3.2.1 Domestic Flow

In order to estimate the wastewater flow rate, an itemization of the domestic flow along with infiltration and inflow is completed. Usually a city of Miller's size produces roughly 75 gallons per capita per day (gpcpd) of wastewater flow (SD DENR, 1990). However, the high rate of infiltration and inflow collected increases the per capita flows to values higher than what is considered normal.

The domestic component of the wastewater is estimated from historic water use records. The domestic wastewater flow is generally estimated by analyzing the water use for the

months of December, January and February. During these months, 80 percent of the water that is used is assumed to be sent into the wastewater collection system. The winter water usage for 1999 through 2014 was evaluated. The average per capita usage for the winter months is approximately 83.1 gpcpd. The portion of the water that is assumed to enter the sewer system is 80 percent or 66.5 gpcpd. Therefore, using the 2010 population of 1,489, the current domestic wastewater flow rate is estimated to be **99,000 gallons per day (gpd)** (66.5 x 1,489).

3.2.2 Lift Station Flow Records

Lift station pumping records were studied as part of the July 2010 *Facility Plan for the Wastewater Collection and Treatment Systems* to evaluate the variability of the wastewater flow rates. The City of Miller supplied lift station records of the hours of pump operation per day from 2007 through June 2010 for both lift stations. The hour readings for the lift stations were converted to flow and are shown graphically in Figure 3.6. The data supplied and shown in the figure relates to only the portion of the sewer system that contributes flow to the lift stations. Once a trend is established, this data can be used as an indicator of how much inflow and infiltration is entering the collection system.

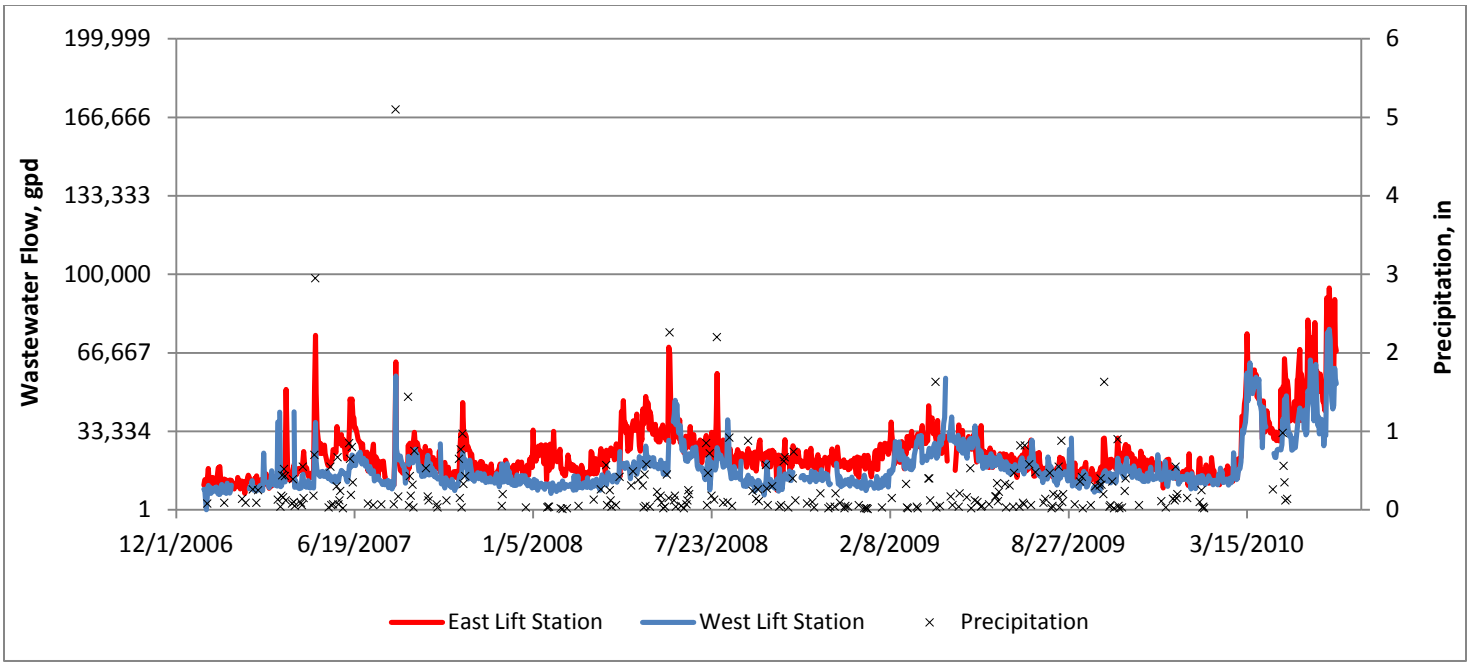


Figure 3.6: Lift Station Flows

Based on available information during the period of record, the two lift stations provided sewer service to approximately 184 people. The estimated domestic wastewater flow production of the service area amounted to approximately 12,600 gallons per day (184 x 68.4). The average wastewater flow rate pumped by the lift stations during the period of record was approximately 40,800 gallons per day which equated to an average per capita wastewater flow of 222 gpcpd. There were 43 days in the period of record during which the daily wastewater flow exceeded 100,000 gpd. The highest daily flow rate was approximately 171,000 gpd for both lift stations. This is an indication that there was significant inflow and infiltration entering the system which was caused by deficiencies in the collection system which allow the collection of infiltration and inflow and sump pump activity.

Although instantaneous wastewater records are not available to determine the intensity of inflow sources during significant rainfall events, it is evident that there is a problem due to daily wastewater flow rates that vary by more than a factor of three.

3.2.3 Infiltration and Inflow Evaluation

Inflow is the flow entering the system from storm sewer connections, perforated manhole covers, improperly abandoned lines, roof drains, basement sump pumps, and other drainage systems. According to representatives of the City, there are many houses that have basement sump pumps which are connected directly into the sanitary sewer system. Inflow also results from individual precipitation events and periods of snow melt. The intensity of the event can play a large role in the degree of impact to the system. In other words, a two-inch rainfall over a couple of hours will result in a larger inflow than a two-inch rainfall over 12 hours.

The inflow component of the total wastewater flow is difficult to estimate because it can occur in short intense flows that are related to precipitation events. For the purpose of this evaluation the wastewater flow is estimated using a combined infiltration and inflow component.

Water that enters the sewer system through cracked pipes, poor joints and the walls of manholes is infiltration. Therefore, infiltration occurs when the groundwater table is at or above the sewer piping. Evidence of infiltration is apparent by the consistently high average day flows in months and years during and following months and years with above-normal precipitation. As would be expected, the above-normal precipitation results in an increased level of the groundwater table. This increased level in the groundwater table then subjects a larger portion of the sewer system to infiltration. This is evident by extended periods of high flows.

The actual infiltration rate in the sewer system is unknown, but can be estimated by evaluating the wastewater flow during overnight hours when domestic wastewater production is minimized. A continuous flow recorder was installed in the outfall pipe upstream from the wastewater treatment ponds during April 3, 2009, through May 20, 2009. The data obtained from the flow recorder was utilized to perform a limited infiltration and inflow study. During the period of measurement there was an average flow of 361,000 gpd or 251 gpm. Figure 3.7 shows a daily summary of the wastewater flow data that was measured and the daily precipitation. The wastewater flow during the period of record began relatively high when ground conditions were wet. The wastewater flow shows a general downward trend as the ground dried out after the spring thaw. The flow rate was significantly higher than the average wastewater flow rate due to wet soil conditions.

The overnight wastewater flows for the period of measurement indicate an average minimum infiltration flow of approximately 175 gpm or 252,000 gpd as shown in the raw data readings in Figure 3.8. The peak flows recorded during the period of measurement exceeded 400 gpm on a few occasions. The data indicates a high of 515 gpm for a short period on April 13, 2009.

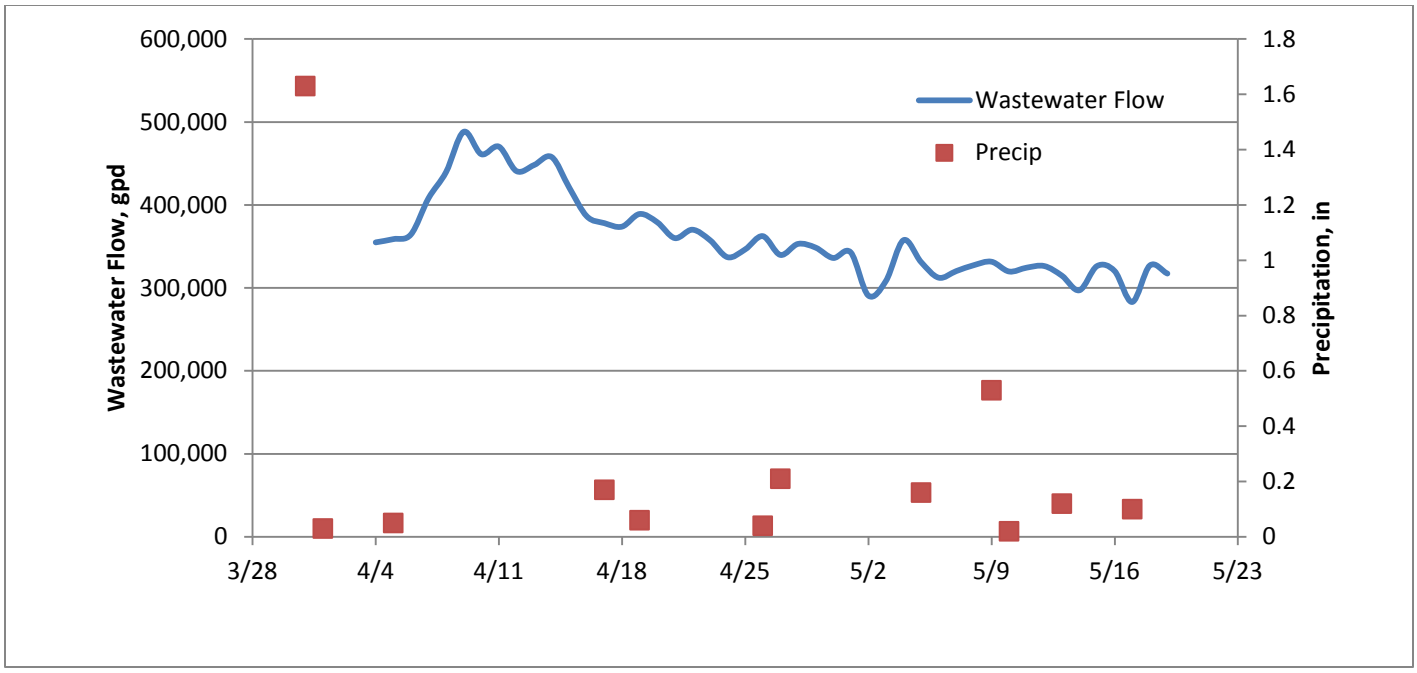


Figure 3.7: Daily Wastewater Flow Measurements

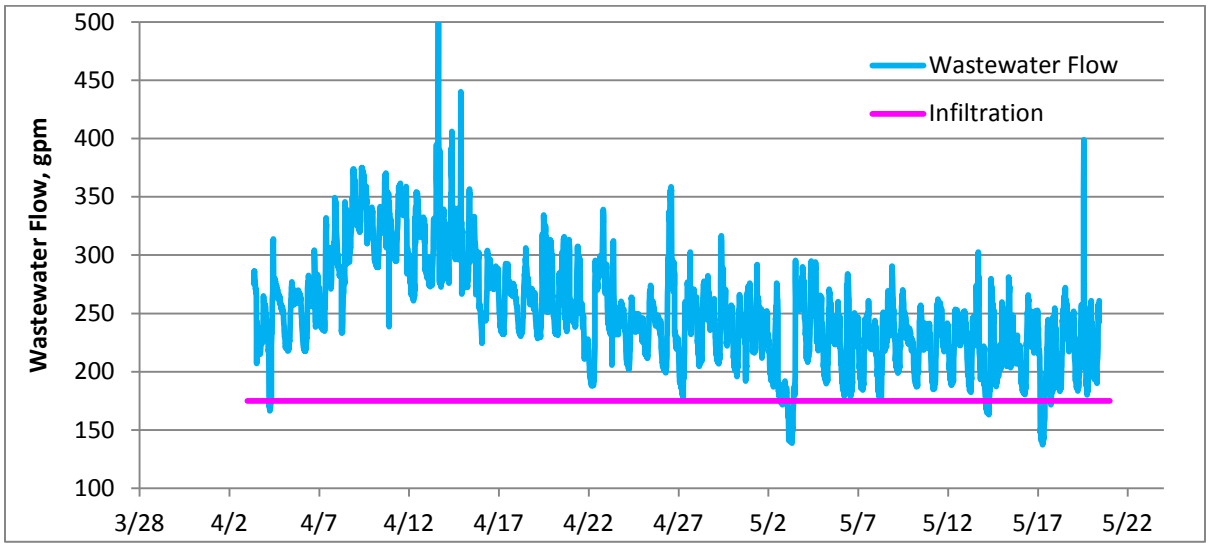


Figure 3.8: Average Minimum Infiltration

The Environmental Protection Agency (EPA) threshold for infiltration rates to be considered excessive is a wastewater flow of 120 gpcpd during dry-weather flows, which can be considered during December, January and February (EPA, 1975). The dry weather flows calculated from the lift station records indicate an average wastewater flow

rate of 158 gpcpd and a peak flow rate of 303 gpcpd during winter periods. Therefore, the wastewater flow during dry weather is considered excessive by the EPA's standards.

The EPA's upper limit for what they consider "normal wastewater flows during wet periods" is 275 gpcpd (EPA, 1975). The wastewater flow meter records indicate a peak flow rate of 485 gpcpd during April 2009. This indicates that wet weather flows can be considered excessive by EPA's standards.

The SD DENR has established a standard maximum acceptable allowance for infiltration. The allowance is 50 gallons per day per inch of diameter per mile of pipe for PVC pipe and 200 gallons per day per inch of diameter per mile of pipe for clay pipe and other types. Based on the total diameter-length in inch-miles times the allowable rates of infiltration, the infiltration rate considered acceptable is shown in Table 3.2.

Table 3.2: Theoretical Infiltration Tabulation

Diameter (in)	Type	Total (ft)	Dimeter*Length in-mi	Rate gpd/in-mi	Infiltration gpd
4	PVC	200	0.15	50	8
6	PVC	951	1.08	50	54
6	VCP	5,568	6.33	200	1,265
6	DIP	194	0.22	200	44
8	PVC	12,873	19.50	50	975
8	VCP	25,878	39.21	200	7,842
10	PVC	1,015	1.92	50	96
10	VCP	471	0.89	200	178
12	PVC	1,490	3.39	50	169
12	VCP	2,038	4.63	200	926
15	PVC	1,153	3.28	50	164
15	VCP	687	1.95	200	390
18	PVC	1,070	3.65	50	182
18	VCP	14,991	51.11	200	10,221
24	VCP	2,537	11.53	200	2,306
4" PVC Sewer Service		11,920	9.03	50	452
6" VCP Sewer Service		53,760	61.09	200	12,218
					37,492

Using this standard and the estimated quantity of inch-miles, the acceptable rate of flow for infiltration is about 26.0 gpm (37,500 gpd/ 1,440 minutes/day). This flow rate is

much lower than the actual estimated daily infiltration and inflow rate which will be discussed later in this report.

The wastewater treatment facility (WWTF) must be sized and analyzed with pertinent design flows in mind. There are times when long periods of wet weather and high water tables can cause infiltration rates to soar. To be certain that the WWTF is not undersized, a design flow larger than the average day flow should be used when there is a system with considerable infiltration and inflow.

3.2.4 Projection of Wastewater Flow and Waste Load

Future flow projection is a matter of judgment rather than a determination of fact, particularly when projecting future growth patterns and population. Unforeseen policies, events and technical changes can occur that affect the actual future population and wastewater flows. The best available information and engineering judgment are combined to define a set of design conditions.

It is not economically feasible to make frequent changes in the capacity of a wastewater collection system or WWTF. Therefore, a system is generally designed for the maximum flow that is expected during the selected design period.

At the time that the evaluation was completed, the actual domestic wastewater flow production during the period of lift station records was estimated to be 12,600 gpd (68.4 gpcpd x 184 people) for both lift station service areas. The average wastewater flow rate pumped by the lift stations was found to be 40,800 gpd. Therefore, the infiltration and inflow component of the wastewater flow was estimated at 28,200 gpd (40,800 gpd - 12,600 gpd) for the lift station service areas. This amounts to a per capita infiltration and inflow rate of 153 gpcpd.

The estimated infiltration and inflow rate for the lift station service areas is scaled up based on the total 2010 population to estimate the total infiltration and inflow collected throughout the City. Based on this method the total design infiltration and inflow rate is

228,000 gpd (1,489 people x 153 gpcpd). This value is the design infiltration and inflow component that will be used throughout this report. The total design average day wastewater flow rate is the sum of the domestic flow and the infiltration and inflow and is calculated to be **327,000 gpd** (228,000 gpd + 99,000 gpd).

The organic loading to the treatment ponds can be measured by the five-day biochemical oxygen demand (BOD_5). The DENR suggests that typical organic waste that is collected by a community ranges from 0.17 to 0.22 pounds of BOD_5 per person per day. For the purpose of this evaluation, the organic waste load that is collected by the sanitary sewer is calculated using an average waste production of 0.20 pounds of BOD_5 per person per day. The average BOD_5 production for the out-of-town students is 0.085 pounds per day per student. The BOD_5 production is also increased for the hospital, two convenience stores, five restaurants and a car wash.

A summary of the wastewater flows and organic loadings that will be used for the evaluation and design of the wastewater treatment alternatives is presented in Table 3.3.

Table 3.3: Wastewater Facility Design Data

Population	1489
BOD_5 per Capita (lbs)	0.20
Out-of-Town Students	200
BOD_5 per Out-of-Town Student (lbs per student)	0.085
BOD_5 from Commercial Sites	87.0
Total BOD_5 (lbs)	402
Hydraulic Loading, gpcpd	66.5
Total Domestic Hydraulic Loading	99,000
Design Daily Infiltration and Inflow	228,000
Total Design Wastewater Flow Rate	327,000

3.2.5 Collection System Capacity Evaluation

In order to determine and evaluate the capacity of the City's collection system, a spreadsheet was created that calculates the anticipated hydraulic loading to each section of sewer pipe. This spreadsheet and associated evaluation was completed as part of the

July 2010 *Facility Plan for the Wastewater Collection and Treatment Systems*. A description of this evaluation is provided below.

The service connections used in the calculations were estimated based on the location of the pipe section. Using the 2000 population, a ratio of 1.82 people per connection was calculated to estimate the number of residents on a particular section of pipe. The total infiltration and inflow was prorated to each pipe based on the pipe's percentage of the total inch of diameter-miles.

The peak domestic component of the wastewater flow as recommended by the SD DENR was assumed to be four times the average flow. Additionally, the peak infiltration and inflow component of the wastewater flow was assumed to be four times the average flow rate which was also recommended by the SD DENR. The Manning's Equation was used to establish the maximum capacity for each of the pipe segments. The capacity of the pipe was compared to the peak wastewater flow that is anticipated for each pipe section. All pipe segments were found to have adequate capacity under the conditions used in the evaluation. However, the evaluation uses pipe friction factors that do not take into account potential blockages that could be caused by sags, offset joints, tree roots, protruding services and other structural deficiencies. The actual capacity of the wastewater collection system could potentially be much lower than that indicated if there are considerable pipe deficiencies, lesser pipe slopes or pipe blockages.

3.3 LIFT STATIONS

The City has hired Dakota Pump and Control from Watertown, South Dakota, to provide the preventative maintenance on the lift station pumps and related equipment. A portable generator is available to operate the lift stations during a power outage. The City rotates the generator between the two lift stations. The City operators desire a supervisory control and data acquisition (SCADA) system for the lift stations to provide better control and supervision on a remote basis. This system would consist of a set of sensors and controls wired to a radio system that would be interfaced with the City's existing SCADA system.

3.3.1 East Lift Station

The east lift station is located between East Second Street and East Third Street on Fifth Avenue. This lift station was constructed in 1998 and is a dry well / wet well type that uses duplex three-horsepower pumps. The pumps are submersible-type pumps in a dry pit configuration. Photographs of the lift station are shown in Figures 3.9 through 3.11. The lift station structure consists of a six-foot diameter concrete wet well and a six-foot by seven-foot concrete dry well. The concrete surface at the top of the wet well is in poor condition as shown in Figure 3.10. The trash screen in the wet well is in good condition and is cleaned periodically by the City. The wastewater is pumped through approximately 420 feet of four-inch PVC force main to a manhole on East Third Street west of Fifth Avenue.

The pumps, fittings, valves and piping in the lift station have rust that is showing over their surfaces. The rust is not a serious concern and is likely to occur due to the very humid conditions located in the station. The station is not completely water tight; therefore, infiltration occurs which is pumped out by the sump pump. There is no alarm indicator for a flood water level in the station that could occur if the sump pump fails.

A pump calibration, or flow rate measurement, was completed on July 2, 2010. Based on the expected pressure conditions and the rated pump capacity a flow rate of 175 gpm is expected. However, the pump calibration indicated that both pumps have a capacity of 130 gpm each. The low flow rate could mean that the force main is partially plugged or the pumps are worn or malfunctioning.

Figure 3.9: Top of East Lift Station

Figure 3.10: Poor Concrete in Wet Well

Figure 3.11: Interior View of East Lift Station Dry Pit

Pump manufacturers generally recommend that a submersible pump cycle on and off no more frequent than approximately every 6.7 minutes for a three-horsepower motor. Pump run time is also recommended to be a minimum of 1.3 minutes each cycle for a three-horsepower motor. High pump cycling frequencies and low run time can tend to reduce the life of a motor. Pump cycling at the east lift station is found to be between 6.5 to 76 minutes for minimum to peak flows. The minimum pump run time was found to be approximately 3.4 minutes. Based on this information, the pump cycling frequency exceeds the maximum recommended frequency by a small margin at the estimated peak flow. This indicates that the wet well is slightly undersized. However, it is not practical

to size a wet well for the peak wastewater flow when there is a large degree of flow variation due to infiltration and inflow. Since the peak wastewater flows are not expected under normal weather conditions, the wet well sizing is considered to be acceptable.

Based on the pump hour readings supplied by the City, the lift station pumps seem to be adequately sized. The velocity in the force main when pumping at 130 gpm is 3.3 feet per second. This flow rate is within the acceptable range of two to five feet per second.

3.3.2 West Lift Station

The west lift station is located on West Second Street and Second Avenue. Photographs of the lift station are shown in Figures 3.12 and 3.13. The west lift station pumps the wastewater through approximately 525 feet of four-inch PVC force main to a manhole located east of the lift station on West Seventh Street and Second Avenue. The west lift station was constructed in 1998 and uses submersible duplex two-horsepower pumps. The lift station consists of a five-foot by seven-foot concrete wet well and a five-foot by six-foot concrete valve vault. The trash screen in the wet well is in good condition and is cleaned periodically by the City. The concrete surfaces are in good condition.

A pump calibration, or flow rate measurement, was completed on July 2, 2010. Based on the expected pressure conditions and the rated pump capacity a flow rate of 80 gpm is expected. However, the pump calibration indicated that the pumps had capacities of 67 gpm and 54 gpm, respectively, for the east and west pumps. The low flow rate could mean that the force main is partially plugged or the pumps are worn or malfunctioning.

Figure 3.12: Top of the West Lift Station

Figure 3.13: Interior View of the West Lift Station

Pump manufacturers generally recommend that a submersible pump cycle on and off no more frequent than approximately every five minutes for a two-horsepower motor. Pump run time is also recommended to be a minimum of 1.3 minutes each cycle for a two-horsepower motor. High pump cycling frequencies and low run time can tend to reduce the life of a motor. Pump cycling at the west lift station is found to be between 3.8 to 59 minutes for minimum to peak flows. The minimum pump run time was found to be approximately 3.9 minutes. Based on this information, the pump cycling frequency is slightly more frequent that what is recommended at the estimated peak flow which indicates that the wet well is undersized. However, it is not practical to size a wet well for the peak wastewater flow when there is a large degree of flow variation due to infiltration and inflow. Since the peak wastewater flows are not expected under normal weather conditions, the wet well sizing is considered to be acceptable.

Based on the pump hour readings supplied by the City, the lift station pumps seem to be inadequately sized. There are many days on record where the pumps are operating over 20 hours per day. The velocity in the force main when pumping at 54 gpm is 1.4 feet per second. This flow rate is below the acceptable range of two to five feet per second which can cause solid material to settle out of suspension and partially plug the force main.

3.4 WASTEWATER TREATMENT

Miller's wastewater treatment facility (WWTF) was originally built in 1964 and is located one mile north of the City. A third treatment cell was added in 1982. The layout and location of the WWTF is shown in Figure 3.14. The treatment facility operates under Surface Water Discharge (SWD) Permit #SD0022659. A copy of the permit and current standards are contained in Appendix C. At the time this report was written, the permit was being renewed and was expected to include ammonia limitations among other operational requirements. Preliminary discussions with the DENR indicate the ammonia limitations will not be strict. However, the additional limitations on a system that is currently struggling to meet current limitations will most likely add to the exceedances of the permit limits.

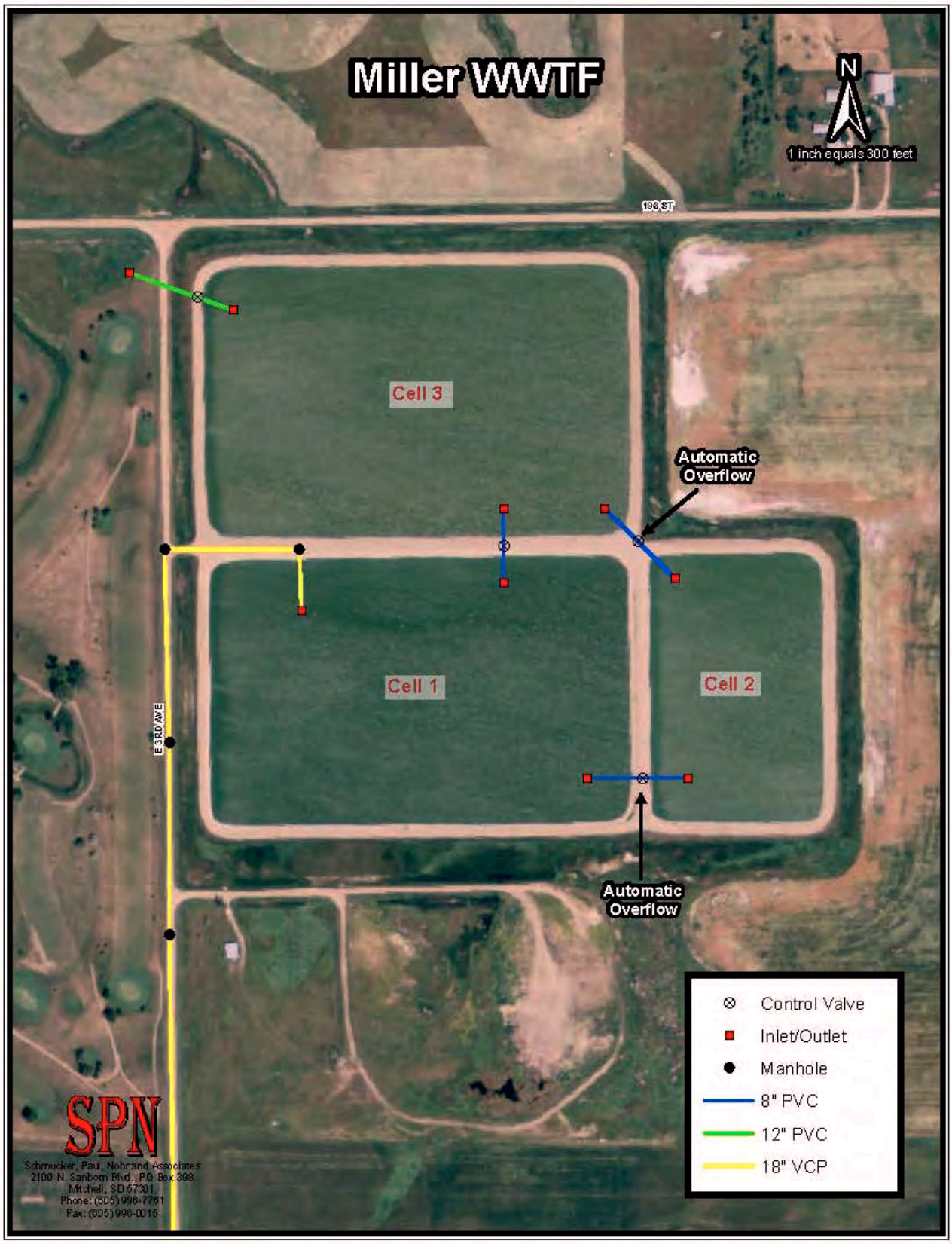


Figure 3.14: Wastewater Treatment Facility

Currently, Cell One has an approximate high water surface area of 18.19 acres and an effective storage depth of 3.6 feet. The effective storage depth is measured from two feet above the floor, which is the residual depth, to the bottom of the freeboard which is three feet below the top of the dike. Based on available information, filling Cell One to the full level, which would be three feet below the top of the dike, would result in a surcharge of the influent line of approximately six inches higher than the bottom of the pipe. Based on available information, this amounts to approximately 450 feet of wastewater backed up into the influent line. For this reason, the effective storage depth of three feet and a high water surface area of 18.0 acres will be used. Cell Two has a high water surface area of 7.41 acres and an effective storage depth of three feet. Cell Three has a high water surface area of 17.7 acres and an effective storage depth of 3.2 feet. The inside of the existing dikes are clad with riprap as shown in Figure 3.15 which indicates a typical view of the dikes and treatment cells.

The concrete surfaces and casting that compose the manhole where the wastewater enters Cell One are in poor condition as shown in Figure 3.16. The wastewater between cells flows automatically by the use of automatic overflow piping between the cells. The operator should manually control the movement of wastewater between the cells by using the valves located between the cells. The discharge from Cell Three is controlled by a buried gate valve.

In relation to the other cells, Cell Two is much smaller which makes it difficult to operate the WWTF as recommended by the DENR. When discharging from the WWTF, the desired method is to lower Cell Three, fill Cell Three by lowering Cell Two, then fill Cell Two by lowering Cell One. The relatively small Cell Two is not able to fill Cell Three which requires the operator to drain all cells at once or fill and empty Cell Two multiple times to fill Cell Three.

Figure 3.15: View of Cell Three (Left) and Cell One (Right)

Figure 3.16: Manhole at Cell One Inlet

The existing primary treatment pond, because of its age, most likely has a significant amount of sludge that has accumulated. City representatives have indicated that sludge has been a problem in the past and has been partially removed in the vicinity of the pond inlet. It is suspected that the sludge has significantly built up again. The sludge is generated over time from the biological activities that occur in the treatment of the waste. This sludge should be removed to restore the wastewater storage volume. In addition, the build-up of sludge around the pond inlet can impede the flow into the pond which may eventually plug the pipe. The City plans to remove the sludge, as necessary, when needed.

The wastewater discharged from the WWTF flows through a ditch that eventually empties into Ree Creek which is classified with the following beneficial uses:

- Fish and wildlife propagation, recreation and stock watering waters
- Irrigation waters

On August 6, 2014, the South Dakota DENR conducted a surface water discharge (SWD) compliance inspection. A copy of the SWD Compliance Inspection Report is presented in Appendix D. The main comment by the DENR was that the City must increase its efforts to consistently meet effluent limits and other provisions of the Miller SWD permit. A summary of the discharge monitoring records from 2006 through 2014 is shown in Table 3.4. The records show that the minimum pH, maximum pH, BOD and TSS were exceeded. According to available records, from 2003 through 2005 there were an additional five measurements of total suspended solids (TSS) that exceeded the permit limit.

The organic waste loading was calculated previously to be 402 pounds per day. The SD DENR Design Criteria states that the maximum loading to a primary pond should be 30 pounds of BOD_5 per acre of pond per day. Given that the area of the primary pond is 18.0 acres, the current BOD_5 loading is 22.3 pounds per acre per day and is below the maximum recommended limit.

Table 3.4: Discharge Monitoring Records

Date	Daily Max Temp °C	pH	Max 7-Day Avg mg/l BOD	Max 7-Day Avg mg/l TSS
Limit		**6 - 9**	**45**	**165**
3/27/2006	6.5	8.25	17	45
3/28/2006	9.7	8.36	18	43
3/29/2006	9.9	8.30	19	55
11/13/2006	7.1	6.18	22	60
11/14/2006	6.3	5.99	22	61
11/15/2006	4.9	6.02	25	61
11/20/2006		5.87	19	48
4/17/2007	12.2	6.00	18	48
4/17/2007	14.3	7.30	20	54
4/18/2007	15.6	7.34	23	62
4/23/2007	16.8	8.35	22	108
9/10/2007	19.3	7.04	28	86
9/11/2007	18.9	6.56	26	80
9/12/2007	21.5	8.10	27	90
9/17/2007	20.2	8.07	27	98
9/24/2007	20.3	7.02	37	116
4/30/2008	13	6.11	22	124
10/31/2008	14.4	6.49	24	41
4/30/2009	14.8	9.32	35	132
10/31/2009	12.7	6.68	35	128
3/31/2010	10.1	7.00	35	14
5/31/2012	21.2	9.36	62	160
5/31/2013	21.7	9.43	18.67	67.33
6/30/2013	27.7	9.34	53	123
12/31/2013	14	8.9	24	40
5/31/2014	29.4	9.93	85	140

3.4.1 Hydraulic Capacity

To aid in evaluating the capacity of the existing pond, a water balance is compiled and is presented in Table 3.5. The water balance is created for evaluative purposes only. The actual operating conditions of the WWTF could vary greatly due to changes in evaporation, precipitation, discharges, actual seepage and other things that would affect the condition of the WWTF.

Table 3.5: WWTF Hydraulic Capacity

Population	1489
Domestic Wastewater Flow, gpcpd	66.5
Domestic Wastewater Flow, gpd	99,019
Design Infiltration and Inflow, gpd	228,000
Total Hydraulic Loading, gpd	327,019
Total WWTF Volume Required, gal	58,863,330
Pond Capacity, gal	45,563,730
Capacity Shortage, gal	13,299,600
Capacity Shortage, gpd	73,887

The hydraulic capacity calculations are based on the design wastewater flow rate estimated above. Because of evaporation loss during the summer, the most critical period for wastewater storage occurs during the winter period. The seepage rate is difficult to determine because of the many factors that influence its intensity. During the periods when there is a high water table in the vicinity of the WWTF very little, if any, seepage would occur. Therefore, for the purpose of this report a seepage rate of zero is assumed.

The hydraulic capacity calculations indicate that there is insufficient capacity to store and dispose of the wastewater. Years with high precipitation which causes infiltration and inflow rates to rise are likely to cause the City's WWTF to become hydraulically overloaded to a greater extent.

Based on the data shown in Table 3.5, if 73,900 gpd or 32 percent of the estimated infiltration and inflow was eliminated, the existing WWTF would have adequate capacity. Improvement alternatives are included later in this report to address the shortage in wastewater storage and to consider sewer improvements to reduce the infiltration and inflow.

3.5 FUTURE CONDITIONS

Information related to the project need and planning area is found in Section 2 of this report. Specific information on population projections is found in Section 2.2. The population of Miller is considered to be stable with minimal growth expected. As a result, the current estimated wastewater flow and waste loading are used for future conditions.

Land use is not expected to change significantly in the immediate vicinity of the City. There is some land available for future development on the east and north sides of the City. Based on the past growth of the community, it is viewed as sufficient to meet the community's needs.

Due to the importance of conserving water, money and energy, various means for reducing wastewater flows and water usage are recommended. First, by using faucet aerators, reduced flush toilets and limited flow showerheads, wastewater flow and water use can be reduced. Second, sump pumps and drain tile that empty into the sanitary sewer system should be modified to discharge outside the sanitary sewer system.

4 WASTEWATER SYSTEM ALTERNATIVES

The alternatives developed for the City of Miller were composed to demonstrate some options available to fix the identified deficiencies in the system. There are no areas within the city limits that are not served by municipal sanitary sewer. Therefore, no restoration of septic systems is necessary. All sewage collection is by conventional methods. The current collection system consists of gravity flow and force main pipes that transport sewage to the treatment system. No alternative collection systems were considered in this report. The City of Miller has some commercial activities but no federal facilities.

4.1 CAUTIONARY NOTES CONCERNING COST ESTIMATES

The opinions of probable cost provided with the following alternatives reflect the anticipated costs for administration, engineering design, construction, contingencies, construction observation, and other costs related to completion of the project. The costs as presented are based on an analysis and comparison of projects of similar size and scope. The actual construction and project costs will vary on an individual project basis. The actual bid cost will reflect the bidder's evaluation of construction problems, weather, soils and difficulty of work. Thus, the engineer cannot be held responsible for the accuracy of the estimates made in this report, as the engineer has no control over the contractors' bid costs.

Changes in materials, equipment and energy costs, as well as availability of other construction work at the time of the bid opening, could substantially influence actual project cost. Construction costs will also vary somewhat based on the quantity of items necessary to construct the project. The quantities and costs contained in this report are preliminary estimates based on our best judgment without field measurements. Final quantities and opinions of probable cost and final construction costs must be based upon final design.

Different funding sources have different requirements for some non-construction items. Therefore, actual costs of non-construction items should be considered tentative at this

time and subject to later modifications and adjustments as current situations and funding sources dictate. Further, inasmuch as the period of construction cannot be accurately predicted, the costs as presented in this report have not been adjusted to reflect projected inflation factors. Therefore, it is important that the estimate of costs as presented be reviewed and updated periodically to reflect construction cost trends.

4.2 EQUIVALENT UNIFORM ANNUAL COST

The equivalent uniform annual cost (EUAC) not only takes the capital costs into account when evaluating the options but also looks at the salvage value of the components and the expected annual operation and maintenance costs. The result is a comparison of the alternatives on an overall basis throughout a design life of 20 years. The EUAC is eliminated from consideration since the proposed improvements presented subsequently offer one viable alternative for each set of improvements or would only be a factor of the capital cost, as is the case of sanitary sewer improvements. The lift station options presented would also only vary by capital cost factors since the operation and maintenance of both options are very similar.

4.3 PROPOSED SANITARY SEWER IMPROVEMENTS

A general recommendation is the enforcement of a sewer use ordinance that prevents connections of sump pumps and other inflow sources from being contributed to the collection system. Otherwise, the reduction of the infiltration that occurs from the results of installing new pipe could be unnoticed compared to that occurring from these sources. Based on conversations with City representatives, there are many homes with sump pumps that are connected directly to the sanitary sewer. The difficulty arises in locating these sump pumps and obtaining homeowners' cooperation in changing the discharge points to a location other than the sewer system. Nevertheless, the City should attempt to work with homeowners to eliminate sump pumps from discharging to the wastewater collection system.

The operating characteristics and deficiencies of the wastewater collection system are discussed in detail in Section 3 of this report. The following is a summary of the deficiencies of Miller's sanitary sewer.

- Approximately 73 percent of the sewer system is composed of VCP which has varying degrees of structural deficiencies, some of which are very serious.
- Many manholes are in very poor structural condition.
- The smoke testing revealed that there is a general problem with clogged or submerged sewer sections throughout the City.
- Two storm sewer inlets were found connected to the sanitary sewer on Broadway south of Third Street.
- Inflow and infiltration is considered excessive based on wastewater flow monitoring and lift station records.

4.3.1 Sanitary Sewer Option 1: Do Nothing

The first option that was considered is the "do nothing" option. This option will not repair the structural deficiencies identified in the collection system. The excessive infiltration and inflow rates in the collection system will continue to occur. Because the problems with the collection system will not be fixed, this option is not recommended.

4.3.2 Sanitary Sewer Option 2: Priority 1 and 2 Sanitary Sewer

Figure 4.1 is a map of the sewer system showing the proposed pipe according to the priority rating. Sections with a rating of one require replacement as soon as possible due to a major threat of collapse or line blockage. Sections with a rating of two require replacement because of sags, offset or separated joints, major cracked pipe and other issues. Point repairs are also shown in the figure that require a location of pipe to be replaced due to a significant sag, offset, crushed pipe or other issue. There are several sections of sewer added to the scope of work in order to eliminate small gaps in replacement work.

The existing piping shown in Figure 4.1 will be replaced with eight-, 10 - and 12-inch pipe as part of this option. The sewer services would be replaced within the rights-of-way with four-inch pipe.

SANITARY SEWER MAP
CITY OF
MILLER

SCALE: 1" = 800'

LEGEND

- 4" SEWER MAIN
- 6" SEWER MAIN
- 8" SEWER MAIN
- 10" SEWER MAIN
- 12" SEWER MAIN
- 15" SEWER MAIN
- 18" SEWER MAIN
- 24" SEWER MAIN
- MANHOLE (S)
- CLEANOUT (C)
- PVC PIPE
- VCP PIPE
- PRIORITY 1
- PRIORITY 2
- ADDITIONAL
- NEW FORCEMAIN ROUTE
- POINT REPAIR
- CIPP
- REPLACE DUE TO STORM SEWER IMPROVEMENTS
- ADD OR REPLACE MANHOLE
- LINE MANHOLE

Map and Utilities as shown on the drawings are located in accordance with available data, but may vary. This map is not to be used for construction.

Lift Station

4" Forcemain

6" DIP

Abandon South Side

Figure 4.1: Proposed Sanitary Sewer Improvements

SPN & Associates
Engineers, Planners and Surveyors
2100 North Sanborn Blvd. - P.O. Box 398 Mitchell, South Dakota 57301
Phone (605) 996-7761 Fax (605) 996-0015

The option of pipe lining or cast-in-place pipe (CIPP) for the method of repairing the sewer system will be applicable for some sections. The use of the CIPP liner allows a trenchless method of rehabilitating the sanitary sewer main and saves the cost of rebuilding the street surface. CIPP liner will not solve any problems with sags, flattened pipe, poorly aligned pipe or improperly sized pipe. As a result, these locations must be repaired with the use of open trenches and associated street repairs. This is the case with most of the pipe sections. Typically, the CIPP method can be practical when asphalt or concrete streets are involved because of the high cost associated with street surfacing. CIPP becomes less cost effective in pipe sections with numerous service connections where trenches must be dug to connect the service pipe. During the design phase the TV inspections and other information will be used to verify the most cost effective process to make the sewer repairs for the entire system. The preliminary review of available data indicates that there are approximately five sections of existing piping that would be likely candidates for lining.

The manholes adjacent to pipe which will be replaced will also be replaced. The rehabilitation or lining of manholes is a potential method for repairing the manholes which are not next to the proposed construction area. An evaluation of each manhole was completed to determine exactly which manholes should be replaced and/or rehabilitated. Figure 4.1 shows manholes that will be added where necessary, replaced due to failing structures and lined to allow the continued use of the existing manhole. There are approximately 37 manholes that require lining. One manhole should be replaced and is not adjacent to the proposed replacement of the sanitary sewer piping.

The improvements proposed would result in a reduction of the infiltration due to the newly installed pipe. The proposed improvements amount to approximately 41 percent of the total sewer system length. It is likely that a significant reduction in the infiltration and inflow will occur as a result of this project.

Because of the size of this project, Option 2 is split into three phases. The smaller parts of the overall project will make the project more manageable in terms of both funding

and implementation. It is very difficult to split the project into parts for implementation because the major deficiencies are basically widespread throughout the City. Note that upon completion of Phase 1, Phase 2 is immediately recommended with Phase 3 to follow. Effort was made to split Option 2 into somewhat equal parts based on cost as much as practical.

4.3.2.1 Sanitary Sewer Phase 1

The goal of the first phase of work is to implement the lowest elevation of the sewer main in the area of the new east lift station. Refer to Figure 4.2 for a map showing the phases of implementation of Option 2. The estimated costs associated with the Phase 1 improvements are presented in Table 4.1.

4.3.2.2 Sanitary Sewer Phase 2

The second phase of work involves the next higher elevation of the sewer in the area of the new east lift station. The manholes which require lining or replacement will be completed in Phase 2. The estimated costs associated with the Phase 2 improvements are presented in Table 4.2.

4.3.2.3 Sanitary Sewer Phase 3

The third phase of work includes the west side of the City and remaining sanitary sewer that must be replaced after Phases 1 and 2. The sewer main which is to be lined will be completed in Phase 3. The estimated costs associated with the Phase 3 improvements are presented in Table 4.3.

SANITARY SEWER MAP
CITY OF
MILLER

SCALE: 1" = 800'

LEGEND

- 4" SEWER MAIN
- 6" SEWER MAIN
- 8" SEWER MAIN
- 10" SEWER MAIN
- 12" SEWER MAIN
- 15" SEWER MAIN
- 18" SEWER MAIN
- 24" SEWER MAIN
- MANHOLE Ⓢ
- CLEANOUT Ⓒ
- PVC PIPE
- VCP PIPE
- PRIORITY 1
- PRIORITY 2
- ADDITIONAL
- NEW FORCEMAIN ROUTE
- POINT REPAIR
- CIPP
- REPLACE DUE TO STORM SEWER IMPROVEMENTS
- ADD OR REPLACE MANHOLE
- LINE MANHOLE
- PHASE 1
- PHASE 2
- PHASE 3

Map and Utilities as shown on the drawings are located in accordance with available data, but may vary. This map is not to be used for construction.

Lift Station

4" Forcemain

6" DIP

Abandon South Side

Figure 4.2: Phases of Sanitary Sewer Implementation

SPN & Associates
Engineers, Planners and Surveyors
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Phone (605) 996-7761 Fax (605) 996-0015

Table 4.1: Estimated Costs of Sanitary Sewer Phase 1

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$209,800.00	$209,800.00
2	Full Depth Concrete Saw Cut	700	LF	$6.00	$4,200.00
3	Full Depth Asphalt Saw Cut	1,100	LF	$4.00	$4,400.00
4	Remove and Dispose of Concrete Paving	3,200	SY	$10.00	$32,000.00
5	Pulverize and Salvage Existing Asphalt	26,100	SY	$3.50	$91,350.00
6	Remove and Dispose of Existing Manholes	42	EA	$400.00	$16,800.00
7	Remove and Dispose of Curb and Gutter	2,310	LF	$4.00	$9,240.00
8	4" Sanitary Sewer Service Pipe	3,930	LF	$26.00	$102,180.00
9	8" Sanitary Sewer Pipe	9,630	LF	$45.00	$433,350.00
10	12" Sanitary Sewer Pipe	930	LF	$51.00	$47,430.00
11	18" Sanitary Sewer Pipe	20	LF	$80.00	$1,600.00
12	Trench Stabilization for High Groundwater	2,600	TN	$30.00	$78,000.00
13	Sanitary Sewer Manholes	30	EA	$3,800.00	$114,000.00
14	Connect to Existing Sewer Service	131	EA	$250.00	$32,750.00
15	8" x 4" Sanitary Sewer Wyes	91	EA	$200.00	$18,200.00
16	12" x 4" Sanitary Sewer Wyes	40	EA	$300.00	$12,000.00
17	Post TV Inspection of Sewer	10,560	LF	$1.00	$10,560.00
18	Place Recycled Asphalt	26,100	SY	$2.00	$52,200.00
19	Fine Grading of Base Material	26,100	SY	$2.00	$52,200.00
20	Curb and Gutter	2,310	LF	$33.00	$76,230.00
21	Gravel Base Course or Surfacing	16,100	TN	$22.00	$354,200.00
22	Concrete Paving	3,200	SY	$80.00	$256,000.00
23	Asphalt Surfacing	3,600	TN	$120.00	$432,000.00
24	Double Blotter Coat	15,700	SY	$8.00	$125,600.00
25	Bypass Pumping	1	LS	$39,000.00	$39,000.00
26	Traffic Control	1	LS	$31,000.00	$31,000.00
27	Siltation and Erosion Control	1	LS	$10,000.00	$10,000.00
28	Topsoil, Seed, Fertilize & Mulch	9,300	SY	$1.50	$13,950.00
29	Incidental Construction Items	1	LS	$172,000.00	$172,000.00
				Subtotal	$2,832,240.00
				Contingencies	$283,200.00
				Total Construction Cost	$3,115,440.00
				Legal and Administration Cost	$62,300.00
				Design Engineering	$181,500.00
				Bidding Phase Engineering	$6,000.00
				Construction Engineering	$308,600.00
				Total Project Cost	$3,673,840.00

Table 4.2: Estimated Costs of Sanitary Sewer Phase 2

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$219,800.00	$219,800.00
2	Full Depth Concrete Saw Cut	600	LF	$6.00	$3,600.00
3	Full Depth Asphalt Saw Cut	1,000	LF	$4.00	$4,000.00
4	Pulverize and Salvage Existing Asphalt	33,600	SY	$3.50	$117,600.00
5	Remove and Dispose of Existing Manholes	28	EA	$400.00	$11,200.00
6	Remove and Dispose of Curb and Gutter	2,580	LF	$4.00	$10,320.00
7	4" Sanitary Sewer Service Pipe	4,740	LF	$26.00	$123,240.00
8	8" Sanitary Sewer Pipe	9,740	LF	$45.00	$438,300.00
9	10" Sanitary Sewer Pipe	50	LF	$48.00	$2,400.00
10	12" Sanitary Sewer Pipe	2,320	LF	$51.00	$118,320.00
11	18" Sanitary Sewer Pipe	420	LF	$80.00	$33,600.00
12	Trench Stabilization for High Groundwater	3,000	TN	$30.00	$90,000.00
13	Sanitary Sewer Manholes	35	EA	$3,800.00	$133,000.00
14	Connect to Existing Sewer Main	30	EA	$500.00	$15,000.00
15	Connect to Existing Sewer Service	158	EA	$250.00	$39,500.00
16	8" x 4" Sanitary Sewer Wyes	145	EA	$200.00	$29,000.00
17	12" x 4" Sanitary Sewer Wyes	13	EA	$300.00	$3,900.00
18	Post TV Inspection of Sewer	12,110	LF	$1.00	$12,110.00
19	Manhole Lining	340	VF	$180.00	$61,200.00
20	Place Recycled Asphalt	33,600	SY	$2.00	$67,200.00
21	Fine Grading of Base Material	33,600	SY	$2.00	$67,200.00
22	Curb and Gutter	2,580	LF	$33.00	$85,140.00
23	Gravel Base Course or Surfacing	19,000	TN	$22.00	$418,000.00
24	Asphalt Surfacing	3,300	TN	$120.00	$396,000.00
25	Double Blotter Coat	24,200	SY	$8.00	$193,600.00
26	Bypass Pumping	1	LS	$37,000.00	$37,000.00
27	Traffic Control	1	LS	$27,000.00	$27,000.00
28	Siltation and Erosion Control	1	LS	$10,000.00	$10,000.00
29	Topsoil, Seed, Fertilize & Mulch	13,200	SY	$1.50	$19,800.00
30	Incidental Construction Items	1	LS	$180,000.00	$180,000.00
				Subtotal	$2,967,030.00
				Contingencies	$296,700.00
				Total Construction Cost	$3,263,730.00
				Legal and Administration Cost	$65,300.00
				Design Engineering	$189,500.00
				Bidding Phase Engineering	$6,000.00
				Construction Engineering	$322,200.00
				Total Project Cost	$3,846,730.00

Table 4.3: Estimated Costs of Sanitary Sewer Phase 3

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$136,900.00	$136,900.00
2	Full Depth Concrete Saw Cut	400	LF	$6.00	$2,400.00
3	Full Depth Asphalt Saw Cut	1,250	LF	$4.00	$5,000.00
4	Pulverize and Salvage Existing Asphalt	21,300	SY	$3.50	$74,550.00
5	Remove and Dispose of Existing Manholes	34	EA	$400.00	$13,600.00
6	Remove and Dispose of Curb and Gutter	1,910	LF	$4.00	$7,640.00
7	4" Sanitary Sewer Service Pipe	2,730	LF	$26.00	$70,980.00
8	8" Sanitary Sewer Pipe	6,600	LF	$45.00	$297,000.00
9	12" Sanitary Sewer Pipe	1,060	LF	$51.00	$54,060.00
10	18" Sanitary Sewer Pipe	880	LF	$80.00	$70,400.00
11	Trench Stabilization for High Groundwater	1,900	TN	$30.00	$57,000.00
12	Sanitary Sewer Manholes	50	EA	$3,800.00	$190,000.00
13	Connect to Existing Sewer Service	91	EA	$250.00	$22,750.00
14	8" x 4" Sanitary Sewer Wyes	73	EA	$200.00	$14,600.00
15	12" x 4" Sanitary Sewer Wyes	18	EA	$300.00	$5,400.00
16	Post TV Inspection of Sewer	9,380	LF	$1.00	$9,380.00
17	Clean, Inspect and Pre-rehabilitation Televising of Sewer	1,720	LF	$2.00	$3,440.00
18	Cut Protruding Tap, Offset Joints, Mineral Deposits, etc.	5	EA	$120.00	$600.00
19	8" Cured-in-Place Pipe Liner	970	LF	$27.00	$26,190.00
20	12" Cured-in-Place Pipe Liner	500	LF	$32.00	$16,000.00
21	18" Cured-in-Place Pipe Liner	250	LF	$75.00	$18,750.00
22	Sewer Service Tap Cut-Out	92	EA	$175.00	$16,100.00
23	Place Recycled Asphalt	21,300	SY	$2.00	$42,600.00
24	Fine Grading of Base Material	21,300	SY	$2.00	$42,600.00
25	Curb and Gutter	1,910	LF	$33.00	$63,030.00
26	Gravel Base Course or Surfacing	10,900	TN	$22.00	$239,800.00
27	Asphalt Surfacing	300	TN	$120.00	$36,000.00
28	Double Blotter Coat	18,500	SY	$8.00	$148,000.00
29	Bypass Pumping	1	LS	$18,000.00	$18,000.00
30	Traffic Control	1	LS	$10,000.00	$10,000.00
31	Siltation and Erosion Control	1	LS	$7,000.00	$7,000.00
32	Topsoil, Seed, Fertilize & Mulch	10,300	SY	$1.50	$15,450.00
33	Incidental Construction Items	1	LS	$112,000.00	$112,000.00
				Subtotal	$1,847,220.00
				Contingencies	$184,700.00
				Total Construction Cost	$2,031,920.00
				Legal and Administration Cost	$40,600.00
				Design Engineering	$123,000.00
				Bidding Phase Engineering	$18,000.00
				Construction Engineering	$209,100.00
				Total Project Cost	$2,422,620.00

4.3.3 Sanitary Sewer Option 3: Priority 3 Sanitary Sewer

Sections with a priority rating of three are composed of clay pipe in good condition or with minor deficiencies such as light sags, small cracks or other similar issues. The priority three-rated pipe is shown previously in Figure 3.2.

The existing piping will be replaced with eight- and 12-inch pipe as part of this option. The sewer services would be replaced within the rights-of-way with four-inch pipe.

The preliminary review of available data indicates that there are approximately seven sections of existing piping that would be likely candidates for lining. The manholes adjacent to pipe which will be replaced will also be replaced.

The improvements proposed would result in a reduction of the infiltration due to the newly installed pipe. The proposed improvements amount to approximately 34 percent of the total sewer system length. The estimated costs associated with the Priority 3 improvements are presented in Table 4.4.

Table 4.4: Estimated Costs of Priority 3 Sewer

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$308,100.00	$308,100.00
2	Full Depth Concrete Saw Cut	848	LF	$6.00	$5,088.00
3	Full Depth Asphalt Saw Cut	1,650	LF	$4.00	$6,600.00
4	Pulverize and Salvage Existing Asphalt	37,950	SY	$3.50	$132,825.00
5	Remove and Dispose of Existing Manholes	78	EA	$400.00	$31,200.00
6	Remove and Dispose of Curb and Gutter	2,120	LF	$4.00	$8,480.00
7	4" Sanitary Sewer Service Pipe	6,360	LF	$26.00	$165,360.00
8	8" Sanitary Sewer Pipe	6,890	LF	$45.00	$310,050.00
9	12" Sanitary Sewer Pipe	13,940	LF	$51.00	$710,940.00
10	Trench Stabilization for High Groundwater	5,200	TN	$30.00	$156,000.00
11	Directionally Bored Casing for 8" Sewer	100	LF	$100.00	$10,000.00
12	Directionally Bored Casing for 12" Sewer	100	LF	$150.00	$15,000.00
13	Sanitary Sewer Manholes	88	EA	$3,800.00	$334,400.00
14	Connect to Existing Sewer Service	212	EA	$250.00	$53,000.00
15	8" x 4" Sanitary Sewer Wyes	110	EA	$200.00	$22,000.00
16	12" x 4" Sanitary Sewer Wyes	102	EA	$300.00	$30,600.00
17	Post TV Inspection of Sewer	23,000	LF	$1.00	$23,000.00
18	Clean, Inspect and Pre-rehabilitation Televising of Sewer	2,170	LF	$2.00	$4,340.00
19	Cut Protruding Tap, Offset Joints, Mineral Deposits, etc.	10	EA	$120.00	$1,200.00
20	8" Cured-in-Place Pipe Liner	1,110	LF	$27.00	$29,970.00
21	12" Cured-in-Place Pipe Liner	200	LF	$32.00	$6,400.00
22	18" Cured-in-Place Pipe Liner	860	LF	$75.00	$64,500.00
23	Sewer Service Tap Cut-Out	38	EA	$175.00	$6,650.00
24	Place Recycled Asphalt	37,950	SY	$2.00	$75,900.00
25	Fine Grading of Base Material	37,950	SY	$2.00	$75,900.00
26	Curb and Gutter	2,120	LF	$33.00	$69,960.00
27	Gravel Base Course or Surfacing	23,300	TN	$22.00	$512,600.00
28	Asphalt Surfacing	1,800	TN	$120.00	$216,000.00
29	Double Blotter Coat	25,500	SY	$8.00	$204,000.00
30	Gravel Surfacing (4")	8,700	TN	$22.00	$191,400.00
31	Bypass Pumping	1	LS	$56,000.00	$56,000.00
32	Traffic Control	1	LS	$36,000.00	$36,000.00
33	Siltation and Erosion Control	1	LS	$10,000.00	$10,000.00
34	Topsoil, Seed, Fertilize & Mulch	15,800	SY	$1.50	$23,700.00
35	Incidental Construction Items	1	LS	$252,000.00	$252,000.00
				Subtotal	$4,159,163.00
				Contingencies	$415,900.00
				Total Construction Cost	$4,575,063.00
				Legal and Administration Cost	$91,500.00
				Design Engineering	$231,400.00
				Bidding Phase Engineering	$15,000.00
				Construction Engineering	$277,700.00
				Total Project Cost	$5,190,663.00

4.4 LIFT STATION IMPROVEMENTS

A summary of the identified lift station deficiencies is as follows:

- The City currently has one generator that is rotated between the two lift station sites during a power outage. An automatic stand-by emergency generator is recommended for each site.
- The concrete surfaces in the wet well at the east lift station are in poor condition.
- The pumps in both lift stations have capacities that are lower than expected. This could be due to worn pumps or partially plugged force mains.
- The pumps in the west lift station seem to be inadequately sized. Larger pumps would increase the velocity in the force main to an acceptable velocity.
- The surfaces of the pumps, fittings, valves and piping in the east lift station are rusty.
- The east lift station's dry pit leaks groundwater and has no flood water alarm.
- A lift station supervisory control and data acquisition (SCADA) system is recommended to provide for operator control, monitoring and record keeping.

4.4.1 Lift Station Option 1: Do Nothing

There are certain deficiencies that should be addressed for continued operation of the lift stations. Because doing nothing will not address any of the problems with the system, it is not considered as an acceptable option.

4.4.2 Lift Station Option 2: West Lift Station Repair

This option considers replacing the pumps in the west lift station to increase the flow rate. The higher flow rate will increase the velocity in the force main to an acceptable flow rate. Cleaning of the force main is also recommended and is included in the cost estimate.

To reduce the risk of flooding the lift station, the wet well and electrical materials adjacent to the lift station will be raised. An automatic stand-by generator is recommended to provide power during emergencies. The fittings, valves and piping should be prepared and recoated to preserve the life of the materials. The costs associated with the proposed improvements are presented in Table 4.5.

Table 4.5: Estimated Costs of West Lift Station Repair

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$9,000.00	$9,000.00
2	Adjust Wet Well / Guiderails	4	VF	$2,000.00	$8,000.00
3	Adjust Valve Pit	4	VF	$1,000.00	$4,000.00
4	Raise Control Panel	1	LS	$1,200.00	$1,200.00
5	Electrical Adjustments	1	LS	$3,200.00	$3,200.00
6	Embankment and Access Road	200	CY	$10.00	$2,000.00
7	Gravel Surfacing (6")	110	TN	$20.00	$2,200.00
8	Topsoil, Seed, Fertilizer & Mulch	300	SY	$1.25	$375.00
9	Erosion Control	1	LS	$1,000.00	$1,000.00
10	Remove and Replace West Lift Station Pumps	1	LS	$15,000.00	$15,000.00
11	40-kW Trailer-Mounted Generator	1	EA	$40,000.00	$40,000.00
12	Sandblast and Recoat Fittings, Valves and Piping	1	LS	$10,000.00	$10,000.00
13	Force Main Cleaning with Poly Swab	1	LS	$3,000.00	$3,000.00
				Subtotal	$98,975.00
				Contingencies	$9,900.00
				Total Construction Cost	$108,875.00
				Legal and Administration Cost	$2,200.00
				Design Engineering	$9,800.00
				Bidding Phase Engineering	$6,000.00
				Construction Engineering	$11,800.00
				Total Project Cost	$138,675.00

4.4.3 Lift Station Option 3: East Lift Station Replacement

There are several deficiencies associated with the east lift station. However, the main reason for the required replacement is due to the need for a deeper structure and a greater capacity. The existing sewer was built with flat slopes that do not meet current design criteria. The sewer replacement plan will include re-routing much of the sewer in the area to the east lift station. This will allow the proposed slopes to meet current design practice, but will collect a greater percentage of waste in the area. The route of the force main must be extended to the nearest manhole from which the sewer flows by gravity to the primary treatment pond. A new dual six-inch force main is proposed for increased capacity. An automatic stand-by generator is recommended to provide power during an emergency. Two types of lift stations are evaluated and discussed subsequently.

4.4.4 Lift Station Option 3a: Wet Well / Dry Pit

The first lift station type considered is a wet well / dry well type, similar to the existing lift station. The wet well would be composed of a precast concrete structure. The dry pit would be composed of a steel structure that houses the pumps, controls and related electrical equipment. The costs associated with the proposed improvements are presented in Table 4.6.

Table 4.6: Estimated Costs of East Lift Station Replacement

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$56,000.00	$56,000.00
2	Abandon Existing Lift Station	1	LS	$10,000.00	$10,000.00
3	12" Sanitary Sewer Pipe	100	LF	$70.00	$7,000.00
4	6" PVC Dual Force Main	1,200	LF	$38.00	$45,600.00
5	6" PVC 90° Bend	4	EA	$400.00	$1,600.00
6	Connect to Existing Manhole	2	EA	$1,500.00	$3,000.00
7	1" Type K Copper Water Service Pipe	80	LF	$23.00	$1,840.00
8	1" Curb Stop	1	EA	$275.00	$275.00
9	Lift Station Wet Well and Appurtenances	1	LS	$130,000.00	$130,000.00
10	Furnish Dry Pit Station and Appurtenances	1	LS	$120,000.00	$120,000.00
11	Install Dry Pit Station and Appurtenances	1	LS	$100,000.00	$100,000.00
12	Electrical Concrete Pad	1	LS	$1,000.00	$1,000.00
13	Rock Surfacing	50	TN	$30.00	$1,500.00
14	Site Grading and Access Road Embankment	1	LS	$4,500.00	$4,500.00
15	Gravel Surfacing	550	TN	$22.00	$12,100.00
16	60 kW Automatic Stand-by Generator	1	LS	$50,000.00	$50,000.00
17	Electrical Work and Materials	1	LS	$20,000.00	$20,000.00
18	Bypass Pumping	1	LS	$5,000.00	$5,000.00
19	Clean Force Main	1	LS	$5,000.00	$5,000.00
20	Traffic Control	1	LS	$5,000.00	$5,000.00
21	Erosion Control	1	LS	$1,000.00	$1,000.00
22	Dewatering	1	LS	$15,000.00	$15,000.00
23	Seed, Fertilize and Mulch Disturbed Area	7,100	SY	$1.50	$10,650.00
				Subtotal	$606,065.00
				Contingencies	$60,600.00
				Total Construction Cost	$666,665.00
				Legal and Administration Cost	$13,300.00
				Design Engineering	$34,000.00
				Bidding Phase Engineering	$5,000.00
				Construction Engineering	$40,000.00
				Total Project Cost	$758,965.00

4.4.5 Lift Station Option 3b: Submersible with Building

The second type of lift station evaluated is a submersible type. Typically, submersible lift stations are constructed more economically, but require different types of maintenance and operation. In order to provide ease of operation a building is proposed which will house the controls and valves. The costs associated with the proposed improvements are presented in Table 4.7.

Table 4.7: Estimated Costs of East Lift Station Replacement

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$47,000.00	$47,000.00
2	Abandon Existing Lift Station	1	LS	$10,000.00	$10,000.00
3	12" Sanitary Sewer Pipe	100	LF	$70.00	$7,000.00
4	6" PVC Dual Force Main	1,200	LF	$38.00	$45,600.00
5	6" PVC 90° Bend	4	EA	$400.00	$1,600.00
6	Connect to Existing Manhole	2	EA	$1,500.00	$3,000.00
7	1" Type K Copper Water Service Pipe	80	LF	$23.00	$1,840.00
8	1" Curb Stop	1	EA	$275.00	$275.00
9	Lift Station Wet Well and Appurtenances	1	LS	$120,000.00	$120,000.00
10	Above-Ground Piping, Fittings and Related Items	1	LS	$50,000.00	$50,000.00
11	Control Building with Concrete and Related Items	1	LS	$90,000.00	$90,000.00
12	Rock Surfacing	50	TN	$30.00	$1,500.00
13	Site Grading and Access Road Embankment	1	LS	$4,500.00	$4,500.00
14	Gravel Surfacing	550	TN	$22.00	$12,100.00
15	60 kW Automatic Stand-by Generator	1	LS	$50,000.00	$50,000.00
16	Electrical Work and Materials	1	LS	$20,000.00	$20,000.00
17	Bypass Pumping	1	LS	$5,000.00	$5,000.00
18	Clean Force Main	1	LS	$5,000.00	$5,000.00
19	Traffic Control	1	LS	$5,000.00	$5,000.00
20	Erosion Control	1	LS	$1,000.00	$1,000.00
21	Dewatering	1	LS	$15,000.00	$15,000.00
22	Chain Linked Fence with Gates	1	LS	$7,000.00	$7,000.00
23	Seed, Fertilize and Mulch Disturbed Area	7,100	SY	$1.50	$10,650.00
				Subtotal	$513,065.00
				Contingencies	$51,300.00
				Total Construction Cost	$564,365.00
				Legal and Administration Cost	$11,300.00
				Design Engineering	$34,000.00
				Bidding Phase Engineering	$5,000.00
				Construction Engineering	$40,000.00
				Total Project Cost	$654,665.00

4.4.6 Lift Station Option 4: Lift Station SCADA

A lift station SCADA system is recommended to improve control of the lift stations. The SCADA system would be integrated with the City's existing SCADA system to provide for overall control of the City's facilities. The SCADA system would provide alarm functions for emergencies, log events and records for future use and provide remote access for ease of use. The estimated cost of the SCADA system is presented in Table 4.8.

Table 4.8: Estimated Costs for Lift Station SCADA

Item	Description	Quantity		Unit Price	Total Cost
1	Furnish SCADA Equipment	1	LS	$30,000.00	$30,000.00
2	Install SCADA Equipment	1	LS	$15,000.00	$15,000.00
				Subtotal	$45,000.00
				Contingencies	$4,500.00
				Total Construction Cost	$49,500.00
				Legal and Administration Cost	$1,000.00
				Design Engineering	$8,200.00
				Bidding Phase Engineering	$6,000.00
				Construction Engineering	$9,800.00
				Total Project Cost	$74,500.00

4.5 PROPOSED WASTEWATER TREATMENT IMPROVEMENTS

The following is a summary of the deficiencies of Miller's wastewater treatment system.

- The manhole upstream of Cell One is in poor condition. The repair of this manhole is included in the sanitary sewer improvements.
- Cell Two is much smaller than Cells One and Three which makes it difficult to properly operate the WWTF.
- There is an unknown degree of sludge build-up in Cell One. The City plans to remove this sludge when necessary.
- The treatment system is overloaded hydraulically.
- The discharge monitoring reports indicate violations of the limits. This is most likely due to the hydraulic overloading of the facility.
- The new permit will include limitations on ammonia which may be difficult to meet with the current facility.

The improvements made to the wastewater collection system (if any) would reduce the current infiltration and inflow rate. However, these estimates of infiltration and inflow reduction could vary greatly based on many factors such as: groundwater levels, soil conditions and pipe deficiencies. The currently estimated infiltration and inflow rate is used for the sizing of WWTF improvements in this section.

The enforcement of a sump pump ordinance and public notification of the problems being created by discharging sump pump waste to the sewer system could have a profound impact on the reduction of infiltration and inflow. In order to provide a conservative sizing of the WWTF the current infiltration and inflow rate is used for the design values. Since the reduction of the infiltration and inflow sources due to these actions cannot be quantified prior to the design, the wastewater flows should be monitored to determine the actual reduction of infiltration and inflow achieved by the resulting modifications.

4.5.1 Treatment System Option 1: Do Nothing

This option involves no improvements made to the WWTF and will not improve the hydraulic overloading of the WWTF and other identified deficiencies. Because of the major work proposed on the sanitary sewer, it is likely that a significant reduction in infiltration and inflow will be realized. The reduction in infiltration and inflow could potentially eliminate the need for an expansion of the facility. Therefore, the "Do Nothing" option should be carefully considered.

4.5.2 Treatment System Option 2: WWTF Expansion

In order to add hydraulic capacity and improve the ability of the WWTF to meet the discharge limits a pond area expansion is recommended. The third column shown in Table 4.9 includes the proposed extra pond area which is necessary to provide adequate storage for the winter period. The most likely location for the proposed pond would be on the east side of the existing facility. The City owns the property adjacent to Cell Two that can be used for expansion.

The proposed treatment cell would be incorporated with the existing Cell Two to create a 18.2-acre Cell Two. This will promote better operation of the WWTF than the continued use of the relatively small existing Cell Two. The costs associated with the Option 2 improvements are presented in Table 4.10. Figure 4.3 shows the proposed layout of the Cell Two expansion.

Table 4.9: Proposed Hydraulic Capacity

	Current	Expand Cell 2
Population	1489	1489
Domestic Wastewater Flow, gpcpd	66.5	66.5
Domestic Wastewater Flow, gpd	99,019	99,019
Design Infiltration and Inflow, gpd	228,000	228,000
Total Hydraulic Loading, gpd	327,019	327,019
Total WWTF Volume Required, gal	58,863,330	58,863,330
Pond Capacity, gal	45,563,730	58,863,330
Capacity Shortage, gal	13,299,600	0
Capacity Shortage, gpd	73,887	

Table 4.10: Anticipated Costs of WWTF Improvements

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$60,000.00	$60,000.00
2	Remove and Dispose of Fence	2,070 LF	$1.00	$2,070.00
3	Remove and Stockpile Topsoil	11,100 CY	$2.00	$22,200.00
4	Pond Excavation	79,600 CY	$2.50	$199,000.00
5	Pond Dike Construction	11,000 CY	$3.00	$33,000.00
6	Construct Pond Clay Liner	8,300 CY	$4.00	$33,200.00
7	Place Topsoil	11,100 CY	$3.00	$33,300.00
8	Remove and Salvage Riprap	3,400 TN	$35.00	$119,000.00
9	Riprap with Fabric Filter	1,900 TN	$32.00	$60,800.00
10	Connect to Existing Pond Piping	2 EA	$2,000.00	$4,000.00
11	Depth Indicator	1 EA	$1,500.00	$1,500.00
12	Inlet Structure	2 EA	$3,000.00	$6,000.00
13	Outlet Structure	1 EA	$2,500.00	$2,500.00
14	Seepage Collars	3 EA	$500.00	$1,500.00
15	12" Ductile Iron Pipe	200 LF	$50.00	$10,000.00
16	8" Control Valve	1 EA	$1,800.00	$1,800.00
17	Gravel Surfacing for Pond Access	500 TN	$22.00	$11,000.00
18	Warning Signs	1 LS	$1,000.00	$1,000.00
19	Transfer Pumping	1 LS	$20,000.00	$20,000.00
20	12" Straw Wattles	2,000 LF	$5.00	$10,000.00
21	Barbed Wire Fence	2,300 LF	$3.50	$8,050.00
22	Seeding, Fertilizing and Mulching	8,700 SY	$1.20	$10,440.00
			Subtotal	$650,360.00
			Contingencies	$65,000.00
			Total Construction Cost	$715,360.00
			Legal and Administration Cost	$14,300.00
			Design Engineering	$45,700.00
			Bidding Phase Engineering	$4,500.00
			Construction Engineering	$54,800.00
			Total Project Cost	$834,660.00

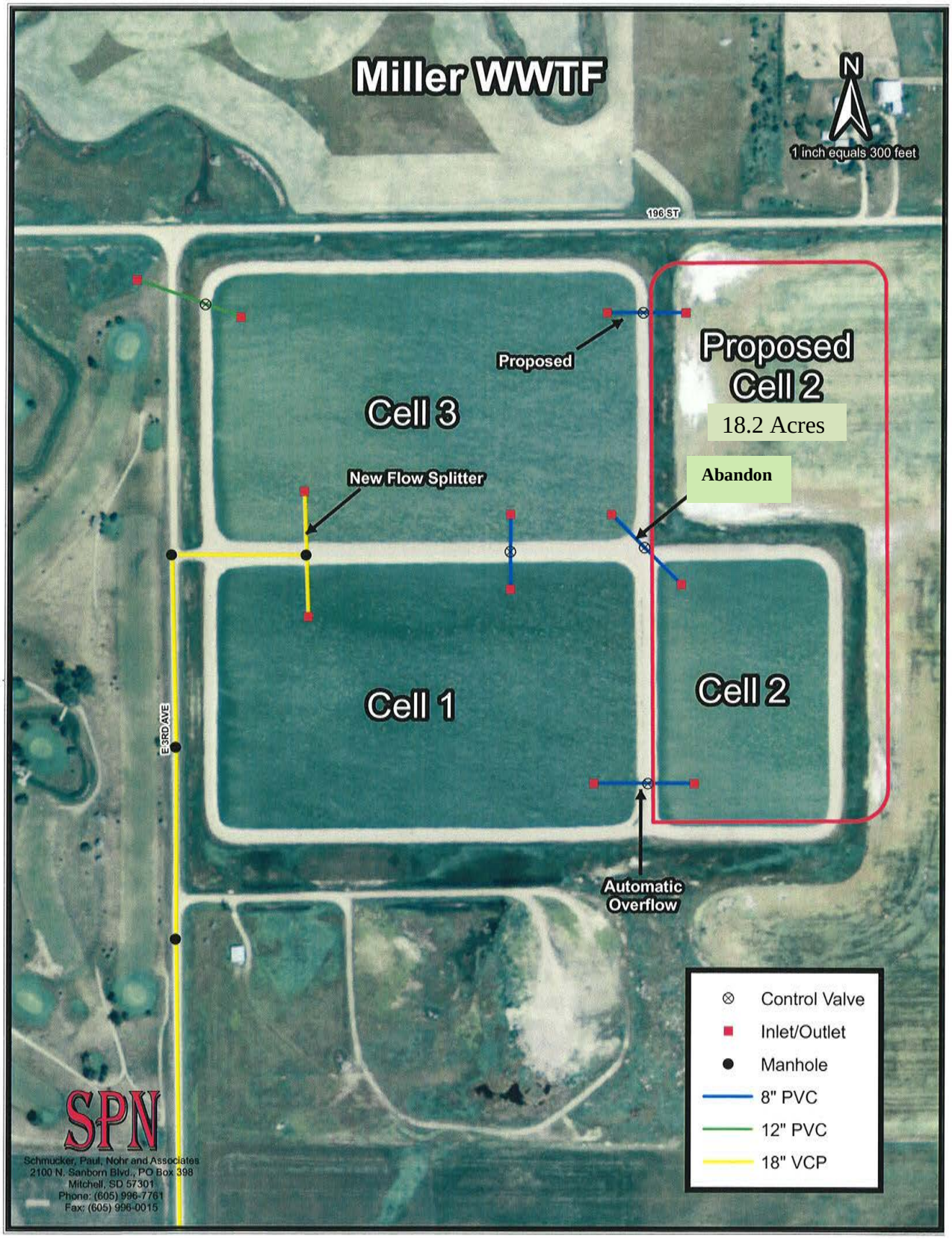

Figure 4.3: Proposed Layout of WWTF Improvements

4.6 OPTIMUM OPERATION OF EXISTING FACILITIES

The existing facilities are being operated in the most efficient manner that can be accomplished, considering the deficiencies and problems that will be addressed in the proposed improvements.

4.7 REGIONALIZATION

Saint Lawrence is located approximately one mile east of Miller. However, the town has recently completed a wastewater treatment facility upgrade and is not capable of handling the magnitude of wastewater flow from Miller. There are no other communities within a reasonable distance to make consideration of regional wastewater solutions feasible.

5 WASTEWATER SYSTEM RECOMMENDATIONS

A summary of the total project costs for each of the improvement options discussed in Section 4 is presented below.

Table 5.1: Summary of Costs

Improvement Options	Cost	Recommended for Phase 1	Recommended for Phase 2	Recommended for Phase 3
Sanitary Sewer Priority 1 & 2 - Phase 1	$3,673,840	$3,673,840		
Sanitary Sewer Priority 1 & 2 - Phase 2	$3,846,730		$3,846,730	
Sanitary Sewer Priority 1 & 2 - Phase 3	$2,422,620			$2,422,620
Sanitary Sewer Priority 3	$5,190,663			
West Lift Station Repair	$138,675	$138,675		
East Lift Station Replacement Option 1	$758,965			
East Lift Station Replacement Option 2	$654,665	$654,665		
Lift Stations SCADA	$74,500	$74,500		
WWTF Improvements	$834,660			
Total Cost of Wastewater System	**$17,595,318**	**$4,541,680**	**$3,846,730**	**$2,422,620**

5.1 WASTEWATER COLLECTION SYSTEM

The Sanitary Sewer Option 1 (Do Nothing) is not recommended because it would not address any of the identified structural deficiencies or potential health hazards associated with the existing sewer. Phase 1 of Option 2 is recommended to begin an implementation program to fix the major deficiencies identified by the TV inspection records. Phases 2 and 3 of Option 2 should be implemented upon completion of the previous phase. Option 3 (Priority 3 Sanitary Sewer) is not recommended at this time. The City can re-assess the need for the Priority 3 improvements as funding becomes available.

5.2 LIFT STATION IMPROVEMENTS

The “do nothing” option is not recommended because this will not provide the higher wastewater flow rate that is required at the west lift station. The force mains would not be cleaned and the east wet well would not be lined which would continue to degrade. The “do nothing” option is also not recommended because a second generator is recommended to operate the lift stations during emergencies. The flood alarm and the repair of the rusty pipe and fittings are recommended. The replacement of the east lift

station will be necessary to provide for a greater service area and a deeper sewer upon the implementation of the Phase 1 improvements.

Lift Station Option 2 (West Lift Station Repair) is recommended to return the lift station to proper operating conditions and provide for many more years of service. Lift Station Option 3 (East Lift Station Replacement) is recommended to provide service to the larger service area and deeper sewer upon implementation of the Phase 1 improvements. The lift station replacement will also take care of the identified lift station deficiencies. Lift Station Option 4 (Lift Station SCADA) is recommended to provide an appropriate control, monitoring and record-keeping system that will greatly benefit the operators.

5.3 WASTEWATER TREATMENT IMPROVEMENTS

WWTF Option 1 (Do Nothing) is recommended as the Option 2 Sanitary Sewer improvements should significantly reduce the infiltration and inflow which most likely will eliminate the identified deficiencies without the implementation of the WWTF expansion.

5.4 DEMONSTRATION OF FINANCIAL CAPABILITY

As part of the cost analysis of the recommended improvements, the City's ability to pay for the projects is evaluated. The total costs of the improvements are listed in Table 5.1. For the purpose of this financial evaluation, the total cost of the improvements is assumed to be eligible for a low interest loan from the DENR's State Revolving Fund program. This, however, is subject to change due to decisions that must be made by the appropriate funding agencies.

Table 5.2 summarizes the financial data that was supplied by the City Finance Officer and is used to determine the proposed operational surplus or deficit of the Wastewater Fund. The budgeted revenues generated from user fees are listed in Table 5.2.

The budget analysis indicates that the current revenue is sufficient until the payment for the proposed project loan is added. The new loan will create a deficit and require an increase in user fees. The increase in user fees will depend on the actual financing that is

available. The current sewer fee schedule is a flat rate of $31.65 per month for residential use which includes a surcharge for a previous project. Sewer rates for commercial use are $31.65 per month plus a charge of $1 per 1,000 gallons of water used over 6,000 gallons. The DENR requires a minimum sewer rate of $22 per month to qualify for funding consideration. The operation and maintenance costs for the Wastewater Fund are based on the costs for 2015. These costs include the salaries and all expenses incurred during the year.

The annual loan payment for principal and interest on the total cost of the improvements is calculated based on a 30-year loan period and an interest rate of 3.25 percent. The implementation of the recommended improvements will require an increase in user fees. The increase in user fees will depend on the actual financing that is available. The proposed improvements are expected to reduce the annual costs of operation and maintenance as shown in Table 5.2.

The short-lived asset replacement cost is included in Table 5.2 and consists of lift station pump replacement, control equipment replacement and general repair items. The calculations for the short-lived asset replacement are shown in Table 5.3. The City should budget this amount annually for maintenance. Because the financing that will be supplied by various funding agencies is unknown at this time, multiple columns of budget information are provided in Table 5.4 based on varying grant percentages. The City would need a grant of approximately 84 percent to balance the sewer fund with the current rate structure or an increase of $24.25 per user per month. An alternate table for sewer rate analysis is presented in Table 5.5 for a Rural Development loan which would have a term of 40 years and an interest rate of 2.625 percent.

Table 5.2: Operation of the Wastewater Fund

	2015 Budget	2016 Budget
Total Cost of Improvements		$4,541,680
Revenue from User Fees	+ $283,000	+ $283,000
Current O & M Cost - Expenses	- $260,225	- $220,311
Short-Lived Asset Replacement	- $9,200	- $9,200
Current Principal and Interest Payments	- $11,500	- $11,414
Retirement of Debt Incurred with This Project	- $0	- $239,264
Debt Reserves (10% of Loan Payment)	- $0	- $23,930
Remaining Surplus	**$2,075**	**($221,119)**
Increase of User Fee		$24.25
Number of Accounts	765	765
Added Revenue	$0	$222,615
Surplus After Increase in User Fee	**$2,075**	**$1,496**
Current Sewer Fee (Residential)	$31.65	$31.65
New Sewer Fee	$31.65	$55.90

Table 5.3: Short-Lived Asset Replacement Calculations

Expenses	Annual Cost	Cost	Future Cost	Period of Service, yr	Start Service
Lift Station Pumps	$4,800	$50,000	$103,946	15	2016
Lift Station Controls	$2,900	$30,000	$62,368	15	2016
Lift Station Equipment	$1,500	$16,000	$33,263	15	2016
Annual Total to Be Budgeted	$9,200				

Table 5.4: Sewer Rate Analysis (SRF)

Percent Grant	75%	70%	65%	60%	55%	50%
Annual O & M	$220,311	$220,311	$220,311	$220,311	$220,311	$220,311
Amount Amortized	$1,135,420	$1,362,504	$1,589,588	$1,816,672	$2,043,756	$2,270,840
Grant Amount	$3,406,260	$3,179,176	$2,952,092	$2,725,008	$2,497,924	$2,270,840
Annual Payment	$59,816	$71,779	$83,742	$95,705	$107,669	$119,632
Debt Reserves	$5,982	$7,178	$8,374	$9,571	$10,767	$11,963
Current Debt/Asset/Other Cost	$20,614	$20,614	$20,614	$20,614	$20,614	$20,614
Total Annual Costs	$306,722	$319,882	$333,041	$346,201	$359,360	$372,520
Annual Revenue	$283,000	$283,000	$283,000	$283,000	$283,000	$283,000
Surplus/Deficit After Project	-$23,722	-$36,882	-$50,041	-$63,201	-$76,360	-$89,520
Minimum Sewer Rate Increase	$2.75	$4.25	$5.50	$7.00	$8.50	$10.00
New Sewer Rate	$34.40	$35.90	$37.15	$38.65	$40.15	$41.65

Table 5.5: Sewer Rate Analysis (RD)

Percent Grant	75%	70%	65%	60%	55%	50%
Annual O & M	$220,311	$220,311	$220,311	$220,311	$220,311	$220,311
Amount Amortized	$1,135,420	$1,362,504	$1,589,588	$1,816,672	$2,043,756	$2,270,840
Grant Amount	$3,406,260	$3,179,176	$2,952,092	$2,725,008	$2,497,924	$2,270,840
Annual Payment	$46,188	$55,426	$64,663	$73,901	$83,139	$92,376
Debt Reserves	$4,619	$5,543	$6,466	$7,390	$8,314	$9,238
Current Debt/Asset/Other Cost	$20,614	$20,614	$20,614	$20,614	$20,614	$20,614
Total Annual Costs	$291,732	$301,893	$312,055	$322,216	$332,378	$342,539
Annual Revenue	$283,000	$283,000	$283,000	$283,000	$283,000	$283,000
Surplus/Deficit After Project	-$8,732	-$18,893	-$29,055	-$39,216	-$49,378	-$59,539
Minimum Sewer Rate Increase	$1.00	$2.25	$3.25	$4.50	$5.50	$6.50
New Sewer Rate	$32.65	$33.90	$34.90	$36.15	$37.15	$38.15

6 STORM DRAINAGE EVALUATION

6.1 DRAINAGE ANALYSIS

The rational method as used in this drainage analysis determines the peak runoff rate that can be expected. The rational method is one of the most common methods to calculate expected runoff due to a rainfall event. The rational method is used to calculate the runoff from small drainage basins and simple collection systems.

The basic formula of the rational method is: Q = C x I x A (runoff in cubic feet per second = runoff coefficient x rainfall intensity in inches per hour x drainage area in acres). The concept of the rational method is that a rainfall with a given intensity will generate the maximum runoff when the entire drainage area is contributing runoff to the outlet. The duration of the storm between the start of the rainfall and the period when the entire drainage area is contributing runoff is referred to as the time of concentration. The runoff coefficient is a factor that represents the fraction of the rainfall that is anticipated to be generated as runoff. This coefficient varies by land use and soil type. The intensity of the rainfall can be chosen from intensity-duration-frequency (IDF) charts which are published for certain geographical areas. When the time of concentration is used to determine the intensity of the storm from the IDF curves, an estimate of the peak storm water runoff rate is generated with the rational method.

6.1.1 Runoff Coefficient

Coefficients that are utilized for design calculations are 0.2 for farmland, 0.4 for residential areas, and 0.7 for commercial land. For the purpose of this study a runoff coefficient of 0.6 was used as an average representation for design.

6.1.2 Time of Concentration

The time of concentration at a given location is a measure of the time elapsed after rainfall begins to when the entire drainage area is contributing runoff to a given area. Thus, the time of concentration is the greatest possible duration of a given unit of runoff to a particular point in the drainage system. This design parameter determines the

duration of the design storm for runoff calculations based on the distance and elevation difference for the most remote contributing point. The storm water run-off values generated for this report are conservative in that it is assumed that the storm water run-off can flow freely through the drainage area with no restrictions.

6.1.3 Rainfall Intensity

The time of concentration is used to determine the duration of the design storm. The intensity of the design storm is taken from the Hydrometeorological Design Studies Center NOAA Atlas 14 Point Precipitation Frequency Estimates of South Dakota. The estimates are based on frequency analysis of a partial duration series which means that the intensity, duration and frequency of the storms were analyzed for the area. The rainfall event that was used for this evaluation is considered a five-year event which means that there is a 20 percent chance that at least one event of that magnitude will happen each year. It is impractical to design a storm drainage system for the worst-case storm. As a result, designing for a storm event that is fairly common will lessen the impacts of larger storm events and is reasonably economical to construct. Taking all this into account, a five-year event is typically utilized by many communities and is recommended for the capacity of proposed improvements.

6.2 EXISTING DRAINAGE SYSTEM EVALUATION

The City of Miller is relatively flat sloping from south to north. Ree Creek flows around the west side of the City and collects a majority of the storm water run-off. Storm water is conveyed away from the City by multiple storm water drainage systems. Those systems consist of concrete curb and gutter, asphalt streets, storm sewer inlets and storm sewer piping which include reinforced concrete pipe (RCP), polyvinyl chloride (PVC) pipe, asbestos cement pipe (ACP) and vitrified clay pipe (VCP).

Previous smoke testing which was conducted as part of the *Facility Plan for the Wastewater Collection and Treatment Systems* identified two locations where a cross connection between the sanitary and storm sewer existed. The two cross connections were storm sewer inlets on Broadway south of Third Street. Cross connections allow

storm water to directly enter the sanitary sewer system adding unwanted volume to the system. A drain tile was found connected directly to the sewer on the southwest corner of West Fourth Avenue and West Third Street.

A segment located in east central Miller from East First Avenue to East Third Avenue between East Third Street and East Fifth Street experiences flooding and standing water. Any time storm water is allowed to remain stagnant for a duration of time, it can greatly undermine the integrity of the streets by weakening the subgrade. After time and repeated traffic use the street will deteriorate requiring additional maintenance or complete street reconstruction.

East Second Street from East Third to East Seventh Avenue and the surrounding area also experience flooding during spring thaw and rain events. A 36-inch RCP culvert is located to the east of this area which conveys storm water under the railroad tracks and contributes to flooding within the City. Storm water has flowed over the railroad tracks into the City which has added to flooding within the City. The lift station located on East Fifth Avenue north of Second Street has experienced flooding allowing storm water to infiltrate the sanitary sewer system. Flooding in this area needs to be reduced in order to decrease inflow into the sanitary sewer system and to provide relief to residents.

Flooding has also been observed on West Second Avenue on the northwest side of the City. An eight-inch PVC line with inlets conveys storm water to Crystal Lake. The piping system is inadequate to carry any significant rain event. On West Seventh Street and West Third Avenue a sanitary sewer lift station experiences flooding during spring thaw and rain events.

Other areas of the City do not see the extent of flooding as described above but prolonged drainage throughout the City can ultimately present the same results and undermine asphalt streets. The City of Miller has taken a proactive approach by installing an extensive amount of curb and gutter and storm sewer piping with inlets. However, standing water throughout the City after rain events gives clear signs that the existing

storm sewer piping and inlets is undersized. For example, areas of flooding which will be described in more detail takes place where existing inlets are located.

The majority of the storm sewer system was cleaned and televised as part of projects in 2014 and 2015. The majority of the storm sewer inlets and manholes were also inspected. The televising showed many areas of failing pipe as well as inadequate storm sewer inlets. The following sections will discuss these deficiencies in greater detail.

6.3 REGIONAL DRAINAGE SYSTEMS

The City of Miller contains four major underground piping systems: the West, Central, Northeast and Southeast Systems. The drainage systems are shown in Figure 6.1. Three of the four main piping systems discharge to Ree Creek which flows south to north around the west side of the City. Storm water is routed to the storm drainage systems by curb and gutter flow to storm sewer inlets. The drainage systems are discussed in greater detail in the following sections.

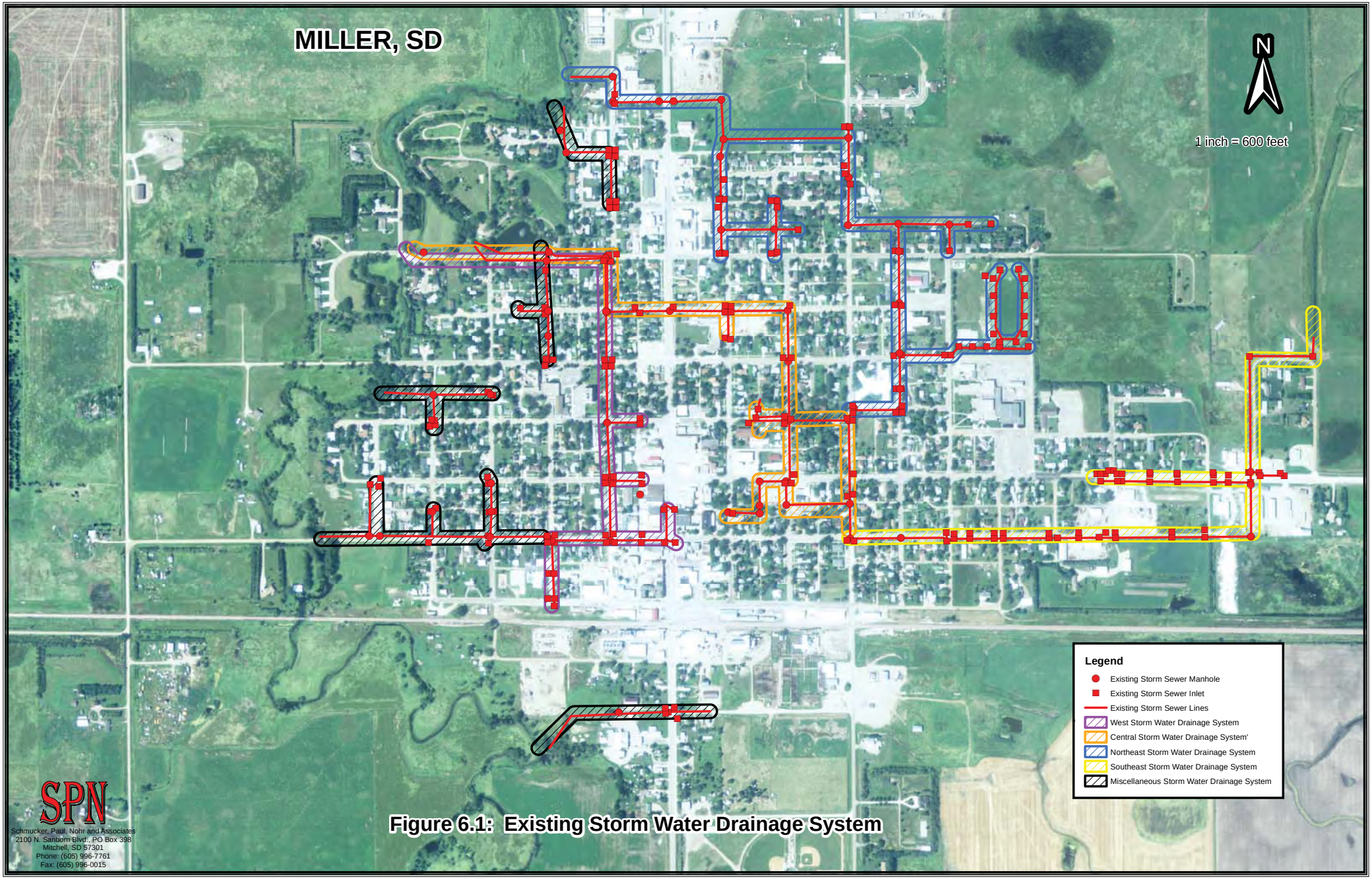

Figure 6.1: Existing Storm Water Drainage System

SPN
Schmucker, Paul, Nohr and Associates
2100 N. Sanborn Blvd., PO Box 398
Mitchell, SD 57301
Phone: (605) 996-7761
Fax: (605) 996-0015

6.3.1 Drainage System 1: West Drainage System

An underground storm water drainage system is located on the west side of the City on West First Avenue stretching from West First to West Seventh Streets. This stretch of storm sewer was incorporated as part of the initial storm water drainage system. The system consists of approximately 4,600 linear feet of reinforced concrete pipe and vitrified clay pipe and approximately 28 storm sewer inlets. All streets in the vicinity of the system have curb and gutter which allows the storm water to be directed to storm sewer inlets. City of Miller personnel have joined this system with the West Second Street drainage system in an attempt to take pressure off the system when applicable. Table 6.1 has been provided to show the capacities for the different sections of pipe throughout the system. Figure 6.2 illustrates a typical storm sewer inlet located within the system. Figure 6.3 illustrates an inlet with a CMP pipe concreted into the flow line. Storm sewer calculations have been provided in Appendix E.

Table 6.1: Pipe Capacity for West Drainage System

Section of Pipe	Pipe Size in	Pipe Capacity cfs	Slope %	Rain Event in/hr
W 2nd Avenue (W 1st Street - W 2nd Street)	18	7.4	0.50%	1.83
W 2nd Street (Broadway - W 1st Avenue)	18	7.4	0.50%	1.47
W 1st Avenue (W 2nd Street - W 3rd Street)	24	16.0	0.50%	0.81
W 1st Avenue (W 3rd Street - W 4th Street)	27	21.9	0.50%	0.84
W 1st Avenue (W 5th Street - W 6th Street)	30	29.0	0.50%	1.00
W 1st Avenue (W 4th Street - W 5th Street)	30	29.0	0.50%	0.85
W 1st Avenue (W 6th Street - W 7th Street)	36	47.2	0.50%	1.38
W 7th St (W 1st Ave - Ree Creek)	36	47.2	0.50%	1.29

* Size and type of pipe are an estimate from obtained data

* Slope of pipe is unknown, 0.5% was used as a conservative estimate

Figure 6.2: Typical Storm Sewer Inlet

Figure 6.3: Storm Sewer Inlet with CMP Flow Line

6.3.2 Drainage System 2: Central Drainage System

Drainage System 2 is a closed piping drainage system and is located in central Miller. The system consists of storm sewer inlets, storm manholes and approximately 6,500 linear feet of reinforced concrete pipe and vitrified clay pipe. The underground piping system was constructed as part of the initial storm water drainage system. City of Miller personnel have installed a pipe joining the Central and Southeast drainage systems to take pressure off the Central Drainage System. Additional piping has been installed in other areas of the Central Drainage System to improve drainage. Table 6.2 has been provided to show the capacities for the different sections of pipe throughout the system. Figures 6.4 through 6.7 illustrate deficient catch basins and piping within the system. Storm sewer calculations have been provided in Appendix E.

Table 6.2: Pipe Capacity for Central Drainage System

Section of Pipe	Pipe Size in	Pipe Capacity cfs	Slope %	Rain Event in/hr
E 4th St (E 2nd Ave - E 3rd Ave)	24	16.0	0.50%	0.69
E 2nd Ave (E 6th St - E 4th Street)	27	13.9	0.20%	0.38
W 6th St (W 1st Ave - E 2nd Ave)	30	13.0	0.10%	0.26
W 1st Avenue (W 7th Street - W 6th Street)	30	16.9	0.17%	0.33
W 7th St (W 1st Ave - W 2nd Ave)	30	28.7	0.49%	0.53
W 7th St (W 2nd Ave - Ree Creek)	36	46.7	0.49%	0.86

* Size, slope and type of pipe are an estimate from obtained data

Figure 6.4: Cracked Structure

Figure 6.5: Deficient pipe Opening

Figure 6.6: Broken Clay Tile

Figure 6.7: Inlet with CMP Invert

6.3.3 Drainage System 3: Northeast Drainage System

Drainage System 3 is a closed storm sewer system and was completed in 2000. The system conveys water from the northeast side of Miller to the northwest side of the City. The system consists of approximately 38 storm sewer inlets, 25 storm sewer manholes and approximately 8,000 linear feet of reinforced concrete pipe. Table 6.3 has been provided to show the capacities for the different sections of pipe throughout the system. The piping and inlets are in favorable condition as can be seen in Figure 6.8. Figure 6.9 illustrates an improperly installed storm sewer inlet with staggered adjusting rings. Figure 6.9 also illustrates a protruding pipe within an inlet. Storm sewer calculations have been provided in Appendix E.

Table 6.3: Pipe Capacity for Northeast Drainage System

Section of Pipe	Pipe Size in	Pipe Capacity cfs	Slope %	Rain Event in/hr
4th Street (E 3rd Avenue - E 4th Avenue)	18	4.7	0.20%	1.64
E 4th Avenue (4th Street - E 5th Street)	30	14.9	0.13%	1.16
E 4th Avenue (E 5th Street - E 7th Street)	36	24.2	0.13%	0.92
E 4th Avenue (E 7th Street - Alley)	36	24.2	0.13%	0.92
Alley (E 4th Avenue - E 3rd Avenue)	36	18.9	0.13%	0.64
E 3rd Avenue (Alley - Alley)	36	0.6	0.13%	0.64
Alley (E 3rd Avenue - E 1st Avenue)	36	32.0	0.23%	1.00
E 10th Street (E 1st Avenue - Ree Creek)	42	42.7	0.18%	0.99

* Size, type and slope of pipe obtained from previous as-built plans

Figure 6.8: Typical Storm Sewer Inlet

Figure 6.9: Improperly Installed Storm Sewer Inlet

6.3.4 Drainage System 4: Southeast Drainage System

Drainage System 4 is a closed storm sewer system which was constructed in 2001. The system consists of approximately 35 storm sewer inlets, two manholes and 3,700 feet of 24-inch reinforced concrete pipe. When constructed in 2001, a 24-inch pipe was the largest sized pipe allowed by the South Dakota Department of Transportation in the highway right-of-way. During the spring thaw and major storm events, massive amounts of flooding can occur in this area. The creek to the east can overflow its banks and flood into the City. The system is not capable of conveying the storm water away from the area which causes large amounts of flooding in the area. Table 6.4 has been provided to show the capacities for the different sections of pipe which were installed in 2001. Figure 6.10 illustrates a typical inlet within the system. Figure 6.11 illustrates a protruding pipe within an inlet. A portion of piping from East 3rd Avenue to East 5th Avenue which the City of Miller personnel connected to the system is not included in the table due to lack of available information. Its primary purpose is an overflow pipe which allows storm water to move from either system when overloaded. Storm sewer calculations have been provided in Appendix E.

Table 6.4: Pipe Capacity for Southeast Drainage System

Section of Pipe	Pipe Size in	Pipe Capacity cfs	Slope %	Rain Event in/hr
E 2nd Street (E 5th Avenue - E 7th Avenue)	24	42.1	0.18%	0.51
E 2nd Street (E 7th Avenue - E 10th Avenue)	24	42.1	0.18%	0.41
E 10th Avenue (E 2nd Street - E 3rd Street)	24	42.1	0.18%	0.35
E 3rd Street (E 8th Avenue - E 10th Avenue)	42	42.1	0.18%	2.83

* Size, type and slope of pipe obtained from previous as-built plans

Figure 6.10: Typical Storm Sewer Inlet

Figure 6.11: Protruding Pipe within Inlet

6.3.5 Drainage System 5: Additional Drainage Systems

The City of Miller has various smaller storm drainage systems in addition to the previously described larger systems. These systems consist of underground piping and inlets with various pipe types. The west side of Miller has two smaller underground piping systems on West Second Street and in the Alley between West Fifth and West Fourth Streets which convey storm water to Ree Creek. An underground storm water system on West First Avenue conveys storm water to the creek. A piping system located on West Second Avenue conveys storm water to Crystal Lake located on the northwest corner of Miller. An additional underground piping system conveys water from Second Street Southwest to the creek. The capacity of the outfall pipes has been provided in Table 6.5 for the above-listed piping systems. Figures 6.12 and 6.13 illustrate inlets located within the West Second Street storm sewer system.

Table 6.5: Pipe Capacity for Additional Drainage Systems

Location of Piping System	Pipe Size in	Outfall Pipe Capacity cfs	Slope %	Rain Event in/hr
W 2nd Street (W 2nd Avenue - Ree Creek)	12	3.6	0.50%	0.3
West Alley (W 3rd Avenue - Ree Creek)	18	7.4	0.50%	7.4
West 1st Avenue (W 7th Street - Ree Creek)	12	2.5	0.50%	0.3
W 2nd Avenue (W 5th Street - Crystal Lake)	8	1.2	0.50%	0.2
2nd Street SW (1st Avenue SE - Ree Creek)	18	10.8	0.50%	1.1

* Size and type of pipe are an estimate from obtained data

* Slope of pipe is unknown, 0.5% was used as a conservative estimate

Figure 6.12: Inlet Located in West Second Street Storm Sewer System

Figure 6.13: Inlet Located in West Second Street Storm Sewer System

7 STORM DRAINAGE ALTERNATIVES

The operating characteristics and deficiencies of the existing drainage areas that were discussed in Section 6 of this report require action by the City of Miller. The alternatives relating to the storm water systems that were evaluated to assist in the prevention and/or mitigation of the flooding problems are described below.

7.1 CAUTIONARY NOTES CONCERNING COST ESTIMATES

The opinions of probable cost provided with the following alternatives reflect the anticipated costs for administration, engineering design, construction, contingencies, construction observation, and other costs related to completion of the project. The costs as presented are based on an analysis and comparison of projects of similar size and scope. The actual construction and project costs will vary on an individual project basis. The actual bid cost will reflect the bidder's evaluation of construction problems, weather, soils and difficulty of work. Thus, the engineer cannot be held responsible for the accuracy of the estimates made in this report, as the engineer has no control over the contractors' bid costs.

Changes in materials, equipment and energy costs, as well as availability of other construction work at the time of the bid opening, could substantially influence actual project cost. Construction costs will also vary somewhat based on the quantity of items necessary to construct the project. The quantities and costs contained in this report are preliminary estimates based on our best judgment without field measurements. Final quantities and opinions of probable cost and final construction costs must be based upon final design.

Different funding sources have different requirements for some non-construction items. Therefore, actual costs of non-construction items should be considered tentative at this time and subject to later modifications and adjustments as current situations and funding sources dictate. Further, inasmuch as the period of construction cannot be accurately predicted, the costs as presented in this report have not been adjusted to reflect projected

inflation factors. Therefore, it is important that the estimate of costs as presented be reviewed and updated periodically to reflect construction cost trends.

7.2 EQUIVALENT UNIFORM ANNUAL COST

The equivalent uniform annual cost (EUAC) not only takes the capital costs into account when evaluating the options but also looks at the salvage value of the components and the expected annual operation and maintenance costs. The result is a comparison of the options on an overall basis throughout a design life. The EUAC is eliminated from consideration since the proposed improvements presented subsequently offer one viable option for each set of improvements or would only be a factor of the capital cost, as is the case of storm sewer improvements.

7.3 REPLACEMENT OF EXISTING SYSTEMS

The following Storm Water System Options propose updating previously installed storm water drainage systems. As described previously in Section 6 of this report, the existing storm drainage systems are only capable of conveying a limited precipitation event. In order to efficiently convey storm water away from the City of Miller, the existing systems will be updated to the five-year storm event, unless otherwise stated, which is utilized by most cities of similar size. New asphalt or blotter coated streets have been proposed to repair disturbed surfaces to ensure that storm water is conveyed to the gutter line which in turn will route the storm water to storm drainage inlets.

7.3.1 Replacement Option 1: Do Nothing

The first storm water system option that was considered was the “do nothing” option. Since Replacement Option 1 will not address the drainage problems experienced in the City, Replacement Option 1 is not considered as an acceptable option.

7.3.2 Replacement Option 2: West Drainage System

Replacement Option 2 proposes the installation of a new underground piping system with storm sewer inlets to replace the older existing system. The piping will also be installed to replace an existing eight-inch PVC line which experiences flooding during rain events. The system will be designed to convey a 3.1-inch-per-hour rain event. The drainage

system will consist of approximately 5,000 linear feet of reinforced concrete pipe, 32 storm sewer inlets and 15 storm sewer manholes.

The estimated project cost for the proposed system is shown in Table 7.1. A preliminary storm drainage system layout is shown in Figure 7.1. Storm sewer calculations have been provided in Appendix E.

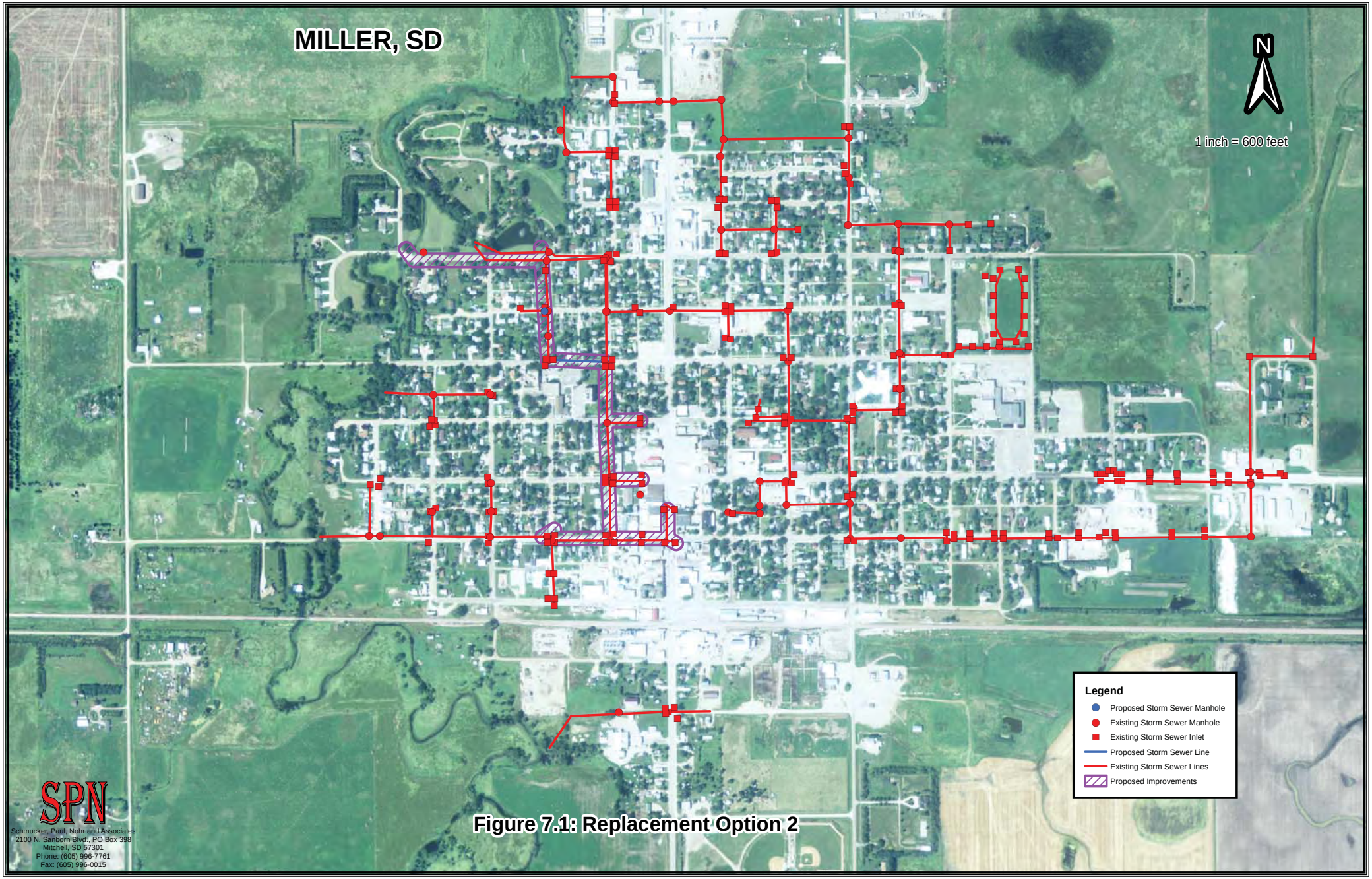

Figure 7.1: Replacement Option 2

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Table 7.1: Estimated Project Cost for Replacement Option 2

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$119,000.00	$119,000.00
2	Pulverize and Salvage Existing Asphalt	23,000 SY	$3.50	$80,500.00
3	Remove and Dispose Existing Structures	47 EA	$400.00	$18,800.00
4	Remove Storm Sewer Pipe (12"-24")	1,700 LF	$25.00	$42,500.00
5	Remove Storm Sewer Pipe (27"-36")	3,200 LF	$35.00	$112,000.00
6	Storm Sewer Inlet	32 EA	$3,000.00	$96,000.00
7	Storm Sewer Manhole	15 EA	$5,000.00	$75,000.00
8	12" RCP Storm Sewer Pipe	480 LF	$50.00	$24,000.00
8	15" RCP Storm Sewer Pipe	240 LF	$60.00	$14,400.00
9	24" RCP Storm Sewer Pipe	1,080 LF	$80.00	$64,800.00
10	30" RCP Storm Sewer Pipe	230 LF	$90.00	$18,400.00
11	36" RCP Storm Sewer Pipe	430 LF	$110.00	$38,700.00
12	42" RCP Storm Sewer Pipe	860 LF	$125.00	$94,600.00
13	48" RCP Storm Sewer Pipe	450 LF	$150.00	$56,250.00
14	54" RCP Storm Sewer Pipe	1,775 LF	$200.00	$266,250.00
15	54" RCP Flared End Section	1 EA	$1,700.00	$1,700.00
16	Asphalt Surfacing	1,300 TN	$110.00	$143,000.00
17	Gravel Base Course and Surfacing	8,900 TN	$20.00	$178,000.00
18	Double Blotter Coat	16,700 SY	$8.00	$133,600.00
19	Topsoil, Seed, Fertilizer & Mulch	11,300 SY	$1.50	$16,950.00
20	Traffic Control	1 LS	$15,000.00	$15,000.00
21	Erosion Control	1 LS	$30,000.00	$30,000.00
22	Incidental Construction	1 LS	$74,000.00	$74,000.00
			Subtotal	$1,713,450.00
			Contingencies (12%)	$206,550.00
			Construction Total	$1,920,000.00
			Design Engineering	$111,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$167,000.00
			Administration and Legal	$58,000.00
			Total Project Cost	$2,261,000.00

7.3.3 Replacement Option 3: Central Drainage System

Replacement Option 3 proposes the installation of a new underground piping system with storm sewer inlets. The piping will be installed directly over the old system with inlets being placed in efficient areas to collect the storm water. The system will be designed to convey a 3.1-inch-per-hour rain event. The drainage system will consist of approximately 6,500 linear feet of reinforced concrete pipe, 26 storm sewer inlets and 18 storm sewer manholes.

A preliminary storm drainage system layout is shown in Figure 7.2. The estimated project cost for the proposed system is shown in Table 7.2. Storm sewer calculations have been provided in Appendix E.

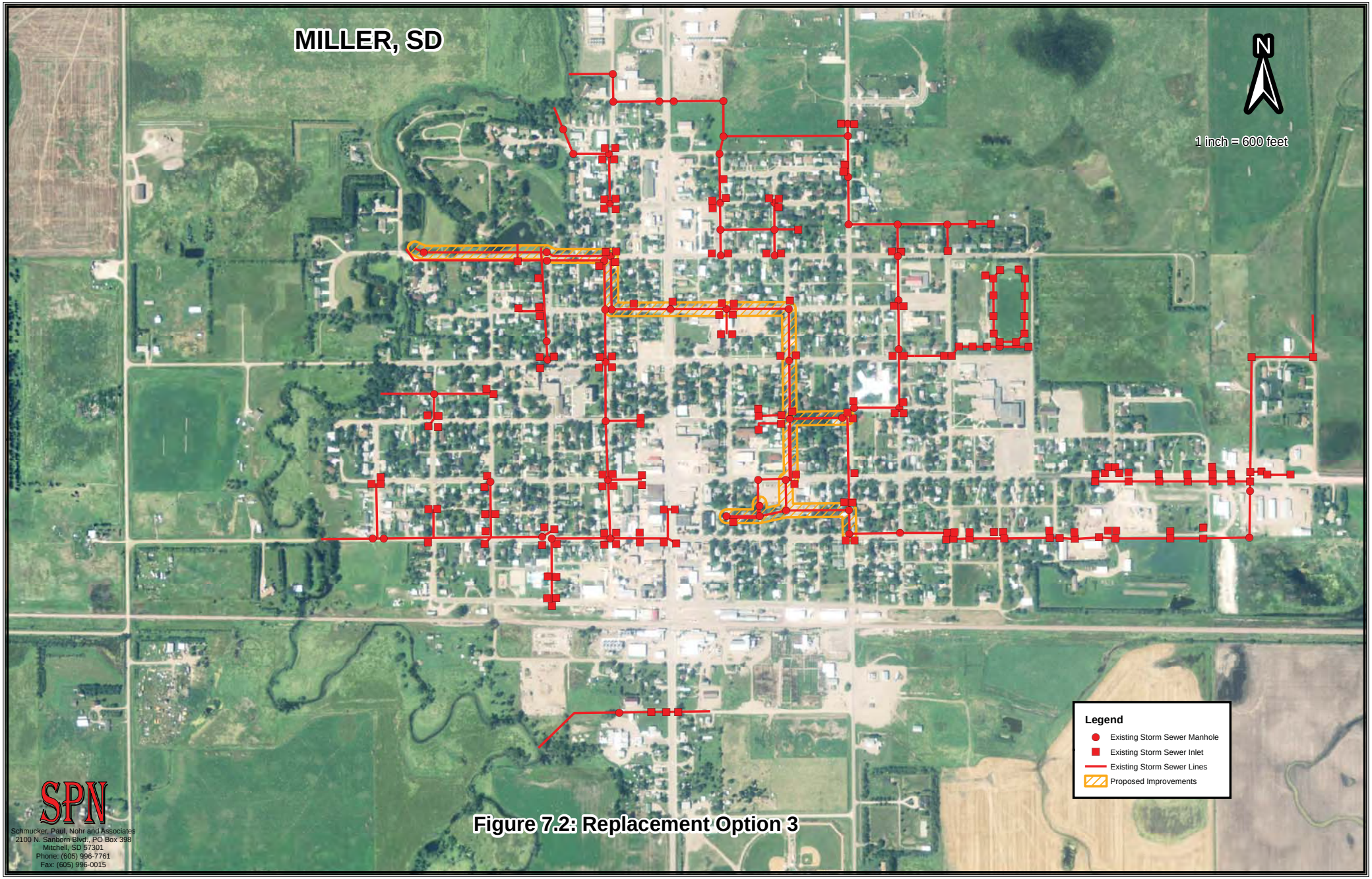

Figure 7.2: Replacement Option 3

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Table 7.2: Estimated Project Cost for Replacement Option 3

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$181,000.00	$181,000.00
2	Pulverize and Salvage Existing Asphalt	18,760 SY	$3.50	$65,660.00
3	Remove and Dispose Existing Structures	50 EA	$400.00	$20,000.00
4	Remove Storm Sewer Pipe (12"-24")	2,700 LF	$25.00	$67,500.00
5	Remove Storm Sewer Pipe (27"-36")	3,900 LF	$35.00	$136,500.00
6	Storm Sewer Inlet	42 EA	$3,000.00	$126,000.00
7	Storm Sewer Manhole	18 EA	$5,000.00	$90,000.00
8	12" RCP Storm Sewer Pipe	630 LF	$50.00	$31,500.00
9	24" RCP Storm Sewer Pipe	630 LF	$80.00	$50,400.00
10	30" RCP Storm Sewer Pipe	1,350 LF	$90.00	$121,500.00
11	42" RCP Storm Sewer Pipe	450 LF	$125.00	$56,250.00
12	54" RCP Storm Sewer Pipe	1,240 LF	$200.00	$248,000.00
13	60" RCP Storm Sewer Pipe	2,600 LF	$250.00	$650,000.00
14	60" RCP Flared End Section	1 EA	$1,900.00	$1,900.00
15	Asphalt Surfacing	130 TN	$110.00	$14,300.00
16	Double Blotter Coat	18,760 SY	$8.00	$150,080.00
17	Gravel Base Course and Surfacing	8,200 TN	$20.00	$164,000.00
18	Topsoil, Seed, Fertilizer & Mulch	8,200 SY	$1.50	$12,300.00
19	Traffic Control	1 LS	$10,000.00	$10,000.00
20	Erosion Control	1 LS	$25,000.00	$25,000.00
21	Incidental Construction	1 LS	$212,000.00	$212,000.00
			Subtotal	$2,433,890.00
			Contingencies (12%)	$292,110.00
			Construction Total	$2,726,000.00
			Design Engineering	$152,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$228,000.00
			Administration and Legal	$82,000.00
			Total Project Cost	$3,193,000.00

7.3.4 Replacement Option 4A: Northeast Drainage System

Replacement Option 4A proposes the installation of a new underground piping system with inlets to replace the existing storm sewer system. The system will be designed to convey a 3.1-inch-per-hour rain event. The drainage system will consist of approximately 8,000 linear feet of reinforced concrete pipe, 36 storm sewer inlets and 24 storm sewer manholes.

A preliminary storm drainage system layout is shown in Figure 7.3. The estimated project cost for the proposed system is shown in Table 7.3. Storm sewer calculations have been provided in Appendix E.

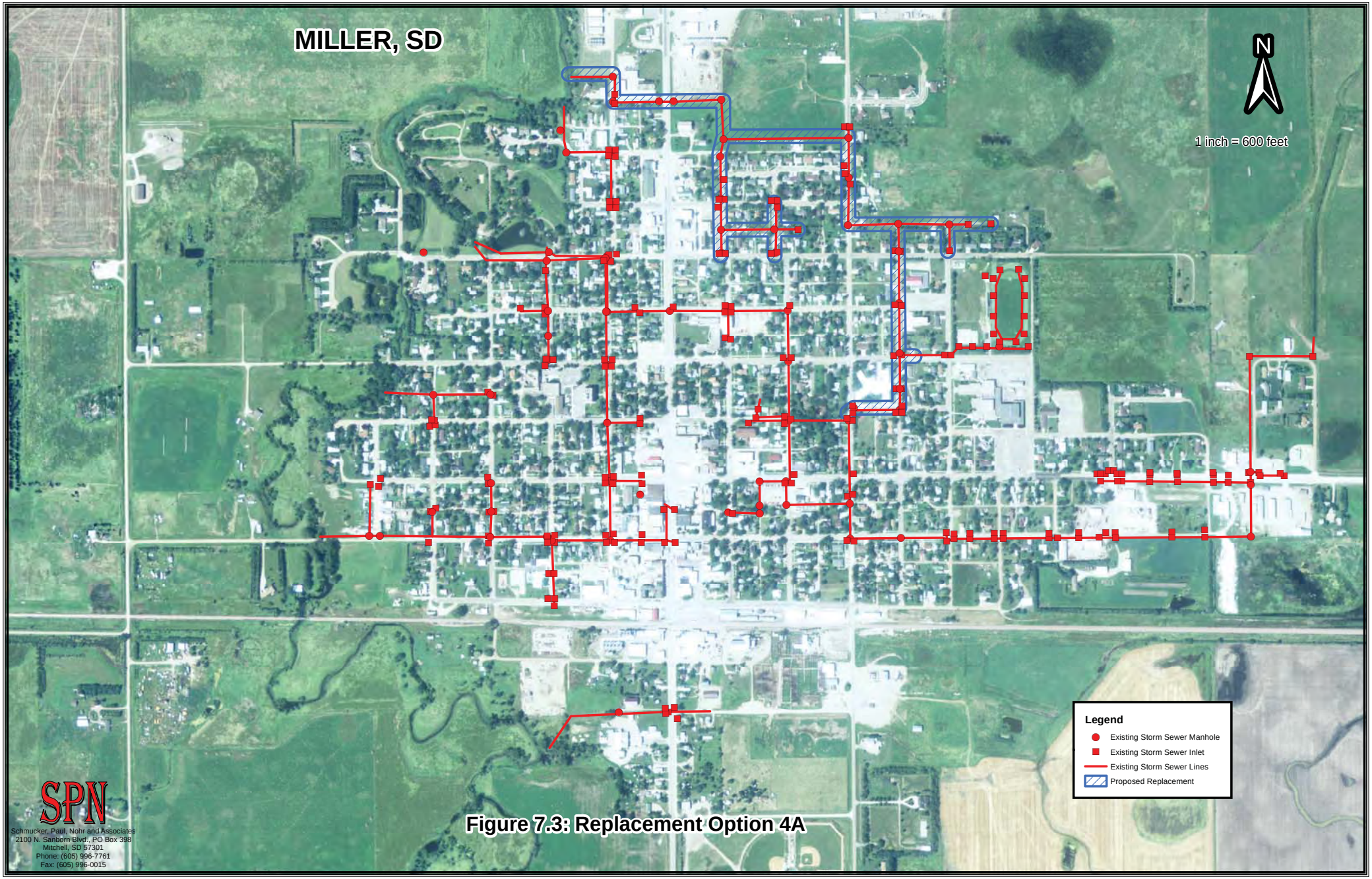

Figure 7.3: Replacement Option 4A

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Table 7.3: Estimated Project Cost for Replacement Option 4A

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$198,000.00	$198,000.00
2	Pulverize and Salvage Existing Asphalt	20,400 SY	$3.50	$71,400.00
3	Remove and Dispose Existing Structures	57 EA	$400.00	$22,800.00
4	Remove Storm Sewer Pipe (12"-24")	3,570 LF	$25.00	$89,250.00
5	Remove Storm Sewer Pipe (27"-42")	4,880 LF	$35.00	$170,800.00
6	Storm Sewer Inlet	36 EA	$3,000.00	$108,000.00
7	Storm Sewer Manhole	24 EA	$5,000.00	$120,000.00
8	12" RCP Storm Sewer Pipe	540 LF	$50.00	$27,000.00
9	18" RCP Storm Sewer Pipe	262 LF	$60.00	$15,720.00
10	24" RCP Storm Sewer Pipe	2,236 LF	$80.00	$178,880.00
11	30" RCP Storm Sewer Pipe	402 LF	$90.00	$36,180.00
12	36" RCP Storm Sewer Pipe	665 LF	$110.00	$73,150.00
13	42" RCP Storm Sewer Pipe	411 LF	$125.00	$51,375.00
14	54" RCP Storm Sewer Pipe	957 LF	$200.00	$191,400.00
15	60" RCP Storm Sewer Pipe	3,510 LF	$250.00	$877,500.00
16	60" RCP Flared End Section	1 EA	$1,900.00	$1,900.00
17	Asphalt Surfacing	200 TN	$110.00	$22,000.00
18	Double Blotter Coat	20,400 SY	$8.00	$163,200.00
19	Gravel Base Course and Surfacing	11,300 TN	$20.00	$226,000.00
20	Topsoil, Seed, Fertilizer & Mulch	18,800 SY	$1.50	$28,200.00
21	Traffic Control	1 LS	$15,000.00	$15,000.00
22	Erosion Control	1 LS	$50,000.00	$50,000.00
23	Incidental Construction	1 LS	$124,000.00	$124,000.00
			Subtotal	$2,861,755.00
			Contingencies (12%)	$344,245.00
			Construction Total	$3,206,000.00
			Design Engineering	$177,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$266,000.00
			Administration and Legal	$97,000.00
			Total Project Cost	$3,751,000.00

7.3.5 Replacement Option 4B: Northeast Drainage System Extension

Option 4B proposes extending a storm sewer line to a proposed development to the northeast of the West First Avenue and West Tenth Street intersection. An existing drainage ditch would be utilized to channel flow to a 24-inch reinforced concrete pipe to an existing 42-inch reinforced concrete pipe and a proposed 60-inch reinforced concrete pipe which would be installed parallel to the 42-inch pipe. The system will be designed to convey a 3.1-inch-per-hour rain event. The estimated project cost for the proposed system is shown in Table 7.4. A preliminary storm drainage system layout is shown in Figure 7.4. Storm sewer calculations have been provided in Appendix E.

Table 7.4: Estimated Project Cost for Option 4B

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$54,000.00	$54,000.00
2	Pulverize and Salvage Existing Asphalt	1,600 SY	$3.50	$5,600.00
3	Remove and Dispose Existing Structures	5 EA	$400.00	$2,000.00
4	Remove Storm Sewer Pipe (27"-42")	1,250 LF	$35.00	$43,750.00
5	10' x 5' Box	6 EA	$7,500.00	$45,000.00
6	24" RCP Storm Sewer Pipe	550 LF	$80.00	$44,000.00
7	60" RCP Storm Sewer Pipe	1,250 LF	$250.00	$312,500.00
8	60" RCP Flared End Section	1 EA	$1,900.00	$1,900.00
9	Bore 60" RCP Storm Pipe	120 LF	$650.00	$78,000.00
10	Double Blotter Coat	1,600 SY	$8.00	$12,800.00
11	Gravel Base Course and Surfacing	1,800 TN	$20.00	$36,000.00
12	Topsoil, Seed, Fertilizer & Mulch	5,200 SY	$1.50	$7,800.00
13	Traffic Control	1 LS	$1,500.00	$1,500.00
14	Erosion Control	1 LS	$6,000.00	$6,000.00
15	Incidental Construction	1 LS	$30,000.00	$30,000.00
			Subtotal	$680,850.00
			Contingencies (12%)	$82,150.00
			Construction Total	$763,000.00
			Design Engineering	$52,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$78,000.00
			Administration and Legal	$23,000.00
			Total Project Cost	$921,000.00

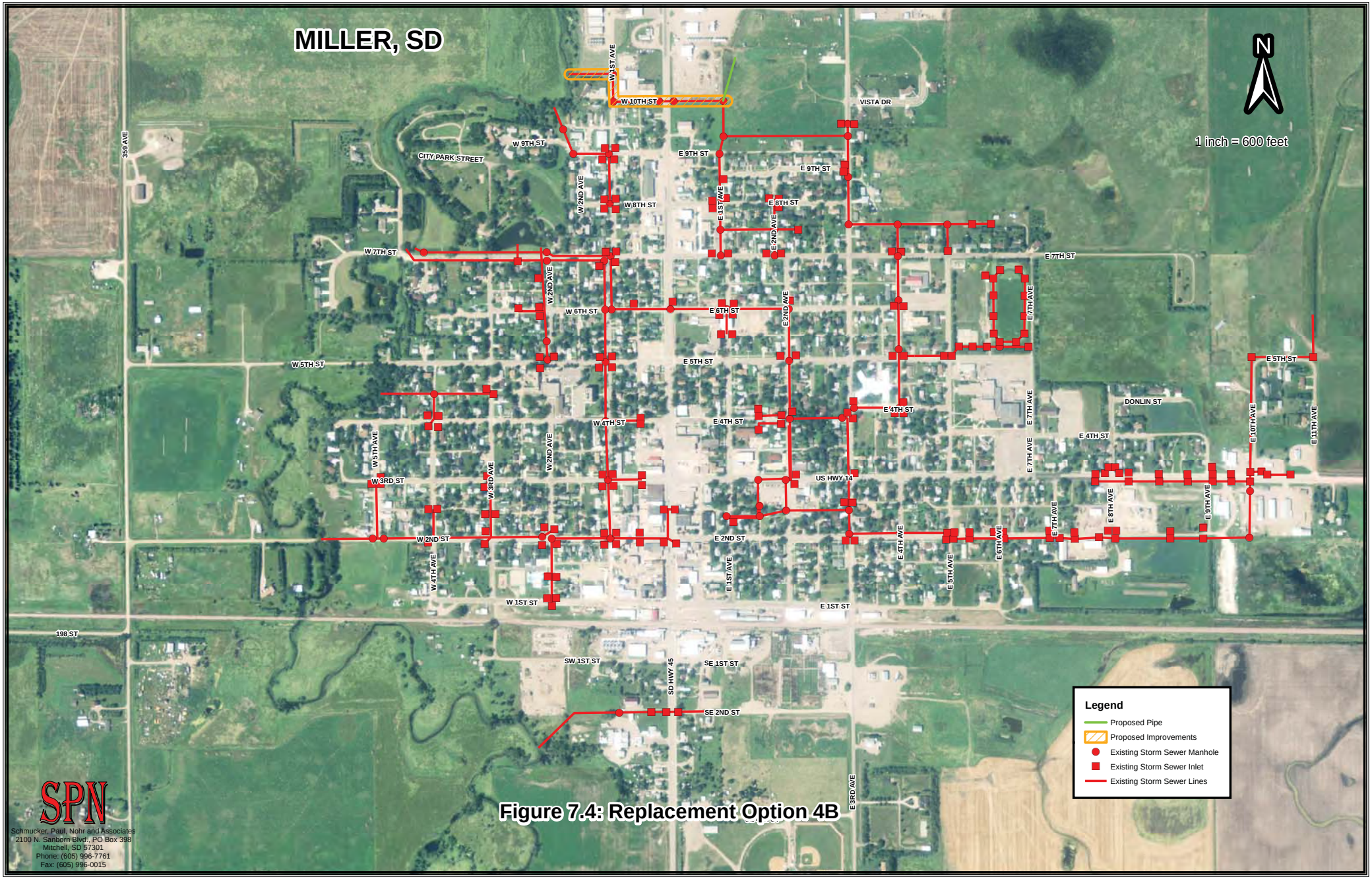

Figure 7.4: Replacement Option 4B

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7.3.6 Replacement Option 5: Southeast Drainage System

Replacement Option 5 evaluates upgrading the Southeast Drainage System. A portion of the drainage system lies under US Highway 14. Generally, construction through US and SD highways are avoided due to high costs and permits. The previously installed system was only capable of conveying a 1.67-inch-per-hour storm event due to limitations of the Department of Transportation storm sewer piping. However, since a 1.67-inch-per-hour storm event is less than the target 3.1 inch-per-hour storm event, the option discussed will show the cost for maximizing the efficiency to update the entire system to convey a 3.1-inch-per-hour event.

Replacement Option 5 proposes the installation of a new underground piping system with inlets. The improvements would be designed to convey a 3.1-inch-per-hour rain event. Ditch shaping has been proposed to reduce the likelihood of storm water from reaching the City from the creek through a 36-inch reinforced concrete pipe located just to the east of the City under the railroad tracks. An area inlet will be added at the intersection of Second Street and East Tenth Avenue to catch storm water routed by the ditching to the storm piping system. From this intersection to the north, a dual piping system will be utilized to provide the needed capacity generated from the additional storm water. The drainage system will consist of approximately 6,500 linear feet of reinforced concrete pipe, 22 storm sewer inlets, nine storm sewer manholes and 4,000 linear feet of ditch shaping.

A preliminary storm drainage system layout is shown in Figure 7.5. The estimated project cost for the proposed system is shown in Table 7.5. Storm sewer calculations have been provided in Appendix E.

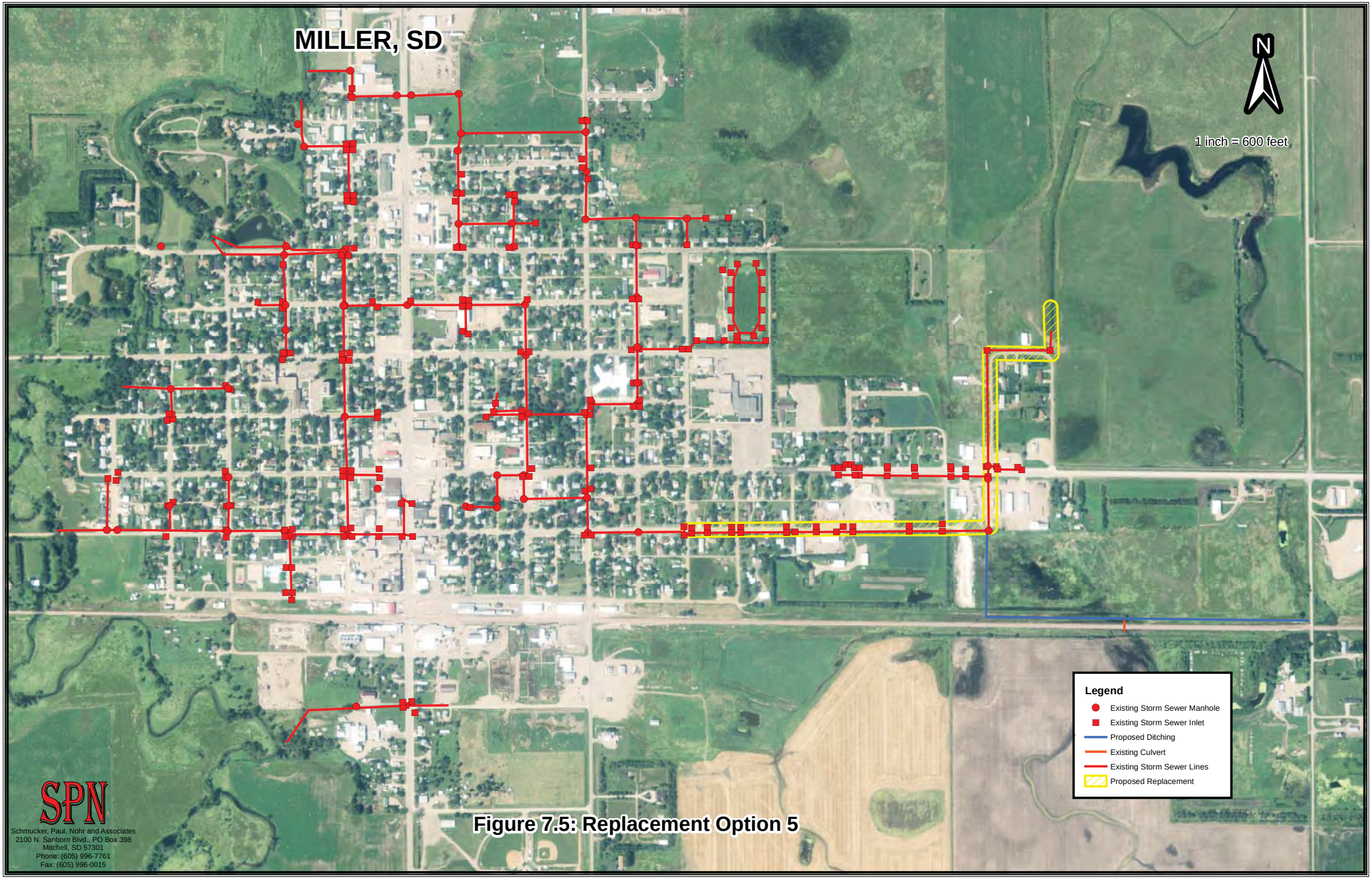

Figure 7.5: Replacement Option 5

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Table 7.5: Estimated Project Cost for Replacement Option 5

1	Mobilization	1	LS	$134,000.00	$134,000.00
2	Pulverize and Salvage Existing Asphalt	6,400	SY	$3.50	$22,400.00
3	Remove and Dispose Existing Structures	25	EA	$400.00	$10,000.00
4	Remove Storm Sewer Pipe (12"-24")	3,400	LF	$25.00	$85,000.00
5	Remove Storm Sewer Pipe (27"-42")	1,500	LF	$35.00	$52,500.00
6	Storm Sewer Inlet	22	EA	$3,000.00	$66,000.00
7	Storm Sewer Manhole	9	EA	$5,000.00	$45,000.00
8	12" RCP Storm Sewer Pipe	440	LF	$50.00	$22,000.00
9	24" RCP Storm Sewer Pipe	700	LF	$80.00	$56,000.00
10	18" RCP Storm Sewer Pipe	38	LF	$70.00	$2,660.00
11	30" RCP Storm Sewer Pipe	54	LF	$90.00	$4,860.00
12	36" RCP Storm Sewer Pipe	50	LF	$110.00	$5,500.00
13	42" RCP Storm Sewer Pipe	354	LF	$125.00	$44,250.00
14	48" RCP Storm Sewer Pipe	810	LF	$150.00	$121,500.00
15	54" RCP Storm Sewer Pipe	1,000	LF	$200.00	$200,000.00
16	Dual 48" RCP Storm Sewer Pipe	2,100	LF	$290.00	$609,000.00
17	Dual 48" RCP Flared End Sections	2	EA	$3,000.00	$6,000.00
18	Dual 48" RCP Bore	100	LF	$650.00	$65,000.00
19	Double Blotter Coat	6,400	SY	$8.00	$51,200.00
20	Gravel Base Course and Surfacing	7,400	TN	$20.00	$148,000.00
21	Ditch Shaping	4,000	LF	$3.50	$14,000.00
22	Topsoil, Seed, Fertilizer & Mulch	12,400	SY	$1.50	$18,600.00
23	Traffic Control	1	LS	$9,000.00	$9,000.00
24	Erosion Control	1	LS	$33,000.00	$33,000.00
25	Incidental Construction	1	LS	$182,000.00	$182,000.00
				Subtotal	$2,007,470.00
				Contingencies (12%)	$241,530.00
				Construction Total	$2,249,000.00
				Design Engineering	$128,000.00
				Bidding and Contract Documents	$5,000.00
				Construction Engineering	$192,000.00
				Administration and Legal	$68,000.00
				Total Project Cost	$2,642,000.00

7.3.7 Replacement Option 6: West Second Street Drainage System

Replacement Option 6 proposes the installation of a new underground piping system with inlets. The system will be designed to convey a 3.1-inch-per-hour rain event. The system has been rerouted in order to accommodate the proposed sanitary sewer installation on East First Street and West Third Avenue. The drainage system will consist of approximately 3,800 linear feet of reinforced concrete pipe, 18 storm sewer inlets and seven storm sewer manholes. A preliminary storm drainage system layout is shown in Figure 7.6. The estimated project cost for the proposed system is shown in Table 7.6. Storm sewer calculations have been provided in Appendix E.

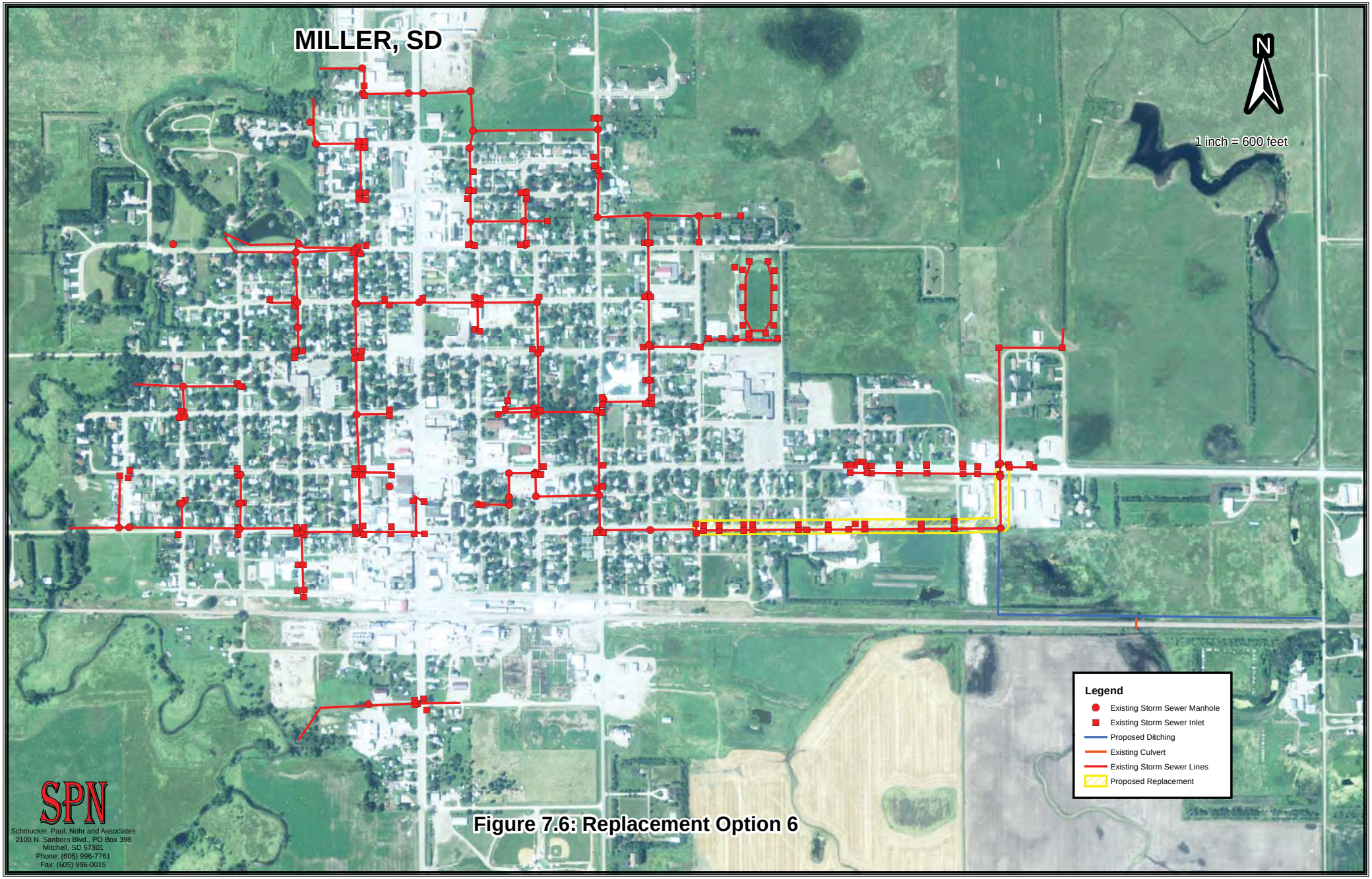

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Figure 7.6: Replacement Option 6

Table 7.6: Estimated Project Cost for Replacement Option 6

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$82,000.00	$82,000.00
2	Remove Asphalt Surfacing	14,100 SY	$3.00	$42,300.00
3	Remove Storm Sewer Pipe (12"-24")	3,795 LF	$20.00	$75,900.00
4	Storm Sewer Inlet	18 EA	$3,000.00	$54,000.00
5	Storm Sewer Manhole	7 EA	$5,000.00	$35,000.00
6	12" RCP Storm Sewer Pipe	270 LF	$50.00	$13,500.00
7	15" RCP Storm Sewer Pipe	600 LF	$60.00	$36,000.00
8	18" RCP Storm Sewer Pipe	200 LF	$70.00	$14,000.00
9	24" RCP Storm Sewer Pipe	200 LF	$80.00	$16,000.00
10	30" RCP Storm Sewer Pipe	900 LF	$90.00	$81,000.00
11	36" RCP Storm Sewer Pipe	475 LF	$110.00	$52,250.00
12	42" RCP Storm Sewer Pipe	1,150 LF	$125.00	$143,750.00
13	42" RCP Flared End Section	1 EA	$1,400.00	$1,400.00
14	Double Blotter Coat	14,100 SY	$8.00	$112,800.00
15	Gravel Base Course and Surfacing	6,200 TN	$20.00	$124,000.00
16	Topsoil, Seed, Fertilizer & Mulch	7,900 SY	$1.50	$11,850.00
17	Traffic Control	1 LS	$9,000.00	$9,000.00
18	Erosion Control	1 LS	$25,000.00	$25,000.00
19	Incidental Construction	1 LS	$98,000.00	$98,000.00
			Subtotal	$1,027,750.00
			Contingencies (15%)	$154,250.00
			Construction Total	$1,182,000.00
			Design Engineering	$73,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$110,000.00
			Administration and Legal	$36,000.00
			Total Project Cost	$1,406,000.00

7.3.8 Replacement Option 7: West Alley Drainage System

Replacement Option 7 proposes the installation of a new underground piping system with inlets. The system will be designed to convey a 3.1-inch-per-hour rain event. The drainage system will consist of approximately 1,100 linear feet of reinforced concrete pipe, six storm sewer inlets and three storm sewer manholes.

The estimated project cost for the proposed system is shown in Table 7.7. A preliminary storm drainage system layout is shown in Figure 7.7. Storm sewer calculations have been provided in Appendix E.

Table 7.7: Estimated Project Cost for Replacement Option 7

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$21,000.00	$21,000.00
2	Remove Asphalt Surfacing	3,200 SY	$3.00	$9,600.00
3	Storm Sewer Inlet	6 EA	$3,000.00	$18,000.00
4	Storm Sewer Manhole	3 EA	$5,000.00	$15,000.00
5	12" RCP Storm Sewer Pipe	72 LF	$50.00	$3,600.00
6	24" RCP Storm Sewer Pipe	200 LF	$80.00	$16,000.00
7	30" RCP Storm Sewer Pipe	400 LF	$90.00	$36,000.00
8	36" RCP Storm Sewer Pipe	400 LF	$110.00	$44,000.00
9	36" RCP Flared End Section	1 EA	$1,200.00	$1,200.00
10	Double Blotter Coat	3,200 SY	$8.00	$25,600.00
11	Gravel Base Course and Surfacing	1,400 TN	$20.00	$28,000.00
12	Topsoil, Seed, Fertilizer & Mulch	2,300 SY	$1.50	$3,450.00
13	Traffic Control	1 LS	$3,000.00	$3,000.00
14	Erosion Control	1 LS	$7,000.00	$7,000.00
15	Incidental Construction	1 LS	$25,000.00	$25,000.00
			Subtotal	$256,450.00
			Contingencies (15%)	$38,550.00
			Construction Total	$295,000.00
			Design Engineering	$24,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$36,000.00
			Administration and Legal	$9,000.00
			Total Project Cost	$369,000.00

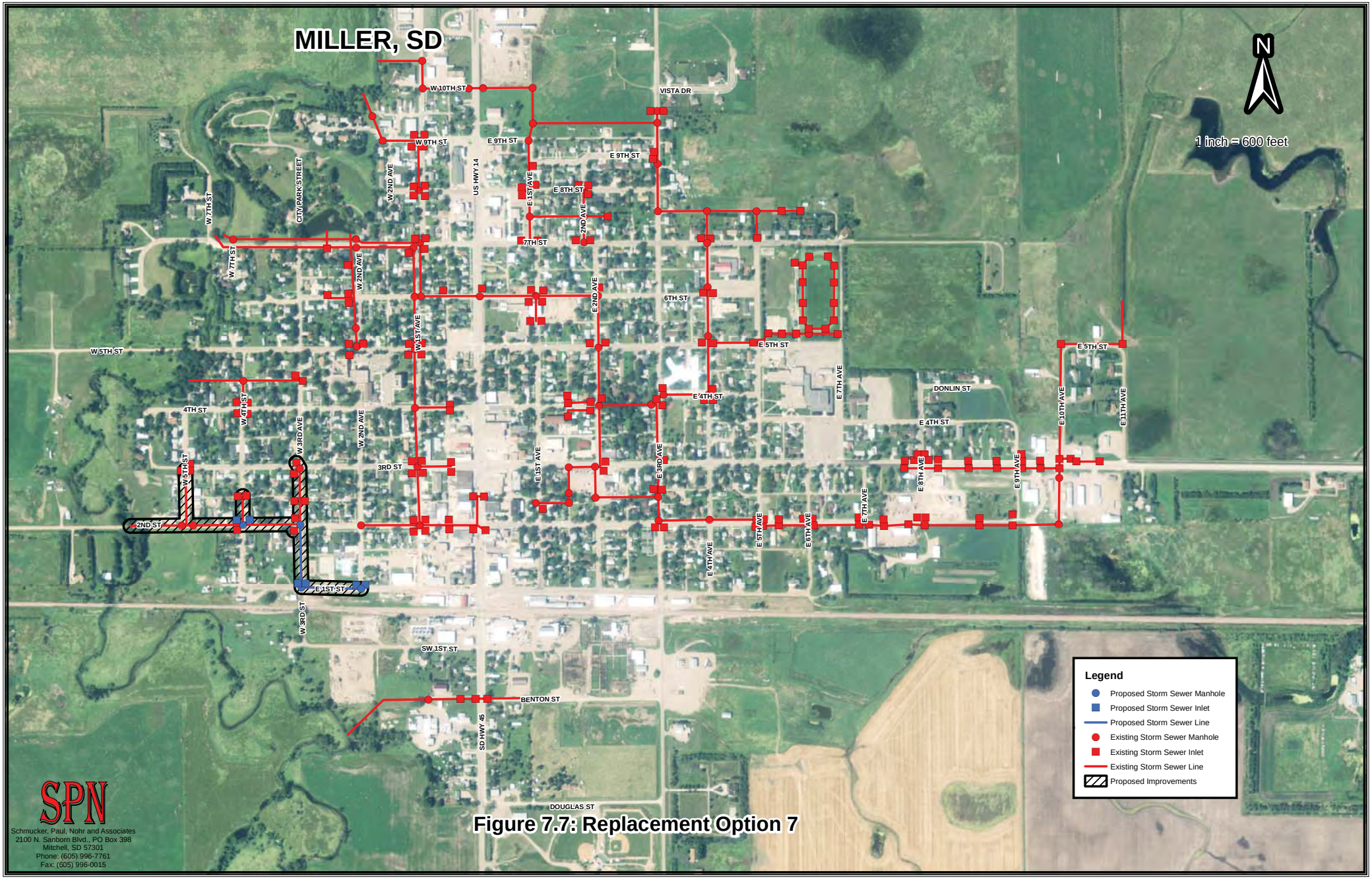

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Figure 7.7: Replacement Option 7

7.3.9 Replacement Option 8: West First Avenue Drainage System

Replacement Option 8 proposes the installation of a new underground piping system with inlets. The system will be designed to convey a 3.1-inch-per-hour rain event. The drainage system will consist of approximately 1,000 linear feet of reinforced concrete pipe, eight storm sewer inlets and three storm sewer manholes.

The estimated project cost for the proposed system is shown in Table 7.8. A preliminary storm drainage system layout is shown in Figure 7.8. Storm sewer calculations have been provided in Appendix E.

Table 7.8: Estimated Project Cost for Replacement Option 8

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$21,000.00	$21,000.00
2	Remove Asphalt Surfacing	3,200 SY	$3.00	$9,600.00
3	Storm Sewer Inlet	8 EA	$3,000.00	$24,000.00
4	Storm Sewer Manhole	3 EA	$5,000.00	$15,000.00
5	12" RCP Storm Sewer Pipe	96 LF	$50.00	$4,800.00
6	30" RCP Storm Sewer Pipe	1,000 LF	$90.00	$90,000.00
7	30" RCP Flared End Section	1 EA	$1,100.00	$1,100.00
8	Double Blotter Coat	3,200 SY	$8.00	$25,600.00
9	Gravel Base Course and Surfacing	1,400 TN	$20.00	$28,000.00
10	Topsoil, Seed, Fertilizer & Mulch	2,300 SY	$1.50	$3,450.00
11	Traffic Control	1 LS	$3,000.00	$3,000.00
12	Erosion Control	1 LS	$7,000.00	$7,000.00
13	Incidental Construction	1 LS	$25,000.00	$25,000.00
			Subtotal	$257,550.00
			Contingencies (15%)	$39,450.00
			Construction Total	$297,000.00
			Design Engineering	$24,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$36,000.00
			Administration and Legal	$9,000.00
			Total Project Cost	$371,000.00

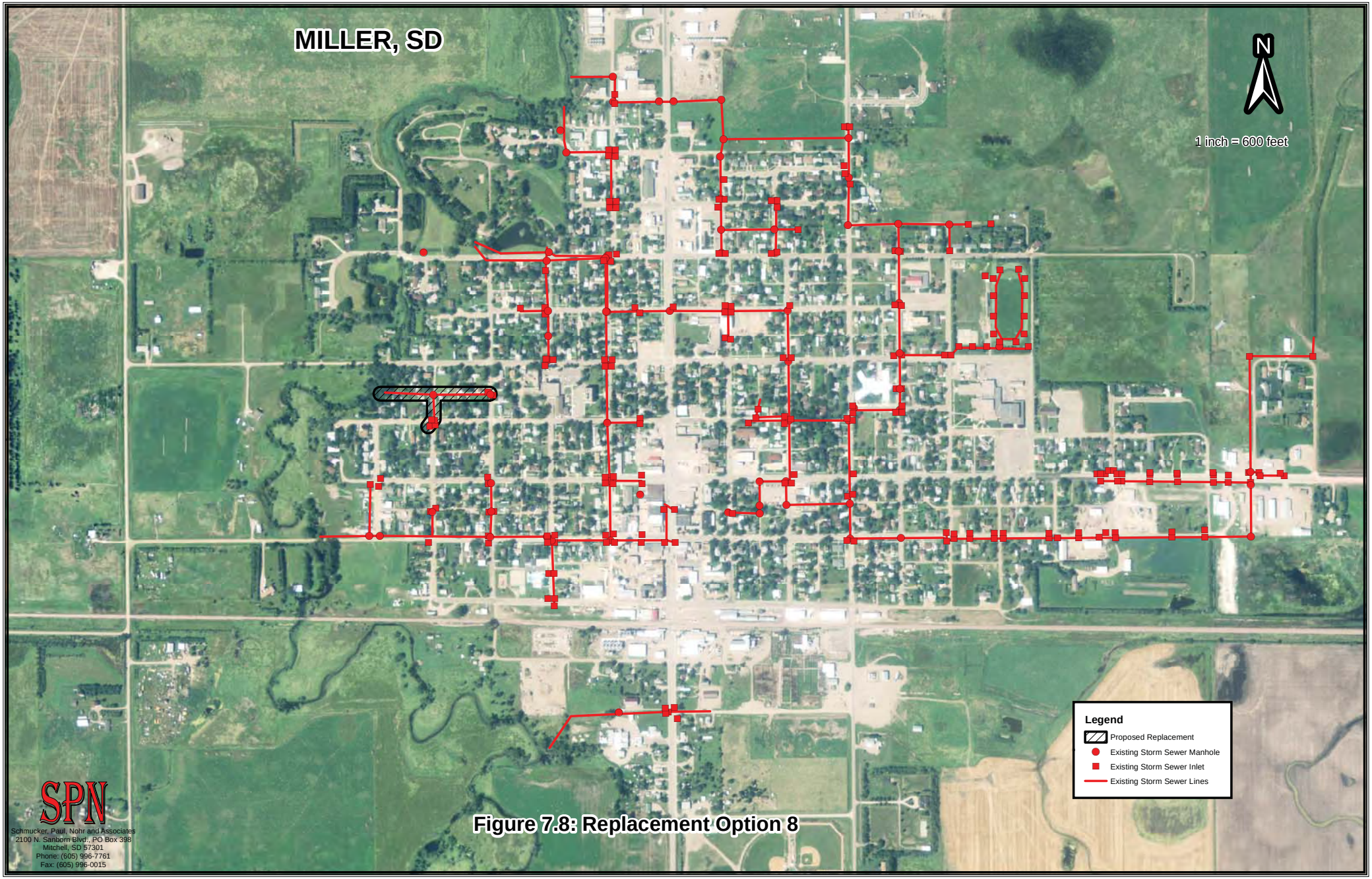

Figure 7.8: Replacement Option 8

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7.3.10 Replacement Option 9: Second Street Southwest Drainage System

Replacement Option 9 proposes the installation of a new underground piping system with inlets. The system will be designed to convey a 3.1-inch-per-hour rain event. The drainage system will consist of approximately 1,250 linear feet of reinforced concrete pipe, four storm sewer inlets and three storm sewer manholes. The estimated project cost for the proposed system is shown in Table 7.9. A preliminary storm drainage system layout is shown in Figure 7.9. Storm sewer calculations have been provided in Appendix E.

Table 7.9: Estimated Project Cost for Replacement Option 9

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$18,000.00	$18,000.00
2	Remove Asphalt Surfacing	700 SY	$3.00	$2,100.00
3	Storm Sewer Inlet	4 EA	$3,000.00	$12,000.00
4	Storm Sewer Manhole	3 EA	$5,000.00	$15,000.00
5	12" RCP Storm Sewer Pipe	48 LF	$50.00	$2,400.00
6	30" RCP Storm Sewer Pipe	1,200 LF	$90.00	$108,000.00
7	30" Flared End Section	1 EA	$1,100.00	$1,100.00
8	Asphalt Surfacing	200 TN	$110.00	$22,000.00
9	Gravel Base Course and Surfacing	300 TN	$20.00	$6,000.00
10	Topsoil, Seed, Fertilizer & Mulch	2,700 SY	$1.50	$4,050.00
11	Traffic Control	1 LS	$2,000.00	$2,000.00
12	Erosion Control	1 LS	$6,000.00	$6,000.00
13	Incidental Construction	1 LS	$21,000.00	$21,000.00
			Subtotal	$219,650.00
			Contingencies (15%)	$33,350.00
			Construction Total	$253,000.00
			Design Engineering	$22,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$33,000.00
			Administration and Legal	$8,000.00
			Total Project Cost	$321,000.00

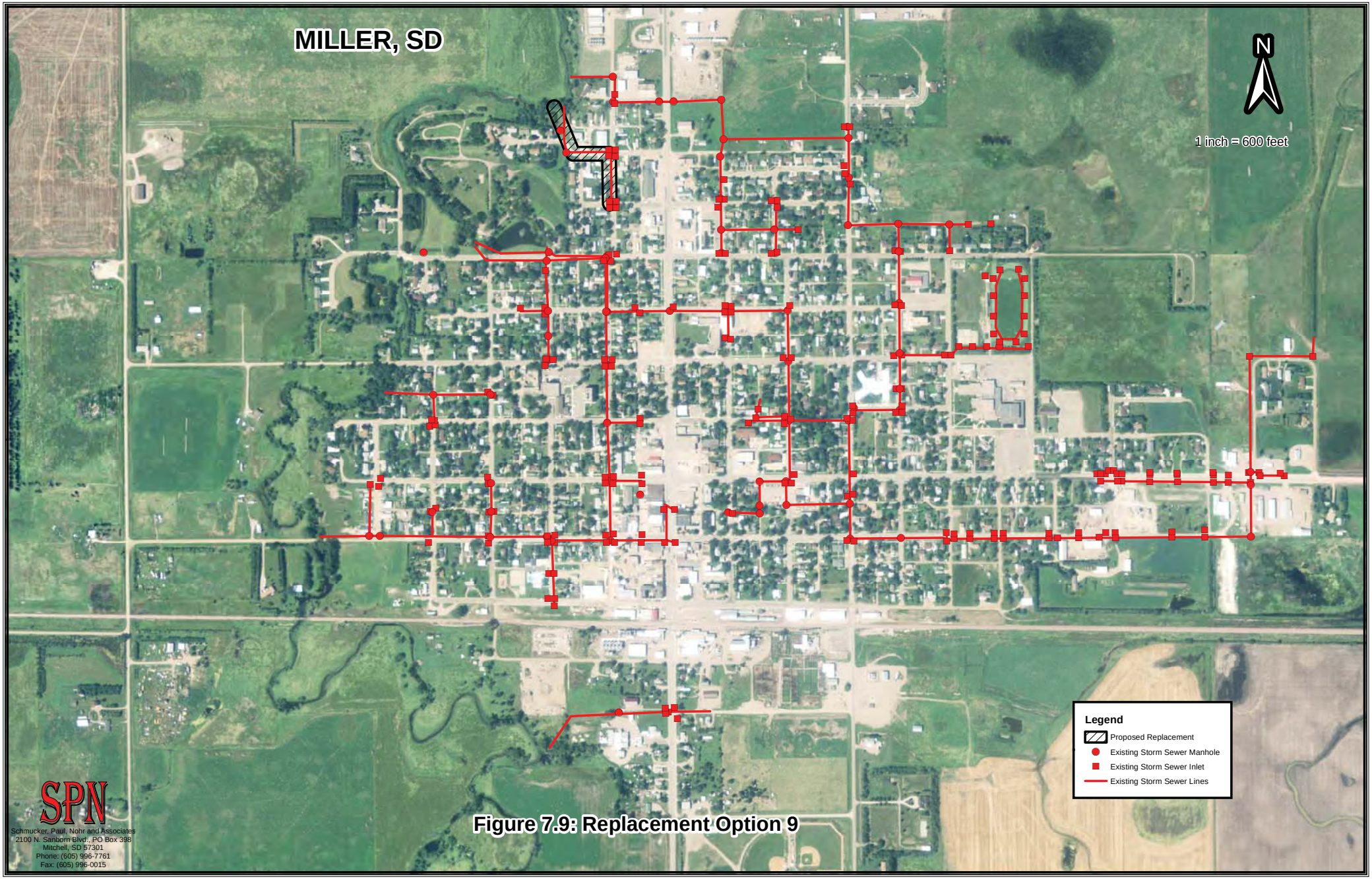

Figure 7.9: Replacement Option 9

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7.3.11 Replacement Option 10: Spot Repairs

Replacement Option 10 proposes replacing inlets and sections of pipe found to be deficient and in need of replacement during the cleaning and televising completed in 2015. The estimated project cost for the proposed improvements is shown in Table 7.10.

Table 7.10: Estimated Project Cost for Replacement Option 10

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$10,000.00	$10,000.00
2	Pulverize and Salvage Existing Asphalt	350 SY	$3.50	$1,225.00
3	Remove and Dispose Existing Structures	10 EA	$400.00	$4,000.00
4	Storm Sewer Inlet - Spot Repairs	16 EA	$3,500.00	$56,000.00
5	Connect to Existing Storm Pipe - Spot Repairs	10 EA	$1,500.00	$15,000.00
6	New Storm Sewer Casting	2 EA	$500.00	$1,000.00
7	Storm Sewer Pipe - Spot Repairs	70 LF	$75.00	$5,250.00
8	12" RCP Storm Sewer Pipe	70 LF	$50.00	$3,500.00
9	Asphalt Surfacing	70 TN	$110.00	$7,700.00
10	Gravel Base Course and Surfacing	200 TN	$20.00	$4,000.00
11	Topsoil, Seed, Fertilizer & Mulch	400 SY	$1.50	$600.00
12	Traffic Control	1 LS	$2,500.00	$2,500.00
13	Erosion Control	1 LS	$1,000.00	$1,000.00
14	Incidental Construction	1 LS	$10,000.00	$10,000.00
			Subtotal	$121,775.00
			Contingencies (12%)	$15,225.00
			Construction Total	$137,000.00
			Design Engineering	$13,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$20,000.00
			Administration and Legal	$5,000.00
			Total Project Cost	$180,000.00

7.3.12 Replacement Option 11: Phased Storm Sewer Improvements

The City of Miller plans to complete the storm sewer improvements in conjunction with the proposed water and sanitary sewer improvements. For this reason, the replacement options need to be customized to accommodate the priorities of the water and sanitary sewer improvements.

7.3.12.1 Storm Sewer Improvements Phase 1

Phase 1 proposes updating the Central Drainage Storm Sewer System from East Third Street to the south. The storm sewer improvements would be coordinated with water and sewer improvements also being completed in the area. The downstream piping will remain undersized until replaced as part of a Phase 2 project. Phase 1 improvements will also include extending storm sewer piping to a proposed development located northeast of the SD Highway 45 and West 10th Street intersection as proposed in Replacement Option 4B. A preliminary storm drainage system layout is shown in Figure 7.10. The estimated project cost for the proposed system is shown in Table 7.11.

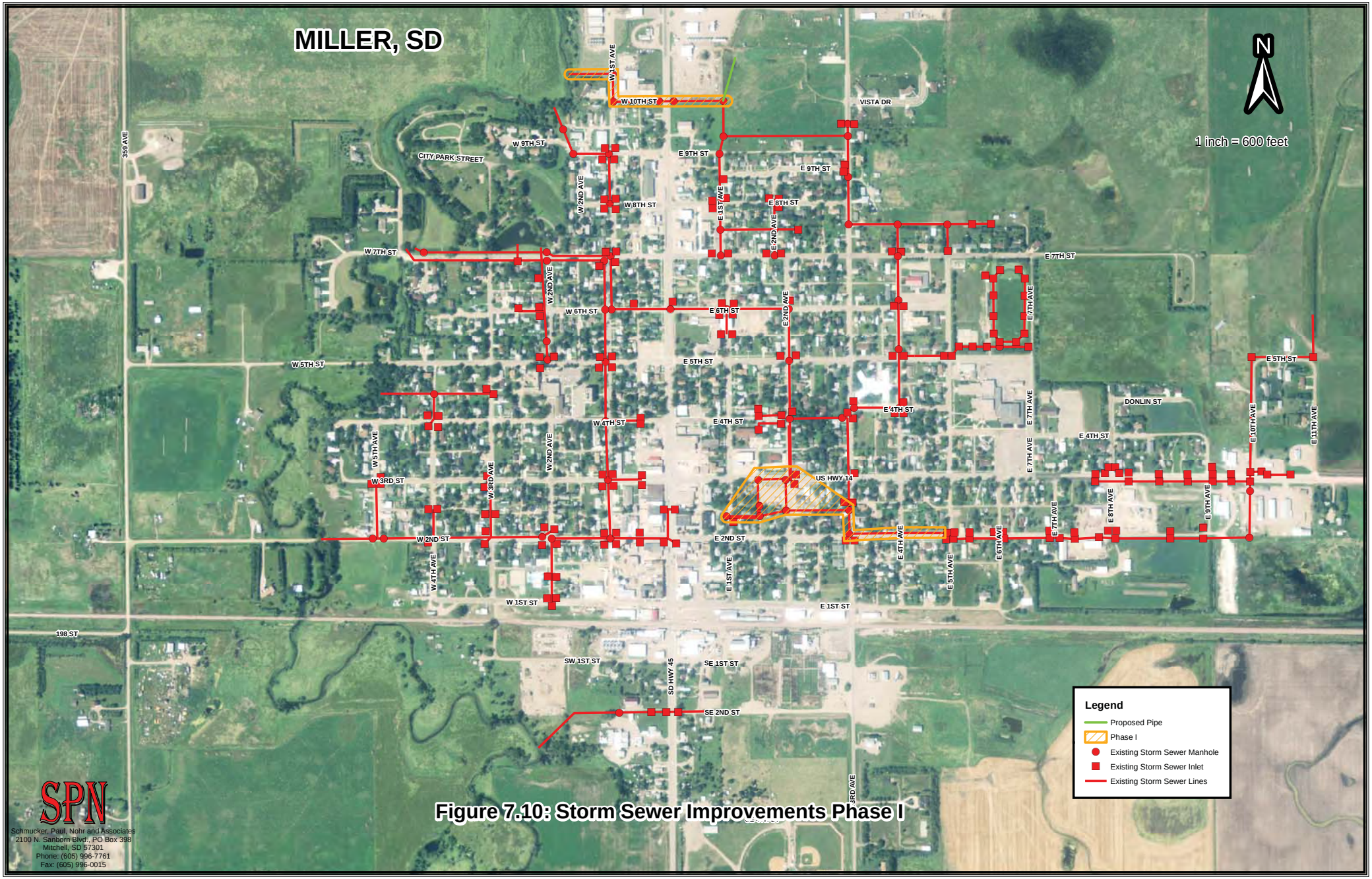

Figure 7.10: Storm Sewer Improvements Phase I

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Table 7.11: Estimated Project Cost for Storm Sewer Phase 1

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$65,000.00	$65,000.00
2	Pulverize and Salvage Existing Asphalt	7,670 SY	$3.50	$26,845.00
3	Remove and Dispose Existing Structures	10 EA	$400.00	$4,000.00
4	Remove Storm Sewer Pipe (12"-24")	2,050 LF	$25.00	$51,250.00
5	Storm Sewer Inlet	22 EA	$3,000.00	$66,000.00
6	Storm Sewer Inlet - Spot Repairs	16 EA	$3,500.00	$56,000.00
7	Connect to Existing Storm Pipe - Spot Repairs	10 EA	$1,500.00	$15,000.00
8	New Storm Sewer Casting	2 EA	$500.00	$1,000.00
9	Storm Sewer Manhole	12 EA	$5,000.00	$60,000.00
10	Storm Sewer Pipe - Spot Repairs	70 LF	$75.00	$5,250.00
11	12" RCP Storm Sewer Pipe	422 LF	$50.00	$21,100.00
12	24" RCP Storm Sewer Pipe	700 LF	$80.00	$56,000.00
13	30" RCP Storm Sewer Pipe	1,350 LF	$90.00	$121,500.00
14	Asphalt Surfacing	200 TN	$110.00	$22,000.00
15	Double Blotter Coat	7,670 SY	$8.00	$61,360.00
16	Gravel Base Course and Surfacing	3,650 TN	$20.00	$73,000.00
17	Topsoil, Seed, Fertilizer & Mulch	4,600 SY	$1.50	$6,900.00
18	Traffic Control	1 LS	$2,500.00	$2,500.00
19	Erosion Control	1 LS	$7,000.00	$7,000.00
20	Incidental Construction	1 LS	$48,000.00	$48,000.00
			Subtotal	$769,705.00
			Contingencies (12%)	$93,295.00
			Construction Total	$863,000.00
			Design Engineering	$57,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$86,000.00
			Administration and Legal	$26,000.00
			Total Project Cost	$1,037,000.00

7.3.12.2 Storm Sewer Improvements Phase 2

Phase 2 proposes completing the Central Drainage System as described in Replacement Option 3. The storm sewer improvements would be coordinated with water and sewer improvements also being completed in the area. Due to the planned sanitary sewer improvements proposed storm sewer improvements will be completed on East 2nd Street from East 5th Avenue to East 6th Avenue. The downstream piping will remain undersized until replaced as part of a Phase 3 project. A preliminary storm drainage system layout is shown in Figure 7.11. The estimated project cost for the proposed system is shown in Table 7.12.

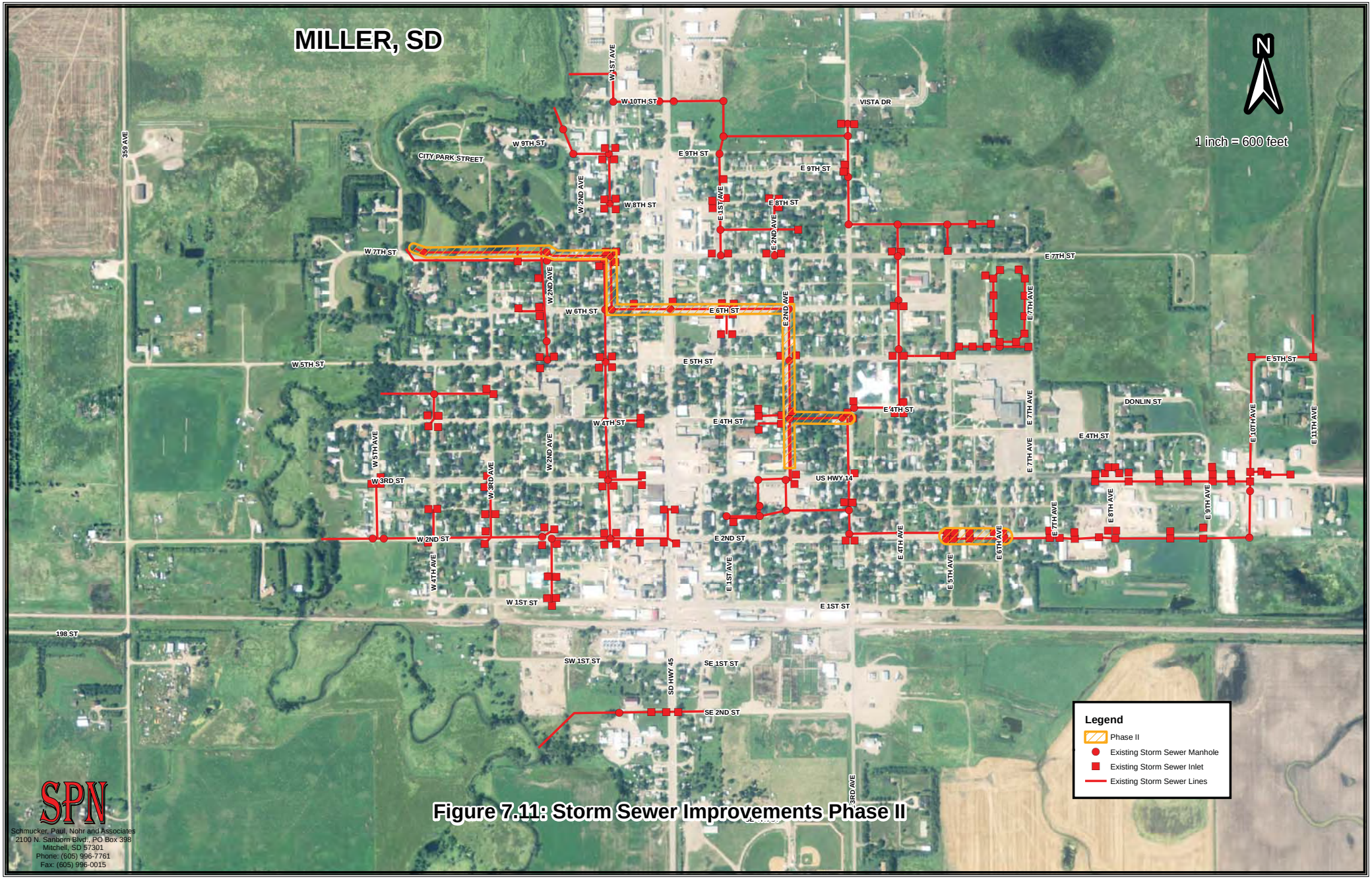

Figure 7.11: Storm Sewer Improvements Phase II

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Table 7.12: Estimated Project Cost for Storm Sewer Phase 2

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$149,000.00	$149,000.00
2	Pulverize and Salvage Existing Asphalt	14,760 SY	$3.50	$51,660.00
3	Remove and Dispose Existing Structures	47 EA	$400.00	$18,800.00
4	Remove Storm Sewer Pipe (12"-24")	2,476 LF	$25.00	$61,900.00
5	Remove Storm Sewer Pipe (27"-36")	3,900 LF	$35.00	$136,500.00
6	Storm Sewer Inlet	42 EA	$3,000.00	$126,000.00
7	Storm Sewer Manhole	18 EA	$5,000.00	$90,000.00
8	12" RCP Storm Sewer Pipe	630 LF	$50.00	$31,500.00
9	18" RCP Storm Sewer Pipe	38 LF	$70.00	$2,660.00
10	24" RCP Storm Sewer Pipe	630 LF	$80.00	$50,400.00
11	30" RCP Storm Sewer Pipe	54 LF	$90.00	$4,860.00
12	36" RCP Storm Sewer Pipe	50 LF	$110.00	$5,500.00
13	42" RCP Storm Sewer Pipe	804 LF	$125.00	$100,500.00
14	54" RCP Storm Sewer Pipe	1,240 LF	$200.00	$248,000.00
15	60" RCP Storm Sewer Pipe	2,600 LF	$250.00	$650,000.00
16	60" RCP Flared End Section	1 EA	$1,900.00	$1,900.00
17	Asphalt Surfacing	200 TN	$110.00	$22,000.00
18	Double Blotter Coat	14,760 SY	$8.00	$118,080.00
19	Gravel Base Course and Surfacing	6,500 TN	$20.00	$130,000.00
20	Topsoil, Seed, Fertilizer & Mulch	6,200 SY	$1.50	$9,300.00
21	Traffic Control	1 LS	$10,000.00	$10,000.00
22	Erosion Control	1 LS	$25,000.00	$25,000.00
23	Incidental Construction	1 LS	$93,000.00	$93,000.00
			Subtotal	$2,136,560.00
			Contingencies (12%)	$256,440.00
			Construction Total	$2,393,000.00
			Design Engineering	$135,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$203,000.00
			Administration and Legal	$72,000.00
			Total Project Cost	$2,808,000.00

7.3.12.3 Storm Sewer Improvements Phase 3

Phase 3 proposes finishing the improvements started in Phase 2 as described in Replacement Option 5 Southeast Miller Storm Water Drainage System. The cost estimate for the remaining work from Option 5 is presented in Table 7.13. Storm Sewer Improvements Phase 3 also proposes installing new storm sewer improvements as described in Replacement Option 6 West Second Street Drainage System. The estimated project cost for the proposed system is shown in Table 7.13. A preliminary storm drainage system layout is shown in Figure 7.12.

Table 7.13: Estimated Project Cost for Remaining Work in Option 5

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$111,000.00	$111,000.00
2	Pulverize and Salvage Existing Asphalt	2,000 SY	$3.50	$7,000.00
3	Remove and Dispose Existing Structures	15 EA	$400.00	$6,000.00
4	Remove Storm Sewer Pipe (12"-24")	2,904 LF	$25.00	$72,600.00
5	Reomve Storm Sewer Pipe (27"-42")	1,500 LF	$35.00	$52,500.00
6	Storm Sewer Inlet	12 EA	$3,000.00	$36,000.00
7	Storm Sewer Manhole	9 EA	$5,000.00	$45,000.00
8	12" RCP Storm Sewer Pipe	240 LF	$50.00	$12,000.00
9	48" RCP Storm Sewer Pipe	810 LF	$150.00	$121,500.00
10	54" RCP Storm Sewer Pipe	1,000 LF	$200.00	$200,000.00
11	Dual 48" RCP Storm Sewer Pipe	2,100 LF	$290.00	$609,000.00
12	Dual 48" RCP Flared End Sections	2 EA	$3,000.00	$6,000.00
13	Dual 48" RCP Bore	100 LF	$650.00	$65,000.00
14	Double Blotter Coat	2,000 SY	$8.00	$16,000.00
15	Gravel Base Course and Surfacing	5,500 TN	$20.00	$110,000.00
16	Ditch Shaping	4,000 LF	$3.50	$14,000.00
17	Topsoil, Seed, Fertilizer & Mulch	9,300 SY	$1.50	$13,950.00
18	Traffic Control	1 LS	$7,000.00	$7,000.00
19	Erosion Control	1 LS	$28,000.00	$28,000.00
20	Incidental Construction	1 LS	$111,000.00	$111,000.00
			Subtotal	$1,643,550.00
			Contingencies (12%)	$197,450.00
			Construction Total	$1,841,000.00
			Design Engineering	$107,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$161,000.00
			Administration and Legal	$56,000.00
			Total Project Cost	$2,170,000.00

Table 7.14: Estimated Project Cost for Option 6

Item	Description	Quantity	Unit Price	Total Cost
1	Mobilization	1 LS	$82,000.00	$82,000.00
2	Remove Asphalt Surfacing	14,100 SY	$3.00	$42,300.00
3	Remove Storm Sewer Pipe (12"-24")	3,795 LF	$20.00	$75,900.00
4	Storm Sewer Inlet	18 EA	$3,000.00	$54,000.00
5	Storm Sewer Manhole	7 EA	$5,000.00	$35,000.00
6	12" RCP Storm Sewer Pipe	270 LF	$50.00	$13,500.00
7	15" RCP Storm Sewer Pipe	600 LF	$60.00	$36,000.00
8	18" RCP Storm Sewer Pipe	200 LF	$70.00	$14,000.00
9	24" RCP Storm Sewer Pipe	200 LF	$80.00	$16,000.00
10	30" RCP Storm Sewer Pipe	900 LF	$90.00	$81,000.00
11	36" RCP Storm Sewer Pipe	475 LF	$110.00	$52,250.00
12	42" RCP Storm Sewer Pipe	1,150 LF	$125.00	$143,750.00
13	42" RCP Flared End Section	1 EA	$1,400.00	$1,400.00
14	Double Blotter Coat	14,100 SY	$8.00	$112,800.00
15	Gravel Base Course and Surfacing	6,200 TN	$20.00	$124,000.00
16	Topsoil, Seed, Fertilizer & Mulch	7,900 SY	$1.50	$11,850.00
17	Traffic Control	1 LS	$9,000.00	$9,000.00
18	Erosion Control	1 LS	$25,000.00	$25,000.00
19	Incidental Construction	1 LS	$98,000.00	$98,000.00
			Subtotal	$1,027,750.00
			Contingencies (15%)	$154,250.00
			Construction Total	$1,182,000.00
			Design Engineering	$73,000.00
			Bidding and Contract Documents	$5,000.00
			Construction Engineering	$110,000.00
			Administration and Legal	$36,000.00
			Total Project Cost	$1,406,000.00

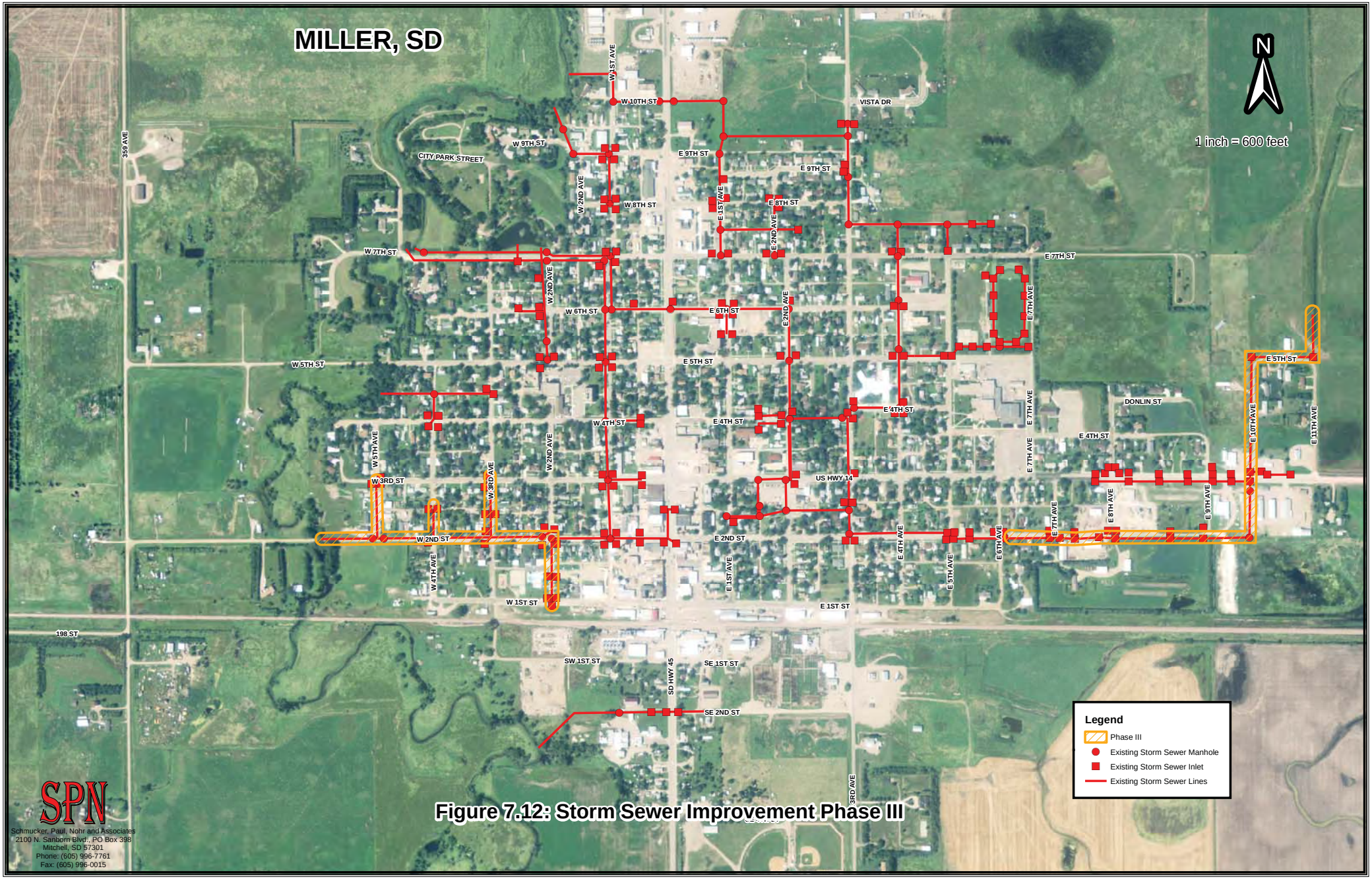

Figure 7.12: Storm Sewer Improvement Phase III

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8 STORM DRAINAGE RECOMMENDATIONS

The options discussed have been analyzed and the following is a recommendation for the implementation of the options for the City of Miller.

8.1 REPLACEMENT OF EXISTING SYSTEMS

8.1.1 Replacement Option 1: Do Nothing

Since this option will not address current storm water deficiencies located in the City of Miller, the "Do Nothing" option is not recommended.

8.1.2 Replacement Option 2: West Drainage System

The existing West Miller Drainage System is an underground piping system consisting of reinforced concrete pipe and vitrified clay pipe. The age and size of the pipe and type of inlets associated with the system warrants the complete replacement and resizing of the storm water drainage system piping and inlets. Our recommendation to the City of Miller is to implement the construction when feasible.

8.1.3 Replacement Option 3: Central Miller Drainage System

The existing underground piping system located in central Miller consists of reinforced concrete and vitrified clay pipe. The area served by the system experiences periods of prolonged flooding due to plugged or inadequate pipe sizes. Our recommendation to the City of Miller is to implement the proposed improvements as described in Replacement Option 11.

8.1.4 Replacement Option 4A: Northeast Miller Drainage System

The existing storm water drainage system located in northeast Miller serves a large portion of the City and is undersized for a 3.1-inch-per-hour rain event. The drainage problems that are experienced in conjunction with the storm sewer system warrant upgrading the system from its current state. Our recommendation to the City of Miller is to implement the construction when feasible.

8.1.5 Replacement Option 4B: Northeast Drainage System Extension

Option 4B proposes extending drainage piping to a possible development area. The City has expressed great interest in this project. For this reason it is our recommendation to the City of Miller to implement the proposed improvements as described in Replacement Option 11.

8.1.6 Replacement Option 5: Southeast Drainage System

Replacement Option 5 proposes installing a storm water system capable of conveying a 3.1-inch-per-hour rain event. In order to convey the amount of storm water generated in this area during a five-year storm event, it is our recommendation to the City of Miller to implement the proposed improvements as described in Replacement Option 11.

8.1.7 Replacement Option 6: West Second Street Drainage System

The storm drainage system located on West Second Street is not capable of conveying a five-year rain event. Televising videos and inlet and manhole reports show that the condition of this piping system is in poor condition. Our recommendation to the City of Miller is to implement the proposed improvements as described in Replacement Option 11.

8.1.8 Replacement Option 7: West Alley Drainage System

Replacement Alternative 7 proposes upgrading a 12-inch PVC storm sewer line to reinforced concrete pipe large enough to convey a 3.1-inch-per-hour storm event. The City of Miller does not perceive the drainage area as an area of concern. For this reason the improvements are not recommended at this time.

8.1.9 Replacement Option 8: West First Avenue Drainage System

Replacement Option 8 also proposes upgrading a 12-inch PVC Storm sewer line with reinforced concrete pipe capable of conveying a 3.1-inch-per-hour rain event. The City of Miller does not perceive the drainage area as an area of concern. For this reason the improvements are not recommended at this time.

8.1.10 Replacement Option 9: Second Street Southwest Drainage System

Replacement Option 9 proposes up-sizing an existing piping system at the intersection of SD Hwy 45 and Second Street Southwest. The piping system will adequately convey storm water from the street to the creek. The intersection is not a primary concern and the improvements are not recommended at this time.

8.1.11 Replacement Option 10: Clean and Televise Spot Repairs

Replacement Option 10 proposes correcting deficiencies identified in the clearing and televising reports completed in 2015. If the improvements are not completed, the storm sewer piping and inlets' condition will continue to deteriorate possibly causing hazards to the public. Our recommendation to the City of Miller is to implement the proposed improvements as described in Replacement Option 11.

8.1.12 Replacement Option 11: Phased Improvements

The City of Miller plans to complete the storm sewer improvements in conjunction with the proposed water and sanitary sewer improvements. For this reason, the replacement options need to be customized to accommodate the priorities of the water and sanitary sewer improvements. Phase 1 should be implemented as soon as possible. Phases 2 and 3 should be implemented subsequently.

8.2 ECONOMIC EVALUATION

Table 8.1 lists a summary of costs for the recommended improvements contained in this report.

Table 8.1: Summary of Costs for Project Phases

Recommended Improvements	Cost
Phase 1	
Spot Repairs and Upstream Improvements to Central Drainage	$1,037,000
Option 4B (Northeast Drainage Extension)	$921,000
Total Costs for Phase 1	$1,958,000
Phase 2	
Remainder of Central & Portion of Southeast Drainage System	$2,808,000
Total Costs for Phase 2	$2,808,000
Phase 3	
Remainder of Southeast Drainage System	$2,170,000
Option 6 (West Second Street Drainage System)	$1,406,000
Total Costs for Phase 3	$3,576,000
Total Costs for All Improvements	$8,342,000

8.3 DEMONSTRATION OF FINANCIAL CAPABILITY

As part of the cost analysis of the recommended improvements, the City's ability to pay for the projects is evaluated. The total costs of the improvements are listed in Table 8.1. For the purpose of this financial evaluation, the total cost of the improvements is assumed to be eligible for a low interest loan from the DENR's State Revolving Fund program. This, however, is subject to change due to decisions that must be made by the appropriate funding agencies.

The annual loan payment for principal and interest on the total cost of the improvements is calculated based on a 30-year loan period and an interest rate of 3.25 percent. Storm drainage system expenses are currently funded by the City's General Fund. In order to pay for a loan on this project a system of fee collection or increased taxes will be necessary. For the purpose of this evaluation, the required loan payments are assumed to be funded by a grant and loan package as depicted in Table 8.2. The cost of the loan expense is shown in terms of cost per sanitary sewer connection at the bottom of Table 8.2. The actual cost per user will depend on the financing that is available and the structure used to collect additional revenue to pay for the loan. An alternate table for

sewer rate analysis is presented in Table 8.3 for a Rural Development loan which would have a term of 40 years and an interest rate of 2.625 percent. Tables 8.2 and 8.3 include a short-term asset replacement cost for cleaning the sewer lines. The short-term asset replacement cost calculations are shown in Table 8.4.

Table 8.2: Storm Sewer Fee Analysis (SRF)

Percent Grant	75%	70%	65%	60%	55%	50%
Annual O & M	$0	$0	$0	$0	$0	$0
Amount Amortized	$489,500	$587,400	$685,300	$783,200	$881,100	$979,000
Grant Amount	$1,468,500	$1,370,600	$1,272,700	$1,174,800	$1,076,900	$979,000
Annual Payment	$25,788	$30,945	$36,103	$41,260	$46,418	$51,575
Debt Reserves	$2,579	$3,095	$3,610	$4,126	$4,642	$5,158
Current Debt/Asset/Other Cost	$625	$625	$625	$625	$625	$625
Total Annual Costs	$28,991	$34,665	$40,338	$46,011	$51,685	$57,358
Annual Revenue	$0	$0	$0	$0	$0	$0
Surplus/Deficit After Project	-$28,991	-$34,665	-$40,338	-$46,011	-$51,685	-$57,358
Minimum Rate Increase	$3.25	$4.00	$4.50	$5.25	$5.75	$6.25

Table 8.3: Storm Sewer Fee Analysis (RD)

Percent Grant	75%	70%	65%	60%	55%	50%
Annual O & M	$0	$0	$0	$0	$0	$0
Amount Amortized	$489,500	$587,400	$685,300	$783,200	$881,100	$979,000
Grant Amount	$1,468,500	$1,370,600	$1,272,700	$1,174,800	$1,076,900	$979,000
Annual Payment	$19,913	$23,895	$27,878	$31,860	$35,843	$39,825
Debt Reserves	$1,991	$2,390	$2,788	$3,186	$3,584	$3,983
Current Debt/Asset/Other Cost	$625	$625	$625	$625	$625	$625
Total Annual Costs	$22,529	$26,910	$31,290	$35,671	$40,052	$44,433
Annual Revenue	$0	$0	$0	$0	$0	$0
Surplus/Deficit After Project	-$22,529	-$26,910	-$31,290	-$35,671	-$40,052	-$44,433
Minimum Rate Increase	$2.50	$3.00	$3.50	$4.00	$4.50	$5.00

Table 8.4: Short-Lived Asset Replacement Schedule

Expenses	Year															
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Clean Piping Every 20 Years	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625
Total Annual Budget	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625	$625

9 WATER SYSTEM EVALUATION

9.1 GENERAL INFORMATION

The City of Miller currently provides water service to approximately 820 connections. 129 of these connections are commercial-type connections. The remainder are residential connections. The City purchases 100 percent of its domestic demand from the Mid-Dakota Rural Water System (Mid-Dakota). The City has three wells inside the City limits which have degraded to a point that they are no longer operable.

9.2 WATER DEMAND

To evaluate the City of Miller's potential to meet the needs of the future, a review of past water usage records was completed. The process used to estimate future water demand included a determination of the current average per capita demand combined with a projection of the future population. Records of water purchased from Mid-Dakota and City water sales dated from January 1999 through October 2014 were obtained and utilized to create Table 9.1.

The sources and methods used to develop the information presented in Table 9.1 are described by the following:

- Water purchased per month from Mid-Dakota is based on information provided by the City of Miller.
- Water usage billed per month is based on data provided by the City of Miller. One value is shown red for June 2012 since this value was missing and is estimated.
- The percentage of unaccounted-for water per month and year is calculated by dividing the difference between the water purchased and the water billed.
- Monthly precipitation data for 1999-2014 is from the National Climatic Data Center Miller Station.
- Per capita per day usage for each month is calculated by dividing the water accounted for by the population and the days per month.
- Total sum of water usages is calculated by summing up the columns.

- Two average day values were calculated for the available months of each year. The daily water purchased and the daily water billed for each year were calculated by dividing the sum of the water for each month by the days in that period.

Table 9.1 indicates that the billed per capita water usage ranges from 64 gpcpd during February 2014 to 255 gpcpd during July 2006. The average per capita water usage based on purchase data for the period of January 1999 through 2014 was determined to be approximately 169 gpcpd. An analysis of the billed water data from 1999 through 2014 indicates that the City of Miller billed an average of 61.6 million gallons per year (mgy), or 112 gpcpd. The billed per capita data is within the typical range of 100 to 125 gpcpd for this size of community. For the purpose of this report the purchased per capita per day water usage of 169 will be used.

Table 9.1 indicates that the water losses in the system average 34 percent. The typical reasons for losses in the system are leaks, slow or malfunctioning meters and fire fighting. However, the City generally meters water used for fire fighting. Water loss is not often thought of as financial loss. However, when considering the amount of water purchased from Mid-Dakota and that sold to the residents of Miller, the financial loss becomes apparent. The average amount purchased from Mid-Dakota from 1999 through 2014 is approximately 92.8 million gallons per year, as compared to 61.6 million gallons per year sold. This water loss results in an average annual cost to the City of nearly $14,700 annually [(92.8 MG - 61.6 MG) x $0.47 per 1,000 gallons]. As a result, it is important that unaccounted-for water loss be limited to less than the generally accepted standard of 12 to 15 percent or roughly half that currently being experienced in the City's distribution system.

Table 9.1: Water Use Records

	1999					2000					2001				
Month	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)
January	6.10	4.38	28%	0.24	92	8.61	4.43	49%	0.00	93	7.22	4.06	44%	0.71	86
February	6.84	4.18	39%	0.19	88	8.35	4.21	50%	0.33	89	6.24	3.32	47%	1.95	70
March	5.89	4.03	31%	0.79	85	6.44	3.72	42%	0.66	78	5.95	3.32	44%	0.12	70
April	7.07	4.43	37%	3.04	93	8.18	4.60	44%	2.92	97	7.47	3.98	47%	4.10	84
May	6.47	5.21	20%	4.36	110	9.16	5.13	44%	4.38	108	7.43	4.10	45%	2.78	87
June	11.00	6.97	37%	3.59	147	12.51	5.55	56%	2.21	117	7.79	5.46	30%	2.50	115
July	9.40	8.59	9%	1.35	181	10.54	6.96	34%	3.41	147	13.42	9.91	26%	2.64	209
August	14.73	11.34	23%	1.56	239	12.47	6.96	44%	2.09	147	10.52	7.13	32%	1.35	150
September	9.95	7.09	29%	2.22	150	11.32	7.16	37%	0.12	151	10.21	6.47	37%	1.99	136
October	7.89	5.47	31%	0.90	115	8.44	4.77	43%	2.66	101	7.25	4.44	39%	0.96	94
November	8.51	4.71	45%	0.00	99	5.51	3.77	32%	0.93	79	7.48	4.27	43%	1.49	90
December	10.31	6.13	41%	0.07	129	7.09	4.34	39%	0.22	92	4.66	3.61	23%	0.04	76
Total	104.15	72.53		18.31		108.63	61.59		19.93		95.64	60.06		20.63	
Average Day	285,353	198,707				296,803	168,273				262,038	164,540			
Average (gpcpd)	187	130				194	110				171	108			
Average Unacc %			31%					43%					38%		

Average Water Purchased Per Year =	92.8	MG
Average Water Accounted for Per Year =	61.6	MG
Maximum Month Billed =	11.8	MG
Minimum Month Billed =	2.08	MG
Average Day Purchased 1999-2014 =	254,270	gpd
Average Day Billed1999-2014 =	168,703	gpd
Average Per Capita Usage (Based on Purchased Water) =	169	gpcpd
Average Per Capita Usage (Based on Billed Data) =	112	gpcpd

Table 9.1: Water Use Records (Continued)

	2002					2003					2004				
Month	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)
January	7.16	4.25	41%	0.65	90	5.23	3.96	24%	0.12	84	5.39	3.90	28%	0.04	82
February	5.47	3.96	28%	0.07	83	5.09	3.76	26%	1.27	79	5.16	3.60	30%	0.08	76
March	3.77	3.43	9%	0.44	72	4.44	3.64	18%	0.47	77	4.17	3.47	17%	2.66	73
April	5.67	4.20	26%	1.47	89	5.60	4.02	28%	1.80	85	4.80	4.02	16%	0.99	85
May	5.79	4.93	15%	0.72	104	6.14	4.73	23%	2.26	100	6.82	5.37	21%	3.06	113
June	11.62	9.43	19%	1.62	199	9.75	8.51	13%	3.32	179	6.18	5.22	16%	4.41	110
July	11.27	10.73	5%	2.39	226	7.34	8.01	-9%	2.24	169	7.40	6.58	11%	4.66	139
August	7.67	7.22	6%	3.06	152	13.31	9.28	30%	2.09	196	8.62	7.06	18%	2.98	149
September	8.47	7.15	16%	1.04	151	8.91	7.87	12%	1.54	166	7.23	5.82	19%	4.50	123
October	6.15	4.90	20%	1.12	103	6.86	6.34	8%	0.81	134	6.32	5.01	21%	1.78	106
November	5.20	4.01	23%	0.00	84	5.32	3.71	30%	1.42	78	4.88	3.65	25%	0.15	77
December	4.54	3.87	15%	0.03	82	6.18	3.77	39%	0.26	80	6.24	3.52	44%	0.00	74
Total	82.79	68.06		12.61		84.14	67.59		17.60		73.20	57.21		25.31	
Average Day	226,819	186,474				230,510	185,184				200,003	156,306			
Average (gpcpd)	148	122				151	121				131	102			
Average Unacc %			18%					20%					22%		

Table 9.1: Water Use Records (Continued)

	2005					2006					2007				
Month	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)
January	5.23	4.14	21%	0.02	87	5.91	4.67	21%	0.10	101	7.77	3.78	51%	0.17	82
February	4.78	3.55	26%	0.13	75	6.02	3.45	43%	0.21	75	6.33	3.31	48%	0.49	72
March	4.54	3.16	30%	0.20	67	5.23	3.10	41%	1.06	67	5.46	3.10	43%	1.29	67
April	5.82	5.02	14%	1.17	106	6.23	3.89	37%	1.05	84	7.28	3.82	47%	2.54	83
May	6.62	5.25	21%	2.87	111	9.45	6.25	34%	0.41	135	9.36	5.72	39%	5.51	124
June	7.40	5.02	32%	7.83	106	14.07	10.59	25%	1.00	229	9.73	5.19	47%	3.29	112
July	12.26	9.51	22%	1.73	201	16.37	11.75	28%	0.31	255	12.45	10.07	19%	0.21	218
August	9.26	7.88	15%	3.75	166	12.52	9.45	24%	3.36	205	9.21	6.37	31%	8.55	138
September	8.83	6.63	25%	2.37	140	8.60	6.00	30%	2.81	130	7.53	5.09	32%	1.04	110
October	6.68	4.42	34%	0.84	93	7.00	4.16	41%	0.09	90	7.44	4.25	43%	3.33	92
November	6.09	4.11	33%	0.38	87	8.80	3.57	59%	1.09	77	6.58	3.64	45%	0	79
December	5.65	4.55	19%	0.23	96	5.76	3.52	39%	2.09	76	6.37	3.18	50%	0.28	69
Total	83.15	63.23		21.52		105.95	70.40		13.58		95.51	57.52		26.70	
Average Day	227,811	173,244				290,260	192,868				261,668	157,586			
Average (gpcpd)	153	116				195	130				176	106			
Average Unacc %			24%					35%					41%		

Table 9.1: Water Use Records (Continued)

	2008					2009					2010				
Month	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)
January	5.72	3.94	31%	0.11	85	6.31	3.97	37%	0.16	86	5.97	3.37	44%	0.59	73
February	6.29	3.59	43%	0.10	78	6.79	3.86	43%	0.53	84	7.14	4.54	36%	0.94	98
March	6.69	3.22	52%	1.27	70	5.87	3.24	45%	2.61	70	6.51	3.35	49%	1.43	73
April	6.54	3.51	46%	1.44	76	6.11	3.87	37%	0.56	84	7.68	4.43	42%	2.91	96
May	6.28	4.17	34%	2.51	90	8.38	5.10	39%	1.09	111	8.57	4.44	48%	5.67	96
June	8.97	5.66	37%	3.95	123	9.35	6.75	28%	2.20	146	8.95	4.21	53%	5.04	91
July	10.87	8.05	26%	4.61	174	9.95	6.87	31%	3.05	149	10.08	5.29	48%	4.53	115
August	8.79	5.98	32%	1.16	129	9.77	6.59	33%	2.82	143	11.72	6.65	43%	1.47	144
September	8.77	6.28	28%	2.83	136	8.47	5.62	34%	1.23	122	9.59	6.68	30%	5.18	145
October	7.59	4.39	42%	2.68	95	6.32	3.87	39%	4.98	84	9.51	2.08	78%	0.95	45
November	6.66	4.22	37%	0.42	92	6.67	5.34	20%	0.06	116	7.58	4.66	39%	0.07	101
December	6.31	3.05	52%	0.51	66	6.25	3.25	48%	1.3	70	7.17	3.90	46%	0.71	84
Total	89.49	56.05		21.59		90.24	58.30		20.59		100.47	53.60		29.49	
Average Day	244,519	153,145				247,230	159,734				275,266	146,841			
Average (gpcpd)	164	103				166	107				185	99			
Average Unacc %			38%					36%					46%		

Table 9.1: Water Use Records (Continued)

	2011					2012					2013				
Month	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)
January	8.34	3.71	56%	1.04	80	6.02	3.81	37%		83	4.43	3.84	13%	0.45	83
February	7.86	4.12	48%	1.67	89	5.71	3.31	42%		72	5.91	2.97	50%	0.65	64
March	7.02	4.16	41%	1.14	90	5.84	3.13	46%		68	5.18	3.23	38%	0.47	70
April	7.17	3.15	56%	2.82	68	6.14	5.36	13%		116	6.09	4.65	24%	2.22	101
May	8.97	2.73	70%	5.36	59	9.25	6.37	31%		138	7.15	5.59	22%	7.49	121
June	8.76	4.77	46%	6.98	103	10.67	6.52	39%	1.65	141	7.54	5.74	24%	5.28	124
July	8.65	5.03	42%	2.68	109	11.25	6.67	41%	2.31	145	11.52	6.67	42%	1.24	145
August	8.89	8.10	9%	3.01	175	11.51	10.14	12%	0.81	220	11.19	8.41	25%	1.32	182
September	8.10	5.99	26%	1.14	130	9.04	7.69	15%	0.16	167	10.37	8.11	22%	1.06	176
October	8.88	5.69	36%	1.02	123	8.03	4.56	43%	0.65	99	7.06	3.65	48%	5.44	79
November	5.97	4.37	27%	0.06	95	5.47	4.02	27%	0.18	87	6.22	4.15	33%	0.21	90
December	7.79	3.51	55%	0.22	76	5.12	3.84	25%	0.74	83	5.88	4.21	28%	0.29	91
Total	96.40	55.33		27.14		94.05	65.42		6.50		88.54	61.22		26.12	
Average Day	264,110	151,589				256,967	178,743				242,575	167,726			
Average (gpcpd)	177	102				173	120				163	113			
Average Unacc %			42%					31%					31%		

Table 9.1: Water Use Records (Continued)

	2014					2015				
Month	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)	Purchased (MG)	Billed (MG)	Unacc. for %	Precip (in)	Billed (gpcpd)
January	8.89	3.56	60%		77	3.89	3.03	22%		66
February	10.28	2.94	71%		64	4.08	2.96	27%		64
March	9.01	3.92	56%		85	3.53	3.01	15%		65
April	6.70	3.07	54%		67	4.28	4.44	-4%		96
May	6.81	4.82	29%		104	5.74	5.58	3%		121
June	9.71	6.59	32%		143	8.59	7.37	14%		160
July	11.07	11.15	-1%		242	7.74	7.22	7%		156
August	10.77	4.74	56%		103	7.89	6.71	15%		145
September	7.47	6.29	16%		136	7.29	7.19	1%		156
October	5.16	3.96	23%		86					
November	3.85	3.19	17%		69					
December	3.86	3.54	8%		77					
Total	93.58	57.77		0.00						
Average Day	256,384	158,282								
Average (gpcpd)	172	106								
Average Unacc %			35%							

Finding and/or attributing the cause for the water loss is not always easy. This is the case with Miller's system. Approximately 55 percent of the existing system is Asbestos Cement Pipe (ACP) which is also commonly referred to as transite pipe. This pipe is old and becomes brittle over time which makes it a headache for operators when fixing leaks. Discussions with the water operators indicate that in the past couplers used for repairing leaks and/or for rehabilitation of water main did not have stainless steel bolts. Over time the bolts that were used have rusted away. The City has fixed a number of leaks where the bolts associated with previous repairs had completely corroded away. New stainless steel bolts were added to the couplers and they are working properly now. The operator estimates that there are over 100 of these couplers in place throughout the system.

The City completed a water meter replacement project in 2010. Since old water meters tend to not read all of the flow that goes through them, the water loss was expected to decrease with the installation of the new meters. Unfortunately, that was not the case. Since the water loss continues to be excessive, it is apparent that the loss is within the distribution system and portions of the distribution system need to be replaced.

A significant increase in water usage is noticeable during the growing months of April through September. It should be noted that above-average precipitation during these months typically lessens the increase in usage just as the below-normal precipitation typically magnifies the increase in usage. This is clearly shown by the relatively low water usage during 2004, 2007 and 2010 which were fairly wet years and the high usages in 2002, 2003 and 2006 which were very dry years.

9.3 PROJECTION OF WATER DEMAND

Future water demand projections are the basis for establishing the water distribution system capacity and storage. These projections are based on historical data of per capita flows and population projections to determine peak day and peak hour demands to ensure that the system is capable of meeting the future demands of the City. As shown in Section 2.3 the population of Miller is expected to stabilize and remain fairly steady in

the foreseeable future. For this reason the 2010 population is used for determining the future water demands along with the average per capita demand of 169 gpd.

To meet the peak day water usage that may occur in the future, a peaking factor is generally determined. Smaller cities have a greater fluctuation than larger cities, but these fluctuations generally occur over a shorter period of time. As can be seen in Table 9.1, the water use in a city such as Miller that does not have a significant commercial or industrial user is largely dependent on the climate and its impact on lawn watering. Our experience has shown that the ratio of average day to peak day ranges from 2.0 to 7.0 for communities in South Dakota. This is confirmed by references in Salvato, 1982 which found peak day demands to be as high as 10 times that of the average day.

In Miller's case the peak month of water use occurred during July 2006 with 15.8 million gallons, according to Mid-Dakota's records, which is slightly different from the monthly record in Table 9.1. The basis for utilizing Mid-Dakota's numbers for this portion of the report is to be consistent with the use of records from one meter for capacity evaluations. It is beneficial to use the Mid-Dakota meter's records in this case because Mid-Dakota has daily records available whereas the City does not keep daily meter records.

Based on Mid-Dakota's monthly usage records, the average day during the peak month was nearly 510,000 gpd (15.8 MG / 31 days). The peak day during the peak month is expected to be 1.2 to 1.5 the daily usage during the peak month (Salvato, 1982). This would result in a range of expected peak day usage from 612,000 gallons to 765,000 gallons. However, Mid-Dakota's peak day flow recorded for July 2006 was only 552,000 gallons. This is not unexpected due to the fact that Mid-Dakota's system is designed to provide a maximum flow rate of approximately 350 gpm to the City of Miller, which would result in a maximum daily flow of 504,000 gallons over a 24-hour period. It is interesting that the peak daily flow record indicates a higher flow rate that what is currently contracted between the City and Mid-Dakota by 48,000 gpd or about 10 percent.

It should also be noted that, according to Mid-Dakota's records for the period from July 10 through 16 in 2006, the City was essentially receiving the maximum water flow every minute of every day. The operators noted that the tank levels during this time were decreasing during the day, but were filling for the most part during the night. This being the case it is difficult to determine the exact peak day usage. A review of the daily usage for the month of July indicates a usage that is fairly consistent (around 510,000 gpd). This and the fact that the storage did not become emptied, which would have occurred at the higher ratio, leads us to believe that the ratio of the flow for this month was on the low side of the range. Therefore, we have selected an average day to peak day ratio of 1.2 which results in a peak day usage of 612,000 gallons (510,000 gallons x 1.2). This results in a ratio of purchased peak day usage to average day flow of approximately 2.4 (612,000 gpd / 252,000 gpd). The peak day demand of 604,000 gpd (1,489 people x 169 gpcpd X 2.4) will be used throughout the remainder of the report.

Water treatment plants and pumping facilities within these plants are typically designed to meet the expected maximum day usage during the design life of the plant. In addition, these facilities are generally designed at a constant flow rate for production to meet the peak day demand. However, in the City of Miller's case the water supply is provided from Mid-Dakota. The contract between the City of Miller and the Mid-Dakota Rural Water System set the amount of water that Mid-Dakota is obligated to provide the City of Miller at 350 gpm or a maximum of 504,000 gpd. As discussed earlier, this is approximately 48,000 gallons less than the supplied peak day usage during 2006 and approximately 100,000 gallons less than the estimated peak day usage. However, this is associated with a high percentage of water loss at roughly 34 percent. If the water loss is reduced to the desired maximum of 15 percent, the peak day usage would be lowered to approximately 489,000 gpd [604,000 gpd x (100% - (34% - 15%))] which is less than the maximum contract rate. Therefore, no action toward increasing the Mid-Dakota contract rate is recommended at this time.

9.4 WATER SOURCES

9.4.1 Mid-Dakota Rural Water

The City of Miller is under contract with the Mid-Dakota Rural Water System to supply water at a maximum flow rate of 350 gpm over a 24-hour period or 504,000 gpd. The purchase of this water from Mid-Dakota currently costs the City a minimum monthly charge of $5,740 and a demand charge of $7,000 regardless of quantity of water used. In addition to the minimum bill and demand charge the City currently pays a water rate of $0.47 per thousand gallons delivered by Mid-Dakota. The contract also includes an Excess Capacity Rate should the City request and Mid-Dakota have the ability to deliver a demand rate above the contracted rate of 350 gpm. The cost of this additional flow rate is half the minimum bill rate or essentially $8.20 ($5,740 / 350 gpm / 2) per additional gallon per minute requested and delivered per month.

As discussed earlier, this contracted flow rate is not sufficient to meet the current or estimated future peak day usage for the City of Miller with the existing water loss. Reducing the water loss to an acceptable level needs to be a priority of the City. This will not only allow the current contract flow rate to be sufficient to meet the peak day needs, but will also save the City the cost of the water loss.

9.4.2 Existing Wells

The City has three wells that were formerly used as a back-up to Mid-Dakota or for non-potable water use. The wells have not been used in many years and have since become inoperable. The existing wells should be properly abandoned. There has been some discussion with the City about drilling a new well as a back-up water supply and for non-potable water use. However, the desire for the new well is not a very high priority considering the deficiencies identified with the water distribution system.

9.5 STORAGE

The City currently has two water reservoirs. Behind City hall is a 250,000-gallon glass-lined steel ground storage reservoir which is shown in Figure 9.1. A 400,000-gallon elevated storage reservoir is located next to City Hall and is shown in Figure 9.2. The 400,000-gallon single pedestal spheroid water tower was constructed in 2010. Both reservoirs are in good condition and are inspected periodically for needed maintenance.

Figure 9.1: 250,000-Gallon Ground Storage Reservoir

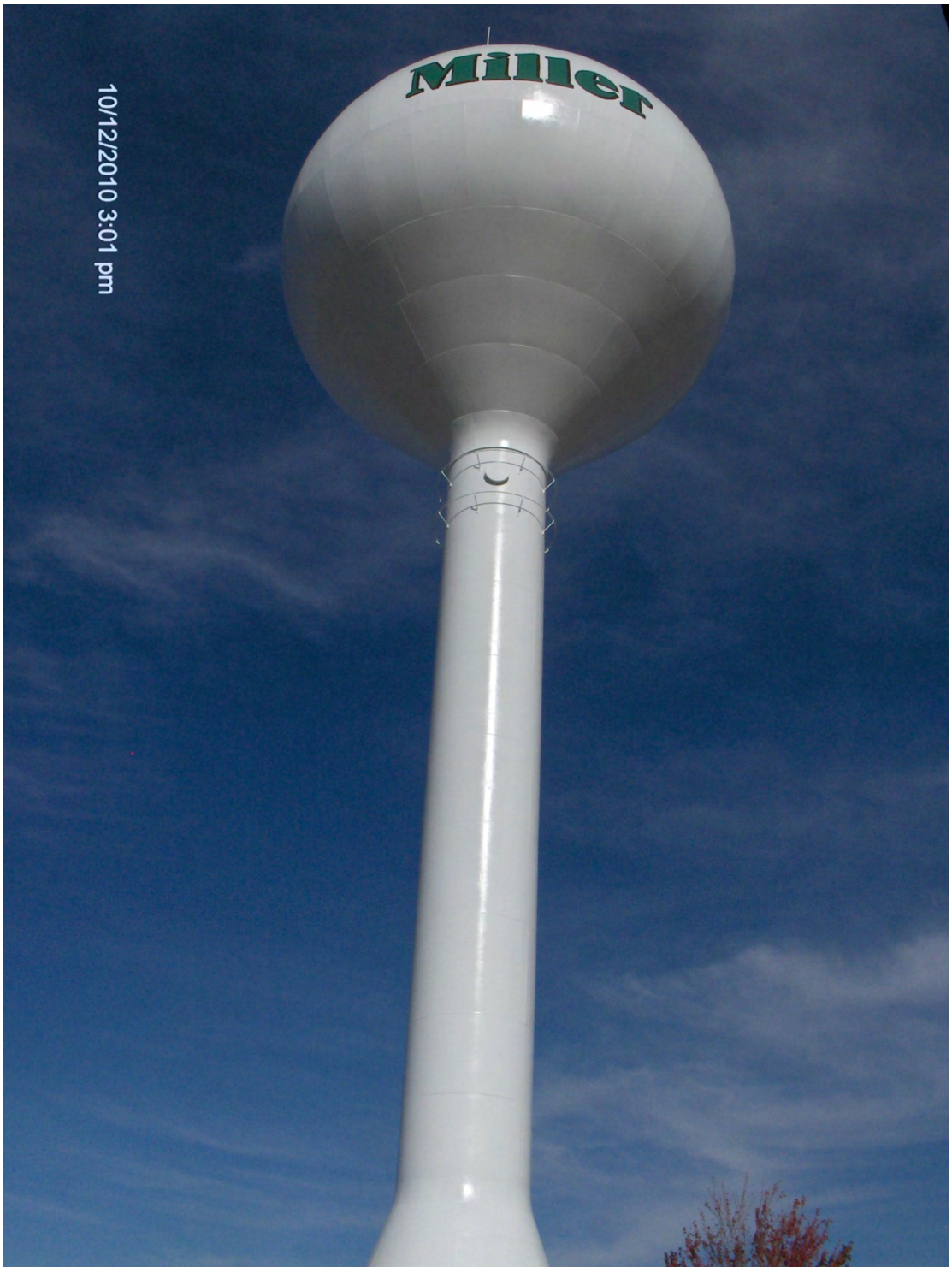


Figure 9.2: 400,000-Gallon Water Tower

Water storage establishes the pressure(s) for the distribution system; provides a means for equalizing operating pressures during high demand periods; provides emergency storage to temporarily offset the effects of downtime for pump repairs, pipeline repairs and power outages; and provides fire protection. Ground storage reservoirs cannot provide any of these attributes unless they are constructed on a hill or with the use of an automatic stand-by generator. As a result, ground storage is often referred to as dead storage. This is not to say that ground storage does not have its place or usefulness in a water system. Ground storage tanks are cheaper to construct than elevated storage tanks; however, the cost of the pumping facilities and the pumping cost must be added to the cost of the ground storage tank. In some circumstances, the water supply is such that pumping is required to increase the pressure to a desirable range and/or the supply is at a slow constant rate such that ground storage and pumping facilities are utilized to reduce the overall size of the elevated tank required. This is especially beneficial in small communities that need additional storage and have an existing water tower, but the cost of a new elevated tank is cost prohibitive.

There is not a defined method for determining the volume of elevated storage for water distribution systems. Standards such as the Ten State Standards say that if fire flow is to be provided, the flow guidelines established by ISO should be met. Thus, at 2000 gpm, a 2-hour fire event requires 240,000 gallons for the downtown area.

Equalization and emergency storage are the other factors in determining the volume of water required or desired. Equalization storage is required to supply the varying demands throughout each day. Figure 9.3 illustrates a typical variation of demand over a peak day. During those times that the water usage is shown to be over 100% of the supply rate, the system's storage must provide the additional water to meet the demands. Mays states that storage for equalization with constant rate pumps typically ranges from 10% to 25% of the peak day demand. The higher end of the range is for communities with high ratios of average day to peak day usage. Since the selected peak day to average day ratio for Miller is at the middle of the typical range of 2.0 to 3.0, the mid-point of the required range of equalization storage, or 17.5%, is selected for the desired equalization storage.

The projected peak day demand is 604,000 gpd and results in an equalization storage volume of approximately 106,000 gallons.

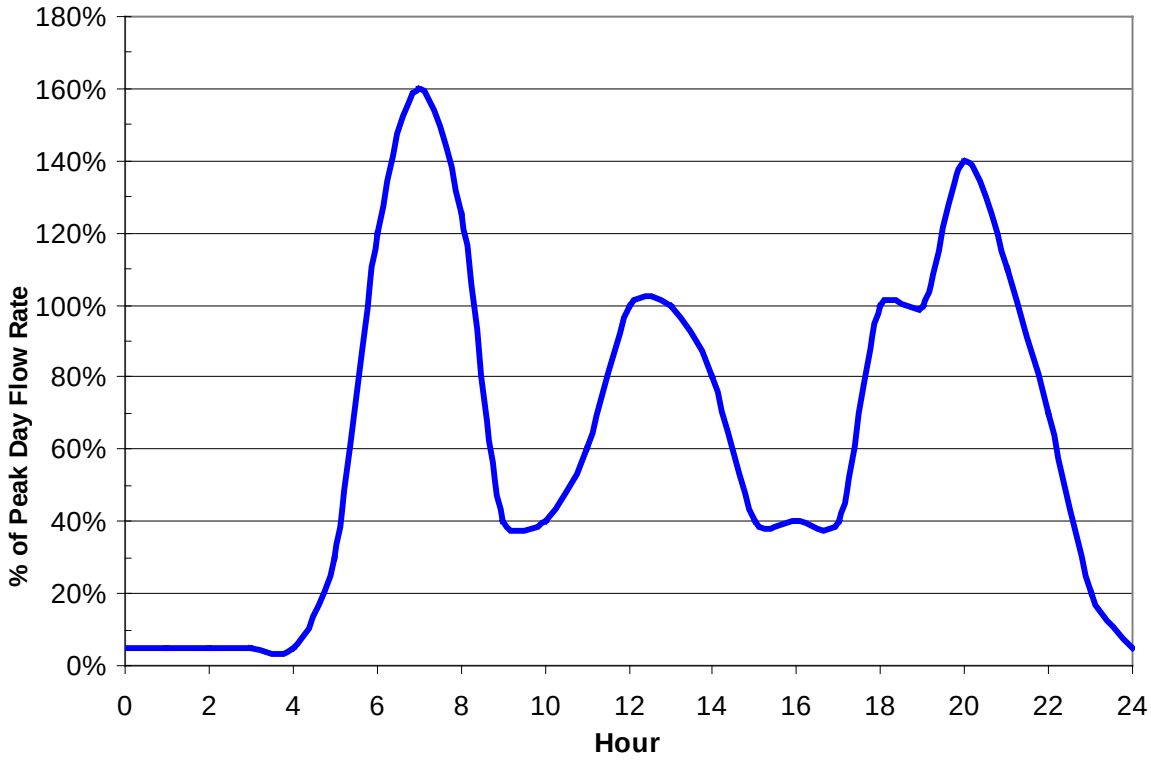


Figure 9.3: Water Demand Pattern Used in Model

Emergency storage is essentially the storage that a community feels comfortable with based on the reliability of the power supply and its water system in general. Emergency storage equal to the average day usage is commonly used for the emergency storage volume and is utilized in this report. The current average day water demand is 252,000 gallons.

The total required water storage for a community is generally considered to be the equalization storage plus the larger of fire or emergency storage (Mays 2000). In the case of Miller, the emergency storage governs. Therefore, the total elevated storage required to meet the emergency and equalization storage would be 252,000 gallons + 106,000 gallons or 358,000 gallons. The 400,000-gallon water tower has the storage capacity to

meet this recommended storage volume. Since the booster station has a stand-by emergency generator the 250,000 gallons of ground storage can also act as storage to meet the needs of the City.

9.6 BOOSTER STATION

The City of Miller's water system includes 250,000 gallons of ground storage. As discussed in the previous paragraphs, Miller's ground storage is considered "live" storage since the booster station has an emergency stand-by generator. Miller has three end suction pumps to move water from the ground storage tank to the water tower and distribution system. One pump is rated at 200 gpm. The other two pumps are rated at 700 gpm. Figure 9.4 is a photograph of the booster station building. Figure 9.5 shows a view of the pumps in the booster station.

Figure 9.4: Booster Pump Station

Figure 9.5: Booster Station Piping

9.7 DISTRIBUTION SYSTEM

According to available information the several types and sizes of water main used throughout the distribution system is shown in Figure 9.6. Currently, the City's piping consists of polyethylene (PE), polyvinyl chloride (PVC), cast iron pipe (CIP), ductile iron pipe (DIP) and asbestos cement pipe (ACP). The approximate total length of each size and type of pipe in the water distribution system is listed below.

Pipe Size	Pipe Type	Length
4	ACP	2,463
6	ACP	47,680
8	ACP	4,594
6	CIP	382
6	DIP	392
2	PE	6,131
2	PVC	4,943
6	PVC	31,415
8	PVC	315
10	PVC	881
12	PVC	184
		99,380

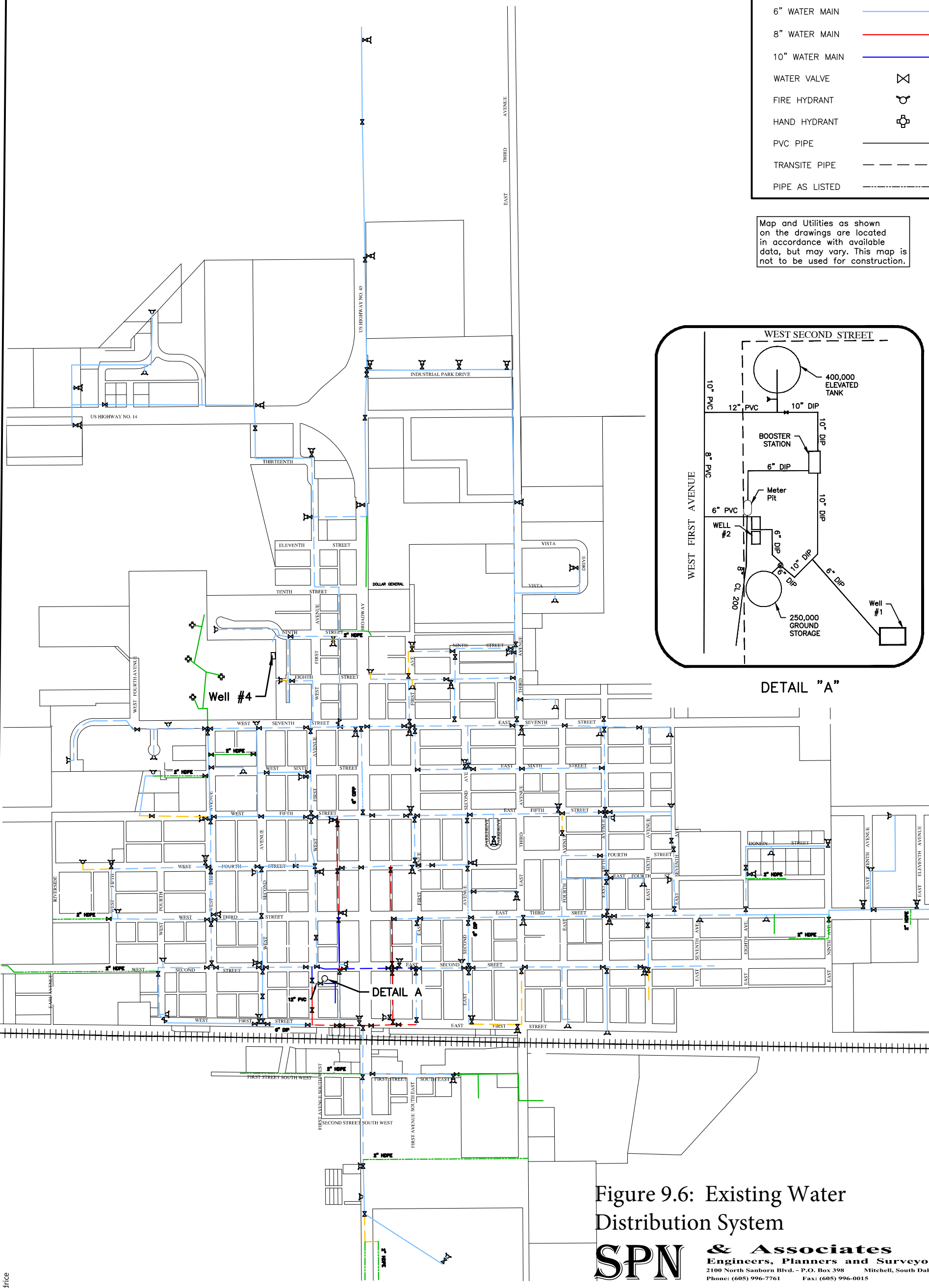
WATER MAP
CITY OF
MILLER
HAND COUNTY, SOUTH DAKOTA

SCALE: 1" = 800'

LEGEND

- 2" WATER MAIN
- 4" WATER MAIN
- 6" WATER MAIN
- 8" WATER MAIN
- 10" WATER MAIN
- WATER VALVE
- FIRE HYDRANT
- HAND HYDRANT
- PVC PIPE
- TRANSITE PIPE
- PIPE AS LISTED

Map and Utilities as shown on the drawings are located in accordance with available data, but may vary. This map is not to be used for construction.



DETAIL "A"

Figure 9.6: Existing Water Distribution System

SPN & Associates
Engineers, Planners and Surveyors
2100 North Sanborn Blvd. - P.O. Box 398 Mitchell, South Dakota 57301
Phone: (605) 996-7761 Fax: (605) 996-0015

G:\Files\CAD\and projects R2\City Maps\dwgs\Miller City Map\GIS Utility Map.dwg, GIS WATER MAP 11X17, 12/17/2015 3:45:19 PM, drice

Approximately 55 percent of the distribution system piping is composed of ACP. The problem with the ACP is that the roughness coefficient is extremely low with pipe that is 40 years old. Calculations show that an 8-inch ACP is equal to a 7-inch PVC pipe and a 6-inch ACP is equal to a 5.3-inch PVC pipe. This roughness makes a substantial difference with fire flows.

The ACP has been noted to become brittle and break frequently, especially once it is exposed due to a repair, adding a connection or replacing a valve. The Environmental Protection Agency (EPA) indicates that the asbestos in the ACP is a fibrous material with high tensile strength. The asbestos was added to cement products as reinforcement to strengthen the material. The decay of this cement mixture allows asbestos to enter the drinking water. The EPA also states that asbestos may cause an increased risk of such health problems as developing benign intestinal polyps, lung disease, lung cancer, asbestosis (a respiratory disease) and mesothelioma (a form of cancer).

In addition, there are sections of CIP and DIP which are brittle and corroded. Typically, the inside of CIP will corrode over time. The corrosion can induce a build-up of scale which reduces the inside diameter and capacity of the pipe. The corrosion increases the roughness of the pipe which also reduces the capacity of the pipe by increasing friction. One section of DIP on East Second Avenue was installed as part of a soil remediation program where petroleum contaminated soil was present. This pipe has since been found to be severely corroded.

The Water Superintendent has indicated that the total frequency of water main breaks has been averaging around six per year which is high for this size of system. The soils in the area are considered to be corrosive; therefore, the exterior of the metallic pipes are typically quite corroded.

The main-line distribution system composed of pipe larger than two inches in diameter currently has approximately 27 dead ends. There are approximately 15 of these dead

ends that are not practically able to be looped due to their location. At a minimum, a fire hydrant should be located at the dead ends to properly flush and maintain water quality. Approximately five of the dead ends do not have fire hydrants. The City usually flushes the water mains twice a year. Without looping and multi-directional flow of water in the distribution system, water is supplied, for the most part, through a long single pipeline. In this type of distribution system, total water usage decreases the closer one gets toward the end of the lines. This results in decreased movement of water in the pipe and the possibility of exceptionally long retention times of the water in various segments of the pipe. Long retention times in a pipe can have a detrimental effect on the quality of the water in the pipe such as:

- A decrease in the disinfection levels in the water;
- An increase in the potential for the formation of carcinogenic disinfection process by-products; and
- An increased potential for the formation of biological growth.

9.7.1 Hydrants and Valves

The SD Department of Environment and Natural Resources (SD DENR), which is the state regulatory agency for public water supplies, requires that fire hydrants be served by water mains with a minimum diameter of six inches. There are approximately three hydrants that are served by four-inch lines. Hydrants used only for flushing dead-end lines may be located on four-inch mains. Figure 9.1 shown previously indicates the current main sizes of the City's distribution system. Based on available information there are approximately 96 hydrants.

There are an estimated 212 main-line water valves. Many of the old valves on the ACP lines are not working properly. For the most part, the spacing and locations of the valves appear to be sufficient to adequately maintain water service to the users of the system when portions of the system are taken offline due to maintenance or pipe repair. Overall, the water service valves are in unknown condition. City personnel access the valves only when necessary.

9.7.2 Hydraulic Evaluation

A hydraulic evaluation of the water system was conducted using the KY Pipe 2014 hydraulic computer model. This model utilizes the Hazen-Williams formula and commonly accepted friction factors for the pipeline material being considered to calculate head loss due to pipe friction and resulting flows and pressures. Two types of hydraulic analyses were performed with the hydraulic program to evaluate the City of Miller's distribution system. The first type is a general system analysis which provides a snapshot of the system at the set parameters. The second type is a fire flow analysis which predicts the fire flow from selected fire hydrants. The analyses were utilized to obtain a complete picture of the existing distribution system and to allow proper recommendations to be made that will improve the existing conditions.

Any hydraulic evaluation can find the existing water system to be inadequate by simply making the requirements very stringent. In the same manner, generally all systems are adequate to meet the average day demands. Deficiencies in a system are typically not apparent until system demands increase to provide the peak day or peak hour flows. The reason for this is that the flow rate in a pipeline significantly affects the downstream pressures. The friction loss, or the pressure loss, in a pipe is a function of the square of the velocity. Therefore, as the flow rate and corresponding velocity in a pipe increase, the resulting friction increases exponentially. As the flow rate increases above two feet per second, the corresponding friction loss begins to climb rapidly with a velocity of three feet per second generally considered the maximum desired velocity. As a result, it is common practice to evaluate the overall system deficiencies in a distribution system based on peak hour and peak day flows.

9.7.3 Modeled Flow Rates

The total water demand for the City consists of two main components. First, the non-residential use is modeled by distributing demands for the high water users throughout the water distribution model. The other component consists of a residential flow rate which is modeled at each metered connection. The water use demand is spread throughout the hydraulic model based on the density of housing and other connections.

Two sets of modeled system demands are created to place different loading conditions on the model:

- **Peak Hour Demand**

  Mays states that the peak hour to average day flow ratio typically ranges from 2.0 to 7.0:1. It is our opinion that the peak hour to average day ratio should be modeled as 3.84. This number was calculated by multiplying the highest usage shown in Figure 9.4 of 160 percent by the estimated peak day to average day ratio of 2.4. Therefore, the total modeled peak hour flow rate is estimated to be 672 gpm (0.252 MGD x 3.84 / 1440 minutes per day). This flow will be utilized in the general analysis to evaluate the distribution system's hydraulic capacity to maintain adequate water pressure during this high-use period.

  Approximately 16 percent of the total demand, or 110 gpm, is allotted to high water users which account for six of the total connections. The high user demands are spread throughout the model where the demands originate. The remainder of the demand, or 561 gpm, is for typical residential or light commercial use. The demands are spread throughout the model based on the density of housing and buildings at a rate of approximately 0.689 gpm per connection [561 gpm / (820 connections - 6 high rate users)] on the hydraulic model.

- **Peak Day Demand**

  The peak day demand in the models was set to approximately 0.604 MGD or 419 gpm based on the estimated water use projection discussed previously. This flow will be used in the fire flow analysis to evaluate potential fire flows.

  Approximately 16 percent of the total demand, or 69 gpm, is allotted to the high water users which account for six of the total connections. The high user demands are spread throughout the model where the demands originate. The remainder of the demand, or 350 gpm, is for residential use. The residential demands are spread throughout the model based on the density of housing at a rate of approximately 0.430 gpm per connection [350 gpm / (820 connections - 6 high rate users)] on the hydraulic model.

9.7.4 Pressure Analysis

To check the water system for low-pressure problems, hydraulic models are created with the following assumptions made:

- The peak hour demand is placed on the model according to Section 9.7.3.
- The operating elevation of the water towers is set to the mid-tank level which is approximately an elevation of 1,696 feet above mean sea level.
- The booster pumps that pump from the ground storage to the elevated storage are not operating.

SD DENR Recommended Design Criteria states in Section 8.4.2:

> *"A water distribution system shall be designed so as to provide a pressure of 20 pounds per square inch at each service outlet or connection under any or all conditions or demands that can be placed on the system. Under normal conditions, minimum pressures should be approximately 60 psi and not less than 35 psi."*

Section 7.3.1 of the Recommended Standards for Water Works by the Committee of the Great Lakes further recommends a minimum working pressure of 35 psi with a normal working pressure of 60 to 80 psi. The AWWA Distribution System Handbook by Mays states on page 3.8 that low operating pressures of less than 30 psi can result in annoying reductions in water flow when more than one water-using device is in service. The new minimum desired by many residents is 40 psi as that pressure is typically required to properly operate lawn sprinkler systems. Based on the references above, the recommended pressures for services are shown in Table 9.2.

Table 9.2: Recommended Pressures

Condition	Service Pressure Criteria (psi)
Maximum Pressure	60-80
Minimum Pressure During Peak Day	30-40
Minimum Pressure During Peak Hour	30
Minimum Pressure During Fire Flow	20

Figure 9.7 indicates that the operating pressures are above the minimum recommended pressure of 40 psi in all areas of the community. Figure 9.7 also shows the expected pipeline velocities during peak flow. Typically, three feet per second is the maximum recommended velocity since greater velocities introduce significant pressure loss within the water system. The hydraulic model results indicate all locations are below the recommended maximum velocity.

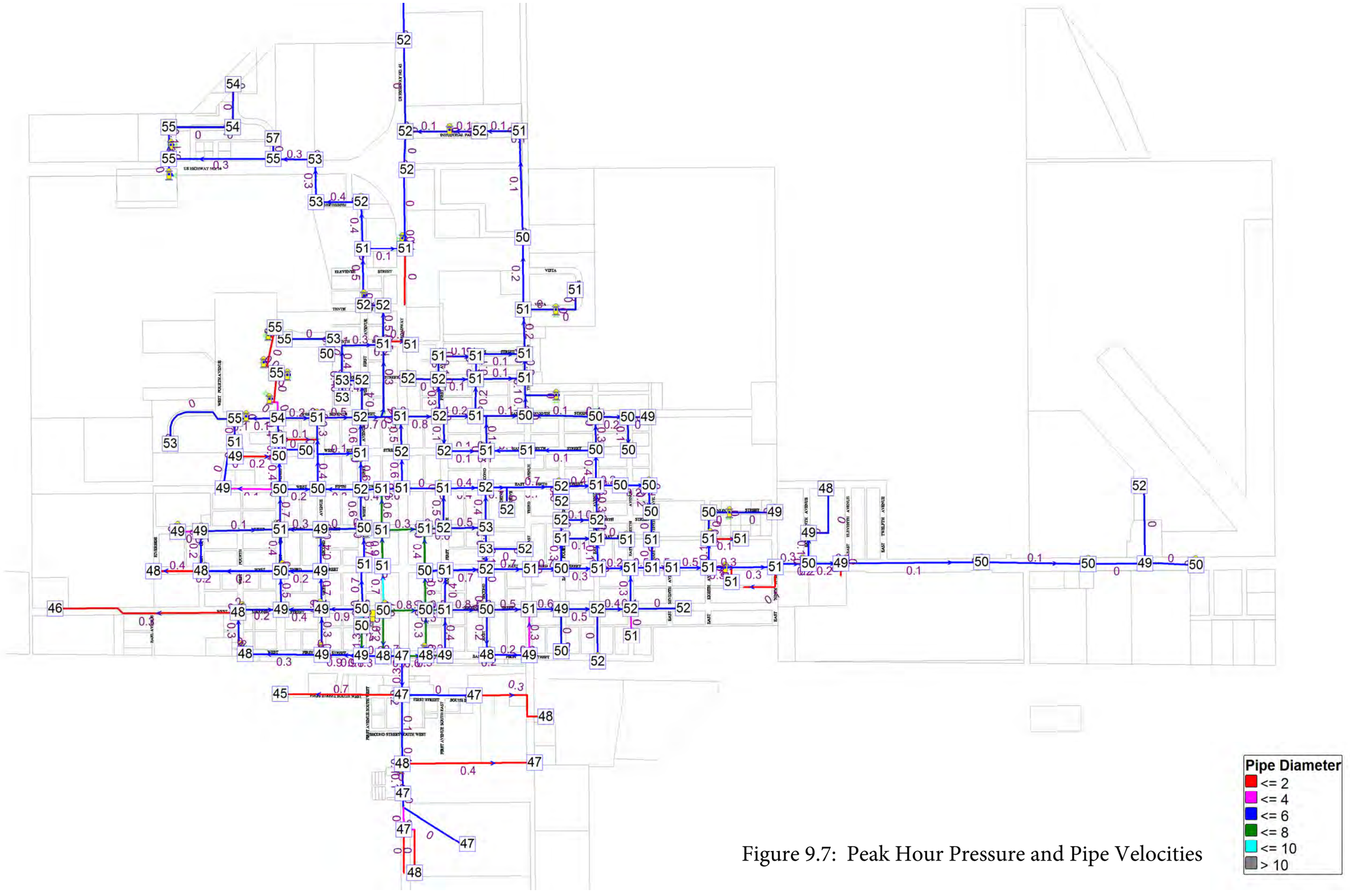


Figure 9.7: Peak Hour Pressure and Pipe Velocities

9.7.5 Fire Flow Simulation

In order to check the water system for low flow problems, hydraulic models are created with the following assumption made:

- The peak day demand is placed on the model according to Section 9.7.3.
- The operating level of the towers is set to the mid-tank level.
- The booster pumps are not operating.

Main pipelines are to deliver the needed fire flow to each hydrant in accordance with the ISO guidelines. The ISO guidelines are based on a number of variables including size of structure, construction material, occupancy, exposure and connections to other structures. For one- and two-family dwellings not exceeding two stories in height, the following needed fire flows are required:

Distance Between Buildings	Fire Flow Requirement
Over 100 feet	500 gpm
31 to 100 feet	750 gpm
11 to 30 feet	1,000 gpm
10 feet or less	1,500 gpm

As for the business district, the needed fire flow would be variable for each structure and an inspection and analysis of each structure would be required. Rather than performing these inspections and analyses, a minimum needed fire flow of 2,000 gpm is sought for business and school areas.

The fire flows that are estimated from the model are shown in Figure 9.8. As can be seen, many areas are served by fire flows that are less than the minimum required by ISO. The fire flows shown range from 250 gpm to 4,730 gpm. The low fire flows are due mainly to the long dead-end lines. The fire flow through a dead-end water main is typically lower than normal because of the increased friction and lack of multi-directional flow.

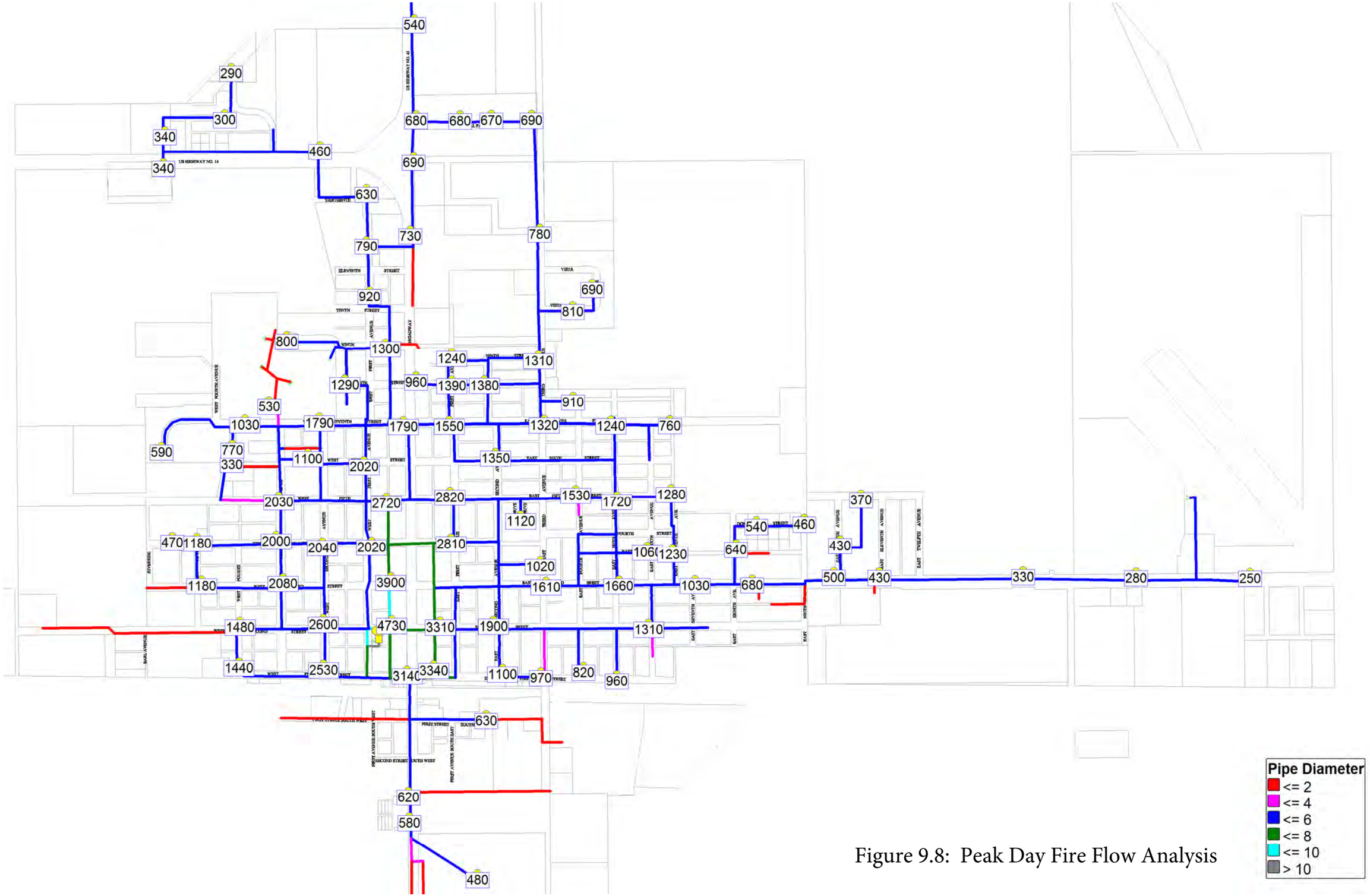


Figure 9.8: Peak Day Fire Flow Analysis

9.8 FUTURE CONDITIONS

Information related to project need and the planning area are found throughout Section 9 of this report. Specific information on population projections is found in Section 2.3. Land use is not expected to change significantly in the immediate vicinity of the City. There is some land available for future development and based on the past growth of the community, it is viewed as sufficient to meet community needs.

Due to the importance of conserving water, money and energy, various means for reducing wastewater flows and water usage are recommended. By using faucet aerators, reduced flush toilets, and limited flow showerheads, wastewater flow and water use can be reduced.

10 WATER SYSTEM ALTERNATIVES

10.1 GENERAL

The proposed improvements developed for the City of Miller were composed to demonstrate some possible options offered to fix the identified deficiencies in the water system.

10.2 CAUTIONARY NOTES CONCERNING COST ESTIMATES

The opinions of probable cost provided with the following alternatives reflect the anticipated costs for administration, engineering design, construction, contingencies, construction observation, and other costs related to completion of the project. The costs as presented are based on an analysis and comparison of projects of similar size and scope. The actual construction and project costs will vary on an individual project basis. The actual bid cost will reflect the bidder's evaluation of construction problems, weather, soils and difficulty of work. Thus, the engineer cannot be held responsible for the accuracy of the estimates made in this report as the engineer has no control over the contractors' bid costs.

Changes in materials, equipment and energy costs, as well as availability of other construction work at the time of the bid opening, could substantially influence actual project cost. Construction costs will also vary somewhat based on the quantity of items necessary to construct the project. The quantities and costs contained in this report are preliminary estimates based on our best judgment without field measurements. Final quantities and opinions of probable cost and final construction costs must be based upon final design.

Different funding sources have different requirements for some non-construction items. Therefore, actual costs of non-construction items should be considered tentative at this time and subject to later modifications and adjustments as current situations and funding sources dictate. Further, inasmuch as the period of construction cannot be accurately predicted, the costs as presented in this report have not been adjusted to reflect projected

inflation factors. Therefore, it is important that the estimate of costs as presented be reviewed and updated periodically to reflect construction cost trends.

10.3 EQUIVALENT UNIFORM ANNUAL COST

The equivalent uniform annual cost (EUAC) not only takes the capital costs into account when evaluating the options but also looks at the salvage value of the components and the expected annual operation and maintenance costs. The result is a comparison of the alternatives on an overall basis throughout a design life. The EUAC is eliminated from consideration since the proposed improvements presented subsequently offer one viable alternative for each set of improvements or would only be a factor of the capital cost, as in the case of distribution improvements.

10.4 WATER SOURCE IMPROVEMENTS

The City's wells have not been used for many years and should be properly abandoned. The most recent operating well has collapsed.

10.4.1 Water Source Option 1: Do Nothing

The City has a contract for rural water which makes the use of a well only a back-up water supply which is considered redundant and not completely necessary. The unused wells should be properly abandoned which makes the "Do Nothing" option not recommended.

10.4.2 Water Source Option 2: Abandon Wells

The City's three wells have not been used for many years and have become inoperable. This option considers the cost which is presented in Table 10.1 to properly abandon the wells. This option also includes the cost to demolish the existing buildings and associated above-ground pipe, fittings and valves.

Table 10.1: Estimated Costs for Abandoning Wells

Item	Description	Quantity		Unit Cost	Total Cost
1	Mobilization	1	LS	$5,000.00	$5,000.00
2	Demolish Buildings and Concrete Floors	1	LS	$15,000.00	$15,000.00
3	Remove and Dispose of Pipe, Valves and Fittings	1	LS	$3,000.00	$3,000.00
4	Abandon Well	3	EA	$8,000.00	$24,000.00
5	Cap Pipe	3	EA	$1,000.00	$3,000.00
				Subtotal	$50,000.00
				Contingencies (10%)	$5,000.00
				Construction Total	$55,000.00
				Legal and Administration Cost	$2,200.00
				Design Engineering	$4,500.00
				Bidding and Contract Documents	$2,000.00
				Construction Engineering	$6,000.00
				Total Project Cost	$69,700.00

10.4.3 Water Source Option 3: Well Improvements

The last working well in Miller has become inoperable. It is expected that achieving a working well will require a complete replacement because the casing pipe is likely to be collapsed. The estimated costs for the well improvements are presented in Table 10.2.

Table 10.2: Estimated Costs of Well Improvements

Item	Description	Quantity		Unit Cost	Total Cost
Well Drilling					
1	Mobilization	1	LS	$30,000.00	$30,000.00
2	5" Minimum Diameter Exploratory Hole	1,350	LF	$20.00	$27,000.00
3	Sampling, Analysis and Logging of Formation	1	LS	$2,500.00	$2,500.00
4	Drilling Bore Holes or Reaming of Pilot Hole	1,250	LF	$65.00	$81,250.00
5	10-Inch Steel Well Casing	1,250	LF	$60.00	$75,000.00
6	8-Inch Diameter Stainless Steel Slotted Screen	120	LF	$185.00	$22,200.00
7	Graded Filter Pack	120	LF	$100.00	$12,000.00
8	Grout Seal	1,250	LF	$50.00	$62,500.00
9	Well Development	120	Hr	$300.00	$36,000.00
10	Furnish, Install and Remove Pump and Discharge Column for Test Pumping	1	LS	$12,000.00	$12,000.00
11	Base Test Pumping	24	HR	$150.00	$3,600.00
12	Aquifer Recovery Measurements	12	HR	$150.00	$1,800.00
13	Well Disinfection	1	LS	$150.00	$150.00
14	Pitless Discharge Unit	1	LS	$12,000.00	$12,000.00
				Subtotal	**$378,000.00**
Well Pump and Piping					
15	Mobilization	1	LS	$5,000.00	$5,000.00
16	Furnish and Install 25 HP, 200 GPM Well Pump and Motor	1	EA	$6,660.00	$6,660.00
17	Furnish and Install Inline 4" Check Valve	2	EA	$400.00	$800.00
18	Furnish and Install Submersible Pump Wiring	1,230	LF	$5.00	$6,150.00
19	Furnish and Install 4" Schedule 40 Column Piping	1,210	LF	$20.00	$24,200.00
20	Furnish and Install 6" PVC Underground Piping	100	LF	$40.00	$4,000.00
21	Furnish and Install Fire Hydrant with 6" Gate Valve	1	EA	$4,200.00	$4,200.00
				Subtotal	**$51,010.00**
Abandon Three Existing Wells					
22	Abandon Existing Well	3	EA	$11,000.00	$33,000.00
23	Cap Water Main	3	EA	$1,500.00	$4,500.00
24	Remove Above Ground Well Piping and Related Items	1	LS	$3,000.00	$3,000.00
				Subtotal	**$40,500.00**
				Construction Cost	$469,510.00
				Contingencies	$47,000.00
				Total Construction Cost	$516,510.00
				Legal and Administration Cost	$10,300.00
				Design Engineering	$35,600.00
				Bidding Phase Engineering	$6,000.00
				Construction Engineering	$42,700.00
				Total Project Cost	$611,110.00

10.5 WATER STORAGE IMPROVEMENTS

No improvements are recommended.

10.6 BOOSTER STATION IMPROVEMENTS

No improvements are recommended.

10.7 WATER DISTRIBUTION IMPROVEMENTS

The operating characteristics and deficiencies of the water distribution system are discussed in detail in Section 9 of this report. The following is a summary of the deficiencies of Miller's water distribution system.

- The average water loss rate for the period of record is 34 percent.
- Approximately 55 percent of the distribution system piping is composed of ACP. There are also sections of CIP and DIP which should be replaced.
- There are approximately 27 dead ends when considering the portion of the system made up of piping larger than two-inch diameter. At a minimum, a fire hydrant should be located at each dead end for flushing. There are approximately 15 of these dead ends that are not practically able to be looped due to their location.
- There are approximately four fire hydrants that are served by four-inch diameter water mains.
- Estimated fire flows are lower than those desired for insurance and fire-fighting purposes in some locations.

10.7.1 Water System Option 1: Do Nothing

One option for water system improvements is to do nothing. This is not feasible because it will not include replacement of the ACP or rectify the excessive water losses currently occurring. As a result, doing nothing is not considered as an acceptable option.

10.7.2 Water System Option 2: Replace ACP Next to Sewer Improvements

The ACP throughout the City is becoming increasingly problematic. The ACP has been noted to become brittle and break frequently, especially once it is exposed due to a repair, adding a connection or replacing a valve. Because of these issues and the potential health risks from the asbestos contained in the pipes, the pipe should be replaced. Option 2 also

considers the looping of water main where practical and the extension of water main to areas on the south end of Third Avenue and the west end of Second Street.

Option 2 considers the replacement of the ACP within the distribution system where sanitary or storm sewer work is proposed. Option 2 is further broken down into three phases to follow the work laid out in the proposed phased approach of the sanitary sewer work. The replacement of piping highlighted in Figure 10.1 is proposed for this option.

As shown in Figure 10.2, the pressures are not improved by a significant amount overall. There are some regional pressures that increase slightly due to the proposed piping. The fire flows shown in Figure 10.3 are improved, especially in the vicinity of pipe replacement. For example, the fire flow at East First Street and Fourth Avenue was at 820 gpm and is now expected to increase to 2,180 gpm. This is due to the replacement of the ACP which restricted flow and the installation of pipe for looping the water main.

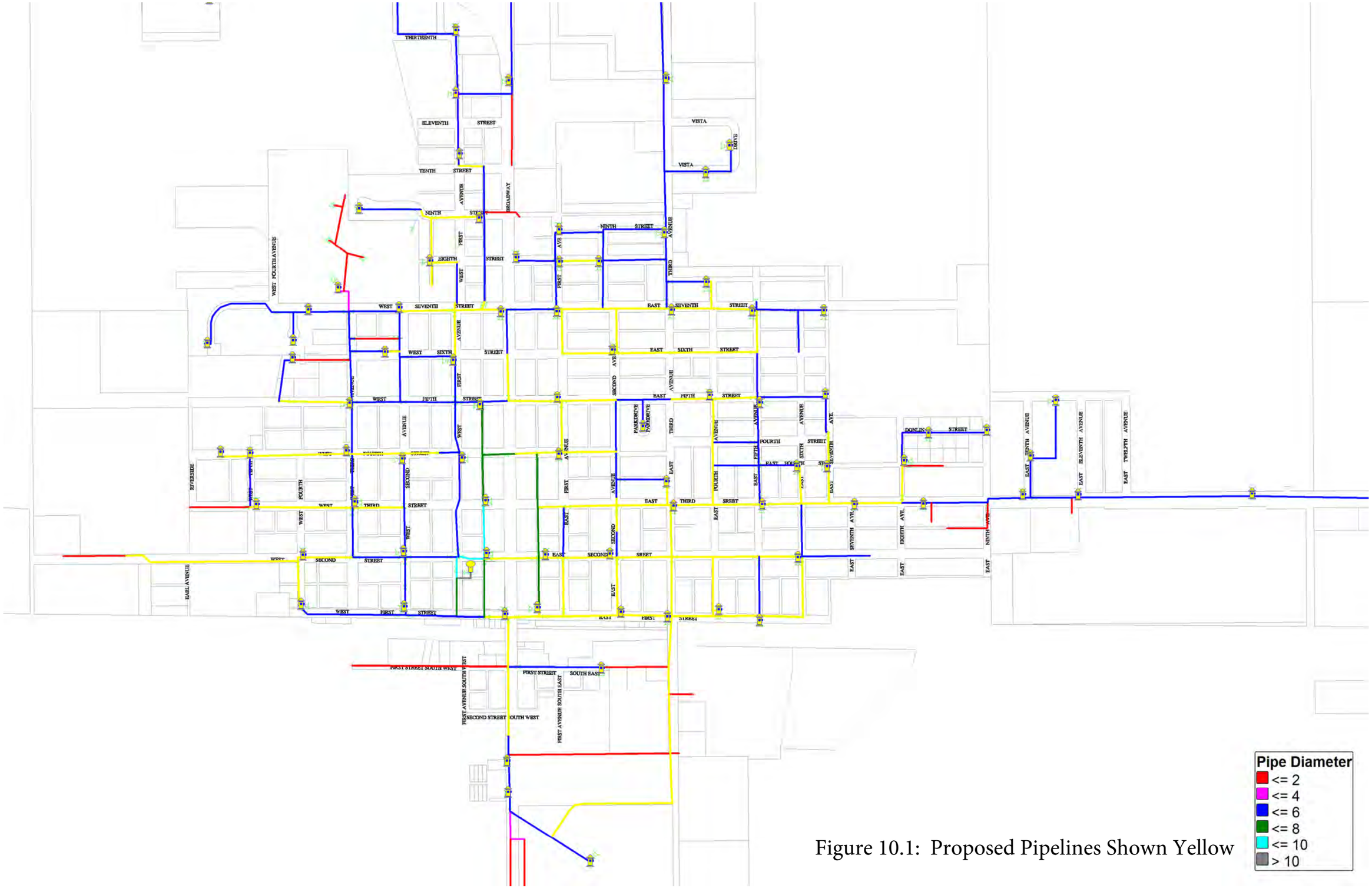


Figure 10.1: Proposed Pipelines Shown Yellow

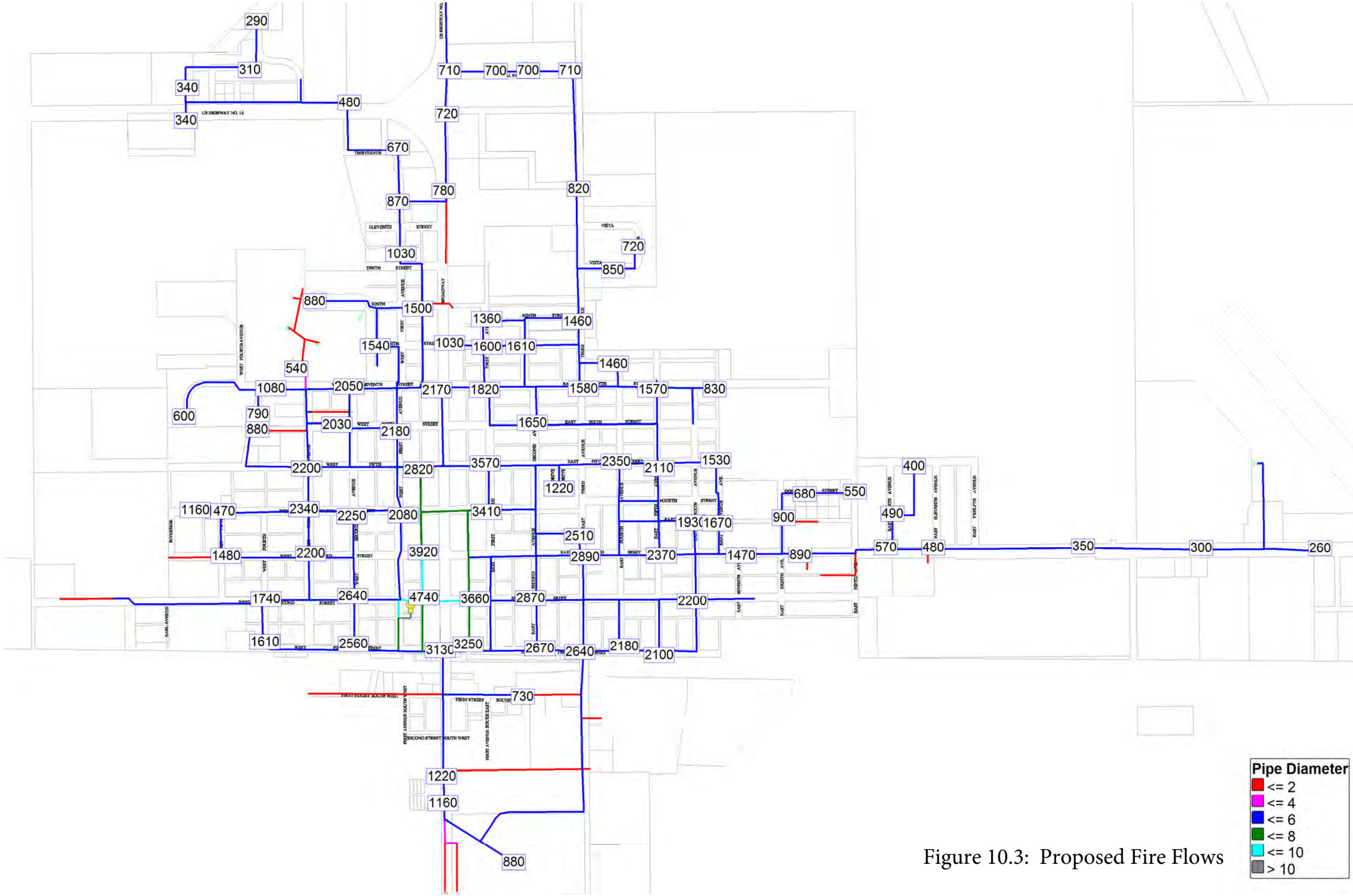


Figure 10.3: Proposed Fire Flows

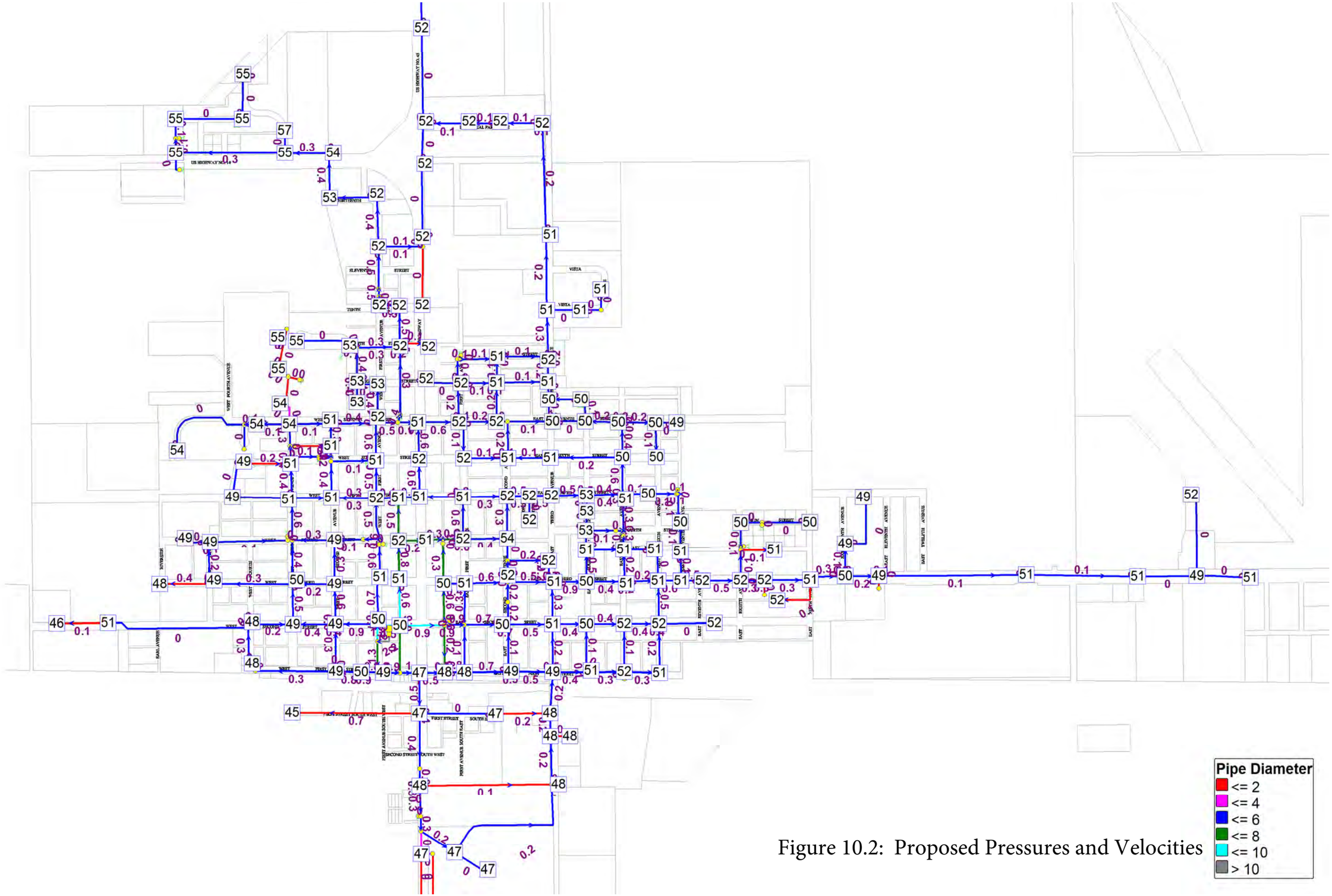


Figure 10.2: Proposed Pressures and Velocities

10.7.2.1 Water Distribution Phase 1

The first phase of work will be implemented in the general southeast area of the City where the first phase of sanitary sewer is proposed. Refer to Figure 10.4 for a map showing the phases of implementation of Option 2. Phase 1 also includes the looping of water main on East First Street and the water main extension on the south end of Third Avenue since this piping is in the general area of water main improvements proposed for this phase. The estimated costs associated with the Phase 1 improvements are presented in Table 10.3 which includes the estimated costs for new pipe with associated fittings, connections, service piping, street work and related items.

10.7.2.2 Water Distribution Phase 2

The second phase of work involves the corresponding general area of the second phase of sanitary sewer improvements. The estimated costs associated with the Phase 2 improvements are presented in Table 10.4.

10.7.2.3 Water Distribution Phase 3

The third phase of work includes the west side of the City where the third phase of sanitary sewer improvements is proposed. This phase also includes the remaining portion of the looping necessary on the far south part of the City and the water main extension on the west end of Second Street. The estimated costs associated with the Phase 3 improvements are presented in Table 10.5.

WATER MAP
CITY OF
MILLER
HAND COUNTY, SOUTH DAKOTA

SCALE: 1" = 800'

LEGEND

- 2" WATER MAIN
- 4" WATER MAIN
- 6" WATER MAIN
- 8" WATER MAIN
- 10" WATER MAIN
- WATER VALVE
- FIRE HYDRANT
- HAND HYDRANT
- PVC PIPE
- TRANSITE PIPE
- PIPE AS LISTED
- PHASE 1
- PHASE 2
- PHASE 3

Map and Utilities as shown on the drawings are located in accordance with available data, but may vary. This map is not to be used for construction.

Well #4

DETAIL A

Figure 10.4: Phases of Water Distribution Implementation

SPN & Associates
Engineers, Planners and Surveyors
2100 North Sanborn Blvd. - P.O. Box 398 Mitchell, South Dakota 57301
Phone: (605) 996-7761 Fax: (605) 996-0015

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Table 10.3: Estimated Costs of Water Distribution Phase 1

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$118,000.00	$118,000.00
2	Pulverize and Salvage Existing Asphalt	13,800	SY	$3.50	$48,300.00
3	Remove Sidewalk	360	SY	$3.50	$1,260.00
4	Full Depth Concrete Saw Cut	1,200	FT	$10.00	$12,000.00
5	Full Depth Asphalt Saw Cut	410	FT	$5.00	$2,050.00
6	Remove and Dispose Existing Valve and Box	35	EA	$250.00	$8,750.00
7	Remove and Dispose Existing Fire Hydrant	12	EA	$350.00	$4,200.00
8	Directional Boring 10" Water Main	150	FT	$100.00	$15,000.00
9	Directional Boring 6" Water Main	120	FT	$80.00	$9,600.00
10	6" Water Main	7,260	FT	$28.00	$203,280.00
11	8" Water Main	1,000	FT	$32.00	$32,000.00
12	10" Water Main	850	FT	$40.00	$34,000.00
13	Fire Hydrant	23	EA	$3,200.00	$73,600.00
14	6" PVC Fire Hydrant Lead	460	FT	$28.00	$12,880.00
15	6" Gate Valve	69	EA	$1,100.00	$75,900.00
16	8" Gate Valve	5	EA	$1,500.00	$7,500.00
17	10" Gate Valve	2	EA	$2,500.00	$5,000.00
18	Miscellaneous Fittings and Connections	1	LS	$100,600.00	$100,600.00
19	1" Curb Stop w/Box	134	EA	$240.00	$32,160.00
20	2" Curb Stop w/ Box	5	EA	$450.00	$2,250.00
21	1" Service Line	4,422	LF	$25.00	$110,550.00
22	2" Service Line	165	LF	$32.00	$5,280.00
23	4" Concrete Sidewalk	3,240	SF	$6.00	$19,440.00
24	Place Recycled Asphalt	13,800	SY	$2.00	$27,600.00
25	Fine Grading of Base Material	13,800	SY	$1.00	$13,800.00
26	Gravel Base or Surfacing	6,700	TN	$22.00	$147,400.00
27	Asphalt Paving	2,600	TN	$120.00	$312,000.00
28	Blotter Coat Surfacing	5,200	SY	$8.00	$41,600.00
29	Traffic Control	1	LS	$15,000.00	$15,000.00
30	Erosion Control	1	LS	$4,000.00	$4,000.00
31	Incidental Construction	1	LS	$96,400.00	$96,400.00
				Subtotal	$1,591,400.00
				Contingencies	$159,100.00
				Total Construction Cost	$1,750,500.00
				Legal and Administration Cost	$35,000.00
				Design Engineering	$112,500.00
				Bidding Phase Engineering	$10,000.00
				Construction Engineering	$202,500.00
				Total Project Cost	$2,110,500.00

Table 10.4: Estimated Costs of Water Distribution Phase 2

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$132,000.00	$132,000.00
2	Pulverize and Salvage Existing Asphalt	22,300	SY	$3.50	$78,050.00
3	Remove Sidewalk	500	SY	$3.50	$1,750.00
4	Full Depth Concrete Saw Cut	1,600	FT	$10.00	$16,000.00
5	Full Depth Asphalt Saw Cut	840	FT	$5.00	$4,200.00
6	Remove and Dispose Existing Valve and Box	44	EA	$250.00	$11,000.00
7	Remove and Dispose Existing Fire Hydrant	23	EA	$350.00	$8,050.00
8	6" Water Main	12,400	FT	$28.00	$347,200.00
9	8" Water Main	1,000	FT	$32.00	$32,000.00
10	Fire Hydrant	31	EA	$3,200.00	$99,200.00
11	6" PVC Fire Hydrant Lead	620	FT	$28.00	$17,360.00
12	6" Gate Valve	82	EA	$1,100.00	$90,200.00
13	8" Gate Valve	3	EA	$1,500.00	$4,500.00
14	Miscellaneous Fittings and Connections	1	LS	$141,400.00	$141,400.00
15	1" Curb Stop w/Box	178	EA	$240.00	$42,720.00
16	2" Curb Stop w/ Box	3	EA	$450.00	$1,350.00
17	1" Service Line	5,874	LF	$25.00	$146,850.00
18	2" Service Line	100	LF	$32.00	$3,200.00
19	4" Concrete Sidewalk	4,500	SF	$6.00	$27,000.00
20	Place Recycled Asphalt	22,300	SY	$2.00	$44,600.00
21	Fine Grading of Base Material	22,300	SY	$1.00	$22,300.00
22	Gravel Base	9,100	TN	$22.00	$200,200.00
23	Blotter Coat Surfacing	22,300	SY	$8.00	$178,400.00
24	Traffic Control	1	LS	$15,000.00	$15,000.00
25	Erosion Control	1	LS	$4,000.00	$4,000.00
26	Incidental Construction	1	LS	$107,600.00	$107,600.00
				Subtotal	$1,776,130.00
				Contingencies	$177,600.00
				Total Construction Cost	$1,953,730.00
				Legal and Administration Cost	$39,100.00
				Design Engineering	$124,000.00
				Bidding Phase Engineering	$10,000.00
				Construction Engineering	$223,200.00
				Total Project Cost	$2,350,030.00

Table 10.5: Estimated Costs of Water Distribution Phase 3

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$82,000.00	$82,000.00
2	Pulverize and Salvage Existing Asphalt	10,800	SY	$3.50	$37,800.00
3	Remove Sidewalk	300	SY	$3.50	$1,050.00
4	Full Depth Concrete Saw Cut	1,000	FT	$10.00	$10,000.00
5	Full Depth Asphalt Saw Cut	530	FT	$5.00	$2,650.00
6	Remove and Dispose Existing Valve and Box	23	EA	$250.00	$5,750.00
7	Remove and Dispose Existing Fire Hydrant	6	EA	$350.00	$2,100.00
8	6" Water Main	9,890	FT	$28.00	$276,920.00
9	Fire Hydrant	19	EA	$3,200.00	$60,800.00
10	6" PVC Fire Hydrant Lead	380	FT	$28.00	$10,640.00
11	6" Gate Valve	59	EA	$1,100.00	$64,900.00
12	Miscellaneous Fittings and Connections	1	LS	$98,500.00	$98,500.00
13	1" Curb Stop w/Box	116	EA	$240.00	$27,840.00
14	2" Curb Stop w/ Box	3	EA	$450.00	$1,350.00
15	1" Service Line	3,828	LF	$25.00	$95,700.00
16	2" Service Line	99	LF	$32.00	$3,168.00
17	4" Concrete Sidewalk	2,700	SF	$6.00	$16,200.00
18	Place Recycled Asphalt	10,800	SY	$2.00	$21,600.00
19	Fine Grading of Base Material	10,800	SY	$1.00	$10,800.00
20	Gravel Base and Surfacing	5,000	TN	$22.00	$110,000.00
21	Blotter Coat Surfacing	10,800	SY	$8.00	$86,400.00
22	Traffic Control	1	LS	$15,000.00	$15,000.00
23	Erosion Control	1	LS	$4,000.00	$4,000.00
24	Incidental Construction	1	LS	$67,400.00	$67,400.00
				Subtotal	$1,112,568.00
				Contingencies	$111,300.00
				Total Construction Cost	$1,223,868.00
				Legal and Administration Cost	$24,500.00
				Design Engineering	$82,800.00
				Bidding Phase Engineering	$10,000.00
				Construction Engineering	$149,000.00
				Total Project Cost	$1,490,168.00

10.7.3 Water System Option 3: Replace Remaining ACP

Option 3 considers the replacement of the remaining ACP which was not replaced as part of Phase 1 through 3. The estimated costs associated with the Option 3 improvements are presented in Table 10.6 which includes the estimated costs for new pipe with associated fittings, connections, service piping, street work and related items. The highlighted piping shown in Figure 10.5 is proposed for this option.

As shown in Figure 10.6, the pressures are not improved by a significant amount overall. The fire flows shown in Figure 10.7 are improved, especially in the vicinity of pipe replacement. For example, Figure 10.3 indicated a fire flow of 1,360 gpm on East Ninth Street and First Avenue; the proposed fire flow after the implementation of Option 3 would result in an expected fire flow of 1,760 gpm.

Table 10.6: Estimated Costs of Remaining ACP Replacement

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$220,000.00	$220,000.00
2	Pulverize and Salvage Existing Asphalt	46,500	SY	$3.50	$162,750.00
3	Remove Sidewalk	480	SY	$3.50	$1,680.00
4	Full Depth Concrete Saw Cut	1,500	FT	$10.00	$15,000.00
5	Full Depth Asphalt Saw Cut	1,220	FT	$5.00	$6,100.00
6	Remove and Dispose Existing Valve and Box	51	EA	$250.00	$12,750.00
7	Remove and Dispose Existing Fire Hydrant	10	EA	$350.00	$3,500.00
8	6" Water Main	27,850	FT	$28.00	$779,800.00
9	Fire Hydrant	35	EA	$3,200.00	$112,000.00
10	6"Fire Hydrant Lead	700	FT	$28.00	$19,600.00
11	6" Gate Valve	51	EA	$1,100.00	$56,100.00
12	Miscellaneous Fittings and Connections	1	LS	$163,600.00	$163,600.00
14	1" Curb Stop w/Box	172	EA	$240.00	$41,280.00
15	1" Service Line	6,020	FT	$25.00	$150,500.00
18	Place Recycled Asphalt	46,500	SY	$2.00	$93,000.00
19	Fine Grading of Base Material	46,500	SY	$1.00	$46,500.00
18	Gravel Base	20,300	TN	$22.00	$446,600.00
19	Blotter Coat Surfacing	46,500	SY	$8.00	$372,000.00
20	Traffic Control	1	LS	$7,500.00	$7,500.00
21	Erosion Control	1	LS	$7,500.00	$7,500.00
22	Incidental Construction	1	LS	$249,800.00	$249,800.00
				Subtotal	$2,967,560.00
				Contingencies	$296,800.00
				Total Construction Cost	$3,264,360.00
				Legal and Administration Cost	$65,300.00
				Design Engineering	$174,000.00
				Bidding Phase Engineering	$10,000.00
				Construction Engineering	$261,000.00
				Total Project Cost	$3,774,660.00

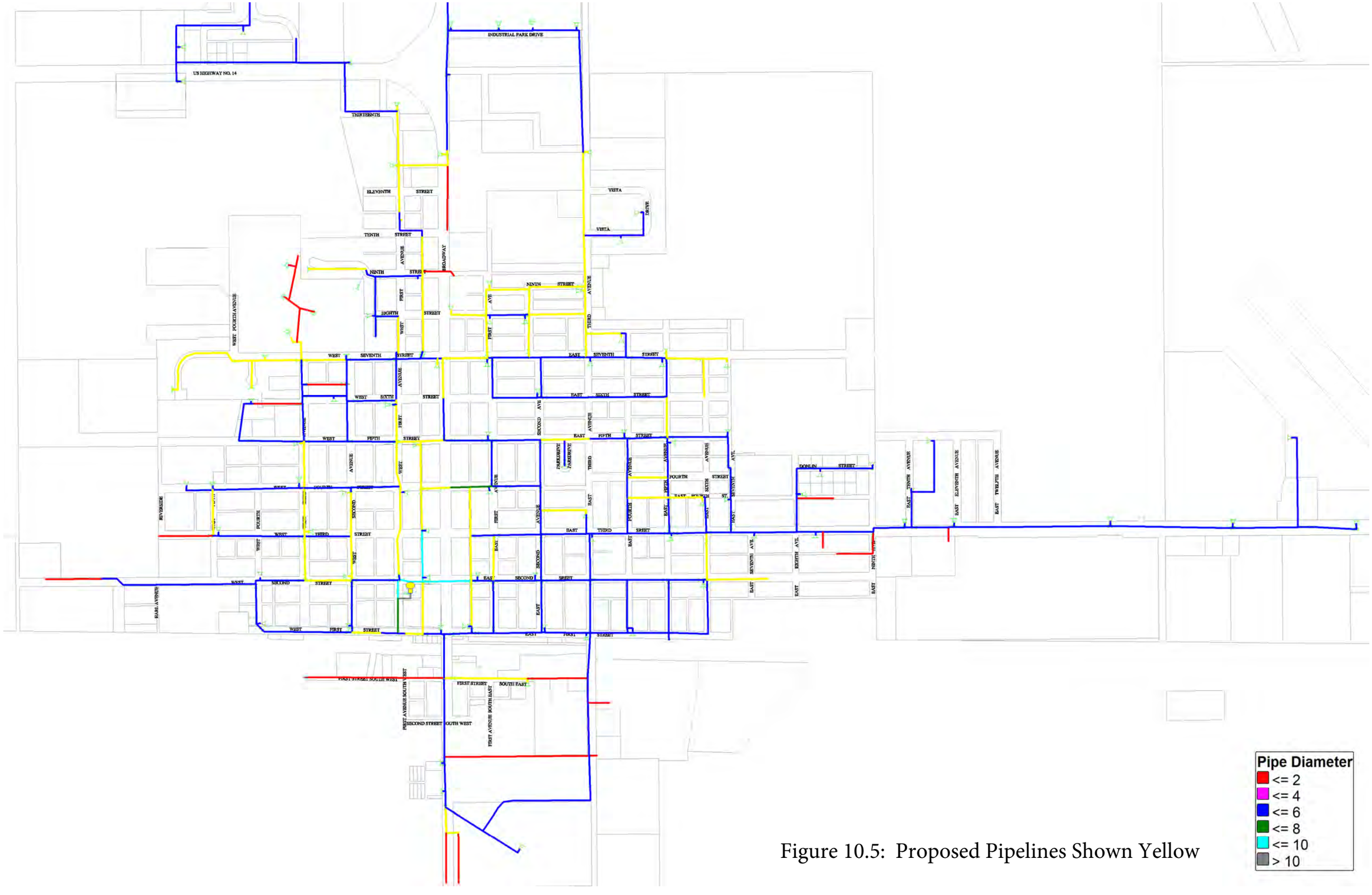


Figure 10.5: Proposed Pipelines Shown Yellow

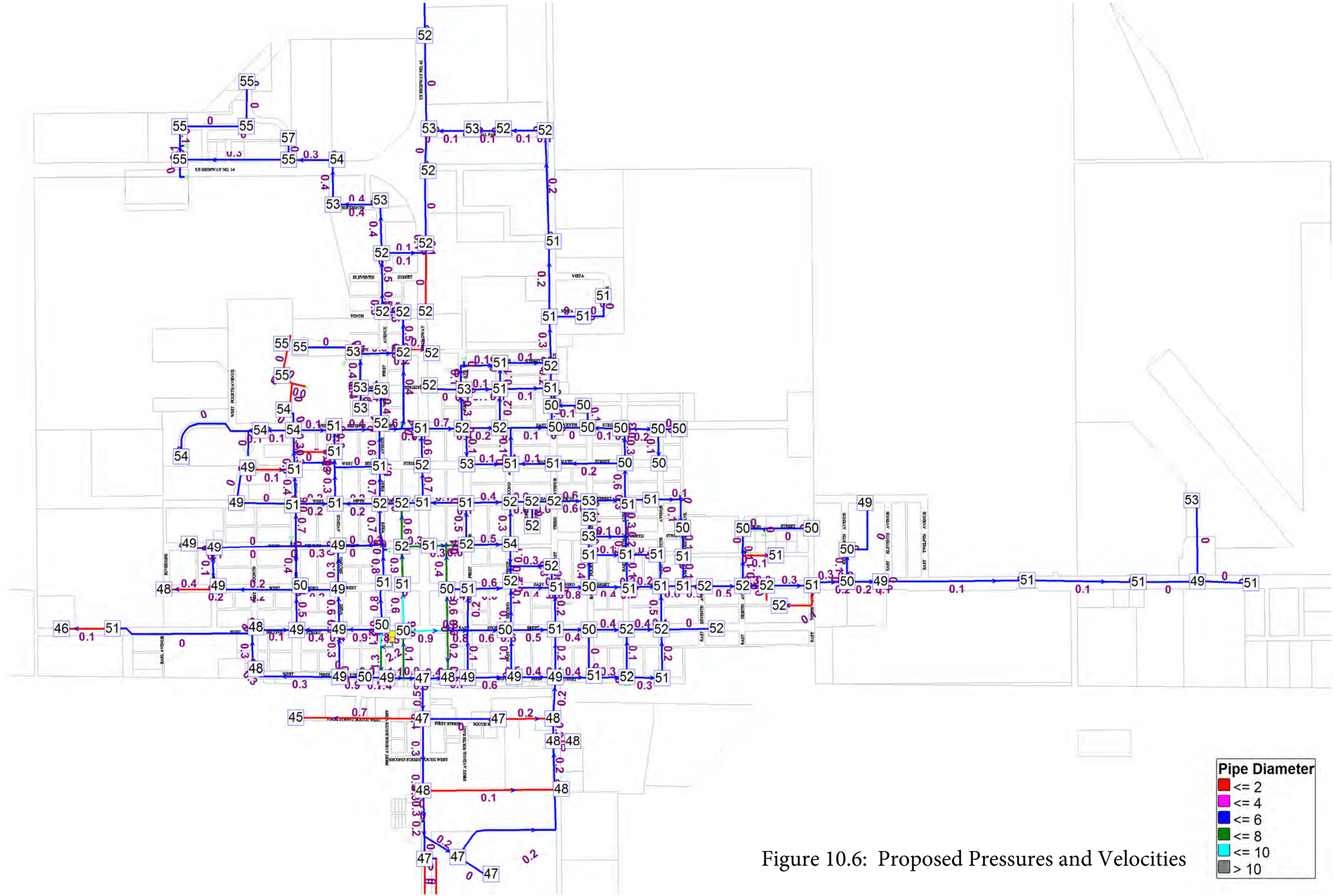


Figure 10.6: Proposed Pressures and Velocities

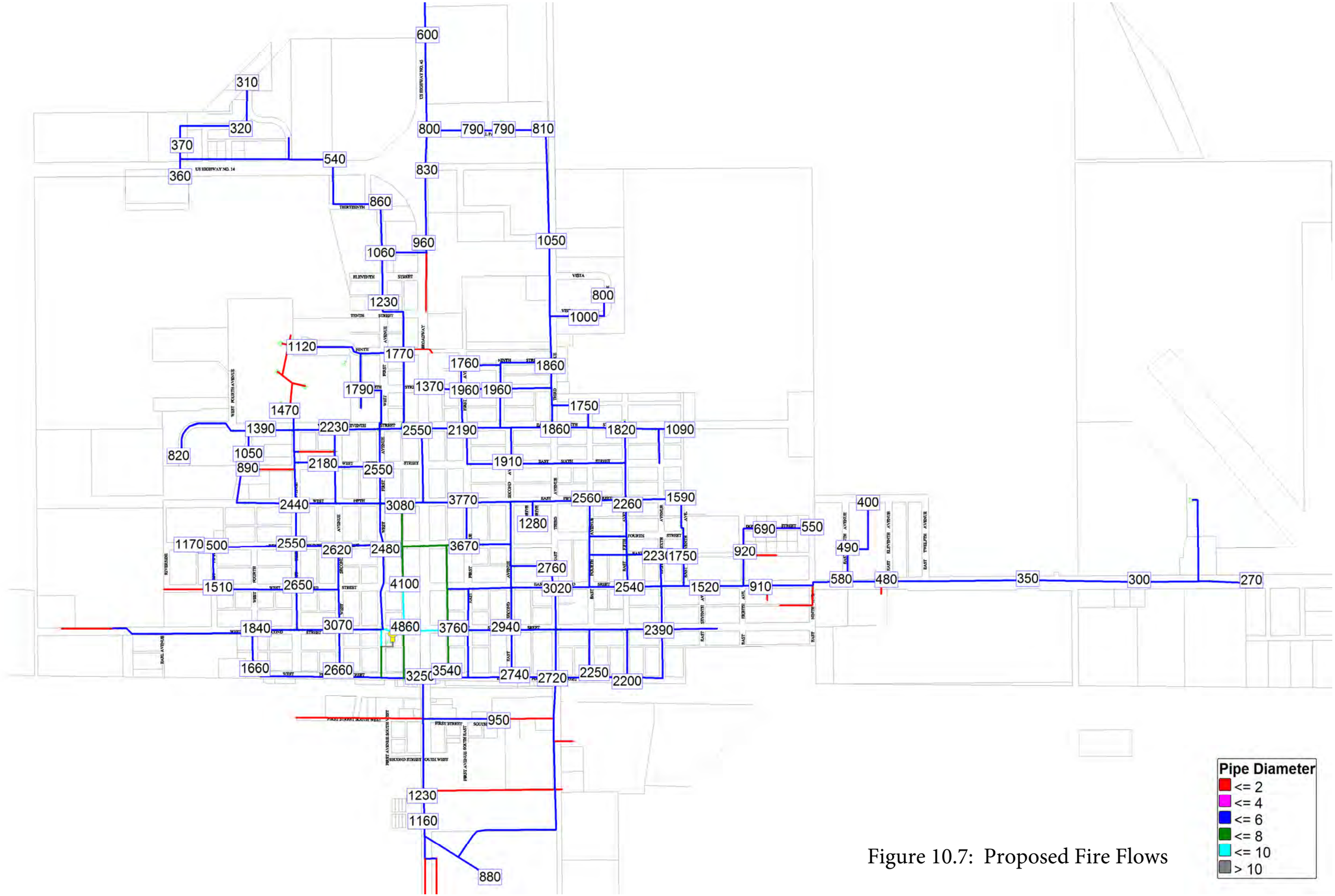


Figure 10.7: Proposed Fire Flows

10.7.4 Water System Option 4: Alley Surfacing

The City completed an urgent water main replacement project in 2010 because of leaking pipe. The alley over which the repair took place has not been resurfaced to date, much to the dismay of local businesses who regularly use this alley. The design of the proposed resurfacing has been completed. The City would like to include the bidding and construction of this work in an overall project. Therefore, the estimated cost for this work is presented in Table 10.7. The location of the needed resurfacing is shown in Figure 10.8.

Table 10.7: Estimated Costs of Alley Surfacing

Item	Description	Quantity		Unit Price	Total Cost
1	Mobilization	1	LS	$4,900.00	$4,900.00
2	Asphalt Saw Cut	14	LF	$5.00	$70.00
3	Concrete Saw Cut	225	LF	$8.00	$1,800.00
4	Remove and Dispose of Asphalt	20	SY	$4.00	$80.00
5	Remove and Dispose of Concrete	754	SF	$1.50	$1,131.00
6	Remove and Salvage Gravel Surfacing	720	SY	$3.00	$2,160.00
7	Unclassified Excavation	117	CY	$15.00	$1,755.00
8	Spreading and Fine Grading of Base Material	610	SY	$3.00	$1,830.00
9	Concrete Curb and Gutter	50	LF	$40.00	$2,000.00
10	3-Foot Concrete Valley Gutter	295	LF	$20.00	$5,900.00
11	Concrete Paving	1,210	SF	$12.00	$14,520.00
12	Gravel Base Course	280	TN	$24.00	$6,720.00
13	Asphalt Concrete Pavement	110	TN	$135.00	$14,850.00
14	Salvage and Reset Inlet Grate	1	EA	$500.00	$500.00
15	Adjust Water Valve or Curb Stop to Grade	11	EA	$300.00	$3,300.00
16	Miscellaneous Traffic Control	1	LS	$4,000.00	$4,000.00
17	Inlet Protection	1	EA	$500.00	$500.00
18	Seeding and Fertilizing	1	LS	$500.00	$500.00
				Subtotal	$66,516.00
				Contingencies	$6,700.00
				Total Construction Cost	$73,216.00
				Legal and Administration Cost	$1,500.00
				Design Engineering	$0.00
				Bidding Phase Engineering	$3,500.00
				Construction Engineering	$8,400.00
				Total Project Cost	$86,616.00

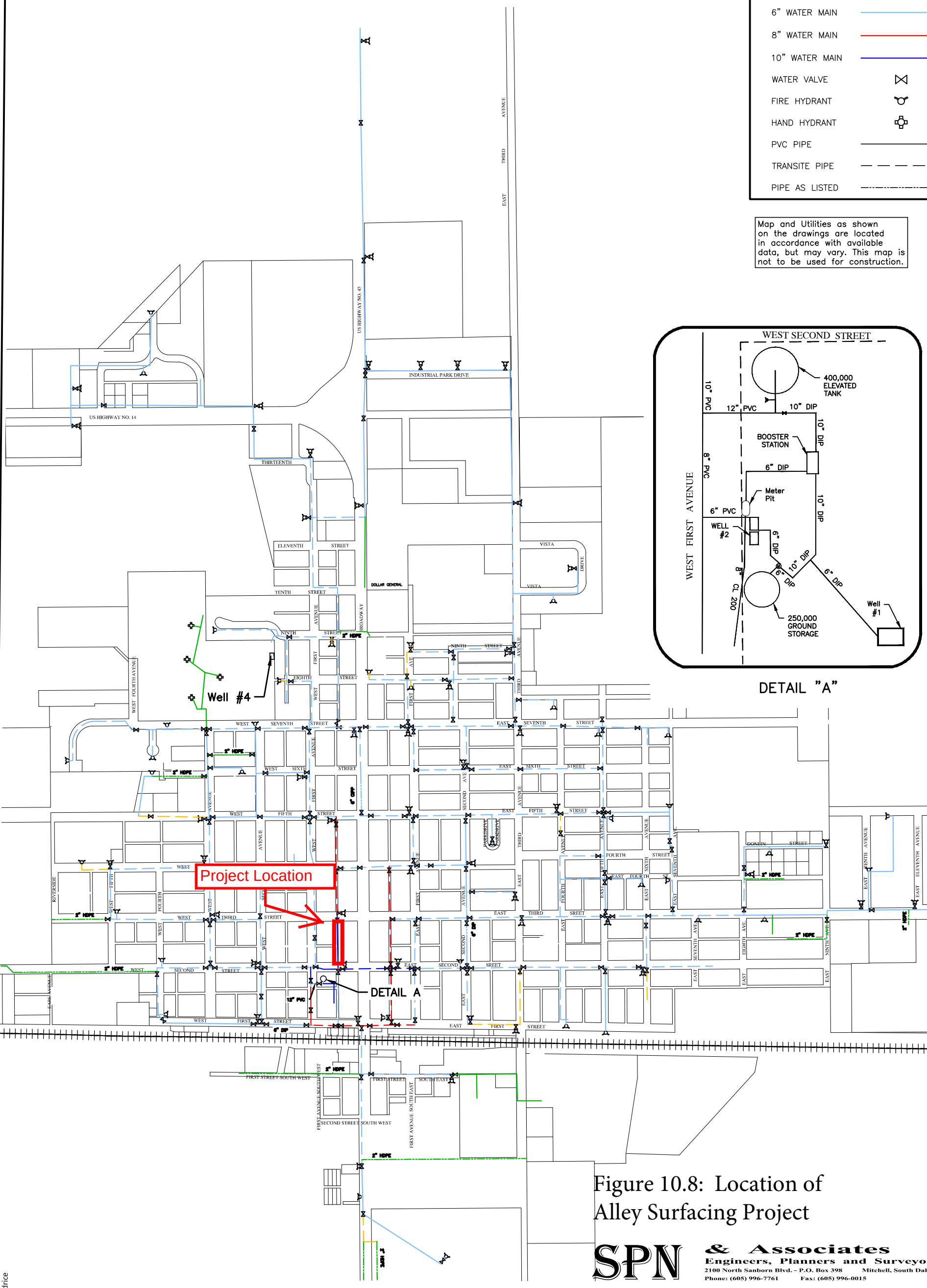
WATER MAP
CITY OF
MILLER
HAND COUNTY, SOUTH DAKOTA

SCALE: 1" = 800'

LEGEND

- 2" WATER MAIN
- 4" WATER MAIN
- 6" WATER MAIN
- 8" WATER MAIN
- 10" WATER MAIN
- WATER VALVE
- FIRE HYDRANT
- HAND HYDRANT
- PVC PIPE
- TRANSITE PIPE
- PIPE AS LISTED

Map and Utilities as shown on the drawings are located in accordance with available data, but may vary. This map is not to be used for construction.



DETAIL "A"

Figure 10.8: Location of Alley Surfacing Project

SPN & Associates
Engineers, Planners and Surveyors
2100 North Sanborn Blvd. - P.O. Box 398 Mitchell, South Dakota 57301
Phone: (605) 996-7761 Fax: (605) 996-0015

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10.8 OPTIMUM OPERATION OF EXISTING FACILITIES

The existing facilities are being operated in the most efficient manner that can be accomplished, considering the deficiencies and problems that will be addressed in the proposed improvements.

10.9 REGIONALIZATION

Regionalization is not a feasible approach to solving the problems identified.

11 WATER SYSTEM ALTERNATIVES

A summary of the total project costs for each of the improvement options discussed in Section 10 is presented in Table 11.1. The recommended improvements are also tabulated in Table 11.1 and discussed below.

Table 11.1: Summary of Costs

Improvement Options	Cost	Recommended for Phase 1	Recommended for Phase 2	Recommended for Phase 3
Abandon Wells	$69,700			$69,700
Well Improvements	$611,110			
Water Distribution Phase 1	$2,110,500	$2,110,500		
Water Distribution Phase 2	$2,350,030		$2,350,030	
Water Distribution Phase 3	$1,490,168			$1,490,168
Replace Remaining ACP	$3,774,660			
Alley Surfacing	$86,616	$86,616		
Total Water System Costs		**$2,197,116**	**$2,350,030**	**$1,559,868**

11.1 WATER SOURCE IMPROVEMENTS

The "Do Nothing" option is not recommended since the unused wells should be properly abandoned. Water Source Option 2 (Abandon Wells) is recommended. Water Source Option 3 (Well Improvements) is not recommended as the capital cost of a new well is substantial, especially considering the benefits gained from a back-up well.

11.2 WATER STORAGE IMPROVEMENTS

No improvements are necessary.

11.3 BOOSTER STATION IMPROVEMENTS

No improvements are necessary.

11.4 WATER DISTRIBUTION IMPROVEMENTS

Option 2 (Replace ACP Adjacent to Sewer Improvements) is recommended to begin a replacement strategy for the ACP. The first phase of improvements will go along well with the proposed sanitary sewer improvements to reduce overall costs. Upon completion of the Phase 1 water system improvements, Phases 2 and 3 should also be implemented subsequently. Option 3 (Replace Remaining ACP) is not recommended at this time. The City can consider this work as funding becomes available. Option 4 (Alley Surfacing) is recommended to provide a new driving surface for one block of alley where a water main replacement project disturbed the surface in 2010.

11.5 DEMONSTRATION OF FINANCIAL CAPABILITY

As part of the cost analysis of the recommended improvements, the City's ability to pay for the projects is evaluated. The total costs of the improvements are listed in Table 11.1. For the purpose of this financial evaluation, the total cost of the improvements is assumed to be eligible for a low interest loan from the DENR's State Revolving Fund program. This, however, is subject to change due to decisions that must be made by the appropriate funding agencies.

Table 11.2 summarizes the financial data that was supplied by the City Finance Officer and is used to determine the proposed operational surplus or deficit of the Water Fund. The budgeted revenues generated from user fees are listed in Table 11.2. The budget analysis indicates that the current revenue is insufficient when short-lived asset replacement costs are deducted. The short-lived asset calculations are shown in Table 11.3.

Table 11.2: Operation of the Water Fund

	Water Budget 2015	Water Budget 2016
Total Cost of Improvements		$2,197,116
Gross Revenue	$545,000	$545,000
Operation and Maintenance Cost	$544,000	$520,000
Retirement of Current Debt		
Short-Lived Asset Replacement	$15,755	$15,755
Net Income	**-$14,755**	**$9,245**
Retirement of Debt Incurred with This Project	$0	$115,748
Amount to Be Set Aside for Debt Reserves	$0	$11,575
Remaining Surplus After Project	**-$14,755**	**-$118,077**
Increase of Fee	$1.50	$12.00
Number of Accounts	820	820
Added Revenue	$14,760	$118,080
Surplus After Increase in Fee	**$5.24**	**$2.61**
Existing Water Charge	$50.00	$50.00
New Water Charge	$51.50	$62.00

Table 11.3: Short-Lived Asset Replacement Calculations

Expenses	Annual Cost	Cost	Future Cost	Period of Service, yr	Start Service
High Service Pumps, Controls	$4,800	$50,000	$103,946	20	2010
Pump Station Valves	$355	$5,000	$16,932	30	2010
Water Tank Inspection/Repair	$10,600	$150,000	$507,953	30	2010
Annual Total to Be Budgeted	$15,755				

The new loan will create a greater deficit and require an increase in user fees. The increase in user fees will depend on the actual financing that is available. The current water fee schedule amounts to $50 per month for 5,000 gallons of residential water use. The water rate schedule includes a surcharge of $3.94 for a previous project, a base rate of $26.06 and a cost of $4.00 per 1,000 gallons of water used. Water rates for commercial use are based on the meter size and a cost of $4.00 per 1,000 gallons used.

The operation and maintenance costs for the Water Fund are based on the costs for 2015. These costs include the salaries and all expenses incurred during the year.

The annual loan payment for principal and interest on the total cost of the improvements is calculated based on a 30-year loan period and an interest rate of 3.25 percent. The implementation of the recommended improvements will require an increase in user fees. The increase in user fees will depend on the actual financing that is available. The proposed improvements are expected to reduce the annual costs of operation and maintenance as shown in Table 11.2.

The short-lived asset replacement cost is included in Table 11.2 and consists of booster station pump and valve replacement, control equipment replacement and general repair items. The City should budget this amount annually for maintenance. Because the financing that will be supplied by various funding agencies is unknown at this time, multiple columns of budget information are provided in Table 11.4 based on varying grant percentages. An alternate table for water rate analysis is presented in Table 11.5 for a Rural Development loan, which would have a term of 40 years and an interest rate of 2.625 percent.

Table 11.4: Water Rate Analysis (SRF)

Percent Grant	75%	70%	65%	60%	55%	50%
Annual O & M	$520,000	$520,000	$520,000	$520,000	$520,000	$520,000
Amount Amortized	$549,279	$659,135	$768,991	$878,846	$988,702	$1,098,558
Grant Amount	$1,647,837	$1,537,981	$1,428,125	$1,318,270	$1,208,414	$1,098,558
Annual Payment	$28,937	$34,724	$40,512	$46,299	$52,087	$57,874
Debt Reserves	$2,894	$3,472	$4,051	$4,630	$5,209	$5,787
Current Debt/Asset/Other Cost	$15,755	$15,755	$15,755	$15,755	$15,755	$15,755
Total Annual Costs	$567,585	$573,952	$580,318	$586,684	$593,050	$599,416
Annual Revenue	$545,000	$545,000	$545,000	$545,000	$545,000	$545,000
Surplus/Deficit After Project	-$22,585	-$28,952	-$35,318	-$41,684	-$48,050	-$54,416
Minimum Water Rate Increase	$2.50	$3.00	$3.75	$4.25	$5.00	$5.75
New Water Rate	$52.50	$53.00	$53.75	$54.25	$55.00	$55.75

Table 11.5: Water Rate Analysis (RD)

Percent Grant	75%	70%	65%	60%	55%	50%
Annual O & M	$520,000	$520,000	$520,000	$520,000	$520,000	$520,000
Amount Amortized	$549,279	$659,135	$768,991	$878,846	$988,702	$1,098,558
Grant Amount	$1,647,837	$1,537,981	$1,428,125	$1,318,270	$1,208,414	$1,098,558
Annual Payment	$22,344	$26,813	$31,282	$35,751	$40,220	$44,689
Debt Reserves	$2,234	$2,681	$3,128	$3,575	$4,022	$4,469
Current Debt/Asset/Other Cost	$15,755	$15,755	$15,755	$15,755	$15,755	$15,755
Total Annual Costs	$560,334	$565,249	$570,165	$575,081	$579,997	$584,912
Annual Revenue	$545,000	$545,000	$545,000	$545,000	$545,000	$545,000
Surplus/Deficit After Project	-$15,334	-$20,249	-$25,165	-$30,081	-$34,997	-$39,912
Minimum Water Rate Increase	$1.75	$2.25	$2.75	$3.25	$3.75	$4.25
New Water Rate	$51.75	$52.25	$52.75	$53.25	$53.75	$54.25

12 GENERAL TOPICS OF SELECTED PLAN

12.1 JUSTIFICATION AND DESCRIPTION OF SELECTED PLAN

The justification of each component of the selected plan has been discussed in previous sections. The overall selected plan is outlined in Table 12.1.

Table 12.1: Selected Plan Summary

Improvement Options	Cost	Recommended for Phase 1	Recommended for Phase 2	Recommended for Phase 3
Wastewater System				
Sanitary Sewer Priority 1 & 2 - Phase 1	$3,673,840	$3,673,840		
Sanitary Sewer Priority 1 & 2 - Phase 2	$3,846,730		$3,846,730	
Sanitary Sewer Priority 1 & 2 - Phase 3	$2,422,620			$2,422,620
West Lift Station Repair	$138,675	$138,675		
East Lift Station Replacement Option 2	$654,665	$654,665		
Lift Stations SCADA	$74,500	$74,500		
Total Cost of Wastewater System	**$17,595,318**	**$4,541,680**	**$3,846,730**	**$2,422,620**
Storm Sewer				
Phase 1: Spot Repairs and Upstream Improvements to Central Drainage	$1,037,000	$1,037,000		
Phase 1: 60-inch Storm Sewer Crossing North Highway	$921,000	$921,000		
Phase 2: Central Miller	$2,808,000		$2,808,000	
Phase 3: East Second Avenue	$2,170,000			$2,170,000
Phase 3: West Second Street	$1,406,000			$1,406,000
Total Cost of Storm Sewer	**$8,342,000**	**$1,958,000**	**$2,808,000**	**$3,576,000**
Water System				
Abandon Wells	$69,700			$69,700
Water Distribution Phase 1	$2,110,500	$2,110,500		
Water Distribution Phase 2	$2,350,030		$2,350,030	
Water Distribution Phase 3	$1,490,168			$1,490,168
Alley Surfacing	$86,616	$86,616		
Total Cost of Water System	**$9,811,974**	**$2,197,116**	**$2,350,030**	**$1,559,868**
Total Cost of Phases 1-3		**$25,260,044**		
Total Cost	**$35,749,292**	**$8,696,796**	**$9,004,760**	**$7,558,488**

12.2 CAPITAL FINANCING PLAN

The City of Miller will make application to state and federal resources for loan and grant assistance to complete the project and begin construction in 2017.

12.3 ENVIRONMENTAL EVALUATION

The City of Miller has requested comments from concerned federal agencies. The correspondence related to these inquiries will be placed in Appendix A of this Facility Plan as it is made available.

12.4 VIEWS OF THE PUBLIC AND CONCERNED INTEREST GROUPS

The City of Miller is planning to conduct a public hearing on the proposed project. Information related to the hearing will be submitted after it is conducted.

12.5 DESIGN OF SELECTED PLAN

The proposed improvements to the wastewater system, storm sewer system and water system will require design work to be completed. The improvements will be designed in accordance with the SD DENR design criteria and the accepted principles and standards for each component.

12.6 ENVIRONMENTAL IMPACTS OF SELECTED PLAN

Environmental information gathered thus far does not indicate that any of the state or federal agencies will have environmental concerns related to the project or its proposed construction activities. The proposed improvements will take place in previously disturbed areas or in the City's rights-of-way.

12.7 ARRANGEMENTS FOR IMPLEMENTATION

This report provides information to describe the proposed project and to support the City Council's decision to proceed with it as quickly as possible. Final design will be completed by the City of Miller's consultant and approved by the DENR, as it is definitely a "work of sanitary significance." Cost estimates have been prepared and are referenced elsewhere in this document. The project will be bid in accordance with state statutes that govern municipal corporations and will be constructed by the lowest responsible bidder.

The project is considered relatively large; therefore, for planning purposes the project will be broken up into three parts which will be designed, bid and constructed separately. The anticipated schedule for the progression of the project is shown in Table 12.2

Table 12.2: Preliminary Implementation Schedule

Task	Month - Year
Facility Plan Submitted to Funding Agencies	December-15
Environmental Review Completed	January-16
Funding Agency Approval of Facility Plan	February-16
Final Funding Package Complete	March-16
Phase 1 Begin Design	April-16
Phase 1 Plans & Specifications Submitted to DENR	December-16
Phase 1 Plans & Specifications Approved by DENR	January-17
Phase 1 Advertisement for Bids	January-17
Phase 1 Open Bids	February-17
Phase 1 Award Bids	February-17
Phase 1 Begin Construction	April-17
Phase 1 Construction Complete	November-17
Phase 1 Project Close-out	December-17
Phase 2 Begin Design	February-17
Phase 2 Plans & Specifications Submitted to DENR	October-17
Phase 2 Plans & Specifications Approved by DENR	November-17
Phase 2 Advertisement for Bids	November-17
Phase 2 Open Bids	December-17
Phase 2 Award Bids	January-18
Phase 2 Begin Construction	April-18
Phase 2 Construction Complete	November-18
Phase 2 Project Close-out	December-18

Table 5.5, Continued

Task	Month - Year
Phase 3 Begin Design	January-18
Phase 3 Plans & Specifications Submitted to DENR	August-18
Phase 3 Plans & Specifications Approved by DENR	September-18
Phase 3 Advertisement for Bids	October-18
Phase 3 Open Bids	October-18
Phase 3 Award Bids	November-18
Phase 3 Begin Construction	April-19
Phase 3 Construction Complete	November-19
Phase 3 Project Close-out	December-19

12.8 LAND ACQUISITION

No land acquisition will be required for the proposed collection system improvements as all work will be completed in existing street rights-of-way, in easements that have already been obtained or on City property.

12.9 INTERAGENCY AGREEMENTS

No operating agreements with other agencies are needed as the City of Miller owns, operates and maintains its municipal wastewater system. Loan documents will have to be executed with the appropriate lender but as Miller is a municipal corporation, it has the legal authority to enter into such agreements. Miller's attorney will advise the City Council on any legal matters related to this issue.

13 REFERENCES

American Association of State Highway and Transportation Officials (AASHTO). Roadside Design Guide, 4th Edition 2011. Washington DC: American Association of State Highway and Transportation Officials, 2011.

Committee of Great Lakes – Upper Missouri River Council of State Public Health and Environmental Managers, (1997). Recommended Standards for Water Works (Albany, NY: Health Education Services), pp.

Environmental Protection Agency, (1975). Handbook for Sewer System Evaluation and Rehabilitation (Washington, D.C.: Office of Water Program Operations), pp.

Mays, Larry W., (2000). Water Distribution Systems Handbook, (New York, NY: McGraw Hill), pp.

National Oceanic and Atmospheric Administration, (Various). Climatological Data, Annual Summary for South Dakota.

Salvato, Joseph A., (1982). Environmental Engineering and Sanitation (New York, NY: John Wiley & Sons), pp.

Schmucker, Paul, Nohr & Associates, Facility Plan for the Wastewater Collection and Treatment Systems in Miller, South Dakota, SPN Project #13217, Miller South Dakota, July 2010.

South Dakota Department of Environment and Natural Resources, (May 1990). Recommended Design Criteria Manual, Wastewater Collection and Treatment Facilities, Pierre, SD: Division of Environmental Regulation.

South Dakota Department of Highways Drainage Manual Volume One

United States Department of Agriculture, (1963). Soil Survey of Hand County, South Dakota (National Cooperative Soil Survey), pp.

United States Census Bureau, American Fact Finder for Miller South Dakota. http://factfinder.census.gov/home/saff/main.html?_lang=en

Appendix A

Environmental Assessment Correspondence

Correspondence will be inserted as received.

Appendix B
Sanitary Sewer TV Inspection Evaluation

Records of TV Inspections TV Inspection Evaluation

SEWER LOCATION Street	US MH	DS MH	Cammed Length (ft)		Pipe Dia. (in)	Pipe Type	Map Length	# Services	Deficiencies Sag 1" L, Ft	Sag 2" L, Ft	Sag 3"< L, Ft	Egg L, Ft	Serv. Def	Descriptions of Deficiencies
Industrial Park Dr.	1	2	398.2		8	PVC	400	6					3Cp, 2Int, 2TB	220-350 grease.
Industrial Park Dr	2	3	398.2		8	PVC	440	5					4CP, 1TB	
Industrial Park Dr	3	4	396	J	8	PVC	380	1			396		1 Tnt	Sags up and down throughout.
East 3rd Ave	4	168	190.7		18	VCP	191	0						Pipe generally 1/3 full water
East 3rd Ave	5	4	307.2		18	VCP	310	0			307			Sags 1 to 4" up and down throughout.
	6	5	358		18	VCP	358				358			MH lid at 234' from 6. Sags 1 to 4" up and down throughout. Cam stuck on something.
	7	6	512		18	VCP	512							All 1/4 full of water
East 3rd Ave.	9	7	486.6		18	VCP	466	1			20			Sag likely. Def last 20' Cam'ed while jetting.
Vista Drive	10	9	294.9		8	PVC	298							74.2ft Pipe dimple.
Vista Drive	11	10	239		8	PVC	240	9	239					Minor sags throughout.
Vista Drive	11	11	189.1		8	PVC	194	3						Cap at 189
East 3rd Ave.	12	9	452.3		18	VCP	246	0			95			403.3ft Seal Ring Hanging. Sag 0-30, 66-81, 403-453
East 10th	13	181	26.3		18	VCP	26							
East 10th St.	181	12	321.8		18	VCP	658	0						
East 10th St.	181 US	12	171.3		18	VCP		0			90			Worthless video (foggy and into water)
West 10th St.	14	13	336.5		18	VCP	497	1		307			1TB	94ft, 174.1ft, 261.1ft many seals hanging badly. Cam'ed while jetting. 190-336
West 10th St.	14	13	100.2		18	VCP		0						Camera image blocked - worthless video.
West 10th St.	15	14	356.2		24	VCP	281	5		36		23	5TB	PVC to 23'. 128.2ft Greese Deposit on Top of Pipe. Sag start at 320 to end.
West 1st Ave.	16	15	224.1		8	PVC	391	1		20			1Int	224.1ft Intruding Service Pipe (Survey Abandoned)
West 1st Ave.	16	15	70.2		8	PVC		1		20			1Int	70.2ft Intruding Service Pipe (Survey Abandoned).
West 1st Ave.	17	16	356.7		8	PVC	516	2					2TB	Many minor sags
West 1st Ave.	18	17	159		8	PVC	229	3	20				2TB, 2Int	158ft Intruding Service Pipe (Survey Abandoned)
West 1st Ave.	18	17	192.7		8	PVC		1					1Int	192.7ft Intruding Service Pipe. (Survey Abandoned)
	19	182	151	J3	24	VCP	151	2					1 Int	Minor OS joints throughout. 96 multiple cracks. Broken pipe chunk in invert at MH 19
West 1st Ave.	20	19	3		8	PVC	342	0						3.0ft Collapsed pipe (4in down) (Survey Abandoned)
West 1st Ave.	20	19	343.5		8	PVC		10	30				9Cp	343.5ft Joint Offset (Inflow, 2in) (Survey Abandoned)
West 9th St.	21	20	99.2		8	PVC	73	0	40					
West 9th St.	22	21	68.6		8	VCP	468	1					1TB	69 **Grease.** (Survey Abandoned)
West 9th St.	22	21	364.9		8	VCP		7					2TB	364 **Grease.** (Survey Abandoned)
	23	19	164	J3	24	VCP	164	5					2 Int	4 dirt around service. Minor OS joints throughout. Multiple cracks. Broken pipe chunk in invert at MH 19
	23 U	23UU			8	VCP	500							No Record. Replace this line for serviceability.
	24	23	380	J	24	VCP	380	10					3 Int	Minor lon cracks, broke in taps (soil visible). 232 small hole. 370 Stick stuck in end of line.
West 8th St.	25	25D	29.5		10	VCP	250	0						29.5ft **Heavy Sediment.** (Survey Abandoned). Replace since cannot clean this line.
West 8th St.	25	25	175	J	6	VCP	200	3					1 Int	Roots in many joints. 22 broken pipe Joints open and OS. Did not reach end
West 8th St.	25	25	197	J	6	VCP	200	3			25			65 broken pipe, soil visible. Did not reach end.
West 1st Ave	26	24	39.4		24	VCP	348	1					1 TB	Servey abandoned. **Sediment obstruction**
North 1st Ave.	26	24	134.4		24	VCP							2TB	134.4ft Camera Underwater (Survey Abandoned)
	26	24	348		24	VCP								Camera under water from 120 on.
West 1st Ave	27	26	67.1		18	VCP	110	1					1TB	Minor pipe degradation at 22 and 30. Cracks at 30&50. Line curves left at 60. Severe pipe chunks and gravel.
West 1st Ave	28	27	41	J	18	VCP	41	0						To 15, 30 lon cracks. 23 curves right. Minor OS joints. 25% water.
West 1st Ave.	30	28	79	J	18	VCP	250	1					1TB	OS joint up/down L/R throughout. Roots in some joints and services. 78 Broken pipe-severe
	30	28	221	J	18	VCP								Lon cracks throughout, 106 broken pipe. 168 broken pipe-severe, worse at end
West 1st Ave	31	30	377	J	15	VCP	387	9			25		3TB, 4 Int	Cracks 19 - 44. OS joints throughout. 59 hole. 305ft Int lateral (Survey Abandoned).
West 1st Ave	31	30			15	VCP					8		1TB	Severe cracks. Sag in this area. 8 ft Joint smaller (Survey Abandoned)
West 5th St.	32	31	12	J	8	VCP	443	3					2TB	11 sharp bend left. Bad vertical angle from US MH. Cannot perform inspection
West 5th St.	33	32	26	J	8	VCP		2					1 Int	18 change from PVC. 26 bad service conn
West 5th St.	33	32	73	J	8	VCP	409						9TB	85.2ft Pipe Fractures; 0, 20.0ft, 24.1ft, 56.1ft, 86.8ft Roots; 153.3ft Line Left. (Survey Abandoned)
West 5th Street	33	35	275.1		8	PVC	417						2.0	**140 Sediment Remains. 275.1ft, Obstacles in Pipe** (Small Rocks, Minor) (Survey Abandoned)
West 5th St.	34	33	174	J	6	VCP	419	2					1TB, 1 Int	42 change from pvc to vcp. 51, 99 Holes. 110 change to 6", several minor JO.
West 5th St.	34	33	190	J	6	VCP		7						Roots in many joints. 54, 72, 74 broken pipe. Multiple joints with cracks.
West.3rd Ave	35	36	137.7		8	PVC	117	1						
West 3rd Ave	36	37	241.4		8	PVC	233	0						
West 7th St.	37	37D	48.7		8	PVC	440	0						
West 7th St.	37	38	82.1		10	PVC	135	1						
West 7th St.	39	37D	280.2		8	PVC	460	4					4TB	357-369 VCP; 407.2ft **Large Obstacle in Pipe** (Survey Abandoned)
West 7th St.	39 US	37D	127		8	PVC	460	2			20			137ft **Pipe Chunk.** (Survey Abandoned)
	40	39	128		8	PVC	128	1						
West 7th St.	40	40	12.1		8	PVC	100	1						Line Right (Survey Abandoned)

Records of TV Inspections TV Inspection Evaluation

SEWER LOCATION Street	US MH	DS MH	Cammed Length (ft)		Pipe Dia. (in)	Pipe Type	Map Length	# Services	Deficiencies Sag 1" L, Ft	Sag 2" L, Ft	Sag 3"< L, Ft	Egg L, Ft	Serv. Def	Descriptions of Deficiencies
West 7th St.	41	40	44.5		8	PVC	136	0	20					
West 7th St.	42	41	14.9		8	PVC	381	0						14.9ft **Large Obstacle in Pipe** (Survey Abandoned)
West 7th St.	42	41	368.3		8	PVC		7			30		1Int. 4Cp	20.6ft Sag in Pipe (4in); 368.3ft Intruding Service Pipe (Survey Abandoned)
West 7th St.	43	27	472	J3	8	VCP	472	6			40		1TB	Multiple cracks throughout. Long crack at 300. 21 soil around service. 417, 464 broken pipe. 431 Settled PVC repair. MH 27 bad.
West 2nd St.	44	36	38.7		6	VCP	432	0						3.0ft, 28.7ft Multiple **roots**,**38.7ft** Joint Offset (Inflow) (Survey Abandoned)
	44	43	165	J	6	VCP	235	4						60 broken pipe. Roots in many joints. 104 hole - severe
	44	43	70	J	6	VCP								10-18 Severe broken pipe
West 2nd St.	45	32	290.4		8	VCP	413	10					4TB	**Significant Sediment remains.** Bad service conn. 168.8ft Pipe Broken. 290.4ft **Gravel** (Survey Abandoned)
West 2nd St.	45	45	24.5		6	VCP	217	0						Joints up/down, L/R; 24.5ft Joint Offset (Inflow) (Survey Abandoned)
West 2nd Ave	45	45	44.2		8	VCP	110	1					1TB	Joints up/down throughout. 44.2ft End of Pipe (Capped End)
West 5th St.	46	31	182.7		18	PVC	213	2			173		2pvc cut in	1/2 pipe sag
West 4th St.	47	46	358.4		18	PVC	446	10		115	88		2pvc cut in	358.4ft Pipe Sag (Survey Abandoned) 50- gravel <1"
West 5th St.	47 US	46	25.1		18	PVC		1			20			35.1ft Pipe full pipe sag (Survey Abandoned)
West 3rd St.	48	47	131.6		18	VCP	414	7	85		15		5TB, 1 Int,1Cp	Holes @ 43&49. 77 service gusher. 131.6ft Intruding Lateral (Survey Abandoned)
West 4th St.	48 US	47	282.4		18	VCP		5		209	10		4TB, 1 Int	Lon cracks 7-17. (Survey Abandoned)-sag
West 2nd St.	49	48	423.3		18	PVC	411	13		178			1TB	**Minor gravel 70'**
West 1st St.	50	50D	129.6		15	VCP	300	6	10				5TB, 3Int	129.6ft Intruding (5") Lateral Service (Survey Abandoned) Sediment 117-129. Minor offset joints throughout
West 1st St.	50	50D	39.5		15	VCP		1		40				30.5ft Intruding Lateral Service (Survey Abandoned)
West 1st St.	50	49	52.5		18	VCP	100	8					2TB, 6Int	Multiple cracks throughout; 32ft Hole, Soil Visible
West 1st St.	50 US	49	87.9		18	VCP		5					2TB, 3Int	Pipe change at 18. 34 smaller pipe dropping ds. 87.9ft Intruding Lateral Service Pipe (Survey Abandoned)
West 4th St.	51	74	371		8	VCP	445				371		2TB, 1Int	17, 121 pipe is broken; 210 short PVC; sags and JO throghout
West 4th St.	52	51	416		8	VCP	416				416			17.1 Line left. 4.3 hole in pipe (Soil Visible). Bad sags throughout. Roots 154. 232 JS; 406 bad service conn
West 4th St.	53	52	170	J3	8	VCP	437	5			170			OS joints throghout. 5, 66 JO. 23 broken pipe, soil visible. 104 broken service - soil visible. 155 service full of roots. Huge sags up and down. 166 pipe gone-severe (Survey abandoned)
West 4th St.	53 us	52	170	J3	8	VCP		2					2TB	8 PVC to VCP huge OJ
West 4th St.	54	53	6	J3	8	VCP	407	1			6			Joint Separation (**Survey Abandoned**)
West 4th St.	54 us	53	78	J3	8	VCP		4			78			OJ and JS throughout. 80.4ft Line Right, 75.1ft Line Left. 55.7ft Material change (VCP to PVC **survey abandoned looks bad**.), 75.1ft Material Change (PVC to VCP). PVC to VCP at 7.
West 4th St.	55	54	236	J	8	VCP	428	7					1 Int	5, 164, 194, 212 Severe hole. Many open joints. Roots in many joints. 234 broken pipe-severe
West 4th St.	55	54	151	J	8	VCP		5					1Int	Many locations of broken pipe and holes.
West 4th St.	55 U	55	198	J	6	VCP	300	2			10			Minor JO & JS throughout. Roots in many joints.
West 5th Ave	56	55	110.4		6	PVC	416	1	25		15	X		110.4ft Pipe Egg Shaped (Abandoned Survey)
West 4th St.	56 us	55	71.2		6	PVC		1						71.2ft. Line Left (Survey Abandoned)
West 5th Ave.	57	56	176.2		6	PVC	235	2		30			1TB	32 bad joint. Pipe inserted from MH 57.
	57 U	57	182	J	4	PVC	200	2				20		182 pipe crushed. Several JS
West 3rd St.	58	59	11.6		6	VCP	263	0						11.6ft **Large clay chunk**. (Survey Abandoned)
West 3rd Ave.	58	59	126.3		6	VCP		4	30	20			4TB, 1Int	64.2ft Hole in Pipe, Soil visible. Major intruding joint. Services are bad.
West 3rd St.	58	58	186		8	VCP	80	0						63 Severe hole. 123 Broken pipe. 186 **blockage** (Survey Abandoned)
	59	61	40		8	VCP	450				37			27 steep slope up.
West 3rd St.	59 ds	61	190.4		8	VCP		8					6TB, 1Cp, 2Int	79 pipe broke. 184.6ft Missing Cap on Service, Soil Visible; 190.4ft Intruding Lateral Service (Survey Abandoned)
West 3rd St.	60	59	79.9		6	VCP	315	1					1CP	79.9ft, 36.1ft Joint Offset (Abandon Survey) **Sediment remains.**
	61	62	293		8	VCP	400	11			95		8TB, 3Cp	**Sediment remains.** 2-3" water throughout; 150 crack; 219 pvc to 248; last half joints up/down, L/R
West 3rd St.	61	61	204		8	VCP	293	4					3TB	Grease Deposit, roots joint 110.4ft. Open pipe at 204
West 3rd St.	62	63	107.8		8	VCP	414	3		45			1TB	Sag at start. Minor OS & L/R joints; 117 service plugged;
West 3rd St.	62US	63	191.4		8	VCP		6					5TB, 1Cp	19 service plugged; sag at start; 3-4" water throughout.
West 3rd St.	62	62	138.6		6	VCP	294	1					1TB&Int	138.6 ft Survey Abandoned Intruding Service. Minor OS joints & L/R throughout.
West 3rd St.	63	48	93.1		8	VCP	225	0						3" water throughout; OS joints up/down, L/R throughout; 93.1 ft, Joint Offset (Inflow, 1in Drop) (Survey Abandoned)
West 3rd St.	63	63	69.4		8	VCP	197	2			69		1TB, 1Cp	3.6ft Pipe broken Visible Soil, 69.4ft Pipe Sag (Survey Abandoned); 3-4" water throughout
West 3rd St	63	63	3.4		8	VCP	246	0						3.4 ft Line Left 45 bend - Inspection Abandoned)
West 4th Ave	64	65	45	J	8	VCP	450							0 cracks, JO and JS throughout, 44 broken bend - sharp bend left
West 4th Ave	64	65	269	J	8	VCP		5			90		2 Int	JO throughout. 52 cracks. 197 broken at service. 238 gusher. 255 roots through hole. Roots in many joints.
West 2nd St.	65	66	251.8		8	VCP	260	8	212	20	20		8TB,	Minor sags, L/R & OS joints throughout. 228.5ft ,232.6ft Holes in Pipe; 251.8ft Sag, **Clay tile blockage** (abandoned)
West 2nd St.	66	67	381.5		8	VCP	587	12	302	50	30		12TB,1Cp, 1Int	Sags, OS joints, L/R throughout. Service@111 rocks. 381.5ft Intruding Service Pipe (Abandoned Survey)
West 2nd St.	67	69	139.4		8	VCP	414	7			139		6TB, 2Cp, 1Int	Sags, OS joints throughout. 139.4ft Intruding Service Pipe (Abandoned Survey)
West 2nd Ave.	67A	67	197	J	6	VCP	300				197			Camera underwater mostly. Some OS joints.

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SEWER LOCATION Street	US MH	DS MH	Cammed Length (ft)		Pipe Dia. (in)	Pipe Type	Map Length	# Services	Deficiencies Sag 1" L, Ft	Sag 2" L, Ft	Sag 3"< L, Ft	Egg L, Ft	Serv. Def	Descriptions of Deficiencies
	67A	67	109	J	6	VCP								
West 2nd Ave.	68	67A	90	J	6	VCP	90	1						OS joint throughout.
West 2nd Ave.	68 U	68	47	J	6	VCP	47							JO throughout. 43 4" VCP. 47 bend broken-soil visible.
West 2nd St.	69	49	216	J3	8	VCP	216	10					4cap, 2 Int	8 JO. 11, 13 broken pipe. 35 broken service. 212 vcp to pvc to MH 49
West 7th St.	70	26	65.2		18	VCP	109	2					2Cp	Following jetter. Line curves right throughout. 59.7ft Hole in Pipe, Soil Visible
West 7th St.	71	70	132.9		18	VCP	288	4					2TB, 1Int	Following jetter. Line curves left at 22. 130 ft Obstacles in Pipe (Large VCP Pieces) (Survey Abandoned)
Broadway Ave.	72	71	372.5		24	VCP	389	13					11TB, 2Cp	Following jetter. Lon cracks 7 to 23. Service gusher at 167. 0.5" **gravel 110 on**. Line curves left at 325. Sediment in MH 71.
Broadway Ave.	73	72	327.5		24	VCP	352	8					6TB, 1CP	Following jetter. **Many spots of 1" gravel, heavier 250 to end.**
Broadway Ave.	74	73	490.5		24	VCP	452	16		38			4TB	Lon crack at 308. Minor gravel. Minor joint offsets throughout. Minor sags throughout. **Heavy sediment last 25 ft.** Line curves right at 460
Broadway Ave.	75	74	430.6		18	VCP	440	17		40			8TB	Minor sags throughout. 195&235 service gushers. 2" sag at end.
East 2nd St.	76	49	102	J3	10	VCP	221	0						6 pvc to vcp. 11, 42, 42-50, 64-76 broken pipe. 102 severe hole. OJ & JS throughout. 102 pipe bends down (survey abandoned). Ahead sediment blockage.
Broadway Ave	76	75	398		18	VCP	410	16					3TB	398ft Camera Failure In Water (Survey Abandoned). Pipe .3 to .5 full. Hole at 358. Joints worse on N end.
Broadway Ave	76	75	25.8		18	VCP		0			30			25.8 ft Sag in Pipe (Survey Abandoned)
West 1st St.	77	50	30.3	J3	8	VCP	261	1						JO & JS throughout. 58 broke at service-soil visible. 61 pipe broke and about to cave in. (Survey Abandoned)
Broadway Ave	77	76	462.1		18	VCP	467	25	52		52		15TB, 5Cp	1" sag to 52, 2" sag at 222. offset tile joints throughout. 54.5ft Hole in Pipe, Soil Visible
Broadway Ave	77	76	85.1		18	VCP		4					3TB	Joints are all terrible
Broadway Ave	77 U	77	143	J	18	VCP	143							Minor JO & JS throughout. 70 multiple cracks. 143 open pipe. **Abandon Line**
outh Broadway Av	78	78D	198	J	8	VCP	478	2			150		1TB	9.8ft Intruding Lateral Service Pipings. Camera underwater.
			175	J	8	VCP					158			Break in connection east of MH 77
South Broadway Av	79	78	364	J	8	VCP	480	6					2TB	24 PVC to VCP. 42.4ft Vertical Hole in Pipe. 2" water throughout.
outh Broadway Av	80	79	364		8	VCP	364	6			121		4TB, 2Cp,	1' hole; **Sediment Remains.** 7'63, Multiple Cracks in Pipe; 10.2ft, 122.5ft, 139.8ft, 143, 304 Holes in Pipe, Soil Visible. 2" water to 145 where it is deeper
South Broadway Av	81	80	232.4		8	VCP	271	4			178		3TB, 1 Int	Pipe 1/2 full water. 232.4ft Hole in Pipe, Visible Soil; Ahead of 232.4ft intr service (Survey Abandoned)
South Broadway Av	81	80	36.2		8	VCP		2					1TB, 1Int	32.2ft Hole in Pipe, Soil Visible; 35.6ft Intruding Lateral Sanatary Pipe (Survey Abandoned)
outh Broadway Av	81	81	29.6		8	VCP	449	0						29.6ft Complete blockage(Survey Abandoned)
	83	82			6	VCP	400							No record
	82	180	86		8	VCP	200	1					2TB	56 open hole to dirt. 86 **Sediment Remains** (survey abandoned). Roots in many joints w minor OS
	84	76			8	VCP	30							Cannot get to it. No record. Refer to 382' on 84-85
East 2nd St.	84	85	383	J	12	VCP	393	14						0 Curves right. JO and JS throughout. Super bad. Street about to fall in-303-317
East 2nd St.	85	85	54.8		8	VCP	447	2					2TB	52 broken service. Line is R&L/up and down throuhgout. 54.8ft Pipe Line Right (Survey Abandoned)
	85	86	8	J	12	VCP	8	0						
East 2nd St.	86	87	25	J	8	VCP	300	3					3 Int	18 broken pipe. 25 broke at service.
			63	J	8	VCP		1						Line curves left first 20'. JO and JS throughout. 12, 31, 61 Holes. 63 Severe broken pipe.
East 2nd St.	86	99	162	J	12	VCP	167	6					1Cp	0 severe break. 13 small break. 61.1ft Joint Offset
East 2nd St.	87	88	91	J	8	VCP	110	3						JO throughout. 75 hole. 89 severe broken pipe.
East 2nd St.	88	104	428	J	12	VCP	443	8	50				1 Int	Multiple 1" sags
East 2nd Ave.	90	91D	6	J	8	VCP	465	0					3TB, 1Int	2 hole-severe; 22, 31, 96 broken at service; 72 severe break; obstruction at 120.
	91	91D	5	J	8	VCP								Dropping OS at MH 91D - PVC to VCP.
East 2nd St.	91	91D	20	J	8	VCP	530	1			20			15.6ft Broken Pipe, Visible Soil - collapse likely. Sags and OS joints throughout.
East 2nd St.	91D	88	18	J	12	PVC	18	0						
	91 U	91			6	VCP	450							No record
East 2nd St.	92	91	347.2		8	VCP	350	12					9TB,3Cp, 1Int	PVC to VCP at 10; line L&R/up,down throughout; 26&33&320 broken pipe-severe; 50.7ft Crack; 257 broken service-severe; 320.7ft Broken Pipe
	92 U	92	388		8	VCP	400	8					8TB, 1 Int	Line L,R/up,down throughout. 218&273&293 service-roots. **Roots in many joints.** 388 intruding tap(survey abandoned)
East 2nd St.	93	92	212.8		8	PVC	382	3					1TB	
East 2nd St.	94	96	365.8		8	VCP	360	12			24		6TB	255& 363 Broken Pipe, Soil Visible. Sediment at start.
	94	92	184		8	VCP	330	8	59	60			6TB	26 Broken pipe - severe; Hole 49; 65 service w roots; Int tap cut at 103. Sunk pipe at 184
East 5th Ave	94	111	162	J	8	PVC	162	1						New Oct 2015
East 5th Ave	95	94	531	J	8	PVC	531	7						New Oct 2016 - 213 gusher, later fixed
East 6th St.	96	167	7.7		8	VCP	443	0						7.7ft Sediment in Pipe (Small Rocks Settlement) (Survey Abandoned)
East 2nd St.	97	96	292.3		8	VCP	471	4	150				3CP	1" sags throughout. 291.6ft **Grease** deposit
East 6th Ave.	97 us	96	135.8		8	VCP		6	50				4CP, 1TB	4.7ft Broken Pipe; 15.1ft Multiple Fractures, Fracture Spiral all in different locations. Roots in many services. **Grease Deposit** (Survey Abandoned)
East 2nd St.	98	96	293.2		8	VCP	412	13					8CP, 2TB, 3Int	111.6ft Infiltration Runner
East 2nd St.	98	96	56.7		8	VCP		1		44			1TB	56.7ft Intruding Service Pipe.(Survey Abandoned)

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SEWER LOCATION Street	US MH	DS MH	Cammed Length (ft)		Pipe Dia. (in)	Pipe Type	Map Length	# Services	Deficiencies Sag 1" L, Ft	Sag 2" L, Ft	Sag 3"< L, Ft	Egg L, Ft	Serv. Def	Descriptions of Deficiencies
East 2nd St	98	98	34.4		8	VCP	301	2		34			2TB	6 open joint. 34 PVC Reducer Encoutered; 34.1ft Material Change; 12.0ft Roots Protruding Pipes (Survey Abandoned) **Sediment remains.**
East 2nd St.	99	100	123	J	12	VCP	198	0						19 cracks. 123 broken pipe chunks.
East 1st Ave.	101	101D	200	J	6	VCP	218	1						62 Joint Offset (Outflow, 1in). Stopped short
East 1st Ave.	102	101	47		6	VCP	107	0						Pipe half full water. 46ft Material Change (VCP to PVC) 47ft Joint Offset (At VCP to PVC Transition)(Bad Video) (Survey Abandoned)
East 3rd St.	103	141	410.8		15	PVC	521	7			44			**Rocks and gravel at start**. Sag at 250-1/2 pipe.
East 3rd St.	103 U	103	31	J3	12	PVC	363	1						26.5ft Pipe Line Left/Up (Survey Abandoned) Looks bad upstream toward west.
East 3rd St.	104	103	23.2		12	VCP	43	1					1TB	2' open hole, PVC at 14
East 3rd St.	105	104	350.8		12	VCP	197	19					6TB, 12CP	Poor video. 1/3 to 1/2 full water. Hole @ 29, 50, 52, 117, 241. Broken at 136.298,312,329-338. Broke service at 142. Cracks 180-228, 245-247. 235, 238,253,271,274 holes
East 3rd St.	106	105	155.5		12	VCP	421	4					3TB	Following jetter. 32 broken service-severe. 103 service gusher broken inside. Bad Inv in 105 MH
East 3rd St.	107	106	182.7		12	VCP	168	4					3TB	9.5ft Pipe Broken, Soil Visible; 95.7ft Large Roots (Service);179.4ft Broken Pipe, Soil Visible. 150-169 cracks
East 3rd St.	108	107	295.1		8	VCP	281	0						Minor sags and OS joints throughout. 294.4ft Joint Offset (Inflow) & bad cracks. (Survey Abandoned). **Sediment 88-294**
	109	109 A	300	J	8	PVC	300	3		150				Sags throughout
East 3rd St.	109	111	271	J3	15	PVC	271	1		50	20			255 leaking joint
	110	107	51	J3	6	VCP	400	1						OJ & JS throughout. 6 PVC to VCP. 48 broken pipe reduces to 6" Upstream. Survey Abandoned
	110 ds	107												No record
	111	LS	59	J3	15	PVC	59				59			Reverse grade creates 3" sag
	112	109	12	J3	8	VCP	365							Severe hole at MH 112. Bad Sag. Major OJ at 12. Survey abandoned. JO visible to west.
East 3rd St.	113	112	225		8	VCP	235				200			25 broken pipe. Sag 13-115,127-225 (1/2 pipe) 64.6ft broken pipe soil visible, 134&203.3ft broken pipe (Survey Abandoned)
	114	113			8	VCP	120							
East 3rd St.	115	113	585.7		8	VCP	596	14					7TB, 1CP	Sags throughout. 538 hole. 464 Hole at service - severe; 551 Seperated Joint-severe. Broken pipe 575. 346 roots@ service. Sediment remains.
	116	115	27	J	8	VCP	250							Very bad. See record
East 3rd St.	117	116	51.8		10	PVC	66	0						
East 3rd St.	118	117	297.4		10	PVC	386	0						Grease Depostits on Top of Pipe throughout. **Significant sediment remains.**
East 3rd St.	118	117	64.3		10	PVC		1					1TB	
East 3rd St.	119	118	346.7		10	PVC	362	1		44		10		182.6ft, 188.7ft, 205.3ft Grease Depostis on Top of Pipe. Sag at beginning and end. Rock imprint at 342
East 3rd St.	120	116	353.4		8	VCP	386	11					2TB, 6Cp,	Pipe trans@12. OS joints throughout. 138 Roots Blocking Lateral Entrance; 170 cracks; 207 service plugged; 265&317 broken service; 353 Multiple Cracks and Pipe Broken in 116 invert
West 3rd St.	121	120	249.9		8	VCP	289	10					1TB, 9Cp	121 Broken Pipe-severe. 128 broken service; 248 Obstacle in Pipe (Large Piece of VCP) (Survey Abandoned) Sediment last 100'
East 3rd St.	122	119	63.3		10	PVC	66	0						
West 3rd St.	123	122	235.6		8	VCP	197	4					4Cp	Sags throughout. Short pvc pipe at 122 MH
East 3rd St.	124	123	24.9		8	VCP	118	1			24		1TB	24.9ft Bad Sag (Abandon Survey)
East 5th St.	128	123	347.1		8	PVC	469	0						
East 5th St.	129	128	284.3		8	PVC	307	4	10				1Int	284.3ft Intruding Service Pipe
East 5th St.	129 us	128	139.2		8	PVC		3					1Int 2TB	139.2ft Intruding Service Pipe
	130	115	194	J	6	DIP	194	2			100		2 Int	Bad sags >60%. Camera underwater. Rough surface. JS throughout. 187 broken pipe.
			118	J	6									14 PVC changes to VCP. Broken pipe at most joints.
	131	113	175	J	8	VCP	375				100			JO, JS and sags throughout. 82 broken pipe. 97,103 pipe broke at service - severe. 171 multiple cracks
East 5th Ave.	132	109 A	188	J	8	PVC	188	1			100			Sags throughout
East 4th Ave.	133	132	358.7		8	PVC	381	7	28					
East 5th St.	133	136	337		8	VCP	352	0		210				OS, separated joints & lon cracks throughout. Grease at 100. 118 severe hole. 140-154&176-197&206-302 pipe broken. PVC from 154-176&197-206. 329PVC 337 ft Pipe 45 angle right (Survey Abandoned)
East 5th St.	134	135	197.7		8	PVC	325	2						Sags throughout. Infilt at MH 135
East 5th Ave.	135	132	336	J	8	PVC	352	3	196	100	40			Whole pipe has 1 to 4" water. **Sediment remains.**
East 5th St.	135	136	195	J	6	VCP	381	9					2 Int	7 PVC to VCP. 112 broke at service - severe
	135 us	136	80	J	6	VCP		1						PVC pipe piece settled 17-26 Minor JO and JS throughout. 66 hole at service. 80 6" pipe
East 5th St.	136	137	343.3		8	VCP	343	9					9TB	12,63,186,285,305 broken services. 13 small hole. 50.7ft Material Change (VCP to PVC), 50.1ft Pipe is Broken, Soil Visible; 53.2 ft Material Change (PVC to VCP); 60-118 lon cracks throughout; 118 Multiple Cracks by Angular Joint. Outside drop to MH 137. 1-3" water throughout
East 4th Ave.	136	136	35.4		6	PVC	300	0						34.9ft Joint Offset (Inflow) (3in Drop in Joint) (Survey Abandoned)
East 3rd Ave.	137	145	372.9		18	VCP	392	1					1Cp	Following jetter. 28' of bad steel pipe then VCP. Pipe 1/3 full. Patches of gravel remain.
East 5th St.	137	137	38.5		8	PVC	440	0						38.5ft Pipe Line Left (Surveyed Abandoned)
East 5th St.	138	137	226.1		18	VCP	220	3					3TB	Followed jetter. Pipe 1/4 full water. Gravel remains
Park Dr.	139	138	227.7		8	PVC	239	5						
East 5th St.	140	138	213.6		18	VCP	252	3					3TB	71 &171 collapsed service. **Gravel remains.**

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SEWER LOCATION Street	US MH	DS MH	Cammed Length (ft)		Pipe Dia. (in)	Pipe Type	Map Length	# Services	Deficiencies Sag 1" L, Ft	Sag 2" L, Ft	Sag 3"< L, Ft	Egg L, Ft	Serv. Def	Descriptions of Deficiencies
East 2nd St.	141	140	414		15	PVC	302						1TB	Following jetter. Service pipe sinking at 326.
East 5th St.	143	140	367.9		18	VCP	413	16					11TB, 4Cp	54 Pipe Broken, Soil Visible; 106 broken service; 118 242, 248 Pipe Collapsed, service gusher at 118 which is pipe in dirt. Severe cracks 118-145, service 267 collapsed, Holes 267,334,348, Joint Offset (Outflow, PVC Connection) (Survey Abandoned)
East 5th St.	143 US	140	46.9		18	PVC		0						46.9ft Joint Offset-Inflow(Survey Abandoned)
East 5th St.	143	144	367.2		18	VCP	368	7					5TB	Following jetter. OS joints throughout. 15.2ft Material Change (VCP to PVC); 23.2ft Material Change (PVC to VCP); 159.2ft Pipe Calapsed, Soil Visible
East 5th St.	143 U	143	195	J	6	VCP	300	4		20	20		1 Int	JO throughout. Roots in many joints.
East 5th St.	144	73	118.3		18	VCP	86	0					1 rocks plug	OS joints throughout. Line curves right at 30. Cracks at 82 service.
	145 U	145	157	J	8	VCP	200	1						2 Hole
	145	146	447		8	VCP	447							2-8,145 broken pipe; 57 broke @ service; following jetter; 148 service full of roots; 2-3" sags and OS joints throughout;
East 3rd Ave.	145	150	389.3		18	VCP	372	1					1Int	Following jetter. Unknown ubstruction at end.
East 6th St.	146	147	426	J	8	VCP	426	12					1TB, 2Int	77 broken service; many holes and broken pipe. 97 Sag in Pipe (2 in); 118.8ft Intruding Lateral Service Pipe
East 6th St.	147	148	9.1		8	VCP	374	0						7.7ft **pipe chunk**. (Survey Abandoned)
East 7th St.	147 us	148	269.5		8	VCP		7					5Int, 1Int, 1Cp	186 broken pipe; 252 Seperated service. 2-3" sags throughout; Joints a Mildly Seperated the Entire Length; 269.5ft Intruding Lateral Service (Survey Abandoned)
East 7th St.	148	71	218	J	8	VCP	420	8			300			Sags throughout. Broken at many services. 210,216 service severe.
East 1st. Ave.	148	156	360.3		12	PVC	380	2			100		1TB	**Sediment remains.** 1-3" water throughout.
East 7th St.	149	148	207	J	8	VCP	409	10					11TB, 1Cp	121.5ft Large Roots in Lateral, 194.6ft, 200.5ft Holes in Pipe, Soil Visible (Survey Abandoned)
East 7th St.	150	149	103		8	VCP	515	5					4Tb, 1Cp	103ft Hole in Pipe, Visible Soil; 103ft External Cable Entering Pipe (3 in) (Survey Abandoned)
East 7th St.	150	149	360.3		8	VCP		12					10Tb, 2Cp	103.1ft Roots in Lateral (Blocking Entire Lateral); 109.6ft Minor Cracks in Pipe; 202.1ft Large Piece of Wall Missing; 360.3ft External Pipe or Cable Running Through Sewer Pipe (Survey Abandoned)
East 3rd Ave.	150	154	223.4		18	VCP	221	2					1TB	Following jetter. Gravel visible above 1/4 pipe of water.
	151	150	199		8	VCP	300		38					59 cracks, 63 service gusher, 79 cracks at service, 104 hole-severe, 126 leaking tap, 190 broken tap, 199 intr tap blocking
	151 us	150	151		8	VCP				70				53 broken pipe - severe, 78-80 cracks
	152	151	342		8	VCP	300			37			6 TB	271 and 272 broken pipe - severe
East 7th St	153	152	394.7		8	VCP	359	4					2 TB	59ft Roots, 113Int tap w roots, 301 broken pipe at service - severe
East 7th St.	153	153	101.9		8	VCP	230	2					2TB	16 cracks at service, 17ft Material changes (VCP to PVC), 101.9ft Reducer (Survey Abandoned)
East 3rd Ave	154	155	405.9		18	VCP	424	6					6TB	Following jetter. Service at 137 gusher. Cracks 124&143-190. Gravel 282.
East 3rd Ave	155	8	391		18	VCP	526	7					1TB, 5Cp	391ft Camera Failure in Water (Survey Abandoned)
North 1st Ave	156	159	217.3		12	PVC	223	2						**Sediment remains.**
East 8th St.	157	156	360	J	8	VCP	360	10					2 Int	**Roots cut out**, still roots in joints. Roots in services. Minor JO throughout. Tee facing down. 254, 280, 307 holes
East 8th St.	158	157	337		8	VCP	424	1	40				1Int	Following jetter. 129 roots in service. Int service at 368
	158 us	157	16		8	VCP								
North 1st Ave	159	165	160.9		12	PVC	160.9	0						
East 9th St.	160	159	378.1		8	VCP	375	0					7TB, 3Cp	Minor OS joints throughout.
East 9th St.	161	160	431.2		8	VCP	435	21					10TB 10Cp	12,206,230,308 SJ at service. 338.9ft, 318.3ft, 312.1ft Roots Protruding Through Pipe. Minor OS joints throughout. Pipe extended from MH 161 into sewer.
North 1st Ave	162	13	103		8	VCP	700				103			Severe Egg-shape. Survey Abandoned
West 1st St.	163	50	183.8		8	PVC	185	2			183		1Int	2-3" sags throughout. **Sediment remains.** 183.8ft Intruding Lateral Service (Survey Abandoned)
North 1st Ave	164	181	294.6		12	PVC	294.6	1						
East 1st St.	165	164	95.4		12	PVC	50	1					1TB	11.9ft Mutliple Cracks in Pipe
East 8th St.	166	130	252.1		8	PVC	252	1						
East 8th St.	166	166	316.9		8	PVC	316.9	3					2TB	59.8ft 6 x 8" Reducer; 316.9ft Pipe is Capped w CO
East 3rd St.	167	110	364		8	VCP	364	11					8TB, 1Cp	9 pvc changes to vcp. 80.1ft severe hole-small pipe blasting water. 111 south invert. Pipe up to 1/2 full water to 220.
East 3rd St.	167U	167	110		8	VCP	250	4					4TB, 2Cp	375ft Hole and Multiple Cracks in Pipe; 473.8ft Obstacle in Pipe (Small Rocks) (Survey Abandoned). **Sediment around 220&468**. Pipe up to 1/2 full water to 220.
East 3rd Ave.	168	169	456.8		18	VCP	502	0						
East 3rd Ave.	168	169	557		18	VCP	557	0						4" water
East 3rd Ave.	169	170	256.1		18	VCP	496	1					1TB	
East 3rd Ave.	169	170	261.1		18	VCP		0						See only top half
East 3rd Ave.	170	171	337.6		18	VCP	501	0						277.5ft Seal Ring Hanging. 1/3 full
East 3rd Ave.	170	171	175.4		18	VCP		0						10.2ft Seal Ring Hanging. 1/3 to 1/2 full
East 3rd Ave.	171	172	483.1		18	VCP	498	0						Stopped short 20'. Pipe 1/3 full
East 3rd Ave.	172	173	316.6		18	VCP	501	0						**Some solids at 40'.** Pipe 1/3 full.
East 3rd Ave.	172	173	180.5		18	VCP		0						Only see top of pipe.
East 3rd Ave.	173	174	252.8		18	VCP	500	0						1/3 full.
East 3rd Ave.	173	174	250		18	VCP		0						217.6ft Possible Sag (Camera Went Underwater)

Records of TV Inspections TV Inspection Evaluation

SEWER LOCATION Street	US MH	DS MH	Cammed Length (ft)		Pipe Dia. (in)	Pipe Type	Map Length	# Services	Deficiencies Sag 1" L, Ft	Sag 2" L, Ft	Sag 3"< L, Ft	Egg L, Ft	Serv. Def	Descriptions of Deficiencies
East 3rd Ave.	174	175	415.6		18	VCP	500	0						1/3 full.
East 3rd Ave.	174	175	83.5		18	VCP		0						Worthless video - only top of pipe.
East 3rd Ave.	175	176	265.7		18	VCP	501	0						1/3 full.
East 3rd Ave.	175	176	230.4		18	VCP		0						Worthless video - only top of pipe.
East 3rd Ave.	176	177	270.8		18	VCP	500	0						
East 3rd Ave.	176	177	233		18	VCP		0						Worthless video - only top of pipe.
East 3rd Ave.	177	178	289	J	18	VCP	498	0						
East 3rd Ave.	177	178	170		18	VCP		0						70.1ft Possible Sag (Camera Went Underwater). Worthless video - only top of pipe.
North 3rd Ave.	178	179	290.1		18	VCP	347	0			80			69.7ft, 132.4ft, 180.6ft Seal Ring Hanging; 69,94 lon crack; 290 ft Pipe Broken-multiple cracks. **Huge deposit near MH 179**
1st St. Southeast	180	78	375.8		8	VCP	376						2TB	1-2" water&minor OS joints throughout. Service conn are bad. 186 roots; 351 broken service
West 1st Ave	182	15	48.7		24	VCP	20	1			33		1TB	Sag north end.
West 7th St.	CO1	42	276.2		8	PVC	294	4	60				3TB, 1Cp	several small sags. 276.2ft End of Pipe (Ascess End-PVC)
North 1st Ave	CO2	162			8	VCP	700							Cannot access with camera.
	CO3	91			8	VCP	150							Cannot access with camera. 92-91 video shows pipe full of sediment. Replace with proposed proj
East 4th St.	CO5	133	37.9		8	PVC	204	0						37.9ft Pipe is Capped
							70,065	865						

Appendix C

Surface Water Discharge Permit and Statement of Basis

Permit No.: SD0022659

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA 57501-3181

SURFACE WATER DISCHARGE PERMIT

AUTHORIZING DISCHARGE

UNDER THE

SOUTH DAKOTA SURFACE WATER DISCHARGE SYSTEM

In compliance with the provisions of the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota, Article 74:52,

the ***city of Miller***

is authorized under this permit to discharge to

Ree Creek

from its wastewater treatment facility located about one mile north of the city in the northwest ¼ of Section 2, Township 112 North, Range 68 West, in Hand County, South Dakota (Latitude 44.545083, Longitude -98.97975), in accordance with discharge points, effluent limits, monitoring requirements, and other conditions set forth herein. Authorization is limited to those outfalls specifically listed in the permit. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the South Dakota Water Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

This permit shall become effective **April 01, 2009.**

This permit and the authorization to discharge shall expire at midnight, **March 31, 2014.**

Signed this 31st day of March 2009.

Authorized Permitting Official

Steven M. Pirner
Secretary
Department of Environment and Natural Resources

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DEFINITIONS

30-day (and monthly) average means the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

7-day (and weekly) average means the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday.

ARSD means the Administrative Rules of South Dakota.

An **Authorized Release** is a discharge from a permitted outfall that meets all permit conditions and effluent limits.

BOD_5 means Five-Day Biochemical Oxygen Demand. BOD is a measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days) in a sample.

A **Bypass** is the intentional diversion of waste streams from any portion of a treatment facility. Bypasses do not include releases from the sanitary sewer collection system (see sanitary sewer overflow) or unauthorized releases from the treatment facility (see unauthorized release). Bypasses may result in a discharge or unauthorized release.

Composite samples shall be flow proportioned. The composite sample shall contain at least four samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

1. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;

2. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;

3. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,

4. Continuous collection of sample, with sample collection rate proportional to flow rate.

Daily maximum (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.

A **Grab** sample, for monitoring requirements, is a single “dip and take” sample collected at a representative point in the discharge stream.

An **Instantaneous measurement**, for monitoring requirements, is a single reading, observation, or measurement either taken at the facility or within 15 minutes of the sample.

MGD is the measure of flow rate meaning million gallons per day.

pH is the measure of the hydrogen ion concentration of water or wastewater; expressed as the negative log of the hydrogen ion concentration. A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic.

A **Publicly-owned treatment works** or **POTW** is any device or system used in the treatment, including recycling and reclamation, of municipal sewage or industrial waste of a liquid nature which is owned by the state or a municipality. This term includes sewers, pipes, or other conveyances only if they convey wastewater to a publicly owned treatment works providing treatment.

A **Sanitary sewer overflow** is the intentional or unintentional discharge of untreated sewage from the sanitary sewer collection system, including sewer lines, manholes, lift stations, etc.

SDDENR means the South Dakota Department of Environment and Natural Resources.

Secretary means the Secretary of the South Dakota Department of Environment and Natural Resources, or authorized representative.

Severe property damage is substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Sewage sludge is any solid, semi-solid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes but is not limited to solids removed during primary, secondary or advanced wastewater treatment, scum, septage, portable toilet pumpings, and sewage sludge products. Sewage sludge does not include grit, screenings, or ash generated during the incineration of sewage sludge.

TSS means **Total Suspended Solids**. TSS is a measure of the filterable solids present in a sample.

An **Unauthorized release** is a discharge from the lower end of the treatment or containment system through a release structure or over or through retention dikes that does not meet all permit conditions or effluent limits. An unauthorized release is distinguished from a sanitary sewer overflow in that a sanitary sewer overflow discharges wastewater prior to treatment or containment.

An **Upset** is an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

1.0 EFFLUENT LIMITS AND MONITORING REQUIREMENTS

1.1 Description of Discharge Points

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under this permit is a violation of the South Dakota Water Pollution Control Act and could subject the person(s) responsible for such discharge to penalties under Section 34A-2-75 of the Act. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge within a reasonable time from the permittee first learning of an unauthorized discharge could subject the permittee to penalties as provided under the South Dakota Water Pollution Control Act.

Outfall Number	Description of Discharge Points
001	Any discharge from the discharge structure located in the third cell (Latitude 44.547194, Longitude -98.983361 – Navigational Quality GPS).

1.2 Effluent Limits – *Outfall 001*

Effective immediately and lasting through the life of this permit, the quality of effluent discharged by the facility shall, as a minimum, meet the limits as set forth below:

Effluent Characteristic	Effluent Limit		
	30-Day Average[1]	7-Day Average[1]	Daily Maximum[1]
Five-Day Biochemical Oxygen Demand, mg/L	30	45	N/A
Total Suspended Solids, mg/L	110	165	N/A
The pH of the discharge shall not be less than 6.0 standard units or greater than 9.0 standard units in any sample.			
No chemicals, such as chlorine, shall be used without prior written permission.			

[1] See Definitions.

1.3 Self-Monitoring Requirements

All discharges, sanitary sewer overflows, and unauthorized releases shall be monitored for the following parameters at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge.

Effluent Characteristic	Frequency	Reporting Values[1]	Sample Type[1]
Duration of Discharge, days	Monthly	Monthly Total[2]	Calculate
Total Flow, million gallons	Monthly	Monthly Total	Calculate
pH, standard units	At least three per discharge [6]	Daily Minimum; Daily Maximum	Instantaneous[3,4]
Water Temperature, °C[5]	At least three per discharge[6]	Daily Maximum; 30-Day Average	Instantaneous [5]
Flow Rate, MGD	At least three per discharge[6]	Daily Maximum; 30-Day Average	Instantaneous
Five-Day Biochemical Oxygen Demand, mg/L	At least three per discharge[6]	Maximum 7-Day Average; 30-Day Average	Grab
Total Suspended Solids, mg/L	At least three per discharge[6]	Maximum 7-Day Average; 30-Day Average	Grab

[1] See Definitions.

[2] The date and time of the start and termination of each discharge shall also be reported in the comment section of the DMR.

[3] pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment.

[4] The pH and temperature of the effluent shall be determined when ammonia samples are collected.

[5] The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

[6] A minimum of three samples shall be taken during any discharge. A sample shall be taken at the beginning, middle, and end of the discharge if the discharge is less than one week in duration. If a single, continuous discharge is greater than one week in duration, three samples shall be taken the first week and one each following week. All of the samples collected during the 7-day or 30-day period are to be used in determining the averages. The permittee always has the option of collecting additional samples if appropriate.

1.4 Inspection Requirements

The permittee shall inspect its wastewater treatment facility and the outfall on at least a **monthly** basis. During a discharge, the permittee shall inspect the facility on at least a **daily** basis. The inspection shall be conducted to determine if a discharge is occurring, has occurred since the previous inspection, and/or if a discharge is likely to occur before the next inspection. In addition, the inspection shall be performed to determine if proper operation and maintenance procedures are being undertaken at the wastewater treatment facility. Lift stations shall be inspected at least **weekly.** The permittee shall maintain a notebook recording information obtained during the inspection. At a minimum, the notebook shall include the following:

1. Date and time of the inspection;

2. Name of the inspector(s);

3. The facility's discharge status;

4. The measured amount of freeboard or water depth in each pond;

5. Identification of operational problems and/or maintenance problems;

6. Recommendations, as appropriate, to remedy identified problems;

7. A brief description of any actions taken with regard to problems identified; and,

8. Other information, as appropriate.

The permittee shall maintain the notebook in accordance with proper record-keeping procedures and shall make the notebook available for inspection, upon request, by the Secretary or the U.S. Environmental Protection Agency.

2.0 MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

2.1 Representative Sampling

Samples taken in compliance with the monitoring requirements established under this permit shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

2.2 Monitoring Procedures

Monitoring shall be conducted according to test procedures approved under ARSD §74:52:03:06, a.b.r. 40 CFR, Part 136, unless other test procedures have been specified in this permit.

2.3 Reporting of Monitoring Results

Effluent monitoring results obtained during the previous three months shall be summarized for each month, reported on separate Discharge Monitoring Report Forms (EPA No. 3320-1), and submitted to SDDENR on a **quarterly** basis. These must be postmarked no later than the 28th day of the month following the completed reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with Section 2.4 and submitted to the Secretary at the following address:

original to: SD Department of Environment & Natural Resources
Surface Water Quality
PMB 2020
Joe Foss Building
523 East Capitol
Pierre SD 57501-3182

2.4 Signatory Requirements

All applications, reports or information submitted to the Secretary shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Secretary shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

    a. The authorization is made in writing by a person described above and submitted to the Secretary; and,

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of superintendent or equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may be either a named individual or any individual occupying a named position.)

3. If an authorization under 2.a above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the Secretary.

4. Any person signing a document under this section shall make the following certification:

    "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

2.5 Additional Monitoring by the Permittee

If the permittee monitors, at the designated points, any pollutant more frequently than required by this permit, using test procedures approved under ARSD §74:52:03:06, a.b.r. 40 CFR 136 or as specified in this permit, the results of this monitoring shall be used in determining compliance with this permit.

2.6 Records Contents

Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;

2. The initials or names of the individuals who performed the sampling or measurements;

3. The dates analyses were performed;

4. The time analyses were initiated;

5. The initials or names of individuals who performed the analyses;

6. References and written procedures, when available, for the analytical techniques or methods used; and,

7. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

2.7 Duty to Provide Information

The permittee shall furnish to the Secretary, within a reasonable time, any information the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Secretary, upon request, copies of records required to be kept by this permit.

2.8 Other Information

When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Secretary, it shall promptly submit such facts or information.

2.9 Planned Changes

The permittee shall give notice to the Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutant discharged, or could result in noncompliance with permit conditions.

2.10 Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report, or application. This period may be extended by request of the Secretary at any time. Data collected on site, copies of Discharge Monitoring Reports, and a copy of this permit must be maintained on site during the duration of the permitted activity.

2.11 Twenty-four Hour Notice of Noncompliance Reporting

1. The permittee shall report any emergency related to this permit or permitted-facility that may endanger health or the environment as soon as possible, but no later than twenty-four (24) hours after becoming aware of the circumstances. The report shall be made to the Secretary at (605) 773-3351 during regular business hours, or to South Dakota Emergency Management at (605) 773-3231 any other time.

2. Instances of noncompliance, unanticipated bypasses, sanitary sewer overflows, unauthorized releases, and upsets shall be reported to the Secretary at (605) 773-3351 by the first workday (8:00 a.m. - 5:00 p.m. Central Time) following the day the permittee became aware of the circumstances.

3. A written submission shall also be provided within five days of becoming aware of the circumstances above. The written submission shall contain:

    a. A description of the event and its cause;

    b. The period of the event, including exact dates and times;

    c. The estimated time the event is expected to continue if it has not been corrected; and,

    d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the event.

4. The Secretary may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Surface Water Quality Program, South Dakota Department of Environment and Natural Resources, Pierre, (605) 773-3351.

5. Reports shall be submitted in accordance with Sections 2.3 and 2.4.

The permittee shall give advance notice to the Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

2.12 Other Noncompliance Reporting

Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for Section 2.3 are submitted. The reports shall contain the information listed in Section 2.11.

2.13 Permit Transfers

This permit may be transferred to a new permittee if:

1. The current permittee notifies the Secretary at least 30 days in advance of the proposed transfer date; and

2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them.

The Secretary will notify the existing and new permittee of his or her intent to transfer, modify, or revoke and reissue the permit based on the information received and other permit information.

3.0 COMPLIANCE REQUIREMENTS

3.1 Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

3.2 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

3.3 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and treatment and control systems (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit or other conditions required by the Secretary upon issuance. This may include the maintenance of freeboard levels of lagoons or holding ponds. Proper operation and maintenance may also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

3.4 Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3.5 Inspection and Entry

The permittee shall allow the Secretary or EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the South Dakota Water Pollution Control Act, any substances or parameters at any location.

3.6 Removed Substances

Collected screenings, grit, solids, sludges, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard in accordance with applicable requirements of SDCL 34A-2, -6, and -11.

3.7 Bypass of Treatment Facilities

1. Anticipated Bypass. Anticipated bypasses causing violation of effluent limits are prohibited, unless the Secretary approves the anticipated bypass after considering its adverse effects and determines that it will meet the following conditions:

    a. The bypass was unavoidable to prevent loss of life, threat to public health, personal injury, or severe property damage;

    b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment

should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

c. The permittee submitted notices as required under paragraph 3 of this section.

2. Anticipated Bypass Not Causing Violations. The permittee may allow anticipated bypasses to occur which do not cause effluent limit violations, but only if for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 1 and 3 of this section.

3. Notice of Bypass:

a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice at least 10 days before the date of the bypass.

b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Section 2.11.

3.8 Sanitary Sewer Overflows

1. Reporting. Overflows from the sanitary sewer collection system shall be reported to the Secretary at (605) 773-3351 as soon as possible, but no later than the first business day after becoming aware of the sanitary sewer overflow. Anticipated overflows shall be reported in advance, if possible. In addition to verbal notification, the permittee shall submit to the Secretary a written report in accordance with Section 2.11, paragraphs 3 and 4.

2. Sampling. Sanitary sewer overflows shall be sampled at the same or similar frequency and for the same parameters as required for permitted outfalls. The results shall be included with the written report required in paragraph 1.

3. Plan Development. In the event that the Secretary notifies the permittee of the need to develop a capacity, management, operation, and maintenance program in order to address, reduce, or eliminate the frequency of sanitary sewer overflows, the permittee shall submit such a plan to the Secretary. The plan shall, at a minimum, address the following areas:

a. Sewer management program: This program includes personnel organizational structure, training, communication information systems, noncompliance notification program, and other appropriate items;

b. Collection system operation program: This program includes operational budgeting, monitoring, safety, emergency preparedness and response, pump stations, operational recordkeeping, and other appropriate items;

c. Collection system maintenance program: This program includes maintenance budgeting, planned and unplanned maintenance; sewer cleaning; maintenance recordkeeping, parts and equipment inventory, and other appropriate items; and

d. Sewer system capacity evaluation: The capacity evaluation includes the following:

1. System inventory (sewer locations, sizes, slopes, materials, age, condition, etc.);
2. Identification of problem areas (overflows, surcharged lines, basement backups, etc.);
3. Capacity evaluation of problem areas (utilizing flow and precipitation records, infiltration and inflow investigation, manhole and pipe inspections and televising, smoke and dye testing, and building inspections); and
4. Sewer rehabilitation recommendations.

Upon the Secretary’s approval of the plan, the permittee shall implement the plan.

3.9 Upset Conditions

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limits if the requirements of paragraph 2. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review (i.e., Permittees will have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with technology-based permit effluent limits).

2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An upset occurred and that the permittee can identify the cause(s) of the upset;

   b. The permitted facility was at the time being properly operated;

   c. The permittee submitted notice of the upset as required under Section 2.11; and,

   d. The permittee complied with mitigation measures required under Section 3.2.

3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

3.10 Industrial Wastes

1. Each significant industrial user must be identified as to qualitative and quantitative characteristics of the discharge as well as production data. A significant industrial user is defined as an industrial user discharging to a publicly owned treatment works (POTW) that satisfies any of the following: (1) has a process wastewater flow of 25,000 gallons or more per average work day or contributes five percent or more of the average dry weather hydraulic or organic capacity of the municipal system receiving the waste; (2) is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N or; (3) is determined by the Control Authority to have a reasonable potential to adversely impact the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

2. The permittee shall notify the Secretary of any new introductions by new or existing significant industrial users or any substantial change in pollutants from any significant industrial user. Such notice must contain the information described in paragraph 1 above and be forwarded no later than 60 days following the introduction or change.

3. Pretreatment Standards [ARSD §74:52:11:01, a.b.r. 40 CFR 403.5] developed pursuant to Section 307 of the Federal Clean Water Act require that under no circumstances shall the permittee allow the introduction of the following pollutants to the POTW from any source of nondomestic discharge:

   a. Pollutants which create a fire or explosion hazard in the POTW, including but not limited to, wastestreams with a closed cup flashpoint of less than 60 degrees Celsius (140 degrees Fahrenheit) using the test methods specified in ARSD §74:28:22:01, a.b.r. 40 CFR 261.21;

   b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0 standard units unless the works are specifically designed to accommodate such discharges;

c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, or other interference with the operation of the POTW;

d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;

e. Heat in amounts which will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Celsius (104 degrees Fahrenheit);

f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

h. Any trucked or hauled pollutants, except at discharge points designated by the POTW;

i. Any pollutant which causes pass through or interference; and,

j. In addition to the general limits expressed above, more specific pretreatment limits have been promulgated for specific industrial categories under Section 307 of the Federal Clean Water Act (see ARSD, Chapter 74:52:10, a.b.r. 40 CFR Subchapter N, Parts 405 through 471, for specific information).

4. The permittee shall provide adequate notice to the Secretary of any substantial change in the volume or character of pollutants being introduced into the POTW by an industrial user. For the purposes of this section, adequate notice shall include information on:

   a. The quality and quantity of effluent to be introduced into the POTW; and,

   b. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

5. The Secretary retains the right to take legal action against the industrial user and/or the permittee, in those cases where a permit violation has occurred because of the failure of an industrial user to discharge at an acceptable level.

3.11 Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain coverage under a new permit. The permit application must be submitted at least 180 days before the expiration date of this permit. Periodically during the term of this permit and at the time of reissuance, the permittee may be requested to reaffirm its eligibility to discharge under this permit.

3.12 Availability of Reports

Except for data determined to be confidential under ARSD §74:52:02:17, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of SDDENR. Permit applications, permits, and effluent data shall not be considered confidential.

3.13 Property Rights

The Secretary’s issuance of this permit, adoption of design criteria, and approval of plans and specifications, does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state or local laws or regulations, or any taking, condemnation or use of eminent domain against any property owned by third parties. The State does not warrant that the permittee's compliance with this permit, design criteria, approved plans and specifications, and operation under this permit, will

not cause damage, injury or use of private property, an invasion of personal rights, or violation of federal, state or local laws or regulations. The permittee is solely and severably liable for all damage, injury or use of private property, invasion of personal rights, infringement of federal, state or local laws and regulations, or taking or condemnation of property owned by third parties, which may result from actions taken under the permit.

3.14 Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

3.15 Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limits (and compliance schedules, if necessary), or other appropriate requirements if one or more of the following events occurs:

1. Water Quality Standards: The water quality standards of the receiving waters applicable to this general permit are modified in such a manner as to require different effluent limits than contained in this permit.

2. Water Quality Management Plan: A revision to the current water quality management plan is approved and adopted which calls for different effluent limits than contained in this permit.

3. Effluent Guidelines: Effluent limit guidelines are promulgated or revised for point sources covered by this permit;

4. Total Maximum Daily Load: Additional controls in the permit are necessary to implement a total maximum daily load approved by the Secretary and/or EPA.

5. Whole Effluent Toxicity: Whole effluent toxicity is detected in the discharge.

6. Noncompliance: The discharger is a significant contributor of pollution to waters of the state, presents a health hazard, or is in noncompliance with the conditions of the permit; or

7. Other Changes: Other conditions or standards change so that the discharge no longer qualifies for this permit, such as the permittee being designated as a major discharger, changes in necessary influent or effluent pollutant monitoring, additional industrial pretreatment requirements become applicable to the permittee, or other items.

3.16 Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause, including failure to comply with any provision of this permit or any condition imposed by the Secretary upon granting coverage under this permit. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4.0 PENALTIES FOR NONCOMPLIANCE

4.1 Penalties for Violations of Permit Conditions

Any person who violates a permit condition is in violation of the provisions of SDCL 34A-2-36, and is subject to penalties under SDCL 34A-2-75. In addition to a jail sentence authorized by SDCL 22-6-2, such violators are subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, or for damages to the environment of this state. Except as provided in Sections 3.6 and 3.8, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

4.2 Penalties for Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit is in violation of the provisions of SDCL 34A-2-77, and is subject to penalties under SDCL 34A-2-75. In addition to a jail sentence authorized by SDCL 22-6-2, such violators are subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, or for damages to the environment of this state.

4.3 Penalties for Falsification of Reports

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is in violation of the provisions of SDCL 34A-2-77, and is subject to penalties under SDCL 34A-2-75. In addition to a jail sentence authorized by SDCL 22-6-2, such violators are subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, or for damages to the environment of this state.

4.4 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude SDDENR from taking any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the Federal Clean Water Act.

STATEMENT OF BASIS

Applicant:	City of Miller
Permit Number:	SD0022659
Contact Person:	James Bonebright- Superintendent 120 W 2nd St. P.O. Box 69 Miller S.D. 57362
Phone:	(605) 853 2705
Permit Type:	Minor Municipal - Renewal

DESCRIPTION

The city of Miller operates a wastewater treatment facility located about one mile north of the city in the northwest ¼ of Section 2, Township 112 North, Range 68 West, in Hand County, South Dakota (Latitude 44° 32' 42.3N", Longitude -98° 58' 47.1W"; Navigational Quality GPS).

The collection system for the city consists of gravity flow and two lift stations. The wastewater treatment facility consists of a three-cell lagoon system operated in series, with the flexibility to bypass and isolate any of the three cells for maintenance. The inter-pond piping has valves, but is designed to overflow to the next pond if the water level reaches five feet in cell 1, and six feet in cell 2. Cell 1 has a surface area of 17.5 acres, cell 2 is 7 acres and cell 3 is 17.5 acres.

This wastewater treatment facility began operation in 1964, was upgraded in 1982 with the addition of the third cell, and serves a population of 1,530 persons (2000 census). Minor industrial discharges contributing to the flow include a nursing home, hospital, one meat locker, two laundromats, and one car wash.

RECEIVING WATERS

Any discharge from this facility flows about 200 yards in a road ditch that parallels 196th Street then enters Ree Creek, which is classified by the South Dakota Surface Water Quality Standards (SDSWQS), Administrative Rules of South Dakota (ARSD), Section 74:51:03:01 for the following beneficial uses:

(9) Fish and wildlife propagation, recreation, and stock watering waters; and
(10) Irrigation waters.

Since the receiving waterbody has a minimum beneficial use classification of (9) and (10), the SDSWQS (ARSD Section 74:51:01:02.01) require that an analysis of the receiving stream be conducted to determine whether the waterbody deserves a higher beneficial use designation. The South Dakota Department of Environment and Natural Resources (SDDENR) has conducted an analysis for Ree Creek near the discharge

location. SDDENR personnel have determined that the beneficial use classifications for the Ree Creek are appropriate and will remain unchanged.

ANTIDEGRADATION

The South Dakota Department of Environment and Natural Resources (SDDENR) has fulfilled the antidegradation review requirements for this permit. In accordance with South Dakota's Antidegradation Implementation Procedures and the SDSWQS, no further review is required. The results of SDDENR's review are included in Attachment 1.

MONITORING DATA

The city of Miller has been submitting Discharge Monitoring Reports (DMRs) as required under the current permit. As shown in Attachment 2, this facility has had one pH violation since the last on site inspection. However, this violation seems to be isolated and does not reflect the overall treatment performance of this facility. No future violations are expected. No discharge was reported for the months not included in the table.

INSPECTIONS

Personnel from SDDENR conducted a *Compliance inspection* of the Miller wastewater treatment facility on June 5, 2006. The following requirements and recommendations were made:

Requirements and Corrective Actions

1. The city has had 5 violations of the Total Suspended Solids limits since last inspection on October 28, 2003:
    - 30-day average November 30, 2004;
    - 30-day and 7-day averages August 31, 2005; and
    - 30-day and 7-day averages March 31, 2006.

    During the permit renewal process, the city's TSS variance was removed from the currently effective permit (application received in 1999, permit issued in 2004). The limits currently in effect are based on the secondary treatment standards. The city has requested that this variance be re-issued. Because the city has been in compliance with BOD_5 limits since 2001, the department will re-evaluate whether or not granting the variance is appropriate.

    If the city meets the requirements for the higher limit, this change will be considered a major modification and will require public notice.

2. The March 2006 Discharge Monitoring Report was reviewed during the inspection. The weekly and monthly averages for the March 2006 discharge were properly calculated. However, because the discharge occurred during the last week of the month (March) with the last Saturday being in the following month (April) – for reporting purposes, the 7-day averages for TSS and BOD_5 should be

reported as NA (Not Applicable) on the March DMR and these values should be reported on the April DMR.

This is referred to as the Saturday rule and it usually causes confusion. I would recommend that the operator call the department for assistance if this situation occurs again.

Please correct the DMR and submit it within 14 days of receipt. The city may also want to submit the April DMR at this time to avert future confusion.

Recommendations and Comments

1. The budget numbers reviewed during the inspection were the 2006 proposed budget and the revenue averaged from the 2006 January – March sewer use fees. Based on this limited information, it appears that the city may not have enough revenue collected from fees to cover the expenses in the budget. In addition, the current sewer usage rates are $15.00 per month. In order to have an adequate source of funds for repairs and replacement of the city's wastewater collection and treatment system, we recommend that the city continue to review its wastewater rates and give serious consideration to raising them. Several communities are facing upgrades, rehabilitation, or new construction. These construction costs are typically very large and cannot be accomplished without the community leaders having the foresight to set appropriate wastewater rates to cover these costs as well as the cost of operation and maintenance. Many communities facing construction projects are finding that an appropriate rate is approximately $17 per household per month.

2. The city should continue to develop and implement an emergency response plan and/or a priority call list in the event of a sewer line break, severe storm, or natural disaster. An emergency response plan and a priority call list will aid the city in handling these events. For further information or assistance in preparing an emergency response plan, please contact the South Dakota Association of Rural Water Systems at (605) 336-7219, or visit their website, http://www.sdarws.com/

EFFLUENT LIMITS

The permittee shall comply with the effluent limits specified below. These limits are based on the Secondary Treatment Standards (ARSD Section 74:52:06:03), and current permit limits.

Outfall 001 – Any discharge from the discharge structure located in the third cell (Latitude 44.547194, Longitude -98.983361; Navigational Quality – GPS).

1. The BOD_5 concentration shall not exceed 30 mg/L (30-day average) or 45 mg/L (7-day average). These limits are based on the Secondary Treatment Standards.

2. The Total Suspended Solids (TSS) concentration shall not exceed 110 mg/L (30-day average) or 165 mg/L (7-day Average). These limits are based on the Secondary Treatment Standards and current permit limits.

   Note: ARSD Section 74:52:06:04(2) allows TSS limits less stringent than Secondary Treatment Standards if it can be demonstrated that:

   a) Waste stabilization ponds are the principal process used for secondary treatment;
   b) Operation and maintenance data indicate that TSS values specified in subdivision 74:52:06:03(3) cannot be achieved;
   c) The effluent quality for TSS does not exceed 110 mg/L for 30-day average and 165 mg/L for 7-day average; and
   d) The POTW is achieving levels of effluent quality required for BOD_5 specified in Section 74:52:06:03.

   Because the facility meets the above criteria, the TSS variance is allowed.

3. The pH shall not be less than 6.0 standard units or greater than 9.0 standard units in any single analysis and/or measurement. These limits are based on the Secondary Treatment Standards.

   Note: SDDENR specifies that pH analyses are to be conducted within 15 minutes of sample collection with a pH meter. Therefore, the permittee must have the ability to conduct onsite pH analyses. The pH meter used must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment

4. No chemicals, such as chlorine, shall be used without prior written permission.

Effluent water temperature (°C), flow rate (MGD), total flow (million gallons), and duration of discharge (days) shall be monitored, but will not have a limit.

SELF MONITORING REQUIREMENTS

As a minimum, upon the effective date of this permit, the following parameters shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge.

A minimum of three samples shall be taken during any discharge. A sample shall be taken at the beginning, middle, and end of the discharge if the discharge is less than one week in duration. If a single, continuous discharge is greater than one week in duration, three samples shall be taken the first week and one each following week. All samples collected during the 7-day or 30-day period shall be used in determining the averages. The permittee always has the option of collecting additional samples if appropriate.

Effluent monitoring results shall be summarized for each month and recorded on separate DMRs to be submitted to SDDENR on a **quarterly** basis. If no discharge occurs during a month, it shall be stated as such on the DMR.

Monitoring shall consist of **monthly** inspections of the facility and the outfall to verify that proper operation and maintenance procedures are being practiced and whether or not there is a discharge occurring from this facility. **Daily** inspections are required during a discharge. The lift stations shall be inspected on at least a **weekly** basis, although **daily** inspections are recommended. Documentation of each of these visits shall be kept in a notebook to be reviewed by SDDENR or EPA personnel when an inspection occurs.

SLUDGE

Based on the city of Miller's permit application, SDDENR does not anticipate sludge will be removed or disposed of during the life of the permit. Therefore, the proposed Surface Water Discharge permit shall not contain sludge disposal requirements. However, if sludge disposal is necessary, the city of Miller is required to submit to SDDENR a sludge disposal plan for review and approval **prior** to the removal and disposal of sludge.

DRAINAGE ISSUES

Hand County has the authority to regulate drainage. The city of Miller is responsible for getting any necessary drainage permits from the county **prior** to discharging.

ENDANGERED SPECIES

This is a renewal of an existing permit. No listed endangered species are expected to be impacted by activities related to this permit.

PERMIT EXPIRATION

A five-year permit is recommended.

PERMIT CONTACT

Any questions pertaining to this statement of basis can be directed to Jonathan Hill Natural Resource Engineer, for the Surface Water Quality Program, at (605) 773-3351.

January 9, 2009

ATTACHMENT 1

Antidegradation Review

Permit Type: **Minor Municipal - Renewal** Applicant: **City of Miller**

Date Received: **August 18, 2008** Permit #: **SD0022659**

County: **Hand** Legal Description: **NW ¼ of sec 2, T 112N, R 68W**

Receiving Stream: **Ree Creek** Classification: **9,10**

If the discharge affects a downstream waterbody with a higher use classification, list its name and uses: **N/A**

APPLICABILITY

1. Is the permit or the stream segment exempt from the antidegradation review process under ARSD 74:51:01? Yes ☒ No ☐ If no, go to question #2. If yes, check those reasons why the review is not required:

☐ Existing facility covered under a surface water discharge permit is operating at or below design flows and pollutant loadings;

☐ *Existing effluent quality from a surface water discharge permitted facility is in compliance with all discharge permit limits;

☐ *Existing surface water discharge permittee was discharging to the current stream segment prior to March 27, 1973, and the quality and quantity of the discharge has not degraded the water quality of that segment as it existed on March 27, 1973;

☐ *The existing surface water discharge permittee, with DENR approval, has upgraded or built new wastewater treatment facilities between March 27, 1973, and July 1, 1988;

☒ The existing surface water discharge permittee discharges to a receiving water assigned only the beneficial uses of (9) and (10); the discharge is not expected to contain toxic pollutants in concentrations that may cause an impact to the receiving stream; and DENR has documented that the stream cannot attain a higher use classification. This exemption does not apply to discharges that may cause impacts to downstream segments that are of higher quality;

☐ Receiving water meets Tier 1 waters criteria. Any permitted discharge must meet water quality standards;

☐ The permitted discharge will be authorized by a Section 404 Corps of Engineers Permit, will undergo a similar review process in the issuance of that permit, and will be issued a 401 certification by the department, indicating compliance with the state's antidegradation provisions; or

☒ Other: This permit does not authorize an increase in effluent limits.

*An antidegradation review is not required where the proposal is to maintain or improve the existing effluent levels and conditions. Proposals for increased effluent levels, in these categories of activities are subject to review.

No further review required.

ANTIDEGRADATION REVIEW SUMMARY

2. The outcome of the review is:

- ☒ A formal antidegradation review was not required for reasons stated in this worksheet. Any permitted discharge must ensure water quality standards will not be violated.
- ☐ The review has determined that degradation of water quality should not be allowed. Any permitted discharge would have to meet effluent limits or conditions that would not result in any degradation estimated through appropriate modeling techniques based on ambient water quality in the receiving stream, or pursue an alternative to discharging to the waterbody.
- ☐ The review has determined that the discharge will cause an insignificant change in water quality in the receiving stream. The appropriate agency may proceed with permit issuance with the appropriate conditions to ensure water quality standards are met.
- ☐ The review has determined, with public input, that the permitted discharge is allowed to discharge effluent at concentrations determined through a total maximum daily load (TMDL). The TMDL will determine the appropriate effluent limits based on the upstream ambient water quality and the water quality standard(s) of the receiving stream.
- ☐ The review has determined that the discharge is allowed. However, the full assimilative capacity of the receiving stream cannot be used in developing the permit effluent limits or conditions. In this case, a TMDL must be completed based on the upstream ambient water quality and the assimilative capacity allowed by the antidegradation review.
- ☐ Other: _____

3. Describe any other requirements to implement antidegradation or any special conditions That are required as a result of this antidegradation review: _____

Jonathan Hill — Reviewer
September 22, 2008 — Date

Kelli D. Buscher, P.E. — Team Leader
September 22, 2008 — Date

ATTACHMENT 2

Monitoring Data

Outfall 001 - A, Monitoring Location: Effluent Gross

	BOD5	BOD5	Duration of discharge	Flow	Flow rate	Flow rate	pH	pH	TSS	TSS	Temperature	Temperature
	30DA AVG	MX 7D AV	MO TOTAL	MO TOTAL	30DA AVG	DAILY MX	DAILY MN	DAILY MX	30DA AVG	MX 7D AV	30DA AVG	DAILY MX
Limit	30 mg/L	45 mg/L	N/A d	N/A Mgal/mo	N/A Mgal/d	N/A Mgal/d	6 SU	9 SU	110 mg/L	165 mg/L	N/A deg C	N/A deg C
DMR End Date												
11/30/2006	22	23	10	13.7	1.37	5.19	***5.87***	6.18	57.5	60.67	6.55	7.9
4/30/2007	20.75	22	14	19.04	1.36	5.71	7.8	8.38	68	108	14.72	16.8
9/30/2007	29	37	18	22.86	1.27	8.1	6.56	8.1	94	116	20.04	21.5
4/30/2008	16	22	12	19.56	1.63	5.25	6.11	6.25	64.5	124	11.2	13

Appendix D

SD Department of Environment and Natural Resources Wastewater System Inspection Report

DEPARTMENT OF ENVIRONMENT and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

August 22, 2014

The Honorable Ronald Blachford
Mayor
120 W. 2nd Street
Miller, SD 57362-1316

RE: Surface Water Discharge Compliance Inspection (SWD Permit Number: SD0022659)

Dear Mayor Blachford:

The South Dakota Department of Environment and Natural Resources conducted a Surface Water Discharge Compliance Inspection of the city's wastewater treatment facility on August 6, 2014. I appreciate Mr. Jim Bonebright's time and cooperation in supplying the requested information.

The administration and operating personnel are commended for the excellent operation, maintenance, and preventive maintenance programs. The continued improvement will extend the normal life of the facility and assure water quality benefits to the community and the state.

I have attached an inspection summary and a copy of the inspection report. Please pay special attention to the inspection summary tables and implement the required corrective actions as soon as possible. All corrective actions taken will be reviewed during our next inspection at your facility.

Thank you for your continued efforts to protect the environment and natural resources of South Dakota. Please review this report for accuracy, and respond within thirty days with any needed corrections. If you have any questions about this letter or the inspection / file review reports, please contact me at (605) 773-3351.

Sincerely,

Tim Flor

Environmental Scientist III/Inspector
Surface Water Quality Program

Enclosures

cc: Jim Bonebright, City of Miller
SWD File - Pierre

INSPECTION SUMMARY

Facility: City of Miller

SWD Permit: SD0022659

Inspection Date:

The following comments detail violations of the permit that were identified during the inspection Corrective actions are required for the city to come into compliance with its surface water discharge permit.

COMMENTS	REQUIRED CORRECTIVE ACTIONS
The city of Miller has experienced numerous effluent violations of pH, BOD_5, and TSS in the last three years. The city had 5 discharges in the last 3 years. Only 1 of the 5 discharges that did not have any permit violations. The other four discharges had at least 1 TSS, 7 BOD, and *10 pH violations. ***Please note that some of the pH violations may be due to a faulty or incorrectly calibrated meter. But they are still violation.**	The city **must** look into modifications of its operation to allow for adequate treatment of the wastewater. These violations are not acceptable and can lead to enforcement actions which can include fines and penalties. Please contact the department at the number listed on the previous page if you wish to have assistance from the state with these modifications.
On the May 2014 DMR, the number of exceedances (No. EX) column was not filled out correctly when there are violations.	If any of the calculated values or any of the Daily Maximum samples exceed the permit limits, it must be marked as an exceedance on the DMR. If you have questions about filling out DMRs, please contact this office for assistance. Please begin doing this with the next DMR submittal.

NON-MECHANICAL FACILITY INSPECTION CHECKLIST

SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

I. General Facility Information

Name	City of Miller		
Location	NE corner of the city.		
SWD Permit No.	SD0022659		
Contact Person / Title	Jim Bonebright, Water & WW Super.	**Phone Number** (City Hall) (Cell)	(605) 853-2705 (605) 204-0564
Responsible Party/Title	Ron Blachford / Mayor	**Phone Number** (City Hall)	(605) 853-2705

Persons present during the inspection:

Name	Title/Phone	Affiliation
Jim Bonebright	Same	City of Miller
Tim Flor	Inspector / (605) 773-3351	SDDENR

Mailing Address	120 W. 2nd, Miller, SD 57362-1316		
Street Address	Same		
Inspection Date	08/06/2014	**Last Inspection Date**	File Review (02/14/2012) On-site (07/27/2010)
Entrance Time	9:30 AM	**Exit Time**	12:00 PM
Permit Effective Date	04/01/2009	**Permit Expiration Date**	03/31/2014
Avg. Reported Flow Rate	Unknown	**Avg. Design Flow Rate**	0.27 MGD
Population Served	1489 (2010 Census)	**Design Population Equivalent (if known)**	Unknown
Date Facility Began Operation	1964	**Dates of Facility Upgrades**	1982
Receiving Water:	Road ditch then 200 yards to Ree Creek.		
Classification:	9, 10		

Facility Description from Statement of Basis:

The city of Miller operates a wastewater treatment facility located about one mile north of the city in the northwest ¼ of Section 2, Township 112 North, Range 68 West, in Hand County, South Dakota (Latitude 44° 32' 42.3N", Longitude -98° 58' 47.1W"; Navigational Quality GPS).

The collection system for the city consists of gravity flow and two lift stations. The wastewater treatment facility consists of a three-cell lagoon system operated in series, with the flexibility to bypass and isolate any of the three cells for maintenance. The inter-pond piping has valves, but is designed to overflow to the next pond if

the water level reaches five feet in cell 1, and six feet in cell 2. Cell 1 has a surface area of 17.5 acres, cell 2 is 7 acres and cell 3 is 17.5 acres. This wastewater treatment facility began operation in 1964, was upgraded in 1982 with the addition of the third cell, and serves a population of 1,530 persons (2000 census). Minor industrial discharges contributing to the flow include a nursing home, hospital, one meat locker, two Laundromat's, and one car wash.

Does the facility match the above description? **No, there is only one laundromat.**

Is a permit modification needed? **No**

II. Personnel Inventory and Budget

Number of personnel: **3**

Certification	Class I	Class II	Class III	Class IV
Wastewater Treatment	**XX**			
Wastewater Collection		**XX**		

Is a certified operator required? If yes, what classification is required? **Class 1 Treatment and Class 2 Collection**

Budget: **Fiscal Year 2013**

Annual wastewater expenses	**$ 134,305.44**	Residential Sewer Use Fee	**$ 27.00**
Annual wastewater revenue	**$ 186,246.73**	Commercial Sewer Use Fee	**$ 27 +$1/1000 Gal. over 6000 Gal.**

Describe any wastewater projects planned during the next three years: **Televise and GIS lines and curb stops, then will redo collection System as needed.**

Describe measures taken to raise funds for the project(s): **WW Funds, CD's, Savings, Loans, Grants**

Personnel and budget comments: No comments.

III. Required Recordkeeping and Reporting

Permit Verification

		Yes	No	N/A
1.	Is a current copy of the permit and other related materials readily available?	X		
2.	Are the number and location of discharge points as described in the permit? If no, explain.	X		
3.	Facility, address and contact information is correct in the SWD Database? (Including: Fees, SSO's, PTD's, Inspections, PDF's, Flooding Reports, etc.)	X		
4.	Facility, address and contact and permit information is correct in the ICIS Database? (Including: Monitoring and Limits, Inspections, Construction Schedules, etc.)	X		
5.	Has there been any new, different, or increased loading to the WWTF? If yes, describe changes.		X	
6.	Are influent flows increasing or decreasing? **About the same.**			
7.	List any industries/non-domestic contributors. **Laundromat, nursing home, hospital, meat locker, car wash**			X

Permit verification comments: **No comments.**

Inspection Records

	Yes	No	N/A
1. The following necessary information is current, complete, and reasonably available:			
a. Inspection notebooks for the WWTF with the following information:	X		
i. Date and time of the inspection	X		
Ii Name or initials of inspector	X		
iii. Facility's discharge status	X		
iv. Measured depth of the ponds or measured freeboard	X		
v. Identification of operational/maintenance problems	X		
vi. Recommendations to remedy problems	X		
vii. Steps taken to remedy problems	X		
b. Lab results	X		
c. pH testing	X		
d. Discharge Monitoring Reports (DMRs)	X		
e. Emergency discharge forms	X		
f. Other: _____			X
g. Other: _____			X
2. Is information is maintained for the required 3-year period?	X		

Inspection records comments: They also have the SCADA system. The ponds are usually inspected daily.

Sampling and Laboratory Information

	Yes	No	N/A
1. The following sampling and analysis requirements are met:			
a. Dates, times, locations of sampling are recorded.	X		
b. Initials of person performing sampling are recorded.	X		
c. The pH meter meets the following specifications:	X		
i. Capable of simultaneous two-point calibration	X		
ii. Reads to two decimal places	X		
iii. Temperature compensation adjustment	X		
d. pH meter is calibrated properly before use.	X		
e. pH calibration logbook is maintained with the following information:			
i. Date	X		
ii. Time	X		
iii. Initials of person performing calibration	X		
iv. 7 buffer reading	X		
v. 10 buffer reading	X		
vi. Temperature of buffer	X		
vii. Buffer expiration date	X		
f. Is the permittee performing any other tests?		X	
2. Are samples taken at sampling location specified by permit? _____	X		
3. Is the permittee using the method of sample collection required by the permit?	X		
Required method: Grab, Instantaneous			
4. Sample collection procedures adequate and include:			
a. Sample refrigeration during compositing.			X
b. Proper preservation techniques.	X		
c. Containers in conformance with 40 CFR 136.3.	X		
Specify any problems: _____			

5. Laboratory Information (from lab result sheets)

Name:	**State Health Lab**
Address:	**615 E 4th Street, Pierre, SD 57501**
Contact:	**Stacy Ellwanger**
Phone:	**605-773-3361**
Parameters tested:	**BOD, TSS**
Dates, times, and initials of person performing analyses are recorded:	**Yes**

Sampling and laboratory comments: They have had issues with their new pH meter not calibrating properly.

Flow Measurement:

Type of effluent flow measurement device: **Calculated from depth indicators**

	Yes	No	N/A
1. Is flow measured at each outfall? Number of outfalls: **1**	X		
2. Are facility personnel calculating flows properly?	X		
3. Are the proper flow tables used by facility personnel?	X		
4. If flow measurement equipment adequate to handle expected ranges of flow rate?	X		

Comments on effluent flow measurement: There is an old weir but no plate. They do not use the weir for anything.

Self-Monitoring Reporting Information

	Yes	No	N/A
1. Operator is aware of permit conditions (especially SSO and violation reporting?)	X		
2. Is the facility required to obtain permission from the department before discharging?		X	
a. If yes, has the facility requested permission to discharges?			X
b. If yes, has the facility received permission to discharges?			X
c, If yes, has the facility been denied permission to discharge?			X
3. Is the facility approved for NetDMR? (If so, there will be no DMRs in the file after the approval date.)	X		
4. Are DMRs being submitted to DENR as required by the permit?	X		
a. Are they submitted on time?	X		
Use the attached DMR Calculations Form to help answer 5 – 8 for most recent discharges.			
5. Is monitoring for required parameters performed at least as frequently as required by the permit?	X		
a. Are they sampling more frequently?		X	
6. Is the geometric mean properly calculated and recorded for fecal/total coliform data?		X	
7. Are weekly and monthly averages calculated properly and reported on the DMR?	X		
8. Are the maximum and minimum values of all data points reported properly?	X		
9. Is the number of exceedances column (NO. EX) completed properly?		X	
10. Is the permit signatory or authorized representative signing the DMRs?	X		
11. Are sample types reported properly?	X		
12. Does the facility do WET testing? If so, Acute or Chronic?		X	

Self-monitoring or DMR comments: The # of Ex. are not filled out correctly on the May 2012 DMR for BOD. It should be 2, not 1 as reported. The May 2014 DMR for BOD should also be 2, not 1 in the # Ex. Box.

DMR Calculations Form

Month of ***May 2014***

Week 1							
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)	Fecal (#/100 ml)
5/5	37	100	9.9	Not	17.8	----------	----------
5/6	31	88	9.93	Available	16.8	----------	----------
5/7	28	68	7.5	----------	15.6	----------	----------
Week Total	96	256	----------	----------	----------	----------	----------
÷ # of Samples	3	3	----------	----------	----------	----------	----------
=7-Day Avg.	32	85.3	----------	----------	----------	----------	----------
Week 2							
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)	Fecal (#/100 ml)
5/12	41	130	9.45	N/A	10.3	----------	----------
Week Total	41	130	----------	----------	----------	----------	----------
÷ # of Samples	1	1	----------	----------	----------	----------	----------
=7-Day Avg.	41	130	----------	----------	----------	----------	----------
Week 3							
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)	Fecal (#/100 ml)
5/20	39	56	8.93	N/A	20.9	----------	----------
Week Total	39	56	----------	----------	----------	----------	----------
÷ # of Samples	1	1	----------	----------	----------	----------	----------
=7-Day Avg.	39	56	----------	----------	----------	----------	----------
Week 4 (if applicable)							
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)	Fecal (#/100 ml)
*5/27	85	140	9.46	N/A	29.4	----------	----------
Week Total	85	140	----------	----------	----------	----------	----------
÷ # of Samples	1	1	----------	----------	----------	----------	----------
=7-Day Avg.	85	140	----------	----------	----------	----------	----------
Monthly Summary							
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)	Fecal (#/100 ml)
Daily Max.	----------	----------	9.93	N/A	29.4	----------	----------
Daily Min.	----------	----------	7.5	----------	---------	----------	----------
Max. 7-day Avg.	85	140	----------	----------	---------	----------	----------
Month Total	261	582	----------	Not	110.8	----------	----------
÷ # of Samples	6	6	----------	Available	6	----------	----------
=30-Day Avg.	43.5	97	----------	----------	18.5	----------	----------
Reported on DMR							
Date	BOD (mg/L)	TSS (mg/L)	pH	Flow (MGD)	Temp (°C)	Ammonia (mg/L)	Fecal (#/100 ml)
Daily Max.	----------	----------	9.93	N/A	29.4	----------	----------
Daily Min.	----------	----------	7.5	----------	---------	----------	----------
Max. 7-day Avg.	85	140	----------	----------	---------	----------	----------
30-Day Avg.	43.5	97	----------	----------	18.47	----------	----------

***Lab Comments - Lots of bugs in the sample**

IV. Facility Compliance Review

Effluent Violations

		Yes	No	N/A
1.	Has the facility discharged since the last inspection? If yes, list how many. **5**	X		
2.	Is the facility in compliance with all effluent limits since the last inspection?		X	
a.	Effluent BOD5 violations. If yes, how many? **7**	X		
b.	Effluent TSS violations. If yes, how many? **1**	X		
c.	Effluent pH violations. If yes, how many? **10**	X		
d.	Effluent ammonia violations. If yes, how many?			X
e.	Effluent fecal coliform violations. If yes, how many?			X
f.	Effluent total coliform violations. If yes, how many?			X
h.	Effluent temperature violations. If yes, how many?			X
i.	Effluent TRC violations. If yes, how many?			X
j.	Other violations. If yes, list parameter and number of occurrences .		X	

Effluent violations comments: There are several effluent violations since the last inspection. All violations have been addressed by Warning Letters, except for the May 2014 discharge. These violations were not flagged in NetDMR due to a bug in the system where if they leave out the = sign, it will not make you acknowledge them. The operator did put in the # of Ex., attached a letter and had reported it as required. There were 4 of the 6 pH readings that were over the Daily Mx limit of 9.0 SU. This was incorrectly reported as 1 in the # Ex. Box. The correct number should be 4. BOD was incorrectly reported as 1 in the # Ex. box and should be 2 because there was 1 30 Day Ave and 1 Mx 7 Day Ave violation.

Compliance Schedule

		Yes	No	N/A
1.	Is the facility subject to a compliance schedule either in its permit or in an enforcement action? If yes, note date and type of enforcement action.		X	
2.	List milestones that remain in the schedule:			
3.	Has facility has missed milestone dates? If yes explain:			X
4.	Will the facility meet or do they plan to meet final compliance schedule date?			X

Compliance schedule comments: No comments.

Facility Review

		Yes	No	N/A
1.	Are written emergency procedures established (in the event of a major storm event, a chemical release into the sewer system, a sewer main break, etc.)?	X		
2.	Can the facility be bypassed (internal, collection system, total)? Describe bypass procedures:		X	
3.	Does the facility accept hauled (septage) wastes? If yes, list amount and hauler contact information. **Septic hauler is Brad Manning Digging.**	X		
4.	Does the facility accept industrial or nondomestic wastes? If yes, list amount and sources.		X	
5.	Has the facility experienced problems with industrial or hauled wastes? If yes, explain:		X	
6.	Are the non-domestic users regulated by sewer ordinance? If yes, attach relevant ordinance.	X		

Facility review comments: No comments.

V. Collection System

Piping and Manholes

Type of Collection System ☒ Separate ☐ Combined (San + Storm) ☐ Both ☐ Other

		Yes	No	N/A
1.	Is a routine sewer-cleaning schedule maintained? If yes, what is the schedule and what type of equipment is used? **As needed and problem areas annually.**	X		
2.	Have sewer backups occurred into basements during high flows since the last inspection? If yes, explain:		X	

If overflows occurred at this facility, the information from question 3 should be entered in the SSO database.

		Yes	No	N/A
3.	Have manholes overflowed during high flows? If yes, give dates, volumes, receiving waters, etc.		X	
4.	Was DENR notified of any overflows or unauthorized releases? If no, why not?			X
5.	Were samples taken of the overflow/unauthorized release? If yes, list the sample results in the comment section below. If no, explain.			X
6.	Have bypasses occurred from the collection system (including lift stations) since the last inspection? If yes, explain (date, volumes, receiving water, etc.)		X	
7.	Does the community have a sump pump ordinance? If yes, how is it enforced? **Newspaper, door to door if needed.**	X		
8.	Has testing for inflow/infiltration sources been conducted since the last inspection? If yes, describe testing. **SPN currently.**	X		
9.	Have sources of inflow/infiltration been identified?	X		
10.	Have measures been taken to correct inflow/infiltration problems?	X		
11.	Has the collection system been upgraded since the last inspection? If yes, describe: **In progress.**	X		
12.	Miles of collection system, if known: **About 18-20 miles**			

Piping and manhole comments: Collection system is being studied now and it will be determined what needs to be done soon.

Lift Stations

Item	Comments
Number of lift stations	**2**
Type of lift stations (wetwell/drywell or submersible)	**Main is Wetwell/Drywell, Park is Submersible**
List areas served	**East edge of city and west of city park.**
Inspection frequency	**Daily – SCADA, Visually at least monthly**
Condition of lift stations	**Very good**
Alternative power source available for each lift station	**Portable Generators**
Wetwell baskets (quantity)	**2**
Cleaning schedule	**About every two months.**
Bar screens (quantity)	**N/A**
Cleaning schedule	**N/A**
Screening disposal method	**Bury on site.**
Dehumidifier working properly (if applicable)	**Yes**
Ventilation system working properly (if applicable)	**Yes**
Type of alarm system	**Lights, Horns, SCADA/auto dialer on both.**
Alarm system working properly	**Yes**
Lift station have hour meters	**Yes**
Hour meters are logged in an inspection notebook	**SCADA**
Pump ratings	**~ 100 GPM**
Pump calibration schedule	**Annually by Dakota Pump**
Are inspections being documented?	**SCADA**

Comments concerning lift stations: No comments.

VI. Treatment Processes

Stabilization Ponds

Item	Comments
Inspection frequency	**At least daily**
Weeds and/or trees growing on the dikes	**No**
Vegetation growing in the ponds	**No**
Pond dikes protected from erosion with riprap	**Yes**
Dike structure failure (sloughing and/or sagging)	**No**
Evidence of erosion	**Minor in a spot or two.**
Pond seepage surfacing reported	**None**
Sludge: Past disposal practices	**N/A**
Future Plans	**No**
Observation of sludge accumulation	**None**
Fencing in good condition	**Yes**
All access gates are kept locked	**Yes**
Signs legible and properly located	**Yes**
Facility accessible in all weather conditions	**Yes**
Evidence of burrowing animals	**No**
Evidence of grazing animals	**No**
Odor problem (except seasonal turnover)	**No**
Inter-pond piping valves are working and used	**Yes**
Depth indicator(s)	**Yes, in all cells**
Discharge structure (valve control, overflow, etc.)	**Valve controlled**
Which ponds are drawn down during a discharge?	**Cell 3**
Cells operated in series or parallel	**Series – Valves but also overflow pipes between cells.**
Are chemicals added for algae, insects, etc?	**None**

Cell information (stabilization pond)

	Cell # 1	Cell # 2	Cell # 3
Maximum operation depth	**6'**	**6'**	**6'**
Current operating depth	**3'**	**3'**	**3'**
Minimum operating depth	**2'**	**2'**	**2'**
Surface area at maximum depth	**17.5 A**	**7 A**	**17.5 A**

Comments concerning stabilization ponds: No Comments.

For Office Use Only			
Rating: ☒ **S** ☐ **M** ☐ **U**	**Other: MOD** ☐ **ASSIST** ☐ **SEV** ☐ **ENF** ☐		
Name of Inspector	**Signature**	**Affiliation / Phone**	**Date**
Tim Flor		*SDDENR / (605) 773-3351*	8-22-14
Name of Reviewer	**Signature**	**Affiliation / Phone**	**Date**
Albert Spangler, P.E.		*SDDENR / (605) 773-3351*	8/22/14

RESOLUTION #2011-8

WHEREAS, the Council has deemed it necessary to raise the water and sewer rates,

THEREFORE, BE IT RESOLVED that the following water and sewer rates will be effective with the November usage:

2011

SEWER RATES

MINIMUM CHARGE: $22.00 per month
Commercial Accounts using over 6,000 gallons of water per month add $1.00/1,000 gallons

WATER RATES

RESIDENTIAL RATE: $21.00 base fee per month plus:
0-1,000 gallons $2.00 per thousand gallons
1,001-10,000 gallons $3.50 per thousand gallons
10,001-20,000 gallons $4.00 per thousand gallons
20,001-30,000 gallons $4.50 per thousand gallons
30,001-40,000 gallons $5.00 per thousand gallons
40,001-50,000 gallons $5.50 per thousand gallons
50,001 gallons and over $6.00 per thousand gallons
COMMERCIAL RATE: $3.50 per 1,000 gallons,
Plus required to pay base fee

BASE FEE ACCORDING TO METER SIZE:

5/8"-1" meter	$31.00
11/2" meter	$36.00
2" meter	$46.00
3" meter	$56.00
4" meter	$66.00
6" meter	$86.00

COMPOUND METER CHARGES:

5/8" X 2" meter	$46.00
3/4" X 3" meter	$56.00
1" X 4" meter	$66.00
112"X 6" meter	$86.00
2" X 8"	$101.00

Ronald Blachford, Mayor

ATTEST:

Laura Smith, Finance Officer
(SEAL)

RESOLUTION #2013-10

WHEREAS, The City Council has deemed it necessary to raise the sewer rates,

THEREFORE, BE IT RESOLVED that the following sewer rate increase will be effective with the September, 2013 usage:

Minimum monthly sewer rate: $27.00

Commercial Accounts using over 6,000 gallons of water per month, add $1.00/1,000 gallons.

Dated this 19th day of August, 2013.

Ronald Blachford, Mayor

ATTEST:

Sheila Coss, Finance Officer

SEAL

CITY OF MILLER
*Budget YTD Rev-Exp©

Current Period: December 2013

		2013 YTD Budget	2013 YTD Amt	December MTD Amt	2013 YTD Balance	% of Budget
SEWER FUND						
	Revenues	$200,435.00	$186,246.73	$0.00	$14,188.27	92.92%
	Expenditures	$195,605.00	$134,305.44	$0.00	$61,299.56	68.66%
	Profit(Loss)	$4,830.00	$51,941.29	$0.00	($47,111.29)	1075.39%
Revenue						
Active	R 602-383-3131 SALES TAX DUE	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-383-3310 FEDERAL GRANT	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-383-3340 STATE GRANTS	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-383-3611 INTEREST EARNE	$2,500.00	$277.79	$0.00	$2,222.21	11.11%
Active	R 602-383-3622 RENT - LAND	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-383-3831 SEWER - USERS	$197,435.00	$185,662.68	$0.00	$11,772.32	94.04%
Active	R 602-383-3832 SALE OF SUPPLIE	$500.00	$306.26	$0.00	$193.74	61.25%
Active	R 602-383-3833 SEWER SURCH R	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-383-3839 OTHER SEWER R	$0.00	$0.00	$0.00	$0.00	0.00%
Active	R 602-383-3913 SALE OF MUN. PR	$0.00	$0.00	$0.00	$0.00	0.00%
	Total Revenue	$200,435.00	$186,246.73	$0.00	$14,188.27	92.92%
Expenditure						
Active	E 602-438-4110 REGULAR SALAR	$75,595.00	$57,566.41	$0.00	$18,028.59	76.15%
Active	E 602-438-4120 FICA	$5,785.00	$4,304.59	$0.00	$1,480.41	74.41%
Active	E 602-438-4130 RETIREMENT	$4,535.00	$3,486.52	$0.00	$1,048.48	76.88%
Active	E 602-438-4140 WORK COMP. INS	$2,500.00	$0.00	$0.00	$2,500.00	0.00%
Active	E 602-438-4150 GROUP HEALTH I	$5,940.00	$7,341.46	$0.00	-$1,401.46	123.59%
Active	E 602-438-4151 GROUP LIFE INS.	$100.00	$60.00	$0.00	$40.00	60.00%
Active	E 602-438-4160 OTHER INS.	$4,000.00	$4,020.84	$0.00	-$20.84	100.52%
Active	E 602-438-4220 ENGINEER FEES	$5,000.00	$1,250.00	$0.00	$3,750.00	25.00%
Active	E 602-438-4251 CONTRACT REPA	$17,000.00	$31,967.27	$0.00	-$14,967.27	188.04%
Active	E 602-438-4261 OPERATE SUPPL	$15,000.00	$9,022.47	$0.00	$5,977.53	60.15%
Active	E 602-438-4262 FUEL	$5,250.00	$3,900.40	$0.00	$1,349.60	74.29%
Active	E 602-438-4270 CONFERENCE F	$500.00	$253.75	$0.00	$246.25	50.75%
Active	E 602-438-4271 LODGING EXPEN	$500.00	$188.99	$0.00	$311.01	37.80%
Active	E 602-438-4272 MEAL EXPENSE	$200.00	$46.25	$0.00	$153.75	23.13%
Active	E 602-438-4273 MILEAGE EXPENS	$200.00	$110.44	$0.00	$89.56	55.22%
Active	E 602-438-4281 ELECTRIC/HEAT	$4,000.00	$7,670.60	$0.00	-$3,670.60	191.77%
Active	E 602-438-4282 TELEPHONE	$1,500.00	$934.07	$0.00	$565.93	62.27%
Active	E 602-438-4290 OTHER EXPENSE	$4,000.00	$2,181.38	$0.00	$1,818.62	54.53%
Active	E 602-438-4292 MEMBERSHIPS &	$0.00	$0.00	$0.00	$0.00	0.00%
Active	E 602-438-4300 CAPITAL IMPROV	$30,000.00	$0.00	$0.00	$30,000.00	0.00%
Active	E 602-438-4360 VEHICLE & MACHI	$4,000.00	$0.00	$0.00	$4,000.00	0.00%
Active	E 602-438-4381 RIP RAP PROJEC	$0.00	$0.00	$0.00	$0.00	0.00%
Active	E 602-438-4382 RESERVE-EQUIP	$10,000.00	$0.00	$0.00	$10,000.00	0.00%
Active	E 602-438-5110 TRANSFERS OUT	$0.00	$0.00	$0.00	$0.00	0.00%
	Total Expenditure	-$195,605.00	-$134,305.44	$0.00	-$61,299.56	68.66%
	Total SEWER FUND	$4,830.00	$51,941.29	$0.00	-$47,111.29	1075.39%
ELECTRIC FUND						
	Revenues	$2,219,715.00	$1,784,302.68	$0.00	$435,412.32	80.38%
	Expenditures	$2,191,170.00	$1,700,272.55	$0.00	$490,897.45	77.60%
	Profit(Loss)	$28,545.00	$84,030.13	$0.00	($55,485.13)	294.36%
Revenue						
Active	R 603-382-3131 SALES TAX DUE	$0.00	$0.00	$0.00	$0.00	0.00%

Outfall 001 - A, Monitoring Location: 1 Effluent Gross

		BOD, 5-day, 20 deg. C	BOD, 5-day, 20 deg. C	Duration of discharge	Flow rate	Flow rate	Flow, total	pH	pH	Solids, total suspended	Solids, total suspended	Temperature, water deg. centigrade	Temperature, water deg. centigrade
		30DA AVG	MX 7D AV	MO TOTAL	30DA AVG	DAILY MX	MO TOTAL	DAILY MN	DAILY MX	30DA AVG	MX 7D AV	30DA AVG	DAILY MX
DMR	Limit	30 mg/L	45 mg/L	N/A d	N/A MGD	N/A MGD	N/A Mgal	6 SU	9 SU	110 mg/L	165 mg/L	N/A deg C	N/A deg C
End Date	Recv'd Date												
05/31/2012	6/7/2012	50.8	62	17	1.2	5.48	20.4	8.66	9.36	132.6	160	19	21.2
05/31/2013	7/31/2013	18.67	18.67	11	0.59	0.71	6.49	9.25	9.43	67.33	67.33	20.83	21.7
06/30/2013	8/1/2013	43	53	28	17.08	2.85	17.08	7.24	9.34	98.25	123	23.53	27.7
12/31/2013	2/18/2014	22	24	10	1.43	4.28	14.3	7.83	8.9	35	40	8.9	14
05/31/2014	7/24/2014	43.5	85	26	21.32	1.9	21.32	7.5	9.93	97	140	18.47	29.4

* 4 of 6 pH sample were over the Daily MX Limit of 9.0 S.U.

DMR Copy of Record

Permit

Permit #:	SD0022659	**Permittee:**	Miller, City of	**Facility:**	MILLER, CITY OF
Major:	No	**Permittee Address:**	120 W 2nd street Miller, SD 57362	**Facility Location:**	120 W 2ND ST. PO BOX 69 MILLER, SD 57362
Permitted Feature:	001 External Outfall	**Discharge:**	**001-A** Discharge from Cell 3 to Ree Creek		

Report Dates & Status

Monitoring Period:	From 05/01/14 to 05/31/14	**DMR Due Date:**	**07/28/14**	**Status:**	**NetDMR Validated**

Considerations for Form Completion

DISCHARGE START DATE: .....START TIME: ..... END DATE: ..... END TIME: .....IF NO DISCHARGE OCCURS DURING THE MONITORING PERIOD, "NO DISCHARGE" SHALL BE REPORTED.

Principal Executive Officer

First Name:	James	**Title:**	Water Wastewater Supt.	**Telephone:**	605-853-2705
Last Name:	Bonebright				

No Data Indicator (NODI)

Form NODI: –

Parameter Code	Parameter Name	Monitoring Location	Season #	Param. NODI		Quantity or Loading Qualifier 1	Quantity or Loading Value 1	Quantity or Loading Qualifier 2	Quantity or Loading Value 2	Quantity or Loading Units	Quality or Concentration Qualifier 1	Quality or Concentration Value 1	Quality or Concentration Qualifier 2	Quality or Concentration Value 2	Quality or Concentration Qualifier 3	Quality or Concentration Value 3	Quality or Concentration Units	# of Ex.	Frequency of Analysis	Sample Type
					Sample								=	18.47	=	29.4	04 - deg C		03/DS - Three Per Discharge	IN - INSTAN
00010	Temperature, water deg. centigrade	1 - Effluent Gross	0	--	Permit Req.									Req Mon 30DA AVG		Req Mon DAILY MX	04 - deg C	0	03/DS - Three Per Discharge	IN - INSTAN
					Value NODI															
					Sample	=	21.32	=	1.9	03 - MGD									03/DS - Three Per Discharge	IN - INSTAN
00056	Flow rate	1 - Effluent Gross	0	--	Permit Req.		Req Mon 30DA AVG		Req Mon DAILY MX	03 - MGD								0	03/DS - Three Per Discharge	IN - INSTAN
					Value NODI															
					Sample								=	43.5 (1)	=	85 (2)	19 - mg/L	(2)	03/DS - Three Per Discharge	GR - GRAB
00310	BOD, 5-day, 20 deg. C	1 - Effluent Gross	0	--	Permit Req.								<=	30 30DA AVG	<=	45 MX 7D AV	19 - mg/L	1	03/DS - Three Per Discharge	GR - GRAB
					Value NODI															
					Sample						>=	7.5			=	9.93	12 - SU	* (4)	03/DS - Three Per Discharge	IN - INSTAN
00400	pH	1 - Effluent Gross	0	--	Permit Req.						>=	6 DAILY MN			<=	9 DAILY MX	12 - SU	1	03/DS - Three Per Discharge	IN - INSTAN
					Value NODI															
					Sample								=	97	=	140	19 - mg/L		03/DS - Three Per Discharge	GR - GRAB
00530	Solids, total suspended	1 - Effluent Gross	0	--	Permit Req.								<=	110 30DA AVG	<=	165 MX 7D AV	19 - mg/L	0	03/DS - Three Per Discharge	GR - GRAB
					Value NODI															
					Sample			=	21.32	3R - Mgal									01/30 - Monthly	CA - CALCTD
51500	Flow, total	1 - Effluent Gross	0	--	Permit Req.				Req Mon MO TOTAL	3R - Mgal								0	01/30 - Monthly	CA - CALCTD
					Value NODI															
					Sample			=	26	5A - d									01/30 - Monthly	CA - CALCTD
81381	Duration of discharge	1 - Effluent Gross	0	--	Permit Req.				Req Mon MO TOTAL	5A - d								0	01/30 - Monthly	CA - CALCTD
					Value NODI															

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

See attached letter explaining ph violation

Attachments

Name	Type	Size
LagoonPHViolationLetter7222014.pdf	pdf	254970

Report Last Saved By

Miller, City of

User:	james.bonebright@cityofmiller.com	Date/Time:	2014-07-24 08:41 (Time Zone: -05:00)
Name:	James Bonebright		
E-Mail:	james.bonebright@cityofmiller.com		

Appendix E
Storm Water Drainage Calculations

Miller Storm Water Drainage
EXISTING SYSTEM
5 YEAR STORM

STORM DRAINAGE SYSTEM DESIGN BY THE RATIONAL METHOD

Calculated by: JDS
Date: 12/7/2015
Checked by:

X Preliminary
Final
Design

Drainage Area: The City of Miller
Project No.: 13600
Design Storm: 5 year storm
n = 0.013

Location	Conveyance		Direct Runoff										Sys.	Travel Time (System Design)							Total Runoff					Remarks
	From	To	W.S. or S.B. No.	O.F.L. ft.	W.C. Type *	S %	V f.p.s.	Ti min.	i in./hr.	A Ac.	C	q c.f.s.	Q c.f.s.	Convey Sys./ Size Descr. (in)	Slope min. %	Slope des. %	V des. f.p.s.	Cap. (all.) c.f.s.	Leng.	t min.	T.O.C. min.	i in/hr.	Total A Ac.	Comp C	Des. Q c.f.s.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
Southeast Storm Sewer Piping System																							0.0			
	1A	1B	70	750	SGF	1.0	2.0	6.3	3.1	13.20	0.60	24.6	24.6	12	47.49	0.50	3.2	2.5	720	3.7	10.0	3.10	13.2	0.60	24.6	
	1B	1E	72	800	SGF	1.0	2.0	6.7	3.1	8.06	0.60	15.0	39.5	12	123.19	0.50	3.2	2.5	670	3.5	13.5	3.10	21.3	0.60	39.5	
	1C	1E	73	600	SGF	1.0	2.0	5.0	3.1	3.31	0.60	6.2														
	1D	1E	97	450	SGF	1.0	2.0	3.8	3.1	2.89	0.60	5.4														
	1C, 1D	1E											11.5	12	10.48	0.50	3.2	2.5	200	1.0	6.1	3.10	6.2	0.60	11.5	
	1E	1F	96	425	SGF	1.0	2.0	3.6	3.1	3.72	0.60	6.9	58.0	18	30.48	0.50	4.2	7.4	250	1.0	14.5	3.10	31.2	0.60	58.0	
	1F	1G	95	325	SGF	1.0	2.0	2.7	3.1	0.83	0.60	1.5	59.5	18	32.13	0.50	4.2	7.4	400	1.6	16.1	3.10	32.0	0.60	59.5	
	1G	1H	93	350	SGF	1.0	2.0	2.9	3.1	1.24	0.60	2.3	61.8	24	7.47	0.50	5.1	16.0	50	0.2	16.2	3.10	33.3	0.60	61.8	
	1H	1O, 1P	86	800	SGF	1.0	2.0	6.7	3.1	5.17	0.60	9.6	71.5	24	9.98	0.50	5.1	16.0	400	1.3	17.5	3.10	38.4	0.60	71.5	
	1P	1S, 1R	68	800	SGF	1.0	2.0	6.7	3.1	10.10	0.60	18.8														
	1O	1S, 1R	67	800	SGF	1.0	2.0	6.7	3.1	9.09	0.60	16.9														
	1O 1P	1S, 1R											107.2	27	11.97	0.50	5.5	21.9	450	1.4	18.9	3.10	57.6	0.60	107.2	
	1S	1T	78	300	SGF	1.0	2.0	2.5	3.1	1.45	0.60	2.7														
	1R	1T	85	500	SGF	1.0	2.0	4.2	3.1	2.48	0.60	4.6														
	1S 1R	1T											114.5	27	13.66	0.20	3.5	13.9	350	1.7	20.6	3.10	61.5	0.60	114.5	
	1T	1U 1V 1W 1X	84	675	SGF	1.0	2.0	5.6	3.1	5.58	0.60	10.4	124.8	30	9.26	0.10	2.6	13.0	460	2.9	23.5	3.10	67.1	0.60	124.8	
	1U	1Y	76	500	SGF	1.0	2.0	4.2	3.1	3.72	0.60	6.9														
	1V	1Y	77	350	SGF	1.0	2.0	2.9	3.1	1.86	0.60	3.5														
	1W	1Y	65	850	SGF	1.0	2.0	7.1	3.1	4.55	0.60	8.5														
	1X	1Y	64	450	SGF	1.0	2.0	3.8	3.1	2.89	0.60	5.4														
	1U 1V 1W 1X	1Y											149.1	30	13.21	0.12	2.9	14.2	430	2.5	26.0	2.80	80.1	0.60	134.6	
	1Y	1Z	46	350	SGF	1.0	2.0	2.9	3.1	2.48	0.60	4.6	153.7	30	14.04	0.10	2.6	13.0	200	1.3	27.2	2.80	82.6	0.60	138.8	
	1Z	1AA	47	200	SGF	1.0	2.0	1.7	3.1	1.24	0.60	2.3	156.0	30	14.46	0.10	2.6	13.0	50	0.3	27.5	2.80	83.9	0.60	140.9	
	1AA	1BB 1CC 1DD	45	200	SGF	1.0	2.0	1.7	3.1	0.83	0.60	1.5	157.5	30	14.75	0.17	3.4	16.9	575	2.8	30.3	2.60	84.7	0.60	132.1	
	1BB	Out	44	400	SGF	1.0	2.0	3.3	3.1	2.27	0.60	4.2														
	1CC	Out	43	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5														6505
	1DD	Out	25	350	SGF	1.0	2.0	2.9	3.1	1.45	0.60	2.7														
													167.9	30	16.76	0.49	5.8	28.7	425	1.2	31.5	2.50	90.3	0.60	135.4	
	1BB 1CC 1DD	Out											167.9	36	6.34	0.49	6.6	46.7	875	2.2	33.7	2.50	90.3	0.60	135.4	
South Main Storm Sewer to Northwest																										
	2A	2B 2C	38	950	SGF	1.0	2.0	7.9	3.1	10.30	0.60	19.2	19.2	8	252.45	0.50	3.5	1.2	75	0.4	8.3	3.10	10.3	0.60	19.2	
	2B	2D	36	800	SGF	1.0	2.0	6.7	3.1	2.07	0.60	3.9														
	2C	2D	18	800	SGF	1.0	2.0	6.7	3.1	3.51	0.60	6.5														
	2C 2B	2D											29.5	8	597.44	0.50	3.5	1.2	160	0.8	9.1	3.10	15.9	0.60	29.5	
	2D	2E	20	225	SGF	1.0	2.0	1.9	3.1	1.65	0.60	3.1	32.6	8	728.05	0.50	3.5	1.2	240	1.1	10.2	3.10	17.5	0.60	32.6	
	2E	2F 2G 2H 2I	34	175	SGF	1.0	2.0	1.5	3.1	0.62	0.60	1.2	33.8	8	780.46	0.50	3.5	1.2	430	2.0	12.2	3.10	18.2	0.60	33.8	
	2J	2L 2M	69	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5														
	2K	2L 2M	56	200	SGF	1.0	2.0	1.7	3.1	1.24	0.60	2.3														
	2J 2K	2L 2M											5.8	18	0.30	0.50	4.2	7.4	230	0.9	4.3	3.10	3.1	0.60	5.8	
	2L	2N 2O	71	400	SGF	1.0	2.0	3.3	3.1	2.27	0.60	4.2														
	2M	2N 2O	60	400	SGF	1.0	2.0	3.3	3.1	1.24	0.60	2.3														1565
	2L 2M	2N 2O											12.3	18	1.37	0.50	4.2	7.4	200	0.8	5.1	3.10	6.6	0.60	12.3	
	2N	2F 2G 2H 2I	58	150	SGF	1.0	2.0	1.3	3.1	0.62	0.60	1.2														
	2O	2F 2G 2H 2I	59	400	SGF	1.0	2.0	3.3	3.1	1.45	0.60	2.7														
	2N 2O	2F 2G 2H 2I											16.1	18	2.36	0.50	4.2	7.4	230	0.9	6.0	3.10	8.7	0.60	16.1	
	2F	2P 2Q 2R 2S	37	350	SGF	1.0	2.0	2.9	3.1	2.07	0.60	3.9														
	2G	2P 2Q 2R 2S	35	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5														
	2H	2P 2Q 2R 2S	57	250	SGF	1.0	2.0	2.1	3.1	1.24	0.60	2.3														

LEGEND: FOR = Forest, FAL = Fallow, GRA = Grass, NBD = Nearly Bare Ground,
GWW = Grassed WaterWay, SGF = Shallow Gutter Flow

Miller Storm Water Drainage
EXISTING SYSTEM
5 YEAR STORM

STORM DRAINAGE SYSTEM DESIGN BY THE RATIONAL METHOD

Calculated by: JDS
Date: 12/7/2015
Checked by:

X Preliminary
Final
Design

Drainage Area: The City of Miller
Project No.: 13600
Design Storm: 5 year storm
n = 0.013

Location	Conveyance		Direct Runoff										Sys.	Travel Time (System Design)							Total Runoff					Remarks
	From	To	W.S. or S.B. No.	O.F.L. ft.	W.C. Type *	S %	V f.p.s.	Ti min.	i in./hr.	A Ac.	C	q c.f.s.	Q c.f.s.	Convey Sys./ Size Descr. (in)	Slope min. %	Slope des. %	V des. f.p.s.	Cap. (all.) c.f.s.	Leng.	t min.	T.O.C. min.	i in/hr.	Total A Ac.	Comp C	Des. Q c.f.s.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	2I	2P 2Q 2R 2S	33	200	SGF	1.0	2.0	1.7	3.1	1.03	0.60	1.9														
	2F 2G 2H 2I	2P 2Q 2R 2S											61.4	24	7.38	0.50	5.1	16.0	428	1.4	13.6	3.10	33.0	0.60	61.4	
	2T	2P 2Q 2R 2S	53	250	SGF	1.0	2.0	2.1	3.1	1.03	0.60	1.9														
	2U	2P 2Q 2R 2S	55	200	SGF	1.0	2.0	1.7	3.1	1.03	0.60	1.9														
	2U 2T	2P 2Q 2R 2S											3.8	12	1.16	0.50	3.2	2.5	318	1.7	15.3	3.10	2.1	0.60	3.8	
	2P	2X	31	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5														
	2Q	2X	54	250	SGF	1.0	2.0	2.1	3.1	1.03	0.60	1.9														
	2R	2X	52	350	SGF	1.0	2.0	2.9	3.1	1.45	0.60	2.7														
	2S	2X	30	525	SGF	1.0	2.0	4.4	3.1	4.13	0.60	7.7														
	2P 2Q 2R 2S	2X											81.0	27	6.84	0.50	5.5	21.9	434	1.3	16.6	3.10	43.6	0.60	81.0	
	2V	2X	51	250	SGF	1.0	2.0	2.1	3.1	1.86	0.60	3.5														
	2W	2X	50	600	SGF	1.0	2.0	5.0	3.1	2.68	0.60	5.0														
	2V 2W	2X											8.4	12	5.62	0.50	3.2	2.5	243	1.3	6.3	3.10	4.5	0.60	8.4	
	2X	2Y 2Z 2AA 2BB											89.5	30	4.76	0.50	5.9	29.0	441	1.2	17.8	3.10	48.1	0.60	89.5	
	2Y	2CC	49	350	SGF	1.0	2.0	2.9	3.1	2.48	0.60	4.6														
	2Z	2CC	48	350	SGF	1.0	2.0	2.9	3.1	2.07	0.60	3.9														
	2AA	2CC	28	350	SGF	1.0	2.0	2.9	3.1	2.07	0.60	3.9														
	2BB	2CC	29	400	SGF	1.0	2.0	3.3	3.1	2.07	0.60	3.9														
													105.6	30	6.63	0.50	5.9	29.0	382	1.1	18.9	3.10	56.8	0.60	105.6	
	2Y 2Z 2AA 2BB	2CC											105.6	36	2.51	0.50	6.7	47.2	368	0.9	19.8	3.10	56.8	0.60	105.6	
	2CC	Out	26	525	SGF	1.0	2.0	4.4	3.1	4.13	0.60	7.7	113.3	36	2.89	0.50	6.7	47.2	1500	3.7	23.6	3.10	60.9	0.60	113.3	
Furthest Southeast Portion of Storm Sewer to the East																							0.0			
	3D	3A	103	525	SGF	1.0	2.0	4.4	3.1	3.51	0.60	6.5	6.5	18	0.39	0.19	2.6	4.5	54	0.4	4.7	3.10	3.5	0.60	6.5	
	3A	3B	104	800	SGF	1.0	2.0	6.7	3.1	11.98	0.60	22.3	28.8	18	7.52	0.20	2.7	4.7	50	0.3	7.0	3.10	15.5	0.60	28.8	
	3C	3B	110	375	SGF	1.0	2.0	3.1	3.1	2.07	0.60	3.9	3.9	18	0.13	0.26	3.0	5.4	38	0.2	7.2	3.10	2.1	0.60	3.9	
	3B	3F	105	675	SGF	1.0	2.0	5.6	3.1	4.96	0.60	9.2	41.9	24	3.43	0.18	3.0	9.5	354	2.0	9.2	3.10	22.5	0.60	41.9	
	3F	3G	111	550	SGF	1.0	2.0	4.6	3.1	3.31	0.60	6.2														
	3E	3G	106	200	SGF	1.0	2.0	1.7	3.1	1.45	0.60	2.7														
	3E 3F	3G											50.7	24	5.03	0.18	3.0	9.5	332	1.8	11.0	3.10	27.3	0.60	50.7	
	3G	3H	112	400	SGF	1.0	2.0	3.3	3.1	2.27	0.60	4.2	55.0	24	5.90	0.18	3.0	9.5	70	0.4	11.4	3.10	29.6	0.60	55.0	
	3H	3I	115	400	SGF	1.0	2.0	3.3	3.1	1.65	0.60	3.1	58.0	24	6.58	0.18	3.0	9.5	146	0.8	12.2	3.10	31.2	0.60	58.0	
	3I	3J	113	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5	61.5	24	7.39	0.18	3.0	9.5	262	1.4	13.6	3.10	33.1	0.60	61.5	
	3J	3M 3L	114	400	SGF	1.0	2.0	3.3	3.1	3.72	0.60	6.9														
	3K	3M 3L	116	400	SGF	1.0	2.0	3.3	3.1	1.65	0.60	3.1														
	3J 3K	3M 3L											71.5	24	9.98	0.18	3.0	9.5	650	3.6	17.2	3.10	38.4	0.60	71.5	
	3M	3N	119	450	SGF	1.0	2.0	3.8	3.1	3.93	0.60	7.3														
	3L	3N	117	650	SGF	1.0	2.0	5.4	3.1	2.69	0.60	5.0														
	3M 3L	3Z											83.8	24	13.72	0.18	3.0	9.5	708	3.9	21.2	3.10	45.1	0.60	83.8	
	36" RCP Culvert	3Z											83.8													Two 48" Pipes
	3Z	3N											83.8	24	13.72	0.18	3.1	9.6	710	3.9	3.9	3.10	0.0	#####	#DIV/0!	
	3P	3O	109	1550	SGF	1.0	2.0	13.0	3.1	20.70	0.60	38.5	38.5	42	0.15	0.18	4.4	42.1	250	1.0	13.0	3.10	20.7	0.60	38.5	Highway Piping
	3O	3Z	118	400	SGF	1.0	2.0	3.3	3.1	4.13	0.60	7.7	46.2	42	0.21	0.18	4.4	42.1	750	2.9	15.8	3.10	24.8	0.60	46.2	Highway Piping
	3Z	Whatever											130.0	42	1.67		0.0	0.0					0.0			
Storm Sewer on Northeast Portion of Miller to Northwest																							0.0			
	4I	4L 4K	92	300	SGF	1.0	2.0	2.5	3.1	0.83	0.60	1.5														
	4J	4L 4K	90	700	SGF	1.0	2.0	5.9	3.1	3.93	0.60	7.3														
	4I 4J	4L 4K											8.9	18	0.71	0.20	2.7	4.7	324	2.0	7.9	3.10	4.8	0.60	8.9	
	4K 4H	4M 4N	108, 102	1000	SGF	1.0	2.0	8.4	3.1	11.16	0.60	20.8														
	4L	4M 4N	94	400	SGF	1.0	2.0	3.3	3.1	1.45	0.60	2.7														
	4K 4H 4L	4M 4N											32.3	30	0.62	0.13	3.0	14.8	157	0.9	9.2	3.10	17.4	0.60	32.3	

LEGEND: FOR = Forest, FAL = Fallow, GRA = Grass, NBD = Nearly Bare Ground,
GWW = Grassed WaterWay, SGF = Shallow Gutter Flow

Miller Storm Water Drainage
EXISTING SYSTEM
5 YEAR STORM

STORM DRAINAGE SYSTEM DESIGN
BY THE RATIONAL METHOD

Calculated by JDS
Date 12/7/2015
Checked by

X Preliminary
Final
Design

Drainage Area The City of Miller
Project No. 13600
Design Storm 5 year storm
n = 0.013

Location	Conveyance		Direct Runoff										Sys.	Travel Time (System Design)							Total Runoff					
	From	To	W.S. or S.B. No.	O.F.L. ft.	W.C. Type *	S %	V f.p.s.	Ti min.	i in./hr.	A Ac.	C	q c.f.s.	Q c.f.s.	Convey Sys./ Size Descr. (in)	Slope min. %	Slope des. %	V des. f.p.s.	Cap. (all.) c.f.s.	Leng.	t min.	T.O.C. min.	i in/hr.	Total A Ac.	Comp C	Des. Q c.f.s.	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	4M	4C 4B	91	250	SGF	1.0	2.0	2.1	3.1	1.45	0.60	2.7														
	4N	4C 4B	101	350	SGF	1.0	2.0	2.9	3.1	2.48	0.60	4.6														
	4M 4N	4C 4B											39.6	30	0.93	0.13	3.0	14.9	254	1.4	10.6	3.10	21.3	0.60	39.6	
	4A	4C 4B	107	875	SGF	1.0	2.0	7.3	3.1	10.10	0.60	18.8	18.8	18	3.20	3.00	10.3	18.2	800	1.3	8.6	3.10	10.1	0.60	18.8	
	4C	4D 4E	89	350	SGF	1.0	2.0	2.9	3.1	1.45	0.60	2.7														
	4B	4D 4E	100	425	SGF	1.0	2.0	3.6	3.1	2.89	0.60	5.4														
	4C 4B	4D 4E											66.5	36	0.99	0.13	3.4	24.2	375	1.8	12.4	3.10	35.7	0.60	66.5	
	4D	4F 4G	88	350	SGF	1.0	2.0	2.9	3.1	1.65	0.60	3.1														
	4E	4F 4G	99	450	SGF	1.0	2.0	3.8	3.1	3.10	0.60	5.8														
	4E 4D	4F 4G											75.3	36	1.27	0.13	3.4	24.2	382	1.9	14.3	3.10	40.5	0.60	75.3	
	4F	4MH2	120	400	SGF	1.0	2.0	3.3	3.1	2.69	0.60	5.0														
	4G	4MH2	121	275	SGF	1.0	2.0	2.3	3.1	0.62	0.60	1.2														
	4G 4F	4MH2											81.5	36	1.49	0.13	3.4	24.2	200	1.0	15.3	3.10	43.8	0.60	81.5	
	4P	4MH1	98	550	SGF	1.0	2.0	4.6	3.1	3.10	0.60	5.8	5.8	18	0.30	0.25	3.0	5.3	188	1.1	5.7	3.10	3.1	0.60	5.8	
	4O	4MH1	122	450	SGF	1.0	2.0	3.8	3.1	2.07	0.60	3.9	3.9	15	0.36	0.25	2.6	3.2	102	0.6	3.8	3.10	2.1	0.60	3.9	1946
	4MH1	4MH2											9.6	21	0.37	0.25	3.3	7.9	372	1.9	7.5	3.10	5.2	0.60	9.6	
	4MH2	4MH5											91.1	36	1.86	0.13	3.4	24.2	390	1.9	17.2	3.10	49.0	0.60	91.1	
	4MH5	4Q											91.1	36	1.86	0.08	2.7	18.9	340	2.1	19.3	3.10	49.0	0.60	91.1	
	4Q	4MH3	79	475	SGF	1.0	2.0	4.0	3.1	4.34	0.60	8.1	99.2	36	2.21	0.13	3.4	24.2	286	1.4	20.7	3.10	53.3	0.60	99.2	
	4MH3	4MH4											99.2	36	2.21	0.23	4.5	32.0	930	3.4	24.1	2.60	53.3	0.60	83.2	
	4R	4MH6	83	500	SGF	1.0	2.0	4.2	3.1	2.89	0.60	5.4														
	4S	4MH6	75	400	SGF	1.0	2.0	3.3	3.1	1.24	0.60	2.3														
	4R 4S	4MH6											7.7	18	0.53	0.35	3.5	6.2	210	1.0	5.2	3.10	4.1	0.60	7.7	
	4T	4MH6	82	500	SGF	1.0	2.0	4.2	3.1	2.27	0.60	4.2		18					160							
	4V	4MH6	80, 81	450	SGF	1.0	2.0	3.8	3.1	2.06	0.60	3.8														
	4T 4V	4MH6											8.1	18	0.59	0.35	3.5	6.2	172	0.8	5.0	3.10	4.3	0.60	8.1	
	4MH6	4MH7											15.7	21	0.99	0.19	2.8	6.8	402	2.4	7.5	3.10	8.5	0.60	15.7	
	4X	4MH7	63	400	SGF	1.0	2.0	3.3	3.1	2.07	0.60	3.9														
	4U	4MH7	74	400	SGF	1.0	2.0	3.3	3.1	2.27	0.60	4.2														
	4X 4U	4MH7											8.1	24	0.13	0.26	3.6	11.4	170	0.8	4.1	3.10	4.3	0.60	8.1	835
	4MH7	4Z 4Y4AA											23.8	24	1.11	0.26	3.6	11.4	225	1.0	8.6	3.10	12.8	0.60	23.8	
	4Z	4MH8	61	450	SGF	1.0	2.0	3.8	3.1	1.86	0.60	3.5														
	4Y	4MH8	62	350	SGF	1.0	2.0	2.9	3.1	1.03	0.60	1.9														
	4AA	4MH8	123	300	SGF	1.0	2.0	2.5	3.1	0.83	0.60	1.5														
	4Z 4Y 4AA	4MH8											30.7	24	1.84	0.26	3.6	11.4	310	1.4	10.0	3.10	16.5	0.60	30.7	
	4MH8	4MH4											30.7	24	1.84	0.28	3.8	11.9	130	0.6	10.6	3.10	16.5	0.60	30.7	
	4MH4	4BB											129.9	42	1.67	0.18	4.4	42.7	1052	3.9	28.1	2.40	69.8	0.60	100.5	1564
	4BB	4CC	124	400	SGF	1.0	2.0	3.3	3.1	2.07	0.60	3.9	133.7	42	1.77	0.18	4.4	42.7	194	0.7	28.8	2.35	71.9	0.60	101.4	
	4CC	Out											133.7	42	1.77	0.18	4.4	42.7	318	1.2	30.0	2.30	71.9	0.60	99.2	
Furthest Southwest Portion to Creek																										
	5A	5G 5H	32	375	SGF	1.0	2.0	3.1	3.1	1.45	0.60	2.7														
	5B	5G 5H	16	775	SGF	1.0	2.0	6.5	3.1	4.55	0.60	8.5														
	5C	5G 5H	19	275	SGF	1.0	2.0	2.3	3.1	0.83	0.60	1.5														
	5A 5B 5C	5G 5H											12.7	18	1.46	0.50	4.2	7.4	400	1.6	8.1	3.10	6.8	0.60	12.7	
	5D	5F		400	SGF	1.0	2.0	3.3	3.1	1.65	0.60	3.1														
	5E	5F	7	300	SGF	1.0	2.0	2.5	3.1	2.07	0.60	3.9														
	5D 5E	5F											6.9	10	9.97	0.50	2.8	1.5	200	1.2	4.5	3.10	3.7	0.60	6.9	
	5F	5G 5H	17	250	SGF	1.0	2.0	2.1	3.1	1.45	0.60	2.7	9.6	10	19.26	0.50	2.8	1.5	200	1.2	9.2	3.10	5.2	0.60	9.6	

LEGEND: FOR = Forest, FAL = Fallow, GRA = Grass, NBD = Nearly Bare Ground,
GWW = Grassed WaterWay, SGF = Shallow Gutter Flow

Miller Storm Water Drainage
EXISTING SYSTEM
5 YEAR STORM

STORM DRAINAGE SYSTEM DESIGN
BY THE RATIONAL METHOD

Calculated by: JDS
Date: 12/7/2015
Checked by:

X Preliminary
Final
Design

Drainage Area: The City of Miller
Project No.: 13600
Design Storm: 5 year storm
n = 0.013

Location	Conveyance		Direct Runoff										Sys.	Travel Time (System Design)							Total Runoff					Remarks
	From	To	W.S. or S.B. No.	O.F.L. ft.	W.C. Type *	S %	V f.p.s.	Ti min.	i in./hr.	A Ac.	C	q c.f.s.	Q c.f.s.	Convey Sys./ Size Descr. (in)	Slope min. %	Slope des. %	V des. f.p.s.	Cap. (all.) c.f.s.	Leng.	t min.	T.O.C. min.	i in/hr.	Total A Ac.	Comp C	Des. Q c.f.s.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	5G	5I	8	400	SGF	1.0	2.0	3.3	3.1	1.65	0.60	3.1														
	5H	5I	10	450	SGF	1.0	2.0	3.8	3.1	3.72	0.60	6.9														
	5G 5H	5I											32.3	18	9.46	0.50	4.2	7.4	475	1.9	11.1	3.10	17.4	0.60	32.3	
	5J	5I	11	200	SGF	1.0	2.0	1.7	3.1	0.41	0.60	0.8														
	5K	5I	6	250	SGF	1.0	2.0	2.1	3.1	1.86	0.60	3.5														
	5J 5K	5I											4.2	10	3.71	0.50	2.8	1.5	200	1.2	3.3	3.10	2.3	0.60	4.2	
	5L	5M	125	300	SGF	1.0	2.0	2.5	3.1	2.48	0.60	4.6	4.6	8	6.98	0.50	3.5	1.2	400	1.9	4.4	3.10	2.5	0.60	4.6	
	5I	5M											36.5	18	12.09	0.50	4.2	7.4	400	1.6	4.1	3.10	19.6	0.60	36.5	
													41.1	15	116.18	0.50	3.7	4.6	77	0.3	11.5	3.10	19.6	0.60	36.5	
	5M	Out											41.1	12	63.92	0.50	4.6	3.6	380	1.4	12.8	3.10	22.1	0.60	41.1	
Furthest West Central Portion to Creek																										
	6A	6MH1	14	650	SGF	1.0	2.0	5.4	3.1	4.96	0.60	9.2														
	6B	6MH1	1	750	SGF	1.0	2.0	6.3	3.1	8.26	0.60	15.4														
	6A 6B	6MH1											24.6	18	5.48	0.50	4.2	7.4	400	1.6	7.9	3.10	13.2	0.60	24.6	
	6C	6MH1	3	600	SGF	1.0	2.0	5.0	3.1	2.07	0.60	3.9														
	6D	6MH1	2	275	SGF	1.0	2.0	2.3	3.1	1.24	0.60	2.3														
	6E	6MH1	5	550	SGF	1.0	2.0	4.6	3.1	1.65	0.60	3.1														
	6F	6MH1	4	600	SGF	1.0	2.0	5.0	3.1	3.51	0.60	6.5														
	6C 6D 6E 6F	6MH1											15.8	18	2.25	0.50	4.2	7.4	200	0.8	5.8	3.10	8.5	0.60	15.8	
	6MH1	Out											40.3	18	14.75	0.50	4.2	7.4	400	1.6	9.4	3.10	21.7	0.60	40.3	
Northwest 12" Line																										
	7A	7E 7F 7G	42	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5														
	7B	7E 7F 7G	24	500	SGF	1.0	2.0	4.2	3.1	3.31	0.60	6.2														
	7C	7E 7F 7G	41	450	SGF	1.0	2.0	3.8	3.1	2.48	0.60	4.6														
	7D	7E 7F 7G	23	450	SGF	1.0	2.0	3.8	3.1	3.93	0.60	7.3														
	7A 7B 7C 7D	7E 7F 7G											21.5	12	36.55	0.50	3.2	2.5	350	1.8	6.0	3.10	11.6	0.60	21.5	
	7E	Out	40	350	SGF	1.0	2.0	2.9	3.1	1.45	0.60	2.7														
	7F	Out	39	400	SGF	1.0	2.0	3.3	3.1	1.65	0.60	3.1														
	7G	Out	22	350	SGF	1.0	2.0	2.9	3.1	1.45	0.60	2.7														
	7E 7F 7G	Out											30.0	12	70.91	0.50	3.2	2.5	650	3.4	9.4	3.10	16.1	0.60	30.0	
West Second Avenue																										
	8A	8D	15	450	SGF	1.0	2.0	3.8	3.1	4.55	0.60	8.5														
	8B	8D	27	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5														
	8C	8D	13	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5														
	8A 8B 8C	8D											15.4	8	77.66	0.50	3.5	1.2	375	1.8	5.5	3.10	8.3	0.60	15.4	
	8D	Crystal Lake	12	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5	18.8	8	116.52	0.50	3.5	1.2	600	2.8	8.4	3.10	10.1	0.60	18.8	
Second Street South West																										
	9A	Out	126	650	SGF	1.0	2.0	5.4	3.1	15.90	0.60	29.6	29.6	18	3.80	0.50	6.1	10.7	1400	3.8	9.3	3.10	15.9	0.60	29.6	

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GWW = Grassed WaterWay, SGF = Shallow Gutter Flow

Miller Storm Water Drainage
STORM SEWER DESIGN
5 YEAR STORM

STORM DRAINAGE SYSTEM DESIGN
BY THE RATIONAL METHOD

Calculated by: JDS
Date: 12/7/2015
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X Preliminary
Final
Design

Drainage Area: The City of Miller
Project No.: 14141
Design Storm: 5 year storm
n = 0.013

Location	Conveyance		Direct Runoff										Sys.	Travel Time (System Design)								Total Runoff					Remarks
	From	To	W.S. or S.B. No.	O.F.L.	W.C. Type *	S	V	Ti	i	A	C	q	Q	Existing Sys Size Descr. (in)	Convey Sys./ Size Descr. (in)	Slope min. %	Slope des. %	V des.	Cap. (all.)	Leng.	t	T.O.C.	i	Total A	Comp C	Des. Q	
				ft.		%	f.p.s.	min.	in./hr.	Ac.		c.f.s.	c.f.s.					f.p.s.	c.f.s.		min.	min.	in/hr.	Ac.		c.f.s.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
Southeast Storm Sewer Piping System																								0.0			
	1A	1B	70	750	SGF	1.0	2.0	6.3	3.1	13.20	0.60	24.6	24.6	12	30	0.36	0.25	4.2	20.5	720	2.9	9.1	3.10	13.2	0.60	24.6	
	1C	1E	73	600	SGF	1.0	2.0	5.0	3.1	3.31	0.60	6.2															
	1D	1E	97	450	SGF	1.0	2.0	3.8	3.1	2.89	0.60	5.4															
	1C, 1D	1E											11.5	12	24	0.26	0.25	3.6	11.3	200	0.9	5.9	3.10	6.2	0.60	11.5	
	1E	1B	96	425	SGF	1.0	2.0	3.6	3.1	3.72	0.60	6.9	18.5	12	30	0.20	0.25	4.2	20.5	700	2.8	8.7	3.10	9.9	0.60	18.5	
	1F	1G	95	325	SGF	1.0	2.0	2.7	3.1	0.83	0.60	1.5	20.0	24	42	0.04	0.25	5.2	50.3	400	1.3	10.0	3.10	10.8	1.34	44.5	eliminated
	1B	1Q, 1P	72	800	SGF	1.0	2.0	6.7	3.1	8.06	0.60	15.0	59.5		42	0.35	0.25	5.2	50.3	400	1.3	10.4	3.10	32.0	0.60	59.5	
	1G	1H	93	350	SGF	1.0	2.0	2.9	3.1	1.24	0.60	2.3															
	1H	1Q, 1P	86	800	SGF	1.0	2.0	6.7	3.1	5.17	0.60	9.6	11.9	27	24	0.28	0.25	3.6	11.3	400	1.9	8.5	3.10	6.4	0.60	11.9	
	1P	1S, 1R	68	800	SGF	1.0	2.0	6.7	3.1	10.10	0.60	18.8															
	1Q	1S, 1R	67	800	SGF	1.0	2.0	6.7	3.1	9.09	0.60	16.9															
	1Q 1P	1S, 1R											107.2	27	54	0.30	0.25	6.2	98.3	450	1.2	11.6	3.10	57.6	0.60	107.2	1260
	1S	1T	78	300	SGF	1.0	2.0	2.5	3.1	1.45	0.60	2.7															
	1R	1T	85	500	SGF	1.0	2.0	4.2	3.1	2.48	0.60	4.6															
	1S 1R	1T											114.5	27	54	0.34	0.25	6.2	98.3	350	0.9	12.6	3.10	61.5	0.60	114.5	
	1T	1U 1V 1W 1X	84	675	SGF	1.0	2.0	5.6	3.1	5.58	0.60	10.4	124.8	30	54	0.40	0.25	6.2	98.3	460	1.2	13.8	3.10	67.1	0.60	124.8	
	1U	1Y	76	500	SGF	1.0	2.0	4.2	3.1	3.72	0.60	6.9															
	1V	1Y	77	350	SGF	1.0	2.0	2.9	3.1	1.86	0.60	3.5															
	1W	1Y	65	850	SGF	1.0	2.0	7.1	3.1	4.55	0.60	8.5															6635
	1X	1Y	64	450	SGF	1.0	2.0	3.8	3.1	2.89	0.60	5.4															
	1U 1V 1W 1X	1Y											149.1	30	60	0.33	0.25	6.6	130.2	430	1.1	14.9	3.10	80.1	0.60	149.1	1715
	1Y	1Z	46	350	SGF	1.0	2.0	2.9	3.1	2.48	0.60	4.6	153.7	30	60	0.35	0.25	6.6	130.2	200	0.5	15.4	3.10	82.6	0.60	153.7	
	1Z	1AA	47	200	SGF	1.0	2.0	1.7	3.1	1.24	0.60	2.3	156.0	30	60	0.36	0.25	6.6	130.2	50	0.1	15.5	3.10	83.9	0.60	156.0	1255
	1AA	1BB 1CC 1DD	45	200	SGF	1.0	2.0	1.7	3.1	0.83	0.60	1.5	157.5	30	60	0.37	0.25	6.6	130.2	575	1.4	17.0	3.10	84.7	0.60	157.5	
	1BB	Out	44	400	SGF	1.0	2.0	3.3	3.1	2.27	0.60	4.2															
	1CC	Out	43	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5															
	1DD	Out	25	350	SGF	1.0	2.0	2.9	3.1	1.45	0.60	2.7															
	2CC	Out	26	525	SGF	1.0	2.0	4.4	3.1	4.13	0.60	7.7	7.7														
	1BB 1CC 1DD 2CC	Out											175.6	36	60	0.45	0.25	6.6	130.2	1300	3.3	20.2	3.10	94.4	0.60	175.6	

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n = 0.013

Location	Conveyance		Direct Runoff										Sys.	Travel Time (System Design)								Total Runoff					Remarks
	From	To	W.S. or S.B. No.	O.F.L.	W.C. Type *	S	V	Ti	i	A	C	q	Q	Existing Sys Size Descr. (in)	Convey Sys./ Size Descr. (in)	Slope min. %	Slope des. %	V des.	Cap. (all.)	Leng.	t	T.O.C.	i	Total A	Comp C	Des. Q	
				ft.		%	f.p.s.	min.	in./hr.	Ac.		c.f.s.	c.f.s.					f.p.s.	c.f.s.		min.	min.	in/hr.	Ac.		c.f.s.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
South Main Storm Sewer to Northwest																											
	2J	2L 2M	69	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5															
	2K	2L 2M	56	200	SGF	1.0	2.0	1.7	3.1	1.24	0.60	2.3															
	2J 2K	2L 2M											10.1	18	24	0.20	0.50	5.1	16.0	230	0.8	4.1	3.10	3.1	0.60	5.8	
	2L	2N 2O	71	400	SGF	1.0	2.0	3.3	3.1	2.27	0.60	4.2															
	2M	2N 2O	60	400	SGF	1.0	2.0	3.3	3.1	1.24	0.60	2.3															
	2L 2M	2N 2O											16.6	18	24	0.54	0.50	5.1	16.0	200	0.7	4.8	3.10	6.6	0.60	12.3	
	2N	2F 2G 2H 2I	58	150	SGF	1.0	2.0	1.3	3.1	0.62	0.60	1.2															
	2O	2F 2G 2H 2I	59	400	SGF	1.0	2.0	3.3	3.1	1.45	0.60	2.7															
	2N 2O	2F 2G 2H 2I											20.4	18	30	0.25	0.50	5.9	29.0	230	0.6	5.4	3.10	8.7	0.60	16.1	
	2D 2E 5A 5B 5C	2F 2G 2H 2I										16.9	16.9	18	24	0.56	0.50	5.1	16.0	430	1.4	1.4	3.10	1.5	3.59	16.1	
	2F	2P 2Q 2R 2S	37	350	SGF	1.0	2.0	2.9	3.1	2.07	0.60	3.9															
	2G	2P 2Q 2R 2S	35	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5															
	2H	2P 2Q 2R 2S	57	250	SGF	1.0	2.0	2.1	3.1	1.24	0.60	2.3															
	2I	2P 2Q 2R 2S	33	200	SGF	1.0	2.0	1.7	3.1	1.03	0.60	1.9															
	2F 2G 2H 2I	2P 2Q 2R 2S											48.9	24	36	0.54	0.50	6.7	47.2	420	1.0	1.0	3.10	14.9	0.60	27.7	
	2T	2P 2Q 2R 2S	53	250	SGF	1.0	2.0	2.1	3.1	1.03	0.60	1.9															
	2U	2P 2Q 2R 2S	55	200	SGF	1.0	2.0	1.7	3.1	1.03	0.60	1.9															
	2U 2T	2P 2Q 2R 2S											3.8	12	15	0.35	0.50	3.7	4.6	230	1.0	2.1	3.10	2.1	0.60	3.8	
	2P	2X	31	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5															
	2Q	2X	54	250	SGF	1.0	2.0	2.1	3.1	1.03	0.60	1.9															
	2R	2X	52	350	SGF	1.0	2.0	2.9	3.1	1.45	0.60	2.7															
	2S	2X	30	525	SGF	1.0	2.0	4.4	3.1	4.13	0.60	7.7															
	2P 2Q 2R 2S	2X											68.5	27	42	0.46	0.50	7.4	71.1	430	1.0	3.0	3.10	25.4	0.60	47.3	
	2V	2X	51	250	SGF	1.0	2.0	2.1	3.1	1.86	0.60	3.5															
	2W	2X	50	600	SGF	1.0	2.0	5.0	3.1	2.68	0.60	5.0															
	2V 2W	2X											8.4	12	24	0.14	0.50	5.1	16.0	220	0.7	5.7	3.10	4.5	0.60	8.4	
	2X	2Y 2Z 2AA 2BB											76.9	30	42	0.58	0.50	7.4	71.1	430	1.0	4.0	3.10	30.0	0.60	55.7	
	2Y	2CC	49	350	SGF	1.0	2.0	2.9	3.1	2.48	0.60	4.6															
	2Z	2CC	48	350	SGF	1.0	2.0	2.9	3.1	2.07	0.60	3.9															
	2AA	2CC	28	350	SGF	1.0	2.0	2.9	3.1	2.07	0.60	3.9															
	2BB	2CC	29	400	SGF	1.0	2.0	3.3	3.1	2.07	0.60	3.9															
	2Y 2Z 2AA 2BB	8A 8B 8C											93.1	30	48	0.42	0.50	8.1	101.6	450	0.9	6.7	3.10	38.6	0.60	71.9	
	8A	8D	15	450	SGF	1.0	2.0	3.8	3.1	4.55	0.60	8.5															
	8B	8D	27	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5															
	8C	8D	13	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5															
	8A 8B 8C	8D											108.5	8 PVC	54	0.30	0.50	8.7	139.1	375	0.7	7.4	3.10	46.9	0.60	87.3	
	8D	Crystal Lake	12	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5	111.9	36	54	0.32	0.25	6.2	98.3	1400	3.8	11.2	3.10	48.8	0.60	90.7	

LEGEND: FOR = Forest, FAL = Fallow, GRA = Grass, NBD = Nearly Bare Ground,
GWW = Grassed WaterWay, SGF = Shallow Gutter Flow

Miller Storm Water Drainage
STORM SEWER DESIGN
5 YEAR STORM

STORM DRAINAGE SYSTEM DESIGN
BY THE RATIONAL METHOD

Calculated by: JDS
Date: 12/7/2015
Checked by:

X Preliminary
Final
Design

Drainage Area: The City of Miller
Project No.: 14141
Design Storm: 5 year storm
n = 0.013

Location	Conveyance		Direct Runoff										Sys.	Travel Time (System Design)								Total Runoff					Remarks
	From	To	W.S. or S.B. No.	O.F.L.	W.C. Type *	S	V	Ti	i	A	C	q	Q	Existing Sys Size Descr. (in)	Convey Sys./ Size Descr. (in)	Slope min. %	Slope des. %	V des.	Cap. (all.)	Leng.	t	T.O.C.	i	Total A	Comp C	Des. Q	
				ft.		%	f.p.s.	min.	in./hr.	Ac.		c.f.s.	c.f.s.					f.p.s.	c.f.s.		min.	min.	in/hr.	Ac.		c.f.s.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
Furthest Southeast Portion of Storm Sewer to the East - 3.1																								0.0			
	3D	3A	103	525	SGF	1.0	2.0	4.4	3.1	3.51	0.60	6.5	6.5	24	30	0.03	0.19	3.6	17.6	54	0.3	4.6	3.10	3.5	0.60	6.5	
	3A	3B	104	800	SGF	1.0	2.0	6.7	3.1	11.98	0.60	22.3	28.8	24	36	0.19	0.20	4.2	29.8	50	0.2	6.9	3.10	15.5	0.60	28.8	
	3C	3B	110	375	SGF	1.0	2.0	3.1	3.1	2.07	0.60	3.9	3.9	24	18	0.13	0.26	3.0	5.4	38	0.2	7.1	3.10	2.1	0.60	3.9	
	3B	3F	105	675	SGF	1.0	2.0	5.6	3.1	4.96	0.60	9.2	41.9	24	42	0.17	0.18	4.4	42.1	354	1.3	8.4	3.10	22.5	0.60	41.9	
	3F	3G	111	550	SGF	1.0	2.0	4.6	3.1	3.31	0.60	6.2															
	3E	3G	106	200	SGF	1.0	2.0	1.7	3.1	1.45	0.60	2.7															
	3E 3F	3G											50.7	24	48	0.12	0.18	4.8	60.1	332	1.2	9.6	3.10	27.3	0.60	50.7	
	3G	3H	112	400	SGF	1.0	2.0	3.3	3.1	2.27	0.60	4.2	55.0	24	48	0.15	0.18	4.8	60.1	70	0.2	9.8	3.10	29.6	0.60	55.0	4406
	3H	3I	115	400	SGF	1.0	2.0	3.3	3.1	1.65	0.60	3.1	58.0	24	48	0.16	0.18	4.8	60.1	146	0.5	10.4	3.10	31.2	0.60	58.0	
	3I	3J	113	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5	61.5	24	48	0.18	0.18	4.8	60.1	262	0.9	11.3	3.10	33.1	0.60	61.5	
	3J	3M 3L	114	400	SGF	1.0	2.0	3.3	3.1	3.72	0.60	6.9															
	3K	3M 3L	116	400	SGF	1.0	2.0	3.3	3.1	1.65	0.60	3.1															
	3J 3K	3M 3L											71.5	24	54	0.13	0.18	5.2	82.3	1000	3.2	14.5	3.10	38.4	0.60	71.5	Dual 48-inch Pipe
	3M	3N	119	450	SGF	1.0	2.0	3.8	3.1	3.93	0.60	7.3															
	3L	3N	117	650	SGF	1.0	2.0	5.4	3.1	2.69	0.60	5.0															
	3M 3L	3N											83.8	24	63	0.08	0.18	5.7	124.2	400	1.2	15.6	3.10	45.1	0.60	83.8	Dual 48-inch Pipe
	3P	3O	109	1550	SGF	1.0	2.0	13.0	3.1	20.70	0.60	38.5	38.5	42	42	0.15	0.18	4.4	42.1	250	1.0	13.0	3.10	20.7	0.60	38.5	Highway Piping
	3O	3N	118	400	SGF	1.0	2.0	3.3	3.1	4.13	0.60	7.7	46.2	42	42	0.21	0.18	4.4	42.1	750	2.9	15.8	3.10	24.8	0.60	46.2	Highway Piping
	3N	Whatever											130.0	48	63	0.19	0.18	5.8	125.8	1700	4.9	20.5	1.70	69.9	0.60	71.3	Dual 48-inch Pipe
Furthest Southeast Portion of Storm Sewer to the East																								0.0			
	3D	3A	103	525	SGF	1.0	2.0	4.4	1.7	3.51	0.60	3.6	3.6	24	18	0.12	0.19	2.6	4.5	54	0.4	4.7	1.70	3.5	0.60	3.6	
	3A	3B	104	800	SGF	1.0	2.0	6.7	1.7	11.98	0.60	12.2	15.8	24	30	0.15	0.20	3.7	18.3	50	0.2	6.9	1.70	15.5	0.60	15.8	
	3C	3B	110	375	SGF	1.0	2.0	3.1	1.7	2.07	0.60	2.1	2.1	24	15	0.11	0.26	2.7	3.3	38	0.2	7.1	1.70	2.1	0.60	2.1	
	3B	3F	105	675	SGF	1.0	2.0	5.6	1.7	4.96	0.60	5.1	23.0	24	36	0.12	0.18	3.9	27.9	354	1.5	8.6	1.70	22.5	0.60	23.0	
	3F	3G	111	550	SGF	1.0	2.0	4.6	1.7	3.31	0.60	3.4															
	3E	3G	106	200	SGF	1.0	2.0	1.7	1.7	1.45	0.60	1.5															
	3E 3F	3G											27.8	24	36	0.17	0.18	3.9	27.9	332	1.4	10.0	1.70	27.3	0.60	27.8	
	3G	3H	112	400	SGF	1.0	2.0	3.3	1.7	2.27	0.60	2.3	30.1	24	42	0.09	0.18	4.4	42.1	70	0.3	10.3	1.70	29.6	0.60	30.1	
	3H	3I	115	400	SGF	1.0	2.0	3.3	1.7	1.65	0.60	1.7	31.8	24	42	0.10	0.18	4.4	42.1	146	0.6	10.9	1.70	31.2	0.60	31.8	
	3I	3J	113	400	SGF	1.0	2.0	3.3	1.7	1.86	0.60	1.9	33.7	24	42	0.11	0.18	4.4	42.1	262	1.0	11.9	1.70	33.1	0.60	33.7	
	3J	3M 3L	114	400	SGF	1.0	2.0	3.3	1.7	3.72	0.60	3.8															
	3K	3M 3L	116	400	SGF	1.0	2.0	3.3	1.7	1.65	0.60	1.7															
	3J 3K	3M 3L											39.2	24	42	0.15	0.18	4.4	42.1	650	2.5	14.3	1.70	38.4	0.60	39.2	
	3M	3N	119	450	SGF	1.0	2.0	3.8	1.7	3.93	0.60	4.0															
	3L	3N	117	650	SGF	1.0	2.0	5.4	1.7	2.69	0.60	2.7															
	3M 3L	3N											46.0	24	48	0.10	0.18	4.8	60.1	708	2.5	16.8	1.70	45.1	0.60	46.0	
	3P	3O	109	1550	SGF	1.0	2.0	13.0	1.7	20.70	0.60	21.1	21.1	42	36	0.10	0.18	3.9	27.9	250	1.1	13.0	1.70	20.7	0.60	21.1	Highway Piping
	3O	3N	118	400	SGF	1.0	2.0	3.3	1.7	4.13	0.60	4.2	25.3	42	36	0.14	0.18	3.9	27.9	750	3.2	16.1	1.70	24.8	0.60	25.3	Highway Piping
	3N	Whatever											71.3	48	48	0.25	0.18	4.8	60.9	751	2.6	19.4	1.70	69.9	0.60	71.3	

LEGEND: FOR = Forest, FAL = Fallow, GRA = Grass, NBD = Nearly Bare Ground,
GWW = Grassed WaterWay, SGF = Shallow Gutter Flow

Miller Storm Water Drainage
STORM SEWER DESIGN
5 YEAR STORM

STORM DRAINAGE SYSTEM DESIGN
BY THE RATIONAL METHOD

Calculated by: JDS
Date: 12/7/2015
Checked by:

X Preliminary
Final
Design

Drainage Area: The City of Miller
Project No.: 14141
Design Storm: 5 year storm
n = 0.013

Location	Conveyance		Direct Runoff										Sys.	Travel Time (System Design)								Total Runoff					Remarks
	From	To	W.S. or S.B. No.	O.F.L.	W.C. Type *	S	V	Ti	i	A	C	q	Q	Existing Sys Size Descr. (in)	Convey Sys./ Size Descr. (in)	Slope min. %	Slope des. %	V des.	Cap. (all.)	Leng.	t	T.O.C.	i	Total A	Comp C	Des. Q	
				ft.		%	f.p.s.	min.	in./hr.	Ac.		c.f.s.	c.f.s.					f.p.s.	c.f.s.		min.	min.	in/hr.	Ac.		c.f.s.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
Storm Sewer on Northeast Portion of Miller to Northwest																											
	4I	4L 4K	92	300	SGF	1.0	2.0	2.5	3.1	0.83	0.60	1.5															
	4J	4L 4K	90	700	SGF	1.0	2.0	5.9	3.1	3.93	0.60	7.3															
	4I 4J	4L 4K											8.9	18	24	0.15	0.20	3.2	10.1	324	1.7	7.5	3.10	4.8	0.60	8.9	
	4K 4H	4M 4N	108, 102	1000	SGF	1.0	2.0	8.4	3.1	11.16	0.60	20.8															
	4L	4M 4N	94	400	SGF	1.0	2.0	3.3	3.1	1.45	0.60	2.7															
	4K 4H 4L	4M 4N											32.3	30	42	0.10	0.13	3.8	36.4	157	0.7	9.1	3.10	17.4	0.60	32.3	
	4M	4C 4B	91	250	SGF	1.0	2.0	2.1	3.1	1.45	0.60	2.7															
	4N	4C 4B	101	350	SGF	1.0	2.0	2.9	3.1	2.48	0.60	4.6															411
	4M 4N	4C 4B											39.6	30	42	0.16	0.13	3.8	36.5	254	1.1	10.2	3.10	21.3	0.60	39.6	
	4A	4C 4B	107	875	SGF	1.0	2.0	7.3	3.1	10.10	0.60	18.8	18.8	18	24	0.69	3.00	12.5	39.2	800	1.1	8.4	3.10	10.1	0.60	18.8	
	4C	4D 4E	89	350	SGF	1.0	2.0	2.9	3.1	1.45	0.60	2.7															
	4B	4D 4E	100	425	SGF	1.0	2.0	3.6	3.1	2.89	0.60	5.4															
	4C 4B	4D 4E											66.5	30	54	0.11	0.13	4.5	71.4	375	1.4	11.6	3.10	35.7	0.60	66.5	
	4D	4F 4G	88	350	SGF	1.0	2.0	2.9	3.1	1.65	0.60	3.1															
	4E	4F 4G	99	450	SGF	1.0	2.0	3.8	3.1	3.10	0.60	5.8															
	4E 4D	4F 4G											75.3	36	54	0.15	0.13	4.5	71.4	382	1.4	13.0	3.10	40.5	0.60	75.3	957
	4F	4MH2	120	400	SGF	1.0	2.0	3.3	3.1	2.69	0.60	5.0															
	4G	4MH2	121	275	SGF	1.0	2.0	2.3	3.1	0.62	0.60	1.2															
	4G 4F	4MH2											81.5	36	54	0.17	0.13	4.5	71.4	200	0.7	13.7	3.10	43.8	0.60	81.5	
	4P	4MH1	98	550	SGF	1.0	2.0	4.6	3.1	3.10	0.60	5.8	5.8	18	24	0.06	0.25	3.6	11.3	188	0.9	5.5	3.10	3.1	0.60	5.8	
	4O	4MH1	122	450	SGF	1.0	2.0	3.8	3.1	2.07	0.60	3.9	3.9	15	18	0.13	0.25	3.0	5.3	102	0.6	3.8	3.10	2.1	0.60	3.9	
	4MH1	4MH2											9.6	21	24	0.18	0.25	3.6	11.3	372	1.7	7.2	3.10	5.2	0.60	9.6	
	4MH2	4MH5											91.1	36	60	0.12	0.13	4.8	94.5	390	1.4	15.1	3.10	49.0	0.60	91.1	
	4MH5	4O											91.1	36	60	0.12	0.08	3.8	73.7	340	1.5	16.6	3.10	49.0	0.60	91.1	
	4O	4MH3	79	475	SGF	1.0	2.0	4.0	3.1	4.34	0.60	8.1	99.2	36	60	0.14	0.13	4.8	94.5	286	1.0	17.6	3.10	53.3	0.60	99.2	
	4MH3	4MH4											83.2	36	60	0.10	0.23	6.4	124.9	930	2.4	20.0	2.60	53.3	0.60	83.2	1946
	4R	4MH6	83	500	SGF	1.0	2.0	4.2	3.1	2.89	0.60	5.4															
	4S	4MH6	75	400	SGF	1.0	2.0	3.3	3.1	1.24	0.60	2.3															
	4R 4S	4MH6											7.7	18	24	0.12	0.35	4.3	13.5	210	0.8	5.0	3.10	4.1	0.60	7.7	
	4T	4MH6	82	500	SGF	1.0	2.0	4.2	3.1	2.27	0.60	4.2			18					160							
	4V	4MH6	80, 81	450	SGF	1.0	2.0	3.8	3.1	2.06	0.60	3.8															
	4T 4V	4MH6											8.1	18	24	0.13	0.35	4.3	13.5	172	0.7	4.9	3.10	4.3	0.60	8.1	
	4MH6	4MH7											15.7	21	30	0.15	0.19	3.6	17.7	402	1.9	6.9	3.10	8.5	0.60	15.7	
	4X	4MH7	63	400	SGF	1.0	2.0	3.3	3.1	2.07	0.60	3.9															
	4U	4MH7	74	400	SGF	1.0	2.0	3.3	3.1	2.27	0.60	4.2															
	4X 4U	4MH7											8.1	24	24	0.13	0.26	3.6	11.4	170	0.8	4.1	3.10	4.3	0.60	8.1	
	4MH7	4Z 4Y4AA											23.8	24	36	0.13	0.26	4.8	33.7	225	0.8	7.6	3.10	12.8	0.60	23.8	
	4Z	4MH8	61	450	SGF	1.0	2.0	3.8	3.1	1.86	0.60	3.5															
	4Y	4MH8	62	350	SGF	1.0	2.0	2.9	3.1	1.03	0.60	1.9															
	4AA	4MH8	123	300	SGF	1.0	2.0	2.5	3.1	0.83	0.60	1.5															
	4Z 4Y 4AA	4MH8											30.7	24	36	0.21	0.26	4.8	33.7	310	1.1	8.7	3.10	16.5	0.60	30.7	665
	4MH8	4MH4											30.7	24	36	0.21	0.28	4.9	35.0	130	0.4	9.2	3.10	16.5	0.60	30.7	
																											1564
	4MH4	4BB											100.5	42	60	0.15	0.18	5.6	110.6	1052	3.1	23.1	2.40	69.8	0.60	100.5	
	4BB	4CC	124	400	SGF	1.0	2.0	3.3	3.1	2.07	0.60	3.9	101.4	42	60	0.15	0.18	5.6	110.6	194	0.6	23.7	2.35	71.9	0.60	101.4	
	4CC	Out											99.2	42	60	0.15	0.18	5.6	110.6	318	0.9	24.6	2.30	71.9	0.60	99.2	

LEGEND: FOR = Forest, FAL = Fallow, GRA = Grass, NBD = Nearly Bare Ground,
GWW = Grassed WaterWay, SGF = Shallow Gutter Flow

Miller Storm Water Drainage
STORM SEWER DESIGN
5 YEAR STORM

STORM DRAINAGE SYSTEM DESIGN
BY THE RATIONAL METHOD

Calculated by: JDS
Date: 12/7/2015
Checked by:

X Preliminary
Final
Design

Drainage Area: The City of Miller
Project No.: 14141
Design Storm: 5 year storm
n = 0.013

Location	Conveyance		Direct Runoff										Sys.	Travel Time (System Design)								Total Runoff					Remarks
	From	To	W.S. or S.B. No.	O.F.L.	W.C. Type *	S	V	Ti	i	A	C	q	Q	Existing Sys Size Descr. (in)	Convey Sys./ Size Descr. (in)	Slope min. %	Slope des. %	V des.	Cap. (all.)	Leng.	t	T.O.C.	i	Total A	Comp C	Des. Q	
				ft.		%	f.p.s.	min.	in./hr.	Ac.		c.f.s.	c.f.s.					f.p.s.	c.f.s.		min.	min.	in/hr.	Ac.		c.f.s.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
Furthest Southwest Portion to Creek																						0.0					
	2A	2B 2C	38	950	SGF	1.0	2.0	7.9	3.1	10.30	0.60	19.2															
	2B	2D	36	800	SGF	1.0	2.0	6.7	3.1	2.07	0.60	3.9															
	2C	2D	18	800	SGF	1.0	2.0	6.7	3.1	3.51	0.60	6.5															
	2C 2B	2D											29.5	18	30	0.52	0.50	5.9	29.0	160	0.5	0.5	3.10	15.9	0.60	29.5	
	2D	2E 5A 5B 5C	20	225	SGF	1.0	2.0	1.9	3.1	1.65	0.60	3.1	32.6	18	36	0.24	0.50	6.7	47.2	240	0.6	1.1	3.10	17.5	0.60	32.6	
	2E	5G 5H	34	175	SGF	1.0	2.0	1.5	3.1	0.62	0.60	1.2															
	5A	5G 5H	32	375	SGF	1.0	2.0	3.1	3.1	1.45	0.60	2.7															
	5B	5G 5H	16	775	SGF	1.0	2.0	6.5	3.1	4.55	0.60	8.5															
	5C	5G 5H	19	275	SGF	1.0	2.0	2.3	3.1	0.83	0.60	1.5															
	2C 2B 2A	5G 5H											29.5	18	30	0.52	0.50	5.9	29.0	900	2.5	3.6	3.10	25.0	0.60	46.5	
	5D	5F		400	SGF	1.0	2.0	3.3	3.1	1.65	0.60	3.1															
	5E	5F	7	300	SGF	1.0	2.0	2.5	3.1	2.07	0.60	3.9															
	5D 5E	5F											6.9	18	18	0.43	0.50	4.2	7.4	200	0.8	3.9	3.10	28.7	0.60	53.4	
	5F	5G 5H	17	250	SGF	1.0	2.0	2.1	3.1	1.45	0.60	2.7	9.6	18	24	0.18	0.50	5.1	16.0	200	0.7	4.2	3.10	30.2	0.60	56.1	
	5G	5I	8	400	SGF	1.0	2.0	3.3	3.1	1.65	0.60	3.1															
	5H	5I	10	450	SGF	1.0	2.0	3.8	3.1	3.72	0.60	6.9															
	5G 5H	5I											49.1	30	36	0.54	0.50	6.7	47.2	475	1.2	5.4	3.10	35.5	0.60	66.1	
	5J	5I	11	200	SGF	1.0	2.0	1.7	3.1	0.41	0.60	0.8															
	5K	5I	6	250	SGF	1.0	2.0	2.1	3.1	1.86	0.60	3.5															
	5J 5K	5I											4.2	15	15	0.43	0.50	3.7	4.6	200	0.9	4.0	3.10	2.3	0.60	4.2	
	5L	5M	125	300	SGF	1.0	2.0	2.5	3.1	2.48	0.60	4.6	4.6	8	15	0.51	0.50	3.7	4.6	400	1.8	4.9	3.10	2.5	0.60	4.6	
	5I	5M											53.4	18	42	0.28	0.50	7.4	71.1	400	0.9	4.0	3.10	40.3	0.60	74.9	
	5I	Out											58.0	36	42	0.33	0.50	7.4	71.1	750	1.7	7.1	3.10	40.3	0.60	74.9	
Furthest West Central Portion to Creek																						0.0					
	6A	6MH1	14	650	SGF	1.0	2.0	5.4	3.1	4.96	0.60	9.2															
	6B	6MH1	1	750	SGF	1.0	2.0	6.3	3.1	8.26	0.60	15.4															
	6A 6B	6MH1											24.6	12	30	0.36	0.50	5.9	29.0	400	1.1	4.2	3.10	1.2	6.61	24.6	
	6C	6MH1	3	600	SGF	1.0	2.0	5.0	3.1	2.07	0.60	3.9															
	6D	6MH1	2	275	SGF	1.0	2.0	2.3	3.1	1.24	0.60	2.3															
	6E	6MH1	5	550	SGF	1.0	2.0	4.6	3.1	1.65	0.60	3.1															
	6F	6MH1	4	600	SGF	1.0	2.0	5.0	3.1	3.51	0.60	6.5															
	6C 6D 6E 6F	6MH1											15.8	12	24	0.48	0.50	5.1	16.0	200	0.7	3.8	3.10	2.4	2.12	15.8	
	6MH1	Out											40.3	12	36	0.37	0.50	6.7	47.2	400	1.0	5.2	3.10	3.6	3.62	40.3	
Northwest 12" Line																											
	7A	7E 7F 7G	42	400	SGF	1.0	2.0	3.3	3.1	1.86	0.60	3.5															
	7B	7E 7F 7G	24	500	SGF	1.0	2.0	4.2	3.1	3.31	0.60	6.2															
	7C	7E 7F 7G	41	450	SGF	1.0	2.0	3.8	3.1	2.48	0.60	4.6															
	7D	7E 7F 7G	23	450	SGF	1.0	2.0	3.8	3.1	3.93	0.60	7.3															
	7A 7B 7C 7D	7E 7F 7G											21.5	12 PVC	30	0.28	0.50	5.9	29.0	350	1.0	5.2	3.10	11.6	0.60	21.5	
	7E	Out	40	350	SGF	1.0	2.0	2.9	3.1	1.45	0.60	2.7															
	7F	Out	39	400	SGF	1.0	2.0	3.3	3.1	1.65	0.60	3.1															
	7G	Out	22	350	SGF	1.0	2.0	2.9	3.1	1.45	0.60	2.7															
	7E 7F 7G	Out											30.0	12 PVC	30	0.54	0.50	5.9	29.0	650	1.8	7.0	3.10	16.1	0.60	30.0	
Second Street South West																											
	9A	Out	126	650	SGF	1.0	2.0	5.4	3.1	15.90	0.60	29.6	29.6	18 PVC	36	0.20	0.50	6.7	47.2	1400	3.5	8.9	3.10	15.9	0.60	29.6	

LEGEND: FOR = Forest, FAL = Fallow, GRA = Grass, NBD = Nearly Bare Ground,
GWW = Grassed WaterWay, SGF = Shallow Gutter Flow

WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: Kingbrook Rural Water System

Project Title:	2017 Improvements
Funding Requested:	$9,000,400
Other Proposed Funding:	$550,000 - Local Cash
Total Project Cost:	$9,550,400
Project Description:	Construction of new water main to connect about 220 new users. The new users are primarily existing residences and livestock pasture taps within the service area but currently use other water sources. The project also includes new pipeline to improve capacity and reliability in the service area. This project will include about 6.5 miles of 14- and 16-inch PVC pipe and about 125 miles of 2- to 6-inch PVC pipe. The construction will also include new booster pumps and other miscellaneous work needed to connect the new users and improve system reliability.
Alternatives Evaluated:	The "No Action" alternative was rejected because of the need to provide service to residents that currently do not have access to a quality water source. Also, this alternative does not address needed improvements to the system capacity and reliability. Completion of the system upgrade alternative was selected to provide service to the new users and the proposed improvements.
Implementation Schedule:	Kingbrook anticipates bidding the project in in July 2016 with a project completion date of October 2017.
Service Population:	15,800
Current Domestic Rate:	$56.55 per 7,000 gallons usage

Interest Rate: 3.0% Term: 20 years Security: System Revenue

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If funding is provided as all loan, Kingbrook would have 81% coverage based on current rural water rates of $56.55/7,000 gallons.

25% Funding Subsidy:	$2,250,000 subsidy with a loan of $6,750,000.
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $6,750,000, Kingbrook would have 89% coverage based on current rural water rates of $56.55/7,000 gallons.

50% Funding Subsidy:	$4,500,000 subsidy with a loan of $4,500,000.
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $4,500,000, Kingbrook would have 98% coverage based on current rural water rates of $56.55/7,000 gallons.

75% Funding Subsidy:	$6,750,000 subsidy with a loan of $2,250,000.
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $2,250,000, Kingbrook would have 109% coverage based on current rural water rates of $56.55/7,000 gallons.

ENGINEERING REVIEW COMPLETED BY: ERIC MEINTSMA

FINANCIAL REVIEW COMPLETED BY: JON PESCHONG

Kingbrook
Rural Water System, Inc.

PO Box 299 • 302 E. Ash St. • Arlington, SD 57212 • Phone 605-983-5074 • 1-800-605-5279 • Fax 605-983-5636 • office@kingbrookruralwater.com

RECEIVED
JAN 04 2016
Division of Financial & Technical Assistance

December 31, 2015

Andy Bruels
DENR
523 East Capitol Ave.
Pierre, SD 57501-3182

Dear Mr. Bruels:

Enclosed please find our application for our 2017 Improvement Project. Our engineer only gave me a day to complete this application and some of the information may be incomplete or need to be updated.

Our engineer, Matt Oedekoven of DGR Engineering, has sent the Facilities Plan under separate cover directly from his office in Rock Rapids, Iowa.

The forms on page 14 and 15 that require signatures are signed by me for Randy Jencks. Randy had to leave for Florida unexpectantly on Tuesday, December 29th as his wife's aging mother took a turn for the worse. Matt overlooked these two forms requiring signatures before Randy left. I will get Randy to sign them when he returns next week and will send them to you as soon as possible.

I have ordered a more recent Certificate of Good Standing from the Secretary of State and should have that next week also.

The Board of Directors approved the authorization of the project at their December 21, 2015 board meeting and the meeting minutes are enclosed reflecting that approval, however, Kingbrook Directors will need to pass an official resolution for the authorized signatory at our January 18, 2016 board meeting. I have included a draft of that resolution.

Sincerely,

Jolene King
Office Supervisor

Enclosures

Drinking Water Facilities Funding Application

Division of Financial & Technical Assistance

Drinking Water State Revolving Fund Program (DWSRF)
Consolidated Water Facilities Construction Program (CWFCP)

Applicant:	Proposed Funding Package	
Kingbrook Rural Water		
Address: 302 E Ash Street P.O. Box 299 Arlington, SD 57212	Requested Funding	$9,000,400
	Local Cash	$550,000
Subapplicant:	Other:	
	Other:	
DUNS Number: 11-978-1029	Other:	
	TOTAL	$9,550,400

Project Title: 2017 Improvements Project

Description:

The Kingbrook Rural Water System proposes to construct pipeline improvements to connect approximately 220 new service locations, and to improve the reliability of the existing water system. The project includes approximately 140 miles of new pipelines. The water rate at Kingbrook for rural customers is $56.55 for 7,000 gallons. The Kingbrook Rural Water System has a reserve fund.

The Applicant Certifies That:

I declare and affirm under the penalties of perjury that this application has been examined by me and, to the best of my knowledge and belief, is in all things true and correct.

Randy Jencks, P.E. General Manager	R Jencks	12/29/15
Name & Title of Authorized Signatory (Typed)	Signature	Date

Professional Consultants

Application Prepared By: Kingbrook Rural Water

Contact Person: Jolene King

Mailing Address: 302 E Ash Street, PO Box 299

City, State, and Zip: Arlington, SD 57212

Telephone Number: 605-983-5074 Fax:

Email address: kbrw@mediacombb.net

Consulting Engineering Firm: DGR Engineering

Contact Person: Matthew Oedekoven

Mailing Address: 1302 S Union St

City, State, and Zip: Rock Rapids, IA 51246

Telephone Number: 712-472-2531 Fax: 712-472-2710

Email address: matthew.oedekoven@dgr.com

Legal Counsel's Firm: Gass Law Firm

Contact Person: Jared Gass

Mailing Address: PO Box 486, 212 5th Ave.

City, State, and Zip: Brookings, SD 57006

Telephone Number: 605-692-4277 Fax: 1-888-688-4378

Email address:

Bond Counsel's Firm:

Contact Person:

Mailing Address:

City, State, and Zip:

Telephone Number: Fax:

Email address:

Budget Sheet

Cost Classification	A DWSRF/ CWFCP	B Local Funds	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal & Bond Counsel		$78,100				$78,100
D. Other						
2. Land, Structure, Right-of-Way		$200,000				$200,000
3. Engineering						
A. Bidding and Design Fees	$363,100	$271,900				$635,000
B. Project Inspection Fees	$274,000					$274,000
C. Other						
4. Construction & Improvements	$7,806,300					$7,806,300
5. Equipment						
6. Contractual Services						
7. Other Owner Insp.	$234,000					$234,000
8. Other Interim Interest	$323,000					$323,000
9. Subtotal (Lines 1-8)	$9,000,400	$550,000				$9,550,400
10. Contingencies						
11. Total (Lines 9 and 10)	$9,000,400	$550,000				$9,550,400
12. Total %	94.24%	5.76%	0.00%	0.00%	0.00%	100.00%

Proposed Method of Financing

	Secured Funds	Unsecured Funds	Date Unsecured Funds Anticipated
Local Cash(Identify Source)New User Connection Fee	$550,000		
Other (Explain) SRF Drinking Water Program		$9,000,400	March 31, 2016
Other (Explain)			
Other (Explain)			
Total	$550,000	$9,000,400	$9,550,400

Other Funds to be Borrowed

	Amount	Rate	Term	Annual Debt Service	Security or Collateral Pledged
Other					
Other					
Other					

Please attach copies of commitment letters that contain specific terms and conditions for each source of financing.

General Information

The month and day your fiscal year begins: January 1st

Population Served Current: 15,800 2010 14,000 2000 7,400

Top three employers within 30 miles	Number of Employees	Type of Business
South Dakota State University	2,150	Public University
Daktronics, Inc.	1,650	Electronic Signage Manufacturer
3M	800	Medical Supplies Manufacturer

Repayment Information

Interest rate you are applying for: 3% Term: 20

What security is being pledged toward the repayment of this loan?
(Political Subdivisions Only)

- ☐ 1. General Obligation Bond (Requires Bond Election)
- ☐ 2. Revenue Bond
- ☐ 3. Project Surcharge Revenue Bond
- ☐ 4. Sales Tax Revenue Bond

Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audited or unaudited financial statements to include specific accounting for the drinking water fund.
2. Current year's budget for the drinking water fund.
3. Amortization schedules for all existing debt secured by proposed revenue pledged.

Planning and Legal Documents

1. Current governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water Facilities Funding application and signing of payment requests. This resolution must also include the maximum amount requested and description of proposed project.
3. Documentation that the applicant has an active registration on the Federal System for Award Management (SAM) database.

   (https://www.sam.gov)
4. Facilities Plan. - DGR
5. Cultural Resources Effects Assessment Summary for SRF Projects. DGR
6. Capacity Assessment Worksheets.

Items 7-9 apply to Non-profit Entities only

7. By-laws.
8. Articles of Incorporation.
9. Certificate of Good Standing from Secretary of State.

Drinking Water Fund Debt Information

Year						
Purpose						
Security Pledged						
Amount						
Maturity Date (mmm/yyyy)						
Debt Holder						
Debt Coverage Requirement						
Avg. Annual Required Payment						
Outstanding Balance						

Comments:

See Attached "Current RD, SRF and CoBank Loans" spreadsheet

KINGBROOK RURAL WATER SYSTEM, INC.

Current RD, SRF and CoBank Loans

Lender	LOAN NO.	LOAN AMOUNT	DATE CLOSED	TERM	Maturity Date	INT RATE	LOAN BALANCE	ANNUAL PAYMENT	Security Pledged
RD	35	$4,991,000	Dec-10	40 YR	Oct 2050	3.000%	$4,703,710	$217,416	property mort.
SRF	1	$474,204	Apr-02	30	Apr 2032	0.000%	$261,597	$15,854.36	property mort.
SRF	2	$2,115,000	Aug-05	30	Oct 2035	3.250%	$1,622,306	$110,631.64	property mort.
SRF	3	$3,136,677	Apr-07	20	Apr 2027	3.250%	$2,045,640	$213,902.64	property mort.
SRF	4	$2,315,622	May-09	20	Oct 2028	3.250%	$1,675,623	$158,550	property mort.
SRF	5	$540,000	Jul-14	20	July 2034	3.000%	$540,000	pending	property mort.
CoBank	1	$2,130,229	Dec-10	22	Sep 2032	4.940%	$1,449,101	$132,513	property mort.
CoBank	2	$793,750	Mar-11	20	Apr 2031	5.750%	$651,709	$71,388	property mort.
CoBank	3	$2,449,843	Mar-15	20	Mar 2035	4.450%	$2,404,936	$187,400	property mort.

12/30/2015

Drinking Water Fund Cash Flow Information

Negative cash should be in (Decrease) format	Prior Year	Prior Year	Current Year	Future Year	Future Year	Future Year
Fiscal Year	2014	2015	2016	2017	2018	2019
Operating Revenue						
Base Fees	$3,817,150	$3,846,496	$4,351,000	$4,416,000	$4,567,000	$4,635,000
Surcharge Fees						
Other (Explain)	$455,022	$393,254	$320,000	$322,000	$324,000	$326,000
Operating Expenses						
Personal Services	($1,178,678)	($1,193,079)	($1,449,860)	($1,522,800)	($1,598,940)	($1,678,900)
Chemical, Material & Supplies	($638,311)	($708,059)	($891,990)	($936,600)	($983,430)	($1,032,600)
Electric & Other Utilities	($415,982)	($428,199)	($447,100)	($469,500)	($492,975)	($517,620)
Other (Explain)						
Operating Net Cash	$2,039,201	$1,910,413	$1,882,050	$1,809,100	$1,815,655	$1,731,880
Nonoperating Cash Flow						
Interest Revenue	$48,662	$60,121	$48,800	$50,000	$52,000	$52,800
Transfers In (Explain)	$489,206	$1,797,920	$426,000	0	0	
Fixed Asset Purchases	($743,361)	($1,018,771)	($593,000)	($593,000)	($593,000)	($593,000)
Transfers Out (Explain)	($489,206)	($1,797,920)	($426,000)	0	0	
Principal Debt Payments	($628,340)	($550,135)	($601,000)	($622,800)	($999,200)	($1,033,400)
Interest Debt Payments	($568,875)	($539,189)	($543,000)	($520,000)	($778,800)	($698,200)
Other (Explain)	($70,054)	($70,054)	($70,054)	($123,648)	($187,205)	($187,205)
Nonoperating Net Cash	($1,961,968)	($2,118,028)	($1,758,254)	($1,809,448)	($2,506,205)	($2,459,005)
Increase (Decrease) Cash	$77,233	($207,615)	$123,796	($348)	($690,550)	($727,125)
Beginning Cash Balance	$2,274,192	$2,351,425	$2,143,810	$2,267,606	$2,267,258	$1,576,708
Ending Cash Balance	$2,351,425	$2,143,810	$2,267,606	$2,267,258	$1,576,708	$849,583
Restricted Balance	$1,220,662	$1,290,716	$1,360,770	$1,484,418	$1,671,623	$1,858,828
Unrestricted Balance	$1,130,763	$853,094	$906,836	$782,840	($94,815)	($1,009,245)

Explanations

A moderate rate increase of 1.5% is reflected in yrs 2017-18-19 in base fees.
Transfer In and Out are Project income and expenses with a net result of zero.
Under Nonoperating Cash Flow - Other: this amount is required debt reserves for CoBank, RD & DENR. 2018 and 2019 reflects an increase in reserves based on the loan for this project of $9,550,000 at 3% for 20 years which also reflected in the principal and interest payments for 2018 and 2019. On page 8 we provided Debt Service Reserve amt for 2016.

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber
$902,770	Debt Service Reserve	10% of ann. loan payment (RD)
$243,000.00	Short-Lived Assets Reserve	10% of ann. loan payment (RD)
$215,000.00	Operating Reserve	Desired amount set by KBRW

Drinking Water Fees:

** Attach current and proposed rate ordinances or resolutions and rate schedules.

Municipal or Sanitary District - monthly rates at 5,000 gallons (670 cubic feet)

Other Community System - monthly rates at 7,000 gallons (935 cubic feet)

Check one: ☐ Incorporated Municipality or Sanitary District

or

☒ Other Community System

Monthly	Current Rate	Proposed Rate	# of Accounts	Average use Gallons/Cubic Feet
Domestic	$56.55	$56.55	3,980	9,000 gallons/month
Business	$60.55	$60.55	12	170,000 gallons/mon.
Other: Pasture Taps	$56.55	$56.55	556	10,500 gallons/month
Other: Carthage	$41.55	$41.55	133	2,500 gallons/month

Are fees based on usage or flat rate? Usage-cost per 1,000 gals will be 3.65/kgal

When is proposed fee scheduled to take effect? January 2016

When did the current fee take effect? January 2016

What was the fee prior to the current rate? 3.40/kgal

Four Largest Customers	Type of Business	% of System Revenue
City of Howard	City	4%
City of Arlington	City	4%
City of Lake Preston	City	2%
Lake County Dairy	Agriculture/Dairy	2%

Certification of Drinking Water Needs Categories

Identify the loan amount associated with the needs category or categories described below. If the loan addresses needs in more than one category, please break down the total amount into estimated amounts for each category.

Definition	Loan Amount
Transmission/Distribution	$9,000,400
Treatment	
Storage	
Source	
System Purchase	
Restructuring	
1452(k) Loan Activities	
1. To acquire land or a conservation easement for source water protection.	
2. To implement voluntary, incentive-based source water quality protection measures.	
Total	$9,000,400

Randy Jencks, P.E., General Manager

Name & Title of Authorized Representative

Signature of Authorized Representative

12/29/2015

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forger, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

(d) Have not within a three year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

Randy Jencks, P.E., General Manager

Name & Title of Authorized Representative

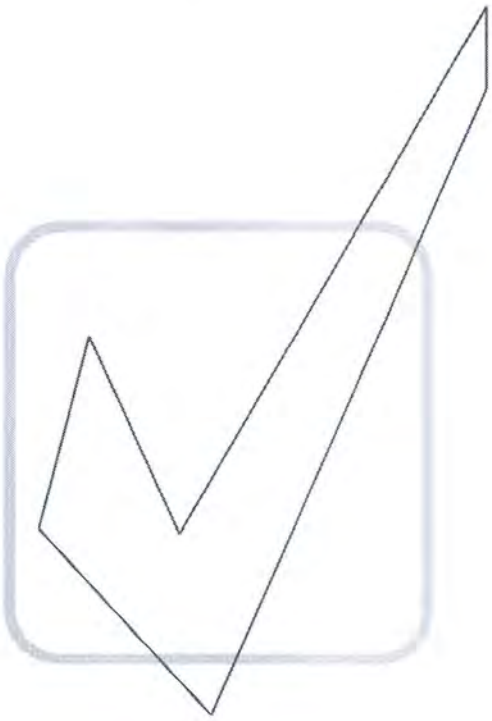
Signature of Authorized Representative

12/29/2015

Date

☐ I am unable to certify to the above statements. Attached is my explanation

Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

Because you are in the process of applying for a Drinking Water State Revolving Fund (DWSRF) loan, it is necessary for you to complete the following worksheets. The Safe Drinking Water Act requires that a system applying for a DWSRF loan must demonstrate that it has financial, managerial, and technical capacity. What exactly does that mean?

- ***Technical capacity*** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

- ***Managerial capacity*** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have a capable and trained staff? Do you have an effective management structure?

- ***Financial capacity*** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that your system does NOT have the required capacity, you may still qualify for a DWSRF loan if it is going to be used to ensure that your system will have the necessary capacity. If you have questions while completing the following worksheets, please call our office at **(605) 773-3754** , and we will be happy to help.

After DENR receives these worksheets, we will study them and other information located in our files to make a determination whether or not your public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan. A final report will be available upon completion of the analysis.

Applicant: Kingbrook Rural Water System

Prepared by: Jolene King, Office Manager
302 E Ash Street, P.O. Box 299
Arlington, SD 57212

Phone #: 605-983-5074

Date: 12/30/2015

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water;

Disinfectant: Any oxidant, including chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms;

Disinfectant contact time: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured;

Filtration: A process for removing particulate matter from the water by passing the water through porous media;

Ground Water: The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs;

Ground Water Under the Direct Influence of Surface Water: Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such a *Giardia lamblia* ; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions;

Maximum Contaminant Level (MCLs): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards;

mg/L: milligrams per liter - equivalent to parts per million;

µg/L: micrograms per liter - equivalent to parts per billion;

NTU: nephelometric turbidity unit;

psi: pounds per square inch

Surface Water: All water that is open to the atmosphere and subject to surface runoff;

Turbidity: A cloudy condition in water due to suspended silt or organic matter; and

Waiver: A process used by the Department of Environment and Natural Resources that allows a public water system to reduce or eliminate monitoring for a particular chemical.

The Technical Portion of your System

Your Water Supply

Please check the appropriate box: *Yes, No,* or *Unknown* for each section. Please try to determine the answer to every question. ***If a section or question does not apply to your system, please check NA for not applicable.***

Water Supply and Existing Demands	**Yes**	**No**	**Unknown**	**NA**
Do you know how much water you pump on an average day? ***Amount:*** Phase 1 - 3 = 2.2 MGD	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** Phase 1 - 3 = 3.5 MGD	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 3.9 MGD	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 12% higher	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** 24 hours	☑	☐	☐	☐
Have you been able to provide adequate volumes of water during drought cycles?	☑	☐	☐	☐
Have you had to restrict usage at any time for any reason? ***Please specify:***	☐	☑	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:*** multiple wells with storage in distribution system	☐	☑	☐	☐
Do you have an Emergency Response Plan that will allow you to meet system demand during a drought or shortage, such as the loss of the largest source? ***If yes, please attach.***	☑	☐	☐	☐
Water Demand	**Yes**	**No**	**Unknown**	**NA**
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? ***Please check:*** ☑ ***growing,*** ☐ ***declining, or*** ☐ ***stable.***	☑	☐	☐	☐
Does your source have additional water available for appropriation?	☑	☐	☐	☐
Do you have a water right? ***Water right permit number(s):*** 5079-3, 5434-3, 5602-3, 5821-3, 6002-3, 6718-3	☑	☐	☐	☐
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	☑	☐	☐	☐
Purchased Water	**Yes**	**No**	**Unknown**	**NA**
If you purchase water from another system or a wholesaler, do you know their long-term plans?	☑	☐	☐	☐
Do you have a contract to purchase water? ***If yes, with whom?*** Joint Well Field	☑	☐	☐	☐
Are you currently staying within your contract?	☑	☐	☐	☐
Are you knowledgeable about other demands being placed on the same water source that you are using?	☑	☐	☐	☐

Alternative Sources	Yes	No	Unknown	NA
Are alternative water sources possibly available to you?	☑	☐	☐	☐
Are you knowledgeable of the characteristics and costs of using alternative sources?	☑	☐	☐	☐
Water Source	**Yes**	**No**	**Unknown**	**NA**
Do you know the depth of your well? ***Depth*** various (30' - 140')	☑	☐	☐	☐
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** East Fork Vermilion and Big Sioux Aquifers	☑	☐	☐	☐
Are all abandoned water sources properly managed and disconnected to prevent accidental contamination or problems with current water system facilities?	☐	☐	☐	☑

Treatment - Microbiological Contamination

Is your system using surface water or ground water under the influence of surface water? ☐ **Yes** ☑ **No**

(If you checked "No", skip to the next section - Ground Water Systems – unless your water system requires treatment other than just disinfection.)

Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown	NA
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	☐	☐	☐	☑
If constructed more than 20 years ago, have treatment processes been upgraded to meet current standards?	☐	☐	☐	☑
Are repair parts available?	☐	☐	☐	☑
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? ***If no, list units you do NOT have redundancy for:***	☐	☐	☐	☑
Can your plant achieve a filtered water turbidity of 0.3 NTU?	☐	☐	☐	☑
Do you have on-line continuous turbidimeters on each filter?	☐	☐	☐	☑
Have you adopted a turbidity goal lower than the standard? ***If yes, list goal:*** daily	☐	☐	☐	☑
Do you have the capability to add coagulant before the filter?	☐	☐	☐	☑

Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown	NA
Is your water free from variations in turbidity and temperature after storm events?	☑	☐	☐	☐
Well Construction and Protection				

Do you know when your well was constructed? ***List year:*** various	☑	☐	☐	☐
Is your well(s) constructed according to current South Dakota regulations?	☑	☐	☐	☐
Do you have a source water protection plan?	☑	☐	☐	☐
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	☑	☐	☐	☐

Disinfection

Do you disinfect? ☑ **Yes** ☐ **No** ***(If "No", skip to the Infrastructure - Pumping section)***

Disinfection	**Yes**	**No**	**Unknown**	**NA**
Do you regularly inspect and maintain your disinfection / chlorination equipment? ***Type of Equipment:*** vacuum regulator gas chlorinator ***How often?*** daily ***Disinfectant used:*** chlorine gas	☑	☐	☐	☐
Do you have back-up equipment? ***Type:*** spare gas chlorinator	☑	☐	☐	☐
Do you have adequate contact time following disinfection and before the first user in the distribution system (30 minutes for ground water systems)? ***Contact time:*** 2 hours minimum	☑	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** 0.3 mg/L ***Total Chlorine Residual:*** _____ (if using chloramines)	☑	☐	☐	☐

Disinfection By-Products

Treatment for the Control of Disinfection By-Products	**Yes**	**No**	**Unknown**	**NA**
If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?	☐	☐	☐	☑
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	☐	☐	☐	☑

Treatment - Security

Treatment Security	**Yes**	**No**	**Unknown**	**NA**
Has the system implemented procedures to improve security of its facilities? (i.e. limiting access to sensitive sites, protecting computer and control equipment etc.)	☑	☐	☐	☐
Are chemicals used for treatment properly stored and secure?	☑	☐	☐	☐
Does the water system track chemical usage? (i.e. a sudden	☐	☑	☐	☐

increase in usage may signal potential contamination or tampering.

Infrastructure - Pumping

Condition of Pumping Equipment	Yes	No	Unknown	NA
Do you routinely inspect for signs of pump or pump motor problems? ***How often:*** daily	☑	☐	☐	☐
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	☑	☐	☐	☐
Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?	☐	☑	☐	☐
Standby/Emergency Power Equipment	**Yes**	**No**	**Unknown**	**NA**
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	☑	☐	☐	☐
Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time?	☑	☐	☐	☐
Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations?	☑	☐	☐	☐

Infrastructure - Storage

Storage Capacity	Yes	No	Unknown	NA
Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power? ***If no, how long:*** _____	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** _____	☐	☑	☐	☐
Security Measures	**Yes**	**No**	**Unknown**	**NA**
Are any openings, such as vent pipes, screened to protect against the entrance of small animals, birds, and small insects?	☑	☐	☐	☐
Are access hatches locked?	☑	☐	☐	☐
Is the tank and the immediate surrounding area fenced?	☑	☐	☐	☐
Control Systems				
Is there a high and low water level signal system to control the pumps?	☑	☐	☐	☐

Is there a drain valve or hydrant to allow for draining of the tank?	☑	☐	☐	☐
Tank Maintenance	**Yes**	**No**	**Unknown**	**NA**
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	☑	☐	☐	☐
Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?	☑	☐	☐	☐

Infrastructure - Distribution

System Maintenance	**Yes**	**No**	**Unknown**	**NA**
Do you have an accurate map of your distribution system that indicates main sizes and valve locations?	☑	☐	☐	☐
Does the operator routinely flush, test, and maintain the hydrants in the system? ***How often:*** as needed	☐	☑	☐	☐
Are the locations of valves in the mains and curb stops on the service lines precisely known?	☑	☐	☐	☐
Does the system keep a log of distribution system breaks to identify weak areas in the system?	☑	☐	☐	☐
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	☑	☐	☐	☐
Are all valves exercised and lubricated periodically?	☐	☑	☐	☐
Is the system free of severe "water hammer" problems?	☑	☐	☐	☐
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	☑	☐	☐	☐
Unaccounted-for Water	**Yes**	**No**	**Unknown**	**NA**
Is unaccounted-for water in the water system monitored and analyzed each month?	☑	☐	☐	☐
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? ***List percentage of unaccounted for water:*** 18 %	☐	☑	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 25 - 125 psi	☑	☐	☐	☐
Do you have a routine leak detection and repair program?	☑	☐	☐	☐
Are all sources of supply and customers metered?	☑	☐	☐	☐
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	☐	☑	☐	☐
Water Quality in Distribution System	**Yes**	**No**	**Unknown**	**NA**
Does your system have an active cross-connection control program?	☐	☑	☐	☐

Are any inspections for cross-connections performed?	☐	☑	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☐	☑	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☑	☐	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** 30%	☐	☑	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☑	☐	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☑	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☑	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☑	☐	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** 5 ***Most common complaint:*** Multiple Class I & II Water	☑	☐	☐	☐
Can you maintain adequate pressure in the distribution system under all conditions of flow?	☑	☐	☐	☐

The Management Portion of your System

Please mark the appropriate box: *Yes, No,* or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Operation & Maintenance

Operations Staff	**Yes**	**No**	**Unknown**	**NA**
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? ***If yes, list classification(s):*** Multiple Class I & II Water Distribution and Treatment Certifications	☑	☐	☐	☐
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	☑	☐	☐	☐
Future Operational Demands	**Yes**	**No**	**Unknown**	**NA**
Does your water system obtain any regular or occasional technical assistance from outside sources, such as DENR, your engineer, other utilities or organizations specifically dedicated to providing technical assistance? ***If yes, who*** engineer, vendors, SD Rural Water	☑	☐	☐	☐

Management & Administration

Who's in Charge?	**Yes**	**No**	**Unknown**	**NA**
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	☑	☐	☐	☐
Does your system have written personnel policies and job descriptions signed by the employees?	☑	☐	☐	☐
Are the limits of the operator's authority clearly known?	☑	☐	☐	☐
Does everyone involved in operations know who is responsible for each area?	☑	☐	☐	☐
Is someone responsible for scheduling work?	☑	☐	☐	☐
Security	**Yes**	**No**	**Unknown**	**NA**
Does the system have procedures for handling new and terminated employees (i.e. collecting keys, changing locks and computer passwords)?	☑	☐	☐	☐
Rules and Standards	**Yes**	**No**	**Unknown**	**NA**
Do you have explicit rules and standards for system modifications?	☑	☐	☐	☐
Do you have rules governing new hook-ups?	☑	☐	☐	☐
Do you have a water main extension policy?	☑	☐	☐	☐
Do you have standard construction specifications to be followed?	☑	☐	☐	☐

	Yes	No	Unknown	NA
Do you have measures to assure cross-connection control and backflow prevention?	☑	☐	☐	☐
Do you have policies or rules describing customer rights and responsibilities?	☑	☐	☐	☐
Regulatory Compliance Program	**Yes**	**No**	**Unknown**	**NA**
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	☑	☐	☐	☐
Do you know how to obtain clarification or explanation of requirements?	☑	☐	☐	☐
Do you have a mechanism to obtain the most recent information on regulatory requirements?	☑	☐	☐	☐
Do you maintain adequate records to document compliance? ***If yes, for how long?*** permanent	☑	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☐	☑	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☑	☐	☐
Do you know what to do in the event of a violation?	☑	☐	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☑	☐	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☐	☑	☐	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☑	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☑	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** Randy Jencks, Manager	☑	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☑	☐	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☑	☐	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☑	☐	☐	☐
Do you have written operating procedures for both routine and emergency system operations?	☑	☐	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☑	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☑	☐	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☑	☐	☐	☐

Maintenance	Yes	No	Unknown	NA
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance (line flushing, pumps, meters, storage tanks, etc.)?	☑	☐	☐	☐
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	☑	☐	☐	☐
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	☑	☐	☐	☐
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	☑	☐	☐	☐
Management Capability	**Yes**	**No**	**Unknown**	**NA**
Are you getting the outside services and technical assistance you need? Do you have adequate legal counsel, insurance, engineering advice, technical/operations assistance, rate case preparation, and financial advice?	☑	☐	☐	☐

The Financial Portion of your System

Please mark the appropriate box: Yes, *No*, or *Unknown* for each section. Please try to determine the answer to every question. ***If a section does not apply to your system, please write NA for not applicable.***

Financial Planning Mechanisms	**Yes**	**No**	**Unknown**	**NA**
Does your system develop and follow an annual budget that is approved by the governing body?	☑	☐	☐	☐
Does the governing body review a monthly summary of revenues and expenses of the utility system?	☑	☐	☐	☐
Do you have within the annual budget separate reserve accounts for equipment replacement, capital improvement, depreciation or security upgrades? ***If so, list accounts:*** various	☑	☐	☐	☐
Does the system have reserve funds available in the event of an emergency?	☑	☐	☐	☐
Do you have a capital budget or capital improvement plan that projects future capital investment needs some distance (at least five years) into the future?	☑	☐	☐	☐
Do you have a process for scheduling and committing to capital projects?	☑	☐	☐	☐
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	☑	☐	☐	☐
Does your long-term planning incorporate analysis of alternative strategies that might offer cost saving to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems?	☑	☐	☐	☐
Rates/Billing - Are they Adequate?	**Yes**	**No**	**Unknown**	**NA**
Do you regularly review your rates? ***How often?*** annually	☑	☐	☐	☐
Do you have a plan in place for periodic increases in rates?	☑	☐	☐	☐
Is the rate structure based on metered watered use? ***List rates per 1000 gallons:*** 31 min + 3.65/kgal (1/1/2016) (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe:***	☐	☑	☐	☐
Does the rate structure assure proportionality among users?	☑	☐	☐	☐
Do you have procedures for billing and collection?	☑	☐	☐	☐
Is your billing collection rate greater than 95%?	☑	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☑	☐	☐	☐

Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown	NA
Does your system have audited financial statements prepared by a certified public accountant (CPA)?	☑	☐	☐	☐
Does your water system income exceed operating expenses (including debt service)?	☑	☐	☐	☐
Does your water utility support other enterprise funds or the general fund?	☐	☐	☐	☑
Does your system require revenues from other enterprise funds or the general fund for normal operations?	☐	☐	☐	☑
Do you employ standardized accounting and tracking systems?	☑	☐	☐	☐
Do you track budget performance?	☑	☐	☐	☐
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	☑	☐	☐	☐
Are financial management recordkeeping systems organized?	☑	☐	☐	☐
Are controls exercised over expenditures?	☑	☐	☐	☐
Are controls exercised to keep from exceeding your budget?	☑	☐	☐	☐
Are there purchasing procedures?	☑	☐	☐	☐
Did your system's governing body review this assessment before returning it to the South Dakota Department of Environment and Natural Resources?	☐	☑	☐	☐

Financial Spreadsheet

Complete the financial spreadsheet on the following page using the guidance presented on the reverse side of the form.

GUIDELINES:

This cash flow projection form provides a systematic method of estimating cash receipts, disbursements and balances. The entries listed on the form will not necessarily apply to every PWS, and some entries may not be included which would be pertinent to each PWS. It is suggested, therefore, that the form be adapted to each particular PWS, with appropriate changes in the entries as may be required.

Procedure: Most of the entries on the form are self-explanatory; however, the following suggestions are offered to simplify the procedure:

(1) First gather the audited financial statements, internally prepared statements or budgets and other information for the current year and the two prior years. Include the most recent audited financial statement with your self-assessment report.

(2) Complete the columns for the prior two years using actual data from your audited financial statements, if available, or your internally prepared financial statements. Keep in mind, for purposes of this analysis, it is important to use **cash** receipts and disbursements. ***Suggestion: Round amounts to the nearest dollar.***

(3) Complete the current year's column using the most recent budget information. Include all expenditures incurred by the utility.

(4) Complete the form using the suggestions in the partial form below for each entry. Be sure to include any expenditures resulting from planned plant improvement and estimate the impact of inflation on all expenditures.

(5) Item #1 (Beginning Cash on Hand) plus Item #3 (Total Cash Receipts) minus Item #6 (Total Cash Paid Out) should equal Item #7 (Ending Cash Position).

(6) Item #13 (Total Added to Reserves) plus Item #14 (Operating Cash) should equal Item #7 (Ending Cash Position).

(7) Item #1 (Beginning Cash on Hand) should equal Item #14 (Ending Cash Position) from the prior financial period.

(8) Items #8 & 9 are used together to determine the impact of the rate structure on the equivalent residential user. If industrial or business customers contribute a significant portion of the revenues, these amounts should be looked at separately. Consideration should be given to design a rate structure so that each

category of user pays its proportional share of the costs of operating and maintaining the PWS.

(9) Item #10 is used to determine to what extent a PWS's net operating income is able to cover its debt service requirements.

(10) Item #11 is used to determine to what extent a PWS's rate structure produces revenues sufficient to cover operating expenses.

(11) Item #14 is the operating cash balance at year end. The operating cash balance at the end of any financial period should be adequate to meet the cash requirements for a minimum of one month. If there is too little cash, additional cash may have to be injected or expenditures may have to be reduced. If there is excessive cash on hand, the money should be invested or otherwise deposited into interest bearing accounts (e.g., set up reserves for replacement or capital improvements, etc.)

Financial Spreadsheet

Please complete shaded areas. Yellow areas will be automatically calculated.

Applicant: Kingbrook Rural Water System, Inc.
Completed by: Jolene King
Date: 12/30/2015

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2014	2015	2016	2017	2018
1. Beginning Cash on Hand	$2,274,192.00	$2,351,425.00	$2,143,810.49	$2,267,606.49	$2,267,258.49
2. Cash Receipts:					
a. Unmetered Water Revenue	$0.00	$0.00	$0.00	$0.00	$0.00
b. Metered Water Revenue	$3,817,150.00	$3,846,496.00	$4,351,000.00	$4,416,000.00	$4,567,000.00
c. Other Water Revenue	$165,874.00	$174,439.33	$140,000.00	$142,000.00	$144,000.00
d. Total Water Revenues (2a thru 2c)	$3,983,024.00	$4,020,935.33	$4,491,000.00	$4,558,000.00	$4,711,000.00
e. Connection Fees	$206,169.00	$168,200.00	$100,000.00	$100,000.00	$100,000.00
f. Interest and Dividend Income	$48,662.00	$60,120.53	$48,800.00	$50,000.00	$52,000.00
g. Other Income	$82,979.00	$50,615.22	$80,000.00	$80,000.00	$80,000.00
h. Total Cash Revenues (2d thru 2g)	$4,320,834.00	$4,299,871.08	$4,719,800.00	$4,788,000.00	$4,943,000.00
i. Transfers in/Additional Rev Needed	$0.00	$0.00	$0.00	$0.00	$0.00
j. Loans, Grants or other Cash Injection	$0.00	$0.00	$0.00	$0.00	$0.00
please specify-ST DOT Reimbursement	$489,206.00	$0.00	$0.00	$0.00	$0.00
SRF Loan and Grants	$0.00	$323,906.45	$426,000.00	$0.00	$0.00
DAPL reimbursement	$0.00	$1,474,013.96	$0.00	$0.00	$0.00
3. Total Cash Receipts (2h thru 2j)	$4,810,040.00	$6,097,791.49	$5,145,800.00	$4,788,000.00	$4,943,000.00
4. Total Cash Available (1+3)	$7,084,232.00	$8,449,216.49	$7,289,610.49	$7,055,606.49	$7,210,258.49
5. Operating Expenses					
a. Salaries and wages	$658,256.00	$688,600.00	$774,000.00	$812,700.00	$853,150.00
b. Employee Pensions and Benefits	$292,513.00	$272,300.00	$401,600.00	$421,700.00	$442,800.00
c. Purchased Water	$168,362.00	$186,400.00	$192,000.00	$201,600.00	$211,700.00
d. Purchased Power	$247,620.00	$241,800.00	$255,100.00	$267,900.00	$281,200.00
e. Fuel for Power Production	$0.00	$0.00	$0.00	$0.00	$0.00
f. Chemicals	$57,211.00	$64,400.00	$74,900.00	$78,600.00	$82,600.00
g. Materials and Supplies	$702,166.00	$757,837.00	$966,350.00	$1,014,700.00	$1,065,400.00
h. Contractual Services - Engineering	$49,797.00	$58,200.00	$63,000.00	$66,200.00	$69,500.00
i. Contractual Services - Other	$10,563.00	$10,600.00	$12,000.00	$13,000.00	$14,000.00
j. Rental of Equipment/Real Property	$0.00	$0.00	$0.00	$0.00	$0.00
k. Transportation Expenses	$0.00	$0.00	$0.00	$0.00	$0.00
l. Laboratory	$0.00	$0.00	$0.00	$0.00	$0.00
m. Insurance	$46,483.00	$49,200.00	$50,000.00	$52,500.00	$55,000.00
n. Drinking Water Fees	$0.00	$0.00	$0.00	$0.00	$0.00
o. Advertising	$0.00	$0.00	$0.00	$0.00	$0.00
p. Miscellaneous	$0.00	$0.00	$0.00	$0.00	$0.00
q. Total Cash O&M Expenses (5a thru 5p)	$2,232,971.00	$2,329,337.00	$2,788,950.00	$2,928,900.00	$3,075,350.00
r. Replacement Expenditures	$0.00	$0.00	$0.00	$0.00	$0.00
s. Total OM&R Expenditures (5q+5r)	$2,232,971.00	$2,329,337.00	$2,788,950.00	$2,928,900.00	$3,075,350.00
t. Loan Principal/Capital Lease Payments	$628,340.00	$550,135.00	$601,000.00	$622,800.00	$999,200.00
u. Loan Interest Payments	$568,875.00	$539,189.00	$543,000.00	$520,000.00	$778,800.00
v. Transfers Out	$489,206.00	$1,797,920.00	$426,000.00	$0.00	$0.00
w. Capital Purchases (specify):	$0.00	$0.00	$0.00	$0.00	$0.00
misc. assets <=15 years	$162,234.00	$253,689.00	$243,000.00	$243,000.00	$243,000.00
SCADA Equip/Beacon Meter System	$581,127.00	$765,082.00	$350,000.00	$350,000.00	$350,000.00
x. Other	$0.00	$0.00	$0.00	$0.00	$0.00
6. Total Cash Paid Out (5s thru 5x)	$4,662,753.00	$6,235,352.00	$4,951,950.00	$4,664,700.00	$5,446,350.00
7. Ending Cash Position (4 - 6)	$2,421,479.00	$2,213,864.49	$2,337,660.49	$2,390,906.49	$1,763,908.49

Financial Spreadsheet

8. Number of Customer Accounts	4,608	4,744	4,794	4,844	4,894
9. Average Annual User Charge per account (2d/8)	**$864.37**	**$847.58**	**$936.80**	**$940.96**	**$962.61**
10. Coverage Ratio (2h-5s)/(5t+5u)	**1.74**	**1.81**	**1.69**	**1.63**	**1.05**
11. Operating Ratio (2d/5s)	**1.78**	**1.73**	**1.61**	**1.56**	**1.53**
12. Additions to Reserve Funds for year					
a. Debt Service Reserve	$70,054.00	$70,054.00	$70,054.00	$73,648.00	$137,205.00
b. Bond Retirement Reserve	$0.00	$0.00	$0.00	$0.00	$0.00
c. Capital Improvement Reserve	$0.00	$0.00	$0.00	$0.00	$0.00
d. Replacement Reserve	$0.00	$0.00	$0.00	$50,000.00	$50,000.00
e. Other	$0.00	$0.00	$0.00	$0.00	$0.00
13. Total Added to Reserves (12a thru 12e)	$70,054.00	$70,054.00	$70,054.00	$123,648.00	$187,205.00
14. End of Year Operating Cash (7 - 13)	**$2,351,425.00**	**$2,143,810.49**	**$2,267,606.49**	**$2,267,258.49**	**$1,576,703.49**

Kingbrook Rural Water System
2017 Improvements Project
Authorized Signatory
Resolution 2016-1

WHEREAS, the Board of Directors of Kingbrook Rural Water System, Inc., proposes to construct pipeline improvements to connect approximately 220 new service locations, install 140 miles of new pipelines and to improve the reliability of the existing water system.

WHEREAS, the Kingbrook Rural Water System is applying to the SD Department of Environment and Natural Resources for up to $9,550,400 of Drinking Water State Revolving Loan Funds with a term of 20 years, an interest rate of 3%, and the loan secured by water user fees and water system assets; and

THEREFORE BE IT RESOLVED the Board of Directors of Kingbrook Rural Water System, Inc., authorizes its General Manager, Randy Jencks also known as R.C. Jencks, to apply for financing for the 2017 Improvements Project. The Board of Directors also authorizes its General Manager, Randy Jencks, to execute any and all loan and grant fund applications, contracts, agreements, pay requests and other required documents necessary to do so.

Chairman,
Kingbrook Rural Water System, Inc.

1-28-16
Date

Attest:

Secretary,
Kingbrook Rural Water System, Inc.

1-28-16
Date

USER NAME PASSWORD

LOG IN

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Create an Account

Entity Dashboard

Entity Overview

Entity Record

Core Data

Assertions

Reps & Certs

POCs

Reports

Service Contract Report

BioPreferred Report

Exclusions

Active Exclusions

Inactive Exclusions

Excluded Family Members

RETURN TO SEARCH

KINGBROOK RURAL WATER SYSTEM, INC.
DUNS: 119781029 CAGE Code: 5ZER2
Status: Active

302 E ASH ST
ARLINGTON, SD, 57212-0000 ,
UNITED STATES

Expiration Date: 01/24/2017
Purpose of Registration: Federal Assistance Awards Only

Entity Overview

Entity Information

Name: KINGBROOK RURAL WATER SYSTEM, INC.
Business Type: Business or Organization
POC Name: Jolene King
Registration Status: Active
Activation Date: 01/25/2016
Expiration Date: 01/24/2017

Exclusions

Active Exclusion Records? No

SAM | System for Award Management 1.0

IBM v1.P.41.20151230-2151

WWW4

Note to all Users: This is a Federal Government computer system. Use of this system constitutes consent to monitoring at all times.

Audit Report
For the Years Ended
December 31, 2014 and 2013

Quality On Tap!

KINGBROOK RURAL WATER

Kinner & Company Ltd
Certified Public Accountants
Taxes, QuickBooks &
Investments

KINGBROOK RURAL WATER SYSTEM, INC.
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Kinner & Company Ltd
Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of
Kingbrook Rural Water System, Inc.

Report on the Financial Statements
We have audited the accompanying financial statements of Kingbrook Rural Water System, Inc. (a nonprofit organization), which comprise the statement of financial position as of December 31, 2014 and 2013, and the related statement of activities and changes in net assets, and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risk of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

404 3rd Avenue, PO Box 690, Brookings, SD 57006
605-692-2515 or 800-692-2515, fax 605-692-8151
Visit our website at www.kinner.co

Opinion
In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Kingbrook Rural Water System, Inc. as of December 31, 2014 and 2013, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters
Other Information
Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying information on pages 18 to 24 is presented for purposes of additional analysis and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with the auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects, in relation to the financial statements as a whole.

Other Reporting Required by Government Auditing Standards
In accordance with *Government Auditing Standards*, we have also issued our report dated February 4, 2015, on our consideration of Kingbrook Rural Water System, Inc.'s internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Kingbrook Rural Water System, Inc.'s internal control over financial reporting and compliance.

Kinner & Company Ltd.

Kinner & Company Ltd
Certified Public Accountants
Brookings, South Dakota

February 4, 2015

KINGBROOK RURAL WATER SYSTEM, INC.
STATEMENT OF FINANCIAL POSITION
AS OF DECEMBER 31, 2014 AND 2013

ASSETS	2014	2013
Current Assets		
Cash and cash equivalents	$ 752,018.85	$ 425,190.93
Accounts receivable, less allowance for doubtful accounts of $8,533.17 and $7,744.87, respectively	297,396.58	295,667.53
Current portion of note receivable	12,796.55	-
Inventory	335,419.19	231,823.69
Certificates of Deposits	306,483.90	861,547.76
Prepaid expenses	64,269.64	88,887.53
Accrued Interest Receivable	410.00	795.07
Total Current Assets	**1,768,794.71**	**1,903,912.51**
Other Assets		
Investment in Joint Well Field, Inc.	282,041.62	269,175.34
Patronage equities	367,736.49	355,409.38
Note receviable, less current portion	23,105.33	-
Short-Lived Asset Reserve	34,739.30	149,729.04
Reserve funds invested in certificates of deposits	908,776.80	838,723.20
Total Other Assets	**1,616,399.54**	**1,613,036.96**
Property and Equipment		
Land and land rights	2,497,725.08	2,496,285.08
Utility, plant and equipment	54,691,939.41	53,540,589.75
Construction in Progress	612,601.17	511,572.37
Accumulated Depreciation	(24,939,734.76)	(23,644,279.92)
Total Property and Equipment	**32,862,530.90**	**32,904,167.28**
TOTAL ASSETS	**$ 36,247,725.15**	**$ 36,421,116.75**
LIABILITIES AND NET ASSETS		
Current Liabilities		
Current maturity of long-term debt	$ 535,960.96	$ 622,003.64
Accounts payable	37,039.11	197,510.75
Deferred Income	105,448.00	137,716.65
Member Deposits	129,975.00	126,675.00
Accrued expenses	69,632.78	79,631.63
Total Current Liabilities	**878,055.85**	**1,163,537.67**
Long-Term Debt		
Long Term Debt - RECD	7,246,510.37	7,368,324.30
Long Term Debt - CoBank	2,191,204.22	2,379,752.78
Long Term Debt - DENR	5,924,255.00	6,233,685.03
Current maturity of long-term debt	(535,960.96)	(622,003.64)
Total Long-Term Debt	**14,826,008.63**	**15,359,758.47**
Total Liabilities	**15,704,064.48**	**16,523,296.14**
Net Assets		
Unrestricted	19,600,144.57	18,909,368.37
Temporarily Restricted	943,516.10	988,452.24
Total Net Assets	**20,543,660.67**	**19,897,820.61**
TOTAL LIABILITIES AND NET ASSETS	**$ 36,247,725.15**	**$ 36,421,116.75**

See the Notes To The Financial Statements.

KINGBROOK RURAL WATER SYSTEM, INC.
STATEMENT OF ACTIVITIES AND CHANGES IN NET ASSETS
FOR THE YEARS ENDED DECEMBER 31, 2014 AND 2013

	2014			2013		
	Unrestricted	Temporarily Restricted	Total	Unrestricted	Temporarily Restricted	Total
Revenues, Gains, and Other Support						
Sales of water	$ 3,817,149.81	$ -	$ 3,817,149.81	$ 3,665,154.12	$ -	$ 3,665,154.12
Hook-up Fees	206,169.00	-	206,169.00	103,332.00	-	103,332.00
Grant Income	489,205.97	-	489,205.97	-	-	-
Other revenue	165,874.32	-	165,874.32	197,807.00	-	197,807.00
Net Assets Released from Restrictions	44,936.14	(44,936.14)	-	(121,443.11)	121,443.11	-
Total Revenues, Gains, and Other Support	**4,723,335.24**	**(44,936.14)**	**4,678,399.10**	**3,844,850.01**	**121,443.11**	**3,966,293.12**
Operating Expenses						
Source of supply	213,152.30	-	213,152.30	192,936.83	-	192,936.83
Water treatment and pumping	326,294.17	-	326,294.17	307,053.34	-	307,053.34
Transmission and distribution	812,248.81	-	812,248.81	657,547.43	-	657,547.43
Customer accounts	24,172.34	-	24,172.34	29,050.19	-	29,050.19
General and administration	857,103.80	-	857,103.80	806,494.22	-	806,494.22
Depreciation	1,362,353.63	-	1,362,353.63	1,377,781.74	-	1,377,781.74
Total Operating Expenses	**3,595,325.05**	**-**	**3,595,325.05**	**3,370,863.75**	**-**	**3,370,863.75**
Income From Operations	**1,128,010.19**	**(44,936.14)**	**1,083,074.05**	**473,986.26**	**121,443.11**	**595,429.37**
Non-operating Revenue (Expense)						
Interest Income	11,026.74	-	11,026.74	13,623.66	-	13,623.66
Interest Expense	(568,874.60)	-	(568,874.60)	(602,595.37)	-	(602,595.37)
Joint Well Field, Inc.'s change in net assets	74,756.28	-	74,756.28	69,001.50	-	69,001.50
Patronage dividend	37,634.97	-	37,634.97	43,206.13	-	43,206.13
Gain (Loss) on asset disposition	8,222.62	-	8,222.62	(14,516.79)	-	(14,516.79)
Net Non-operating Expense	**(437,233.99)**	**-**	**(437,233.99)**	**(491,280.87)**	**-**	**(491,280.87)**
Change in Net Assets	**$ 690,776.20**	**$ (44,936.14)**	**$ 645,840.06**	**$ (17,294.61)**	**$ 121,443.11**	**$ 104,148.50**
NET ASSETS						
Net Assets, beginning of year	$ 18,909,368.37	$ 988,452.24	$ 19,897,820.61	$ 18,926,662.98	$ 867,009.13	$ 19,793,672.11
Change in net assets	690,776.20	(44,936.14)	645,840.06	(17,294.61)	121,443.11	104,148.50
Net Assets, End of Year	**$ 19,600,144.57**	**$ 943,516.10**	**$ 20,543,660.67**	**$ 18,909,368.37**	**$ 988,452.24**	**$ 19,897,820.61**

See the Notes To The Financial Statements.

KINGBROOK RURAL WATER SYSTEM, INC.
STATEMENT OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2014 AND 2013

	2014	2013
Operations		
Change in net assets	$ 645,840.06	$ 104,148.50
Depreciation	1,362,353.63	1,377,781.74
Patronage equities	(12,327.11)	(7,111.50)
Joint Well Field, Inc. changes in net assets	(12,866.28)	(10,864.03)
(Gain) Loss on sale of assets	(8,222.62)	14,516.79
Return of investment in Joint Well Field, Inc. through reduction in water purchase costs	61,890.00	61,890.00
Change in assets and liabilities:		
(Increase) decrease in accounts receivable	(1,729.05)	13,985.42
(Increase) decrease in note receivable	(35,901.88)	-
(Increase) decrease in inventories	(103,595.50)	(33,623.28)
(Increase) decrease in prepaid expenses	24,617.89	(26,660.23)
(Increase) decrease in accrued interest receivable	385.07	1,465.75
Increase (decrease) in accounts payable	(160,471.64)	15,128.27
Increase (decrease) in deferred income	(32,268.65)	(39,326.02)
Increase (decrease) in deposits	3,300.00	1,500.00
Increase (decrease) in accrued expenses	(9,998.85)	4,411.45
Net cash from operating activities	**1,721,005.07**	**1,477,242.86**
Investing activities		
Cash inflows		
Proceeds from maturities of certificates of deposits	600,000.00	100,000.00
Cash outflows		
Purchase of certificates of deposit	-	(100,000.00)
Acquisition of property, plant, and equipment	(1,374,384.63)	(768,916.92)
Cash flows from investing activities	**(774,384.63)**	**(768,916.92)**
Financing activities		
Cash inflows		
Advances on debt	-	-
Cash outflows		
Principal paid on debt	(619,792.52)	(829,553.77)
Cash flows from financing activities	**(619,792.52)**	**(829,553.77)**
Net Change in Cash and Cash Equivalents	**326,827.92**	**(121,227.83)**
Cash and Cash Equivalents at beginning of year	425,190.93	546,418.76
Cash and Cash Equivalents at end of year	**$ 752,018.85**	**$ 425,190.93**
Supplemental Disclosures of Cash Flow Information		
Cash payments for interest	577,422.29	605,985.58
Cash received for interest	11,411.81	15,089.41
Supplemental Schedule of Noncash Investing and Financing Activities		
Payment on construction in progress through an accounts payable account	-	130,581.18

See the Notes to the Financial Statements.

KINGBROOK RURAL WATER SYSTEM, INC.
NOTES TO THE FINANCIAL STATEMENTS
DECEMBER 31, 2014 AND 2013

1. NATURE OF ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

A. Nature of Organization:
Kingbrook Rural Water System, Inc. ("System") was established to acquire, construct, maintain and operate a system for the diversion, supply, storage, and distribution of high quality water to members. The System's revenue is primarily from the sale of water to members in Hamlin, Clark, Kingsbury, Brookings, Lake, Moody, Miner, Minnehaha, Beadle, Sanborn, and McCook counties, in South Dakota. In the event of dissolution, any and all funds remaining in the System shall be transferred to any other or several nonprofit organizations or political subdivisions having one or more purposes in common with the System.

B. Basis of Accounting:
Basis of accounting refers to when revenues and expenses are recognized in the accounts and reported in the financial statements.

Kingbrook Rural Water System, Inc. uses the accrual basis of accounting. Under the accrual basis of accounting revenues are recognized when they are earned, and expenses are recognized when they are incurred.

C. Revenue Recognition:
Revenue from water sales is reflected in the accounts at the time delivered. Grants and contributions are recognized when earned.

D. Basis of Presentation:
The Organization has adopted FASB Accounting Standards Codification FASB ASC 958-210-45, formerly known as Statement of Financial Accounting Standards (SFAS) No. 117, "Financial Statements of Not-for-Profit Organizations". Under the provision of FASB ASC 958-210-45, the organization is required to report information regarding its financial position and activities according to three classes of net assets: unrestricted net assets, temporarily restricted net assets, and permanently restricted net assets. As permitted by the statement, the organization does not use fund accounting.

Net assets of the organization and changes therein are classified and reported as follows:

Unrestricted net assets – Net assets that are not subject to donor imposed stipulations.

Temporarily restricted net assets – Net assets subject to donor imposed stipulations that will be met either by the Organization and/or passage of time.

Permanently restricted net assets – Net assets subject to donor imposed stipulations that they be maintained permanently by the Organization. Generally, the donors of these assets permit the Organization to use all or part of the income earned on related investments for general or specific purposes.

E. Use of Estimates:
The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

F. Cash and Cash Equivalents:
For purposes of reporting cash flows, the System considers all cash accounts and all highly liquid debt instruments purchased with a maturity of three months or less to be cash equivalents. The System maintains accounts at several financial institutions which, at times, may exceed federally insured limits. The System has not experienced any losses in such accounts and believes it is not exposed to significant credit risk on cash and cash equivalents.

Noncash investing and financing activities in 2014 and 2013 consist of the payment for construction in progress through an accounts payable account.

G. Allowance for Doubtful Accounts:
The System uses the allowance method to provide for doubtful accounts. The allowance is calculated based upon estimation of collectibility of these accounts.

H. Fair Value Measurement:
FASB ASC Topic 820, Fair Value Measurements and Disclosures, provides the framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurement) and the lowest priority to unobservable inputs (level 3 measurement). The three levels of the fair value hierarchy under FASB ASC 820 are described below:

Level 1 – Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Organization has the ability to access.

Level 2 – Inputs to the valuation methodology include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability;
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means

If the asset or liability has a specified (contractual) term, the level 2 input must be observable for substantially the full term of the asset or liability.

Level 3 – Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant of the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Following is a description of the valuation methodologies used to measure fair value. There have been no changes in the methodologies used at December 31, 2014 and 2013.

Patronage Equity Accounts and Investment in Joint Well Field, Inc.: Valued at the face value of shares held by the Organization at year end.

The preceding method may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Organization believes its valuation method is appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

All investments held by this Organization are level 3. The values of these investments as of December 31, 2014 and 2013 are:

	2014	2013
Investment in Joint Well Field, Inc.	$282,041.62	$269,175.34
Patronage Dividends	367,736.49	355,409.38

I. Inventories:
Water plant materials and supplies are stated at cost, determined by the weighted moving average pricing method. These items are not for resale, but are used in the normal course of the Organization's activities.

J. Property, Plant, and Equipment:
Property, plant, and equipment are stated at cost. The cost of additions to the plant includes the cost of direct materials, labor, outside contractors, allocable overhead and interest required to be capitalized. Management has elected to report and depreciate the System's share of certain property, plant, and equipment used by Joint Well Field, Inc. in its financial statements. The System's policy is to capitalize those assets with a useful life greater than one year, and an initial acquisition cost of $1,000 or above.

Depreciation is computed by the straight-line method over the following estimated useful lives:

Asset Category	Estimated Useful Life
Supply mains, warehouse, & office building	50 Years
Service lines, valves, and meters	20-50 Years
Wells, pump structures and equipment, water treatment structures and equipment	20 Years
Office furniture and equipment, power-operated, monitoring & miscellaneous equipment	10 Years
Transportation equipment	5 Years

K. Other Assets:
Investment in Joint Well Field, Inc. is the System's share of the unrestricted, undesignated net assets of Joint Well Field, Inc.

Patronage equities are stated at cost or the stated value of patronage allocation notices. They are recognized in the year notice of allocation is received. These equities are not traded on the open market and are nontransferable, thereby precluding any market value determination.

L. Income Tax Status:

The System was incorporated in the State of South Dakota on January 10, 1975, and conducts its activities as a nonprofit corporation. The System was granted exemption under Section 501(c)(12) of the Internal Revenue Code and is classified as an entity that is not a private foundation. Accordingly, no provision for income taxes has been reflected in the financial statements.

M. Uncertain Tax Positions

The Organization believes that it has appropriate support for any tax positions taken, and as such, does not have any uncertain tax positions that are material to the financial statements.

The Organization's federal Exempt Organization Income Tax Returns (Form 990) for 2011, 2012, and 2013 are subject to examination by the IRS, generally for three years after they were filed.

N. Unrestricted Net Assets:

Unrestricted net assets of the System consist of the following:

	2014	2013
Grants used to acquire property, plant and equipment	$14,880,955.48	$14,391,749.51
Member contributions	3,931,611.13	3,725,442.13
Unrestricted portion of net income (loss) over the years	791,676.08	792,176.73
Total	$19,604,242.69	$18,909,368.37

O. Deferred Income:

Deferred income consisted of the following:

	2014	2013
City of Howard advance payment for water service	$0.00	$38,951.65
Advance water billings	105,448.00	98,765.00
Total	$105,448.00	$137,716.65

The System received $527,580 in advance for water service to the City of Howard. The advance payments are being amortized monthly over a period of approximately 11 years and were totally amortized in 2014.

P. Concentration of Risk:

The System maintains cash balances at several financial institutions located in South Dakota. Accounts at each institution are insured by the Federal Deposit Insurance Corporation up to $250,000. As of December 31, 2014 and 2013, the System had no cash balances that exceeded federally insured limits.

Concentration of risk also includes customers in a local geographic area and the specialization of this system producing and distributing quality water.

Q. Commitments

As of December 31, 2014, pursuant to an agreement with the State of South Dakota, the System had available a $540,000 note payable, none of which was used at that date.

R. Accumulated Unpaid Vacation and Sick Pay:
All regular employees, both full-time and part-time, earn accrued vacation time. Vacation accrual will be on a calendar basis. Full-time employees, with less than five (5) full calendar years of employment, will accrue vacation time at the rate of 8 hours per month. Thereafter, vacation time will accrue according to the following schedule with a maximum carryover of 80 hours:

- With 5 years or more – 10 hours per month
- With 10 years or more – 12 hours per month
- With 15 years or more – 14 hours per month

Part-time regular employees who work on a scheduled basis 20 hours or more per week shall earn vacation at a rate proportional to the rate for full-time employees. Temporary employees shall begin to accrue vacation benefits proportional to the number of hours worked after they have worked one thousand (1,000) hours in any consecutive twelve (12) months.

All regular employees, both full-time and part-time, earn accrued sick leave time. Sick leave records will be maintained on a calendar basis. Full-time employees will accrue sick leave at the rate of one day per calendar month of employment, not to exceed 80 days.

Part-time regular employees who work on a scheduled basis 20 hours or more per week shall earn sick leave at a rate proportional to the rate for full-time employees. Temporary employees shall begin to accrue sick leave benefits proportional to the number of hours worked after they have worked one thousand (1,000) hours in any consecutive twelve (12) months.

As of December 31, 2014 and 2013 the following liabilities existed for accumulated unpaid leave balances calculated at the employees' December 31, 2014 and 2013 pay rates:

	2014	2013
Vacation Pay	$12,678.72	$15,165.17

S. Incentive Pay:
The System offers all full-time employees except the General Manager incentive pay. This is to award the achievement of a gross annual water loss of 20% or less, for the 12 months ending December 31st each year.

2. CERTIFICATES OF DEPOSIT AND RESERVE FUNDS

Certificates of deposit are presented in the statement of financial position as follows:

	2014	2013
Certificates of deposit	$306,483.90	$861,547.76
Short Lived Asset Reserve	34,739.30	149,729.04
Reserve funds invested in certificates of deposit	908,776.80	838,723.20
Total	$1,250,000.00	$1,850,000.00

The System established an operating reserve fund to accumulate an emergency cash reserve. Expenditures are made from the reserve only after Board approval.

The mortgage agreements with Rural Economic and Community Development, National Bank of Cooperatives and the Department of Natural Resources and State Revolving Fund of South Dakota require the System to establish and maintain debt service reserve funds. These reserve funds cannot be used or committed for any purpose without prior written approval from the lenders. In 2011, Rural Economic and Community Development recommended that the System set aside $20,250 per month to be used to purchase short-lived assets. Any assets purchased with a useful life of 15 years or less is bought out of this reserve.

Reserve accounts are as follows:

Lender Restricted:	2014	2013
Rural Economic and Community Development	$236,392.80	$214,651.20
CoBank	85,000.00	85,000.00
Department of Natural Resources and State Revolving Fund	372,384.00	324,072.00
Short Lived Asset Reserve	34,739.30	149,729.04
Board designated to operating reserve	215,000.00	215,000.00
Total	$943,516.10	$988,452.24

3. PROPERTY, PLANT, AND EQUIPMENT

Property, plant, and equipment consist of the following:

	2014	2013
Land and land rights	$2,497,725.08	$2,496,285.08
Utility, plant, and equipment	54,691,939.41	53,540,589.75
Construction in progress	612,601.17	511,572.37
	$57,802,265.66	$56,548,447.20
Less: Accumulated Depreciation	(24,939,734.76)	(23,644,279.92)
Total Property & Equipment	$32,862,530.90	$32,904,167.28

At December 31, 2014 and 2013, $968,976, of the above property, plant, and equipment was in use by Joint Well Field, Inc.

Construction in progress consisted of the Town of Sinai Connection Project and the InControl SCADA System Project.

4. ACCRUED EXPENSES

Accrued expenses consist of the following:

	2014	2013
Interest	$51,226.06	$59,773.75
Vacation	12,678.72	15,165.17
Taxes	5,728.00	4,692.17
Total	$69,632.78	$79,631.63

5. LONG-TERM DEBT

Long-term debt obligations consist of the following:

	2014	2013
5.00% Note payable to Rural Economic Development, payable in monthly installments of $8,821 to 2039, including interest, secured by all assets of the System.	$1,479,124.30	$1,510,175.84
4.75% Note payable to Rural Economic Development, payable in monthly installments of $5,443 to 2041, including interest, secured by all assets of the System.	988,596.96	1,006,492.67
3.00% Note payable to Rural Economic Development, payable in monthly installments of $18,118 to 2050, including interest, secured by all assets of the System.	4,778,789.11	4,851,655.79
Non-interest bearing note payable to State of South Dakota, payable in quarterly installments of $3,964 to April 2032, secured by all assets of the System.	277,451.69	293,306.04
3.25% Note payable to State of South Dakota, payable in quarterly installments of $27,657.91 to October 2035, secured by all assets of the System.	1,679,055.74	1,733,997.55
3.25% Note payable to State of South Dakota, payable in quarterly installments of $53,475.66 to April 2027, secured by all assets of the System.	2,190,113.05	2,329,984.39
3.25% Note payable to State of South Dakota, payable in quarterly installments of $30,732.61 to October 2028, secured by all assets of the System.	1,777,634.52	1,876,397.05
4.94% Note payable to CoBank, payable in various monthly installments to September 2032, secured by all assets of the System.	1,507,221.20	1,664,526.44
5.75% Note payable to CoBank, payable in various monthly installments to April 2031, secured by all assets of the System.	683,983.02	715,226.34
Total Long-Term Debt	$15,361,969.59	$15,981,762.11

Aggregate maturities required on the long-term debt are due in future years as follows:

December 31,	Principal	Interest	Total Payment
2015	535,960.96	555,462.93	1,091,423.89
2016	555,064.76	536,051.75	1,091,116.51
2017	575,394.95	515,265.93	1,090,660.88
2018	596,299.88	493,980.64	1,090,280.52
2019	618,037.79	471,864.06	1,089,901.85
2020 & Thereafter	12,481,211.25	4,944,517.35	17,425,728.60
Total	$15,361,969.59	$7,517,142.66	$22,879,112.25

The above loans are subject to certain loan convents. As of the date of this report, the System was in substantial compliance with all loan covenants.

6. DEFINED BENEFIT RETIREMENT PLAN

The System has a defined benefit retirement plan covering substantially all full-time employees. The plan is funded through System contributions based on 12% of annual salaries. The plan also offers a "Rule of 85" feature, which provides its eligible participants with enhanced benefits. The total cost of this plan to the System for the years ended December 31, 2014 and 2013 was $97,197.33 and $85,120.25 respectively.

7. RELATED PARTY TRANSACTIONS

The System has an agreement with Brookings-Deuel Rural Water System, Inc., whereby the parties share in the operation of Joint Well Field, Inc. ("JWF"). Brookings-Deuel Rural Water System, Inc. currently has responsibility for administering the JWF's activities. Each water system has entered into a long-term lease arrangement with JWF, whereas the JWF leases property, plant, and equipment from each system for $1 until the year 2023. Each water system records their respective share of the JWF's annual profit or loss in their individual financial statements. The ratio of profit and loss sharing is determined annually based upon the gallons of water used by each water system during the year.

Summarized financial information from the audited financial statements of JWF at December 31, 2014 and 2013 are as follows:

	2014	2013
Current assets	$30,543.50	$2,449.32
Total assets	1,038,572.27	1,036,351.52
Current liabilities	25,159.18	23,094.41
Long-term debt	465,630.33	475,195.84
Water sales to Brookings-Deuel Rural Water System, Inc.	226,448.92	236,149.12
Water sales to Kingbrook Rural Water System, Inc.	168,362.04	161,401.54
Operating expenses	261,211.72	274,254.84
Income (Loss) from operations	(27,300.76)	(36,879.18)

Changes in net assets for the years ended December 31, 2014 and 2013 are as follows:

	Brookings-Deuel	Kingbrook	Total
Balance, December 31, 2012	$275,038.97	$262,063.84	$537,102.81
Change in net assets, excluding Debt Service	92,131.96	69,001.50	161,133.46
Debt Service Credit	(98,285.00)	(61,890.00)	(160,175.00)
Balance, December 31, 2013	268,885.93	269,175.34	538,061.27
Change in net assets, excluding Debt Service	95,449.94	75,171.55	170,621.49
Debt Service Credit	(99,010.00)	(61,890.00)	(160,900.00)
Balance, December 31, 2014	$265,325.87	$282,456.89	$547,782.76

The System's agreement with JWF also calls for a future commitment of distributions through the form of water credits. These distributions will be equal to the amount of debt service payment that each respective rural water system incurred with the formation and projects of JWF.

Kingbrook Rural Water System, Inc. expected aggregate distributions are as follows:

Year Ending	Amount
2015	$61,890.00
2016	50,874.58
2017	44,886.00
2018	44,886.00
2019	44,886.00
Thereafter	861,991.97
Total	$1,109,414.55

8. RISK MANAGEMENT

The System is exposed to various risks of loss related to torts; theft of, damage to, and destructions of assets; errors and omissions; injuries to employees; and natural disasters. During the years ended December 31, 2014 and 2013, the System managed its risks as follows:

Employee Health Insurance - The System purchases health insurance for its employees from a commercial insurance carrier.

Liability Insurance - The System purchases liability insurance for risks related to torts; theft or damage to property; and errors and omissions of public officials from a commercial insurance carrier.

Workmen's Compensation - The System purchases liability insurance for workmen's compensation from a commercial carrier.

Unemployment Benefits - The System provides coverage for unemployment benefits by paying into the Unemployment Compensation Fund established by state law and managed by the State of South Dakota.

9. MANAGEMENT OPERATING AGREEMENT

The Organization has entered into a contract with the Sioux Rural Water System, Inc. (SRW) In accordance with the terms of this agreement, Kingbrook Rural Water System, Inc. agreed to provide management and accounting services to SRW, these services are provided on an as needed basis.

10. SUBSEQUENT EVENTS

The System did not have any subsequent events through February 4, 2015, which is the date the financial statements were available to be issued, for events requiring recording or disclosure in the financial statements for the fiscal year ended December 31, 2014.

Kinner & Company Ltd
Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Board of Directors of
Kingbrook Rural Water System, Inc.

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Kingbrook Rural Water System, Inc. (a nonprofit organization), which comprise the statement of financial position as of December 31, 2014, and the related statements of activities, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated February 4, 2015.

Internal Control Over Financial Reporting
In planning and performing our audit of the financial statements, we considered Kingbrook Rural Water System, Inc.'s internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Kingbrook Rural Water System, Inc.'s internal control. Accordingly, we do not express an opinion on the effectiveness of Kingbrook Rural Water System, Inc.'s internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Kingbrook Rural Water System, Inc.'s financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the organization's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the organization's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Kinner & Company Ltd.

Kinner & Company Ltd
Certified Public Accountants
Brookings, South Dakota

February 4, 2015

KINGBROOK RURAL WATER SYSTEM, INC.
SCHEDULE OF EXPENSES BY FUNCTION
FOR THE YEAR ENDED DECEMBER 31, 2014

	Source of Supply	Water Treatment and Pumping	Transmission and Distributions	Customer Accounts	General and Administrative	Depreciation	Total
Depreciation	$ -	$ -	$ -	$ -	$ -	$ 1,362,353.63	$ 1,362,353.63
Labor	6,669.69	1,248.62	367,417.05	9,261.06			384,596.42
Repairs and Maintenance	38,120.57	20,214.88	413,740.48				472,075.93
Office Salaries					273,659.51		273,659.51
Purchased Power		247,619.71					247,619.71
Purchased Water	168,362.04						168,362.04
Meter Reading for Billing			29,163.57	3,832.87			32,996.44
Fringe Benefits					232,537.31		232,537.31
Chemicals		57,210.96					57,210.96
Insurance					46,483.41		46,483.41
Professional Fees					60,359.58		60,359.58
Payroll Taxes					51,876.46		51,876.46
Office					33,594.70		33,594.70
Board of Directors' Salaries					37,200.00		37,200.00
Board of Directors' Meeting Expense					22,349.34		22,349.34
Newsletter and Promotion					16,039.44		16,039.44
Telephone and Communications					13,462.82		13,462.82
Dues and Donations					14,766.00		14,766.00
Billing, Collections, and Accounting				9,878.41			9,878.41
Employees' Meeting Expense					31,544.87		31,544.87
Office Utilities					6,237.12		6,237.12
Administrative Travel					9,727.31		9,727.31
Annual Meeting					4,765.93		4,765.93
Panel Maintenance			1,927.71				1,927.71
Uncollectible Accounts				1,200.00			1,200.00
Scholarships					2,500.00		2,500.00
	$ 213,152.30	$ 326,294.17	$ 812,248.81	$ 24,172.34	$ 857,103.80	$ 1,362,353.63	$ 3,595,325.05

KINGBROOK RURAL WATER SYSTEM, INC.
STATEMENT OF OPERATING EXPENSES
AS OF DECEMBER 31, 2014 AND 2013

	2014	2013
Source of Supply		
Purchased Water	$ 168,362.04	$ 161,401.54
Well repairs and maintenance	38,120.57	27,875.20
Labor	6,669.69	3,660.09
	213,152.30	192,936.83
Water Treatment and Pumping		
Purchased power	247,619.71	226,549.95
Chemicals	57,210.96	60,403.89
Repairs and maintenance	20,214.88	17,759.63
Labor	1,248.62	2,339.87
	326,294.17	307,053.34
Transmission and Distribution		
Water line repairs and maintenance	339,269.79	236,155.75
Labor	367,417.05	320,644.26
Pumping stations repairs and maintenance	74,470.69	51,273.97
Meter reading and maintenance	29,163.57	9,975.44
Panel maintenance	1,927.71	39,498.01
	812,248.81	657,547.43
Consumer Accounts		
Billings, collection, and accounting	9,878.41	9,761.48
Labor	9,261.06	14,327.45
Meter reading for billing	3,832.87	3,761.26
Uncollectible accounts	1,200.00	1,200.00
	24,172.34	29,050.19
General and Administration		
Office salaries	273,659.51	244,019.20
Fringe benefits	232,537.31	206,360.75
System Insurance	46,483.41	49,019.15
Payroll taxes	51,876.46	46,233.19
Professional fees	60,359.58	72,866.00
Office Operations/Maintenance	33,594.70	39,393.77
Board of Directors' salaries	37,200.00	36,750.00
Telephone and communications	13,462.82	15,909.24
Board of Directors' meeting expense	22,349.34	20,187.05
Newsletter and promotion	16,039.44	15,672.11
Dues and donations	14,766.00	18,050.69
Administrative travel	9,727.31	11,923.06
Office utilities	6,237.12	5,929.54
Annual meeting	4,765.93	4,307.83
Employees' meeting expense	31,544.87	17,872.64
Scholarships	2,500.00	2,000.00
	857,103.80	806,494.22
Depreciation	1,362,353.63	1,377,781.74
Total Operating Expenses	$ 3,595,325.05	$ 3,370,863.75

KINGBROOK RURAL WATER SYSTEM, INC.
SCHEDULE OF PATRONAGE EQUITIES
FOR THE YEAR ENDED DECEMBER 31, 2014

	Balance January 1, 2014	Patronage Dividends	Less Cash Received	Balance December 31, 2014
CoBank	$ 91,795.50	$ 24,822.73	$ 18,617.05	$ 98,001.18
Kingsbury Electric Cooperative, Inc.	115,870.57	-	2,168.35	113,702.22
Sioux Valley Energy	130,856.41	10,719.96	3,748.19	137,828.18
Others	16,886.90	1,662.35	344.34	18,204.91
	$ 355,409.38	$ 37,205.04	$ 24,877.93	$ 367,736.49

KINGBROOK RURAL WATER SYSTEM, INC.
SCHEDULE OF CHANGES IN PROPERTY, PLANT, AND EQUIPMENT
FOR THE YEAR ENDED DECEMBER 31, 2014

Description	Balance January 1, 2014	Additions	Retirements	Balance December 31, 2014
Supply Mains	$ 25,499,047.94	$ 604,997.01	$ -	$ 26,104,044.95
Service Lines, Valves, and Meters	13,598,668.14	275,459.98	-	13,874,128.12
City of Carthage System	625,118.94	-	-	625,118.94
Distribution Reservoirs	5,633,521.72	5,102.50	-	5,638,624.22
Water Treatment Structures	1,172,927.22	-	-	1,172,927.22
Water Treatment Equipment	1,388,536.41	32,261.64	-	1,420,798.05
Pumping Equipment	1,349,070.12	13,350.11	-	1,362,420.23
Pump Structures	936,558.15	-	-	936,558.15
Land and Land Improvements	2,496,285.08	1,440.00	-	2,497,725.08
Monitoring Equipment	583,078.36	-	-	583,078.36
Wells	1,005,015.04	162,233.58	-	1,167,248.62
Transportation Equipment	377,389.35	99,617.05	84,281.50	392,724.90
Generation Equipment	336,819.33	24,502.40	-	361,321.73
Office Building	204,601.26	6,075.00	-	210,676.26
Miscellaneous Equipment	413,368.42	6,635.43	-	420,003.85
Office Furniture and Equipment	144,195.96	5,396.46	-	149,592.42
Hydrants and Cleanouts	63,741.63	-	-	63,741.63
Power-Operated Equipment	84,652.19	-	-	84,652.19
Warehouse	124,279.57	-	-	124,279.57
Construction in Progress	511,572.37	718,618.21	617,589.41	612,601.17
	$ 56,548,447.20	**$ 1,955,689.37**	**$ 701,870.91**	**$ 57,802,265.66**

KINGBROOK RURAL WATER SYSTEM, INC.
DEBT SERVICE AND DEBT TO CAPITALIZATION CALCULATIONS
FOR THE YEAR ENDED DECEMBER 31, 2014

Debt Service Calculation:

Change in net assets	$ 645,840.06
Less:	
Dividend Income	(37,634.97)
Net Change in Joint Well Field, Inc.	(12,866.28)
Grant Income	(489,205.97)
Plus:	
Depreciation	1,362,353.63
Interest expense	568,874.60
Adjusted change in net assets	$ 2,037,361.07
Principal and Interest on Long-Term Debt Required to be paid during the year	$ 1,197,214.81
Adjusted change in net assets/principal and interest	1.702
**Loan covenant requirement	minimum of 1.25

Debt to Capitalization Ratio:

Total Debt	$ 15,361,969.59
* Total Capitalization	$ 35,905,630.26
Total Debt/total capitalization	0.43
**Loan covenant requirement	not greater than 0.60

* Total Capitalization equals total debt plus unrestricted net assets.

DENR Rate Covenant Ratio:

Net Revenue for Debt Service	1,658,934.67
Principal and Interest Payments	1,197,214.81
DENR Rate Covenant Ratio	1.39
**Loan covenant requirement	1.10 or above

*** These note covenants are detailed in the loan agreements

KINGBROOK RURAL WATER SYSTEM, INC.
WATER SYSTEM OFFICIALS
DECEMBER 31, 2014

Board Members	Office	Term Expiration
Larry Sterling	Chairman	2016
Rodney Stormo	Vice-Chairman	2015
Scott Tolzin	Secretary/Treasurer	2016
Dale Thompson	Director	2017
Marvin Antonen	Director	2015
Brian Christensen	Director	2016
Vacant	Director	2017

Attorney
Jared Gass

General Manager
Randy Jencks

KINGBROOK RURAL WATER SYSTEM, INC.
FOR FISCAL YEAR 2016
PROPOSED BUDGET AND PROJECTED YEAR END

Description		FY 2016 Proposed Budget
REVENUES		
Water Sales-Rural	$	3,033,000.00
Water Sales-Quarterly	$	264,000.00
Water Sales-Pasture Tap	$	486,000.00
Water Sales-Bulk Towns	$	399,000.00
Water Sales - Commercial	$	130,000.00
Water Sales-Carthage	$	39,000.00
TOTAL WATER SALES	**$**	**4,351,000.00**
Total Other Operating Rev	**$**	**449,979.00**
TOTAL OPERATING REVENUE	**$**	**4,800,979.00**
OPERATING EXPENSES		
Source of Supply	$	317,000.00
Water Treatment & Pumping	$	330,000.00
Transmission & Distribution	$	473,300.00
Labor-Operations	$	500,000.00
Operations-Transportation	$	90,000.00
Customer Collections	$	42,000.00
Office Operations	$	82,050.00
Labor- Administration	$	274,000.00
Trans-Administration	$	4,800.00
General & Administration	$	274,200.00
Payroll Taxes & Fringes	$	401,600.00
Depreciation	$	1,664,000.00
TOTAL OPERATING EXP	**$**	**4,452,950.00**
OPERATING INCOME	**$**	**348,029.00**
Gain(loss) on Assets	$	-
Dividend Income	$	40,000.00
Interest Income	$	8,800.00
Other Income	$	-
Joint Well Field Income	$	80,000.00
NONOPERATING INC(EXP)	**$**	**128,800.00**
Interest Exp-RD	$	140,000.00
Interest Exp-CoBank	$	216,000.00
Interest Exp-DENR/SRF	$	187,000.00
TOTAL INTEREST EXPENSE	**$**	**543,000.00**
NET INCOME (LOSS)	**$**	**(66,171.00)**
State DOT Funds	$	-
DAPL Project Funds		
Grant Income	$	426,000.00
NET INCOME (LOSS) w/ Grant Income	**$**	**359,829.00**

KINGBROOK RURAL WATER SYSTEM, INC.
FOR FISCAL YEAR 2016
DEBT SERVICE COVERAGE RATIO CALCULATION

Description		FY 2016 Proposed Budget
Net Income / Loss w/o Grant Income	$	(66,171.00)
Less Dividend Income	-$	40,000.00
Less Net Change JWF Inc.	-$	5,000.00
Plus Depreciation	$	1,664,000.00
Plus Interest Expense	$	543,000.00
Net DSC Income	$	2,095,829.00
Principal and Interest Payments	$	1,144,000.00
2016 principal - $601000		
Debt Service Coverage Ratio		**1.83**

Kingbrook Rural Water System
FOR THE FISCAL YEAR 2016
DENR RATE COVENANT RATIO

Description		FY 2016 Proposed Budget
Total Water Sales	$	4,351,000.00
Less Total Operating Expense	$	(4,452,950.00)
Plus Depreciation Expense	$	1,664,000.00
Plus Joint Well Field Income	$	80,000.00
Net Revenue for Debt Service	$	1,642,050.00
		divided by
Principal and Interest Payments	$	1,144,000.00
DENR Rate Covenant Ratio		**1.44**

#1

COBANK
01 COBANK

PAYMENT SCHEDULE REPLICATION
Principal & Interest Payment

12/16/10
3

C/A Number..... 0000184861
Obligation..... 002454182
Of Payments.. 522

Tot Prin Paid.. 2,118,910.35
Cur Prin Bal... 2,130,229.00
Billed Prin.... 11,318.65

Annual Rate.... 4.940000
1st Pmt Due.... 1/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
7/20/14	6,562.04	.00	6,562.04	.008945019	1,580,225.67
7/31/14	14,084.41	14,084.41	.00	.008912910	1,566,141.26
8/20/14	6,720.11	.00	6,720.11	.008912910	1,566,141.26
8/31/14	14,155.26	14,155.26	.00	.009038303	1,551,986.00
9/20/14	6,660.27	.00	6,660.27	.009038303	1,551,986.00
9/30/14	14,469.62	14,469.62	.00	.009323292	1,537,516.38
10/20/14	6,387.11	.00	6,387.11	.009323292	1,537,516.38
10/31/14	14,299.24	14,299.24	.00	.009300219	1,523,217.14
11/20/14	6,538.42	.00	6,538.42	.009300219	1,523,217.14
11/30/14	11,440.45	11,440.45	.00	.007510715	1,511,776.69
12/20/14	6,269.03	.00	6,269.03	.007510715	1,511,776.69
12/31/14	4,555.49	4,555.49	.00	.003013335	1,507,221.20
YEAR 14	237,475.50	157,305.24	80,170.26		
1/20/15	6,430.32	.00	6,430.32	.003013335	1,507,221.20
1/31/15	4,577.76	4,577.76	.00	.003037218	1,502,643.44
2/20/15	6,410.80	.00	6,410.80	.003037218	1,502,643.44
2/28/15	5,305.71	5,305.71	.00	.003530917	1,497,337.73
3/20/15	5,772.87	.00	5,772.87	.003530917	1,497,337.73
3/31/15	4,626.07	4,626.07	.00	.003089530	1,492,711.66
4/20/15	6,368.93	.00	6,368.93	.003089530	1,492,711.66
4/30/15	4,882.32	4,882.32	.00	.003270772	1,487,829.34
5/20/15	6,144.23	.00	6,144.23	.003270772	1,487,829.34
5/31/15	4,672.58	4,672.58	.00	.003140534	1,483,156.76
6/20/15	6,328.32	.00	6,328.32	.003140534	1,483,156.76
6/30/15	4,927.53	4,927.53	.00	.003322325	1,478,229.23
7/20/15	6,104.93	.00	6,104.93	.003322325	1,478,229.23
7/31/15	4,719.52	4,719.52	.00	.003192684	1,473,509.71
8/20/15	6,287.70	.00	6,287.70	.003192684	1,473,509.71
8/31/15	4,742.58	4,742.58	.00	.003218560	1,468,767.13
9/20/15	6,267.55	.00	6,267.55	.003218560	1,468,767.13
9/30/15	4,995.63	4,995.63	.00	.003401240	1,463,771.50
10/20/15	6,045.81	.00	6,045.81	.003401240	1,463,771.50
10/31/15	4,790.22	4,790.22	.00	.003272518	1,458,981.28
11/20/15	6,226.00	.00	6,226.00	.003272518	1,458,981.28
11/30/15	5,041.93	5,041.93	.00	.003455788	1,453,939.35
12/20/15	6,005.31	.00	6,005.31	.003455788	1,453,939.35
12/31/15	4,838.30	4,838.30	.00	.003327717	1,449,101.05
YEAR 15	132,512.92	58,120.15	74,392.77		
1/20/16	6,184.15	.00	6,184.15	.003327717	1,449,101.05
1/31/16	4,861.95	4,861.95	.00	.003355149	1,444,239.10
2/20/16	6,163.68	.00	6,163.68	.003355149	1,444,239.10
2/29/16	5,337.69	5,337.69	.00	.003695849	1,438,901.41

C/A Number..... 0000184861
Obligation..... 002454182
Of Payments.. 522

Tot Prin Paid.. 2,118,910.35
Cur Prin Bal... 2,130,229.00
Billed Prin.... 11,318.65

Annual Rate.... 4.940000
1st Pmt Due.... 1/20/11
Frequency..... C Basis Code..... S

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
3/20/16	5,746.49	.00	5,746.49	.003695849	1,438,901.41
3/31/16	4,911.82	4,911.82	.00	.003413590	1,433,989.59
4/20/16	6,120.28	.00	6,120.28	.003413590	1,433,989.59
4/30/16	5,160.21	5,160.21	.00	.003598498	1,428,829.38
5/20/16	5,902.69	.00	5,902.69	.003598498	1,428,829.38
5/31/16	4,961.08	4,961.08	.00	.003472129	1,423,868.30
6/20/16	6,077.49	.00	6,077.49	.003472129	1,423,868.30
6/30/16	5,208.11	5,208.11	.00	.003657718	1,418,660.19
7/20/16	5,860.98	.00	5,860.98	.003657718	1,418,660.19
7/31/16	5,010.80	5,010.80	.00	.003532064	1,413,649.39
8/20/16	6,034.08	.00	6,034.08	.003532064	1,413,649.39
8/31/16	5,035.32	5,035.32	.00	.003561929	1,408,614.07
9/20/16	6,012.69	.00	6,012.69	.003561929	1,408,614.07
9/30/16	5,280.30	5,280.30	.00	.003748578	1,403,333.77
10/20/16	5,797.98	.00	5,797.98	.003748578	1,403,333.77
10/31/16	5,085.77	5,085.77	.00	.003624063	1,398,248.00
11/20/16	5,968.97	.00	5,968.97	.003624063	1,398,248.00
11/30/16	5,329.38	5,329.38	.00	.003811469	1,392,918.62
12/20/16	5,755.37	.00	5,755.37	.003811469	1,392,918.62
12/31/16	5,136.71	5,136.71	.00	.003687731	1,387,781.91
YEAR 16	132,943.99	61,319.14	71,624.85		
1/20/17	5,924.63	.00	5,924.63	.003687731	1,387,781.91
1/31/17	5,161.85	5,161.85	.00	.003719496	1,382,620.06
2/20/17	5,902.63	.00	5,902.63	.003719496	1,382,620.06
2/28/17	5,835.86	5,835.86	.00	.004220870	1,376,784.20
3/20/17	5,311.64	.00	5,311.64	.004220870	1,376,784.20
3/31/17	5,215.62	5,215.62	.00	.003788262	1,371,568.58
4/20/17	5,856.11	.00	5,856.11	.003788262	1,371,568.58
4/30/17	5,455.64	5,455.64	.00	.003977664	1,366,112.94
5/20/17	5,645.55	.00	5,645.55	.003977664	1,366,112.94
5/31/17	5,267.81	5,267.81	.00	.003856057	1,360,845.13
6/20/17	5,810.54	.00	5,810.54	.003856057	1,360,845.13
6/30/17	5,506.40	5,506.40	.00	.004046309	1,355,338.73
7/20/17	5,601.44	.00	5,601.44	.004046309	1,355,338.73
7/31/17	5,320.51	5,320.51	.00	.003925594	1,350,018.22
8/20/17	5,764.65	.00	5,764.65	.003925594	1,350,018.22
8/31/17	5,346.54	5,346.54	.00	.003960346	1,344,671.68
9/20/17	5,742.02	.00	5,742.02	.003960346	1,344,671.68
9/30/17	5,582.97	5,582.97	.00	.004151920	1,339,088.71
10/20/17	5,534.83	.00	5,534.83	.004151920	1,339,088.71
10/31/17	5,399.99	5,399.99	.00	.004032585	1,333,688.72
11/20/17	5,695.51	.00	5,695.51	.004032585	1,333,688.72
11/30/17	5,634.96	5,634.96	.00	.004225093	1,328,053.76
12/20/17	5,489.53	.00	5,489.53	.004225093	1,328,053.76
12/31/17	5,453.98	5,453.98	.00	.004106746	1,322,599.78

COBANK
01 COBANK

PAYMENT SCHEDULE REPLICATION
Principal & Interest Payment

12/16/10
5

C/A Number..... 0000184861
Obligation..... 002454182
Of Payments.. 522

Tot Prin Paid.. 2,118,910.35
Cur Prin Bal... 2,130,229.00
Billed Prin.... 11,318.65

Annual Rate.... 4.940000
1st Pmt Due.... 1/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
YEAR 17	133,461.21	65,182.13	68,279.08		
1/20/18	5,648.69	.00	5,648.69	.004106746	1,322,599.78
1/31/18	5,480.66	5,480.66	.00	.004143853	1,317,119.12
2/20/18	5,625.44	.00	5,625.44	.004143853	1,317,119.12
2/28/18	6,125.22	6,125.22	.00	.004650467	1,310,993.90
3/20/18	5,059.88	.00	5,059.88	.004650467	1,310,993.90
3/31/18	5,537.41	5,537.41	.00	.004223825	1,305,456.49
4/20/18	5,576.14	.00	5,576.14	.004223825	1,305,456.49
4/30/18	5,768.59	5,768.59	.00	.004418829	1,299,687.90
5/20/18	5,373.41	.00	5,373.41	.004418829	1,299,687.90
5/31/18	5,592.73	5,592.73	.00	.004303133	1,294,095.17
6/20/18	5,528.08	.00	5,528.08	.004303133	1,294,095.17
6/30/18	5,822.37	5,822.37	.00	.004499182	1,288,272.80
7/20/18	5,326.60	.00	5,326.60	.004499182	1,288,272.80
7/31/18	5,648.57	5,648.57	.00	.004384607	1,282,624.23
8/20/18	5,479.40	.00	5,479.40	.004384607	1,282,624.23
8/31/18	5,676.20	5,676.20	.00	.004425458	1,276,948.03
9/20/18	5,455.23	.00	5,455.23	.004425458	1,276,948.03
9/30/18	5,903.55	5,903.55	.00	.004623171	1,271,044.48
10/20/18	5,256.09	.00	5,256.09	.004623171	1,271,044.48
10/31/18	5,732.86	5,732.86	.00	.004510353	1,265,311.62
11/20/18	5,406.23	.00	5,406.23	.004510353	1,265,311.62
11/30/18	5,958.64	5,958.64	.00	.004709227	1,259,352.98
12/20/18	5,208.08	.00	5,208.08	.004709227	1,259,352.98
12/31/18	5,790.06	5,790.06	.00	.004597646	1,253,562.92
YEAR 18	133,980.13	69,036.86	64,943.27		
1/20/19	5,356.32	.00	5,356.32	.004597646	1,253,562.92
1/31/19	5,818.37	5,818.37	.00	.004641466	1,247,744.55
2/20/19	5,331.82	.00	5,331.82	.004641466	1,247,744.55
2/28/19	6,431.76	6,431.76	.00	.005154708	1,241,312.79
3/20/19	4,793.28	.00	4,793.28	.005154708	1,241,312.79
3/31/19	5,878.30	5,878.30	.00	.004735550	1,235,434.49
4/20/19	5,279.73	.00	5,279.73	.004735550	1,235,434.49
4/30/19	6,100.08	6,100.08	.00	.004937598	1,229,334.41
5/20/19	5,085.06	.00	5,085.06	.004937598	1,229,334.41
5/31/19	5,936.90	5,936.90	.00	.004829361	1,223,397.51
6/20/19	5,228.58	.00	5,228.58	.004829361	1,223,397.51
6/30/19	6,157.09	6,157.09	.00	.005032779	1,217,240.42
7/20/19	5,035.55	.00	5,035.55	.005032779	1,217,240.42
7/31/19	5,996.08	5,996.08	.00	.004925961	1,211,244.34
8/20/19	5,177.11	.00	5,177.11	.004925961	1,211,244.34
8/31/19	6,025.41	6,025.41	.00	.004974561	1,205,218.93

C/A Number..... 0000184861
Obligation..... 002454182
Of Payments.. 522

Tot Prin Paid.. 2,118,910.35
Cur Prin Bal... 2,130,229.00
Billed Prin.... 11,318.65

Annual Rate.... 4.940000
1st Pmt Due.... 1/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
9/20/19	5,151.68	.00	5,151.68	.004974561	1,205,218.93
9/30/19	6,243.16	6,243.16	.00	.005180104	1,198,975.77
10/20/19	4,960.55	.00	4,960.55	.005180104	1,198,975.77
10/31/19	6,085.44	6,085.44	.00	.005075532	1,192,890.33
11/20/19	5,099.59	.00	5,099.59	.005075532	1,192,890.33
11/30/19	6,301.55	6,301.55	.00	.005282589	1,186,588.78
12/20/19	4,909.84	.00	4,909.84	.005282589	1,186,588.78
12/31/19	6,146.06	6,146.06	.00	.005179604	1,180,442.72
YEAR 19	134,529.31	73,120.20	61,409.11		
1/20/20	5,046.88	.00	5,046.88	.005179604	1,180,442.72
1/31/20	6,176.14	6,176.14	.00	.005232053	1,174,266.58
2/20/20	5,020.54	.00	5,020.54	.005232053	1,174,266.58
2/29/20	6,573.11	6,573.11	.00	.005597630	1,167,693.47
3/20/20	4,672.15	.00	4,672.15	.005597630	1,167,693.47
3/31/20	6,238.51	6,238.51	.00	.005342592	1,161,454.96
4/20/20	4,966.28	.00	4,966.28	.005342592	1,161,454.96
4/30/20	6,450.39	6,450.39	.00	.005553715	1,155,004.57
5/20/20	4,780.51	.00	4,780.51	.005553715	1,155,004.57
5/31/20	6,300.61	6,300.61	.00	.005455052	1,148,703.96
6/20/20	4,912.33	.00	4,912.33	.005455052	1,148,703.96
6/30/20	6,510.77	6,510.77	.00	.005667926	1,142,193.19
7/20/20	4,728.00	.00	4,728.00	.005667926	1,142,193.19
7/31/20	6,363.29	6,363.29	.00	.005571115	1,135,829.90
8/20/20	4,857.76	.00	4,857.76	.005571115	1,135,829.90
8/31/20	6,394.44	6,394.44	.00	.005629751	1,129,435.46
9/20/20	4,830.78	.00	4,830.78	.005629751	1,129,435.46
9/30/20	6,602.02	6,602.02	.00	.005845415	1,122,833.44
10/20/20	4,648.50	.00	4,648.50	.005845415	1,122,833.44
10/31/20	6,458.02	6,458.02	.00	.005751538	1,116,375.42
11/20/20	4,775.59	.00	4,775.59	.005751538	1,116,375.42
11/30/20	6,663.88	6,663.88	.00	.005969210	1,109,711.54
12/20/20	4,594.79	.00	4,594.79	.005969210	1,109,711.54
12/31/20	6,522.24	6,522.24	.00	.005877419	1,103,189.30
YEAR 20	135,087.53	77,253.42	57,834.11		
1/20/21	4,719.78	.00	4,719.78	.005877419	1,103,189.30
1/31/21	6,554.18	6,554.18	.00	.005941119	1,096,635.12
2/20/21	4,691.88	.00	4,691.88	.005941119	1,096,635.12
2/28/21	7,099.62	7,099.62	.00	.006474003	1,089,535.50
3/20/21	4,212.47	.00	4,212.47	.006474003	1,089,535.50
3/31/21	6,620.99	6,620.99	.00	.006076892	1,082,914.51
4/20/21	4,633.90	.00	4,633.90	.006076892	1,082,914.51
4/30/21	6,822.34	6,822.34	.00	.006299980	1,076,092.17

C/A Number..... 0000184861
Obligation..... 002454182
Of Payments.. 522

Tot Prin Paid.. 2,118,910.35
Cur Prin Bal... 2,130,229.00
Billed Prin.... 11,318.65

Annual Rate.... 4.940000
1st Pmt Due.... 1/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
5/20/21	4,457.06	.00	4,457.06	.006299980	1,076,092.17
5/31/21	6,686.77	6,686.77	.00	.006213937	1,069,405.40
6/20/21	4,576.55	.00	4,576.55	.006213937	1,069,405.40
6/30/21	6,886.33	6,886.33	.00	.006439400	1,062,519.07
7/20/21	4,401.55	.00	4,401.55	.006439400	1,062,519.07
7/31/21	6,753.20	6,753.20	.00	.006355838	1,055,765.87
8/20/21	4,518.87	.00	4,518.87	.006355838	1,055,765.87
8/31/21	6,786.26	6,786.26	.00	.006427807	1,048,979.61
9/20/21	4,490.04	.00	4,490.04	.006427807	1,048,979.61
9/30/21	6,983.08	6,983.08	.00	.006657021	1,041,996.53
10/20/21	4,317.25	.00	4,317.25	.006657021	1,041,996.53
10/31/21	6,853.64	6,853.64	.00	.006577411	1,035,142.89
11/20/21	4,431.74	.00	4,431.74	.006577411	1,035,142.89
11/30/21	7,048.62	7,048.62	.00	.006809320	1,028,094.27
12/20/21	4,260.24	.00	4,260.24	.006809320	1,028,094.27
12/31/21	6,921.68	6,921.68	.00	.006732534	1,021,172.59
YEAR 21	135,728.04	82,016.71	53,711.33		
1/20/22	4,372.53	.00	4,372.53	.006732534	1,021,172.59
1/31/22	6,955.57	6,955.57	.00	.006811355	1,014,217.02
2/20/22	4,343.07	.00	4,343.07	.006811355	1,014,217.02
2/28/22	7,463.95	7,463.95	.00	.007359322	1,006,753.07
3/20/22	3,895.74	.00	3,895.74	.007359322	1,006,753.07
3/31/22	7,026.13	7,026.13	.00	.006979000	999,726.94
4/20/22	4,281.68	.00	4,281.68	.006979000	999,726.94
4/30/22	7,216.36	7,216.36	.00	.007218331	992,510.58
5/20/22	4,114.41	.00	4,114.41	.007218331	992,510.58
5/31/22	7,095.86	7,095.86	.00	.007149404	985,414.72
6/20/22	4,220.92	.00	4,220.92	.007149404	985,414.72
6/30/22	7,284.16	7,284.16	.00	.007391974	978,130.56
7/20/22	4,055.60	.00	4,055.60	.007391974	978,130.56
7/31/22	7,166.24	7,166.24	.00	.007326465	970,964.32
8/20/22	4,159.84	.00	4,159.84	.007326465	970,964.32
8/31/22	7,201.32	7,201.32	.00	.007416667	963,763.00
9/20/22	4,129.45	.00	4,129.45	.007416667	963,763.00
9/30/22	7,386.72	7,386.72	.00	.007664456	956,376.28
10/20/22	3,966.49	.00	3,966.49	.007664456	956,376.28
10/31/22	7,272.73	7,272.73	.00	.007604465	949,103.55
11/20/22	4,067.44	.00	4,067.44	.007604465	949,103.55
11/30/22	7,456.17	7,456.17	.00	.007856013	941,647.38
12/20/22	3,906.17	.00	3,906.17	.007856013	941,647.38
12/31/22	7,344.84	7,344.84	.00	.007799989	934,302.54
YEAR 22	136,383.39	86,870.05	49,513.34		

C/A Number..... 0000184861
Obligation..... 002454182
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Tot Prin Paid.. 2,118,910.35
Cur Prin Bal... 2,130,229.00
Billed Prin.... 11,318.65

Annual Rate.... 4.940000
1st Pmt Due.... 1/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
1/20/23	4,004.51	.00	4,004.51	.007799989	934,302.54
1/31/23	7,380.79	7,380.79	.00	.007899785	926,921.75
2/20/23	3,973.49	.00	3,973.49	.007899785	926,921.75
2/28/23	7,849.90	7,849.90	.00	.008468783	919,071.85
3/20/23	3,560.25	.00	3,560.25	.008468783	919,071.85
3/31/23	7,455.33	7,455.33	.00	.008111803	911,616.52
4/20/23	3,908.69	.00	3,908.69	.008111803	911,616.52
4/30/23	7,633.74	7,633.74	.00	.008373850	903,982.78
5/20/23	3,751.66	.00	3,751.66	.008373850	903,982.78
5/31/23	7,529.22	7,529.22	.00	.008328941	896,453.56
6/20/23	3,844.51	.00	3,844.51	.008328941	896,453.56
6/30/23	7,705.58	7,705.58	.00	.008595626	888,747.98
7/20/23	3,689.25	.00	3,689.25	.008595626	888,747.98
7/31/23	7,603.80	7,603.80	.00	.008555631	881,144.18
8/20/23	3,779.71	.00	3,779.71	.008555631	881,144.18
8/31/23	7,641.02	7,641.02	.00	.008671702	873,503.16
9/20/23	3,747.16	.00	3,747.16	.008671702	873,503.16
9/30/23	7,814.32	7,814.32	.00	.008945955	865,688.84
10/20/23	3,594.73	.00	3,594.73	.008945955	865,688.84
10/31/23	7,716.68	7,716.68	.00	.008913918	857,972.16
11/20/23	3,681.43	.00	3,681.43	.008913918	857,972.16
11/30/23	7,887.90	7,887.90	.00	.009193654	850,084.26
12/20/23	3,530.82	.00	3,530.82	.009193654	850,084.26
12/31/23	7,793.09	7,793.09	.00	.009167432	842,291.17
YEAR 23	137,077.58	92,011.37	45,066.21		
1/20/24	3,615.08	.00	3,615.08	.009167432	842,291.17
1/31/24	7,831.24	7,831.24	.00	.009297544	834,459.93
2/20/24	3,581.91	.00	3,581.91	.009297544	834,459.93
2/29/24	8,129.04	8,129.04	.00	.009741678	826,330.89
3/20/24	3,319.67	.00	3,319.67	.009741678	826,330.89
3/31/24	7,909.38	7,909.38	.00	.009571686	818,421.51
4/20/24	3,514.01	.00	3,514.01	.009571686	818,421.51
4/30/24	8,075.30	8,075.30	.00	.009866920	810,346.21
5/20/24	3,368.19	.00	3,368.19	.009866920	810,346.21
5/31/24	7,987.64	7,987.64	.00	.009857070	802,358.57
6/20/24	3,446.10	.00	3,446.10	.009857070	802,358.57
6/30/24	8,151.42	8,151.42	.00	.010159323	794,207.15
7/20/24	3,301.88	.00	3,301.88	.010159323	794,207.15
7/31/24	8,066.67	8,066.67	.00	.010156884	786,140.48
8/20/24	3,377.28	.00	3,377.28	.010156884	786,140.48
8/31/24	8,106.18	8,106.18	.00	.010311363	778,034.30
9/20/24	3,343.16	.00	3,343.16	.010311363	778,034.30
9/30/24	8,266.68	8,266.68	.00	.010625084	769,767.62
10/20/24	3,201.67	.00	3,201.67	.010625084	769,767.62
10/31/24	8,186.35	8,186.35	.00	.010634832	761,581.27

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PAYMENT SCHEDULE REPLICATION
Principal & Interest Payment

C/A Number..... 0000184861
Obligation..... 002454182
Of Payments.. 522

Tot Prin Paid.. 2,118,910.35
Cur Prin Bal... 2,130,229.00
Billed Prin.... 11,318.65

Annual Rate.... 4.940000
1st Pmt Due.... 1/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
11/20/24	3,273.41	.00	3,273.41	.010634832	761,581.27
11/30/24	8,344.65	8,344.65	.00	.010957005	753,236.62
12/20/24	3,134.15	.00	3,134.15	.010957005	753,236.62
12/31/24	8,267.30	8,267.30	.00	.010975701	744,969.32
YEAR 24	137,798.36	97,321.85	40,476.51		
1/20/25	3,203.03	.00	3,203.03	.010975701	744,969.32
1/31/25	8,307.77	8,307.77	.00	.011151828	736,661.55
2/20/25	3,167.99	.00	3,167.99	.011151828	736,661.55
2/28/25	8,691.30	8,691.30	.00	.011798226	727,970.25
3/20/25	2,829.32	.00	2,829.32	.011798226	727,970.25
3/31/25	8,391.00	8,391.00	.00	.011526569	719,579.25
4/20/25	3,095.44	.00	3,095.44	.011526569	719,579.25
4/30/25	8,543.68	8,543.68	.00	.011873160	711,035.57
5/20/25	2,961.03	.00	2,961.03	.011873160	711,035.57
5/31/25	8,473.93	8,473.93	.00	.011917730	702,561.64
6/20/25	3,023.51	.00	3,023.51	.011917730	702,561.64
6/30/25	8,624.33	8,624.33	.00	.012275549	693,937.31
7/20/25	2,891.11	.00	2,891.11	.012275549	693,937.31
7/31/25	8,557.68	8,557.68	.00	.012332064	685,379.63
8/20/25	2,950.65	.00	2,950.65	.012332064	685,379.63
8/31/25	8,599.58	8,599.58	.00	.012547177	676,780.05
9/20/25	2,914.37	.00	2,914.37	.012547177	676,780.05
9/30/25	8,746.52	8,746.52	.00	.012923726	668,033.53
10/20/25	2,784.90	.00	2,784.90	.012923726	668,033.53
10/31/25	8,684.54	8,684.54	.00	.013000155	659,348.99
11/20/25	2,840.58	.00	2,840.58	.013000155	659,348.99
11/30/25	8,829.13	8,829.13	.00	.013390677	650,519.86
12/20/25	2,713.19	.00	2,713.19	.013390677	650,519.86
12/31/25	8,770.30	8,770.30	.00	.013481986	641,749.56
YEAR 25	138,594.88	103,219.76	35,375.12		
1/20/26	2,766.16	.00	2,766.16	.013481986	641,749.56
1/31/26	8,813.25	8,813.25	.00	.013733160	632,936.31
2/20/26	2,728.65	.00	2,728.65	.013733160	632,936.31
2/28/26	9,150.11	9,150.11	.00	.014456604	623,786.20
3/20/26	2,430.55	.00	2,430.55	.014456604	623,786.20
3/31/26	8,901.21	8,901.21	.00	.014269648	614,884.99
4/20/26	2,652.38	.00	2,652.38	.014269648	614,884.99
4/30/26	9,039.86	9,039.86	.00	.014701708	605,845.13
5/20/26	2,530.16	.00	2,530.16	.014701708	605,845.13
5/31/26	8,989.08	8,989.08	.00	.014837257	596,856.05
6/20/26	2,576.10	.00	2,576.10	.014837257	596,856.05
6/30/26	8,797.70	8,797.70	.00	.014740070	588,058.35

COBANK
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PAYMENT SCHEDULE REPLICATION
Principal & Interest Payment

12/16/10
10

C/A Number..... 0000184861
Obligation..... 002454182
Of Payments.. 522

Tot Prin Paid.. 2,118,910.35
Cur Prin Bal... 2,130,229.00
Billed Prin.... 11,318.65

Annual Rate.... 4.940000
1st Pmt Due.... 1/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
7/20/26	2,455.79	.00	2,455.79	.014740070	588,058.35
7/31/26	8,356.03	8,356.03	.00	.014209525	579,702.32
8/20/26	2,500.25	.00	2,500.25	.014209525	579,702.32
8/31/26	8,396.60	8,396.60	.00	.014484330	571,305.72
9/20/26	2,464.90	.00	2,464.90	.014484330	571,305.72
9/30/26	8,525.54	8,525.54	.00	.014922903	562,780.18
10/20/26	2,350.83	.00	2,350.83	.014922903	562,780.18
10/31/26	8,478.74	8,478.74	.00	.015065811	554,301.44
11/20/26	2,392.96	.00	2,392.96	.015065811	554,301.44
11/30/26	8,605.41	8,605.41	.00	.015524783	545,696.03
12/20/26	2,280.62	.00	2,280.62	.015524783	545,696.03
12/31/26	8,561.66	8,561.66	.00	.015689430	537,134.37
YEAR 26	134,744.54	104,615.19	30,129.35		
1/20/27	2,320.11	.00	2,320.11	.015689430	537,134.37
1/31/27	8,603.22	8,603.22	.00	.016016886	528,531.15
2/20/27	2,283.83	.00	2,283.83	.016016886	528,531.15
2/28/27	8,889.43	8,889.43	.00	.016819122	519,641.72
3/20/27	2,029.62	.00	2,029.62	.016819122	519,641.72
3/31/27	8,688.11	8,688.11	.00	.016719423	510,953.61
4/20/27	2,209.41	.00	2,209.41	.016719423	510,953.61
4/30/27	8,809.02	8,809.02	.00	.017240351	502,144.59
5/20/27	2,102.10	.00	2,102.10	.017240351	502,144.59
5/31/27	8,773.05	8,773.05	.00	.017471163	493,371.54
6/20/27	2,135.00	.00	2,135.00	.017471163	493,371.54
6/30/27	8,891.61	8,891.61	.00	.018022138	484,479.93
7/20/27	2,029.78	.00	2,029.78	.018022138	484,479.93
7/31/27	8,858.78	8,858.78	.00	.018285133	475,621.15
8/20/27	2,059.67	.00	2,059.67	.018285133	475,621.15
8/31/27	8,901.80	8,901.80	.00	.018716156	466,719.35
9/20/27	2,022.14	.00	2,022.14	.018716156	466,719.35
9/30/27	9,016.81	9,016.81	.00	.019319554	457,702.54
10/20/27	1,919.97	.00	1,919.97	.019319554	457,702.54
10/31/27	8,988.77	8,988.77	.00	.019638890	448,713.77
11/20/27	1,945.87	.00	1,945.87	.019638890	448,713.77
11/30/27	9,101.39	9,101.39	.00	.020283286	439,612.38
12/20/27	1,845.85	.00	1,845.85	.020283286	439,612.38
12/31/27	9,076.59	9,076.59	.00	.020646802	430,535.79
YEAR 27	131,501.93	106,598.58	24,903.35		
1/20/28	1,868.68	.00	1,868.68	.020646802	430,535.79
1/31/28	9,120.65	9,120.65	.00	.021184417	421,415.14
2/20/28	1,830.23	.00	1,830.23	.021184417	421,415.14
2/29/28	9,294.35	9,294.35	.00	.022055092	412,120.79

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3/20/28	1,675.79	.00	1,675.79	.022055092	412,120.79
3/31/28	9,210.03	9,210.03	.00	.022347889	402,910.76
4/20/28	1,751.79	.00	1,751.79	.022347889	402,910.76
4/30/28	9,316.56	9,316.56	.00	.023123135	393,594.20
5/20/28	1,657.42	.00	1,657.42	.023123135	393,594.20
5/31/28	9,299.99	9,299.99	.00	.023628371	384,294.21
6/20/28	1,673.03	.00	1,673.03	.023628371	384,294.21
6/30/28	9,404.02	9,404.02	.00	.024470886	374,890.19
7/20/28	1,580.61	.00	1,580.61	.024470886	374,890.19
7/31/28	9,390.78	9,390.78	.00	.025049415	365,499.41
8/20/28	1,593.35	.00	1,593.35	.025049415	365,499.41
8/31/28	9,436.36	9,436.36	.00	.025817716	356,063.05
9/20/28	1,553.36	.00	1,553.36	.025817716	356,063.05
9/30/28	9,536.66	9,536.66	.00	.026783627	346,526.39
10/20/28	1,464.49	.00	1,464.49	.026783627	346,526.39
10/31/28	9,528.48	9,528.48	.00	.027497126	336,997.91
11/20/28	1,472.74	.00	1,472.74	.027497126	336,997.91
11/30/28	9,626.22	9,626.22	.00	.028564628	327,371.69
12/20/28	1,385.88	.00	1,385.88	.028564628	327,371.69
12/31/28	9,621.47	9,621.47	.00	.029390048	317,750.22
YEAR 28	132,292.94	112,785.57	19,507.37		
1/20/29	1,391.20	.00	1,391.20	.029390048	317,750.22
1/31/29	9,668.18	9,668.18	.00	.030426981	308,082.04
2/20/29	1,350.28	.00	1,350.28	.030426981	308,082.04
2/28/29	9,856.01	9,856.01	.00	.031991511	298,226.03
3/20/29	1,182.48	.00	1,182.48	.031991511	298,226.03
3/31/29	9,762.95	9,762.95	.00	.032736746	288,463.08
4/20/29	1,267.18	.00	1,267.18	.032736746	288,463.08
4/30/29	9,854.26	9,854.26	.00	.034161252	278,608.82
5/20/29	1,186.05	.00	1,186.05	.034161252	278,608.82
5/31/29	9,858.19	9,858.19	.00	.035383624	268,750.63
6/20/29	1,183.78	.00	1,183.78	.035383624	268,750.63
6/30/29	9,946.88	9,946.88	.00	.037011559	258,803.75
7/20/29	1,105.03	.00	1,105.03	.037011559	258,803.75
7/31/29	9,954.36	9,954.36	.00	.038462966	248,849.39
8/20/29	1,099.45	.00	1,099.45	.038462966	248,849.39
8/31/29	10,002.69	10,002.69	.00	.040195758	238,846.70
9/20/29	1,057.28	.00	1,057.28	.040195758	238,846.70
9/30/29	10,087.39	10,087.39	.00	.042233742	228,759.31
10/20/29	982.01	.00	982.01	.042233742	228,759.31
10/31/29	9,497.19	9,497.19	.00	.041516080	219,262.12
11/20/29	971.79	.00	971.79	.041516080	219,262.12
11/30/29	7,122.67	7,122.67	.00	.032484726	212,139.45
12/20/29	901.72	.00	901.72	.032484726	212,139.45
12/31/29	5,769.04	5,769.04	.00	.027194564	206,370.41

COBANK
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PAYMENT SCHEDULE REPLICATION
Principal & Interest Payment

12/16/10
12

C/A Number..... 0000184861
Obligation..... 002454182
Of Payments.. 522

Tot Prin Paid.. 2,118,910.35
Cur Prin Bal... 2,130,229.00
Billed Prin.... 11,318.65

Annual Rate.... 4.940000
1st Pmt Due.... 1/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
YEAR 29	125,058.06	111,379.81	13,678.25		
1/20/30	901.62	.00	901.62	.027194564	206,370.41
1/31/30	5,795.99	5,795.99	.00	.028085373	200,574.42
2/20/30	877.12	.00	877.12	.028085373	200,574.42
2/28/30	5,913.74	5,913.74	.00	.029484018	194,660.68
3/20/30	769.75	.00	769.75	.029484018	194,660.68
3/31/30	5,850.69	5,850.69	.00	.030055838	188,809.99
4/20/30	827.21	.00	827.21	.030055838	188,809.99
4/30/30	5,906.47	5,906.47	.00	.031282613	182,903.52
5/20/30	776.49	.00	776.49	.031282613	182,903.52
5/31/30	5,905.61	5,905.61	.00	.032288115	176,997.91
6/20/30	777.29	.00	777.29	.032288115	176,997.91
6/30/30	5,959.87	5,959.87	.00	.033671979	171,038.04
7/20/30	727.88	.00	727.88	.033671979	171,038.04
7/31/30	5,961.04	5,961.04	.00	.034852129	165,077.00
8/20/30	726.75	.00	726.75	.034852129	165,077.00
8/31/30	5,988.88	5,988.88	.00	.036279312	159,088.12
9/20/30	701.33	.00	701.33	.036279312	159,088.12
9/30/30	6,040.83	6,040.83	.00	.037971597	153,047.29
10/20/30	654.07	.00	654.07	.037971597	153,047.29
10/31/30	6,045.08	6,045.08	.00	.039498118	147,002.21
11/20/30	650.17	.00	650.17	.039498118	147,002.21
11/30/30	6,095.47	6,095.47	.00	.041465158	140,906.74
12/20/30	604.27	.00	604.27	.041465158	140,906.74
12/31/30	6,101.79	6,101.79	.00	.043303748	134,804.95
YEAR 30	80,559.41	71,565.46	8,993.95		
1/20/31	598.70	.00	598.70	.043303748	134,804.95
1/31/31	6,130.29	6,130.29	.00	.045475258	128,674.66
2/20/31	572.66	.00	572.66	.045475258	128,674.66
2/28/31	6,217.10	6,217.10	.00	.048316428	122,457.56
3/20/31	493.62	.00	493.62	.048316428	122,457.56
3/31/31	6,187.97	6,187.97	.00	.050531547	116,269.59
4/20/31	519.95	.00	519.95	.050531547	116,269.59
4/30/31	6,234.40	6,234.40	.00	.053620211	110,035.19
5/20/31	477.65	.00	477.65	.053620211	110,035.19
5/31/31	6,246.00	6,246.00	.00	.056763658	103,789.19
6/20/31	467.24	.00	467.24	.056763658	103,789.19
6/30/31	6,290.81	6,290.81	.00	.060611418	97,498.38
7/20/31	426.34	.00	426.34	.060611418	97,498.38
7/31/31	6,304.56	6,304.56	.00	.064663228	91,193.82
8/20/31	413.91	.00	413.91	.064663228	91,193.82
8/31/31	6,334.01	6,334.01	.00	.069456570	84,859.81

PAYMENT SCHEDULE REPLICATION
Principal & Interest Payment

C/A Number..... 0000184861
Obligation..... 002454182
Of Payments.. 522

Tot Prin Paid.. 2,118,910.35
Cur Prin Bal... 2,130,229.00
Billed Prin.... 11,318.65

Annual Rate.... 4.940000
1st Pmt Due.... 1/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
9/20/31	386.94	.00	386.94	.069456570	84,859.81
9/30/31	6,376.38	6,376.38	.00	.075140163	78,483.43
10/20/31	348.33	.00	348.33	.075140163	78,483.43
10/31/31	6,393.38	6,393.38	.00	.081461526	72,090.05
11/20/31	332.99	.00	332.99	.081461526	72,090.05
11/30/31	6,434.11	6,434.11	.00	.089251013	65,655.94
12/20/31	295.82	.00	295.82	.089251013	65,655.94
12/31/31	6,453.30	6,453.30	.00	.098289659	59,202.64
YEAR 31	80,936.46	75,602.31	5,334.15		
1/20/32	278.42	.00	278.42	.098289659	59,202.64
1/31/32	6,483.45	6,483.45	.00	.109512852	52,719.19
2/20/32	250.83	.00	250.83	.109512852	52,719.19
2/29/32	6,529.62	6,529.62	.00	.123856607	46,189.57
3/20/32	208.78	.00	208.78	.123856607	46,189.57
3/31/32	6,544.24	6,544.24	.00	.141682202	39,645.33
4/20/32	195.64	.00	195.64	.141682202	39,645.33
4/30/32	6,580.78	6,580.78	.00	.165991303	33,064.55
5/20/32	162.30	.00	162.30	.165991303	33,064.55
5/31/32	6,605.55	6,605.55	.00	.199777405	26,459.00
6/20/32	139.83	.00	139.83	.199777405	26,459.00
6/30/32	6,640.39	6,640.39	.00	.250969046	19,818.61
7/20/32	107.99	.00	107.99	.250969046	19,818.61
7/31/32	6,667.42	6,667.42	.00	.336422180	13,151.19
8/20/32	83.40	.00	83.40	.336422180	13,151.19
8/31/32	6,698.57	6,698.57	.00	.509350864	6,452.62
9/20/32	54.89	.00	54.89	.509350864	6,452.62
9/30/32	6,452.62	6,452.62	.00	.509350864	.00
YEAR 32	60,684.72	59,202.64	1,482.08		

COBANK
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PAYMENT SCHEDULE REPLICATION
Principal & Interest Payment

Brown Land #2

3/25/11
2

C/A Number..... 0000190089
Obligation..... 002485376
Of Payments.. 241

Tot Prin Paid.. 793,750.00
Cur Prin Bal... 793,750.00
Billed Prin.... .00

Annual Rate.... 5.750000
1st Pmt Due.... 4/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
4/20/14	6,097.05	2,585.95	3,511.10	.003654999	704,924.36
5/20/14	5,978.63	2,592.95	3,385.68	.003678337	702,331.41
6/20/14	6,085.35	2,599.98	3,485.37	.003701927	699,731.43
7/20/14	5,967.80	2,607.02	3,360.78	.003725743	697,124.41
8/20/14	6,073.72	2,614.08	3,459.64	.003749804	694,510.33
9/20/14	6,067.97	2,621.16	3,446.81	.003774112	691,889.17
10/20/14	5,951.54	2,628.26	3,323.28	.003798671	689,260.91
11/20/14	6,056.15	2,635.38	3,420.77	.003823486	686,625.53
12/20/14	5,940.59	2,642.51	3,298.08	.003848546	683,983.02
YEAR 2014	72,204.13	31,243.32	40,960.81		
1/20/15	6,044.40	2,649.67	3,394.73	.003873882	681,333.35
2/20/15	6,038.44	2,656.85	3,381.59	.003899486	678,676.50
3/20/15	5,707.22	2,664.04	3,043.18	.003925345	676,012.46
4/20/15	6,026.50	2,671.26	3,355.24	.003951495	673,341.20
5/20/15	5,912.97	2,678.49	3,234.48	.003977908	670,662.71
6/20/15	6,014.64	2,685.75	3,328.89	.004004621	667,976.96
7/20/15	5,901.89	2,693.02	3,208.87	.004031606	665,283.94
8/20/15	6,002.54	2,700.31	3,302.23	.004058883	662,583.63
9/20/15	5,996.53	2,707.63	3,288.90	.004086472	659,876.00
10/20/15	5,885.13	2,714.96	3,170.17	.004114348	657,161.04
11/20/15	5,984.43	2,722.31	3,262.12	.004142531	654,438.73
12/20/15	5,873.76	2,729.69	3,144.07	.004171039	651,709.04
YEAR 2015	71,388.45	32,273.98	39,114.47		
1/20/16	5,972.24	2,737.09	3,235.15	.004199865	648,971.95
2/20/16	5,966.12	2,744.49	3,221.63	.004228980	646,227.46
3/20/16	5,753.67	2,751.93	3,001.74	.004258454	643,475.53
4/20/16	5,953.92	2,759.38	3,194.54	.004288243	640,716.15
5/20/16	5,845.41	2,766.85	3,078.56	.004318370	637,949.30
6/20/16	5,941.49	2,774.35	3,167.14	.004348856	635,174.95
7/20/16	5,833.72	2,781.86	3,051.86	.004379675	632,393.09
8/20/16	5,929.06	2,789.39	3,139.67	.004410848	629,603.70
9/20/16	5,922.86	2,796.95	3,125.91	.004442397	626,806.75
10/20/16	5,816.37	2,804.52	3,011.85	.004474297	624,002.23
11/20/16	5,910.25	2,812.12	3,098.13	.004506586	621,190.11
12/20/16	5,804.89	2,819.74	2,985.15	.004539254	618,370.37
YEAR 2016	70,650.00	33,338.67	37,311.33		
1/20/17	5,897.79	2,827.37	3,070.42	.004572292	615,543.00
2/20/17	5,891.50	2,835.03	3,056.47	.004605738	612,707.97
3/20/17	5,591.53	2,842.71	2,748.82	.004639583	609,865.26

PAYMENT SCHEDULE REPLICATION
Principal & Interest Payment

C/A Number..... 0000190089
Obligation..... 002485376
Of Payments.. 241

Tot Prin Paid.. 793,750.00
Cur Prin Bal... 793,750.00
Billed Prin.... .00

Annual Rate.... 5.750000
1st Pmt Due.... 4/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
4/20/17	5,878.67	2,850.41	3,028.26	.004673835	607,014.85
5/20/17	5,775.37	2,858.13	2,917.24	.004708500	604,156.72
6/20/17	5,865.92	2,865.87	3,000.05	.004743587	601,290.85
7/20/17	5,763.57	2,873.63	2,889.94	.004779101	598,417.22
8/20/17	5,853.13	2,881.41	2,971.72	.004815051	595,535.81
9/20/17	5,846.68	2,889.22	2,957.46	.004851463	592,646.59
10/20/17	5,745.58	2,897.04	2,848.54	.004888309	589,749.55
11/20/17	5,833.83	2,904.89	2,928.94	.004925633	586,844.66
12/20/17	5,733.58	2,912.75	2,820.83	.004963408	583,931.91
YEAR 17	69,677.15	34,438.46	35,238.69		
1/20/18	5,820.76	2,920.65	2,900.11	.005001696	581,011.26
2/20/18	5,814.28	2,928.55	2,885.73	.005040435	578,082.71
3/20/18	5,530.65	2,936.48	2,594.17	.005079688	575,146.23
4/20/18	5,801.03	2,944.44	2,856.59	.005119463	572,201.79
5/20/18	5,703.04	2,952.41	2,750.63	.005159735	569,249.38
6/20/18	5,787.86	2,960.41	2,827.45	.005200550	566,288.97
7/20/18	5,690.86	2,968.43	2,722.43	.005241899	563,320.54
8/20/18	5,774.66	2,976.47	2,798.19	.005283794	560,344.07
9/20/18	5,767.96	2,984.53	2,783.43	.005326245	557,359.54
10/20/18	5,672.33	2,992.61	2,679.72	.005369263	554,366.93
11/20/18	5,754.57	3,000.71	2,753.86	.005412858	551,366.22
12/20/18	5,659.87	3,008.84	2,651.03	.005457062	548,357.38
YEAR 18	68,777.87	35,574.53	33,203.34		
1/20/19	5,741.28	3,016.99	2,724.29	.005501868	545,340.39
2/20/19	5,734.38	3,025.16	2,709.22	.005547287	542,315.23
3/20/19	5,467.83	3,033.35	2,434.48	.005593333	539,281.88
4/20/19	5,721.03	3,041.57	2,679.46	.005640037	536,240.31
5/20/19	5,628.62	3,049.81	2,578.81	.005687394	533,190.50
6/20/19	5,707.34	3,058.07	2,649.27	.005735417	530,132.43
7/20/19	5,615.76	3,066.35	2,549.41	.005784120	527,066.08
8/20/19	5,693.54	3,074.65	2,618.89	.005833519	523,991.43
9/20/19	5,686.68	3,082.98	2,603.70	.005883645	520,908.45
10/20/19	5,596.64	3,091.33	2,505.31	.005934497	517,817.12
11/20/19	5,673.02	3,099.70	2,573.32	.005986090	514,717.42
12/20/19	5,583.90	3,108.10	2,475.80	.006038458	511,609.32
YEAR 19	67,850.02	36,748.06	31,101.96		
1/20/20	5,659.15	3,116.52	2,542.63	.006091601	508,492.80
2/20/20	5,652.28	3,124.96	2,527.32	.006145534	505,367.84
3/20/20	5,483.80	3,133.42	2,350.38	.006200275	502,234.42

C/A Number..... 0000190089
Obligation..... 002485376
Of Payments.. 241

Tot Prin Paid.. 793,750.00
Cur Prin Bal... 793,750.00
Billed Prin.... .00

Annual Rate.... 5.750000
1st Pmt Due.... 4/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
4/20/20	5,638.23	3,141.91	2,496.32	.006255863	499,092.51
5/20/20	5,551.52	3,150.42	2,401.10	.006312296	495,942.09
6/20/20	5,624.15	3,158.95	2,465.20	.006369594	492,783.14
7/20/20	5,538.30	3,167.50	2,370.80	.006427776	489,615.64
8/20/20	5,609.97	3,176.08	2,433.89	.006486884	486,439.56
9/20/20	5,602.88	3,184.68	2,418.20	.006546918	483,254.88
10/20/20	5,518.70	3,193.31	2,325.39	.006607920	480,061.57
11/20/20	5,588.73	3,201.96	2,386.77	.006669894	476,859.61
12/20/20	5,505.42	3,210.63	2,294.79	.006732862	473,648.98
YEAR ~~20~~ 20	66,973.13	37,960.34	29,012.79		
1/20/21	5,574.37	3,219.34	2,355.03	.006796889	470,429.64
2/20/21	5,567.07	3,228.04	2,339.03	.006861897	467,201.60
3/20/21	5,336.03	3,236.79	2,099.24	.006928037	463,964.81
4/20/21	5,552.65	3,245.55	2,307.10	.006995250	460,719.26
5/20/21	5,471.92	3,254.34	2,217.58	.007063607	457,464.92
6/20/21	5,538.21	3,263.16	2,275.05	.007133137	454,201.76
7/20/21	5,458.38	3,272.00	2,186.38	.007203847	450,929.76
8/20/21	5,523.55	3,280.86	2,242.69	.007275767	447,648.90
9/20/21	5,516.12	3,289.74	2,226.38	.007348929	444,359.16
10/20/21	5,437.82	3,298.65	2,139.17	.007423386	441,060.51
11/20/21	5,501.42	3,307.59	2,193.83	.007499175	437,752.92
12/20/21	5,424.21	3,316.54	2,107.67	.007576282	434,436.38
YEAR 21	65,901.75	39,212.60	26,689.15		
1/20/22	5,486.70	3,325.54	2,161.16	.007654837	431,110.84
2/20/22	5,479.26	3,334.53	2,144.73	.007734739	427,776.31
3/20/22	5,266.87	3,343.56	1,923.31	.007816141	424,432.75
4/20/22	5,464.37	3,352.62	2,111.75	.007899060	421,080.13
5/20/22	5,389.57	3,361.70	2,027.87	.007983516	417,718.43
6/20/22	5,449.38	3,370.80	2,078.58	.008069550	414,347.63
7/20/22	5,375.59	3,379.93	1,995.66	.008157232	410,967.70
8/20/22	5,434.19	3,389.09	2,045.10	.008246609	407,578.61
9/20/22	5,426.63	3,398.27	2,028.36	.008337704	404,180.34
10/20/22	5,354.53	3,407.47	1,947.06	.008430568	400,772.87
11/20/22	5,411.46	3,416.70	1,994.76	.008525277	397,356.17
12/20/22	5,340.31	3,425.95	1,914.36	.008621861	393,930.22
YEAR 22 2022	64,878.86	40,506.16	24,372.70		
1/20/23	5,396.21	3,435.24	1,960.97	.008720427	390,494.98
2/20/23	5,388.45	3,444.53	1,943.92	.008820932	387,050.45
3/20/23	5,195.27	3,453.86	1,741.41	.008923539	383,596.59

C/A Number..... 0000190089
Obligation..... 002485376
Of Payments.. 241

Tot Prin Paid.. 793,750.00
Cur Prin Bal... 793,750.00
Billed Prin.... .00

Annual Rate.... 5.750000
1st Pmt Due.... 4/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
4/20/23	5,373.04	3,463.22	1,909.82	.009028286	380,133.37
5/20/23	5,304.65	3,472.60	1,832.05	.009135214	376,660.77
6/20/23	5,357.60	3,482.00	1,875.60	.009244392	373,178.77
7/20/23	5,290.07	3,491.43	1,798.64	.009355918	369,687.34
8/20/23	5,341.89	3,500.89	1,841.00	.009469867	366,186.45
9/20/23	5,334.20	3,510.37	1,823.83	.009586291	362,676.08
10/20/23	5,268.42	3,519.88	1,748.54	.009705299	359,156.20
11/20/23	5,318.52	3,529.41	1,789.11	.009826949	355,626.79
12/20/23	5,253.80	3,538.97	1,714.83	.009951359	352,087.82
YEAR ~~23~~ 23	63,822.12	41,842.40	21,979.72		
1/20/24	5,302.64	3,548.56	1,754.08	.010078621	348,539.26
2/20/24	5,294.76	3,558.16	1,736.60	.010208778	344,981.10
3/20/24	5,176.53	3,567.80	1,608.73	.010342015	341,413.30
4/20/24	5,278.72	3,577.46	1,701.26	.010478384	337,835.84
5/20/24	5,216.78	3,587.15	1,629.63	.010618026	334,248.69
6/20/24	5,262.79	3,596.87	1,665.92	.010761059	330,651.82
7/20/24	5,201.93	3,606.61	1,595.32	.010907576	327,045.21
8/20/24	5,246.65	3,616.38	1,630.27	.011057737	323,428.83
9/20/24	5,238.65	3,626.17	1,612.48	.011211647	319,802.66
10/20/24	5,179.41	3,635.99	1,543.42	.011369480	316,166.67
11/20/24	5,222.36	3,645.84	1,576.52	.011531386	312,520.83
12/20/24	5,164.33	3,655.71	1,508.62	.011697492	308,865.12
YEAR ~~24~~ 24	62,785.55	43,222.70	19,562.85		
1/20/25	5,206.06	3,665.62	1,540.44	.011868028	305,199.50
2/20/25	5,197.81	3,675.54	1,522.27	.012043073	301,523.96
3/20/25	5,045.19	3,685.50	1,359.69	.012222909	297,838.46
4/20/25	5,181.36	3,695.48	1,485.88	.012407665	294,142.98
5/20/25	5,126.10	3,705.49	1,420.61	.012597580	290,437.49
6/20/25	5,164.82	3,715.52	1,449.30	.012792838	286,721.97
7/20/25	5,110.80	3,725.59	1,385.21	.012993737	282,996.38
8/20/25	5,148.28	3,735.68	1,412.60	.013200451	279,260.70
9/20/25	5,139.79	3,745.79	1,394.00	.013413237	275,514.91
10/20/25	5,087.45	3,755.94	1,331.51	.013632438	271,758.97
11/20/25	5,123.22	3,766.11	1,357.11	.013858273	267,992.86
12/20/25	5,071.90	3,776.31	1,295.59	.014091084	264,216.55
YEAR ~~25~~ 25	61,602.78	44,648.57	16,954.21		
1/20/26	5,106.14	3,786.54	1,319.60	.014331199	260,430.01
2/20/26	5,097.79	3,796.79	1,301.00	.014578926	256,633.22
3/20/26	4,966.39	3,807.08	1,159.31	.014834712	252,826.14

PAYMENT SCHEDULE REPLICATION
Principal & Interest Payment

C/A Number..... 0000190089
Obligation..... 002485376
Of Payments.. 241

Tot Prin Paid.. 793,750.00
Cur Prin Bal... 793,750.00
Billed Prin.... .00

Annual Rate.... 5.750000
1st Pmt Due.... 4/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
4/20/26	5,080.76	3,817.39	1,263.37	.015098873	249,008.75
5/20/26	5,032.42	3,827.73	1,204.69	.015371869	245,181.02
6/20/26	5,063.64	3,838.09	1,225.55	.015654107	241,342.93
7/20/26	5,016.58	3,848.49	1,168.09	.015946147	237,494.44
8/20/26	5,046.52	3,858.91	1,187.61	.016248422	233,635.53
9/20/26	5,037.87	3,869.36	1,168.51	.016561522	229,766.17
10/20/26	4,992.62	3,879.84	1,112.78	.016886036	225,886.33
11/20/26	5,020.61	3,890.35	1,130.26	.017222600	221,995.98
12/20/26	4,976.47	3,900.89	1,075.58	.017571894	218,095.09
YEAR 26	60,437.81	46,121.46	14,316.35		
1/20/27	5,003.16	3,911.46	1,091.70	.017934654	214,183.63
2/20/27	4,994.33	3,922.04	1,072.29	.018311576	210,261.59
3/20/27	4,884.88	3,932.67	952.21	.018703701	206,328.92
4/20/27	4,976.86	3,943.32	1,033.54	.019111814	202,385.60
5/20/27	4,935.87	3,954.00	981.87	.019536963	198,431.60
6/20/27	4,959.26	3,964.71	994.55	.019980235	194,466.89
7/20/27	4,919.21	3,975.44	943.77	.020442760	190,491.45
8/20/27	4,941.51	3,986.21	955.30	.020925926	186,505.24
9/20/27	4,932.66	3,997.01	935.65	.021431086	182,508.23
10/20/27	4,894.49	4,007.83	886.66	.021959722	178,500.40
11/20/27	4,914.66	4,018.69	895.97	.022513619	174,481.71
12/20/27	4,877.83	4,029.57	848.26	.023094512	170,452.14
YEAR 27	59,234.72	47,642.95	11,591.77		
1/20/28	4,896.66	4,040.49	856.17	.023704542	166,411.65
2/20/28	4,887.57	4,051.43	836.14	.024345831	162,360.22
3/20/28	4,826.72	4,062.40	764.32	.025020907	158,297.82
4/20/28	4,869.43	4,073.40	796.03	.025732508	154,224.42
5/20/28	4,835.68	4,084.43	751.25	.026483678	150,139.99
6/20/28	4,851.23	4,095.50	755.73	.027277875	146,044.49
7/20/28	4,818.84	4,106.59	712.25	.028118760	141,937.90
8/20/28	4,833.02	4,117.71	715.31	.029010644	137,820.19
9/20/28	4,823.71	4,128.86	694.85	.029958310	133,691.33
10/20/28	4,793.08	4,140.04	653.04	.030967153	129,551.29
11/20/28	4,805.19	4,151.26	653.93	.032043370	125,400.03
12/20/28	4,775.94	4,162.50	613.44	.033193771	121,237.53
YEAR 28	58,017.07	49,214.61	8,802.46		
1/20/29	4,786.66	4,173.77	612.89	.034426385	117,063.76
2/20/29	4,777.32	4,185.08	592.24	.035750432	112,878.68
3/20/29	4,713.98	4,196.41	517.57	.037176285	108,682.27

C/A Number..... 0000190089
Obligation..... 002485376
Of Payments.. 241

Tot Prin Paid.. 793,750.00
Cur Prin Bal... 793,750.00
Billed Prin.... .00

Annual Rate.... 5.750000
1st Pmt Due.... 4/20/11
Frequency..... C Basis Code..... 5

DATE	TOTAL PAYMENT	PRINCIPAL AMOUNT	APPLIED TO INTEREST	PAYMENT PERCENT	PRINCIPAL BALANCE
4/20/29	4,758.67	4,207.78	550.89	.038716342	104,474.49
5/20/29	4,732.60	4,219.17	513.43	.040384691	100,255.32
6/20/29	4,739.83	4,230.60	509.23	.042198259	96,024.72
7/20/29	4,714.99	4,242.06	472.93	.044176749	91,782.66
8/20/29	4,720.93	4,253.55	467.38	.046343721	87,529.11
9/20/29	4,711.37	4,265.07	446.30	.048727446	83,264.04
10/20/29	4,688.54	4,276.62	411.92	.051362148	78,987.42
11/20/29	4,692.34	4,288.20	404.14	.054289657	74,699.22
12/20/29	4,670.82	4,299.81	371.01	.057561645	70,399.41
YEAR 29	56,708.05	50,838.12	5,869.93		
1/20/30	4,673.02	4,311.47	361.55	.061242984	66,087.94
2/20/30	4,663.42	4,323.14	340.28	.065414960	61,764.80
3/20/30	4,624.32	4,334.85	289.47	.070183178	57,429.95
4/20/30	4,644.16	4,346.59	297.57	.075685073	53,083.36
5/20/30	4,625.87	4,358.36	267.51	.082104071	48,725.00
6/20/30	4,624.64	4,370.16	254.48	.089690302	44,354.84
7/20/30	4,607.70	4,382.00	225.70	.098794178	39,972.84
8/20/30	4,604.95	4,393.87	211.08	.109921386	35,578.97
9/20/30	4,595.15	4,405.77	189.38	.123830734	31,173.20
10/20/30	4,580.40	4,417.70	162.70	.141714677	26,755.50
11/20/30	4,575.52	4,429.66	145.86	.165560725	22,325.84
12/20/30	4,562.06	4,441.66	120.40	.198947049	17,884.18
YEAR 30	55,381.21	52,515.23	2,865.98		
1/20/31	4,555.84	4,453.69	102.15	.249029589	13,430.49
2/20/31	4,545.89	4,465.75	80.14	.332508344	8,964.74
3/20/31	4,531.57	4,477.85	53.72	.499495802	4,486.89
4/20/31	4,522.70	4,486.89	35.81	.499495802	.00
YEAR 31	18,156.00	17,884.18	271.82		

CoBank #T03

Kingbrook Rural Water Systems Inc
Long Term Amortizing fix
Rate: 4.45%
Facility/Loan Maturity Date: 03/20/2035
Interest calculations are for estimating purposes only

Date	New Principal Balance	Principal Amount	Interest Amount
	$2,449,842.51		
6/22/15	$2,443,628.89	$6,213.62	$9,402.91
7/20/15	$2,437,089.40	$6,539.49	$9,077.92
8/20/15	$2,430,826.91	$6,262.49	$9,354.15
9/21/15	$2,424,540.42	$6,286.49	$9,329.50
10/20/15	$2,417,930.14	$6,610.28	$9,006.55
11/20/15	$2,411,594.23	$6,335.91	$9,280.90
12/21/15	$2,404,935.95	$6,658.28	$8,957.87
1/20/16	$2,398,550.25	$6,385.70	$9,232.04
2/22/16	$2,392,140.08	$6,410.17	$9,206.11
3/21/16	$2,385,113.96	$7,026.12	$8,591.80
4/20/16	$2,378,652.30	$6,461.66	$9,156.99
5/20/16	$2,371,871.86	$6,780.44	$8,836.02
6/20/16	$2,365,359.46	$6,512.40	$9,104.80
7/20/16	$2,358,529.72	$6,829.74	$8,786.84
8/22/16	$2,351,966.19	$6,563.53	$9,053.79
9/20/16	$2,345,377.51	$6,588.68	$9,029.65
10/20/16	$2,338,473.67	$6,903.84	$8,712.91
11/21/16	$2,331,833.29	$6,640.38	$8,977.12
12/20/16	$2,324,879.23	$6,954.06	$8,663.63
1/20/17	$2,318,186.76	$6,692.47	$8,925.14
2/20/17	$2,311,468.64	$6,718.12	$8,898.88
3/20/17	$2,303,867.61	$7,601.03	$8,016.03
4/20/17	$2,297,094.62	$6,772.99	$8,846.14
5/22/17	$2,290,011.73	$7,082.89	$8,534.30
6/20/17	$2,283,185.65	$6,826.08	$8,793.59
7/20/17	$2,276,051.18	$7,134.47	$8,482.84
8/21/17	$2,269,171.60	$6,879.58	$8,738.46
9/20/17	$2,262,265.66	$6,905.94	$8,712.35
10/20/17	$2,255,053.62	$7,212.04	$8,405.45
11/20/17	$2,248,093.58	$6,960.04	$8,658.18
12/20/17	$2,240,828.98	$7,264.60	$8,353.03
1/22/18	$2,233,814.44	$7,014.54	$8,603.79
2/20/18	$2,226,773.01	$7,041.43	$8,578.06
3/20/18	$2,218,878.84	$7,894.17	$7,723.65
4/20/18	$2,211,780.18	$7,098.66	$8,521.16
5/21/18	$2,204,380.92	$7,399.26	$8,218.69
6/20/18	$2,197,226.71	$7,154.21	$8,465.36
7/20/18	$2,189,773.48	$7,453.23	$8,164.85

8/20/18	$2,182,563.29	$7,210.19	$8,408.59
9/20/18	$2,175,325.47	$7,237.82	$8,380.40
10/22/18	$2,167,791.02	$7,534.45	$8,083.83
11/20/18	$2,160,496.59	$7,294.43	$8,326.41
12/20/18	$2,152,907.15	$7,589.44	$8,028.98
1/21/19	$2,145,555.69	$7,351.46	$8,267.64
2/20/19	$2,138,176.06	$7,379.63	$8,239.82
3/20/19	$2,129,975.24	$8,200.82	$7,417.80
4/22/19	$2,122,535.91	$7,439.33	$8,181.21
5/20/19	$2,114,805.70	$7,730.21	$7,890.38
6/20/19	$2,107,308.24	$7,497.46	$8,121.97
7/22/19	$2,099,521.56	$7,786.68	$7,832.21
8/20/19	$2,091,965.53	$7,556.03	$8,065.47
9/20/19	$2,084,380.55	$7,584.98	$8,034.04
10/21/19	$2,076,508.85	$7,871.70	$7,747.39
11/20/19	$2,068,864.64	$7,644.21	$7,976.53
12/20/19	$2,060,935.40	$7,929.24	$7,689.99
1/20/20	$2,053,231.51	$7,703.89	$7,916.01
2/20/20	$2,045,498.10	$7,733.41	$7,885.97
3/20/20	$2,037,229.36	$8,268.74	$7,350.70
4/20/20	$2,029,434.63	$7,794.73	$7,825.97
5/20/20	$2,021,359.17	$8,075.46	$7,544.13
6/22/20	$2,013,503.63	$7,855.54	$7,764.70
7/20/20	$2,005,369.09	$8,134.54	$7,487.13
8/20/20	$1,997,452.27	$7,916.82	$7,703.57
9/21/20	$1,989,505.12	$7,947.15	$7,672.72
10/20/20	$1,981,281.59	$8,223.53	$7,397.40
11/20/20	$1,973,272.47	$8,009.12	$7,611.47
12/21/20	$1,964,988.74	$8,283.73	$7,336.36
1/20/21	$1,956,917.18	$8,071.56	$7,550.21
2/22/21	$1,948,814.70	$8,102.48	$7,517.76
3/22/21	$1,939,958.48	$8,856.22	$6,766.09
4/20/21	$1,931,791.01	$8,167.47	$7,456.81
5/20/21	$1,923,353.45	$8,437.56	$7,182.90
6/21/21	$1,915,122.35	$8,231.10	$7,390.00
7/20/21	$1,906,622.98	$8,499.37	$7,122.26
8/20/21	$1,898,327.77	$8,295.21	$7,326.04
9/20/21	$1,890,000.78	$8,326.99	$7,293.77
10/20/21	$1,881,408.25	$8,592.53	$7,028.31
11/22/21	$1,873,016.42	$8,391.83	$7,229.63
12/20/21	$1,864,360.91	$8,655.51	$6,967.55
1/20/22	$1,855,903.76	$8,457.15	$7,164.46
2/21/22	$1,847,414.20	$8,489.56	$7,131.58
3/21/22	$1,838,207.03	$9,207.17	$6,415.10
4/20/22	$1,829,649.66	$8,557.37	$7,066.67
5/20/22	$1,820,833.33	$8,816.33	$6,805.04
6/20/22	$1,812,209.38	$8,623.95	$6,998.04

7/20/22	$1,803,328.38	$8,881.00	$6,740.53
8/22/22	$1,794,637.35	$8,691.03	$6,931.12
9/20/22	$1,785,913.02	$8,724.33	$6,899.51
10/20/22	$1,776,934.50	$8,978.52	$6,643.25
11/21/22	$1,768,142.33	$8,792.17	$6,830.20
12/20/22	$1,759,097.91	$9,044.42	$6,578.60
1/20/23	$1,750,237.40	$8,860.51	$6,762.00
2/20/23	$1,741,342.93	$8,894.47	$6,727.63
3/20/23	$1,731,768.63	$9,574.30	$6,047.87
4/20/23	$1,722,803.39	$8,965.24	$6,658.52
5/22/23	$1,713,590.84	$9,212.55	$6,409.79
6/20/23	$1,704,555.94	$9,034.90	$6,590.30
7/20/23	$1,695,275.72	$9,280.22	$6,342.28
8/21/23	$1,686,170.64	$9,105.08	$6,518.00
9/20/23	$1,677,030.67	$9,139.97	$6,483.82
10/20/23	$1,667,648.38	$9,382.29	$6,240.45
11/20/23	$1,658,437.44	$9,210.94	$6,412.38
12/20/23	$1,648,986.20	$9,451.24	$6,171.67
1/22/24	$1,639,703.75	$9,282.45	$6,341.02
2/20/24	$1,630,385.72	$9,318.03	$6,307.35
3/20/24	$1,620,628.92	$9,756.80	$5,866.36
4/22/24	$1,611,237.80	$9,391.12	$6,233.08
5/20/24	$1,601,611.53	$9,626.27	$5,999.38
6/20/24	$1,592,147.54	$9,463.99	$6,159.90
7/22/24	$1,582,450.47	$9,697.07	$5,926.44
8/20/24	$1,572,913.05	$9,537.42	$6,089.03
9/20/24	$1,563,339.09	$9,573.96	$6,049.72
10/21/24	$1,553,535.19	$9,803.90	$5,819.86
11/20/24	$1,543,886.97	$9,648.22	$5,977.30
12/20/24	$1,534,010.94	$9,876.03	$5,747.91
1/20/25	$1,524,287.91	$9,723.03	$5,901.44
2/20/25	$1,514,527.62	$9,760.29	$5,863.82
3/20/25	$1,504,168.29	$10,359.33	$5,264.87
4/21/25	$1,494,330.90	$9,837.39	$5,788.22
5/20/25	$1,484,271.10	$10,059.80	$5,565.80
6/20/25	$1,474,357.46	$9,913.64	$5,711.27
7/21/25	$1,464,223.59	$10,133.87	$5,490.69
8/20/25	$1,454,233.13	$9,990.46	$5,635.88
9/22/25	$1,444,204.39	$10,028.74	$5,596.00
10/20/25	$1,433,958.70	$10,245.69	$5,381.63
11/20/25	$1,423,852.27	$10,106.43	$5,518.91
12/22/25	$1,413,531.11	$10,321.16	$5,303.86
1/20/26	$1,403,346.40	$10,184.71	$5,443.36
2/20/26	$1,393,122.67	$10,223.73	$5,401.47
3/20/26	$1,382,343.14	$10,779.53	$4,845.76
4/20/26	$1,372,038.92	$10,304.22	$5,322.38
5/20/26	$1,361,525.62	$10,513.30	$5,112.18

6/22/26	$1,351,141.63	$10,383.99	$5,241.98
7/20/26	$1,340,550.83	$10,590.80	$5,037.44
8/20/26	$1,330,086.47	$10,464.36	$5,161.79
9/21/26	$1,319,582.01	$10,504.46	$5,121.39
10/20/26	$1,308,874.18	$10,707.83	$4,919.42
11/20/26	$1,298,288.43	$10,585.75	$5,040.68
12/21/26	$1,287,501.64	$10,786.79	$4,839.35
1/20/27	$1,276,833.99	$10,667.65	$4,960.30
2/22/27	$1,266,125.47	$10,708.52	$4,917.81
3/22/27	$1,254,906.39	$11,219.08	$4,410.00
4/20/27	$1,244,113.84	$10,792.55	$4,837.86
5/20/27	$1,233,126.15	$10,987.69	$4,638.93
6/21/27	$1,222,250.14	$10,876.01	$4,751.08
7/20/27	$1,211,181.37	$11,068.77	$4,559.40
8/20/27	$1,200,221.27	$10,960.10	$4,667.18
9/20/27	$1,189,219.17	$11,002.10	$4,624.92
10/20/27	$1,178,027.91	$11,191.26	$4,435.86
11/22/27	$1,166,940.77	$11,087.14	$4,540.42
12/20/27	$1,155,666.90	$11,273.87	$4,356.19
1/20/28	$1,144,494.07	$11,172.83	$4,454.92
2/21/28	$1,133,278.43	$11,215.64	$4,411.88
3/20/28	$1,121,739.64	$11,538.79	$4,090.22
4/20/28	$1,110,436.80	$11,302.84	$4,325.54
5/22/28	$1,098,953.39	$11,483.41	$4,144.42
6/20/28	$1,087,563.24	$11,390.15	$4,240.94
7/20/28	$1,075,995.01	$11,568.23	$4,059.79
8/21/28	$1,064,516.88	$11,478.13	$4,150.33
9/20/28	$1,052,994.77	$11,522.11	$4,107.54
10/20/28	$1,041,298.35	$11,696.42	$3,931.92
11/20/28	$1,029,687.27	$11,611.08	$4,017.67
12/20/28	$1,017,904.41	$11,782.86	$3,845.69
1/22/29	$1,006,203.68	$11,700.73	$3,928.23
2/20/29	$994,458.12	$11,745.56	$3,886.09
3/20/29	$982,298.77	$12,159.35	$3,469.51
4/20/29	$970,461.60	$11,837.17	$3,792.67
5/21/29	$958,459.12	$12,002.48	$3,626.60
6/20/29	$946,530.60	$11,928.52	$3,702.44
7/20/29	$934,439.37	$12,091.23	$3,538.06
8/20/29	$922,418.81	$12,020.56	$3,609.12
9/20/29	$910,352.19	$12,066.62	$3,562.89
10/22/29	$898,126.80	$12,225.39	$3,404.23
11/20/29	$885,967.09	$12,159.71	$3,473.30
12/20/29	$873,651.27	$12,315.82	$3,314.02
1/21/30	$861,397.78	$12,253.49	$3,376.71
2/20/30	$849,097.33	$12,300.45	$3,331.12
3/20/30	$836,434.87	$12,662.46	$2,967.71
4/22/30	$824,038.76	$12,396.11	$3,234.91

5/20/30	$811,493.29	$12,545.47	$3,087.99
6/20/30	$799,001.61	$12,491.68	$3,139.07
7/22/30	$786,363.29	$12,638.32	$2,992.30
8/20/30	$773,775.31	$12,587.98	$3,046.10
9/20/30	$761,139.09	$12,636.22	$2,994.63
10/21/30	$748,360.37	$12,778.72	$2,852.24
11/20/30	$735,626.77	$12,733.60	$2,899.27
12/20/30	$722,753.44	$12,873.33	$2,757.85
1/20/31	$709,921.71	$12,831.73	$2,799.79
2/20/31	$697,040.81	$12,880.90	$2,750.51
3/20/31	$683,852.07	$13,188.74	$2,442.79
4/21/31	$670,871.27	$12,980.80	$2,651.46
5/20/31	$657,757.80	$13,113.47	$2,519.91
6/20/31	$644,677.01	$13,080.79	$2,551.29
7/21/31	$631,466.41	$13,210.60	$2,421.39
8/20/31	$618,284.87	$13,181.54	$2,452.41
9/22/31	$605,052.82	$13,232.05	$2,400.19
10/20/31	$591,695.28	$13,357.54	$2,278.09
11/20/31	$578,361.34	$13,333.94	$2,298.71
12/22/31	$564,904.82	$13,456.52	$2,176.07
1/20/32	$551,468.22	$13,436.60	$2,199.62
2/20/32	$537,980.14	$13,488.08	$2,144.75
3/22/32	$524,307.37	$13,672.77	$1,960.19
4/20/32	$510,715.21	$13,592.16	$2,044.61
5/20/32	$497,007.83	$13,707.38	$1,925.82
6/21/32	$483,311.06	$13,696.77	$1,936.70
7/20/32	$469,502.06	$13,809.00	$1,826.14
8/20/32	$455,699.89	$13,802.17	$1,831.54
9/20/32	$441,844.83	$13,855.06	$1,778.63
10/20/32	$427,882.06	$13,962.77	$1,671.05
11/22/32	$413,920.40	$13,961.66	$1,672.41
12/20/32	$399,854.07	$14,066.33	$1,571.20
1/20/33	$385,785.01	$14,069.06	$1,565.26
2/21/33	$371,662.04	$14,122.97	$1,511.35
3/21/33	$357,347.12	$14,314.92	$1,321.27
4/20/33	$343,115.17	$14,231.95	$1,404.73
5/20/33	$328,786.28	$14,328.89	$1,305.81
6/20/33	$314,444.89	$14,341.39	$1,293.54
7/20/33	$300,009.68	$14,435.21	$1,199.75
8/22/33	$285,558.02	$14,451.66	$1,183.52
9/20/33	$271,050.98	$14,507.04	$1,131.76
10/20/33	$256,454.85	$14,596.13	$1,039.22
11/21/33	$241,836.29	$14,618.56	$1,017.00
12/20/33	$227,131.82	$14,704.47	$932.95
1/20/34	$212,400.89	$14,730.93	$904.89
2/20/34	$197,613.52	$14,787.37	$848.51
3/20/34	$182,696.20	$14,917.32	$718.69

Rural Development Loan #35

Principal borrowed:	$4,991,000.00
Regular Payment amount:	$18,118.00
*Total Interest Paid:	$3,036,497.61
Annual Payments:	12
Total Payments:	480 (40 yrs)
Annual interest rate:	3%

Current principal balance 1-1-2015 $ 4,772,618.08

Pmt		Principal	Interest	Prin Bal
	2015	6,171.03	11,946.97	4,772,618.08
	2015	6,186.45	11,931.55	4,766,431.63
	2015	6,201.92	11,916.08	4,760,229.71
	2015	6,217.43	11,900.57	4,754,012.28
	2015	6,232.97	11,885.03	4,747,779.31
	2015	6,248.55	11,869.45	4,741,530.76
	2015	6,264.17	11,853.83	4,735,266.59
	2015	6,279.83	11,838.17	4,728,986.76
	2015	6,295.53	11,822.47	4,722,691.23
	2015	6,311.27	11,806.73	4,716,379.96
	2015	6,327.05	11,790.95	4,710,052.91
	2015	6,342.87	11,775.13	4,703,710.04
		75,079.07	142,336.93	
	2016	6,358.72	11,759.28	4,697,351.32
	2016	6,374.62	11,743.38	4,690,976.70
	2016	6,390.56	11,727.44	4,684,586.14
	2016	6,406.53	11,711.47	4,678,179.61
	2016	6,422.55	11,695.45	4,671,757.06
	2016	6,438.61	11,679.39	4,665,318.45
	2016	6,454.70	11,663.30	4,658,863.75
	2016	6,470.84	11,647.16	4,652,392.91
	2016	6,487.02	11,630.98	4,645,905.89
	2016	6,503.24	11,614.76	4,639,402.65
	2016	6,519.49	11,598.51	4,632,883.16
	2016	6,535.79	11,582.21	4,626,347.37
		77,362.67	140,053.33	
	2017	6,552.13	11,565.87	4,619,795.24
	2017	6,568.51	11,549.49	4,613,226.73
	2017	6,584.93	11,533.07	4,606,641.80
	2017	6,601.40	11,516.60	4,600,040.40
	2017	6,617.90	11,500.10	4,593,422.50
	2017	6,634.44	11,483.56	4,586,788.06

2017	6,651.03	11,466.97	4,580,137.03
2017	6,667.66	11,450.34	4,573,469.37
2017	6,684.33	11,433.67	4,566,785.04
2017	6,701.04	11,416.96	4,560,084.00
2017	6,717.79	11,400.21	4,553,366.21
2017	6,734.58	11,383.42	4,546,631.63
	79,715.74	137,700.26	
2018	6,751.42	11,366.58	4,539,880.21
2018	6,768.30	11,349.70	4,533,111.91
2018	6,785.22	11,332.78	4,526,326.69
2018	6,802.18	11,315.82	4,519,524.51
2018	6,819.19	11,298.81	4,512,705.32
2018	6,836.24	11,281.76	4,505,869.08
2018	6,853.33	11,264.67	4,499,015.75
2018	6,870.46	11,247.54	4,492,145.29
2018	6,887.64	11,230.36	4,485,257.65
2018	6,904.86	11,213.14	4,478,352.79
2018	6,922.12	11,195.88	4,471,430.67
2018	6,939.42	11,178.58	4,464,491.25
	82,140.38	135,275.62	
2019	6,956.77	11,161.23	4,457,534.48
2019	6,974.16	11,143.84	4,450,560.32
2019	6,991.60	11,126.40	4,443,568.72
2019	7,009.08	11,108.92	4,436,559.64
2019	7,026.60	11,091.40	4,429,533.04
2019	7,044.17	11,073.83	4,422,488.87
2019	7,061.78	11,056.22	4,415,427.09
2019	7,079.43	11,038.57	4,408,347.66
2019	7,097.13	11,020.87	4,401,250.53
2019	7,114.87	11,003.13	4,394,135.66
2019	7,132.66	10,985.34	4,387,003.00
2019	7,150.49	10,967.51	4,379,852.51
	84,638.74	132,777.26	
61	7,168.37	10,949.63	4,372,684.14
62	7,186.29	10,931.71	4,365,497.85
63	7,204.26	10,913.74	4,358,293.59
64	7,222.27	10,895.73	4,351,071.32
65	7,240.32	10,877.68	4,343,831.00
66	7,258.42	10,859.58	4,336,572.58
67	7,276.57	10,841.43	4,329,296.01
68	7,294.76	10,823.24	4,322,001.25
69	7,313.00	10,805.00	4,314,688.25
70	7,331.28	10,786.72	4,307,356.97
71	7,349.61	10,768.39	4,300,007.36

72	7,367.98	10,750.02	4,292,639.38
73	7,386.40	10,731.60	4,285,252.98
74	7,404.87	10,713.13	4,277,848.11
75	7,423.38	10,694.62	4,270,424.73
76	7,441.94	10,676.06	4,262,982.79
77	7,460.54	10,657.46	4,255,522.25
78	7,479.19	10,638.81	4,248,043.06
79	7,497.89	10,620.11	4,240,545.17
80	7,516.64	10,601.36	4,233,028.53
81	7,535.43	10,582.57	4,225,493.10
82	7,554.27	10,563.73	4,217,938.83
83	7,573.15	10,544.85	4,210,365.68
84	7,592.09	10,525.91	4,202,773.59
85	7,611.07	10,506.93	4,195,162.52
86	7,630.09	10,487.91	4,187,532.43
87	7,649.17	10,468.83	4,179,883.26
88	7,668.29	10,449.71	4,172,214.97
89	7,687.46	10,430.54	4,164,527.51
90	7,706.68	10,411.32	4,156,820.83
91	7,725.95	10,392.05	4,149,094.88
92	7,745.26	10,372.74	4,141,349.62
93	7,764.63	10,353.37	4,133,584.99
94	7,784.04	10,333.96	4,125,800.95
95	7,803.50	10,314.50	4,117,997.45
96	7,823.01	10,294.99	4,110,174.44
97	7,842.56	10,275.44	4,102,331.88
98	7,862.17	10,255.83	4,094,469.71
99	7,881.83	10,236.17	4,086,587.88
100	7,901.53	10,216.47	4,078,686.35
101	7,921.28	10,196.72	4,070,765.07
102	7,941.09	10,176.91	4,062,823.98
103	7,960.94	10,157.06	4,054,863.04
104	7,980.84	10,137.16	4,046,882.20
105	8,000.79	10,117.21	4,038,881.41
106	8,020.80	10,097.20	4,030,860.61
107	8,040.85	10,077.15	4,022,819.76
108	8,060.95	10,057.05	4,014,758.81
109	8,081.10	10,036.90	4,006,677.71
110	8,101.31	10,016.69	3,998,576.40

111	8,121.56	9,996.44	3,990,454.84
112	8,141.86	9,976.14	3,982,312.98
113	8,162.22	9,955.78	3,974,150.76
114	8,182.62	9,935.38	3,965,968.14
115	8,203.08	9,914.92	3,957,765.06
116	8,223.59	9,894.41	3,949,541.47
117	8,244.15	9,873.85	3,941,297.32
118	8,264.76	9,853.24	3,933,032.56
119	8,285.42	9,832.58	3,924,747.14
120	8,306.13	9,811.87	3,916,441.01
121	8,326.90	9,791.10	3,908,114.11
122	8,347.71	9,770.29	3,899,766.40
123	8,368.58	9,749.42	3,891,397.82
124	8,389.51	9,728.49	3,883,008.31
125	8,410.48	9,707.52	3,874,597.83
126	8,431.51	9,686.49	3,866,166.32
127	8,452.58	9,665.42	3,857,713.74
128	8,473.72	9,644.28	3,849,240.02
129	8,494.90	9,623.10	3,840,745.12
130	8,516.14	9,601.86	3,832,228.98
131	8,537.43	9,580.57	3,823,691.55
132	8,558.77	9,559.23	3,815,132.78
133	8,580.17	9,537.83	3,806,552.61
134	8,601.62	9,516.38	3,797,950.99
135	8,623.12	9,494.88	3,789,327.87
136	8,644.68	9,473.32	3,780,683.19
137	8,666.29	9,451.71	3,772,016.90
138	8,687.96	9,430.04	3,763,328.94
139	8,709.68	9,408.32	3,754,619.26
140	8,731.45	9,386.55	3,745,887.81
141	8,753.28	9,364.72	3,737,134.53
142	8,775.16	9,342.84	3,728,359.37
143	8,797.10	9,320.90	3,719,562.27
144	8,819.09	9,298.91	3,710,743.18
145	8,841.14	9,276.86	3,701,902.04
146	8,863.24	9,254.76	3,693,038.80
147	8,885.40	9,232.60	3,684,153.40
148	8,907.62	9,210.38	3,675,245.78
149	8,929.89	9,188.11	3,666,315.89
150	8,952.21	9,165.79	3,657,363.68
151	8,974.59	9,143.41	3,648,389.09

152	8,997.03	9,120.97	3,639,392.06
153	9,019.52	9,098.48	3,630,372.54
154	9,042.07	9,075.93	3,621,330.47
155	9,064.67	9,053.33	3,612,265.80
156	9,087.34	9,030.66	3,603,178.46
157	9,110.05	9,007.95	3,594,068.41
158	9,132.83	8,985.17	3,584,935.58
159	9,155.66	8,962.34	3,575,779.92
160	9,178.55	8,939.45	3,566,601.37
161	9,201.50	8,916.50	3,557,399.87
162	9,224.50	8,893.50	3,548,175.37
163	9,247.56	8,870.44	3,538,927.81
164	9,270.68	8,847.32	3,529,657.13
165	9,293.86	8,824.14	3,520,363.27
166	9,317.09	8,800.91	3,511,046.18
167	9,340.38	8,777.62	3,501,705.80
168	9,363.74	8,754.26	3,492,342.06
169	9,387.14	8,730.86	3,482,954.92
170	9,410.61	8,707.39	3,473,544.31
171	9,434.14	8,683.86	3,464,110.17
172	9,457.72	8,660.28	3,454,652.45
173	9,481.37	8,636.63	3,445,171.08
174	9,505.07	8,612.93	3,435,666.01
175	9,528.83	8,589.17	3,426,137.18
176	9,552.66	8,565.34	3,416,584.52
177	9,576.54	8,541.46	3,407,007.98
178	9,600.48	8,517.52	3,397,407.50
179	9,624.48	8,493.52	3,387,783.02
180	9,648.54	8,469.46	3,378,134.48
181	9,672.66	8,445.34	3,368,461.82
182	9,696.85	8,421.15	3,358,764.97
183	9,721.09	8,396.91	3,349,043.88
184	9,745.39	8,372.61	3,339,298.49
185	9,769.75	8,348.25	3,329,528.74
186	9,794.18	8,323.82	3,319,734.56
187	9,818.66	8,299.34	3,309,915.90
188	9,843.21	8,274.79	3,300,072.69
189	9,867.82	8,250.18	3,290,204.87
190	9,892.49	8,225.51	3,280,312.38
191	9,917.22	8,200.78	3,270,395.16
192	9,942.01	8,175.99	3,260,453.15

193	9,966.87	8,151.13	3,250,486.28
194	9,991.78	8,126.22	3,240,494.50
195	10,016.76	8,101.24	3,230,477.74
196	10,041.81	8,076.19	3,220,435.93
197	10,066.91	8,051.09	3,210,369.02
198	10,092.08	8,025.92	3,200,276.94
199	10,117.31	8,000.69	3,190,159.63
200	10,142.60	7,975.40	3,180,017.03
201	10,167.96	7,950.04	3,169,849.07
202	10,193.38	7,924.62	3,159,655.69
203	10,218.86	7,899.14	3,149,436.83
204	10,244.41	7,873.59	3,139,192.42
205	10,270.02	7,847.98	3,128,922.40
206	10,295.69	7,822.31	3,118,626.71
207	10,321.43	7,796.57	3,108,305.28
208	10,347.24	7,770.76	3,097,958.04
209	10,373.10	7,744.90	3,087,584.94
210	10,399.04	7,718.96	3,077,185.90
211	10,425.04	7,692.96	3,066,760.86
212	10,451.10	7,666.90	3,056,309.76
213	10,477.23	7,640.77	3,045,832.53
214	10,503.42	7,614.58	3,035,329.11
215	10,529.68	7,588.32	3,024,799.43
216	10,556.00	7,562.00	3,014,243.43
217	10,582.39	7,535.61	3,003,661.04
218	10,608.85	7,509.15	2,993,052.19
219	10,635.37	7,482.63	2,982,416.82
220	10,661.96	7,456.04	2,971,754.86
221	10,688.61	7,429.39	2,961,066.25
222	10,715.33	7,402.67	2,950,350.92
223	10,742.12	7,375.88	2,939,608.80
224	10,768.98	7,349.02	2,928,839.82
225	10,795.90	7,322.10	2,918,043.92
226	10,822.89	7,295.11	2,907,221.03
227	10,849.95	7,268.05	2,896,371.08
228	10,877.07	7,240.93	2,885,494.01
229	10,904.26	7,213.74	2,874,589.75
230	10,931.53	7,186.47	2,863,658.22
231	10,958.85	7,159.15	2,852,699.37

232	10,986.25	7,131.75	2,841,713.12
233	11,013.72	7,104.28	2,830,699.40
234	11,041.25	7,076.75	2,819,658.15
235	11,068.85	7,049.15	2,808,589.30
236	11,096.53	7,021.47	2,797,492.77
237	11,124.27	6,993.73	2,786,368.50
238	11,152.08	6,965.92	2,775,216.42
239	11,179.96	6,938.04	2,764,036.46
240	11,207.91	6,910.09	2,752,828.55
241	11,235.93	6,882.07	2,741,592.62
242	11,264.02	6,853.98	2,730,328.60
243	11,292.18	6,825.82	2,719,036.42
244	11,320.41	6,797.59	2,707,716.01
245	11,348.71	6,769.29	2,696,367.30
246	11,377.08	6,740.92	2,684,990.22
247	11,405.52	6,712.48	2,673,584.70
248	11,434.04	6,683.96	2,662,150.66
249	11,462.62	6,655.38	2,650,688.04
250	11,491.28	6,626.72	2,639,196.76
251	11,520.01	6,597.99	2,627,676.75
252	11,548.81	6,569.19	2,616,127.94
253	11,577.68	6,540.32	2,604,550.26
254	11,606.62	6,511.38	2,592,943.64
255	11,635.64	6,482.36	2,581,308.00
256	11,664.73	6,453.27	2,569,643.27
257	11,693.89	6,424.11	2,557,949.38
258	11,723.13	6,394.87	2,546,226.25
259	11,752.43	6,365.57	2,534,473.82
260	11,781.82	6,336.18	2,522,692.00
261	11,811.27	6,306.73	2,510,880.73
262	11,840.80	6,277.20	2,499,039.93
263	11,870.40	6,247.60	2,487,169.53
264	11,900.08	6,217.92	2,475,269.45
265	11,929.83	6,188.17	2,463,339.62
266	11,959.65	6,158.35	2,451,379.97
267	11,989.55	6,128.45	2,439,390.42
268	12,019.52	6,098.48	2,427,370.90
269	12,049.57	6,068.43	2,415,321.33
270	12,079.70	6,038.30	2,403,241.63
271	12,109.90	6,008.10	2,391,131.73
272	12,140.17	5,977.83	2,378,991.56

273	12,170.52	5,947.48	2,366,821.04
274	12,200.95	5,917.05	2,354,620.09
275	12,231.45	5,886.55	2,342,388.64
276	12,262.03	5,855.97	2,330,126.61
277	12,292.68	5,825.32	2,317,833.93
278	12,323.42	5,794.58	2,305,510.51
279	12,354.22	5,763.78	2,293,156.29
280	12,385.11	5,732.89	2,280,771.18
281	12,416.07	5,701.93	2,268,355.11
282	12,447.11	5,670.89	2,255,908.00
283	12,478.23	5,639.77	2,243,429.77
284	12,509.43	5,608.57	2,230,920.34
285	12,540.70	5,577.30	2,218,379.64
286	12,572.05	5,545.95	2,205,807.59
287	12,603.48	5,514.52	2,193,204.11
288	12,634.99	5,483.01	2,180,569.12
289	12,666.58	5,451.42	2,167,902.54
290	12,698.24	5,419.76	2,155,204.30
291	12,729.99	5,388.01	2,142,474.31
292	12,761.81	5,356.19	2,129,712.50
293	12,793.72	5,324.28	2,116,918.78
294	12,825.70	5,292.30	2,104,093.08
295	12,857.77	5,260.23	2,091,235.31
296	12,889.91	5,228.09	2,078,345.40
297	12,922.14	5,195.86	2,065,423.26
298	12,954.44	5,163.56	2,052,468.82
299	12,986.83	5,131.17	2,039,481.99
300	13,019.30	5,098.70	2,026,462.69
301	13,051.84	5,066.16	2,013,410.85
302	13,084.47	5,033.53	2,000,326.38
303	13,117.18	5,000.82	1,987,209.20
304	13,149.98	4,968.02	1,974,059.22
305	13,182.85	4,935.15	1,960,876.37
306	13,215.81	4,902.19	1,947,660.56
307	13,248.85	4,869.15	1,934,411.71
308	13,281.97	4,836.03	1,921,129.74
309	13,315.18	4,802.82	1,907,814.56
310	13,348.46	4,769.54	1,894,466.10
311	13,381.83	4,736.17	1,881,084.27
312	13,415.29	4,702.71	1,867,668.98

313	13,448.83	4,669.17	1,854,220.15
314	13,482.45	4,635.55	1,840,737.70
315	13,516.16	4,601.84	1,827,221.54
316	13,549.95	4,568.05	1,813,671.59
317	13,583.82	4,534.18	1,800,087.77
318	13,617.78	4,500.22	1,786,469.99
319	13,651.83	4,466.17	1,772,818.16
320	13,685.95	4,432.05	1,759,132.21
321	13,720.17	4,397.83	1,745,412.04
322	13,754.47	4,363.53	1,731,657.57
323	13,788.86	4,329.14	1,717,868.71
324	13,823.33	4,294.67	1,704,045.38
325	13,857.89	4,260.11	1,690,187.49
326	13,892.53	4,225.47	1,676,294.96
327	13,927.26	4,190.74	1,662,367.70
328	13,962.08	4,155.92	1,648,405.62
329	13,996.99	4,121.01	1,634,408.63
330	14,031.98	4,086.02	1,620,376.65
331	14,067.06	4,050.94	1,606,309.59
332	14,102.23	4,015.77	1,592,207.36
333	14,137.48	3,980.52	1,578,069.88
334	14,172.83	3,945.17	1,563,897.05
335	14,208.26	3,909.74	1,549,688.79
336	14,243.78	3,874.22	1,535,445.01
337	14,279.39	3,838.61	1,521,165.62
338	14,315.09	3,802.91	1,506,850.53
339	14,350.87	3,767.13	1,492,499.66
340	14,386.75	3,731.25	1,478,112.91
341	14,422.72	3,695.28	1,463,690.19
342	14,458.77	3,659.23	1,449,231.42
343	14,494.92	3,623.08	1,434,736.50
344	14,531.16	3,586.84	1,420,205.34
345	14,567.49	3,550.51	1,405,637.85
346	14,603.91	3,514.09	1,391,033.94
347	14,640.42	3,477.58	1,376,393.52
348	14,677.02	3,440.98	1,361,716.50
349	14,713.71	3,404.29	1,347,002.79
350	14,750.49	3,367.51	1,332,252.30
351	14,787.37	3,330.63	1,317,464.93
352	14,824.34	3,293.66	1,302,640.59

353	14,861.40	3,256.60	1,287,779.19
354	14,898.55	3,219.45	1,272,880.64
355	14,935.80	3,182.20	1,257,944.84
356	14,973.14	3,144.86	1,242,971.70
357	15,010.57	3,107.43	1,227,961.13
358	15,048.10	3,069.90	1,212,913.03
359	15,085.72	3,032.28	1,197,827.31
360	15,123.43	2,994.57	1,182,703.88
361	15,161.24	2,956.76	1,167,542.64
362	15,199.14	2,918.86	1,152,343.50
363	15,237.14	2,880.86	1,137,106.36
364	15,275.23	2,842.77	1,121,831.13
365	15,313.42	2,804.58	1,106,517.71
366	15,351.71	2,766.29	1,091,166.00
367	15,390.09	2,727.91	1,075,775.91
368	15,428.56	2,689.44	1,060,347.35
369	15,467.13	2,650.87	1,044,880.22
370	15,505.80	2,612.20	1,029,374.42
371	15,544.56	2,573.44	1,013,829.86
372	15,583.43	2,534.57	998,246.43
373	15,622.38	2,495.62	982,624.05
374	15,661.44	2,456.56	966,962.61
375	15,700.59	2,417.41	951,262.02
376	15,739.84	2,378.16	935,522.18
377	15,779.19	2,338.81	919,742.99
378	15,818.64	2,299.36	903,924.35
379	15,858.19	2,259.81	888,066.16
380	15,897.83	2,220.17	872,168.33
381	15,937.58	2,180.42	856,230.75
382	15,977.42	2,140.58	840,253.33
383	16,017.37	2,100.63	824,235.96
384	16,057.41	2,060.59	808,178.55
385	16,097.55	2,020.45	792,081.00
386	16,137.80	1,980.20	775,943.20
387	16,178.14	1,939.86	759,765.06
388	16,218.59	1,899.41	743,546.47
389	16,259.13	1,858.87	727,287.34
390	16,299.78	1,818.22	710,987.56
391	16,340.53	1,777.47	694,647.03
392	16,381.38	1,736.62	678,265.65
393	16,422.34	1,695.66	661,843.31

394	16,463.39	1,654.61	645,379.92
395	16,504.55	1,613.45	628,875.37
396	16,545.81	1,572.19	612,329.56
397	16,587.18	1,530.82	595,742.38
398	16,628.64	1,489.36	579,113.74
399	16,670.22	1,447.78	562,443.52
400	16,711.89	1,406.11	545,731.63
401	16,753.67	1,364.33	528,977.96
402	16,795.56	1,322.44	512,182.40
403	16,837.54	1,280.46	495,344.86
404	16,879.64	1,238.36	478,465.22
405	16,921.84	1,196.16	461,543.38
406	16,964.14	1,153.86	444,579.24
407	17,006.55	1,111.45	427,572.69
408	17,049.07	1,068.93	410,523.62
409	17,091.69	1,026.31	393,431.93
410	17,134.42	983.58	376,297.51
411	17,177.26	940.74	359,120.25
412	17,220.20	897.8	341,900.05
413	17,263.25	854.75	324,636.80
414	17,306.41	811.59	307,330.39
415	17,349.67	768.33	289,980.72
416	17,393.05	724.95	272,587.67
417	17,436.53	681.47	255,151.14
418	17,480.12	637.88	237,671.02
419	17,523.82	594.18	220,147.20
420	17,567.63	550.37	202,579.57
421	17,611.55	506.45	184,968.02
422	17,655.58	462.42	167,312.44
423	17,699.72	418.28	149,612.72
424	17,743.97	374.03	131,868.75
425	17,788.33	329.67	114,080.42
426	17,832.80	285.2	96,247.62
427	17,877.38	240.62	78,370.24
428	17,922.07	195.93	60,448.17
429	17,966.88	151.12	42,481.29
430	18,011.80	106.2	24,469.49
431	18,056.83	61.17	6,412.66
432	*6,412.66	16.03	0

Kingbrook Rural Water System, Inc.
BOARD OPERATING GUIDE #8-1

RATE TARIFFS
(Effective January 1, 2016)

I. Farm, Rural Residential and Small Town:

Availability: To applicants for farm, rural residential and small town use served through a meter size 1 inch or less.

Rate: The applicant shall pay a monthly debt service charge of $31.00 plus pay for all water used at the rate of $3.65 per thousand gallons.

II. Pasture Tap:

Availability: To applicants for water service for livestock and other non-residential use through a meter size 1 inch or less. Meter pits for pasture taps will typically be located not more than 100 feet into the field measured from the horizontal direction of the main.

Rate: The applicant shall pay an annual debt service charge of $372.00 plus pay for all water used at the rate of $3.65 per thousand gallons.

III. Commercial User:

Availability: To applicants for water service requiring a meter size larger than 1 inch or who may require more than one meter at a single point of use.

Rate: The applicant shall pay a monthly debt service charge of $35.00 plus pay for all water used at the rate of $3.85 per thousand gallons.

IV. Bulk User:

Availability: To applicants classified as bulk users for resale and distribution to others.

Rate: The applicant shall pay a monthly debt service charge to be determined by Kingbrook based on costs for the particular water service, plus pay for all water used at the rate of $3.00 per thousand gallons.

V. Disadvantaged Community:

Availability: To applicants that live in communities that qualify as "disadvantaged" under current South Dakota funding guidelines.

Rate: The applicant shall pay a monthly debt service charge $16.75. The monthly debt service charge will be determined by Kingbrook based on costs for that particular water service, plus pay for all water at a rate of $3.65 per thousand gallon used.

NOTE: Beginning in 2015, Kingbrook will transition to a new Badger Beacon meter reading system that will replace all remaining self read accounts, as well as those currently being read by Kingbrook, i.e., pasture taps, quarterlies and Carthage. When a new Beacon service is installed or a current service converted to Beacon, the monthly minimum for that service listed in paragraphs I, II, III and V will be increased by $2.00.

Responsibility: The General Manager shall be accountable for interpreting and administering this Guide on a consistent basis. He shall recommend changes to the Board when needed.

Attest: Scott Tolzin _____ October 19, 2015
Secretary

Reference Minutes and Adopted: July 20, 2015

Kingbrook Rural Water System
2017 Improvements Project
Authorized Signatory
Resolution 2016-1

WHEREAS, the Board of Directors of Kingbrook Rural Water System, Inc., proposes to construct pipeline improvements to connect approximately 220 new service locations, install 140 miles of new pipelines and to improve the reliability of the existing water system.

WHEREAS, the Kingbrook Rural Water System is applying to the SD Department of Environment and Natural Resources for up to $9,550,400 of Drinking Water State Revolving Loan Funds with a term of 20 years, an interest rate of 3%, and the loan secured by water user fees and water system assets; and

THEREFORE BE IT RESOLVED the Board of Directors of Kingbrook Rural Water System, Inc., authorizes its General Manager, Randy Jencks also known as R.C. Jencks, to apply for financing for the 2017 Improvements Project. The Board of Directors also authorizes its General Manager, Randy Jencks, to execute any and all loan and grant fund applications, contracts, agreements, pay requests and other required documents necessary to do so.

_____ _____

Chairman, Date
Kingbrook Rural Water System, Inc.

Attest:

_____ _____

Secretary, Date
Kingbrook Rural Water System, Inc.

MINUTES OF REGULAR MEETING OF BOARD OF DIRECTORS OF KINGBROOK RURAL WATER SYSTEM, INC.

Monday, December 21, 2015 – 10:00 a.m.

The Regular Meeting of the Board of Directors of KINGBROOK RURAL WATER SYSTEM, INC., was held at the System's Corporate Office in Arlington, South Dakota, commencing at 10:00 a.m. on Monday, December 21, 2015. All Directors were present. Also present was System Manager, Randy Jencks, Attorney, Jared Gass, and Engineer Matthew Oedekoven.

Chairman Marvin Antonen presided over the meeting. Attorney Gass acted as recorder for the meeting.

ADMINISTRATIVE

The Chairman called for any additions or corrections to the proposed agenda. None were offered. Approval of the agenda was moved by Sterling, seconded by Christensen. The motion carried.

CONSENT AGENDA

The Board reviewed the minutes of the November 23, 2015 Board of Directors Meeting and the financial reports included in the Director packet. It was noted that the Minutes should be amended to reflect the correct date for strategic planning, March 22, 2016. Manager Jencks also reviewed the monthly financials contained in the Board packet. Following an opportunity for questions and discussion, approval of the consent agenda, with the Minutes as amended, was moved by Christensen, seconded by Andenas. The motion carried.

DIRECTOR REPORTS

SDARWS Board Meeting

Director Thompson presented on his attendance at the SDARWS Board Meeting held in Sioux Falls, SD on December 3, 2015. Thompson updated the board regarding the proposed changes to the State Association dues structure. Thompson also updated the board regarding other State Association policy changes.

Director Christmas Party

A general discussion was had regarding the Christmas party for past and current board members held on December 19, 2015.

OPERATIONS

Manager's Report

Manager Jencks reviewed his written report contained in the Board packet concerning various informational topics.

Construction Project Update

At this point in the meeting Treatment Plant Manager John Ekern and Operations Manager Brian Callies joined the meeting.

Sinai Phase II (14 inch)

Engineer Oedekoven advised that the easement procurement process continues. A general discussion was had regarding the most efficient way to secure easements for the project. Manager Jencks and Oedekoven will bring their recommendations regarding easement procurement to the next regular board meeting. Oedekoven advised that once easements are procured, design can be finalized.

Dakota Access Project
Engineer Oedekoven updated the Board regarding the Dakota access crossing project, advising that the project should be completed by December 23, 2015.

PLANNING

2017 Expansion Project
Engineer Oedekoven reviewed the data included in the director packet regarding the expected cost of the expansion project and the availability of financing through SRF and DENR. Various approaches to the expansion project and their related anticipated costs were discussed. For purposes of estimating the system's expected cost of the project, Oedekoven recommended using a 25% grant figure. Oedekoven also advised that January 1, 2016 is the deadline for submitting funding applications.

Following Oedekoven's report there was a discussion among the board and Manager Jencks on the best way to proceed. Following the discussion, Manager Jencks recommended that the board approve the expansion project in the amount of $9,550,400.00, and that for purposes of the funding applications, that the system adopt the expansion project proposed numbers set forth in Table 3, Column 3, on page 33 of the director packet using a 25% grant with the 20 most expensive new users eliminated from the expansion project. It was so moved by Sterling, seconded by Thompson. The motion carried.

2016 Work Plan and Budget

At this point in the meeting, Kingbrook Office Supervisor, Jolene King, entered the meeting.

Prior to presentment of the 2016 work plan and budget, Chairman Antonen commended the system employees on a job well done in 2015. He thanked them for their valuable contributions to the system. All board members agreed that the System is in good hands as a new year begins.

Manager Jencks then presented the Board with an overview of the capital improvement items and system work completed in 2015, and offered introductory comments regarding the proposed 2016 Work Plan and Budget contained in the Director packet.

Treatment Plan Manager, John Ekern, highlighted the 2016 Work Plan relating to the DeSmet and Chester Well Field areas. Ekern discussed water production at both the DeSmet and Chester Well Fields for the last 12 years, and how each of those well fields are expected to perform in 2016.

Operations Manager, Brian Callies, highlighted the 2016 work plan relating to work done throughout the system distribution areas in 2015, as well as the proposed improvements to the distribution areas to be completed in 2016.

Office Supervisor, Jolene King, reviewed the proposed 2016 Budget with the Board offering specific explanations as to particular items and explaining to the Board how various financial projections are made based on past system data.

Following an opportunity for questions and discussion, approval of the 2016 Work Plan and Budget was moved by Thompson, seconded by Andenas. The motion carried.

System employees Ekern, Callies and King left the meeting.

SDARWS Tech Conference
A general discussion was had among those directors planning to attend the Tech Conference. System delegates will be directors Stormo, Thompson, Sterling and Tolzin.

District 5 Director Recruitment
The board reviewed a list of potential director candidates that was developed from input received at the November, 2015 board meeting. Following a discussion, it was the consensus among the Board to have Manager Jencks contact Shawn Martin, Tom Rook, Brandon Hodne, Mark Schouwenburg, Mike Downs and Doyle Renaas to determine their willingness to run for election to the Board. Manager Jencks will conduct interviews and report on the results at the January Board meeting.

System Tour
Dates and plans were discussed for a spring system tour.

Washington, DC Rally
It was determined that director Sterling will attend the DC Rally held from February 8-10, 2016. Travel plans will be made.

CoBank Regional Meeting
It was determined that directors Stormo, Tolzin and Andenas will attend the CoBank Regional Meeting in Omaha, NE from February 25-26, 2016. Travel plans will be made.

Strategic Planning
The Board members were reminded that strategic planning is scheduled for March 22, 2016 at the State office in Madison, SD.

Policy Review and Improvements
The board reviewed BOG # 5-1 and BOG #5-2. No changes were offered.

Annual Meeting - Redistricting
Manager Jencks confirmed that the Annual Meeting will be scheduled for April 11, 2016. Jencks also reviewed the proposed redistricting plan set forth in the director packet to be voted on at the annual meeting. Following discussion, it was moved by Sterling, seconded by Stormo that the proposed redistricting plan presented to the board be presented to the system members for a vote at the annual meeting. The motion carried.

ADJOURNMENT

BY-LAWS
OF
KINGBROOK RURAL WATER SYSTEM, INC.

ARTICLE I.

General Purposes

This association shall be known as the KINGBROOK RURAL WATER SYSTEM, INC. incorporated under the laws of the State of South Dakota.

The purposes for which the Corporation is formed and the powers which it may exercise are set forth in the Articles of Incorporation of the Corporation.

ARTICLE II.

Name and Location

Section 1. The name of the Corporation is KINGBROOK RURAL WATER SYSTEM, INC.

Section 2. The principal office and place of business of this Corporation shall be located at the company headquarters in Arlington, South Dakota, but the Corporation may maintain offices and places of business at other places within or without the State as the Board of Directors may determine from time to time.

ARTICLE III.

Seal of the Corporation

Section 1. The seal of the Corporation shall have inscribed thereon the name of the Corporation.

Section 2. The Secretary shall have the custody of the seal.

Section 3. The impression of the seal shall be made on all papers and documents requiring the signature of an executive officer of the Corporation.

ARTICLE IV.

Fiscal Year

The fiscal year of the Corporation shall begin on the 1st day of January and end on the 31st day of December in each year.

ARTICLE V.

Governing Body

This Corporation shall be governed by a Board of Directors consisting of seven (7) members to be elected by the members of the Corporation from time to time and in such a manner as is hereinafter provided.

ARTICLE VI.

Membership

Section 1. Membership in the Corporation shall consist of those persons, firms, associations, corporations and bodies politic owning, controlling or occupying land situated within the area to be served by the water system of the Corporation and reasonably accessible thereto, who have made application for membership in the Corporation, and who have agreed to pay such fees as shall be required by the Corporation, from time to time, and enter into such agreements with the Corporation for the purchase of water for domestic use as are required by the Corporation from time to time.

Section 2. A person, firm, association, corporation or body politic may become a member of KINGBROOK RURAL WATER SYSTEM, INC., by:

a. making a written application for membership therein;

b. agreeing to purchase from the Corporation water for domestic use;

c. agreeing to comply with and be bound by the Articles of Incorporation and By-Laws of the Corporation and any rules and regulations adopted by the Board of Directors; and

d. paying such hook-up, connection or other fees as shall be established by the Board of Directors from time to time; no member may hold more than one (1) membership in the Corporation, and no membership in the Corporation shall be transferable, except as provided in these By-Laws.

ARTICLE VII.

Membership Enrollment

Section 1. Membership in the Corporation shall be evidenced by enrolling the name of the member on the membership list maintained by the Corporation at the Corporation headquarters.

Section 2. Transfers of Membership shall be made only upon the books of the Corporation, only to person eligible to become members and only consistent with such rules and politics as adopted by the Board of Directors from time to time.

Section 3. No member of this Corporation shall be entitled to more than one (1) vote at meetings of the members. Every member, upon becoming a member of this Corporation, agrees to sign such Agreement for the purchase of water from the Corporation as may from time to time be provided and required by the Corporation, and shall pay therefore such rates as shall from time to time be fixed by the Board of Directors; provided, however, that the Board of Directors may limit the amount of water which the Corporation shall be required to furnish any one (1) member. Each member shall pay the Corporation such minimum amount per month, regardless of the amount of water consumed, as shall be fixed by the Board of Directors from time to time. Each member shall also pay all amounts owed by him to the Corporation as and when the same shall become due and payable.

Section 4. In case of the death of a member or if a member ceases to be eligible to hold office membership as provided herein, or willfully fails to comply with these By-Laws and other requirements, or willfully obstructs the purposes and proper activities of the Corporation, the Corporation, through the Board of Directors, may elect to terminate his/her membership. Any member whose membership is so terminated for a cause other than that of ceasing to be eligible, may appeal from the action of the Board of Directors to a vote of the members at the next regular meeting of the members or special meeting of the members called for such purpose.

Section 5. A membership held in the name of a husband or a wife shall entitle either to exercise the voting privilege of said membership, but not both. Said membership would also qualify either the husband or the wife as a member for the purpose of running for the office of Director, but not both. When a membership is held by a partnership, corporation, political subdivision or association, the voting privilege may be exercised by a duly acknowledged voting delegate of said entity.

ARTICLE VIII.

Meetings of Members

Section 1. Annual Meeting. The annual meeting of the members of the Corporation shall be held once each calendar year at such time, on such day and at such place as may be designated by the Board of Directors from time to time. It shall be the responsibility of the Board of Directors to make adequate plans and preparations for the annual meeting. Failure to hold the annual meeting at the designated time shall not work a forfeiture or dissolution of the Corporation.

Section 2. Special Meetings. Special meetings of the members may be called by resolution of the Board of Directors or by ten (10%) percent or more of all of the members and it shall thereupon be the duty of the Secretary to cause Notice of such meeting to be given as hereinafter provided. Special meetings of the members must be held within sixty (60) days from the date of receipt of special request therefor and shall be held at such time and at such place as shall be determined by the Board of Directors.

Section 3. Notice. Notice of meetings of members of the Corporation shall be given by Notice mailed to each member of record directed to the address shown upon the books of the Corporation at least ten (10) days prior to the meeting. Such Notice shall state the nature, time, place, and purpose of the meeting, but no failure or irregularity of Notice of any annual meeting, regularly held, shall affect any proceedings taken thereat.

Section 4. Quorum. Twenty-five (25) members, present in person, shall constitute a quorum. If less than a quorum is present at any meeting, a majority of those present in person may adjourn the meeting from time to time without further notice.

Section 5. Vote. Each member shall be entitled to one (1) vote on all issues presented to the membership. All questions shall be decided by a vote of a majority of the members voting thereon in person, except as otherwise provided by law, the Articles of Incorporation or these By-Laws. Voting by proxy shall not be permitted.

ARTICLE IX.

Directors

Section 1. General Powers. The business and affairs of the Corporation shall be managed by a Board of seven (7) Directors which shall exercise all of the powers of the Corporation except such as are by law, the Articles of Incorporation, or these By-Laws conferred upon or reserved to the members.

Section 2. Election and Tenure of Office. The Board of Directors shall hold office for their terms or until their successors shall have been appointed or elected and shall have qualified. The terms of Directors shall be for three (3) years. The terms shall be staggered. At each Annual Meeting, Directors shall be elected to succeed those Directors whose terms have expired, to serve for a term of three (3) years or until their successors shall have been elected and shall have qualified.

Section 3. Voting Districts. The territory served or to be served by the Corporation shall be divided into seven (7) districts in such way as to give equitable representation to all members. Each district shall be represented by one (1) Director. The seven (7) director districts shall be as follows:

District No. 1 shall be located in Hamlin County and consists of the following Townships, to-wit: T114N R53W; T114N R52W; T113N R55W; T113N R54W; T113N R53W; T113N R52W; and T113N R51W.

District No. 2 shall be located in Beadle, Clark, Kingsbury and Miner County and shall consist of the following Townships, to-wit: T114N R57W; T114N R56W; T113N R57W; T113N R56W; T112N R59W; T112N R58W; T112N R57W; T112N R56W; T112N R55W; T111N R59W; T111N R58W; T111N R57W; T111N R56W; T111N R55W; T110N R58W; T110N R57W; T110N R56W; T110N R55W; T109N R58W; T109N R57W; T109N R56W; 109N R55W; T108N R58W; T108N R57W; T108N R56W; T108N R55W.

District No. 3 shall be located in Kingsbury and Lake County and shall consist of the following Townships, to-wit: T112N R54W; T112N R53W; T111N R54W; T111N R53W; T110N R54W; T110N R53W; T109N R54W; T109N R53W; T108N R54W; T108N R53W; T107N R54W; T107N R53W.

District No. 4 shall be located in Brookings County and shall consist of the following Townships, to-wit: T112N R52W; T112N R51W; T111N R52W; T111N R51W; T110N R52W; T110N R51W; and T110N R50W.

District No. 5 shall be located in Brookings, Moody, Lake and Minnehaha County and shall consist of the following Townships, to-wit: T109N R52W; T109N R51W; T109N R50W; T109N R49W; T108N R52W; T108N R51W; T108N R50W; T108N R49W; T107N R52W; T107N R51W; T106N R52W; T106N R51W; T105N R52W; T105N R51W; T104N R52W; T104N R51W; and T103N R52W.

District No. 6 shall be located in Miner, Lake and McCook County and shall consist of the following Townships, to-wit; T106N R54W; T106N R53W; T105N R54W; T105N R53W; T104N R54W; T104N R53W; T103N R54W; T103N R53W; T102N R 54W and T102N R53W.

District No. 7 shall be located in Hanson, Miner, McCook and Sanborn County and shall consist of the following Townships, to-wit: T107N R59W; T107N R58W; T107N R57W; T107N R56W; T107N R55W; T106N R59W; T106N R58W; T106N R57W; T106N R56W; T106N R55W; T105N R58W; T105N R57W; T105N R56W; T105N R55W; T104N R58W; T104N R57; T104N R56W; T104N R55W; and T103N R55W.

In the event a new member is added that does not reside in one of the above districts, the new member will be included in the closest adjacent district. If a member is located where it is difficult to determine the appropriate district, the Board of Directors shall assign the member to a district.

The Board of Directors shall be responsible for reexaming the apportionment of the Districts at least once every ten (10) years and shall submit such amendments or modifications to the members as they deem appropriate.

ARTICLE X.

Nomination and Election of Directors

Section 1. Nomination and Election. Whenever a vacancy in a Director's position shall exist by virtue of a Director's term expiring, any natural person who is a member in good standing of this Corporation and residing within the district in which the vacancy occurs, may become a candidate for the office of Director for such vacancy by filing at the Corporation Headquarters at least sixty (60) days prior to the date of the Annual Meeting, a Nominating Petition setting forth the name of the person so nominated for the office of Director, which petition must be signed by at least ten (10) members in good standing who also reside within the Director district in which the vacancy exists. No nominations shall be received from the floor at the Annual Meeting. At the Annual Meeting, the members present and voting shall select, by secret written ballot, a Director to fill the expired term in that district. Each member present and voting shall be entitled to vote for one (1) Director nominee for each vacancy in each district. The Director candidate receiving the most votes in each district for which an election is held shall be declared to be the elected Director of the Corporation from the particular district. In the event there are no more Director nominees than there are vacancies, the Director candidates may be elected by voice vote at the Annual Meeting.

Section 2. Vacancies. If the office of Director shall become vacant for any cause, the remaining Directors may choose a successor, who shall serve to the next regular or special meeting of the members when the vacancy shall be filled.

ARTICLE XI.

Meetings of Directors

Section 1. A regular meeting of the Board of Directors may be held without notice immediately after and at the same place as the annual meeting of the members. A regular meeting of the Board of Directors shall also be held monthly at such time and place as the Board of Directors may provide by resolution. Such regular monthly meeting may be held without Notice, other than such resolution fixing the time and place thereof.

Section 2. Special meetings of the Board of Directors may be called by the President or by any three (3) Directors and it shall thereupon be the duty of the Secretary to cause Notice of such meeting to be given as hereinafter provided. The President or the Directors calling the meeting shall fix the time and place for the holding of the meeting.

Section 3. Written Notice of the time, place and purpose of any special meeting of the Board of Directors shall be delivered to each Director not less than five (5) days previous thereto, either personally or by mail, by or at the direction of the Secretary or upon a default in duty by the Secretary, by the President or the Directors calling the meeting. If mailed, such Notice shall be deemed to be delivered when deposited in the United States Mail addressed to the Director, at his address, as it appears on the records of the Corporation, with postage thereon fully prepaid.

Section 4. Quorum. Four (4) members of the Board shall constitute a quorum for conducting business; provided, however, that if less than four (4) of the Directors are present at such meeting, a majority of the Directors present may adjourn the meeting from time to time; and provided, further, that the Secretary shall notify any absent Directors of the time and place of such adjourned meeting. The act of the majority of the Directors present at a meeting which a quorum is present shall be the act of the Board of Directors.

ARTICLE XII.

Officers

Section 1. The officers of the Corporation shall be a President, Vice-President, Secretary, Treasurer and such other officers as may be determined by the Board of Directors from time to time. The officers of Secretary and Treasurer may be held by the same person.

Section 2. The officers shall be elected by ballot annually by and from the Board of Directors at the meeting of the Board of Directors held immediately after the annual meeting of the members. If the election of officers shall not be held at such meeting, such election shall be held as soon thereafter as conveniently may be. Each officer shall hold office until the first meeting of the Board of Directors following the next succeeding annual meeting of the members or until his successor shall have been elected or shall have qualified. A vacancy in any office shall be filled by the Board of Directors for the unexpired portion of the term.

Section 3. Any officer or agent elected or appointed by the Board of Directors may be removed by the Board of Directors whenever in its judgement the best interests of the Corporation will be served thereby.

ARTICLE XIII.

Duties of Officers

Section 1. The President shall:

a. Be the principal executive officer of the Corporation and, unless otherwise determined by the members of the Board of Directors, shall preside at all meetings of the members and the Board of Directors.

b. Sign, with the Secretary, any deeds, mortgages, deeds of trust, notes, bonds, contracts or other instruments authorized by the Board of Directors to be executed, except in cases in which the signing and execution thereof shall be expressly delegated by the Board of Directors or by these By-Laws to some other officer or agent of the Corporation, or shall be required by law to be otherwise signed or executed.

c. In general, perform all duties incident to the office of President and such other duties as may be prescribed by the Board of Directors from time to time.

Section 2. Vice-President. In the absence of any President, or in the event of his inability or refusal to act, the Vice-President shall perform the duties of the President and when so acting shall have all the powers of and be subject to all of the restrictions upon the President. The Vice-President shall also perform such other duties as may from time to time be assigned to him by the Board of Directors.

Section 3. Secretary. The Secretary shall be responsible for:

a. Keeping the minutes of the meetings of the members and of the Board of Directors in one (1) or more books provided for that purpose.

b. Arranging for all notices to be given in accordance with the By-Laws or as is required by law.

c. The safekeeping of the corporate records and of the seal of the Corporation and affixing the seal of the Corporation to all documents, the execution of which on behalf of the Corporation under its seal is duly authorized in accordance with the provisions of these By-Laws.

d. Arranging for a complete copy of the Articles of Incorporation and By-Laws of the Corporation containing all amendments thereto to be maintained at the corporation's principal office.

e. Signing with the President, legal documents authorized by the Board of Directors, unless the signing of such documents has been delegated to other officers, agents or employed personnel.

f. Keeping a register of the names and post office addresses of all members to be kept up to date.

g. Performing such other duties as are assigned to him by the Board of Directors.

Section 4. Treasurer. The Treasurer shall be responsible for:

a. Custody of all funds and securities of the Corporation.

b. The receipt of an issuance of receipts for all monies due and payable to the Corporation, and the deposit of all such monies in the name of the Corporation in such bank, or banks as are selected by the Board of Directors.

c. Reviewing the annual financial audit of the Corporation's financial and accounting records and making any necessary recommendations to the Board of Directors.

d. The general performance of all duties incident to the office of Treasurer and such other duties as are assigned to him by the Board of Directors.

Section 5. The Treasurer and any other officer or agent of the Corporation charged with the responsibility for the custody of any of its funds or property shall give bond in such sum with such surety as the Board of Directors shall determine. The Board of Directors in its discretion may require any other officer, agent or employee of the Corporation to give bond in such amount and with such surety as it shall determine. The expense of such bond shall be a legal obligation of the Corporation.

ARTICLE XIV.

Board of Directors – Duties

Section 1. The Board of Directors, subject to the restrictions of the law, the Articles of Incorporation, and By-Laws, shall exercise all of the powers of the Corporation. It shall be the duty of each Director to participate in such activities as are deemed necessary to enhance the prestige of the Corporation, broaden its operation and fulfill its public obligation as a member of the community and the rural water program and in furtherance of all things, to devote reasonable time and attendance at meetings of affiliated organizations and in training sessions designed to assist and improve Directors and Officers in carrying out their duties.

ARTICLE XV.

Non-Profit Operation

Section 1. The Corporation shall at all times be operated on a non-profit basis for the mutual benefit of its members. No interest or dividend shall be paid or payable by the Corporation on any capital furnished by its members.

Section 2. The Corporation will install, maintain, and operate a main distribution water pipeline or lines from the source of the water supply to its qualified members and patrons under such policies, rules and regulations as shall be adopted by the Board of Directors from time to time.

Section 3. The Board of Directors shall from time to time make such rules, regulations, policies and directives as shall be necessary for the efficient operation of a rural water system and shall generally be responsible for the efficient operation of said system.

Section 4. In the event of dissolution, the Board of Directors shall first pay lawful debts and liabilities of the Corporation. Any remaining assets shall be transferred to any other or several non-profit like organizations or political subdivisions having one (1) or more purposes in common with this Corporation. If no such organization can be reasonably found, the remaining assets shall be distributed to the members and former members in proportion to the business they may have done with the Corporation. The Corporation shall make a reasonable effort to locate former members but shall not be obligated to include in the distribution former members who cannot be located.

ARTICLE XVI.

Miscellaneous

Section 1. Membership in other organizations. The Corporation shall not become a member of or purchase stock in any other organization without an affirmative vote of the members at a duly held meeting, the Notice of which shall specify that action is to be taken upon such proposed membership or stock purchased; provided, however, that the Corporation may, upon the authorization of the Board of Directors, purchase stock in or become a member of any Corporation or organization organized on a non-profit basis for the purpose of engaging in or furthering the cause of rural water systems, or of any other organization, when in the opinion of the Board of Directors such membership will promote the interests of the Corporation.

Section 2. Waiver of Notice. Any member or Director may waive in writing any Notice of a meeting required to be given by these By-Laws, either before or after such meeting. The attendance of a member or Director at any meeting shall constitute a Waiver of Notice of such meeting by such member or Director, except in case a member or Director shall attend a meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting was not lawfully called or convened.

Section 3. Policies, rules and regulations. The Board of Directors shall have the power to make and adopt such policies, rules and regulations, not inconsistent with law, the Articles of Incorporation or these By-Laws, as it may deem advisable for the management of the business and affairs of the Corporation.

Section 4. Unless otherwise provided in these By-Laws, the rules of parliamentary procedure as provided in "Roberts Rules of Order" shall govern the conduct of all meetings of the Board of Directors and meetings of members of the Corporation.

ARTICLE XVII.

Amendments

These By-Laws may be repealed or amended by a vote of a majority of the members present at any regular meeting of the Corporation, or at any special meeting of the Corporation called for that purpose. Notice of any proposed amendment to be made at a special meeting or regular meeting of the members must be given at least ten (10) days before such meeting and must set forth the amendments to be proposed together with an explanation as to the effect thereof.

STATE OF SOUTH DAKOTA

OFFICE OF THE SECRETARY OF STATE

Certificate of Incorporation

I, LORNA B. HERSETH, Secretary of State of the State of South Dakota, hereby certify that duplicate originals of the Articles of Incorporation of KINGBROOK RURAL WATER SYSTEM, INC. duly signed and verified, pursuant to the provisions of the South Dakota Nonprofit Corporation Act, have been received in this office and are found to conform to law.

ACCORDINGLY and by virtue of the authority vested in me by law, I hereby issue this Certificate of Incorporation of KINGBROOK RURAL WATER SYSTEM, INC. and attach hereto a duplicate original of the Articles of Incorporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of South Dakota, at Pierre, the Capital, this 10th day of January A.D. 19 75

Lorna B. Herseth
Secretary of State

Assistant

STATE OF SOUTH DAKOTA

OFFICE OF THE SECRETARY OF STATE

Certificate of Amendment

I, LORNA B. HERSETH, Secretary of State of the State of South Dakota, hereby certify that duplicate originals of Amendment to Articles of Incorporation of KINGBROOK RURAL WATER SYSTEM, INC. duly signed and verified, pursuant to the provisions of the South Dakota corporation acts, have been received in this office and are found to conform to law

ACCORDINGLY and by virtue of the authority vested in me by law, I hereby issue this Certificate of Amendment to the Articles of Incorporation of KINGBROOK RURAL WATER SYSTEM, INC. and attach hereto a duplicate original of the Amendment.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of South Dakota, at Pierre, the Capital, this 20th day of April A.D. 1976

Lorna B. Herseth
Secretary of State

Assistant

AMENDED ARTICLES OF INCORPORATION

OF THE

KINGBROOK RURAL WATER SYSTEM, INC.

KNOW ALL MEN BY THESE PRESENTS:

That the Articles of Incorporation of Kingbrook Rural Water System, Inc., are hereby amended to substitute for Article XIV, Section 2 thereof, the following:

ARTICLE XIV

Section 2

No dividend or distribution of the funds or other property of the corporation shall be made until all debts are fully paid and then only on its final dissolution; nor shall any distribution be made except by a vote of the majority of the members of the corporation or a quorum thereof as provided in the by-laws. In the event of dissolution, distribution of any property or assets remaining after payment of debts and liabilities shall be distributed to all persons who are members during the period when such remaining assets and property were owned by the Kingbrook Rural Water System. Said distribution shall be made proportionately according to the amount of patronage supplied by such members.

This amendment was adopted at the annual meeting of members on the 29th day of March, 1976 and received a majority of the votes entitled to be cast by the members present or represented by proxy at the meeting.

IN WITNESS WHEREOF we, the Board of Directors, do hereby sign, seal and acknowledge this certificate in triplicate. Alec Vedvei and Gerry Ikast also sign in their capacity as President and Secretary respectively.

Gerry Ikast
Arthur Wolcan
Alec Vedvei
Emily Swanson
Harold Hasse
Roman Madson
Robert Lombardi
Kyle L. Johnson
Edward Anderson
Charles Kopp
Raymond Edwards
Warren Hansen
Donald E. Reiter
Hartman L. Leite

James M. Stewart
Art Van Moorlehem
Lawrence Vine
Norman Haugan
Harold Walker

Filed this 30th day of April 1976
Lynn B. Hunsaker
SECRETARY OF STATE

SECRETARY OF STATE

ARTICLES OF INCORPORATION

OF

KINGBROOK RURAL WATER SYSTEM, INC.

KNOW ALL MEN BY THESE PRESENTS: That we, Lyle S. Johnson, Alvin Wonsbeck, Ewald Gaard, Gerry Ikast, Donald Swanson, LeRoy Erickson, Harold Walker, Loren Converse, Arthur Van Moorlehem, Marvin Zabell, Norman Haugan, Dennis Haines, Norman Matson, James M. Steward, Lawrence Eich, Charles Skaff, Raymond Carmody, Robert L. Buchheim, Arthur Wolkow, Warren Hannah, Alec Vedvei, Carroll Anderson, Edgar Pedersen, Wesley Lewis, Hartman L. Leite, Orlynn Piehl, Roland Leonhardt, Herschel D. Nelson and Richard Johnson, residents of the State of South Dakota and over twenty-one years of age, have associated ourselves together for the purpose of forming a non-profit corporation in accordance with the provisions of Chapter 47-22, South Dakota Compiled Laws of 1967 and Amendatory Acts thereto, and do hereby make, execute and acknowledge in triplicate these articles of incorporation in writing.

ARTICLE I.

The name of this Corporation shall be KINGBROOK RURAL WATER SYSTEM, INC.

ARTICLE II.

This Corporation shall have perpetual existence.

ARTICLE III.

The objects and purposes of this corporation are:

A. To acquire, construct, maintain and operate a system for the diversion, supply, storage, and distribution of water to the members of this corporation for domestic purposes within the area served by the corporation in the counties of Brookings, Kingsbury, Hamlin, Miner and Lake in South Dakota.

B. To acquire by appropriation or otherwise, and to lease, sell or dispose of water and water rights for domestic purposes.

C. To borrow money for the use of said corporation and to issue securities therefor and to pledge, mortgage, hypothecate and otherwise dispose of the real, personal and intangible property of the corporation as security therefor.

D. To have power to establish schedules of rates for the delivery of water, and to levy assessments upon its members, irrespective of whether or not payment in full has been made for their memberships, and to collect such water charges and assessments from its members. In the event of delinquency in the payment of such water charges and assessments, the corporation shall have the power to enforce the collection thereof by either of or by any combination of the following remedies, upon giving notice to the delinquent member in the manner provided in the Bylaws as the same are in force and effect at the time such delinquency occurs.

1. By personal action of debt brought against the delinquent member in a court of competent jurisdiction.

2. By forfeiture of the delinquent membership or by termination of the delinquent membership, in the method provided by the Bylaws.

3. By withholding the delivery of water from the service connection of the delinquent member.

E. To exercise any and all powers incidental to or conducive to the aforesaid objects or any of them.

ARTICLE IV.

The principal place of business of the Association shall be located at Arlington, Kingsbury County, South Dakota.

ARTICLE V.

The address of the initial registered office shall be Arlington, South Dakota, and the name of the initial registered agent at said address for the service of process is Alec Vedvei.

ARTICLE VI.

The affairs of the association shall be under the control of 25 directors, and those who shall as directors manage the affairs of the association for the first year and until their successors and duly elected and qualified are:

NAME	ADDRESS
Lyle S. Johnson	Lake Preston, South Dakota
Ewald Gaard	Arlington, South Dakota
Gerry Ikast	Arlington, South Dakota
Donald Swanson	Arlington, South Dakota
LeRoy Erickson	Ramona, South Dakota
Harold Walker	Route 4 Madison, South Dakota
Loren Converse	Arlington, South Dakota
Arthur Van Moorlehem	Arlington, South Dakota
Marvin Zabell	Estelline, South Dakota
Norman Haugan	Howard, South Dakota
Dennis Heiser	Howard, South Dakota
Norman Matson	Arlington, South Dakota
James M. Stewart	Ramona, South Dakota
Lawrence Eich	Winfred, South Dakota
Charles Skaff	Route 4 Madison, South Dakota
Raymond Carmody	Ramona, South Dakota
Robert L. Buehheim	Volga, South Dakota
Arthur Wolkow	Erwin, South Dakota
Warren Hannah	De Smet, South Dakota
Alec Vedvei	Hetland, South Dakota
Carroll Anderson	Bruce, South Dakota
Edgar Pedersen	Erwin, South Dakota
Wesley Lewis	Winfred, South Dakota

NAME	ADDRESS
Hartman L. Leite	Volga, South Dakota
Orlynn Piehl	Arlington, South Dakota
Roland Leonhardt	Oldham, South Dakota
Herschel D. Nelson	Bruce, South Dakota
Richard Johnson	De Smet, South Dakota

At the first annual meeting following the expiration of the one-year period for which the directors herein designated will serve, and at each annual meeting thereafter, a new Board of Directors will be elected in accordance with the provisions of the Bylaws of the association and the laws of the State of South Dakota in such cases made and provided.

ARTICLE VII.

The name and address of each incorporator are listed as follows:

NAME	ADDRESS
Lyle S. Johnson	Lake Preston, South Dakota
Alvin Wonsbeck	Lake Preston, South Dakota
Ewald Gaard	Arlington, South Dakota
Gerry Ikast	Arlington, South Dakota
Donald Swanson	Arlington, South Dakota
LeRoy Erickson	Ramona, South Dakota
Harold Walker	Route 4 Madison, South Dakota
Loren Converse	Arlington, South Dakota
Arthur Van Moorlehem	Arlington, South Dakota
Marvin Zebell	Estelline, South Dakota
Norman Haugan	Howard, South Dakota
Dennis Meises	Howard, South Dakota
Norman Matson	Arlington, South Dakota
James M. Stewart	Ramona, South Dakota
Lawrence Eich	Winfred, South Dakota
Charles Skaff	Route 4 Madison, South Dakota
Raymond Carmody	Ramona, South Dakota
Robert L. Bushheim	Volga, South Dakota
Arthur Wolkow	Erwin, South Dakota
Warren Hannah	De Smet, South Dakota
Alec Vedvei	Hetland, South Dakota
Carroll Anderson	Bruce, South Dakota
Edgar Pedersen	Erwin, South Dakota
Wesley Lewis	Winfred, South Dakota
Hartman L. Leite	Volga, South Dakota
Orlynn Piehl	Arlington, South Dakota
Roland Leonhardt	Oldham, South Dakota
Herschel D. Nelson	Bruce, South Dakota
Richard Johnson	De Smet, South Dakota

ARTICLE VIII.

The Board of Directors shall establish a minimum water charge and a schedule of charges for water uses in excess of the minimum. The established minimum water charge shall apply to each service connection. Annually the Board of Directors shall review the established rates and, based upon consideration of the expense of operation and maintenance, repayment of indebtedness and establishment of a proper reserve fund, and the anticipated amount of such costs during the coming year, shall make any proper revision of such schedule of rates.

ARTICLE IX.

If at any time during the fiscal year it appears in the judgment of the Board of Directors that the amount to be derived from the collection of water charges during such fiscal year will be insufficient for the payment of all costs incident to the operation and maintenance of the corporation's system and payment of the corporation's current indebtedness, the Board shall make and levy an assessment upon each member so that the total of such assessment is sufficient, with the amount of water charges collected and reasonably anticipated to be collected, to fully pay the costs of operation and payments on said current indebtedness. A proportionate amount of the total of such assessment levied in any year shall be levied against each member in an amount equal to that portion which the number of service connections supplying each member bears to the total number of service connections served by the system of the corporation.

ARTICLE X.

Section 1. There shall be no capital stock issued by the corporation, and membership in the corporation shall be limited to persons, corporations, or bodies politic owning, controlling or occupying land situated within the area served by the water system of the corporation and reasonably accessible thereto. Applicants for membership must be approved and payment of the membership fee as fixed in the Bylaws, shall be admitted to membership, provided that no occupant of land who is otherwise eligible for membership shall be entitled or be admitted to membership if the capacity of the corporation's system or sources of water supply is required to meet the needs of existing members.

Section 2. Each member, upon payment of the membership fee, shall be entitled to have one service connection installed at a point which may conveniently be tapped for the supply of water to the premises occupied by him, and upon payment of recurring water charges and also assessments, shall be entitled to a supply of water as available from the system of the corporation. Any person desiring more than one service connection shall be required to apply for and to pay a separate membership fee for each service connection authorized by the corporation.

Section 3. There shall be an annual meeting of the members of the corporation to be held at such time and place as may be provided in the Bylaws. Each member shall be entitled to only one vote irrespective of the number of memberships held.

Section 4. Membership in this association shall be transferable and subject to mortgage or pledge only upon the approval of the Board of Directors. The above provisions shall be recited in all certificates of membership issued.

ARTICLE XI.

The Bylaws of the association for the management of its affairs shall be adopted by the members of said association and said members will be empowered to amend or repeal said Bylaws in accordance with the provisions thereof.

ARTICLE XII.

Neither cumulative nor proxy voting shall be allowed. Each member shall be permitted only one vote.

ARTICLE XIII

Sale, conveyance, or encumbrances of all or any part of the property of the company may be made by the Board of Directors, provided, however, that such sale, conveyance or encumbrance is authorized by a two-thirds vote of the members at a regular membership meeting or a special members meeting called for the purpose, and instruments of conveyance or encumbrance shall be executed on behalf of the company by the President and attested by the Secretary of the Company.

ARTICLE XIV.

Section 1. No officer, Director or member shall at any time receive or become entitled to receive any pecuniary profit from the operations hereof either by dividends or other distribution or by payment of any salary, wage, or reward of any kind in excess of reasonable compensation for services actually rendered by any officer, agent, director, or employee or member of the corporation.

Section 2. No dividend or distribution of the funds or other property of the corporation shall be made until all debts are fully paid and then only upon its final dissolution, nor shall any distribution be made except by a vote of the majority of the members of the corporation or a quorum thereof as provided in the Bylaws. In theevent of dissolution, for the purpose of merger, the net funds of the corporation, if any, shall be transferred to any other or several nonprofit organizations having one or more purposes in common with this corporation.

Section 3. No member's individual liability shall extend beyond the consideration paid by each member for his membership certificate.

IN WITNESS WHEREOF, we the incorporators, do hereby make, sign, seal and acknowledge this Certificate in triplicate.

Lyle S. Johnson	James M Stewart
Alvin D. Wonsbeck	Lawrence Eich
Gerald Grand	Charles Skaff
Leroy Shost	Raymond Carmody
Lowell Swanson	Robert L. Buchheim
LeRoy Erickson	Arthur Wolfer
Harold Walker	Warren Hannah
[illegible]	Alec Vedvei
Art Van Hoorbeke	Carroll Anderson
Danville Beed	Edgar Peterson
Norman Haugan	Wesley Lewis
Dennis Meiss	Hartman L. Leite
Norman Matson	Orlynn Piehl

Roland Leonhardt
Herschel D. Nelson
Richard Johnson

STATE OF SOUTH DAKOTA, }
} SS:
COUNTY OF KINGSBURY }

I, Rodney J. Steele, a Notary Public in and for the County and State aforesaid, do hereby certify that Lyle S. Johnso Alvin Wonsbeck, Ewald Gaard, Gerry Ikast, Donald Swanson, LeRoy Erickson, Harold Walker, Loren Converse, Arthur VanMoorlehem, Marvin Zebell, Norman Haugan, Dennis Neises, Norman Matson, James M. Stewart, Lawrence Eich, Charles Skaff, Raymond Carmody, Robert L. Buchheim, Arthur Wolkow, Warren Hannah, Alec Vedvei, Carroll Anderson, Edgar Petersen, Wesley Lewis, Hartman L. Leite, Orlynn Piehl, Roland Leonhardt, Herschel D. Nelson and Richard Johnson, who are known to me to be the persons whose names are subscribed to the foregoing Articles of Incorporation, appeared before me this day in person and each acknowledged that he signed, sealed and delivered said instrument in writing as his free and voluntary act, for the uses and purposes therein set forth.

Witness my hand and notarial seal this 25th day of November, 1974.

Notary Public, South Dakota

My Commission Expires: 9-8-80

STATE OF SOUTH DAKOTA

OFFICE OF THE SECRETARY OF STATE

Certificate of Amendment

I, JOYCE HAZELTINE, Secretary of State of the State of South Dakota, hereby certify that duplicate originals of Amendment to Articles of Incorporation of ..... KINGBROOK RURAL WATER SYSTEM, INC. ..... duly signed and verified pursuant to the provisions of the South Dakota corporation acts, have been received in this office and are found to conform to law.

ACCORDINGLY and by virtue of the authority vested in me by law, I hereby issue this Certificate of Amendment to the Articles of Incorporation of ..... KINGBROOK RURAL WATER SYSTEM, INC. ..... and attach hereto a duplicate original of the Amendment.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of South Dakota, at Pierre, the Capital, this ..... 20th ..... day of ..... October ..... A.D. 19. 88 ...

Joyce Hazeltine
Secretary of State

.....
Deputy

SOS CRP 421 5/80

© 6065340

Filed this 20th day of
Oct. 1988

Joyce Hazeltine
SECRETARY OF STATE

REVENUE
OCT 20 1988

ARTICLES OF AMENDMENT TO THE ARTICLES OF INCORPORATION OF THE KINGBROOK RURAL WATER SYSTEM, INC.

ARTICLE I.

The name of this Corporation is KINGBROOK RURAL WATER SYSTEM, INC.

ARTICLE II.

The Amendment to the Articles of Incorporation adopted is as follows:

ARTICLE XV: To the fullest extent permitted by South Dakota Codified Laws as the same exist or may hereafter be amended, a Director of this Corporation shall not be personally liable to the Corporation or its members for monetary damages for breach of fiduciary duty as a Director.

ARTICLE III.

The foregoing Amendment was adopted by the members at the Thirteenth Annual Membership Meeting on October 8, 1988, commencing at 8:00 o'clock P.M., in Arlington, South Dakota. A quorum was present at such meeting and the Amendment received a favorable vote of over a majority of the votes entitled to be cast by members present or represented by proxy at said meeting.

Executed on this 17th day of October, 1988.

KINGBROOK RURAL WATER SYSTEM, INC.

(SEAL)

By: Larry Sterling
President

ATTEST:
David Raw

David Raw
Secretary

STATE OF SOUTH DAKOTA)
) ss ACKNOWLEDGEMENT
County of Brookings)

On this 17th day of October, 1988, personally appeared before me the undersigned officers, LARRY STERLING and DAVID RAW, known to me to be the President and Secretary respectively of the Corporation that is described in the foregoing instrument and acknowledged to me that they executed the same for the purposes therein contained as officers of said Corporation.

ALAN F. GLOVER

(SEAL)

Alan F. Glover
Notary Public, State of South Dakota

My Commission expires September 23, 1992.

State of South Dakota

OFFICE OF THE SECRETARY OF STATE

Certificate of Good Standing
Nonprofit Corporation

ORGANIZATIONAL ID# NS005704

I, **Shantel Krebs**, Secretary of State of the State of South Dakota, do hereby certify that KINGBROOK RURAL WATER SYSTEM, INC. was duly incorporated under the laws of this state on January 10, 1975.

I, further certify that said corporation has complied with the laws of this State relative to the formation of corporations of its kind and is now a regularly and properly organized and existing corporation under the laws of this State and is in good standing, as shown by the records of this office.

This certificate is not to be construed as an endorsement, recommendation, or notice of approval of the corporation's financial condition or business activities and practices. Such information is not available from this office.

Validation Number: 1808486380
Use this number to verify the certificate as legitimate via the South Dakota Secretary of State website: **sdsos.gov**

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of South Dakota, at Pierre, the Capital, this January 12, 2016.

Shantel Krebs

Shantel Krebs
Secretary of State

Certificate ID: 20332

Facilities Plan Checklist

Before submitting the application, please take a few moments to complete the following checklist. Addressing these items prior to submitting the application will expedite the review process.

Drinking Water Facilities Plan document can be found at http://denr.sd.gov/dfta/wwf/dwsrf/dwfunding.aspx

Checklist of SRF Facilities Plan Requirements

Have the following items been addressed?

- Submission of a Facilities Plan to the department that addresses those items found in the Water Facilities Plan document. – Submitted by DGR [x]
- A public hearing held discussing the project and the use of an SRF loan to finance the project. [x]
- Minutes of the public hearing prepared and submitted to the department's engineer for inclusion into the final Facilities Plan. [x]
- The affidavit of publication of the public hearing received and submitted to the department's engineer for inclusion into the final Facilities Plan. [x]
- The four review agencies contacted and responses received for inclusion into the final Facilities Plan. [x]
- The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. Submitted by DGR [x]

Affidavit of Publication

STATE OF SOUTH DAKOTA,

SS.

County of Kingsbury

Linda R. Schumacher, being first duly sworn, on oath says that she is the publisher of the Arlington Sun, a weekly newspaper published in Arlington, said County of Kingsbury and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said county for fifty-one successive weeks next prior to the publication of the notice herein mentioned, and was and is printed wholly or in part in a office maintained at said place of publication; that the Notice of Public Hearing for Kingbrook Rural Water

_____, a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this affidavit, was published in said newspaper at least once in each week for one successive weeks, on the day of each week on which said newspaper was regularly published to wit:

11-12, 2015; _____, 20____

_____, 20____; _____, 20____

_____, 20____; _____, 20____

_____, 20____; _____, 20____

_____, 20____; _____, 20____

that the full amount of the fees for the publication of the annexed notice is $ 13.24

Subscribed and sworn to before me this 12 day of November, 2015.

Marjorie M. Hoff

Notary Public

County of Kingsbury, South Dakota

My Commission Expires
August 18, 2021

MARJORIE M. HOFF
NOTARY
PUBLIC
SEAL
STATE OF SOUTH DAKOTA

Legal 2556 1xAS 11-12
NOTICE OF PUBLIC HEARING FOR THE KINGBROOK RURAL WATER SYSTEM RURAL WATER SERVICE TO SINAI

The Kingbrook Rural Water System is seeking $13,779,000 of funding from the Board of Water and Natural Resources to construct water pipelines, in-ground booster pumps, and elevated storage tank to improve the existing water system and expand the system to serve new area of the water system. The funds could be either a grant from the state Consolidated Water Facilities Construction Program or a loan from the Drinking Water State Revolving Fund (SRF) Program. The Drinking Water SRF loan terms are 3.0% for 20 years, and the Board of Water and Natural Resources may forgive all or a portion of loan principal. The amount, source of funds, and terms will be determined by the Board of Water and Natural Resources when the application is presented at a scheduled board meeting. The purpose of the public hearing is to discuss the proposed project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

The public hearing will be held at the Kingbrook Rural Water System office, 302 East Ash Street, Arlington, SD, at 8:00 PM on Monday, November 23, 2015.

Published once at a total approximate cost of $12.00

MINUTES OF REGULAR MEETING OF BOARD OF DIRECTORS OF KINGBROOK RURAL WATER SYSTEM, INC.

Monday, November 23, 2015 – 8:00 p.m.

The Regular Meeting of the Board of Directors of KINGBROOK RURAL WATER SYSTEM, INC., was held at the System's Corporate Office in Arlington, South Dakota, commencing at 8:00 p.m. on Monday, November 23, 2015. All Directors were present. Also present was System Manager, Randy Jencks, Attorney, Jared Gass, and Engineers Matthew Oedekoven and Bruce Jennings.

Chairman Marvin Antonen presided over the meeting. Attorney Gass acted as recorder for the meeting.

PUBLIC HEARING

Prior to commencement of the regular meeting of the Board of Directors, Chairman Antonen opened the public hearing regarding the System's expansion project. The time and place for the public hearing was set for 8:00 p.m. on November 23, 2015 as advertised 10 days prior to the meeting in the local Arlington newspaper. During the public meeting, Engineer Oedekoven reviewed the needs and description of the expansion project, as well as proposed financing options available. The public hearing was closed at 8:07 p.m. and the regular meeting of the Board of Directors was resumed thereafter.

ADMINISTRATIVE

The Chairman called for any additions or corrections to the proposed agenda. Director Stormo noted that he wanted to discuss "company entertainment" at the end of the meeting. Approval of the agenda as amended was moved by Sterling, seconded by Stormo. The motion carried.

CONSENT AGENDA

The Board reviewed the minutes of the October 19, 2015 Board of Directors Meeting and the financial reports included in the Director packet. Manager Jencks also reviewed the monthly financials contained in the Board packet. Following an opportunity for questions and discussion, approval of the consent agenda was moved by Christensen, seconded by Stormo. The motion carried.

DIRECTOR REPORTS

Director Stormo presented on his attendance at the Leadership Seminar held from November 18-19. Stormo commented that 72 individuals were in attendance at the Seminar and that overall his experience was positive. Stormo commented that he believes it is in Kingbrook's best interest to stay informed regarding other systems activities throughout the state.

Manager Jencks provided an update to the Board regarding the proposed State Association dues structure.

Director Thompson presented on his attendance at the Seminar and offered his input into the proposed State Association dues structure.

OPERATIONS

Manager's Report

Manager Jencks reviewed his written report contained in the Board packet concerning various informational topics.

Construction Project Update

SCADA Closeout Summary
Engineer Bruce Jennings provided the Board with a SCADA project closeout summary advising that the SCADA system has been up and running for a while and that the staff is reasonably pleased with its performance. Jennings commented that the project went relatively smooth. Jennings also reviewed the final numbers related to the SCADA project and offered insight into future SCADA updates and associated costs.

Sinai Phase II (14 inch)
Engineer Oedekoven distributed his written report regarding Sinai Phase II to the Board members, advising that the preliminary design is complete and that Kingbrook staff is presently working on securing easements for the project. Oedekoven detailed the next steps and decisions that need to be made on the project.

Dakota Access Project
Engineer Oedekoven updated the Board regarding the Dakota access crossing project, advising that 8 crossings remain and that the work will hopefully be completed before December 1, 2015. Oedekoven also reviewed correspondence between the engineers noting that 1 crossing was added in anticipation of the expansion project.

PLANNING

2017 Expansion Project
Engineer Oedekoven updated the Board regarding the expansion project advising that preliminary mapping is nearly complete and that the project has been placed on the 2016 State water plan. Oedekoven detailed the next steps to be taken in order to secure funding for the project. A general discussion was had among the Board and the Engineer regarding various funding options available. At the conclusion of the discussion, the Board directed Engineer Oedekoven to proceed with preparing both state revolving fund and rural development applications.

Strategic Planning
The Board members were reminded that strategic planning is scheduled for March 24, 2016 at the State office in Madison, SD.

Commercial Rates Discussion
It was the general consensus among the Board that discussions regarding commercial rates would be best utilized at the strategic planning to be held on March 22, 2016.

SDARWS Tech Conference
Manager Jencks polled the Board members on attendance at the SDARWS Tech Conference to be held January 12-14. It was determined that Directors Thompson, Sterling, Stormo and Tolzin will be delegates representing Kingbrook. The remaining Directors will be alternates.

2016 Work Plan and Budget
Manager Jencks reviewed the 2016 executive summary and work plan and budget along with the updated 2016 capital improvement items with the Board.

Annual Meeting
Manager Jencks confirmed that the Annual Meeting will be scheduled for April 11, 2016. A brief discussion was had regarding the need to redistrict the System. Manager Jencks will redraw the district boundaries throughout the System and present to the Board for consideration.

Washington, DC Rally
Manager Jencks polled the Board members regarding attendance at the Washington, DC Rural Water Rally being held from February 8-10, 2016. Director Sterling confirmed that he will attend.

CoBank Regional Meeting
Board members Stormo, Tolzin and Andenas confirmed that they will attend the CoBank Regional Customer Meeting in Omaha, NE from February 26-27, 2016.

District 5 Director
A general discussion was had regarding beginning the process to name a replacement for soon to be retiring District 5 Director, Larry Sterling.

January Meeting
After general discussion regarding proposed meeting dates, it was moved by Thompson, seconded by Andenas that the January, 2016 regular meeting of the Board of Directors be changed to January 25, 2016 at 10:00 a.m.

Christmas Dinner
Manager Jencks reminded the Board members that the Christmas dinner for current and past Directors will be held on December 19, 2015 at 1481 Grille in Arlington.

Company Entertainment
A general discussion was had among the Board members regarding the Company's policy related to entertaining other systems and guests of Kingbrook at various rural water functions throughout the year.

ADJOURNMENT
There being no further business to come before the meeting, Director Antonen noted that the next regular meeting is now scheduled for Monday, December 21, 2015 at 10:00 a.m. It was moved by Christensen, seconded by Sterling that the meeting be adjourned. The motion carried. Chairman Antonen declared the meeting adjourned.

Scott Tolzin
Secretary

PRELIMINARY ENGINEERING REPORT

FOR

2017 IMPROVEMENTS

KINGBROOK RURAL WATER SYSTEM

ARLINGTON, SOUTH DAKOTA

October 2015
Revised December 2015

DGR Project No. 800735

PRELIMINARY ENGINEERING REPORT

FOR

2017 IMPROVEMENTS

KINGBROOK RURAL WATER SYSTEM

ARLINGTON, SOUTH DAKOTA

October 2015
Revised December 2015

	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota. By _____ 12/30/2015 Matthew N. Oedekoven, P. E. (date) License Number 10252 My license renewal date is 6/30/16. Pages or sheets covered by this seal: ALL

DGR Project No. 800735

DGR Engineering

Rock Rapids, IA (712) 472-2531 • Sioux Falls, SD (605) 339-4157 • Sioux City, IA (712) 266-1554 • Ankeny, IA (515) 963-3488

PRELIMINARY ENGINEERING REPORT

FOR

2017 PIPELINE IMPROVEMENTS

KINGBROOK RURAL WATER SYSTEM
ARLINGTON, SOUTH DAKOTA

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PRELIMINARY
ENGINEERING REPORT

FOR

2017 IMPROVEMENTS
KINGBROOK RURAL WATER SYSTEM

I. Project Summary

The Kingbrook Rural Water System (KBRW) is a regional water utility in east central South Dakota. KBRW was originally constructed beginning in 1976, and since has been in continuous operation providing quality water to residences, farms and cities in the service area. Kingbrook has a history of growth in service numbers in response to greater demand for quality water on the part of rural residents and cities in the service area. Kingbrook has also, over the years of operation, expanded the water system service area boundaries in response to the needs of the community. Kingbrook currently serves all or part of eleven counties, including: Clark, Beadle, Brookings, Hamlin, Kingsbury, Lake, McCook, Minnehaha, Miner, Moody, and Sanborn. Kingbrook has also added service to most of the small cities and towns within the service area.

This proposed project will provide for the addition of 220 new customer locations to the Kingbrook system. New facilities are required to extend water service pipelines to new consumer locations. The proposed project includes approximately 140 miles of pipeline, and minor booster pumping stations for users on the fringes of the KBRW system.

This proposed project also provides needed improvement to enhance the safety and reliability of the Kingbrook system. More than 15,000 people from eleven counties rely on Kingbrook for daily safe water. The water system is by necessity spread over a service area of nearly 3,000 square miles, larger than some states. The distances involved create opportunity for failures of equipment or facilities due to natural or man-made causes, including wind, tornadoes, floods, errant excavation, chemical spills and electrical system failures. Any of these calamities can cause ripple effects on the Kingbrook system that would adversely affect water service to parts of the water system for hours, days or weeks.

The KBRW management has recognized the essential nature of the service provided and the water system responsibility to design and construct a utility that is robust and resilient to protect the health and safety of consumers. KBRW is well positioned to maximize reliability

because the water system operates three widely separated water sources. Considering the potential hazards which would affect the system, it is unlikely that more than one source would be simultaneously out of service.

KBRW has developed a long range plan to enhance system reliability and safety. The plan includes individual plant improvements at each of the Kingbrook locations, and improvements through the system to allow for at least partial service to any area from one or more of the adjacent water sources. The goal of the plan is to create an ability to provide at least the minimum required water supply for health and safety with any one source out of service.

II. Project Planning Area

A. Location

The location of the proposed project is the existing Kingbrook service area, as shown on Sheet 2 and in more detail on the attached pipe layout map. Kingbrook provides water service to customers in a contiguous area including parts of Clark, Brookings, Hamlin, Kingsbury, Lake, Miner, McCook, Moody, and Sanborn counties. Kingbrook also provides water service to the cities of Arlington, Badger, Bancroft, Howard, Iroquois, Lake Norden, Lake Preston, Montrose, Oldham and Ramona.

KBRW does not have a formal service area boundary. KBRW coordinates with adjacent water systems, including Mid-Dakota on the west, Clark and Sioux on the north, Brookings Deuel, Big Sioux and Minnehaha on the east, and T-M and Hansen on the south, to provide water service to individuals on the most cost-effective basis. In general, KBRW pipelines abut the neighboring water systems within less than 2 miles all around the KBRW boundary. T-M Rural Water District is the only neighboring water system that is organized as a water district with a formal service area boundary.

There are no major natural boundaries to water service either within or surrounding KBRW. Lakes and rivers are present in the area, but pipelines have been successfully installed either under or around all of the existing obstacles.

New customers are proposed with this project throughout the existing service area. These customers have requested service and have paid a good intention fee in anticipation of the proposed construction.

B. Environmental Resources

Elevations are important to water service as the elevations relate to water pressure and pumping requirements. Most of the KBRW facilities operate at a maximum hydraulic gradient of 2,030 feet MSL. The ground elevations in the project area typically range from 1,550 to 1,950 feet MSL. The ground surface is gently rolling, and is drained by the Big Sioux River on the east and the Vermillion River in the west. Much of the area is part of the Prairie coteau and is not well drained.

The area is developed for rural agricultural production. Row crops are significant with corn and soybeans the major crops. Some small grain and some sunflowers are found primarily in the western part of the service area. Livestock is an important enterprise with a mixture of dairy, beef cattle and hogs. Small cities are predominately dependent on agriculture for economic stability.

Wetlands have been identified by the National Wetlands Inventory to a greater or lesser extent throughout the project area. In general, wetlands are small, isolated and not a significant factor in pipeline construction. In some cases, the presence of wetlands influence pipeline routing or construction methods.

Additional environmental information, including cultural and historical resources, is presented in the environmental report.

C. Growth Areas and Population Trends

The population of the project area has been generally stable through the 35 year history of KBRW. There is an overall trend toward larger farm enterprises and consequently fewer farm families in the area. However, there is a corresponding trend toward maintaining rural homes as acreages for non-farm residences.

KBRW has noted growth in service numbers around lakes in the service area. In particular, Lake Poinsett in Kingsbury, Hamlin and Brookings County and Lake Campbell in Brookings County are areas of active development and new construction. More recently, Lake Albert and Lake Thompson have been sites of new development.

Population statistics for the area are given in Table 1 and Table 2. Brookings, Hamlin and Lake Counties show population increases due to increases in the cities of Brookings, Lake Norden, and Madison and the lake areas served by KBRW. Clark, Kingsbury, McCook, and Miner counties have consistently declined in population since 1980. As a group the small cities have a relatively stable population. In terms of total numbers of persons the KBRW service population is stable. The number of active connections to the KBRW is shown on Figure 1 and shows a growing number of service connections. For some individual communities, the percentage changes are significant. KBRW continues to add approximately 50 – 60 connections per year.

III. Existing Facilities

The KBRW water system was originally constructed in three phases. The water system has been added to and modified in the intervening years, but is still operated with three water sources serving three distinct service areas.

A. Phase 1 Area -Joint Well Field Water Treatment Plant

The Joint Well Field (JWF) is a water source and treatment entity that is owned jointly by KBRW and the adjacent Brooking Deuel Rural Water System. These two regional water supply entities originally agreed to construct and operate a joint facility at the initiation of each system. They have successfully operated and developed the water source and treatment facility through over 35 years of additions and upgrades.

The JWF has 8 shallow wells in the Big Sioux Aquifer for water source. The wells are less than 60 feet deep. The JWF owns the property surrounding the wells as a wellhead protection zone. The property presently owned is sufficient for 2 to 4 additional wells, typically of a capacity of 250 to 350 gallons per minute. This water source area has been in production for more than 35 years and is very consistent in quality and quantity of water production. The aquifer in the area is well connected to the adjacent Big Sioux River, but is not close enough to the river to be subject to Safe Drinking Water Act requirements for groundwater under the influence of surface water.

The JWF water treatment plant is an iron and manganese removal filtration plant. The process uses a bank of pressure filters. The existing plant has seven filters of 12 feet diameter each in operation. At a filtration rate of 3 gallons per minute per square foot, the filtration capacity of each filter is 340 gallons per minute. The plant capacity, with consideration of backwash time and waste, is about 3 million gallons per day (MGD).

The Joint Well Field Bruce Water Treatment Plant was last the subject of significant reconstruction in 2006. At that time, two additional pressure filter shells were installed, but were not fitted with media or connecting piping. As such, the filtration capacity of the plant could be increased by nearly 1 MGD at relatively little cost.

The Bruce water treatment plant also includes ground level storage of just over 1 million gallons and high service pumping. The pumping is run on a common header which splits to deliver water west to KBRW and east to the Brookings Deuel system. The pumping energy is a common cost at the JWF. The water is split to the individual systems at the metering point on the high service pump header. The existing high service total capacity is about 3 MGD, and firm capacity with one pump out of service is about 2.5 MGD.

The plant has a diesel standby generator on site and on automatic start for full operation of high service pumps, and approximately 40 percent operation of wells and filtration. Portable generation equipment is available on short notice to power remote wells and provide full plant operation on standby power.

The Bruce plant is well maintained and has been upgraded with current technology as it has been expanded over the years of operation. The JWF has a funded maintenance account for routine repairs to wells, pumps and treatment equipment. The plant is operated by Brookings Deuel personnel. The JWF is funded by a flat rate water charge to the individual water systems. Each system accounts for very nearly half of the water use and the revenue.

The Kingbrook distribution system near the Bruce WTP is limited in capacity to approximately 1.2 MGD. The Bruce WTP pumps west to the Badger Station and south to the Oakwood Booster. The Badger Station consists of the original pump station that sits over a 135,000 gallon clearwell and a 350,000 gallon Aquastore tank built in 2003. Pumps run continuously to pressurize the northeast corner of the Phase 1 distribution system including Badger, Lake Norden, and Lake Poinsett areas. Additionally, water is pumped south to the Arlington Station. The Badger Station is in good operating condition, and is adequate for existing water demands.

The Oakwood booster is an in-line booster station designed to optimize flow rates to the Lake Campbell area and to the Arlington Station. The Oakwood booster does not run continuously, operating only when the flow demands require added energy. The station is in good operating condition. The station capacity is matched to the pipeline capacity of the adjacent system.

South of the Oakwood Booster most of the demand, including the Lake Campbell area, is served directly from distribution pipelines. A small service area in the Sinai/Nunda area requires added energy from the Sinai booster, an in-line pumping station near the Town of Sinai. The Sinai Station is in good operating condition, and has excess capacity because pipeline improvements over the last several years have reduced head losses on adjacent pipelines. In 2015, Kingbrook connected all residents of Sinai as individual customers of KBRW and the Town of Sinai abandoned their water utility.

At the Arlington Station, KBRW has approximately 198,000 gallons of water storage and a pumping station. The Arlington Station consists of the original pumping station sited on top of a 40,000 gallon clearwell. Additionally, a ground level Aquastore tank provides an additional 158,000 gallons of storage. The Station is filled from the north through the Badger Station and from the east through the Oakwood Booster. The pumping station has two discharge headers. One header is dedicated to provide bulk delivery to the City of Arlington at the City elevated tank. The other is constantly running pumps to pressurize the rural service area around Arlington. On peak demand days, KBRW staff have had to manipulate the fill rates into the Arlington Station from the two different fill directions based on current demands. Increasing the fill rate into the Arlington Station has been the subject of interest at Kingbrook. The management approach is to increase the delivery from the north through Badger that includes more storage along the way to help manage peak demands. Kingbrook is currently working on a project to improve the delivery from the north as a part of the Sinai connection project.

All of the Phase 1 facilities are well maintained with no urgent maintenance needs. The buildings are in good repair and adequate for continued service consistent with the past years of operation. Total storage in the Phase 1 Area, excluding storage at the plant, is approximately 683,000 gallons, none of which is elevated. This approximately matches one average day for the service area.

Below is a summary of recent average and peak demands for the Bruce WTP.

Historic Demands for Bruce WTP

Year	Annual Produced (MG)	Average Day (kG)	Peak Day (kG)
2009	208.891	572	891
2010	203.643	558	831
2011	214.608	588	877
2012	245.002	671	1,107
2013	218.125	598	972
2014	235.652	646	952

B. Phase 2 Area -DeSmet Well Field and Water Treatment Plant

The Phase 2 service area uses the DeSmet well field and water treatment plant. The DeSmet plant was originally constructed in 1978, but was expanded and substantially rebuilt in the early 1990's. The north well field includes five wells of about 120 feet total depth producing between 200 – 350 gpm. The total capacity of the north well field raw water pipeline is about 1,200 gpm. A new well was constructed in 2013 to provide redundancy to the existing wells. KBRW owns four wells in the south well field, each approximately 50 feet deep. However, this well field produces very little water and is not currently utilized in their operations. Kingbrook owns about 100 acres of land surrounding the wells in the north wellfield for wellhead protection. Within that space there is room for construction of additional wells as may be needed by growing water demands. Additional raw water capacity would need to be provided to increase the production from this well field.

The water plant provides a basic iron and manganese removal process including aeration, detention and sand filtration. Chlorine and potassium permanganate are used for oxidation and disinfection. The plant is nominally rated at 1,200 gallons per minute total capacity with a filtration rate of 2.5 gallons per minute per square foot of filter area. Media was last replaced in 2011. Historic maximum day flow at DeSmet is about 1.7 million gallons per day. This indicates that the DeSmet plant is very nearly out of capacity. The maximum day flow of 1.7 MGD in 2012 was likely influenced by filling the Ramona Elevated Tank during initial construction that coincided with peak customer demands. Peak days since 2012 have ranged between 1.4 MGD to 1.5 MGD.

In 2011, KBRW performed a pilot study to convert their oxidant to ozone. In addition to lowering the variable cost of oxidant, the system would simplify operations by providing an automatically varying oxidant dose to match the varying oxidant demands of the raw water. However, the system was not pursued further due to high up-front capital costs of the treatment equipment. At the time, the equipment was estimated to have a 30-year payback schedule.

The DeSmet plant has 500,000 gallons of water storage in two bolted steel reservoirs on the plant site. The storage is less than one-third of current maximum day demand, and is not sufficient for reliability of water supply when process disruptions occur at the plant. For example, the raw water pipeline to the plant is approximately 3.5 miles long. About twice per year plant staff should clean the raw water pipeline with foam swabs pumped through the line. This maintenance is not accomplished regularly, partly because plant storage capacity does not allow the staff to reliably meet water demands when the raw water system is shut down for part of a day. The same issue is a factor for other treatment

process maintenance, including filter rehabilitation, detention tank cleaning and flow meter maintenance.

Most of the water produced at DeSmet is delivered to the customer with pumping only at the plant. Water flows north to rural customers and to the small town of Bancroft and Erwin. Water flows south to rural customers, the town of Carthage and the Kingbrook Howard elevated tank. From the Howard tank, water continues south to the town of Howard and more rural customers. The Howard elevated tank is approximately 400,000 gallons.

About 30% of the water from the DeSmet source is pumped again at the Lake Preston Station. The Lake Preston station includes the original 110,000 gallon concrete tank and a newer Aquastore tank approximately 420,000 gallons constructed in 2006. The Lake Preston Station pumps south to the Ramona Elevated Tank.

The Ramona Elevated Tank is important to the Kingbrook system because it is the only major facility that is connected to two water sources. The Ramona Elevated Tank is located on relatively high ground at the boundary between the Phase 2 DeSmet service area, and the Phase 3 Chester service area. This tank was constructed in 2012 and is approximately 1,000,000 gallons.

Total storage in the Phase 2 Area, excluding storage at the plant, is approximately 1,930,000 gallons, 1,400,000 gallons of which is elevated.

Below is a summary of recent average and peak demands for the DeSmet WTP.

Historic Demands for DeSmet WTP

Year	Annual Produced (MG)	Average Day (kG)	Peak Day (kG)
2009	303.890	833	1,254
2010	282.069	773	1,229
2011	300.927	824	1,333
2012	355.509	974	1,734
2013	330.711	906	1,524
2014	364.273	998	1,438

C. Phase 3 Area -Chester Well Field and Water Treatment Plant

The Phase 3 service area of the KBRW system is the southeastern part of the system. The well field at Chester is six shallow wells. KBRW owns approximately 150 acres of property for well development in the area, and has sufficient space for additional well

development within a protected area. The existing wells are adequate for current and projected demands on the source.

The Chester water treatment plant uses five steel pressure filters for iron and manganese removal. The process is working satisfactorily, and the existing equipment is in good condition.

The Chester plant includes the original 110,000 gallon concrete GSR and an Aquastore constructed in 2006 with approximately 520,000 gallons of water storage. The plant has four high service pumps which provide energy to pressurize the service area, and to pump water west to the Orland and Junius reservoirs. The existing high service pumps are not the original plant pumps, but are larger pumps with increased capacity. The present pumps are likely the maximum size which can be used with the existing plant and site piping. Consideration is being given to a future pumping system refurbishment at the station.

New pipeline was installed west of Chester in 2008. The new 12 inch pipe provides added capacity to the service area west of Chester, west to Orland, and to the Junius reservoir. With the new pipeline in place for service to Junius, the entire capacity of the original 8 inch pipe to Orland is available for the Orland service area. In 2014, 8 inch pipe was constructed along Highway 19 to connect the two 8 inch lines and the12 inch line from Chester. Connecting these large transmission mains provide some redundancy for the distribution system in case there is a disruption of service on one of them.

The Orland pumping station includes the original clearwell with the pump station sited on top, along with the original 110,000 gallon concrete water storage tank. The station pumps south to the KBRW Montrose elevated tank. Historically, a separate discharge header pumped west to the Orland West service area using a split pumping header. However, the 12-inch pipe installed in 2008 currently provides service west of Orland without the need for additional pumping. The two pumps for the Montrose tank can each provide full pipeline capacity to the tank.

The KBRW Montrose elevated tank provides approximately 200,000 gallons of water storage and pressurization for the KBRW service area south to Interstate 90, including the City of Montrose. The tank is in good condition, and the storage volume is adequate for the service area.

The Junius station includes water storage and pumping for the west central part of the KBRW service area. The Junius service area includes no elevated storage, and at least one pump runs continuously to maintain service pressures. The Junius station includes the original 135,000 gallon concrete GSR and a 385,000 gallon Aquastore constructed in

2006. With some minor pipeline adjustments, the Junius station can be connected to the Ramona Elevated Tank, which is typically served from the DeSmet WTP.

Total storage in the Phase 3 Area, excluding storage at the plant, is approximately 830,000 gallons, 200,000 gallons of which is elevated.

Below is a summary of recent average and peak demands for the DeSmet WTP.

Historic Demands for Chester WTP

Year	Annual Produced (MG)	Average Day (kG)	Peak Day (kG)
2009	197.612	541	750
2010	202.099	554	691
2011	215.788	591	890
2012	220.676	605	1,149
2013	201.912	553	988
2014	210.112	576	852

IV. Need for Project

The improvements to KBRW for this project include pipeline extensions to serve new water customers. The improvements also include new pipeline and water storage to improve the reliability of the water system in the Bruce WTP service area. The improvements are part of a coordinated long range plan to increase reliability throughout the water system.

A. New Connections

KBRW has received approximately 220 new applications for water service from prospective customers within the existing water system service area. The new applications come primarily from existing residences and livestock pastures which have historically used other water sources.

KBRW was organized in the early 1970's in response to a need for a reliable supply of quality drinking water. The traditional water supply for rural residences and farms in the area is groundwater. Groundwater options include shallow wells which often provide highly mineralized water and are susceptible to contamination by surface activities. The other groundwater option is a relatively deeper well, which may be in an artesian formation, but will be almost certainly highly mineralized, will be expensive to construct and maintain, and may yield water which contains dangerously high levels of sulfate or radiological compounds.

Even after over 35 years of successful water system operation, some residences remain in the KBRW service area which are not served by the regional supply. The reasons that these locations remain unserved vary. In some cases, the historic owners of the property have not recognized the value of a reliable regional supply. The ownership of the location may now have changed, and consequently the perception of the value of water supply has changed. In other cases, the potential customer may have previously requested water service, but service was denied due to capacity or proximity of existing pipelines. By combining individual requests into an overall project, the water system can most efficiently extend water service to remote connections.

B. Capacity and Reliability

The KBRW system includes three distinct water sources. The three sources are entirely independent, drawing water from distinct shallow aquifers separated by more than 20 miles. Each water source is connected to a different electrical distribution circuit, and each has independent standby power. The recent average and maximum daily demands and firm water treatment capacity in each service area are summarized below. Please refer to Section III for more detail.

Kingbrook Rural Water System
Water Treatment Plant Capacity

Service Area	Avg. Daily Demand (kG)	Peak Daily Demand (kg)	Approximate Source Capacity (kg)
Bruce WTP	671	1,107	1,200
De Smet WTP	998	1,734	1,620
Chester WTP	605	1,149	950

Based on the information above, Kingbrook has exceeded the treatment capacity in recent years at both the De Smet WTP and Chester WTP. This is possible by extending filter run times, utilizing storage at the treatment plant, and increasing the filtration rate for pressure filters. At both the De Smet WTP and Chester WTP, storage at the treatment plant and in the distribution system helped Kingbrook meet the peak day demands, even though they exceeded the treatment capacity of the plant.

KBRW has invested in reliability at each of the water sources. Each has a wellhead protection area of land that is owned and controlled by KBRW to prevent contamination by surface activity. Each station has standby on-site electrical generation. KBRW maintains an inventory of chemicals and supplies to assure continued operation in case of a transportation disruption. Most major components of the water source, treatment and pumping system have firm capacity for full operation with one unit out of service.

Even with the appropriate precautions, some hazards remain that could cause service disruption of significant duration. Aquifer contamination would be the most severe in terms of duration and complexity of remediation. A major pipeline break could cause a disruption of more than several hours. Wind or fire could damage facilities to an extent that would cause an outage of more than a day. A failure of the electrical service equipment or of the pipes entering or leaving an individual facility could cause an extended outage.

KBRW is working on contingency planning for disruption of service from any of the water system facilities. The most critical disruptions in terms of numbers of consumers affected are the water source and treatment facilities.

One method to limit risk is to have adequate water storage on the system. Water storage is practical for service disruptions of about one day, but storage volumes greater than one day demand will begin to result in problems with ice formation in winter, or water stagnation in summer. In order to meet one day of water demand using storage, total water storage must be about equal to the service area average daily demand. The recent average and maximum daily demands and available storage in each service area are summarized below. Please refer to Section III for more detail relating to specific locations of available storage.

Historic Demands and Available Storage for Kingbrook Rural Water Service Areas

Service Area	Avg. Daily Demand (kG)	Peak Daily Demand (kg)	Available Storage(kg)
Bruce WTP	671	1,107	683
De Smet WTP	998	1,734	1,930
Chester WTP	605	1,149	830

Based on historic average daily demands and available storage, Kingbrook Rural Water has adequate storage in each of their service areas. However, as the Bruce WTP area continues to expand, additional storage in this service area will become necessary in the near future.

In order to address the potential for source and treatment disruptions of a duration longer than about one day, it is necessary to plan for a supplemental water supply. In the case of KBRW, the geographic diversity of the three water sources will allow the water system to enhance reliability through interconnection of the water sources. Because the original construction of the water system did not provide for interconnection between sources, the pipeline now in place does not allow for significant transfer of water from one service area to another. Creating the capability to transfer water will require larger diameter pipelines between sources.

KBRW has begun the process of source interconnection with previous construction of 12 inch pipeline within the water system. In 2005, new 12 inch pipeline was constructed from the Bruce water plant to the Badger reservoir, and from the Ramona booster toward the Lake Preston station. In 2008, new 12 inch pipeline was constructed from Chester west to the Orland station vicinity. In 2012, new 12 inch pipeline completed the connection between Lake Preston Station to a new Ramona Elevated Tank, and the Ramona Booster was decommissioned. KBRW is currently planning to install 4 miles of 14 inch pipe between Badger Station and the Arlington Station as part of a plan to move demands that currently pass through the Oakwood Booster area over to the Badger Station service area. These pipelines were necessary for immediate capacity, but were sized to additionally provide reserve capacity for reliability enhancement.

The overall plan for source interconnection for reliability enhancement is to provide a core system of 12 inch and greater pipeline interconnecting the sources, and appropriate pumping and storage facilities to utilize the pipeline. This core system will allow KBRW to transfer water among sources to an extent which, while not meeting expected future maximum day demands, will meet the essential demands of residents of the area and will protect the health and safety of the region.

This project addresses new pipeline to improve capacity and reliability in the Bruce WTP service area. The proposed pipeline improvements are part of a coordinated long-range plan to expand the Bruce WTP service area, reduce the De Smet WTP Service Area and provide an interconnection of sources.

V. Alternatives Considered

A. Added Connections

One alternative for added connections is no action. With no action, the prospective service locations will continue with no public water supply service. For some locations, there will continue to be residents or families using unsafe or unreliable water supplies. For other locations, there will be no water available on site. The no action alternative does not address the water supply needs of the area.

In order to provide water to the proposed added connections, some pipeline construction is required. The pipeline routes can be chosen differently depending upon the service location, the existing facilities in the area and the available capacity of existing facilities. The minimum design standards per the South Dakota DENR for distribution pipelines were used for project design. The standards include design for a minimum pipeline pressure under maximum flow of 20 psi, and various material and construction requirements. No alternatives were considered which would require a deviation or variance from the minimum design standards.

Alternate pipe routes were considered for each pipeline extension, and these alternates are too extensive to list here individually. The criteria used for route selection included the following:

- Constructability, including the impact on wetlands, historic resources, roadways and private property.
- Distance along the route.
- Availability of private easements.

Distribution pipelines are sized at different diameters depending upon the water demands of the prospective connections, the relative elevations of supply and delivery locations, and the expected future needs of the area. For this project, pipelines were sized at or near the minimum commercially available size which met the design parameters of prospective connections for this project. Because pipes are available only in fixed increments of size, this process by definition provides some modest opportunity for future flow increases. The actual future available capacity varies depending on the specific circumstances of each pipeline segment, and cannot be reasonably estimated due to the variables of location and prospective demand for each future need. No pipe size alternatives other than the minimum hydraulically acceptable alternative were considered for distribution pipelines.

B. Capacity and Reliability

The objectives for capacity and reliability improvements are as follows:

- Provide capacity for new added connections
- Use the opportunity of economy of scale to place new facilities which will enhance the overall reliability of the Kingbrook system
- Provide for the future interconnection of the Kingbrook water sources, such that a catastrophic loss of one facility could be mitigated at least to the extent of average day demands.

No action is an alternative for the second and third objectives of capacity and reliability improvements. The water system operates adequately now, as long as all facilities are working. For most source, treatment and pumping units Kingbrook has redundancy of individual facilities. No action may prove to be an adequate alternative if a source failure never occurs. No action with respect to the capacity and reliability improvements considered here does not preclude the construction of pipeline in the locations proposed for capacity improvements required for new connections. Rather, the pipelines would be constructed on a similar route and with similar environmental impact, but with a smaller diameter. These smaller pipelines are needed to provide capacity for added connections. Taking the no action alternative as to larger diameter pipeline with this project would sacrifice the opportunity for economy of scale in constructing added capacity for reliability.

Reliability could be addressed with other improvements. New construction for added redundancy at the various source facilities would mitigate the impact of specific failures, such as pipelines or electrical gear. The potential for catastrophic failure, which is the most serious in terms of duration of outage and people affected, would remain. No amount of redundancy will address the perils of aquifer contamination or tornado. And, strict redundancy may not provide opportunity to incorporate the new construction into future expansion plans.

Added pipeline through the avenue of increased pipe size offers some benefits as to capacity and reliability. Capability to transfer significant capacity from one source to another service area provides diversity of response to failure that probably could not be accomplished with redundant equipment at each source. The opportunity to construct added capacity concurrently with pipeline needed for added connections offers economy of scale that will not likely be available again, since the right of way proposed for the added connections will have been used. While larger pipeline offers economy of scale, pipeline construction is expensive and larger pipeline may be a higher cost alternative than would be some other reliability measures. However, none of the other potential measures offers the complete redundancy of source and treatment.

VI. Selection of Alternatives

Added pipeline was selected as the preferred alternative for Added Connections because there is a need for water service and other alternatives do not address the need.

Increased pipeline size between Bruce WTP and the City of Arlington was selected as the preferred alternative for Capacity and Reliability because it is cost effective capacity for future

transfer of water between sources, and because the economy of scale for pipeline construction will be available only now when pipe is constructed for Added Connections.

VII. Proposed Project

The proposed project includes

- construction of about 140 miles of new pipeline, 1.5-inch through 16-inch;
- services to about 220 new connections;

Expected costs for the proposed work are given on Table 3. The costs are estimated based on the Engineer's knowledge of prior similar construction in the area and on the Kingbrook system. The costs are not under the direct control of the Engineer, and the Engineer cannot and does not warranty that the actual costs of construction will not be different from the estimate.

The financial summary and rate impact of various grant ratios are given in Table 4. The locations of existing and proposed facilities are shown on Sheet 1.

TABLES

TABLE 1
POPULATION DATA - BY COUNTY

2017 IMPROVEMENTS
KINGBROOK RURAL WATER SERVICE

	Census Data					Current Housing Information	
Area	**1980**	**1990**	**2000**	**2010**	**Current**	**Number of Households**	**Number of Housing Units**
Beadle County	18,253	19,195	17,023	17,398	18,169	7,343	8,386
Brookings County	24,332	25,207	28,220	31,965	33,314	11,979	13,823
Clark County	4,894	4,403	4,143	3,691	3,645	1,789	2,215
Hamlin County	5,261	4,974	5,540	5,903	5,989	2,041	2,832
Kingsbury County	6,679	5,925	5,815	5,148	5,075	2,311	2,730
Lake County	10,724	10,550	11,276	11,200	12,368	4,655	5,659
McCook County	6,444	5,688	5,832	5,618	5,649	2,186	2,495
Miner County	3,739	3,272	2,884	2,389	2,316	1,053	1,327
Minnehaha County	109,435	123,809	148,281	169,468	182,882	67,623	76,120
Moody County	6,692	6,507	6,595	6,486	6,367	2,686	2,837
Sanborn County	3,213	2,833	2,675	2,355	2,336	1,051	1,185
TOTAL	**201,646**	**214,353**	**240,284**	**263,631**	**278,110**	**104,717**	**119,609**

Note: Reference date for current population data is 2014

Source: U.S. Census Bureau

*** indicates that population estimates were not available for that time period.**

TABLE 2
POPULATION DATA - BY CITY

2017 IMPROVEMENTS
KINGBROOK RURAL WATER SERVICE

		Census Data				
Place	**Area**	**1980**	**1990**	**2000**	**2010**	**Current**
Arlington city	Kingsbury County	991	908	992	915	899
Badger town	Kingsbury County	99	114	144	107	105
Bancroft town	Kingsbury County	41	30	37	19	19
Canova town	Miner County	194	172	140	105	100
Carthage city	Miner County	274	221	187	144	137
De Smet city	Kingsbury County	1,237	1,172	1,164	1,089	1,090
Erwin town	Kingsbury County	66	42	58	45	44
Howard city	Miner County	1,169	1,156	1,071	858	819
Iroquois city	Beadle County	348	328	278	266	266
Lake Norden city	Hamlin County	417	427	432	467	475
Lake Preston city	Kingsbury County	789	663	737	599	583
Madison city	Lake County	6,210	6,257	6,540	6,474	7,126
Montrose city	McCook County	396	420	460	472	474
Nunda town	Lake County	60	45	47	43	47
Oldham city	Kingsbury County	222	189	206	133	130
Ramona town	Lake County	241	194	190	174	191
Sinai town	Brookings County	129	120	133	120	119
Willow Lake city	Clark County	375	317	294	263	244
Vilas town	Miner County	28	28	19	20	19
TOTAL		**13,286**	**12,803**	**13,129**	**12,313**	**12,887**

Note: Reference date for current population data is 2014

Source: U.S. Census Bureau

*** indicates that population estimates were not available for that time period.**

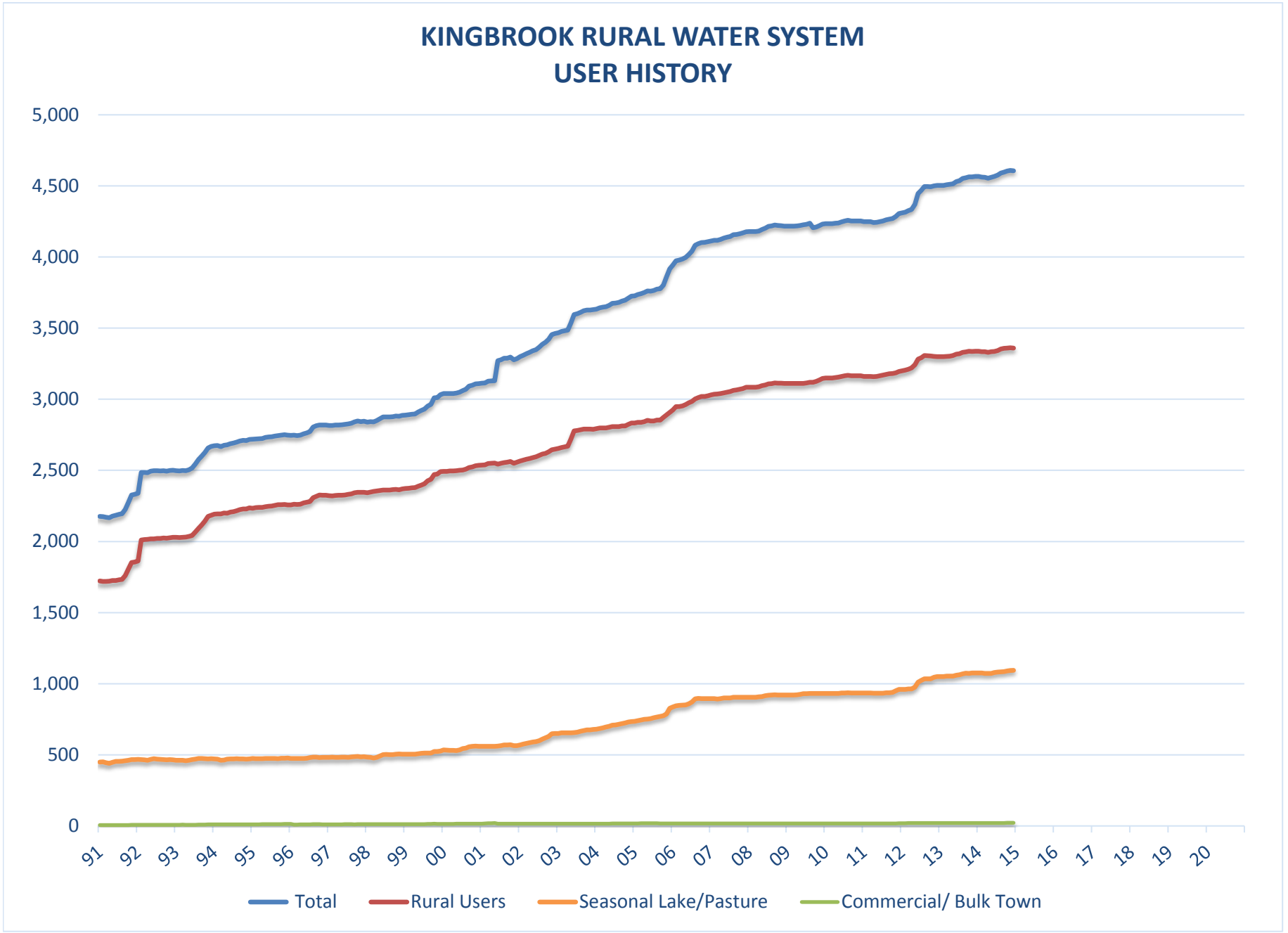
Table 3
Kingbrook Rural Water System
Preliminary Engineering Report
Preliminary Cost Estimate

Item	Units	Estimated Unit Price	Extension
Construction Costs			
Distribution System Construction			
16" DR 18	10,600	$ 40.00	$ 424,000
14" DR 18	23,760	$ 33.25	$ 790,000
6" SDR 17	17,225	$ 8.25	$ 142,100
6" SDR 21	17,225	$ 7.70	$ 132,600
6" SDR 26	46,375	$ 7.00	$ 324,600
6" SDR 17 Restrained Joint	1,325	$ 23.50	$ 31,100
4" SDR 17	6,815	$ 5.70	$ 38,800
4" SDR 21	15,110	$ 5.25	$ 79,300
4" SDR 26	16,005	$ 4.75	$ 76,000
4" SDR 21 Restrained Joint	160	$ 18.00	$ 2,900
3" SDR 17	90,100	$ 4.95	$ 446,000
3" SDR 21	318,000	$ 4.40	$ 1,399,200
3" SDR 17 Restrained Joint	1,860	$ 14.00	$ 26,000
3" SDR 21 Restrained Joint	1,500	$ 12.00	$ 18,000
2" SDR 17	45,350	$ 4.00	$ 181,400
2" SDR 21	86,360	$ 3.85	$ 332,500
2" SDR 17 Restrained Joint	2,470	$ 10.00	$ 24,700
2" SDR 21 Restrained Joint	970	$ 9.60	$ 9,300
1.5" Service Line	33,000	$ 3.65	$ 120,500
Service Meters, ea.	220	$ 2,250	$ 495,000
Valves, Crossings, Misc. Fittings @ 25%	25%		$ 1,273,500
Miscellaneous Work @ 10%	10%		$ 636,800
Subtotal, Distribution System			**$ 7,004,300**
Booster Pump			
Booster Pumps	1	$ 80,000	$ 80,000
Miscellaneous Work @ 25%	15%		$ 12,000
Subtotal, Booster Pumps			**$ 92,000**
Construction Contingencies	10%		**$ 710,000**
Total Estimated Construction Costs			**$ 7,806,300**
Non-Construction Costs			
Administration and Legal			$ 78,100
Crop Damage, Right-of-Way	140	$ 1,250	$ 175,000
Property	1	$ 25,000	$ 25,000
Basic Engineering Services			$ 635,000
Engineering Inspection Services			$ 274,000
Owner Inspection Services			$ 234,000
Interest During Construction (12 months)			$ 323,000
Total Estimated Non-Construction Costs			**$ 1,744,100**
Total Estimated Project Costs			**$ 9,550,400**

Table 4
Kingbrook Rural Water System
Preliminary Engineering Report
Estimate of Project Funding

Item		Cost
Fixed Construction Costs		
Distribution Construction	$	7,004,300
Booster Pump Construction	$	92,000
Construction Contingencies	$	710,000
Total Construction Costs	**$**	**7,806,300**
Total Non-Construction Costs	**$**	**1,744,100**
Estimated Total Project Costs	**$**	**9,550,400**
Funding		
Local Contribution (Connection Fees)	$	550,000
Financed @ 0% Subsidy	$	9,000,400
Financed @ 25% Subsidy	$	6,612,800
Financed @ 50% Subsidy	$	4,225,200
Financed @ 75% Subsidy	$	1,837,600
Rate Impact (financed at 3.0% for 20 years)		
Total Number of Kingbrook Users		4,930
Monthly Rate Increase Per Customer @ 0% Subsidy		$10.12
Monthly Rate Increase Per Customer @ 25% Subsidy		$7.44
Monthly Rate Increase Per Customer @ 50% Subsidy		$4.75
Monthly Rate Increase Per Customer @ 75% Subsidy		$2.07

FIGURES


KINGBROOK RURAL WATER SYSTEM
USER HISTORY
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4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
91
92
93
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14
15
16
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18
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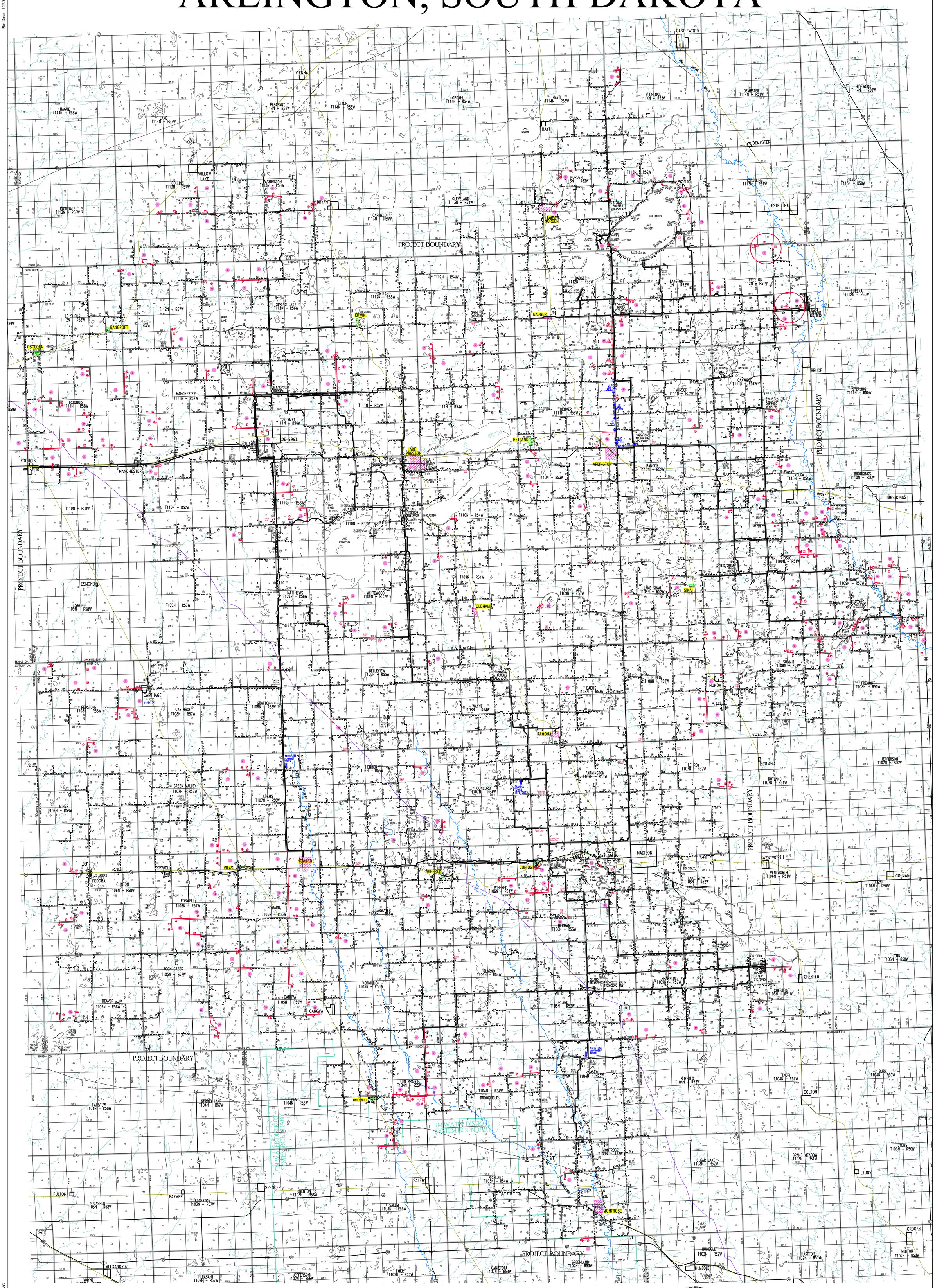
20
Total
Rural Users
Seasonal Lake/Pasture
Commercial/ Bulk Town

KINGBROOK RURAL WATER SYSTEM
ARLINGTON, SOUTH DAKOTA



LEGEND

- 6" — CLASS 160 PVC PIPELINE
- 6" — CLASS 200 PVC PIPELINE
- 6" — CLASS 250 PVC PIPELINE
- EXISTING MAINLINE PIPE 12"
- EXISTING MAINLINE PIPE 10"
- EXISTING MAINLINE PIPE 8"
- EXISTING MAINLINE PIPE 6"
- EXISTING MAINLINE PIPE 5"
- EXISTING MAINLINE PIPE 4" AND SMALLER
- PASTURE SERVICE LOCATION
- MAINLINE VALVE
- PRESSURE REGULATING VALVE
- END OF LINE CLEANOUT
- SERVICE LOCATION
- TOWN – BULK USER
- TOWN – INDIVIDUAL USER
- 6" Cl. 160 / 6" Cl. 200 / 6" Cl. 250 — PROPOSED PIPE
- END OF LINE CLEANOUT
- MAINLINE VALVE
- PRESSURE REGULATING VALVE
- PASTURE SERVICE LOCATION
- SERVICE LOCATION
- STAKING SHEET

REGISTERED PROFESSIONAL ENGINEER
REG NO. 10252
MATTHEW N. OEDEKOVEN
SOUTH DAKOTA
12/30/2015

0 4,500 9,000 18,000 scale feet

REV	DATE	DESCRIPTION
1	FEB 2014	SYSTEM UPDATES

DGR ENGINEERING

Project Manager: Matthew Oedekoven
Designer: Paul Messner
Project Number: 800735
Phone: (712) 472-2531

Kingbrook Rural Water System
Arlington, South Dakota

2017 INTERNAL EXPANSION PROJECT

SHEET 2

Plot Date: 12/30/2015 8:58:20 AM

Layer Manager: BASEMAP
P:\08\00735\DWG\SCH 1\BASE 2017 EXPANSION.DWG

ADDENDUM ONE
TO
PRELIMINARY
ENGINEERING REPORT

2017 IMPROVEMENTS

FOR

KINGBROOK RURAL WATER SYSTEM

ARLINGTON, SOUTH DAKOTA

January 2016

DGR Project No. 800735

ADDENDUM ONE
TO
PRELIMINARY ENGINEERING REPORT

2017 IMPROVEMENTS

FOR

KINGBROOK RURAL WATER SYSTEM
ARLINGTON, SOUTH DAKOTA

January 2016

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

By_____
Matthew N. Oedekoven, P.E.

License No. 10252

Date 1/8/2016

DGR Project No. 800735

DGR Engineering

Rock Rapids, IA (712) 472-2531 • Sioux Falls, SD (605) 339-4157 • Sioux City, IA (712) 266-1554 • Ankeny, IA (515) 963-3488

ADDENDUM ONE
TO
PRELIMINARY ENGINEERING REPORT

2017 IMPROVEMENTS

FOR

KINGBROOK RURAL WATER SYSTEM
ARLINGTON, SOUTH DAKOTA

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ADDENDUM ONE
TO
PRELIMINARY ENGINEERING REPORT

2017 IMPROVEMENTS

FOR

KINGBROOK RURAL WATER SYSTEM
ARLINGTON, SOUTH DAKOTA

I. PURPOSE AND INTRODUCTION

This is an addendum to the report prepared by DeWild Grant Reckert & Assoc. Co. titled: *"Preliminary Engineering Report, 2017 Improvements for Kingbrook Rural Water System, Arlington, South Dakota, Revised December 2015"*. This document will be referred to as the "PER". This addendum will describe the Implementation Schedule for the proposed alternative.

II. IMPLEMENTATION SCHEDULE

January 1, 2016	Request funding for proposed improvements
March, 2016	SD DENR Board Meeting for funding award; Begin Preliminary Design
July, 2016	Funds available, Begin Final Design
September, 2016	Receive project bids
May, 2017	Begin construction
July, 2018	Construction completion

Note that the above schedule is dependent upon timing of funding announcement.