Drinking Water Facilities Funding Applications
January 2015

January 8, 2015
Item 7

TITLE: Drinking Water Facilities Funding Applications

EXPLANATION: The following applications have been received by DENR for funding consideration at this meeting. The projects' priority points are shown in parentheses.

a. Mid-Dakota Rural Water System (155)
b. Dakota Dunes Community Improvement District (21)
c. Colonial Pine Hills Sanitary District (20)
d. Hoven (4)

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

http://denr.sd.gov/bwnrapps/BWNRappsdwf0115.pdf

If you would like a hard copy of the applications, please contact Dave Ruhnke at (605) 773-4216.

WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: Mid-Dakota Rural Water System

Project Title:	Automatic Meter Reading – Advanced Meter Infrastructure Project
Funding Requested:	$2,535,000
Other Proposed Funding:	$65,000 - Local Cash
Total Project Cost:	$2,600,000
Green Reserve Amount:	$0
Project Description:	The project includes installation of a meter transmission unit (MTU) on existing water meters. Antennas will be constructed throughout the service area or installed on existing water towers to collect the meter readings transmitted by radio signal from the MTUs and relay the readings to the base station located at the Mid-Dakota office.
Alternatives Evaluated:	The No Action alternative was evaluated and rejected due to the issues with manually reading the meters. Six manufacturer's systems were evaluated and the MegaNET system from Mueller Systems was determined to be the best fit for the Mid-Dakota system.
Implementation Schedule:	Mid-Dakota anticipates purchasing the units and bidding the installation in 2015 with a project completion in 2016.
Service Population:	32,000
Current Domestic Rate:	$64.65 per 7,000 gallons
Proposed Domestic Rate at Project Completion:	$66.65 per 7,000 gallons

Interest Rate: 3.00% Term: 15 years Security: System Revenue

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If funding is provided as all loan, Mid-Dakota RWS would have 135% coverage based on the proposed rate of $66.65/7,000 gallons.

25% Funding Subsidy:	$633,750 subsidy with a loan of $1,901,250
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $1,901,250 Mid-Dakota RWS would have 137% coverage based on the proposed rate of $66.65/7,000 gallons.

50% Funding Subsidy:	$1,267,500 subsidy with a loan of $1,267,500
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $1,267,500 Mid-Dakota RWS would have 140% coverage based on the proposed rate of $66.65/7,000 gallons.

75% Funding Subsidy:	$1,901,250 subsidy with a loan of $633,750
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $633,750 Mid-Dakota RWS would have 143% coverage based on the proposed rate of $66.65/7,000 gallons.

ENGINEERING REVIEW COMPLETED BY: ERIC MEINTSMA

FINANCIAL REVIEW COMPLETED BY: ELAYNE LANDE

RECEIVED
AUG 2 7 2014
Division of Financial & Technical Assistance

Drinking Water Facilities Funding Application

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

Applicant	Proposed Funding Package	
Mid-Dakota Rural Water System, Inc.	CWFCP / DWSRF	$2,535,000
Address	Local Cash	$65,000
608 W. 14th Street PO Box 318 Miller, SD 57362-0318	Other	
	Other	
Subapplicant	Other	
DUNS Number 149280427	**TOTAL**	$2,600,000

Project Title: Automatic Meter Reading (AMR) - Advanced Meter Infrastructure (AMI) Project

Description:

Mid-Dakota Rural Water System Inc. ("Sponsor") is proceeding with the installation and implementation of an Automatic Meter Reading (AMR) and Advanced Meter Infrastructure (AMI) Project. Sponsor currently uses a self-read billing system, the customer reads his own meter, sends in the reading and Sponsor computes the bill and sends the bill to the customer. This billing method results in the customer's payments being two months in arrears. Sponsor will install a new AMR-AMI system on all of its customer's meters (currently 5,758 meters). Sponsor engaged the services of Bartlett & West Engineers to analyze multiple AMR-AMI Systems. The report was completed in February 2014. The report considered seven alternatives including a "no action" alternative. The report concluded that the "MegaNET System from Mueller Systems, is the preferred alternative; price, coverage, warranty among other factors considered.

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.

Kurt Pfeifle, General Manager		08/26/2014
Name & Title of Authorized Signatory (Typed)	Signature	Date

Professional Consultants

Application Prepared By: Mid-Dakota Rural Water System, Inc.

Contact Person: Kurt Pfeifle, General Manager

Mailing Address: 608 W. 14th Street - PO Box 318

City, State, and Zip: Miller, SD 57362-0318

Telephone Number: (605) 853-3159 Fax: (605) 853-3245

Email address: kurt.pfeifle@mdrws.com

Consulting Engineering Firm: Bartlett & West Engineers

Contact Person: Joe Honner

Mailing Address: 5900 S Western Ave., Suite 101

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

Telephone Number: (605) 274-7415 Fax: (605) 274-7417

Email address: joe.honner@bartwest.com

Legal Counsel's Firm: May, Adam, Gerdes & Thompson

Legal Counsel: Tim Engel

Mailing Address: 503 S Pierre Street - PO Box 160

City, State, and Zip: Pierre, SD 57501

Telephone Number: (605) 224-8803 Fax: (605) 224-6289

Email address: tme@magt.com

This section applies only to political subdivisions

Bond Counsel's Firm: _____

Bond Counsel: _____

Mailing Address: _____

City, State, and Zip: _____

Telephone Number: _____ Fax: _____

Email address: _____

BUDGET SHEET

Cost Classification	A CWFCP / DWSRF	B Mid-Dakota	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal including Bond Counsel		$5,000.00				$5,000.00
D. Other						
2. Land, Structure, Right-of-Way	$50,000.00					$50,000.00
3. Engineering						
A. Bidding and Design Fees		$30,000.00				$30,000.00
B. Project Inspection Fees		$30,000.00				$30,000.00
C. Other						
4. Construction and Project Improvement	$493,000.00					$493,000.00
5. Equipment	$1,900,000.00					$1,900,000.00
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$2,443,000.00	$65,000.00				$2,508,000.00
10. Contingencies	$92,000.00					$92,000.00
11. Total (Lines 9 and 10)	$2,535,000.00	$65,000.00				$2,600,000.00
12. Total %	97.50%	2.50%	0.00%	0.00%	0.00%	100.00%

Columns A - E: Identify each funding source and enter the amounts budgeted by cost category.

Comments:

Method of Financing

Source Header	Secured Funds	Unsecured Funds (Date Anticipated)
Local Cash (Identify Source) Mid-Dakota Reserves	$65,000.00	
Other (Explain) CWFCP - DWSRF		$2,535,000.00 Jan 1, 2015
Other (Explain)		
Other (Explain)		
Other (Explain)		
Other (Explain)		
TOTAL	$65,000.00	$2,535,000.00

Comments:

7.3.1 Repayment Information

Interest rate and term you are applying for: 3 %, 15 years.

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

- ☐ 1. General Obligation bond (requires bond election)
- ☒ 2. Water Revenue bond
- ☐ 3. Project Surcharge Revenue bond
- ☐ 4. Sales Tax Revenue bond

7.3.2 Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audit or unaudited financial statement to include specific accounting of pledged funds.
2. Current year's budget.

Planning and Legal Documents

1. Governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water SRF application and signing of payment requests. This resolution must also include the maximum loan amount requested, interest rate and term being applied for, description of proposed project, and security pledged towards repayment of the loan.
3. Facilities Plan (8.3.18).
4. Capacity Assessment Worksheets (section 8.3.16).

Items 5-7 apply to Nonprofit Entities only

5. By-laws
6. Articles of Incorporation
7. Certificate of Good Standing from Secretary of State

7.3.3 General Information

The month and day your fiscal year begins: January 1

Population Served

Current 32,000 2000 30,000 1990 0

Top Five Employers Within 30 Miles	Number of Employees	Type of Business
Dakota Provisions	600	Turkey Processing Plant
Huron Regional Medical Center	300	Clinic / Hospital
Greenline Implement	75	Ag Dealership
Huron School System	171	Education
Huron Walmart	150	Department Store

Please indicate employers within boundary of issuing entity with an asterisk (*).

7.3.4 Drinking Water Utility Information

Current Water Utility Debt

Year	2007	2011	2012	2014		
Purpose	Initial Construction	Project Expansion	Add-on User Proj.	Redfield Tank		
Security Pledged	Assets + Revenue	Assets + Revenue	Assets + Revenue	Assets + Revenue		
Amount	40,239,289	$12,000.00	$2,374,054.00	$644,786.00		
Maturity Date (mo/yr)	January 31, 2037	December 22, 2051	April 15, 2043	May 14, 2044		
Debt Holder	US Bureau of Rec.	USDA- Rural Devel.	SD Conserv Dist.	SD Conserv. Dist.		
Debt Coverage Requirement	1.0	1.0	1.0	1.0		
Avg. Annual Required Payment	$2,077,808.00	$519,720.00	$120,109.00	$32,621.00		
Outstanding Balance	32,308,856	11,529,559	$2,320,291.00	$643,680.00		

Use additional sheets if more room is required to list all current water utility debt.

Drinking Water Utility Cash Flow

	Prior Year	Prior Year	Current Year	Future Year #
Fiscal Year				
OPERATING CASH FLOW				
Water Sales				
Surcharge Fee				
Other (Explain) _____				
_____				
OPERATING PAYMENTS				
Personal Services				
Chemical, Material & Supplies				
Electric & Other Utilities				
Other (Explain) _____				
_____				
NET CASH FROM OPERATIONS				
NONOPERATING CASH FLOW				
Interest Income				
Other Revenue (Explain) _____				
_____				
Transfers In (Explain) _____				
_____				
Fixed Asset Sale (Explain) _____				
_____				
Transfers Out (Explain) _____				
_____				
Fixed Asset Purchases (Explain) _____				
_____				
Debt Payment (Principal Only)				
Debt Payment (Interest Only)				
Other Expenses (Explain) _____				
_____				
NET CASH FROM NONOPERATING				
Net Increase (Decrease) in Cash				
Beginning Cash Balance				
Ending Cash Balance				
RESTRICTED BALANCE				
UNRESTRICTED BALANCE				

Future Year: First full year after project completion.

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

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

Check one: ____ Incorporated Municipality or Sanitary District

or

✓ Other Community Water System

Monthly:	Current Rate	Proposed Rate	# of Accounts	Average use gallons/cubic feet
Domestic	$64.65	$66.65	5,690	7,000
Business				
Other: Special-GPM	$35.40	$36.40	68	

Are fees based on usage or flat rate? Usage

When is proposed fee scheduled to take effect? January 1, 2015

When did the current fee take effect? January 1 2013

What was the fee prior to the current rate? 62.95

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

Five Largest Customers	Type of Business	% of System Revenues
Huron	Municipality	22%
Miller	Municipality	5%
Gettysburg	Municipality	3%
Highmore	Municipality	3%
Onida	Municipality	2%

7.3.5 Property Tax Information

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

Three year valuation trend:

Year	_____	_____	_____
Assessed Valuation	_____	_____	_____
Full & True Valuation	_____	_____	_____

Three year levies and collection trend:

Year	_____	_____	_____
Amount Levied	_____	_____	_____
Collected	_____	_____	_____
Penalties/Interest	_____	_____	_____
Late Payments	_____	_____	_____

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

Comments:

List all current debt secured by General Obligation bond:

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

Use additional sheets if more room is required to list all current G.O. debt.

Comments:

7.3.6 Sales Tax Information

(Complete 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:

7.3.7 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

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 section 8.3.18.	×
♦ A public hearing held discussing the project and the use of an SRF loan to finance the project. (See section 8.3.15)	×
♦ Minutes of the public hearing prepared and submitted to the department for inclusion into the final Facilities Plan.	×
♦ The affidavit of publication of the public hearing received and submitted to the department for inclusion into the final Facilities Plan. (See section 8.3.15)	×
♦ The four review agencies contacted and responses received for inclusion into the final Facilities Plan. (See section 8.3.18)	×
♦ The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. (See section 8.3.20)	×

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	$2,535,000.00
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	$2,535,000.00

Mid-Dakota Rural Water System, Inc.

Name of Applicant

Signature of Authorized Representative

08/26/2014

Date

7.3.9 Preaward Compliance Review

FORM Approved By OMB: No. 2030-0020 Expires 12-31-2011

United States Environmental Protection Agency
Washington, DC 20460

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note : Read instructions on other side before completing form.

I. Applicant/Recipient (Name, Address, State, Zip Code). MID-DAKOTA RURAL WATER SYSTEM , INC.	DUNS No. 149280427

II. Is the applicant currently receiving EPA assistance? NO

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7. See instructions on reverse side.) none

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective action taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7. See instructions on reverse side.) none

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3)). none

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below. no

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable bypersons with disabilities, explain how a regulatory exception (40 C.F.R. § 7.70) applies.

VII.* Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex,age, or disability in its programs or activities? (40 C.F.R. § 5.140 and § 7.95) yes

a. Do the methods of notice accommodate those with impaired vision or hearing? no b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communication? yes c. Does the notice identify a designated civil rights coordinator? no

VIII.* Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. § 7.85(a)) estimated

IX.* Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166) no

X.* If the applicant/recipient is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.
yes

XI* If the applicant/recipient is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet address for, or a copy of, the procedures. yes

For the Applicant/Recipient I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official	B. Title of Authorized Official	C. Date
[signature]	GENERAL MANAGER / CEO	11/19/14

For the U.S. Environmental Protection Agency I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preawardcompliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisionsof 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized EPA Official See ** note on reverse side.	B. Title of Authorized EPA Official	C. Date

EPA Form 4700-4 (Rev. 03/2008). Previous editions are obsolete.

Instructions for EPA FORM 4700-4 (Rev. 03/2008) General

Recipients of Federal financial assistance from the U.S.Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment).

Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities.

Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities.

The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission.

Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution.

40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972.

40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973.

The Executive Order 13166 (E.O. 13166) entitled: "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items

"Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25.

"Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25.

"Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed.

"Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability.

Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission.

If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable."

In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification.

* Questions VII – XI are for informational use only and will not affect an applicant's grant status. However, applicants should answer all questions on this form. (40 C.F.R. Parts 5 and 7)

** Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.

Approval indicates, in the reviewer's opinion, questions I – VI of Form 4700-4 comply with the preaward administrative requirements for EPA assistance.

"Burden Disclosure Statement"

EPA estimates public reporting burden for the preparation of this form to average 30 minutes per response. This estimate includes the time for reviewing instructions, gathering and maintaining the data needed and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to
U.S. EPA, Attn: Collection Strategies Division (MC 2822T), Office of Information Collection, 1200 Pennsylvania Ave., NW, Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

The information on this form is required to enable the U.S.Environmental Protection Agency to determine whether applicants and prospective recipients are developing projects, programs and activities on a nondiscriminatory basis as required by the above statutes and regulations.

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.

KURT PFEIFLE, GENERAL MANAGER / CEO

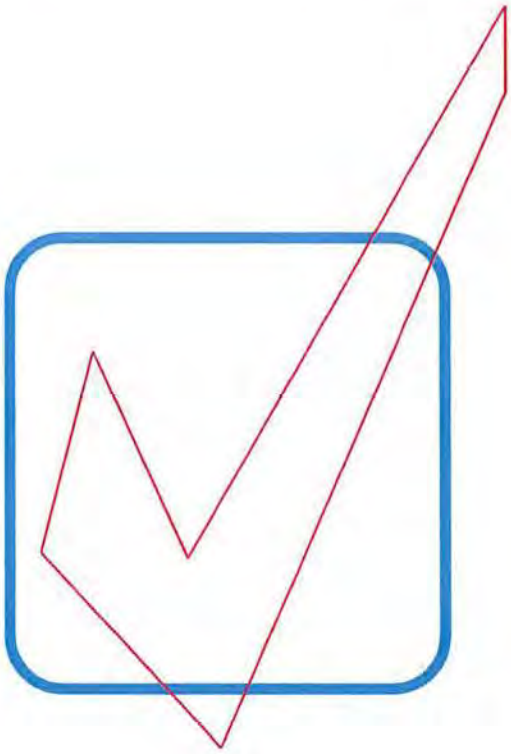
Name & Title of Authorized Representative

Aug 26, 2014

Signature of Authorized Representative 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: MID-DAKOTA RURAL WATER SYSTEM, INC.

Prepared by: KURT PFEIFLE, GENERAL MANAGER / CEO
PO BOX 318
MILLER, SD 57362-0318

Phone #: (605) 853-3159

Date: 8/26/2014

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:*** 4,500,000 Gallons	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 9,000,000 Gallons	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 13.5 Mill. GPD (treatment cap.) 10,000 af water right	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 33%	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** 20 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):*** 5809A-3 & 7245-3	☑	☐	☐	☐
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?***	☐	☐	☐	☑
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:*** Monthly	☐	☑	☐	☐
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:*** Chlorine gas cylinders ***How often?*** Monthly ***Disinfectant used:*** Chlorine gas / Chloraminsation	☑	☐	☐	☐
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:*** 2 ppm (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 spot checks	☑	☐	☐	☐
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:*** One Peak Day Storage	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** 20% of each tank	☑	☐	☐	☐
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:*** Annually (minimum)	☑	☐	☐	☐
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:*** 10 %	☑	☐	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 60 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:*** 10%	☐	☑	☐	☐
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:*** ~10 ***Most common complaint:*** WT Cls IV=2, Cls III=2, Cls I	☑	☐	☐	☐
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):*** WT Cls IV=2, Cls III=2, Cls II=2 Cls I=1: WD Cls IV=8, Cls III=2, Cls II=3, Cls I=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*** _____	☑	☐	☐	☐

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?*** At least seven 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):*** General Manager/CEO or Operations 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:*** Reserve account	☑	☐	☐	☐
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:*** $3.95/Kg domestic, $2.95/Kg livestock (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: Increase if consumption exceeds design allotment.	☑	☐	☐	☐
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 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 / Estimates
8/22/14

Applicant: Mid-Dakota Rural Water System Inc.
Completed by: Steve Peterson

4 Year Estimates	2013 Actual	2014 Budget	2015 Estimate	2016 Estimate	2017 Estimate
1. Cash on Hand	**$ 590,891.36**	**$ 337,732.90**	**$ 746,594.90**	**$ 328,080.26**	**$ 162,010.18**
2. Receipts					
a. Unmetered Water Revenue	$ -	$ -			
b. Metered Water Revenue	$ 6,710,373.24	$ 7,046,520.00	$ 7,257,915.60	$ 7,475,653.07	$ 7,699,922.66
c. Other Water Revenue	$ 197,218.97	$ 199,489.00	$ 205,473.67	$ 211,637.88	$ 217,987.02
d. Total (2a thru 2c)	**$ 6,907,592.21**	**$ 7,246,009.00**	**$ 7,463,389.27**	**$ 7,687,290.95**	**$ 7,917,909.68**
e. Connection Fees	$ 335,583.71	$ 377,500.00	$ 388,825.00	$ 400,489.75	$ 412,504.44
f. Interest/Dividend Revenue	$ 27,806.45	$ 82,506.00	$ 84,981.18	$ 87,530.62	$ 90,156.53
g. Other Income	$ -	$ -	$ -	$ -	$ -
h. Total Revenue (2d thru 2g)	**$ 7,270,982.37**	**$ 7,706,015.00**	**$ 7,937,195.45**	**$ 8,175,311.31**	**$ 8,420,570.65**
i. Transfers in/Additional Needed	$ -	$ 1,309,750.00	$ -	$ -	$ -
j. Loans/Grants/Other	$ 2,531,920.42	$ 2,000,000.00	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -
3. Total Receipts (2h thru 2j)	**$ 9,802,902.79**	**$ 11,015,765.00**	**$ 7,937,195.45**	**$ 8,175,311.31**	**$ 8,420,570.65**
4. Total Available (1 & 3)	**$ 10,393,794.15**	**$ 11,353,497.90**	**$ 8,683,790.35**	**$ 8,503,391.57**	**$ 8,582,580.83**
5. Operating Expense					
a. Salaries & Wages	$ 1,428,857.86	$ 1,701,300.00	$ 1,752,339.00	$ 1,804,909.17	$ 1,859,056.45
b. Pensions & Benefits	$ 424,928.75	$ 470,240.00	$ 484,347.20	$ 498,877.62	$ 513,843.94
c. Purchased Water	$ -	$ -	$ -	$ -	$ -
d. Purchased Power	$ 660,627.78	$ 682,650.00	$ 703,129.50	$ 724,223.39	$ 745,950.09
e. Fuel for Power Production	$ 4,763.24	$ 17,050.00	$ 17,561.50	$ 18,088.35	$ 18,631.00
f. Chemicals	$ 142,114.38	$ 138,500.00	$ 142,655.00	$ 146,934.65	$ 151,342.69
g. Materials, Supplies, Rep & Maint	$ 110,035.42	$ 134,875.00	$ 138,921.25	$ 143,088.89	$ 147,381.55
h. Engineering	$ 155,890.32	$ 236,250.00	$ 243,337.50	$ 250,637.63	$ 258,156.75
i. Other Contract Services	$ 90,239.82	$ 83,700.00	$ 86,211.00	$ 88,797.33	$ 91,461.25
j. Equip Rent/Real Property	$ -	$ -	$ -	$ -	$ -
k. Transportation	$ 153,066.31	$ 224,300.00	$ 231,029.00	$ 237,959.87	$ 245,098.67
l. Laboratory	$ 13,815.23	$ 10,075.00	$ 10,377.25	$ 10,688.57	$ 11,009.22
m. Insurance	$ 80,885.09	$ 106,250.00	$ 109,437.50	$ 112,720.63	$ 116,102.24
n. Regulatory Expense	$ -	$ -	$ -	$ -	$ -
o. Advertising	$ 3,291.70	$ 5,200.00	$ 5,356.00	$ 5,516.68	$ 5,682.18
p. Miscellaneous/A&G	$ 629,641.84	$ 248,325.00	$ 255,774.75	$ 263,447.99	$ 271,351.43
q. Total Expense (5a thru 5p)	**$ 3,898,157.74**	**$ 4,058,715.00**	**$ 4,180,476.45**	**$ 4,305,890.74**	**$ 4,435,067.47**
r. Maintenance Expense	$ -	$ 106,000.00	$ 109,180.00	$ 112,455.40	$ 115,829.06
s. Total Operating Expense (5q & 5r)	**$ 3,898,157.74**	**$ 4,164,715.00**	**$ 4,289,656.45**	**$ 4,418,346.14**	**$ 4,550,896.53**
t. Loan Principal Payments	$ 1,038,045.77	$ 925,413.00	$ 953,175.39	$ 981,770.65	$ 1,011,223.77
u. Loan Interest Payments	$ 1,704,423.72	$ 1,822,225.00	$ 1,876,891.75	$ 1,933,198.50	$ 1,991,194.46
v. Transfers Out	$ -	$ -	$ -	$ -	$ -
w. Capital Purchases	$ 645,271.36	$ 637,550.00	$ 656,676.50	$ 676,376.80	$ 696,668.10
3 Portable Generators	$ 10,459.87	$ 77,000.00	$ 79,310.00	$ 81,689.30	$ 84,139.98
Replace DHU at WTP	$ -	$ 500,000.00	$ -	$ -	$ -
x. Other - New Construction	$ 2,759,702.79	$ 2,480,000.00	$ 500,000.00	$ 250,000.00	$ 200,000.00
6. Total Cash Paid Out (5s thru 5x)	**$ 10,056,061.25**	**$ 10,606,903.00**	**$ 8,355,710.09**	**$ 8,341,381.39**	**$ 8,534,122.83**
7. Ending Cash (4 - 6)	**$ 337,732.90**	**$ 746,594.90**	**$ 328,080.26**	**$ 162,010.18**	**$ 48,458.00**

Financial Spreadsheet / Ratios & Res.
8/22/14

Applicant: Mid-Dakota Rural Water System Inc.
Completed by: Steve Peterson

4 Year Estimates	2013 Actual	2014 Budget	2015 Estimate	2016 Estimate	2017 Estimate
8. Number of Customer Accounts	5,739	5,903	6,003	6,103	6,203
9. Avg Annual User Charge (2d/8)	$ 1,203.62	$ 1,227.51	$ 1,243.28	$ 1,259.59	$ 1,276.46
10. Coverage Ratio ((2h-5s)/(5t+5u)	$ 1.23	$ 1.29	$ 1.29	$ 1.29	$ 1.29
11. Operating Ratio (2d/5s)	$ 1.77	$ 1.74	$ 1.74	$ 1.74	$ 1.74
12. Additions to Reserve Funds					
a. Debt Service Reserve	$ -	$ -	$ -	$ -	$ -
b. Bond Retirement Reserve	$ -	$ -	$ -	$ -	$ -
c. Capital Improvement Reserve	$ -	$ -	$ -	$ -	$ -
d. Replacement Reserve	$ -	$ -	$ -	$ -	$ -
e. Other	$ -	$ -	$ -	$ -	$ -
13. Total Reserves (12a thru 12e)	$ -	$ -	$ -	$ -	$ -
14. Year-End Operating Cash (7-13)	$ 337,732.90	$ 746,594.90	$ 328,080.26	$ 162,010.18	$ 48,458.00

Drinking Water Utility Cash Flow
8/22/14

Calendar Year	2012 Actual	2013 Actual	2014 Budget	2015 Future Year
OPERATING CASH FLOW				
Water Sales	$ 3,494,441.27	$ 3,428,118.20	$ 3,964,712.00	$ 4,083,653.36
Surcharge Fee	$ -	$ -	$ -	$ -
Other (Explain) - Minimum Bills	$ 3,031,460.22	$ 3,282,255.04	$ 3,081,808.00	$ 3,174,262.24
Other Operating Revenue	$ 291,766.91	$ 197,218.97	$ 211,989.00	$ 218,348.67
OPERATING PAYMENTS				
Personal Services	$ (1,781,410.71)	$ (1,835,786.61)	$ (2,171,540.00)	$ (2,236,686.20)
Chemicals, Material & Supplies	$ (509,750.11)	$ (502,034.40)	$ (520,100.00)	$ (535,703.00)
Electric & Other Utilities	$ (676,952.21)	$ (660,627.78)	$ (698,410.00)	$ (719,362.30)
Other (Explain) - All Other Operating Expense	$ (631,830.72)	$ (743,818.63)	$ (425,510.00)	$ (438,275.30)
	$ -	$ -	$ -	$ -
NET CASH FROM OPERATIONS	**$ 3,217,724.65**	**$ 3,165,324.79**	**$ 3,442,949.00**	**$ 3,546,237.47**
NONOPERATING CASH FLOW				
Interest Income	$ 38,142.41	$ 27,806.45	$ 82,506.00	$ 84,981.18
Other Revenue (Explain) - Hookup Fees	$ 544,876.40	$ 335,583.71	$ 365,000.00	$ 375,950.00
Grants & Loans	$ 3,614,860.81	$ 2,531,920.42	$ 2,000,000.00	$ 2,060,000.00
Transfers In (Explain) -	$ -	$ -	$ 1,309,750.00	$ 1,349,042.50
	$ -	$ -	$ -	$ -
Fixed Asset Sale (Explain) -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -
Transfers Out (Explain) - Engineering	$ (59,268.41)	$ (155,890.32)	$ (236,250.00)	$ (243,337.50)
Easements, Construction Expense	$ (3,940,752.83)	$ (2,759,702.79)	$ (3,092,905.00)	$ (3,185,692.15)
Fixed Asset Purch (Explain) -	$ -	$ -		$ -
	$ -	$ -		$ -
Debt Payment (Principal Only)	$ (967,267.50)	$ (1,038,045.77)	$ (925,413.00)	$ (953,175.39)
Debt Payment (Interest Only)	$ (1,630,260.58)	$ (1,704,423.72)	$ (1,822,225.00)	$ (1,876,891.75)
Other Expenses (Explain) - Capital Purchases	$ (628,423.56)	$ (645,271.36)	$ (637,550.00)	$ (656,676.50)
Generators, Transfer Switches, 3-2B	$ (109,372.06)	$ (10,459.87)	$ (77,000.00)	$ (79,310.00)
NET CASH FROM NONOPERATING	**$ (3,137,465.32)**	**$ (3,418,483.25)**	**$ (3,034,087.00)**	**$ (3,125,109.61)**
Net Increase (Decrease) in Cash	$ 80,259.33	$ (253,158.46)	$ 408,862.00	$ 421,127.86
Beginning Cash Balance	$ 510,632.03	$ 590,891.36	$ 337,732.90	$ 746,594.90
Ending Cash Balance	$ 590,891.36	$ 337,732.90	$ 746,594.90	$ 1,167,722.76
RESTRICTED BALANCE	$ 76,690.06	$ 91,172.96	$ 103,672.96	$ 106,783.15
UNRESTRICTED BALANCE	**$ 514,201.30**	**$ 246,559.94**	**$ 642,921.94**	**$ 1,060,939.61**

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)	$0	$0	$0	$0	$0
10. Coverage Ratio (2h-5s)/(5t+5u)	0.0	0.0	0.0	0.0	0.0
11. Operating Ratio (2d/5s)	0.0	0.0	0.0	0.0	0.0
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.**

8.3.17 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

MID-DAKOTA RURAL WATER SYSTEM, INC
RESOLUTION NO. 2014-01

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, Mid-Dakota 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 distribution system, including but not limited to construction of an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) System (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 District hereby approves the submission of an Application for financial assistance in an amount not to exceed $2,600,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The 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. The 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.

[SIGNATURES ON FOLLOWING PAGE]

In addition to the comments above, our Flood Risk and Floodplain Management Section has reviewed the proposed project and offer the comments below:

The Federal floodplain management criterion basically states that construction which could be damaged by floodwaters or which could obstruct flood flows should not be located in the one percent annual chance floodplain. If this is not practicable, any residential construction that could be damaged by floodwater must be placed above the one percent annual chance flood water surface elevation. Any nonresidential construction that could be damaged by flood water must be placed above or flood proofed to above the one percent annual chance flood water surface elevation. All construction should be designed to minimize potential harm to or within the floodplain.

If construction must occur in the floodplain, it must be located outside the floodway. If a floodway has not been determined and designated, the construction should be as far from the stream channel as possible. The goal of any construction in the floodplain is to achieve the highest level of flood protection with zero impact to adjacent property.

Per a phone conversation, held on August 27, 2013, with Kurt Pfeifle, General Manager of Mid-Dakota Rural Water System, Inc., regarding the proposed project. The proposed installation of base stations/radio towers that appear to be located in or near the Lake Oahe Maximum Operating Reservoir Pool Elevation, does not involve any additional volume of soil/material and is therefore, in compliance with Appendix A (Typical Cut and Fill Volumes for Land Development Proposals) of NWDR 1110-2-5, Land Development Guidance at Corps Reservoir Projects

To view the FEMA FIRM panels that contain the floodway and one percent annual chance flood delineations, please perform the following steps:

1. Navigate to the following website: https://msc.fema.gov/portal/.
2. Enter an address or a place (*i.e.*, city, town, or county) in the search box half way down the page.
3. Click on the desired panel.
4. Click on the "View" icon or "Download" icon in the left panel to view the map panel.

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 Hughes, Sully, Hyde, Hand, Beadle, and

parts of Potter, Faulk, Spink, Kingsbury, Sanborn, Aurora, Jerauld, Buffalo, and Davison Counties 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

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# 6479 in the subject line.

Sincerely,

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

Kurt Pfeifle

From: Kurt Pfeifle <kurt.pfeifle@mdrws.com>
Sent: Friday, July 25, 2014 8:10 AM
To: 'Perkovich, Mike'
Cc: 'Meintsma, Eric'; 'Bruels, Andrew'
Subject: RE: DWSRF Application

Mike,

Thank you for the reply. We'll get the agency review letters out, schedule our public hearing (August 12th) and wait for word on the Cultural Resources information.

Thanks again!

Kurt

Kurt Pfeifle, General Manager
Mid-Dakota Rural Water System, Inc.

From: Perkovich, Mike [mailto:Mike.Perkovich@state.sd.us]
Sent: Thursday, July 24, 2014 11:41 AM
To: 'Kurt Pfeifle'
Cc: Meintsma, Eric; Bruels, Andrew
Subject: RE: DWSRF Application

Kurt – Sorry it took a while to get back to you. We are having a discussion with SHPO regarding how to proceed with the Cultural Effects form and the type of information they want. We will transmit that information back to you as soon as we hear back from SHPO.

The report you submitted will be adequate for a meter project. You will need to supplement it with the review agency letters and public meeting information.

From: Kurt Pfeifle [mailto:kurt.pfeifle@mdrws.com]
Sent: Wednesday, July 16, 2014 2:56 PM
To: Perkovich, Mike
Subject: DWSRF Application

Mike,

Mid-Dakota is putting together a Drinking Water Facilities Funding Application for SRF assistance. The application will be for the purchase and installation of an Automatic Meter Reading (AMR) : Advanced Metering Infrastructure (AMI) System. We're looking to the October 2014 SRF application consideration. I need some clarification of a few things:

1. Submission of a Facilities Plan. Given the type of Project we're looking at (AMR : AMI) will the Engineering Report that was completed for the Project (see attached) suffice as the Facilities Plan?
2. I am planning to hold a Public Hearing on the AMR:AMI Project at the August 12, 2014 Board meeting. We will send the report to the four Review Agencies for their comment too.

3. With an AMR:AMI Project the Cultural Effects will be almost nonexistent (no digging)... with the possible exception of a need to erect a few small radio antenna towers. In the latter instance the exact location won't be known until a Vendor and Contractor is provided the work and they determine where a tower is needed based upon a "propagation" study. Therefore, I'm a little unclear as to what needs to be done with regards to Cultural Resources surveys and searches...

Any direction you can provide will be helpful.

Thanks.

Kurt

Kurt Pfeifle, General Manager
Mid-Dakota Rural Water System, Inc.

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State of South Dakota

OFFICE OF THE SECRETARY OF STATE

Certificate of Good Standing
Nonprofit Corporation

ORGANIZATIONAL ID#: NS008659

I, **JASON M. GANT**, Secretary of State of the State of South Dakota, do hereby certify that **MID-DAKOTA RURAL WATER SYSTEM, INC.** was duly incorporated under the laws of this state on **January 15, 1988**.

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.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the state of South Dakota, in Pierre, the Capital City, this day April 26, 2011.

Jason M. Gant
Secretary of State

Litho in U.S.A.

BYLAWS

Article I
General Purposes
Article II
Name & Location
Article III
Seal of Corporation
Article IV
Fiscal Year
Article V
Governing Body
Article VI
Membership
Article VII
Meetings of Members
Article VIII
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Article IX
Meeting of Directors
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Duties of Officers
Article XII
Board of Directors Duties
Article XIII
Non-Profit Operation
Article XIV
Miscellaneous

MID-DAKOTA RURAL WATER SYSTEM, INC. (EFFECTIVE AS OF NOVEMBER 12, 2013)

ARTICLE 1

GENERAL PURPOSES

This corporation shall be known as the Mid-Dakota Rural Water System, Inc and is incorporated under the not for profit 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, and these By-Laws

Return to Top

ARTICLE II

NAME AND LOCATION

Section 1.

The name of the corporation is the Mid-Dakota Rural Water System Inc

Section 2.

The principal office and place of business of this corporation shall be located in the city of Miller 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

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ARTICLE III

SEAL OF 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 officer of the corporation

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ARTICLE IV

FISCAL YEAR

Effective January 1 2008 the fiscal year of the corporation shall commence on January 1 and end on the succeeding December 31

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ARTICLE V

GOVERNING BODY

The business and affairs of the corporation shall be managed by a Board of Directors which shall exercise all of the powers of the corporation except those that are under law the Articles of Incorporation or these By-Laws, conferred upon or reserved to the members or delagated to the General Manager

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ARTICLE VI

MEMBERSHIP

Section 1. Eligibility

Membership in the corporation shall be limited to natural persons and other legal entities that

(a) Are located within the area to be served by this corporation,

(b) Are reasonably accessible from the corporation's designated pipeline location,

(c) Have applied for membership on a form approved by the Board of Directors,

(d) Have agreed to pay a membership fee

(e) Have entered into written agreements with this corporation for the purchase of water for domestic, municipal and other approved beneficial use as may from time to time be required by the Board of Directors and

(f) Have been accepted for membership by the Board of Directors

Section 2 Application

An eligible person or entity shall become a member of the Mid-Dakota Rural Water System Inc , by

(a) Making such written application for membership as may be required by the Board of Directors

(b) 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 or in the case of municipal members by entering into a Water Supply Contract with the Mid-Dakota Rural Water System Inc :

(c) Paying the membership fees No applicant shall become a member unless and until accepted for membership by the Board of Directors No membership in the corporation shall be transferable except as provided in these By-Laws and

(d) Agreeing to pay such supplemental fees as the Board may require

Section 3 Classification

The corporation shall have two classes of member defined as follows

(a) "Municipal member" means bodies politic that purchase water from the corporation for resale to others and that distributes that water through its own distribution system,

(b) "Rural member" means natural persons and other legal entities that do not meet the definition of "municipal member"

Section 4 Fees

Membership in the corporation shall be evidenced by the execution of a Water User Agreement which shall be in such form and shall contain such provisions as shall be determined by the Board of Directors Such agreement shall be signed by an authorized agent of the corporation No membership shall be issued for less than the membership fee fixed by the Board of Directors

Section 5 Transfers

Transfers of membership shall be made only upon the books of the corporation, only to applicants eligible to become members only with the approval of the Board of Directors and when the member transferring is free from indebtedness to the corporation

Section 6 Basis for Fee

Membership fees shall be set by action of the Board

Section 7 Termination of Membership

If a member ceases to be eligible to hold membership as provided herein, or willfully fails to comply with the Articles of Incorporation these By-Laws and other requirements or willfully obstructs the purposes and proper activities of the corporation the Board may vote to terminate the membership

Section 8 Compliance with Federal and State Law

In accepting members and in managing the corporation no benefits employment or membership shall be denied because of a person s race color creed or national origin All federal and state laws and regulations relating to equal opportunity and antidiscrimination shall be complied with by the management of the corporation

Section 9 Membership Records

Such books of account, records and other data necessary to determine at all times the rights and interests of each member and former member of this corporation will be maintained by the corporation. The Corporation shall respect and protect the privacy rights of its members consistent with applicable law

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ARTICLE VII

MEETINGS OF MEMBERS

Section 1 Annual Meeting

No face-to-face annual meeting need be held though the Board may direct that a face-to-face annual meeting be held In the absence of a face-to-face annual meeting, the Board shall arrange for an alternative annual meeting during which the membership shall have the opportunity to tour certain of the corporation's facilities and to obtain a copy of the annual financial statement, the budget for the current fiscal year and the audit report for the previous fiscal year. The election of members of the board of directors shall take place during the annual meeting, regardless of the format of the meeting The board may by resolution allow for voting by mail The annual meeting shall be held during the months of October or November, on a date selected by the Board and in the manner designated by the Board The date, time and place or places shall be designated in a notice provided to the membership.

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 three Directors. It shall thereupon be the duty of the Secretary to cause notice of such meeting to be given as hereinafter provided Special meetings of members must be held not more than twenty (20) days but not less than ten days from the date of receipt of a special request therefore 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.

In the event of a face-to-face meeting twenty-five (25) members present shall constitute a quorum to conduct business and hold any meeting If less than a quorum is present at a face-to-face meeting, a majority vote of those present may adjourn the meeting from time to time without further notice No quorum shall be necessary to conduct an annual meeting in a format other than a face-to-face meeting

Section 5 Vote

Each member shall be entitled to one vote In the case of municipal members, it shall be the duty of each such member to designate one individual to attend meetings and cast votes on behalf of that municipal member

Section 6 Resolutions and Amendments

Any amendments to the Articles of Incorporation amendments to the By-Laws or other resolution to be proposed at a regular or special meeting of the members shall be provided to the General Manager of the corporation at least twenty days prior to the date of the annual meeting or at least ten days before the date of any special meeting The proposed amendment or resolution must be in writing and in the form that is to be presented at the annual or special meeting Upon receipt, the General Manager shall immediately transmit a copy of the proposal or proposals to all members of the Board of Directors and the corporation's attorney.

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ARTICLE VIII

DIRECTORS

Section 1 Composition

The Board of Directors shall consist of nine members, as set forth below

Section 2 Director Districts

(a) Municipal Directors The City of Huron shall appoint two members of the Board of Directors and the remaining municipal members shall elect two members of the Board of Directors at large For the purpose of electing members of the Board of Directors, each municipality except the city of Huron shall have one vote The City of Huron shall not be entitled to vote in the at-large election for municipal members of the Board of Directors

(b) Rural Directors The rural members shall elect five members of the Board of Directors, one from each of the following five districts

(i) District 1 All of Potter County all of Sully County, all of Faulk County and those portions of the Highmore West and Rezac Lake service areas lying in Hyde County

(ii) District 2 All of Hughes County except that portion of the Highmore West service area lying in Hughes County

(iii) District 3 All of Spink County those portions of the Rezac Lake Highmore Central Mac's Corner Collin's Slough Cottonwood Lake and Redfield service areas lying in Hand County and the Stauin Dam service area in Beadle County

(iv) District 4 All of Aurora County all of Jerauld County all of Sanborn County, all of Davison County all of Buffalo County those portions of the Highmore Central, Corm's Slough and Mac's Corner service areas lying in Hyde County; that portion of the Cottonwood Lake service area lying in Beadle County; that portion of the Ames service area lying in Hand County; and that portion of the Highmore West service area lying in Hughes County.

(v) District 5: All of Kingsbury County; that portion of the Highmore East service area lying in Hand County; those portions of the Highmore East, Pearl Creek and Wolsey service areas lying in Beadle County

(c) Director District Boundaries The Board of Directors shall redistrict the five rural director districts no later than December 31, 2011, and once every ten years thereafter

Section 3. Election and Term of Office.

Directors shall hold office for a term of three years commencing the first December 1 after the Annual Meeting of the Membership at which they are elected, and until their successors are duly elected and qualified.

Section 4 Election Procedure

The election of Directors shall take place at the annual meeting with votes to be cast in person or by mail. No proxy voting shall be allowed. At least 90 days prior to the first election, and from time to time thereafter as the Board may determine, the Board shall adopt a resolution governing election procedure.

Section 5 Vacancy

If the office of Director shall become vacant for any cause, the remaining Directors may, no sooner than the next regular meeting of the Directors which is held 28 days after the vacancy occurs, choose a successor, who shall serve until the next regular or special meeting of the members, when the vacancy shall be filled by elective action of the members from the proper district Such Director shall serve the remainder of the unexpired term. No later than 10 days after a vacancy occurs, the General Manager shall cause notice of such vacancy to be mailed to all members within all the affected district. If the vacancy is among the municipal directors, the General Manager shall not later than 10 days after a vacancy occurs cause notice of such vacancy to be mailed to all municipal members

Section 6 Qualifications.

Every Director shall at the time of election and during the term for which elected, reside within the district for which and from which that director was elected A rural Director must be a rural member of the Corporation. No person may hold more than one directorship at a time Every Director must as of the date of election be at least 18 years of age

Section 7. Removal

Upon establishment of 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.

Section 8 Validity of Board Action

Nothing contained in this Article shall affect in any manner whatsoever the validity of any action taken at any meeting of the Board of Directors, nor shall this Article apply to Directors appointed prior to the first election by members

Section 9 Per Diem

Directors and Employees may receive upon submission of a voucher request, compensation for mileage, meals lodging and other reimbursable expenses for attendance at each meeting of the Board and for attendance at any other meeting on the behalf of the corporation at such rates as the Board may set from time-to-time by written policy.

Directors shall receive a per diem for attendance at each meeting of the Board and for attendance at any other meetings on behalf of the corporation at such rates as the Board may set from time-to-time by written policy Participation in a meeting held by telephone conference call or by any other electronic means constitutes attendance at a meeting for the purposes of this section

Section 10 Indemnity

The corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed action suit or proceeding whether civil criminal administrative or investigative other than an action by or in the right of the corporation by reason of the fact that he is or was a director officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director officer, employee or agent of another corporation partner-joint venture trust or other enterprise against expenses including attorney's fees, judgments, fines and amounts paid in settlement, actually and reasonably incurred by him in connection with the action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful Any decision to indemnify pursuant to this section shall be in the sole discretion of the Board of Directors

Section 11. Committees.

The Board of Directors, by resolution adopted by a majority of the directors in office, may designate one or more committees each of which shall consist of two or more directors which committees to the extent provided in such resolution shall have and exercise the authority of the Board of Directors in the management of the corporation The Board of Directors by resolution adopted by a majority of the directors in office may designate other committees not having and exercising the authority of the Board of Directors in the management of the corporation The members of all such committees shall be appointed by the Chairperson of the Board

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ARTICLE IX

MEETING OF DIRECTORS

Section 1 Regular Meeting

A meeting of the Board may be held monthly at such time and place as the Board may provide by resolution Public notice of meetings of the Board shall be given in the manner required by applicable law

Section 2. Special Meeting

Special meetings of the Board may be called by the Chairperson or by any three Directors, and it shall thereupon be the duty of the Secretary to cause notice of such meeting to be given as hereinafter provided The Chairperson or the Directors calling the meeting shall fix the time and place for the holding of the meeting Public notice of special meetings of the Board shall be given in the manner required by applicable law.

Section 3 Notice.

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 six 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 Chairperson 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 If the circumstances do not permit six days notice as provided for herein, such notice shall be given as the Chairperson deems appropriate

Section 4 Quorum

Five members of the Board shall constitute a quorum for conducting business At any Board meeting, a majority of the Directors present may adjourn the meeting from time to time and 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 at which a quorum is present shall be the act of the Board of Directors, unless otherwise provided by law the Articles of Incorporation or the By-Laws.

Section 5 Majority Vote - Tie Votes

A majority vote of all members present and voting is required for the passage of any resolution or motion or for the Board to otherwise take official action In the event of a tie, the presiding officer shall call for a second vote If the second vote results in a tie the resolution, motion or official action shall fail for lack of a majority in favor

Section 6 Meeting by telephone conference call

Members of the Board of Directors or any committee designated thereby may participate in a meeting of the Board of Directors or a committee by means of a conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other at the same time provided arrangements are made so that interested members of the public may monitor the meeting at the corporation's office or some other convenient location Participation by such means shall constitute presence in person at a meeting

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ARTICLE X

OFFICERS

Section 1. Officers.

The officers of the corporation shall be a Chairperson, Vice-Chairperson Secretary, Treasurer, and such other officers as may be determined by the Board of Directors from time to time One person may hold the offices of Secretary and Treasurer

Section 2 Election of Officers.

The officers shall be elected by ballot annually by and from the Board of Directors, at the next regular meeting of the Board held in December following the Annual Meeting of the Membership Each officer shall hold office until the first December meeting of the Board following the next succeeding Annual Meeting of the Membership or until his successor shall have been elected and shall have qualified A vacancy in any office shall be filled by the Board for the unexpired portion of the term

Section 3. Removal

Any officer 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

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ARTICLE XI

DUTIES OF OFFICERS

Section 1. Chairperson

The Chairperson shall

(a) Be the principal executive officer of the corporation and, unless otherwise determined by the Board, shall preside at all meetings of the members and the Board of Directors

(b) Sign any deeds, mortgages deeds of trust, notes bonds contracts or other instruments authorized by the Board 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 Chairperson and such other duties as may be prescribed by the Board from time to time

Section 2 Vice-Chairperson

In the absence of the Chairperson or in the event of his inability or refusal to act, the Vice-Chairperson shall perform the duties of the Chairperson and when so acting shall have all the powers of and be subject to all of the restrictions upon the Chairperson The Vice-Chairperson 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

(a) Be responsible to provide for the issuance of the notices of all meetings of the Membership, to provide for keeping the minutes of the same.

(b) Have access to all corporate books, records, and papers.

(c) Except as otherwise directed by the Board of Directors attest with his or her signature, and impress with the corporate seal, all written contracts of the Corporation

(d) Perform all such other duties as are incident to his/her office, or such other duties as may be assigned by the Board of Directors

Section 4 Treasurer

The Treasurer shall,

(a) Have access to records of all receipts, disbursements, assets, and liabilities of the Corporation

(b) Review the annual financial audit of the Corporation's financial and accounting records and make any necessary recommendations to the Board of Directors.

(c) The general performance of all the duties incident to the office of Treasurer and such other duties as are assigned to him/her by the Board of Directors

Section 5 Bond

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 bonds in such sum, with a 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 a surety as it shall determine The expense of such bond shall be legal obligation of the corporation

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ARTICLE XII

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 Without prejudice to, or limitation upon their general powers, it is hereby expressly provided that the Board shall have, and are given, full power and authority to perform the following duties and functions:

(a) To pass upon the qualification of members and to cause to be issued proof of membership

(b) To select and appoint all officers agents, or employees of the corporation or remove such agents or employees of the corporation at the pleasure of the Board and to prescribe such duties and designate such powers as may be consistent with these By-Laws and 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 and 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 each year an audit of the books and accounts of the corporation by an accountant. The report prepared by such accountant shall be submitted to the members of the corporation prior to their annual meeting

(f) To annually prepare and submit to the members a proposed budget for the succeeding fiscal year and to adopt such a budget prior to the commencement of the succeeding fiscal year

(g) 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.

(h) 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

(i) To select one 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 by whom the same shall be signed with the power to change such banks and the person or persons signing such checks and the form thereof at will

(j) To create and appoint all committees and to delegate such duties as allowed by law the Articles of Incorporation and the By-Laws

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ARTICLE XIII

NON-PROFIT OPERATION

Section 1 Mutual Benefit

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. Purpose

The corporation will construct a water distribution system from the Missouri River in Hughes County, through and for the primary benefit of Aurora, Beadle, Buffalo, Hand, Hughes, Hyde, Jerauld Kingsbury, Potter Sanborn, Spink and Sully Counties, South Dakota and such other counties which in the opinion of the Directors should be included in the water project. In return for receiving the membership fees, the corporation will develop such a system for the mutual benefit of all members The corporation may also plan, investigate, acquire construct, maintain, manage or operate one or more wastewater systems within the geographic area and environs thereof served by the corporation and may establish rates therefore

Section 3 Rules and Rates

The Board of Directors shall from time to time make such rules, policies and directives as shall be necessary for the efficient operation of the system and shall generally be responsible for the efficient operation of said system; provided that any rules or policies establishing rates to be charged for water or other fees must be approved by a two-thirds favorable vote of all members of the Board

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ARTICLE XIV

MISCELLANEOUS

Section 1. Membership in other Corporations

The Corporation shall not become a member 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 purchases, provided however, 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 water supply systems, or of any other organization when in the opinion of a majority of all members of the Board, such membership in such other organization will promote the interests of the corporation.

Section 2 Waiver of Meeting 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 objection to the transaction of any business on the grounds that the meeting was not lawfully called or convened

Section 3. Rules of Order.

Unless otherwise provided in the Articles of Incorporation or these By-Laws, the rules of parliamentary procedure as provided in the latest edition of "Roberts Rules of Order" shall govern the conduct of all meetings of the Board of Directors and meetings of members of the corporation

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STATE OF SOUTH DAKOTA

OFFICE OF THE SECRETARY OF STATE

Certificate Of Incorporation
Non-Profit

I, JOYCE HAZELTINE, Secretary of State of the State of South Dakota, hereby certify that duplicate originals of the Articles of Incorporation of MID-DAKOTA 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 MID-DAKOTA 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 15th day of January A.D. 19 88

Joyce Hazeltine
Secretary of State

Deputy

Filed this 15th day of
Jan 19 88
Joyce Hazeltine
SECRETARY OF STATE

RECEIVED
JAN 11 1988
Secretary of State

RECEIVED
JAN 15 1988
Secretary of State

ARTICLES OF INCORPORATION
OF
MID-DAKOTA RURAL WATER SYSTEM, INC.

The undersigned incorporators of this corporation do hereby organize the same under the South Dakota Non-Profit Corporation Act, and do hereby adopt the following Articles of Incorporation for this corporation.

ARTICLE I

The name of this corporation is Mid-Dakota Rural Water System, Inc.

ARTICLE II

The duration of this corporation shall be perpetual.

ARTICLE III

The principal place of business of this corporation shall be located at Miller, Hand County, South Dakota.

ARTICLE IV

The address of this corporation's initial registered office and the name of its initial registered agent at such address is: Julie Apgar, Miller, South Dakota 57362. The corporation may have such other offices within or without the State of South Dakota as the business of the corporation may from time to time hereafter require. The registered office of the corporation required by the South Dakota Non-Profit Corporation Act shall be continuously maintained in South Dakota, and shall be initially as above provided, subject however to change from time to time by Resolution of the Board of Directors and the filing of a

statement of that change as is required by the South Dakota Non-Profit Corporation Act.

ARTICLE V

The management of the corporation shall be vested in a Board of Directors. The number of Directors shall be fixed by the By-Laws of the corporation. The terms of office of the Directors shall also be fixed by the By-Laws and may be altered by amendment to the By-Laws of this corporation. In addition to all general and necessary authority and power to operate and manage this corporation, the Directors specifically have authority to establish all schedules, tariffs and rates necessary between this corporation and any of its members or customers, limited only that all of such schedules, tariffs and rates shall be pursuant to a written agreement entered into between the corporation and that member or customer.

ARTICLE VI

The number of Directors of this corporation constituting the first Board of Directors of this corporation (and their initial term of office), shall be four, and shall be the following persons, each of whom shall continue in office for the term for which that person has been selected and until a successor is appointed and qualified, or until the Director is removed as provided in the By-Laws, to-wit:

Earl M. Briggs
HCR 31, Box 12
Pierre, SD 57501

Marilou Briggs
HCR 31, Box 12
Pierre, SD 57501

Duane Aymar
Rural Route 1, Box 151
Miller, SD 57362

Susan Hargens
HCR 1, Box 106A
Orient, SD 57467

ARTICLE VII

The names and addresses of the incorporators of this corporation are:

Earl M. Briggs
HCR 31, Box 12
Pierre, SD 57501

Marilou Briggs
HCR 31, Box 12
Pierre, SD 57501

Duane Aymar
Rural Route 1, Box 151
Miller, SD 57362

Susan Hargens
HCR 1, Box 106A
Orient, SD 57467

Julie Apgar
P. O. Box 69
Miller, SD 57362

ARTICLE VIII

The conditions, terms and qualifications for membership in this corporation shall be provided in the By-Laws.

ARTICLE IX

Members of this corporation shall not have any personal liability for corporate obligations.

ARTICLE X

This corporation shall not have any capital stock.

ARTICLE XI

The objects and purposes of this corporation specifically include but are not necessarily limited to the following, to-wit:

1. To serve as the organizational entity for subsequent development or accomplishment of the objects and purposes listed below, and to accomplish these in such manner that authority and obligations may be transferred to future legal entities.

2. To plan, investigate and if feasible acquire, construct, maintain and operate a system for the diversion, supply, storage, treatment and distribution of water to the members of this corporation, for domestic, livestock, municipal, commercial, or private purposes within the geographic area, and environs thereof, served by this corporation.

3. To acquire by appropriation or otherwise, and to lease, sell or dispose of water and water rights for domestic, livestock municipal, commercial, or private purposes within the geographic area, and environs thereof, served by this corporation.

4. To secure grants and to borrow money for the use of this 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.

5. To establish rates for the delivery of water to its members and to provide for the collection thereof. And

6. To exercise any and all other powers incidental to or conducive to any of the aforesaid objectives, or any of them, provided that all rates, rules and the like shall be uniform among members of the same class, and shall not otherwise be discriminatory, and generally this corporation shall have all powers and authorities granted to it by statute, or by operation of law.

ARTICLE XII

Upon the dissolution of this corporation the Board of Directors shall, after paying or making provisions for the payment of all of the liabilities of this corporation, dispose of all of the assets of this corporation in such manner, and to such organization or organizations which qualify as an exempt organization or organizations under the provisions of Section 501(c)(12) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue law), as the Board of Directors shall determine. Any such assets not so disposed of shall be deposited with the Circuit Court of Hand County, South Dakota, the county in which the corporation's principal office is located, exclusively for such purposes or to such organization or organizations as the Court shall determine which are organized and operated exclusively for those purposes.

Further, notwithstanding any other provision of these Articles of Incorporation, the corporation will not carry on any other activities not permitted to be carried on by a corporation

exempt from federal income tax under Section 501(c)(12) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue law), or, by a corporation, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code of 1954 (or its corresponding provision).

ARTICLE XIII

This corporation shall not:

A. Engage in any act of self-dealing which would give rise to any liability for the tax imposed by Section 4941(a) of the Internal Revenue Code of 1954, as the same now is or as the same may from time to time hereafter be amended;

B. Retain any excess business holdings which would give rise to any liability for the tax imposed by Section 4943(a) of the Internal Revenue Code of 1954, as the same now is or as the same may from time to time hereafter be amended;

C. Make any investments which would jeopardize the carrying out of any of the exempt purposes of this corporation, within the meaning of Section 4944 of the Internal Revenue Code of 1954, so as to give rise to any liability for the tax imposed by Section 4944(a) of the Internal Revenue Code of 1954, as the same now is or as the same may from time to time hereafter be amended;

D. Make any taxable expenditure which would give rise to any liability for the tax imposed by Section 4945(a) of the

Internal Revenue Code of 1954, as the same now is or as the same may from time to time hereafter be amended;

E. This corporation shall distribute for each of its taxable years amounts at least sufficient to avoid liability for the tax imposed by Section 4942(a) of the Internal Revenue Code of 1954, as the same now is or as the same may from time to time hereafter be amended.

ARTICLE XIV

These Articles may be amended by a majority vote of the Directors eligible to vote for adoption of any amendment.

Dated this 22 day of December, 1987.

Earl M. Briggs

Earl M. Briggs

Marilou Briggs

Marilou Briggs

Duane Aymar

Duane Aymar

Susan Hargens

Susan Hargens

Julie Apgar

Julie Apgar

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

On this the 22nd day of December, 1987, before me, the undersigned officer, personally appeared Earl M. Briggs, Marilou Briggs, Duane Aymar, Susan Hargens and Julie Apgar, known to me

or satisfactorily proven to be the persons whose names are subscribed to the within instrument, and acknowleged that they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public

(SEAL)

THOMAS C.
My

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Earl M. Briggs, Marilou Briggs, ~~Duane Aymar, Susan Hargens~~ and Julie Apgar, being first duly sworn, each for himself deposes and says: That he is one of the persons described in and who signed the foregoing Articles of Incorporation as an incorporator therein; that he has read said Articles and knows the contents thereof; that the incorporators intend in good faith to form a corporation for the purposes of the promotion of a lawful business set forth in said Articles, and not for the purpose of enabling any corporation or corporations to avoid the provisions of Chapter 37-1 of the South Dakota Compiled Laws of 1967 relating to unlawful trusts or combinations, and laws amendatory thereto.

Earl M. Briggs

Marilou Briggs

Duane Aymar

Susan Hargens

Julie Apgar

Subscribed and sworn to before me this 22nd day of December, 1987.

Notary Public

(SEAL)

THOMAS C. [illegible], Notary Public
My Commission [illegible]
Decem[illegible]

USBR

Exhibit B

Year		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total
Funds Advanced		$ -	$ 1,318,557.00	$ 3,357,443.00	$ 10,561,900.00	$ 13,726,000.00	$ 12,716,300.00	$ 14,755,142.00	$ 14,000,000.00	$ 10,370,000.00	$ 13,309,000.00	$ 16,538,000.00	$ 13,199,000.00	$ 18,533,000.00	$ 212,000.00	142,598,342.00
Reclamation Expenditures		-	167,033.39	104,546.00	63,369.00	152,482.00	149,777.00	258,326.00	261,436.00	205,968.00	208,454.00	132,289.00	147,716.00	202,271.00	80,328.00	2,131,994.39
Interest Earnings		-	-	-	-	-	-	-	-	-	-	-	-	-	784,531.73	784,531.73
Total		-	1,485,590.39	3,461,989.00	10,625,269.00	13,880,482.00	12,866,077.00	15,011,468.00	14,261,436.00	10,575,968.00	13,517,454.00	16,670,289.00	13,346,716.00	18,735,271.00	1,076,860.73	145,514,868.12
Percent that is Loan **		22.203732%	22.204%	22.204%	22.204%	22.204%	22.204%	22.204%	22.204%	22.204%	22.204%	22.204%	22.204%	49.568%	59.531%	
Interest Rate		3.697%	4.478%	5.114%	5.519%	5.567%	5.343%	4.800%	5.961%	4.596%	2.022%	1.342%	1.459%	2.921%	4.631%	
Loan Amount		$ -	$ 329,857	$ 768,691	$ 2,359,206	$ 3,081,985	$ 2,858,749	$ 3,333,106	$ 3,166,571	$ 2,348,259	$ 3,001,378	$ 3,701,428	$ 2,963,469	$ 9,309,149	$ 642,211	$ 37,858,060
Due Date		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Construction Completed		2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	
Number years to Pay			18	19	20	21	22	23	24	25	26	27	28	29	30	24
Schedule	N															
Feb-2007	1		$2,763.41	$7,082.95	$20,211.58	$25,820.75	$23,115.55	$25,042.94	$25,972.77	$16,442.03	$15,388.65	$16,926.89	$13,350.89	$22,074.16	$542.90	$214,735.46
Mar-2007	2		$2,763.41	$7,082.95	$20,211.58	$25,820.75	$23,115.55	$25,042.94	$25,972.77	$16,442.03	$15,388.65	$16,926.89	$13,350.89	$22,074.16	$542.90	$214,735.46
Apr-2007	3		$2,763.41	$7,082.95	$20,211.58	$25,820.75	$23,115.55	$25,042.94	$25,972.77	$16,442.03	$15,388.65	$16,926.89	$13,350.89	$22,074.16	$542.90	$214,735.46
Feb-2008	1		$25,175.36	$64,623.37	$64,623.37	$235,259.81	$210,488.83	$227,855.76	$236,379.37	$149,478.86	$139,319.76	$152,950.53	$120,675.19	$200,137.96	$4,928.21	$1,831,896.38
Feb-2009	2		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2010	3		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2011	4		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2012	5		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2013	6		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2014	7		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2015	8		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2016	9		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2017	10		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2018	11		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2019	12		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2020	13		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2021	14		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2022	15		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2023	16		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2024	17		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2025	18		$26,831.54	$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$212,898.43	$5,250.94	$2,077,808.00
Feb-2026	19			$69,018.61	$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$239,729.97	$5,250.94	$2,077,808.00
Feb-2027	20				$199,991.80	$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$308,748.58	$5,250.94	$2,077,808.00
Feb-2028	21					$250,918.22	$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$508,740.38	$5,250.94	$2,077,808.00
Feb-2029	22						$222,451.25	$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$759,858.80	$5,250.94	$2,077,808.00
Feb-2030	23							$240,946.29	$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$982,109.85	$5,250.94	$2,077,808.00
Feb-2031	24								$250,157.12	$159,060.94	$148,466.27	$163,067.77	$128,748.82	$1,223,056.14	$5,250.94	$2,077,808.00
Feb-2032	25									$159,060.94	$148,466.27	$163,067.77	$128,748.82	$1,473,213.27	$5,250.94	$2,077,808.00
Feb-2033	26										$148,466.27	$163,067.77	$128,748.82	$1,632,274.21	$5,250.94	$2,077,808.00
Feb-2034	27											$163,067.77	$128,748.82	$1,780,740.47	$5,250.94	$2,077,808.00
Feb-2035	28												$128,748.82	$1,943,808.24	$5,250.94	$2,077,808.00
Feb-2036	29													$2,072,557.06	$5,250.94	$2,077,808.00
Feb-2037	30														$2,077,808.00	$2,077,808.00
		Solver														Check:
		Variables:	$ 26,831.54	$ 69,018.61	$ 199,991.80	$ 250,918.22	$ 222,451.25	$ 240,946.29	$ 250,157.12	$ 159,060.94	$ 148,466.27	$ 163,067.77	$ 128,748.82	$ 212,898.43	$ 5,250.94	$2,077,808.00
		Constraints:	($0.00)	($0.00)	($0.00)	($0.00)	($0.00)	$0.00	$0.00	$0.00	$0.00	$0.00	($0.00)	($0.00)	$0.00	
			0	0	0	0	0	0	0	0	0	0	0	0	0	

Annual Revenue			
			$ 524,900.00
Wtg. Avg. Interest	Simple Avg.	NPV@ 4.33 %	NPV of Current:
3.772%	4.175%	$33,950,000	$37,157,000
Difference NPV current loan vs restructured:			$3,207,000
26.02% = Composite loan percentage including restructuring			

Billing Summary			
Principal	Interest	Payment	Balance
$84,521.46	$130,214.01	$214,735.47	37,773,538.09
$84,784.60	$129,950.86	$214,735.46	37,688,753.49
$85,048.76	$129,686.70	$214,735.46	37,603,704.73
$741,071.92	$1,090,824.45	$1,831,896.37	36,862,632.81
$686,466.96	$1,391,321.02	$2,077,808.00	36,176,165.85
$713,627.55	$1,364,180.45	$2,077,808.00	35,462,518.28
$742,101.09	$1,335,706.91	$2,077,808.00	34,720,417.19
$771,978.52	$1,305,829.48	$2,077,808.00	33,948,438.67
$803,334.64	$1,274,473.36	$2,077,808.00	33,145,104.03
$836,248.35	$1,241,559.65	$2,077,808.00	32,308,855.68
$870,802.86	$1,207,005.14	$2,077,808.00	31,438,052.82
$907,085.93	$1,170,722.07	$2,077,808.00	30,530,966.89
$945,190.13	$1,132,617.87	$2,077,808.00	29,585,776.76
$985,213.11	$1,092,594.89	$2,077,808.00	28,600,563.65
$1,027,257.85	$1,050,550.15	$2,077,808.00	27,573,305.80
$1,071,433.00	$1,006,375.00	$2,077,808.00	26,501,872.80
$1,117,853.17	$959,954.83	$2,077,808.00	25,384,019.63
$1,166,639.24	$911,168.76	$2,077,808.00	24,217,380.39
$1,217,918.76	$859,889.24	$2,077,808.00	22,999,461.63
$1,271,826.26	$805,981.74	$2,077,808.00	21,727,635.37
$1,328,503.69	$749,304.31	$2,077,808.00	20,399,131.68
$1,388,100.78	$689,707.22	$2,077,808.00	19,011,030.90
$1,450,357.76	$627,450.24	$2,077,808.00	17,560,673.14
$1,513,524.39	$564,183.61	$2,077,808.00	16,047,048.75
$1,574,883.67	$502,924.33	$2,077,808.00	14,472,165.08
$1,632,423.21	$445,384.79	$2,077,808.00	12,839,741.87
$1,687,061.26	$390,726.74	$2,077,808.00	11,152,680.61
$1,739,394.17	$338,413.83	$2,077,808.00	9,413,268.44
$1,786,034.05	$291,773.95	$2,077,808.00	7,627,232.39
$1,831,349.28	$246,458.72	$2,077,808.00	5,795,883.11
$1,879,179.19	$198,628.81	$2,077,808.00	3,916,703.92
$1,930,860.32	$146,947.68	$2,077,808.00	1,985,843.60
$1,985,843.58	$91,964.42	$2,077,808.00	0.02
$37,858,059.53	$24,874,475.23	$62,732,534.76	

Request for Verification of USDA Rural Development Debt

Name of entity: Mid-Dakota Rural Water System, Inc.

Mid-Dakota Rural Water System, Inc.
hereby authorizes USDA Rural Development (Rural Development) to release and verify to the South Dakota Board of Water and Natural Resources (the Board) and the Department of Environment and Natural Resources (DENR) information on the indebtedness owed by the applicant to USDA Rural Development, and further authorizes the release of such information by the Board, DENR or Rural Development as may be necessary to process the application for financial assistance.

Printed Name & Title: Kurt Pfeifle, General Manager

Signature of person authorizing the release of information

Date: 11/19/14

Date of Original Loan: Loan Number 91-01 12/22/2010

Amount of Loan: $7,000,000

Maturity Date: 12/22/2050

Type of Payment (Check One): [X] Monthly [ ] Quarterly [ ] Annual

Amount of Payment: $25,410.00

Payment Status (Check One): [X] Current [ ] Delinquent

Accrued Interest: $4,965.80

Principal Loan Balance: $6,712,993.66

Reserve Payment Amount: $2,541.00 Per Month

Current Reserve Balance: $2,717,637.00 Debt Service Reserve

Fully Funded Reserve Amount: $519,720.00 (Both Loans)

Security for Loan: Notes and Mortgage

Status Date as of: October 31, 2014

Printed Name & Title: Timothy W. Murray, Loan Specialist

Signature of person verifying the above information

Date: 11/20/2014

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TERM NBR  755     OPR ID  755     ACCOUNT INFORMATION
CNUM 47-030-0363584582   NAME MID DAKOTA RWS        STDT 112014     ACDT 103114
FCOD 9120 LNUM 01 KCOD 00 DUED 00 FMCD 0  FLAG                  CSDT       ZSPC 0
DEFL        DEXD        DECL        DFLA              DFCA                SPCL 0
DSED        DSXD        DSCD        LSAA              DSLO              FPCD
DOLN 122210 AMED 000000 APDT 060109 DCCA          FYLN 50   ICRC    INR1  3.0000
ZDLP 102214 ZDLR 102214 RGT2  1 LRDT 111413 RGT1 02 CCCD 0 PAYC 5 INR2  3.0000
XAON  7,000,000.00  XAOA                RCCT           .00   EPMT           .00
PTC1    287,006.34  PTC3                QPCR   287,006.34   CICR
ICRT    727,248.73  INCR                QICR   727,248.73   QNIC
SSTS    254,100.00A SSC3                QSST   254,100.00A  MICE      TCCD 0
UNPN  6,712,993.66  UNPA                QUPR 6,712,993.66   YICE      NUMO
UNIN      4,965.80  UNIA                QUIN     4,965.80   YNIC      QDEL 000
DACN      551.7529  DACA                QDIN     551.7529   MOIN     25,410.00
UPAM                UPUN                FC10   240,564.29   QMTI
UIAM                UIUN                FCIN                QTMI     25,410.00
STAM                ZADI                ZAAI                ZEDI         RHDM
XAIC                PTC2                CYIC                AVIR
XANI    304,920.00  ZDNI 122214 JTOI 2  STIN                PNSR
STAN           .00  STAA                QSTA           .00  ICDF
TPOF  6,717,959.46  ZBST                QMDU    50,820.00   ICGR

CASE NUMBER: 47 030 0363584582   STATUS TYPE: AI   LOAN: 01   ACDT: 103114
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AWMI18 SUMMARY 11/20/14
ADPS INQUIRY CODE OH 11:42:20
OPR ID M24755 ONLINE BORROWER HISTORY INQUIRY PAGE 001
MORE

CASE NUMBER 47 030 0363584582 NAME MID DAKOTA RWS
LOAN NUMBER: 01 FUND CODE 91 NOTE RATE 03.0000 LOAN AMOUNT 7,000,000.00
DATE LOAN OBLGN 06/09/09 ASSISTANCE TYPE 538

DESC	TC	S	INT RT	EFV DT	CONTROL AMT	INT PAID	PRIN PAID	PRC DT
PMT NOTE	2A	R	03.000	102214	25,410.00	16,574.35	8,835.65	102214
PMT NOTE	2A	R	03.000	092214	25,410.00	17,147.94	8,262.06	092214
PMT NOTE	2A	R	03.000	082214	25,410.00	17,168.87	8,241.13	082214
PMT NOTE	2A	R	03.000	072214	25,410.00	16,636.67	8,773.33	072214
PMT NOTE	2A	R	03.000	062214	25,410.00	17,212.18	8,197.82	062314
PMT NOTE	2A	R	03.000	052214	25,410.00	16,678.42	8,731.58	052214
PMT NOTE	2A	R	03.000	042214	25,410.00	17,255.20	8,154.80	042214
PMT NOTE	2A	R	03.000	032214	25,410.00	15,607.88	9,802.12	032414
PMT NOTE	2A	R	03.000	022214	25,410.00	17,300.78	8,109.22	022414
PMT NOTE	2A	R	03.000	012214	25,410.00	17,321.44	8,088.56	012214
PMT NOTE	2A	R	03.000	122213	25,410.00	16,783.90	8,626.10	122313
PMT NOTE	2A	R	03.000	112213	25,410.00	17,363.94	8,046.06	112213
MAIL CODE	9G	.	.....	111413	MAIL CODE CHANGED			111413
PMT NOTE	2A	R	03.000	102213	25,410.00	16,824.91	8,585.09	102213

CHECK DETAIL HISTORY SCREEN FOR TRANSACTIONS

Request for Verification of USDA Rural Development Debt

Name of entity: Mid-Dakota Rural Water System, Inc.

Mid-Dakota Rural Water System, Inc.
hereby authorizes USDA Rural Development (Rural Development) to release and verify to the South Dakota Board of Water and Natural Resources (the Board) and the Department of Environment and Natural Resources (DENR) information on the indebtedness owed by the applicant to USDA Rural Development, and further authorizes the release of such information by the Board, DENR or Rural Development as may be necessary to process the application for financial assistance.

Printed Name & Title: Kurt Pfeifle, General Manager

Signature of person authorizing the release of information — Date: 11/19/14

Date of Original Loan: Loan Number 91-02 12/22/2010

Amount of Loan: $5,000,000

Maturity Date: 12/22/2050

Type of Payment (Check One): [X] Monthly [ ] Quarterly [ ] Annual

Amount of Payment: $17,900.00

Payment Status (Check One): [X] Current [ ] Delinquent

Accrued Interest: $3,497.66

Principal Loan Balance: $4,728,283.41

Reserve Payment Amount: $1.790.00 Per Month

Current Reserve Balance: $2,717,637.00 Debt Service Reserve

Fully Funded Reserve Amount: $519,720.00 (Both Loans)

Security for Loan: Notes and Mortgage

Status Date as of: October 31, 2014

Printed Name & Title: Timothy W. Murray, Loan Specialist

Signature of person verifying the above information — Date: 11/20/2014

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TERM NBR  755     OPR ID  755     ACCOUNT INFORMATION
CNUM 47-030-0363584582    NAME MID DAKOTA RWS        STDT 112014     ACDT 103114
FCOD 9120 LNUM 02 KCOD 00 DUED 00 PMCD 0  FLAG                   CSDT       ZSPC 0
DEFL          DEXD          DECL          DFLA              DFCA                SPCL 0
DSED          DSXD          DSCD          LSAA              DSLO              FPCD
DOLN 122210 AMED 000000 APDT 060109 DCCA          FYLN 50   ICRC   INR1  3.0000
ZDLP 102214 ZDLR 102214 RGT2  1 LRDT 111413 RGT1 02 CCCD 0 PAYC 5 INR2  3.0000
XAON  5,000,000.00  XAOA                  RCCT          .00   EPMT          .00
PTC1    271,716.59  PTC3                  QPCR   271,716.59   CICR
ICRT    551,683.41  INCR                  QICR   551,683.41   QNIC
SETS    179,000.00A SSC3                  QSST   179,000.00A  MICE      ICCD 0
UNPN  4,728,283.41  UNPA                  QUPR 4,728,283.41   YICE      NUMO
UNIN      3,497.66  UNIA                  QUIN     3,497.66   YNIC      QDEL 000
DACN        388.6260  DACA                QDIN       388.6260 MOIN    17,900.00
UPAM                  UPUN                FC10   169,440.97   QMTI
UIAM                  UIUN                FCIN                QTMI    17,900.00
STAM                  ZADI                ZAAI                ZEDI        RHDM
XAIC                  PTC2                CYIC                AVIR
XANI    214,800.00  ZDNI 122214 JTOI 2   STIN                PNSR
STAN          .00   STAA                  QSTA          .00   ICDF
TPOF  4,731,781.07  ZSST                  QMDU    35,800.00   ICGR

CASE NUMBER: 47 030 0363584582   STATUS TYPE: AI   LOAN: 02   ACDT: 103114
```

AWMI18 SUMMARY 11/20/14
ADPS INQUIRY CODE OH 11:42:30
OPR ID M24755 ONLINE BORROWER HISTORY INQUIRY PAGE 001
MORE

CASE NUMBER 47 030 0363584582 NAME MID DAKOTA RWS
LOAN NUMBER: 02 FUND CODE 91 NOTE RATE 03.0000 LOAN AMOUNT 5,000,000.00
DATE LOAN OBLGN 06/09/09 ASSISTANCE TYPE 538

DESC	TC	S	INT RT	EFV DT	CONTROL AMT	INT PAID	PRIN PAID	PRC DT
PMT NOTE	2A	R	03.000	102214	17,900.00	11,674.11	6,225.89	102214
PMT NOTE	2A	R	03.000	092214	17,900.00	12,078.12	5,821.88	092214
PMT NOTE	2A	R	03.000	082214	17,900.00	12,092.88	5,807.12	082214
PMT NOTE	2A	R	03.000	072214	17,900.00	11,718.03	6,181.97	072214
PMT NOTE	2A	R	03.000	062214	17,900.00	12,123.40	5,776.60	062314
PMT NOTE	2A	R	03.000	052214	17,900.00	11,747.45	6,152.55	052214
PMT NOTE	2A	R	03.000	042214	17,900.00	12,153.71	5,746.29	042214
PMT NOTE	2A	R	03.000	032214	17,900.00	10,993.42	6,906.58	032414
PMT NOTE	2A	R	03.000	022214	17,900.00	12,185.82	5,714.18	022414
PMT NOTE	2A	R	03.000	012214	17,900.00	12,200.39	5,699.61	012214
PMT NOTE	2A	R	03.000	122213	17,900.00	11,821.78	6,078.22	122313
PMT NOTE	2A	R	03.000	112213	17,900.00	12,230.32	5,669.68	112213
MAIL CODE	9G	.	.....	111413	MAIL CODE CHANGED			111413
PMT NOTE	2A	R	03.000	102213	17,900.00	11,850.68	6,049.32	102213

CHECK DETAIL HISTORY SCREEN FOR TRANSACTIONS

MID-DAKOTA RURAL WATER SYSTEM, INC.
ALLOCATION OF FUNDS TO RESERVE ACCOUNTS

Sep-14

Restricted and Investment Fund Balances	$Amounts
Minimum Bills	
Bulk 3 (After BOR "completion")	$ 2,068,105
Other (Individual customers e.g., Rural Households)	$ 1,974,778
Hookup Fees	$ 2,308,758
Aid to Construction	$ (47,354)
Meter Deposits	$ 102,248
Restricted and Investment Fund Balances	$ 6,406,535

Current Investments Balance	$ 5,674,967
Restricted Funds Invested	$ 5,403,915
Reinvested Interest (& Money Market)	$ 271,052

	Previous Month	Amount Currently Allocated
Aid to Construction:		
Aid to Construction for the purposes of determining the distribution of "Restricted Fund Balances", will mean the amount of funds that Mid-Dakota anticipates may be necessary to supplement any Project construction (including engineering etc... for which we intend to utilize reserve funds. *Note allocation includes up to $1.5 million contribution from Mid-Dakota for expansion project*	$ 250,000	$ 250,000
Debt Service:		
Debt Service Reserves are required by the USBR and Mid-Dakota Repayment Agreement. Purusant to said Agreement Mid-Dakota must accumulate a "Reserve Fund" which is "at least equal to the current year's loan payment fund obligation." The purpose of the fund will be to "maintain a reserve fund sufficient to assure that loan obligation payments will be made on time, for emergency maintenance, for extensions to facilities, and for replacement of short-lived assets..." *[excerpt from Repayment Agreement] Debt Service Accrual reflects the current USBR Loan payment accrual that will be payable within the current year. USBR Payment Accrued $1,558,355.94 (Feb - Jan) RD Payment Made $43,310 SD DWF Payment Made $10,009.11 SD DWF Payment Made $2,718.44 Debt Service Account Balance $620,323.28.*	$ 2,077,608 $ 519,720 $ 120,109 $ 2,717,637	$ 2,077,608 USBR $ 519,720 USDA-RD $ 120,109 SD DWF $ 2,717,637 Total
Operating Reserves:		
Operating Reserve is a fund that may be established for the purpose of supplimenting the Operations Budget during those portions of the budget year that are Revenue deficient. Typically this will occur during low water usage months e.g., December, January, February, March. Revenues will decrease but many "fixed" costs remain the same e.g., labor, insurances etc... It is recommended that a 25% (of the annual operating budget) be held in reserve for this purpose. The Operations budget is estimated to be $4,683,765 for FY 2014 therefore, a 25% reserve would be approximately $1,170,941523.	$ 1,170,941	$ 1,170,941
Replacement Reserves (a.k.a. "Sinking Funds"):		
Replacement Reserves may be established for any of the facilities including but not necessarily limited to the Lake Oahe intake, raw water tanks, chemical feed building, water treatment plant, pumping stations, main transmission pipelines (including appurtenances), control system, secondary transmission pipelines (including appurtenances), operations and maintenance buildings and water storage tanks. Replacement funds may be established for plant and equipment which have a life expectancy of more than one (1) year and less than thirty one (31) years, including but not limited to, water storage tank coatings and linings, pumps, motors, variable frequency drives, chemical feeders, flocculators, rapid mixers, air compressors, generators, cathodic protection rectifiers and ground beds, computers and peripherals, programmable logic controllers, heating and ventilation equipment, dehumidification and air conditioning equipment, vehicles, and maintenance equipment.	$ 1,825,084	$ 1,536,389
GRAND TOTAL RESERVE FUNDS	$ 5,963,662	$ 5,674,967

(1) - Amount allocated for "Aid-to-construction" will fluxuate with actual and anticipated costs for remaining construction contracts. The amount shown above includes, amounts identified as "contingency" for the respective construction contracts. Amounts shown in "Replacement Reserves" will also fluctuate proportionately (in the opposite direction) as it is related to and a function of funds allocated for "Aid-to-construction"

G:\work\excel\Project Tracking\Contract status & cash-flow

MID-DAKOTA RURAL WATER SYSTEM, INC.

9/30/14

Investment Summary:

	Target	Actual	Actual		Short Term		Balance	Term (mos)	Current Avg Rate	1st Past Avg Rate	2nd Past Avg Rate	Est. Income CY '14
			18.83%	>	CD's at Area Banks	7	$ 700,600.30	12	0.34%	0.31%	0.31%	$ 712.60
			33.42%	>	CD's at Investment Centers of America	5	$ 1,243,668.89	12	0.458%	0.448%	0.448%	$ 2,959.71
=>	75%	65.57%	0.00%	>	Corporate Bonds	0	$ -	-	0.00%	0.00%	0.00%	$ -
			33.26%	>	US Government Bonds	3	$ 1,237,050.00	12	0.72%	0.72%	0.73%	$ 8,906.78
			14.51%	>	Institutional Money Market @ Investment Centers of America	1	$ 539,936.29	1	0.01%	0.01%	0.01%	$ 63.89
					Total Short-Term	16	$ 3,721,063.48					$ 12,632.96

Target	Actual		Target	Actual	Long Term		Balance	Current Avg Rate	1st Past Avg Rate	2nd Past Avg Rate	Est. Income CY '14
					Curian Capital	1	$ 981,666.10	-2.95%	3.04%	-2.45%	$ 1,684.79
		=>	70%	65.73%	Genworth (Preservation)	1	$ 259,112.11	-1.12%	-0.76%	0.60%	$ 258.68
					-	1	$ -	-	-	-	$ -
=<	30%	34.43%			Long-Term Reserve Account	1	$ 612,626.74	6.33%	1.25%	0.25%	$ 9,464.68
					Inland Real Estate Investment Trust	1	$ 58,727.50	7.07%	7.07%	7.07%	$ 4,133.35
		=<	30%	19.27%	-	1	$ -	-	-	-	$ -
					Phillips Edison Arc REIT	1	$ 42,371.52	0.67%	0.55%	0.57%	$ 212.60
					Allegris Winton Futures Fund, LP	1	$ 99,609.73	-1.15%	3.45%	-2.77%	$ -
					Total Long-Term		$ 1,953,913.70				$ 16,754.31
					Grand Total - Investments		$ 5,674,977.18				$ 28,387.28
					Averages - CD's		$ 232,666.84	12	0.40%	2/0/16	$ 789.56

Original Investment	Change to Date
$ -	$ -
$ 1,095,125.00	$ 137,975.00
$ 750,000.00	$ 231,696.10
$ 250,000.00	$ 9,112.11
$ -	$ -
$ 429,443.28	$ 83,083.46
$ 50,000.00	$ 8,727.50
$ -	$ -
$ 40,000.00	$ 2,371.52
$ 100,000.00	$ (450.27)

	Interest received CY '14	Thru
CD's - Area Banks	$ 1,735.00	9/30/14
CD's - ICA / RBIG	$ 366.50	9/30/14
Corporate Bonds	$ -	-
US Government Bonds	$ 6,343.75	9/30/14
Institutional MM	$ 60.51	9/30/14
Curian Capital	$ 8,024.79	9/30/14
Genworth (Preservation)	$ 1,338.38	9/30/14
-	$ -	-
Long-Term Reserve Account	$ 6,462.23	9/30/14
Inland REIT	$ 3,116.09	9/30/14
-	$ -	-
Phillips Edison Arc REIT	$ 2,107.24	9/30/14
Allegris Winton Futures Fund	$ -	9/30/14
Total Interest received	$ 29,551.58	

	Gain/(Loss) CY '14		Total Change
Curian Capital	$ (870.79)	=	$ 7,164.01
Genworth (Preservation)	$ (1,008.98)	=	$ 327.40
-	$ -	=	$ -
Long-Term Reserve Account	$ 21,261.81	=	$ 27,724.04
Inland REIT	$ -	=	$ 3,116.09
-	$ -	=	$ -
Phillips Edison Arc REIT	$ 73.40	=	$ 2,180.64
Allegris Winton Futures Fund	$ 220.03	=	$ 220.03

Mid-Dakota Investments
MS/Xcel/MyDocuments/MD Cash Deposits
Prepared by Steve Peterson

BARTLETT & WEST

SERVICE. THE BARTLETT & WEST WAY.

MID-DAKOTA RURAL WATER SYSTEM

AUTOMATIC METER READING STUDY

PREPARED BY

BARTLETT & WEST
5900 S Western Ave, Suite 101
Sioux Falls, SD 57108

3045.080
February 2014

Project Engineers: Joseph A. Honner, P. E.
Jordan J. Olson, E.I.

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APPENDIX A

Cost Comparison

Section 1 - Introduction

1.1 Background on Automatic Meter Reading

Advanced Metering Infrastructure (AMI) and Automatic Meter Reading (AMR) give utilities more accurate methods of measuring water consumption. This can help identify service line leaks and abnormal usage patterns, therefore reducing the water demand on the utility. Reduced losses result in lower operational costs for the utility. The usage data can also provide a benefit to the utility when analyzing usage patterns and determining which areas of the system may require improvements for the pipeline and/or booster stations. The devices attached to the current meters result in more accurate water usage measurements, resulting in increased revenue for the utility. Due to these benefits, the investment of installing an AMI/AMR system can often be returned during the life of the system.

1.2 Mid-Dakota Rural Water System

Mid-Dakota Rural Water System is an entity that serves drinking water to an estimated 31,800 people within the communities and rural areas in fourteen counties east of the Missouri River in Central South Dakota. Mid-Dakota serves over 5,700 meters which consist of approximately 4,380 residential/rural household meters, 1290 livestock taps, 15 bulk municipal users, and 50 bulk individuals users. With an estimated service area of over 7,000 square miles, the distribution system is very spread out with varying areas of dense and sparse populations being served. Due to this size of the area served, Mid-Dakota currently enlist the help of most of their clients to "self-read" the meters on a monthly basis, with Mid-Dakota operators reading the meter one time annually. Livestock meters are read yearly by Mid-Dakota operators, and a few Special User meters are read each month by Mid-Dakota employees. Reducing the frequency of meter readings performed by Mid-Dakota employees reduces costs, but also greatly reduces accuracy of readings, and therefore revenue. Based on these factors, it is prudent for Mid-Dakota to pursue AMI/AMR options.

Section 2 - Alternatives

2.1 Introduction

In conducting this study, seven alternatives were considered, including a 'no action' alternative. Products from Sensus, IDT, Mueller Systems, and Metron-Farnier were analyzed for benefits, costs, and end-user services to determine the best product for Mid-Dakota's system. Two hybrid systems were also analyzed to complete 100% coverage for the Sensus system. The soliciting of information from the AMI-AMR manufacturers began in January 2013 at which time Mid-Dakota had approximately 5,410 services. To allow for accurate comparisons amongst the alternatives, proposals received from all AMI/AMR manufacturers were based on these 5,410 users in the system. The final overall system costs will be higher due to additional meters that have been installed since January 2013. All technologies were assumed to have similar install

procedures. Install costs for all readers were assumed at $75 per meter. The cost information for all alternatives is summarized in Appendix A.

2.2 Sensus

The Sensus system utilizes the FlexNet Fixed Network to read water services via a one-way radio frequency with a single "primary use" (unshared) licensed band in the 890-960 MHz spectrum. The Flex Net Network includes the SmartPoint M2 radio transceivers which are installed at each meter. The Model 510 M receiver is designed for non-submersible/non-pit installations. The SmartPoint M2 meter reader obtains hourly readings and can be programmed to monitor continuous flows over a period of time to alert the utility to leak conditions. The M-Series receivers function as a walk-by/drive-by endpoint, fixed base endpoint, or a combination of the two. It receives input from the meter register and remotely sends the data to the endpoint. For a rural water system serving a large area, the fixed base endpoint is typically the preferred method of collecting the data. The fixed base stations receive and process the readings from the meter endpoints within the coverage area and send the data to the Regional Network Interface (RNI) for data base storage. The utility accesses the data via the Sensus Meter Data Manager software. The Sensus FlexWare software allows the utility to manage the system and its data through a web-based interface. The system also allows end-users to monitor and manage their personal accounts and usage through Sensus FlexServer, a web-based portal. This system has a 20-year life, based on the manufacturer's warranty.

Locations of the 5,410 users and the locations of Mid-Dakota's existing elevated towers were provided to Sensus to complete a propagation analysis of Mid-Dakota's system. Based on installing base stations at each of Mid-Dakota's existing elevated towers, the study indicated approximately 60-62% of the existing meters could be read.

In an attempt to provide more base stations, locations for towers within Mid-Dakota's service area not owned by Mid-Dakota (i.e. community water towers) were provided. Sensus conducted a second propagation analysis with the additional towers. The analysis determined that approximately 88% of Mid-Dakota's user could be covered by the system, through the installation of 36 Tower Gateway Base Stations scattered throughout the service area, as shown in Figure 1. See Figure 2 for the coverage of the second propagation study. Base Stations would be installed on existing Mid-Dakota and non-Mid-Dakota towers between 50 and 600 feet in height. They connect with the smart meters to transfer data to and from the Regional Network Interface, located at Mid-Dakota's data center. This system would not be able to cover the entire customer base without expanding the scope of improvements significantly. Therefore, this system would need to be supplemented with another one of the analyzed alternatives to be cost-effective.

Installation costs for the Sensus system total approximately $2,344,700, which covers around 88% of Mid-Dakota's users. These costs include installation of 4,784 meter readers at $75 each ($359,000), 36 base stations at $24,750 each ($891,000), three handheld GPS units at

$5,500 each ($16,500), 5,410 radio transceivers at $125 each ($676,250), installation of 36 towers at $12,000 each ($432,000), an implementation fee of $14,457.83, and training at $6,700. This system would also require yearly fees of $59,400 for the system software and $39,000 for the customer portal login.

2.3 IDT

IDT Harmony is a Satellite AMR and water management system that provides satellite meter reading and online access to meter data. The system uses satellites to read field units connected to meters and transmit data to the Harmony web application. The web application allows a utility to view and manage reading data from a standard web browser, and therefore does not require the installation of any software. The end-users can also access their account information using a web browser. The life of this system is 10 years, based on field unit battery life. After 10 years, the batteries will need replacement, but the field unit will remain.

This system requires little setup time or equipment. Each meter is fitted with a field unit and tested on site. This system would cover the entire customer base without supplementation or additional infrastructure to install or maintain.

The cost to implement the IDT system is approximately $2,980,500. This includes 5,410 satellite readers at $450 per reader ($2,434,500) and installation at $75 per reader ($406,000), 5,410 installation brackets at $10 each ($54,100), database setup at $1 each for 5,410 units ($5,410), installation software support at $12 each for 5,410 units ($64,920), software for $14,895, and installation training at $675. There are also yearly fees of $324,600 for reading meters ($5 per month, per reader for 5,410 readers). Battery replacement after 10 years would cost approximately $225 per meter reader ($175 for battery, $50 for installation) for a total of $1,217,250 for the entire system. This is the most expensive alternative, both in initial start-up costs and annual fees.

2.4 Mueller Systems

MegaNET, by Mueller Systems, uses a three step approach to monitor water usage. Meters are fitted with Meter Transmission Units (MTUs), which communicate with a nearby collector and/or the base station of the system located at the utility's data center. These MTUs operate at a higher power (2 watts) and lower frequency (136-174 MHz) than other systems, allowing them to transmit data further and reducing the amount of infrastructure needed. The collectors, located throughout the distribution area, collect data from all MTUs in their respective transmission areas, before passing the data along to the base station. Data is transmitted every five hours, consisting of hourly data reads. Software analyzes data for potential leak identification and water usage tracking. Costumer software allows users to track account information via web browser. This system has a 20-year life, based on the manufacturer's warranty. The MTU is installed on a mounting bracket and wired to the meter. Typical installation takes less than five minutes.

Locations of the 5,410 users, Mid-Dakota's existing elevated towers and elevated towers within the service not owned by Mid-Dakota were provided to Mueller to complete a propagation analysis of Mid-Dakota's system. Figure 3 shows the locations of the 5,410 meters in the system and the estimated service area they require. The propagation study determined that the MegaNET system would be able to cover all customers within the system by utilizing a majority of the existing elevated water towers in conjunction with the installation of five new towers. The locations of the towers to be used are shown in Figure 4. A combination of 10 super collectors and 16 smart collectors are required to communicate with the 5,410 MTUs in the system. See Figure 5 for the system coverage with the 26 collectors.

This system costs approximately $1,638,700 to implement, including $406,000 for MTU installation (5,410 readers at $75 each) and $1,132,700 to install the MegaNET system consisting of a head end receiver, 10 super collectors, 16 smart collectors, 5,410 MTUs, MegaNET installation and troubleshooting for two computers, and system training. Five new towers installations are also needed for an approximate cost of $100,000. There is a yearly support cost of $7,000 associated with this option. This is the least expensive alternative to implement and has very low annual fees.

2.5 Metron-Farnier

Metron-Farnier uses an Innov8 smart water meter register, attached to each meter, to record digital reading data. The information is then backhauled over the Verizon Wireless network to communicate data from meters to the data server. Verizon Wireless data backhaul is included for 10 years with each meter reader. Each reader has an estimated battery life of 10 years. The batteries cannot be replaced, thus when a battery on the meter reader is drained, the reader must be replaced with a new unit. No additional infrastructure is needed to upgrade the meters to this system. The utility can access and manage the user data through a web-based tool. The utility software provides a billing system interface. End-users can access their accounts through a web browser. This provides consumption reports and billing information. It can also be configured to provide email notification on problem situations such as leaks and unusual consumption levels.

All meters in Mid-Dakota's system would be covered without any additional infrastructure to install or maintain. The system has a 10-year life, based on the battery life and length of Verizon data backhaul support, which would require all registers to be replaced around year 10. The register can be installed to nearly any existing meter within a few minutes.

The cost to implement the Metron-Farnier system is approximately $2,029,000 (5,410 units at $300 each, plus $75 each for installation). The price for each unit includes the register, mounting kit, and data backhaul through the Verizon Wireless network for 10 years. The registers would need to be replaced around year 10, resulting in a total installation cost of $4,058,000 for both installations. There is no yearly cost or fee associated with this option.

2.6 Sensus supplemented with IDT

To achieve 100% coverage with the Sensus system, the IDT system could be used on the 12% of meters not covered by Sensus to create a hybrid reading system. This would allow the entire customer base to be covered, but would require two separate management software systems to maintain and monitor. Of the two hybrid reading systems, this one is more expensive.

The costs for this system include the $2,344,700 listed above under the Sensus heading, plus the costs to implement the IDT system for 12% of the users, totaling $351,235. This cost includes $281,700 for the satellite readers (626 readers at $450 each), $6,260 for installation brackets (626 at $10 each), $626 for initial database setup ($1 per reader for 626 readers), $675 for installation training, and $7,512 for software. There is also a fee of $37,560 per year for meter reading ($5 per month, per meter for 626 meters). After 10 years, the batteries of the IDT readers would need to be replaced for $140,800 (626 readers at $175 each plus $50 for installation). Total installation costs for the hybrid system are approximately $2,695,900, with yearly fees totaling $135,960, and battery replacement around year 10 at $140,800.

2.7 Sensus supplemented with Metron-Farnier

The Metron-Farnier system could be used to supplement the Sensus system, creating a hybrid system to achieve 100% coverage. This system would also require two separate software systems that would need to be maintained and monitored. This alternative is less expensive than the other hybrid system, both in implementation and maintenance.

The total costs for this hybrid system include the $2,344,700 listed under the Sensus heading, plus the costs to implement the Metron-Farnier for the remaining 12% of the users. The total cost for the remaining users is approximately $234,750 ($375 per reader at 626 users). There are no recurring costs associated with the Metron-Farnier system. The total cost of this hybrid system is $2,579,500, with $98,400 in annual fees.

2.8 No Action

The final alternative consists of keeping the existing system in place. This requires no costly infrastructure to install and maintain. However, this alternative involves continued use of employees to drive to many of the meters in order to read them. Other meters are read by the end-user, reducing accuracy of the reading. According to Mid-Dakota, this costs them approximately $237,000 per year in employee wages, mileage expenses, and inaccurate meter readings. This means that Mid-Dakota will have a return on their investment with two of the considered alternatives. This alternative also leaves the possibility of meter tampering or mis-reading, which Mid-Dakota has experienced in the past. All other alternatives considered for this report alleviate both of these issues. This option does not allow the end-user to access their account and usage information online.

Section 3 – Conclusion

3.1 Recommendation

Based on the services provided and cost of implementation, the MegaNet system from Mueller Systems is the preferred alternative. While more infrastructure is needed to create the system, the total cost of implementation is still less expensive than all other options. Most of the cost for this alternative will be up front, as there are only $7,000 worth of support costs from the manufacturer. In addition, the necessary infrastructure will require only five structures and small amounts of land or easement acquisition. All but five towers and collectors can be installed on top of existing towers and structures. The system also has the longest life of the considered alternatives. It comes with a 20 year warranty, 10 years of which is a full warranty and 10 of which is prorated. It is preferred to use a single system for collections, rather than a hybrid system with multiple software programs to manage and monitor.

3.2 Implementation Schedule

It is anticipated that Mid-Dakota will hire a contractor to install the chosen units on the existing meters. They plan on completing installation in one period of time, rather than installing a certain portion of the meters each year. The installation will start in the Fall of a given year and complete installations late in the Spring of the following year.

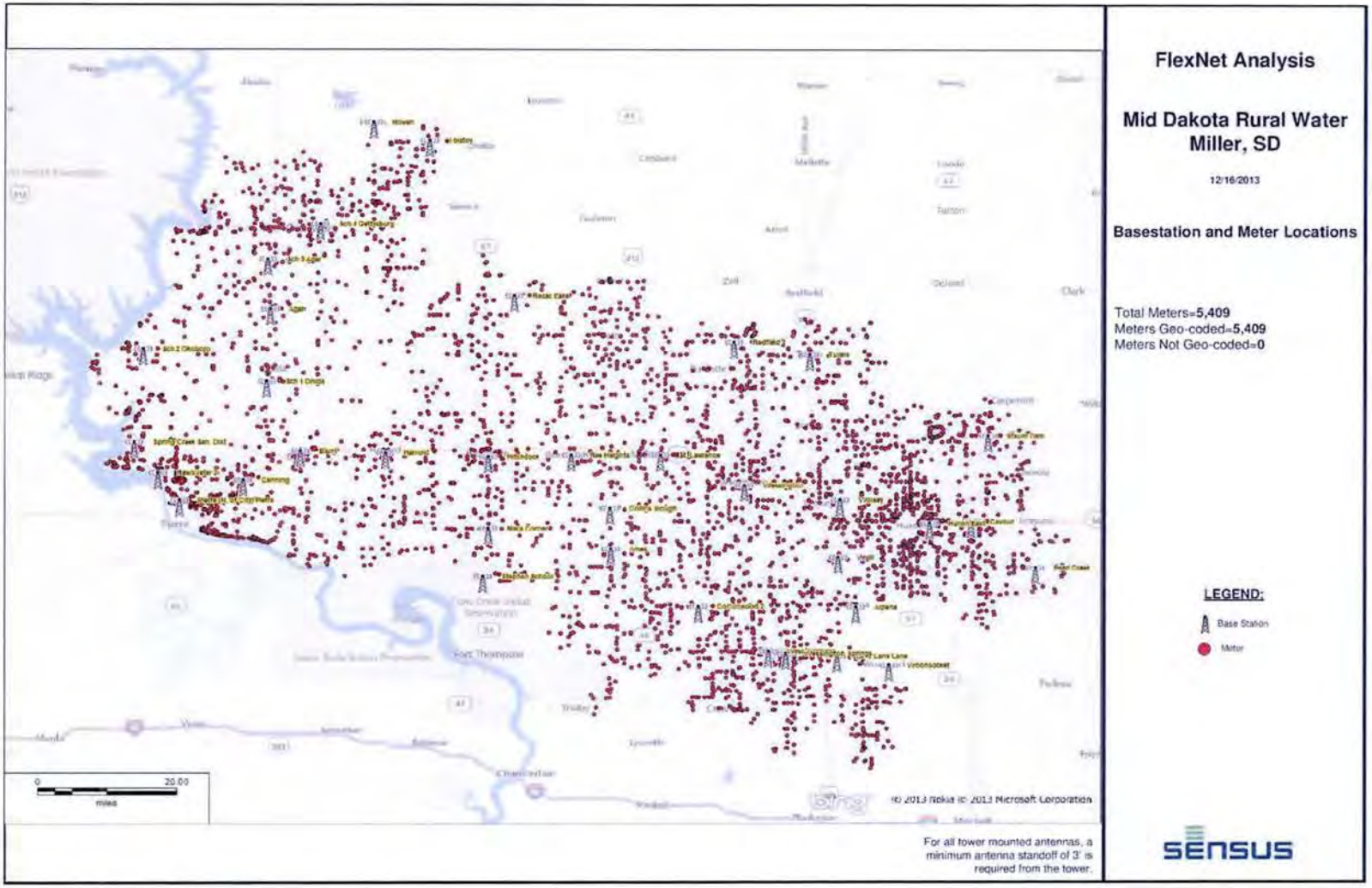

Figure 1: FlexNet Base Station and Meter Locations.

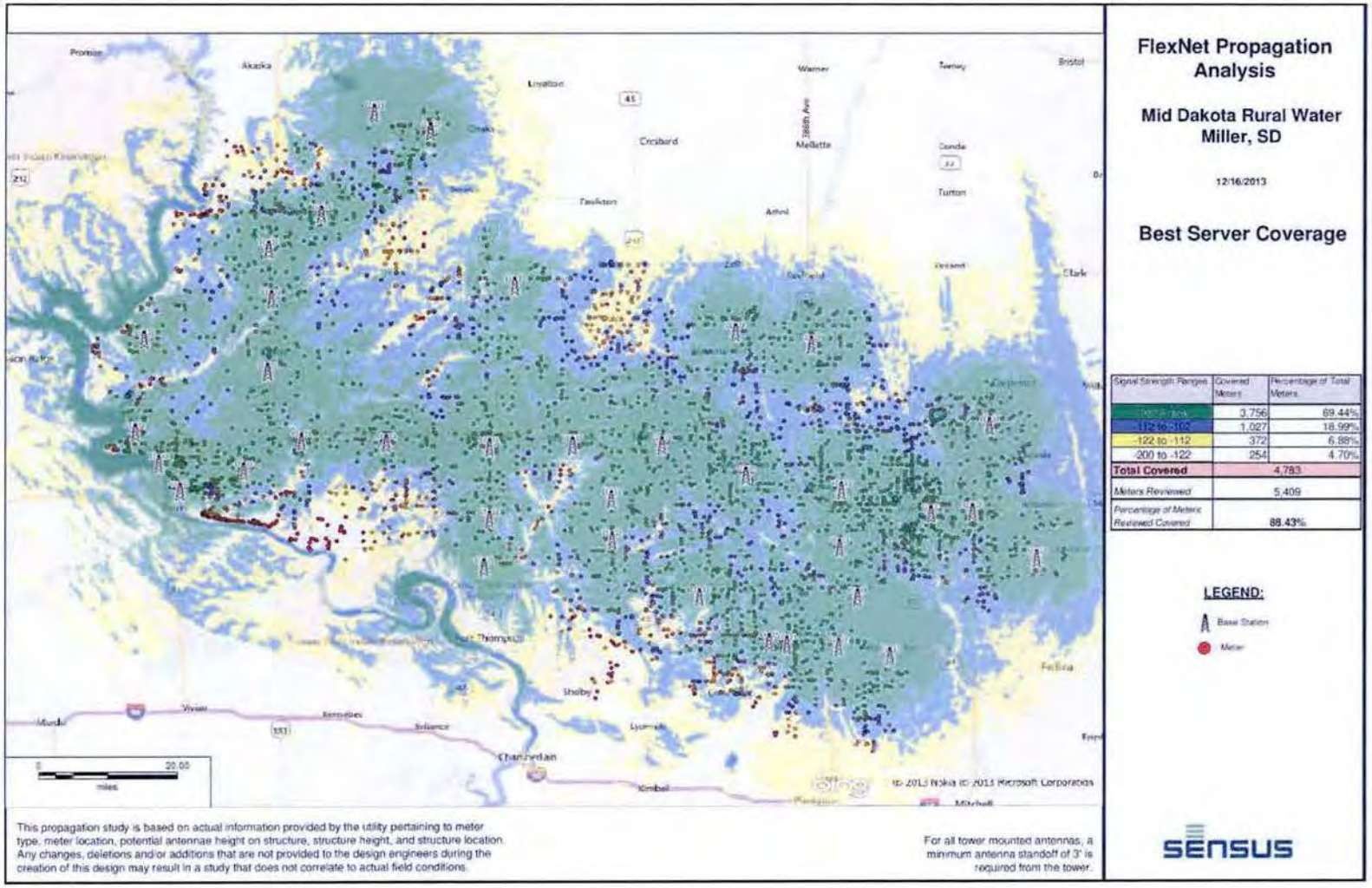

Figure 2: FlexNet Propagation Analysis.

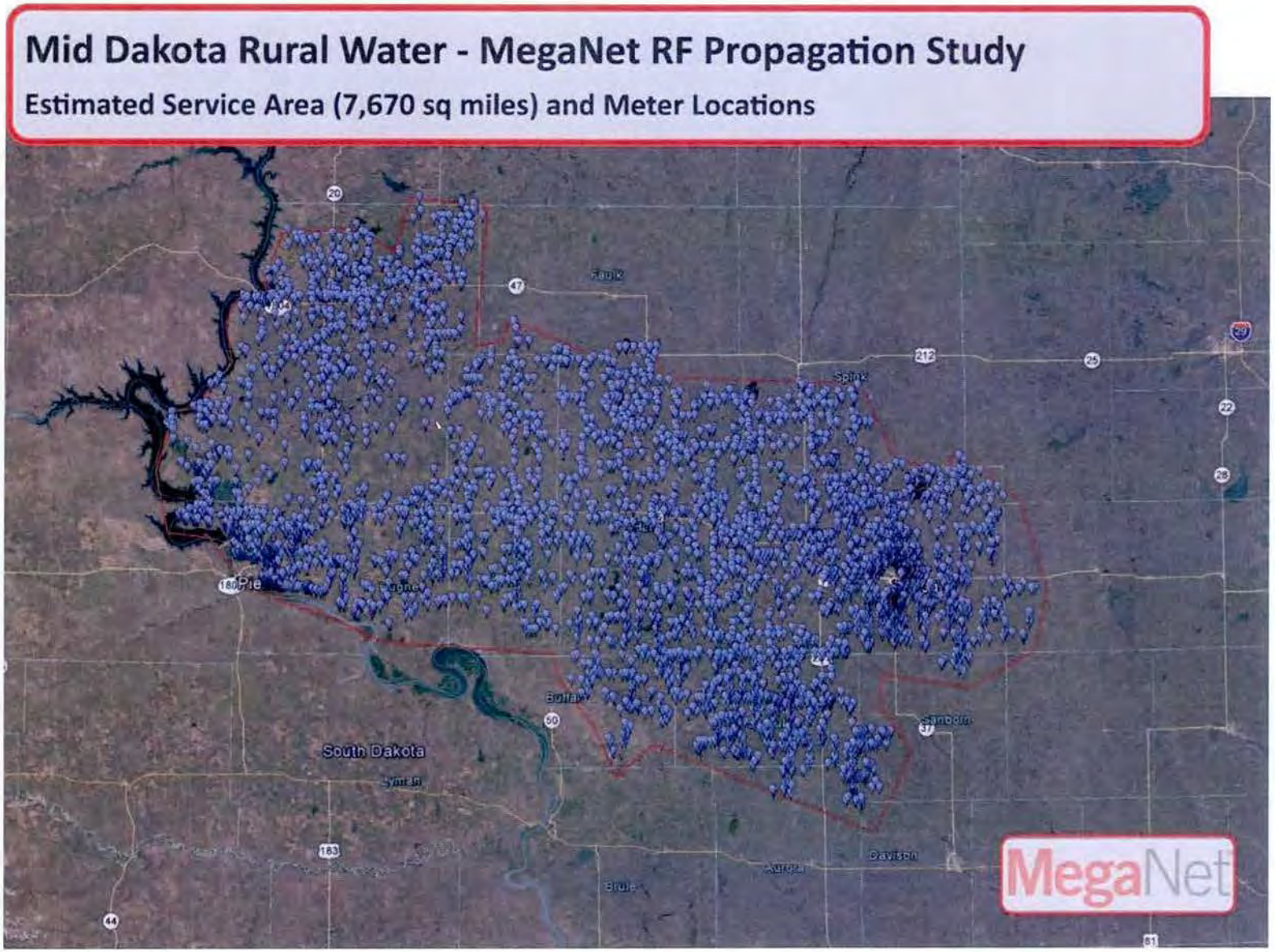

Figure 3: MegaNet Estimated Service Area and Meter Locations.

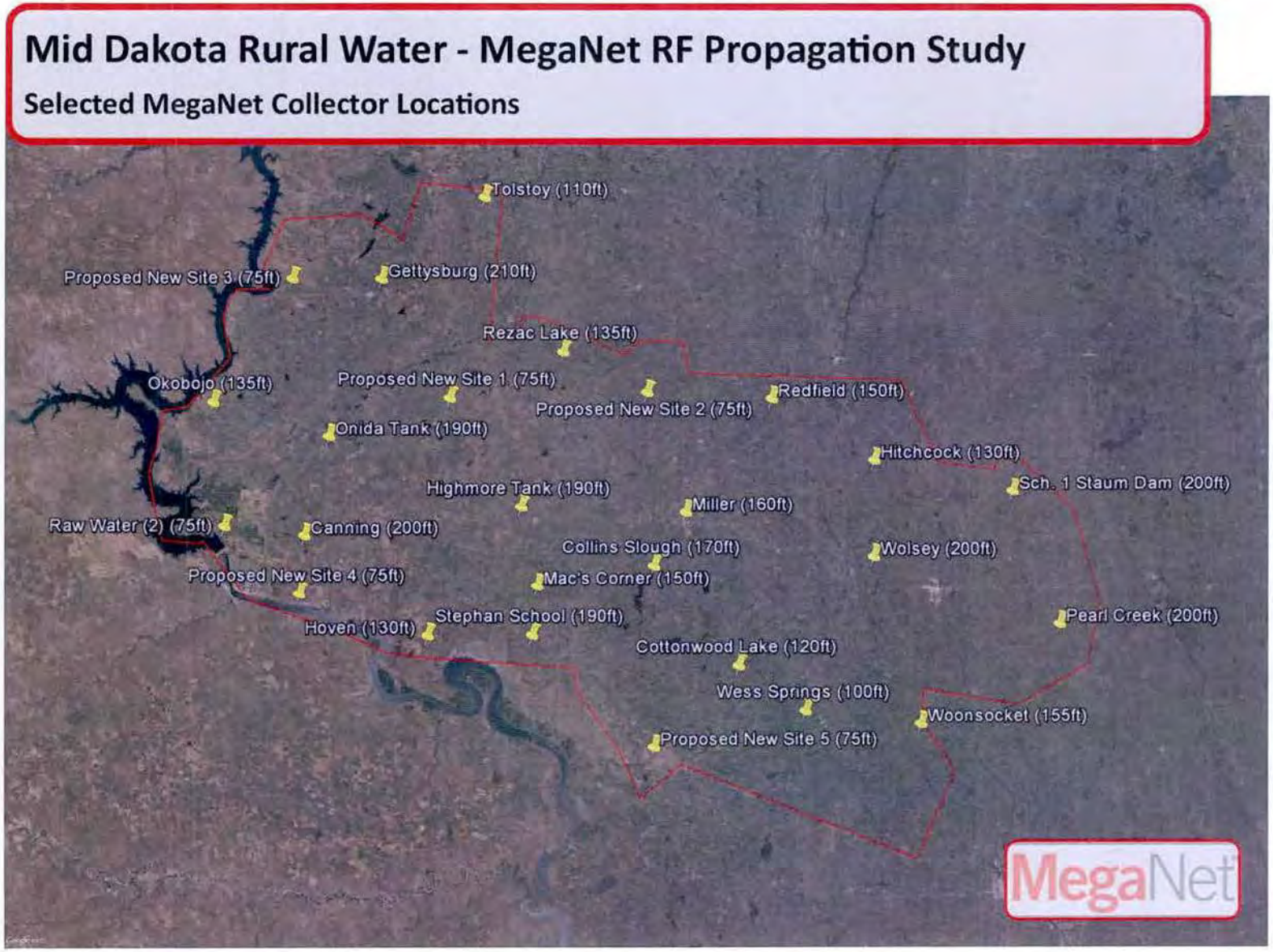

Figure 4: MegaNet Collector and Super Collector Locations.

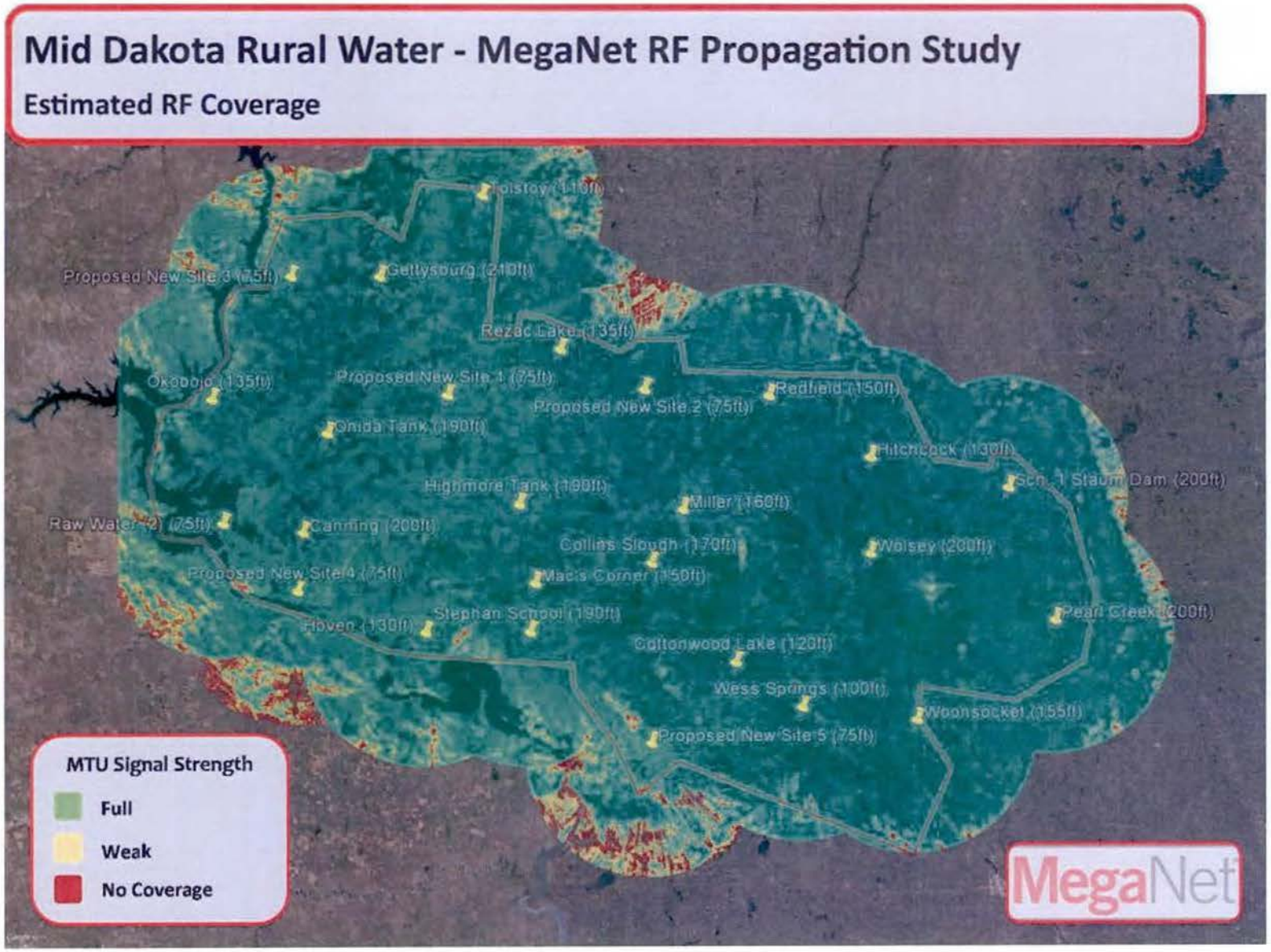

Figure 5: MegaNet Estimated System Coverage.

Appendix A

Supplier	Start-up Cost	Meter Install Costs	Replacement Costs	Yearly O&M/Fees
Sensus (88% Coverage)	$ 1,985,657.83	$ 359,000.00	$ -	$ 98,400.00
IDT	$ 2,574,500.00	$ 406,000.00	$ 946,750.00 *	$ 324,600.00
MegaNet – Mueller Systems	$ 1,232,733.33	$ 406,000.00	$ -	$ 7,000.00
Metron Farnier	$ 1,623,000.00	$ 406,000.00	$ 2,029,000.00 **	$ -
Sensus/IDT	$ 2,289,942.83	$ 406,000.00	$ 140,850.00 *	$ 135,960.00
Sensus/MF	$ 2,173,457.83	$ 406,000.00	$ 219,100.00 **	$ 98,400.00

*Battery replacement for IDT units after 10 years (includes install cost of $50 per unit)
**Complete unit replacement of Metron-Farnier units after 10 year battery life (includes install cost of $75 per unit

Public Hearing

MID DAKOTA RURAL WATER SYSTEM

Quality On Tap!

BOARD OF DIRECTORS

RICK BENSON
Wolsey
Rural 5

LENNIS FAGERHAUG
Wessington Springs
Rural 4

DWIGHT GUTZMER
Highmore
Municipal

ROBERT JONES
Huron
Municipal

JAMES MCGILLVREY
Wolsey
Municipal

JEFFREY MCGIRR
Huron
Municipal

STEVE ROBBENNOLT
Gettysburg
Rural 1

GARY STRASBURG
Rockham
Rural 3

BRUCE VENNER
Pierre
Rural 2

608 W. 14th Street
PO Box 318
Miller, SD 57362

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TF: 1-800-439-3079
FX: 605-853-3245

www.mdrws.com
office@mdrws.com

KURT PFEIFLE
General Manager

Our mission is...
To enhance quality of life and promote economic development, with high quality water and excellent service.

MINUTES
MID-DAKOTA RURAL WATER SYSTEM, INC.
BOARD OF DIRECTORS MEETING
AUGUST 12, 2014
4:30 P.M.
MID-DAKOTA O & M CENTER
MILLER, SD

I. **CALL TO ORDER:** The Mid-Dakota Rural Water System, Inc. Board of Directors met for their regular meeting on Tuesday, August 12, 2014 at the Mid-Dakota Rural Water System O & M Center, Miller, SD. A quorum was present. Chairman Jones called the meeting to order at 4:32 p.m. The Pledge of Allegiance was recited.

The following Directors were in attendance:

Rick Benson	Lennis Fagerhaug
Dwight Gutzmer	Robert H. Jones
Jim McGillvrey	Jeff McGirr
Scott Oligmueller	Bruce Venner

Absent: Steve Robbennolt

Others present at the meeting were:

Kurt Pfeifle	Scott Gross
Bill Sarringar	Steve Peterson
Connie Aymar	Susan Hargens
Scott Perry	Tim Engel
Joseph Honner	Jack Miller
Justin Overman	

II. **INTRODUCTIONS:** Manager Pfeifle introduced Jack Miller and Justin Overman with Howalt McDowell Insurance. Manager Pfeifle stated that they will be giving a presentation later in the meeting. Chairman Jones asked employee Scott Perry to introduce himself and explain his work at Mid-Dakota. Scott said he is the Distribution Specialist and works out of the Huron office. He stated that Pearl Creek and Staum Dam are his service areas. Scott said he does locates, service orders, installs, exercising of valves and maintenance.

III. **ADDITIONS TO THE AGENDA:** Manager Pfeifle announced that 9.d.iv Spencer Livestock new special user contract needed to be added to the agenda.

IV. **APPROVE THE AGENDA:** **A motion was made by Director Benson and seconded by Director McGillvrey to accept the Agenda as presented. Motion carried.**

V. **SRF PUBLIC HEARING:** Chairman Jones read aloud the State Revolving Fund (SRF) Notice of Public Hearing. It reads as follows:

Notice of Public Hearing
For the Mid-Dakota Rural Water System
Automatic Meter Reading System

The Mid-Dakota Rural Water System (MDRWS) is proposing to install an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system to enhance service to existing users, provide better tracking of unaccounted for water and provide more efficiencies in System operation. The AMR:AMI Project is proposed for all 5,761 of Mid-Dakota's customers and will be available for new customers as they join the water system. It is anticipated that construction and installation will begin in the Spring of 2015 and concluding in the Spring/Summer 2016. The MDRWS proposes to borrow up to $2,600,000 of Drinking Water State Revolving Funds at 3% for up to 30 years as financing for the project.

MDRWS will hold on a public hearing on the AMR/AMI Project at the Mid-Dakota Rural Water System Operations & Maintenance Center, 608 West 14th Street, Miller, SD on ***August 12, 2014 commencing at 4:30 p.m.*** *The purpose of the public hearing is to discuss the project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.*

It shall be noted that the Public Notice stated that Mid-Dakota proposes a 30 year loan. This should have read 20 year loan, and in fact the SD DENR may require a shorter term due to the nature of the equipment (i.e., meters).

The public hearing will commence with the reading of this notice and will remain open until conclusion of item #13 on the agenda at approximately 5:55 p.m.

Chairman Jones noted for the record that no one from the public was in attendance, nor have any written comments been received.

VI. FINANCIAL: Steve said June billings were in the amount of $566,911.00 and July receipts were in the amount of $532,623.00, for a difference of ($34,288.00).

Steve said we have 255 more customers than we did one year ago. Water revenue is up somewhat, from the Cash Flow so we actually received +$103,036. It's a fairly even split, water is up $47,250 and minimum bills are up $55,786.

Steve contacted LeAnn Fravel and had them pull another $250,000 from the checking account to the debt service account; that should go tomorrow.

Insurance renewal is due at the end of the month; it looks like the premium will increase $1,446. We may be increasing the values of our major facilities, the underwriters think we need to bump them up; if we decide to there will be an adjustment at that point. We will have to the board provide some direction.

There are two breakouts for Bartlett & West. We didn't get the June invoice until after the July board meeting. It has been paid and the breakout is included. The July breakout is also there, that is the one that shows up on the Major Payments Schedule.

Chairman Jones asked a question about the Balance Sheet – other liabilities. Steve said that he will be working with the auditors to see what we should do with it.

VII. CONSENT AGENDA:

a. Approve Previous Minutes 7/8/2014
b. Approve Financial Report 7/31/2014
c. P.E. # None Indefinite Suppliers $ 0.00
d. Approve "Major Payments List"
e. Approve Manager's Report (written)
f. Engineer's & Construction Progress Report (written)

A motion was made by Director Gutzmer and seconded by Director Venner to accept the consent agenda as presented. Motion carried.

IX. BOARD DEVELOPMENT: Jack Miller and Justin Overman, agents for Howalt McDowell Insurance were present to discuss the insurance coverage that Mid-Dakota has. Jack mentioned that they do the property and management insurance for 90 systems in a three state area (all Class A systems). Justin has been working with Jack and Rural Water for 3 years. Jack also stated that if and when he decides to retire, Justin will take over for Rural Water. 2015 quotes for Property & Liability & Worker's Comp were made and handed out to all present. There was considerable discussion on the amount of our deductibles and values assigned to certain assets. It was the consensus of the board that the General Manager and Accountant should work with Howalt McDowell and decide if we want to increase our deductible from $1,000 to $2,500 and increase the values of some of our assets such as the water treatment plant.

VIII. MEMBERSHIP AND HOOKUP ACTIVITIES: Susan handed out an article about employee Wayne Ruhnke receiving the "Caught doing it Right" Award. Wayne has been helping water the flowers on Main Street in Miller. Congratulations Wayne!

Manager Pfeifle mentioned that there have been no new developments on the Northern Prime Feeders special user hookup, so we'll delete this "place-marker" from future agendas.

Susan gave a run-down of the last month's hookup and membership activities as follows:

Susan said there is now a total of 5,778 accounts, which is 17 more than the last report. The Membership Summary shows 14 account changes that were transfers. There were 2 tap conversions, no changes in location, no accounts with name change only, and no reactivations. There was two disconnects and no deletions. There were 14 new PC Users. We collected $450 in transfer fees, $33,525 in new hookup or increased unit fees, $1,700 in membership fees, $2,000 in meter deposits which customers get back if all bills are paid when they separate from Mid-Dakota, and $0 in reactivation fees, for a total of $37,675.00.

Susan listed the following changes to the Special User Contract lists: Crop Production Services – Class III 4,050 GPD pop=15. Contract transferred from Hi Plains Agronomy to Crop Production Services.

Motion by Director Gutzmer and seconded by Director McGirr to approve the change in the Special User Contract for Crop Production Services. Motion carried.

Susan listed the following new Special Users to the contract list: Cowan Ranch – Class III 17,772 GPD pop=66; Andy Murphy – Class III 8,903 GPD pop=33 (we were contacted about a change to the numbers that were originally submitted) and Spencer Livestock – Class III 8,613 GPD pop=32.

Motion by Director Benson and seconded by Director Gutzmer to approve the New Special User Contracts Cowan Ranch, Andy Murphy and Spencer Livestock. Motion carried.

Susan noted that there are 77 on the Individual PC User List, 44 installed and 33 left.

There were three requests for relief: (1) John Pillote requested relief. Staff recommends relief in the amount of $448.50. (2) Gerson Arevalo – Arevalo Enterprises requested relief. Staff recommends relief in the amount of $1,224.75.

Motion by Director Fagerhaug and seconded by Director Venner to approve the Request(s) for Relief of John Pillote and Gerson Arevalo – Arevalo Enterprises, as presented and recommended by staff. Motion carried.

(3) Cork Maurer (c/o Luke Maurer) requested relief. Cork passed away and Luke is requesting a waiver from the entire amount. Luke Maurer told us "There is very little money in Cork's account." Staff recommends full relief of his account in the amount of $496.35.

Motion by Director Gutzmer and seconded by Director McGillvrey to approve the Request for Relief for Cork Maurer as submitted by Luke Maureras presented and recommended by staff. Motion carried.

X. SOUTH DAKOTA ASSOCIATION OF RURAL WATER SYSTEM (SDARWS) APPOINTMENT TO THE BOARD OF DIRECTORS: Chairman Jones has provided notice of his intent not to request reappointment to the Mid-Dakota board of directors. Concurrently, this will open a seat on the SDARWS board of directors now held by Chairman Jones. The Mid-Dakota board will need to select a new director to be seated on the SDARWS board. The Mid-Dakota board can make the selection (by election) today and the successful candidate will attend the next SDARWS board meeting with Chairman Jones for introductions and possible action by the SDARWS board for official seating (this is a function of their bylaws). The next SDARWS board meeting is September 4, 2014 in Aberdeen. Following that, the first official meeting for the new director will be the December 4, 2014 board meeting in Sioux Falls. Those board members that expressed interest in being selected for the directorship on the SDARWS board: Director Gutzmer, Director Venner and Director McGillvrey. Manager Pfeifle said that if there is other interest or if another nomination is to be made, now would be the time to express that interest or make the nomination. Hearing no other nominations or interest. A secret ballot will be cast for the candidate. The candidate receiving a majority vote of the directors present will be elected. If no one receives a majority, then the two top vote getters will stand for election in a run off. Manager Pfeifle handed out the secret ballots to each director. Chairman Jones abstained from voting. Manager Pfeifle and Attorney Engel counted the votes. Manager Pfeifle announced that with the first vote, there was no majority for any candidate, there was a tie for second. There was a need for a revote. Manager Pfeifle handed out a second secret ballot. Manager Pfeifle and Attorney Engel counted the votes. Manager Pfeifle announced the winner of the second vote, receiving majority vote to be Director McGillvrey.

Motion by Director Gutzmer and seconded by Director Benson confirming the election results for SDARWS board of Directors, that Director McGillvrey shall be named as successor to Chairman Jones on the SDARWS board representing Mid-Dakota. Motion carried.

XI. EMPLOYEE POLICY 4.01 REGULAR AND OVERTIME HOURS (REVISION): Manager Pfeifle stated that he is proposing a change to Employment Policy 4.01 that deals with Regular and Overtime (OT) pay. Currently the Policy says we pay OT rates for anything over 40 hours per week (as is required by the Fair Labor Standards Act). Mid-Dakota takes that step further and says we pay OT for anything over eight hours per workday. We took this approach during construction of the system as a matter of fairness to our employees. Some Contractors have a habit of working an employee for 10-12 hour

days then sending them home at (or near) 40 hours to avoid OT. Our employees, at the time, were at the mercy of the Contractor's schedule and we gave them assurances through our policy that we wouldn't work this way. Construction is no longer the driving factor of our work schedule and therefore Manager Pfeifle feels it's time to revert back to what is required by law with regard to OT. The proposal will strike the language in Employment Policy 4.01 calling for OT on anything over eight hours per day. OT for time exceeding 40 hours per week will still be paid at time-and-one-half. This will also take care of an anomaly in our Policy, whereby an employee could work 12 hours on Monday, 12 hours on Tuesday and take Wednesday – Friday off and that employee would receive 40 hours of regular pay and eight hours of OT… Manager Pfeifle added that he doesn't believe we have had any abuse of this loop-hole, but it has happened, and it looks odd to an Auditor, Director or Manager that might be perusing the OT records (…which also happens from time-to-time). Under current law, Vacation or Sick Leave time does not constitute work and therefore isn't included in the 40 hours of a work week.

Motion by Director Venner and seconded by Director McGirr to accept and approve Employment Policy 4.01 Regular and Overtime Hours as presented and revised. Motion carried.

XII. OAHE ACRES: Manager Pfeifle mentioned that Oahe Acres is owned by R.O. Schmidt of Pierre. RO is giving up his ownership and management of Oahe Acres development (located to the immediate west of our water treatment plant and just west of Grey Goose Road). Mid-Dakota has a Class III Special User Agreement with RO. The agreement provides for billing and general operation of the Oahe Acres water system be done by Mid-Dakota. Mark & Terri Undeberg are assuming ownership and management of the development. They are doing business as an entity called TMT, Inc. Mid-Dakota will need to enter into two agreements with TMT. (1) Water Supply Agreement – Class III 17,833 GPD, Population 66. This is an identical contract to the one RO had with Mid-Dakota. (2) Administrative Services Agreement – provides for billing, operations, and maintenance of the water system by Mid-Dakota. Again, this is virtually identical to the agreement we now have with RO.

Motion by Director Gutzmer and seconded by Director Fagerhaug to approve a Class III Special User Water Supply agreement for 17,833 GPD and an equivalent population of 66, with TMT, Inc. Motion carried.

Motion by Director McGirr and seconded by Director McGillvrey to approve an administrative Services Agreement for the billing, operations and maintenance of the Oahe Acres drinking water system, with TMT, Inc. Motion carried.

XIII. CLOSE PUBLIC HEARING: Chairman Jones declared the Public Hearing for the SRF funding application closed. The hearing was formally opened at the start of the meeting at 4:30 pm and remained open, allowing for any comments until 5:53 pm. Chairman Jones again noted for the record that no one from the public was in attendance, nor have any written comments been received.

XIV. STRATEGIC PLAN: Manager Pfeifle reports as follows:

- Automatic Meter Read (AMR) – Manager Pfeifle noted that a SRF Application Hearing was conducted at the August 12, 2014 board meeting. Mid-Dakota is also scheduled to hear more information concerning AMR and AMI from Utility Services on August 19th.
- Asset Management System – Manager Pfeifle said Blake Flanagan with Bartlett & West was in Miller on July 16th to implement the start of the CMMS and provide some training. It will be a challenge to transition over to the new CMMS from our current technology…but we'll work through it…change is hard! We have begun work in house to identify all assets and start our own Asset Management System. Manager Pfeifle has put together a preliminary list of assets aka "Inventory" and have a start of an Asset Management written plan. Manager Pfeifle has also put together a "Condition of the Asset" form.
- Expand Water Sales – Manager Pfeifle met with Hunter Roberts from GOED on July 18, 2014. The meeting was focused on discussion concerning a proposed Ethanol facility near Onida. This came as a result of Mid-Dakota being approached earlier by the GEOD concerning a potential large water User (500 Kg) in the Pierre/Onida area.
- Expand Business Model – No work done this period. Manager Pfeifle made a note of interest. WEB RWS has purchased water bottling equipment with the intent of bottling their water and selling it in their local market…mostly targeting the Aberdeen area.
- Water East of Highmore – Manager Pfeifle noted the "extra capacity" subject was brought up at the June board meeting. The Board authorized staff to work with Bartlett & West and create a new "Specific Authorization (SA)" for this work. Bartlett & West are aware of the directive too and presumably working to construct a new SA with a Budget to accompany the SA.
- Install 100 (+) Users per year – Manager Pfeifle said it is understood that an ongoing goal of 100 Users installed per year continues to be a goal.

Manager Pfeifle mentioned that we need to start thinking about our next Strategic Planning Session. He is proposing Wednesday, January 21, 2015 at the Miller Community Center. We'd probably schedule a 10:00 am start and conclude around 2:00-3:00 pm. We will have lunch catered in. The board needs to decide who you want to have in attendance: Board and Management…Consultants? Other employees? Public? We had discussed doing this at one time…if we decide to pursue…Manager Pfeifle will need help recruiting members of the public to attend. We also need to decide on a facilitator. We have had numerous people do this in the past: Basin Electric, Dan Cain Consulting, SDARWS and Jerry Backes (B&W). All have done a good job facilitating the meeting. The board decided to think about these questions. We will look at this again in September / October.

XV. DEPARTMENTAL REPORTS:

a. Engineering and Construction Contracts: Engineer Honner said he had nothing to add to his written report.

Manager Pfeifle talked about the Specific Authorization for water treatment plant discharge plan. He has asked Bartlett & West to craft a new Specific Authorization (SA) to design the system necessary for discharging water from the lagoons to the HWPA. We will consider approval of a new SA at the September 9, 2014 board meeting. Manager Pfeifle also reminded Engineer Honner about SA for getting more water from Highmore water storage tank East…

Manager Pfeifle said the West Bend Recreation Area project hit a major snag in mid-July. After months (even years) of trying to get the Crow Creek Sioux Tribe to notice this Project and respond to our requests, such as confirmation of no effects on Cultural Resources, following the report completed by Dakota Research Services…Mid-Dakota thought we were cleared to move forward on the Project. We had recently received a new Countywide Resolution to lay pipeline in the ROW from Hughes County. Mid-Dakota personnel went to the site and flagged a proposed route to the West Bend Recreation Area. Apparently this got the attention of the Crow Creek Tribe and they called Mid-Dakota to insist that no work be done until the Crow Creek Tribal Council has reviewed and acted upon this Project. Mid-Dakota immediately complied, and sent information concerning the Project along with a request to the Crow Creek Tribe to act without delay and let us move forward with the Project. As of the writing of this report, no work has been done and no word received back from the Tribe. SD GF&P was notified that the Project was on hold indefinitely, until such time as the Tribe provides the appropriate permissions to move forward.

AMR AMI Project – Manager Pfeifle stated that we are moving forward with the SRF funding application for the AMR Project and the following resolution must be adopted.

Mid-Dakota Rural Water System, Inc.
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, Mid-Dakota 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 distribution system, including but not limited to construction of an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) System (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 $2,600,000 to the South Dakota Board of Water and Natural Resources for the Project.

2. The 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. The 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 Miller, South Dakota, this 12th day of August 2014.

APPROVED:

_____

BY: _____

_____ *(Title)*

(Seal)

Attest: _____

_____ *(Title)*

Motion by Director Gutzmer and seconded by Director Fagerhaug to adopt the Resolution for SRF Funding Application. Motion Carried.

A report was given on the progress of the Pierre Field Office. Manager Pfeifle presented a slideshow of pictures of the Pierre Distribution Field Office progress.

b. Water Production—Bill Sarringar: Bill reported that he got the OK from DENR concerning the Notice of Intent for discharging water to the Hyde Waterfowl Project.

We received earlier concurrence from USFW and USBR. Bill gave a status report of the dehumidification unit. The substantial completion date is set to be November 7th with the final date of November 15th. The unit may not ship until the middle of October. Mechanical Sales will try to expedite the shipping date but no guarantee.

Bill said that the GE Drinking Water Conference is September 7-9 in Nashville, TN. Shane Bothwell and Steve Laird will be the employees in attendance. Al Thomas and Mike Polak will attend next time.

c. **Water Operations—Scott Gross:** Scott reported that Gettysburg tank is back to normal. Utility Services is currently working on several tanks. Mac's Corner tank is all painted and cured. The following tanks are scheduled for inspection and washout: Wessington Springs – August 13th, Agar – August 15th, Ames – August 18th, and Onida – August 20th.

Scott P., Randy B. and Scott G. took a look at the Lake Byron Association system. It is in pretty rough shape. Scott recommends at a minimum that we address the pump station – needs repainting on the inside, rusted.

d. **Administration and General—Kurt Pfeifle:** Manager Pfeifle reported the NRWA WaterPro Conference will be in Seattle, WA October 6-9. Those attending will be Bruce and Lori Venner, Gale and Mavis Auch, Al and Yvette Thomas, and Kurt and Laurie Pfeifle.

Manager Pfeifle said the VoIP office phone system install has begun. Marco is starting with the Miller OMC and will then move on to the Pierre WTP and FO. The other offices should follow. We're excited about the new technology and are looking forward to the installation and switchover.

Manager Pfeifle stated that the Labor Committee met on Thursday, August 7th. Management presented an adjustment proposal for 2015. Following discussion, the Labor Committee (Jones, McGirr, Fagerhaug and Venner) provided its input and a report and recommendation will be provided at the September board meeting.

Manager Pfeifle mentioned the Attorney's fees will increase next year from $160/hr to $175/hr effective January 1, 2015.

XVI. DIRECTOR REPORTS: Chairman Jones gave a report for the SDARWS statewide association. They purchased another leak detector, valve turner and three new vehicles. The state association will be closing on a building for the Spearfish office on the 12th of August. The original price for the building was $610,000. They purchased building and small piece of land for $235,000. SDARWS now own the buildings in Spearfish and Madison. A power point presentation showing the new West River facility was provided.

In early July, 2014, Manager Pfeifle conducted a survey with other rural water system's managers. The question asked was "Does your system have any limitations or

qualifications allowing a former employee to become a director? Manager Pfeifle reviewed the survey and its results with the board.

There was discussion about loaning money to SDARWS. Attorney Engel reviewed the options for the board. We received a letter stating that Mid-Dakota will not receive a waiver from having to obtain a banking or loan permit according to the money lending license statute. Manager Pfeifle will supply a copy of the letter to SDARWS.

XVII. EXECUTIVE SESSION: Motion by Director Gutzmer and seconded by Director Venner to go into executive session at 7:25 p.m. to discuss a personnel issue and a legal issue.

XVIII. REPORT ON EXECUTIVE SESSION: Chairman Jones declared the Board out of executive session at 7:48 p.m. A personnel issue and a legal issue were discussed and no action was taken while in executive session.

Motion by Director Venner and seconded by Director Gutzmer to approve the report from executive session. Motion carried.

Motion by Director McGillvrey and seconded by Director Gutzmer to authorize the General Manager to apply a Quality Step Increase to certain personnel and to delay implementation of the increase and other provisions of the compensation policy until January 1, 2015. Motion carried.

XIX. ADJOURNMENT: There being no further business to come before the Board, a **motion was made by Director Gutzmer and seconded by Director Fagerhaug to adjourn the meeting. Motion carried.**

Chairman Jones adjourned the meeting at 7:54 p.m.

Chairman	**Date**
Secretary/Treasurer	**Date**

Mid-Dakota Rural Water System, Inc.
Automatic Meter Reading (AMR)
Advanced Metering Infrastructure (AMI)
SRF Hearing

August 12, 2014

The need for the Project:

Mid-Dakota Rural Water System, Inc. ("Mid-Dakota") serves drinking water to communities and rural users in central South Dakota. Mid-Dakota currently serves all or portions of thirteen counties in central South Dakota, encompassing a 7,000 square mile area east of the Missouri River. More than 5,700 rural water users (including livestock taps) and 26 community water systems are currently being served by the system. The system is comprised of a water intake, water treatment plant, raw water pipeline, 16 finished water storage tanks, 14 booster pump stations, control facilities, 600 miles of transmission pipeline and approximately 4,400 miles of distribution pipeline.

The Mid-Dakota system has a design maximum capacity of 13.5 million gallons of water per day (MGD). There is approximately 10 million gallons of storage on the system.

Mid-Dakota has completed a study and analysis for the purchase, installation and use of an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system and proposes to move forward with the implementation of an AMR/ AMI Project. Total estimated maximum cost of the Project is $2,600,000.

Alternatives that were evaluated (including probable costs of each):

The need for a better method of collecting and reporting meter readings at Mid-Dakota is highly desirable for both the Corporation and the Customers that receive service. The alternatives that were investigated consist primarily of varying methods and vendors for supplying and installing AMR/AMI Systems. Mid-Dakota commissioned a study looking at the technologies and costs associated with AMR/AMI Systems. The report was completed in February 2014, and provided an analysis of Sensus, IDT (Satellite), Mueller Systems, Metron-Farnier (cellular) and hybrid systems consisting of Sensus supplemented with IDT and Sensus supplemented with Metron-Farnier. As a result of the report, Mid-Dakota determined that the technologies presented are all viable, with the limiting factors being cost and coverage. Mid-Dakota will issue a Request for Proposal (RFP) to the various AMR/AMI suppliers and will establish minimum requirements in the RFP including an accounting of associated costs such as equipment purchase, installation and ongoing and recurring operational costs of the proposed system. Mid-Dakota will consider the RFPs based upon technology, equipment and operational costs, and other factors. Mid-Dakota will consider award of a Project based on these and other factors that, in the sole and exclusive decision of Mid-Dakota, are most advantageous to Mid-Dakota. This alternative should result in decreased costs of approximately $237,000.00 (see below) and will give the end user real-time access to the user's account and usage information via the internet.

Equipment and installation costs can vary greatly among the various equipment suppliers. Capabilities of the final installed product can vary greatly too. For purposes of completing an assistance application Mid-Dakota expects to incur expense for purchase and installation of an AMR:AMI System ranging from not less than $1,675,000 to no more than $2,600,000.

Revenue source pledged for repayment:

Mid-Dakota currently collects minimum bill revenues of $3,042,000 from existing customers for the purposes of debt service. After restructuring the loan agreement with the U.S. Bureau of Reclamation, the debt service payment for the Bureau loan was reduced to $2,077,808 per year. Annual payments on USDA-Rural Development loans are $519,720 and annual payments to SD Conservancy Sub-District are $152,721. Total current annual payments for loans made by Mid-Dakota are $2,750,258, leaving $291,895 in minimum bills revenue above what is necessary for debt service. Mid-Dakota has a current debt coverage ratio of 1.1. Mid-Dakota proposes to add another $2 - $3 per meter per month fee to cover the costs of the AMR/AMI Project, resulting in additional revenue of $136,800 - $205,00 per year.

The interest rate and term of the loan:

The most recent interest for a loan from SD Conservancy Sub-District is 3%. The term of the loan will be the maximum allowed by SD DENR and the SRF Program for a metering project - 15 years.

The affect of the proposed financing on the Users:

It is anticipated that current users will see their minimum monthly bill increase by approximately $2 - $3 per month.

Affidavit of Publication

STATE OF SOUTH DAKOTA)
)ss.
COUNTY OF HYDE)

MARY ANN MORFORD

of said county and state, being duly sworn, on her oath says: THE HIGHMORE HERALD is a weekly newspaper of general circulation, printed and published in HIGHMORE in said county and state by Mary Ann Morford and has been such a newspaper during the times hereinafter mentioned; that the said HIGHMORE HERALD 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 two hundred bona fide subscribers; that I the undersigned, am publisher of said newspaper, in charge of the advertising department thereof, and have personal knowledge of all the facts stated in this affidavit and that the advertisement entitled

Notice of Public Hearing

a printed copy of which is hereto attached, was printed and published in said newspaper for 1 successive issues, the first publication being made on July 31, 2014, and the last publication on July 31, 2014; that $ 13.44 being the full amount of the fee for 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 be paid to any other person whomsoever.

Mary Ann Morford
Mary Ann Morford, Publisher

Subscribed and sworn to before me this 8th day of August 2014

Mary Ethemlin
Notary Public, Hyde County, South Dakota

My Commission Expires July 8, 2016

NOTICE OF PUBLIC HEARING FOR THE MID-DAKOTA RURAL WATER SYSTEM AUTOMATIC METER READING SYSTEM

The Mid-Dakota Rural Water System (MDRWS) is proposing to install an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system to enhance service to existing users, provide better tracking of unaccounted for water and provide more efficiencies in System operation. The AMR: AMI Project is proposed for all 5,761 of Mid-Dakota's customers and will be available for new customers as they join the water system. It is anticipated that construction and installation will begin in the Spring of 2015 and concluding in the Spring/ Summer 2016. The MDRWS proposes to borrow up to $2,600,000 of Drinking Water State Revolving Funds at 3% for up to 30 years as financing for the project. MDRWS will hold a public hearing on the AMR/AMI Project at the Mid-Dakota Rural Water System Operations and Maintenance Center, 608 West 14th Street, Miller, South Dakota on August 12, 2014, commencing at 4:30 p.m. The purpose of the public hearing is to discuss the project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

FPNO 50 LPNO 50

AFFIDAVIT OF PUBLICATION
Times Enterprise

STATE OF SOUTH DAKOTA)
)SS
County of Beadle)

Michael G. Caviness of said county being first duly sworn, on oath, says that he is the publisher of ***Times Enterprise***, a weekly newspaper printed and published in Wessington, SD said County of Beadle 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 a bonafide circulation of at least two hundred copies weekly, and has been published within said County for fifty successive 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

Mid-Dakota to hold public hearing Aug 12

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:

7/30 20 14: _____ 20___

_____ 20___: _____ 20___

_____ 20___: _____ 20___

that the full amount of the fees for the publication of the annexed notice is

$ 12.46

Michael G. Caviness, Publisher

Subscribed and sworn to before me this 1 day of Aug, 2014.

Janet L. Rittelson, Notary Public
My Commission expires: 6-26-19

Mid-Dakota to hold public hearing August 12

Notice of Public Hearing For the Mid-Dakota Rural Water System Automatic Meter Reading System

The Mid-Dakota Rural Water System (MDRWS) is proposing to install an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system to enhance service to existing users, provide better tracking of unaccounted for water and provide more efficiencies in System operation. The AMR:AMI Project is proposed for all 5,761 of Mid-Dakota's customers and will be available for new customers as they join the water system. It is anticipated that construction and installation will begin in the Spring of 2015 and concluding in the Spring/Summer 2016. The MDRWS proposes to borrow up to $2,600,000 of Drinking Water State Revolving Funds at 3% for up to 30 years as financing for the project. The purpose of the public hearing is to discuss the 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 Mid-Dakota Rural Water System Operations & Maintenance Center, 608 West 14th Street, Miller, SD on August 12 shortly after the start of the meeting at 4:30 p.m.

Published on 7-30-2014 at the total approximate cost of $12.46

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 printed and 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 a bonafide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive 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

Mid-Dakota to hold public hear Aug 12

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 _____ successive week(s), on the day of each week on which said newspaper was regularly published, to wit:

7/30 20 14: _____ 20___

_____ 20___: _____ 20___

_____ 20___: _____ 20___

that the full amount of the fees for the publication of the annexed notice is

$ 12.46

Michael G. Caviness

Michael G. Caviness, Publisher

Subscribed and sworn to before me this 1 day of Aug 2014

Janet L. Kitterson, Notary Public
My Commission expires: 6-26-19

Mid-Dakota to hold public hearing August 12

Notice of Public Hearing For the Mid-Dakota Rural Water System Automatic Meter Reading System

The Mid-Dakota Rural Water System (MDRWS) is proposing to install an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system to enhance service to existing users, provide better tracking of unaccounted for water and provide more efficiencies in System operation. The AMR:AMI Project is proposed for all 5,761 of Mid-Dakota's customers and will be available for new customers as they join the water system. It is anticipated that construction and installation will begin in the Spring of 2015 and concluding in the Spring/Summer 2016. The MDRWS proposes to borrow up to $2,600,000 of Drinking Water State Revolving Funds at 3% for up to 30 years as financing for the project. The purpose of the public hearing is to discuss the 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 Mid-Dakota Rural Water System Operations & Maintenance Center, 608 West 14th Street, Miller, SD on August 12 shortly after the start of the meeting at 4:30 p.m.
Published 07-30-14 at a total approximate cost of $12.46.

PUBLIC NOTICE

Notice of Public Hearing
For the Mid-Dakota Rural
Water System
Automatic Meter Reading System

The Mid-Dakota Rural Water System (MDRWS) is proposing to install an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system to enhance service to existing users, provide better tracking of unaccounted for water and provide more efficiencies in System operation. The AMR:AMI Project is proposed for all 5,761 of Mid-Dakota's customers and will be available for new customers as they join the water system. It is anticipated that construction and installation will begin in the Spring of 2015 and concluding in the Spring/Summer 2016. The MDRWS proposes to borrow up to $2,600,000 of Drinking Water State Revolving Funds at 3% for up to 30 years as financing for the project. The purpose of the public hearing is to discuss the 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 Mid-Dakota Rural Water System Operations & Maintenance Center, 608 West 14th Street, Miller, SD on August 12 shortly after the start of the meeting at 4:30 p.m.

Published once at the total approximate cost of $13.29 (July 31, 2014).

AFFIDAVIT OF PUBLICATION
STATE OF SOUTH DAKOTA
COUNTY OF POTTER

DAWN MCCLURE, OF SAID COUNTY BEING FIRST DULY SWORN, ON OATH SAYS THAT SHE IS A REPRESENTATIVE OF *THE HOVEN REVIEW*, A WEEKLY NEWSPAPER PRINTED AND PUBLISHED IN HOVEN IN SAID COUNTY OF POTTER AND HAS FULL AND PERSONAL KNOWLEDGE OF ALL THE FACTS HEREIN STATE: THAT SAID NEWSPAPER IS A LEGAL NEWSPAPER AND HAS A BONIFIDE CIRCULATION OF AT LEAST TWO HUNDRED COPIES WEEKLY, AND HAS BEEN PUBLISHED WITHIN SAID COUNTY FOR FIFTY-TWO SUCCESSIVE WEEKS PRIOR TO THE PUBLICATION NOTICE HEREIN MENTIONED, AND WAS AND IS PRINTED WHOLLY OR IN PART IN AN OFFICE MAINTAINED AT SAID PLACE OF PUBLICATION: that the Mid Dakota Rural Water System

A printed copy of which, taken from the paper in which same was published, is attached to this sheet, and is made in part of this Affidavit, was published in said newspaper at least once a week, on the day of each week on which the newspaper was regularly published, to wit: 1 week - July 31, 2014

35 lines × 0.391 =

That the full amount of the fee for the publication of the annex notice is: $13.69

Dawn McClure

Subscribed and sworn to for me this
31 day of July, 2014.

Trish Giese
Notary Public
Potter County, South Dakota
My commission expires May 15, 2019.

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA}

§

COUNTY OF BROWN}

Mary Bast being duly sworn, on his/her oath says: That the AMERICAN NEWS is a daily newspaper of general circulation, printed and published in Aberdeen, Brown County, South Dakota, by the Aberdeen News Company, a corporation, and has been such a newspaper during the times hereinafter mentioned; That affiant is an employee and principal clerk of said publisher and has personal knowledge of all facts stated in this affidavit; That the advertisement headed:

Legal # 1818705

a printed copy of which is hereunto attached, was printed and published in the regular and entire issue of said newspaper, and not in a supplement thereof, once each week for 2 successive weeks.

The first publication being made on the 30 day of July 2014
The second publication being made on the 6 day of Aug, 2014
The third publication being made on the _____ day of _____, 2014
The fourth publication being made on the _____ day of _____ 2014
The fifth publication being made on the _____ day of _____, 2014
The sixth publication being made on the _____ day of _____,2014

That said newspaper is a legal newspaper published five days or more each week; with a bona fide circulation of more than two hundred copies daily; published in the English language within the said county of Brown for more than one year prior to the first publication of said notice; and printed in whole in an office maintained at the place of publication of said newspaper; That the whole amount of the fee paid for the publication of the annexed notice is $ 47.65, which insures solely to the benefit of said publisher; That no agreement or understanding for a division thereof had been made with any other person; and That no part thereof has been agreed to be paid to any person whomsoever.

Mary Bast

Subscribed and sworn to before me this 6 day of Aug, 2014

Daily Circulation 13500

Pri Sell Notary Public, Brown County, SD.

SEAL

My commission expires March 20, 2019.

(No. 1818705)
(July 30, Aug. 6, 2014 - 2T)

Notice of Public Hearing
For the Mid-Dakota Rural Water System
Automatic Meter Reading System

The Mid-Dakota Rural Water System (MDRWS) is proposing to install an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system to enhance service to existing users, provide better tracking of unaccounted for water and provide more efficiencies in System operation. The AMR:AMI Project is proposed for all 5,761 of Mid-Dakota's customers and will be available for new customers as they join the water system. It is anticipated that construction and installation will begin in the Spring of 2015 and concluding in the Spring/Summer 2016. The MDRWS proposes to borrow up to $2,600,000 of Drinking Water State Revolving Funds at 3% for up to 30 years as financing for the project. MDRWS will hold on a public hearing on the AMR/AMI Project at the Mid-Dakota Rural Water System Operations & Maintenance Center, 608 West 14th Street, Miller, SD on August 12, 2014, commencing at 4:30 p.m. The purpose of the public hearing is to discuss the project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.
Published twice at an approximate total cost of $47.65

PRINTER'S AFFIDAVIT

STATE OF SOUTH DAKOTA,
COUNTY OF BEADLE: ss

I, ELDON JACOBS, being duly sworn on oath say that the PLAINSMAN is a daily paper published at Huron, Beadle County, South Dakota, and that said newspaper has a bona fide circulation of at least 250 copies daily; that said newspaper has been published within said county for fifty-two consecutive weeks immediately prior to this date, that said newspaper is printed in whole or in part, in an office maintained at said place of publication; that I am Legal Advertising Coordinator of said newspaper and know the facts herein state. The annexed notice headed:

MID DAKOTA RURAL WATER – AUTO METER READING – PO 8623

was published for one day, in said newspaper, and not in any supplement of the said newspaper, the publication was of the **29TH** day **JULY 2014.** That the full amount of the fee charged for publishing is: **NINETEEN & 50/00** dollars insures to the benefit of the publisher of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whom so ever.

Eldon Jacobs

Subscribed and sworn to me before this **29TH** day of **JULY 2014.**

Notary Public, South Dakota

My term expires 10/25/2017
Legal #1382

F.P. 07-29-14

Notice of Public Hearing For the Mid-Dakota Rural Water System Automatic Meter Reading System

The Mid-Dakota Rural Water System (MDRWS) is proposing to install an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system to enhance service to existing users, provide better tracking of unaccounted for water and provide more efficiencies in System operation. The AMR:AMI Project is proposed for all 5,761 of Mid-Dakota's customers and will be available for new customers as they join the water system. It is anticipated that construction and installation will begin in the Spring of 2015 and concluding in the Spring/Summer 2016. The MDRWS proposes to borrow up to $2,600,000 of Drinking Water State Revolving Funds at 3% for up to 30 years as financing for the project. MDRWS will hold on a public hearing on the AMR/AMI Project at the Mid-Dakota Rural Water System Operations & Maintenance Center, 608 West 14th Street, Miller, SD on August 12, 2014, commencing at 4:30 p.m. The purpose of the public hearing is to discuss the project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

No. 1382 (adv.)

Published once at the total approximate cost of $18.27.

Affidavit of Publication

STATE OF SOUTH DAKOTA,
COUNTY OF POTTER, ss.

I, Roberta Atkinson, being first duly sworn, on oath says, that he is the bookkeeper of the POTTER COUNTY NEWS a weekly newspaper published in Gettysburg, County of Potter, 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-two successive weeks next prior to the publication of the notice herein mentioned; that the

Notice of Public Hearing

Mid Dakota Water PO #8620

a printed copy of which, taken from the paper in which 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 one successive week(s), on the day of each week on which said newspaper was regularly published to-wit:

July 31

That the full amount of the fees for the publication of the annexed notice is $13.97

Roberta Atkinson

Subscribed and sworn to before me this 31st day of July, 2014

Kelsey Majeske

Kelsey Majeske, Notary Public
State of South Dakota
My commission expires September, 2018

KELSEY MAJESKE
NOTARY PUBLIC
SOUTH DAKOTA
SEAL SEAL

Notice of public hearing

Notice of Public Hearing
For the Mid-Dakota Rural
Water System
Automatic Meter Reading System

The Mid-Dakota Rural Water System (MDRWS) is proposing to install an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system to enhance service to existing users, provide better tracking of unaccounted for water and provide more efficiencies in System operation. The AMR:AMI Project is proposed for all 5,761 of Mid-Dakota's customers and will be available for new customers as they join the water system. It is anticipated that construction and installation will begin in the Spring of 2015 and concluding in the Spring/Summer 2016. The MDRWS proposes to borrow up to $2,600,000 of Drinking Water State Revolving Funds at 3% for up to 30 years as financing for the project. MDRWS will hold on a public hearing on the AMR/AMI Project at the Mid-Dakota Rural Water System Operations & Maintenance Center, 608 West 14th Street, Miller, SD on August 12, 2014, commencing at 4:30 p.m. The purpose of the public hearing is to discuss the project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

Published once at the total approximate cost of $13.97

-073114

Capital Journal

AFFIDAVIT OF PUBLICATION

State of South Dakota, County of Hughes

Jackie Odom of said county, being, first duly sworn, on oath, says: That he/she is the publisher or an employee of the publisher of the Capital Journal, a daily newspaper published in the City of Pierre in said County of Hughes and State of South Dakota; that he/she has full and personal knowledge of the facts herein stated, that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive, that said newspaper has been published within the said County of Hughes and State of South Dakota, for at least one year next prior to the first publication of the attached public notice, and that the legal/display advertisement headed Notice of Public Hearing For the Mid-Dakota Rural Water System Automatic Meter Reading System a printed copy of which, taken from the paper in which the same was published, and which is hereto attached and made a part of this affidavit, was published in said newspaper for one successive week(s) to wit:

Post 8615

July 30	2014		20
	20		20
	20		20
	20		20
	20		20

That the full amount of the fee charged for the publication of the attached public notice inures to the sole benefit of the publisher or publishers; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are: $15.58.

Signed: Jackie Odom

subscribed and sworn to before me this 4 day of August 2014

Mary L Baker

Notary Public in and for the County of Hughes, South Dakota.
My Commission expires 2-19, 2015.

800 Public Notice

INV 17284 VALVE; PAINT STORE 66.00, INV 178370 PAINT; JESSICA PAULSEN, 38.00. COURT REPORTING; PENNINGTON CO SHERIFF, 1,728.00, MARCH 2014 PRISONER TRANSPORT; PIERRE CITY, 55.76, UTILITIES; POLLARD & LARSON LLP, 180.00, MI C.S.; PRYNTCOMM, 198.00, INV 50696 PAPER; REDWOOD TOXICOLOGY LAB, 88.88, ACCT 107905 DRUG TESTS; REDWOOD TOXICOLOGY LAB, 99.00, TESTING ACCT 119828, WADE REINERS, 3,750.00, SUPP PUBLIC DEFENDER; DOUG RIPLEY, 1,608.33, CONTRACT WORK; RIVER CITIES TRANSIT, 2,916.65, MONTHLY ALLOCATION; MARK ROWEN, 25.00, SPRING CONF REG; RUNNINGS SUPPLY, 150.99, SUPPLIES; SCHMIDT SCHROYER MORENO LEE & 350.25, MI BOARD #21991; SCHREIBER LAW FIRM, 13,638.93. PUBLIC DEFENDER; BD ACHIEVE, 120.00, MI - INV 25023; SECRETARY OF STATE, 30.00, E.RHINHART NOTARY; SERVALL UNIFORM & LINEN CO, 628.47, RUGS & COVERALLS, SHANES PHARMACY, 587.69, INMATE MEDICATIONS; SHEPHERD REPORTING, 80.00, MI - C.M., A.A.; SIMPLEX GRINNELL, 1,409.14, FIRE ALARM #76803832; SMALL ENGINE HOUSE, 73.25, INV 17368 SUPPLIES, SOUTH DAKOTA ONE CALL, 8.66, INV SD14-0572; SPRINT, 9.41, LONG DISTANCE; SUMMASTER AUTO GLASS, 75.00, INV 12964 REPAIRS; SUTLEYS TOWN & RANCH MARKET, 9.33, SUPPLIES; KAREN SWANDA, 22.50, MI - A.A.; TEAM LAB CHEMICAL CORP, 535.50, ROAD MATERIALS; THOMSON REUTERS WEST PAYMENT, 286.13, INFORMATION CHARGES; TMA STORES, 994.43, REPAIRS; USPS, 49.00, STAMPS; W W TIRE, 2,014.70, TIRE REPAIRS ACCT 3984; MONA WEIGER, 22.80, COURT REPORTING; YANKTON COUNTY, 483.50, MI - C.S., A.K., C.M., A.A. All voted aye. Motion passed.

Moved by Abernathy and seconded by Inman to adjourn the meeting until 5:30 PM on Monday May 5, 2014. All voted aye. Motion passed.

Tom Tveit,
Chairman
Hughes County
Commission

ATTEST:

Jane Naylor,
Finance Officer

Published once at the total approximate cost of $114.14.

800 Public Notice

SNAXLP 13719
tidy 7/30

COMMISSIONER PROCEEDINGS
HUGHES COUNTY
SOUTH DAKOTA
MAY 5, 2014

Chairman Tom Tveit called the Monday May 5, 2014 meeting of the Hughes County Board of Commissioners to order at 5:30 PM with members Norm Weaver, Jim Hardwick, Roger Inman and Bill M. Abernathy present. County Manager Kevin Hipple, Director of Equalization Roger Fuller, Human Resource officer Chuck Humphrey and Sheriff Mike Leidholt were also present. The meeting began with a prayer by Pastor John Fehr and the Pledge of Allegiance.

AGENDA: Moved by Abernathy and seconded by Inman to approve the agenda. All voted aye. Motion passed.

MINUTES: Moved by Inman and seconded Weaver to approve the minutes of the April 21, 2014 Commission meeting. All voted aye. Motion passed.

Moved by Hardwick and seconded by Weaver to approve the April 21, 2014 minutes for the Board of Equalization and Consolidated Board of Equalization. All voted aye. Motion passed.

MALT BEVERAGE LICENSES: A public hearing was held at 5:35 pm for a new application for Broken Arrow Farms for a hunting preserve liquor license. No-body appeared to testify. Moved by Abernathy and seconded by Inman to approve and authorize the chairman to sign the application. All voted aye. Motion passed.

Moved by Weaver and seconded by Abernathy approve and authorize the chairman to sign the the following renewal applications for malt beverage licenses: Malt Beverage off-sale: Spring Creek Ventures LLC - 28229 Spring Creek Plaza, Pierre, Malt Beverage on-off sale: Whiskey River Outpost LLC - 4800 SD Hwy 34, Pierre, Grey Goose Store - 28880 Merry Rd., Pierre, Kropslin Ag Center, Inc. - 19865 US Hwy 34, Pierre, Tinker Kennels Inc. - 3005 Karen Ct., Pierre, Malt Beverage on-off sale & SD Farm Wine: Triple M Travel Plaza - 29265 E. Hwy 14, Pierre, Elzkorn Goose Camp - 21444 Catfish Pl., Pierre. All voted aye. Motion passed.

JAIL BOND REFUNDING: The Commission acknowledged that Jail Bond Refinance Resolutions 2012-18 and 2013-84 are still in effect and that they still intend to refinance the jail bonds so long as they can achieve at least a $400,000 savings.

EQUALIZATION AUDIT RESULTS: Commission acknowledged Director of Equalization for a good audit report dated April 15, 2014.

HOMESTEAD EXEMPTION APPLICATION: Moved by Hardwick and seconded Abernathy to approve the Homestead Exemption for B.T. for Wells Second Addition Block Lot 20 & S16' Lot21. Hardwick, Abernathy, and Inman voted aye. Weaver voted nay. Motion passed.

ADD PROPERTY TO TAX ROLLS: Director of Equalization Roger Fuller requested adding parcel #9529 to the assessment rolls at value of $10,000 per year for the years 2012, 2013 and 2014. The property was inoperably moved from the tax rolls. Fuller indicated property owner is aware of this and agrees to the assessment. Moved by Weaver and seconded by Abernathy to add the N1/2 SE W of Brookstone Addition and N of Highlands Ridge Block 5 Sec 27 111-79, to the tax rolls. All voted aye. Motion passed.

PERSONNEL: Moved by Weaver and seconded by Inman to approve hiring Cougar Sanchez as a seasonal employee for the Highway Department at Pay Grade 14 $15.15 per hour beginning May 12, 2014; contingent on passing the commercial certification pesticide applicator test. All voted aye. Motion passed.

BUDGET TRANSFERS: Moved by Abernathy and seconded by Inman to approve transfer of $45,000 from General Fund to the Emergency Management Fund; $350,000 from General Fund to the Road & Bridge Fund; $14,575 From General Fund to Rural Fire Fund; $355,346.25 from General Fund to the Debt Service Fund, and $9287.45 from Assigned Govt Building Fund to Unassigned General Fund Balance – for the chip sealing of the parking lot and driveway of the jail.

FINANCIAL SURPLUS ANALYSIS: The following analysis should be completed as of March 31st and September 30th of each year and should be published in the minutes of the governing board and filed with the Department of Legislative Audit.

March 31, 2014 - Assets: Cash, $1,932,203.38; Taxes Receivable, Current, $3,818,195.47; Taxes Receivable, Prior Year's, $76,261.07. Total Assets: $5,826,660.42. Liabilities and Equity: Deferred Revenue, $3,894,456.34; Assigned to next year's appropriations, $1,017,308.00; Committed to Building Imp. Fund, $595,117.45; Unassigned, $219,778.42.

800 Public Notice

Total Liabilities and Equity: $5,826,660.42. Following Year General Fund Budget, $5,818,196.00. The unassigned fund balance divided by the following year General Fund budget results in the fund balance percentage 2.46%.

September 30, 2013 - Assets: Cash, $2,173,128; Taxes Receivable, Current, $1,842,412; Taxes Receivable, Prior Years, $51,880. Total Assets: $4,067,399. Liabilities and Equity: Deferred Revenue, $1,894,272; Assigned to next year's appropriations, $1,600,837; Committed to Government Building Improvements, $572,289; Unassigned, $0. Total Liabilities and Equity: $4,067,399.

Following Year General Fund Budget, $9,818,190. The unassigned fund balance divided by the following year General Fund budget results in the fund balance percentage-0%.

CLAIMS: Moved by Abernathy and seconded by Inman to approve the following claims:

AT & T MOBILITY, 920.20, CELL PHONES; AUTOMATIC BUILDING CONTROLS, 420.00, INV 172092, 206765 TEST / MON; AVERA ST MARYS HEALTH CARE, 2,133.75, CRISIS ROOM 1.8, D.P.; BAUM HYDRAULICS, 254.57, REPAIRS; BLACK BOOK, 100.00, ACCT 275453 BOOK; BUREAU OF ADMINISTRATION, 725.73, POSTAGE & ACCESS; BUTLER MACHINERY CO, 722.14, REPAIRS & FILTERS; C & R SUPPLY, 533.27, INV 1126741, 1122631 REPAIRS; CAPITAL AREA REFUSE, 549.90, GARBAGE ACCT 3077; CAPITAL AREA COUNSELING, 3,000.00, TEEN COURT SUPPORT; CENTRAL CULVERT SUPPLY, 3,331.00, CULVERTS INV 184, 156; CENTURY BUSINESS PRODUCTS INC, 105.85, INV 221358; CENTURY BUSINESS LEASING, 54.27, INV 530102; CENTURYLINK, 52.46, PHONE; DENISE CODY, 15.00, MI - J.W.; COLE PAPERS INC, 1,247.50, INV 6967811, 8966566; COMM TECH INC, 156.28, INV 6219, 6044; COMMUNICATIONS CENTER, 135.75, INV 601911 SPEAKERS; DRIVERS LICENSE GUIDE, 29.95, INV 659500 DL GUIDE; MARV EKEREN, 15.00, MI - J.W.; ELECTION SYSTEMS & SOFTWARE, 6,060.00, ELECTION INV 886003; ROBERT FINES, 248.44, REIMBURSEMENT TRAINING; FRIMAN OIL & GAS CO INC, 426.00, PROPANE INV 11626; FT PIERRE CHAMBER, 74.19, MOP BUCKET EXPO; FT

800 Public Notice

PIERRE CITY, 1,526.17, EXPO UTILITIES / COPIER LEASE; CHRISTOPHER GRANADOS, 20.00, WITNESS; GROSSENBURG IMPLEMENT, 284.49, REPAIRS & SUPPLIES; HOGENS HARDWARE HANK, 34.05, SUPPLIES; HORN LAW OFFICE, 160.00, MI - C.M. AKA C.R.S.; HUGHES STANLEY CO ACHIEVEMENT, 5,800.00, ACHEVEMENT DAY EXPENSES; JC OFFICE SUPPLIES, 395.59, SUPPLIES; SKYE LACHER, 20.00, WITNESS; LAWSON PRODUCTS INC, 76.99, SUPPLIES; LEWIS DRUG, 27.25, PICTURES #11682 ACCT 3872; LUCY LEWNO, 150.49, MI - J.W.; LINCOLN COUNTY 142.82, MI - A.P.; LYNAYA LONGCROW, 20.00, WITNESS; MID DAKOTA RURAL WATER SYSTEM, 3,032.70, UTILITIES; MIDCONTINENT COMMUNICATIONS, 206.30, UTILITIES; MIDWEST COOP, 28,772.50, DBS-ID3312; MIDWEST TIRE & MUFFLER INC, 49.93, OIL CHANGE INV 23730; MONTANA DAKOTA UTILITIES, 994.85, UTILITIES; JANE NAYLOR, 18.48, SPINDLES / ELECTION SUP-PLIES; NESDCAP, 5,000.00, CARE OF THE POOR ALLOCATION; NORTHWESTERN ENERGY, 271.50, UTILITIES; DARLIS D PERRY, 540.00, BAC; PIERRE AUTO PARTS, 700.00, REPAIRS INV 659724; PIERRE CITY, 11,009.30, UTIL. SEAL DRIVEWAY; PRYNTCOMM, 51387; RELIABLE, 235.30, SUPPLIES; ROBINS WATER CONDITIONING INC, 211.45, SALT / WATER; ROCKMOUNT RESEARCH & ALLOYS, 671.46, INV 1196495 SUPPLY & REPAIR; RUNNINGS SUPPLY, 916.05, SUPPLIES; SDACC, 3,566.87, INV 9222 RENTAL; TESSIERS INC, 8,797.65, INV 918007R 3RD FL AC; TMA PIERRE, 404.36, INV 23537 REPAIRS; TRACTOR SALVAGE & WELDING, 2,370.60, INV 19716, 19715 SUPPLIES; VENTURE COMMUNICATIONS, 94.40, PHONES; W W TIRE, 142.95, ACCT 3984 TIRE REPAIRS; WALMART COMMUNITY, 86.00, FRIDGE - COMMISSION ROOM; WALMART COMMUNITY, 38.84, SUPPLIES, MONA WEIGER, 14.80, COURT REPORTING B.M.; WHEELHOUSE PLUMBING INC, 4.61, INV 13757 SUPPLIES; YANKTON CO SHERIFF, 25.00, MI - J.W. All voted aye. Motion passed.

EXECUTIVE SESSION: Moved by Ab-

800 Public Notice

ernathy and seconded by Weaver to go into executive session for Personnel per SDCL 1-25-2(1). Moved by Weaver and seconded by Abernathy to go out of executive session.

The following salaries and benefits were paid by department in the month of April 2014: Commissioners, 21,308.42; Auditor, 15,066.99; Treasurer, 18,505.00; States Attorney, 25,840.79; Govt Buildings, 8,926.14; Equalization, 9,502.25; Register of Deeds, 8,341.87; Veterans Service, 6957.09; Sheriff, 34,712.90; Jail, 150,002.29; Coroner, 534.25; Juvenile Services, 48,075.24; Extension, 4,262.25; Planning & Zoning; 3,160.02; Road & Bridge, 58,662.35; Emergency Management, 10,518.61 Total payroll, $425,300.50

Auditor's Account with the Treasurer April 30, 2014: Cash on hand-3,936.36, Checks in the Treasurer's possession less than three days, 718,963.80, Cash items, 13.50, Demand deposit Bank-West, 19,263.79; American State Bank, 8,808,385.21; Bad Checks Outstanding, 1,670.92; Investments, 2,539,037.72. Total Cash Assets, $12,092,171.30.

Register of Deeds Fees Collected in April 2014: Recording Fees, 6,250.00; Transfer Fees, 4,849.50; Copy Fees, 283.00; Credit Card Fees, 105.00; and Vitals, 3,025.00. Total, $14,514.50

Moved by Abernathy and seconded by Inman to adjourn the meeting until Monday at 5:30 PM on May 19, 2014. All voted aye. Motion passed.

Tom Tveit,
Chairman
Hughes County
Commission

ATTEST:

Jane Naylor,
Finance Officer
Hughes County,
South Dakota

Published once at the total approximate cost of $137.34.

800 Public Notice

SNAXLP 13720
tidy 7/30

STANLEY COUNTY COMMISSION MINUTES
JULY 24, 2014

The special meeting of the Stanley County Commission was called to order at 9:12 p.m. (CDT) by Chairman Brian Scott with Commissioners Scott Deal, Sonny Harrowa and Dana Iversen present. Commissioner Dennis Booth was absent. Others in attendance were States Attorney Tom P. Maher, Register of Deeds Revelly Stoesser, Treasurer Peggy Dougherty, Director of Equalization Ron Nagle, Fairgrounds Manager Brenton Crank, Highway Superintendent Kelly McCollam, and Deputy Auditor Philena Edwards. Meeting commenced with the Pledge of Allegiance.

AGENDA: Motion by Harrowa, second by Deal to approve the Agenda. All voted Yea. Motion Carried.

Motion by Iversen, second by Deal to go into Executive Session for Personnel, SDCL 1-25-2(1) at 9:14 p.m. (CDT). All voted Yea. Motion Carried.

Motion by Iversen, second by Harrowa to end Executive Session at 9:20 p.m. (CDT). All voted Yea. Motion Carried. It was noticed by Iversen that at previous meeting discussions about fixing the concession area of the Schomer Barn was never put to a motion.

Motion by Deal, second by Iversen to fix the concession area of the Schomer Barn. All voted Yea. Motion Carried.

Motion by Iversen, second by Harrowa to reconvene into Executive Session for Personnel, SDCL 1-25-2(1) at 9:42 p.m. (CDT). All voted Yea. Motion carried.

Motion by Harrowa, second by Deal to end Executive Session at 7:00 p.m. (CDT). All voted Yea. Motion Carried.

Motion by Harrowa, second by Deal to adjourn. Motion carried.

ADJOURN: Motion by Harrowa, second by Deal to adjourn at 7:00 p.m. (CDT). All voted Yea. Motion Carried.

BOARD OF
STANLEY COUNTY
COMMISSIONERS
Brian Scott,
Chairman

ATTEST:
(SEAL)

Philena Edwards,
Deputy Auditor

Published once at the total approximate cost of $24.92.

800 Public Notice

SNAXLP 13715
tidy 7/30

Notice of Public Hearing For the Mid-Dakota Rural Water System Automatic Meter Reading System

The Mid-Dakota Rural Water System (MDRWS) is proposing to install an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system to enhance service to existing users, provide better tracking of unaccounted for water and provide more efficiencies in System operation. The AMR/AMI Project is proposed for all 5,701 of Mid-Dakota's customers and will be available for new customers as they join the water system. It is anticipated that construction and installation will begin in the Spring of 2015 and conclude in the Spring/Summer 2016. The MDRWS proposes to borrow up to $2,600,000 of Drinking Water State Revolving Funds at 3% for up to 30 years as financing for the project. MDRWS will hold on a public hearing on the AMR/AMI Project at the Mid-Dakota Rural Water System Operations & Maintenance Center, 608 West 14th Street, Miller, SD on August 12, 2014, commencing at 4:30 p.m. The purpose of the public hearing is to discuss the project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

800 Public Notice

SNAXLP 13716
2tdly 7/30, 8/6

Mid-Dakota Rural Water System, Inc. Notice of Vacancy on the Board of Directors

Mid-Dakota Rural Water System, Inc. hereby gives notice to its membership that the following seats upon the Board of Directors will be up for election at its Annual Meeting on October 15, 2014:

There is one expired term in Rural Director District area #2, consisting of the following: All of Hughes County except that portion of the Highmore West service area lying in Hughes County.

There is one vacancy in Rural Director District area #3, consisting of the following: All of Spink County, those portions of the Reisic Lake, Highmore Central, Mac's Corner, Collins Slough, Cottonwood Lake and Redfield service areas lying in Hand County, and the Staum Dam service area in Beadle County.

There is one expired term in Rural Director District area #5, consisting of the following: All of Kingsbury County; that portion of the Highmore East service area lying in Hand County; those portions of the Highmore East, Pearl Creek and Wolsey service areas lying in Beadle County.

There is one expired term for a City of Huron Director.

(Note: Contact Mid-Dakota if you question whether or not you are in District #2, District #3 or District #5)

Rural director nominations must be made by petition. Petitions must be filed with Mid-Dakota not later than 4:00 p.m. on September 15, 2014.

Nominations for City of Huron director will be made by the City of Huron. A nominating resolution from the City of Huron shall be filed with Mid-Dakota's office not later than 4:00 p.m. on October 5, 2014.

For more information, contact the Mid-Dakota Rural Water System, Inc. office at 605-853-3159 or 1-800-439-3079.

STOP!

This could be your ad getting noticed. 224-7301

GET NOTICED

Affidavit of Publication

STATE OF SOUTH DAKOTA, COUNTY OF JERAULD, SS.

Karen Wenzel

being first duly sworn, deposes and says: that he/she is a resident of the County of Jerauld and State of South Dakota; and the True Dakotan is a weekly newspaper of general circulation, published in Wessington Springs, in said county by J. Craig and Dennis P. Wenzel; and is now and has been such newspaper continuously, during all the times hereafter mentioned; that the affiant is, and was during all the times hereafter mentioned,, the business manager of said newspaper, in charge of the advertising department thereof; and has personal knowledge of all facts stated in this affidavit:

And that the notice and advertisement headed

Mid Dakota Public Hearing

a printed copy of which is hereunto attached and made a part hereof, was printed and published in said newspaper in 1 successive issues. That the first publication of said notice in said newspaper aforesaid was on Tuesday, the 29 day of July 2014; and that the succeeding publications were:

On Tuesday, the _____ day of _____, 20____

On Tuesday, the _____ day of _____, 20____

On Tuesday, the _____ day of _____, 20____

That the fee charged for the printing and publishing of said notice and advertisement in said newspaper aforesaid, was 39 dollars and 00 cents, and for this affidavit; and that said fee for printing and publishing said notice and advertisement in said newspaper has been full paid; that the full amount of fees charged for the publishing of the said attached and annexed notice and advertisement inures to the benefit of the publisher of the said True Dakotan; and no agreement or understanding for the division thereof has been made with any person whomsoever; that the said newspaper is a legal newspaper as provided by law.

Signed: Karen Wenzel

Subscribed and sworn to before me, this 5 day of Aug 2014.

Penny Wenzel Notary SEAL Public South Dakota

Penny Wenzel Notary Public in and for Jerauld County, South Dakota

AFFIDAVIT EX REL PUBLICATIONS FEES
STATE OF SOUTH DAKOTA, COUNTY OF JERAULD, SS.

_____ being first duly sworn on his oath, says that he is one of the authorized attorneys of the _____ In the action mentioned and described in the annexed notice; that the affiant directed the publication of the annexed notice; that no agreement or understanding for any division of the fees therefore has been made with any person whomsoever; and that no part therefore has been refunded or rebated by the party publishing said notice.

Subscribed and sworn to before me this _____ day of _____, 20____

_____

Notary Public, Jerauld County, South Dakota

Notice of Public Hearing
For the Mid-Dakota Rural Water System Automatic Meter Reading System

The Mid-Dakota Rural Water System (MDRWS) is proposing to install an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) system to enhance service to existing users, provide better tracking of unaccounted for water and provide more efficiencies in System operation. The AMR/AMI Project is proposed for all 5,761 of Mid-Dakota's customers and will be available for new customers as they join the water system. It is anticipated that construction and installation will begin in the Spring of 2015 and concluding in the Spring/Summer 2016. The MDRWS proposes to borrow up to $2,600,000 of Drinking Water State Revolving Funds at 3% for up to 30 years as financing for the project. MDRWS will hold on a public hearing on the AMR/AMI Project at the Mid-Dakota Rural Water System Operations & Maintenance Center, 608 West 14th Street, Miller, SD on August 12, 2014, commencing at 4:30 p.m. The purpose of the public hearing is to discuss the project, the proposed financing, and the source of repayment for the loan. The public is invited to attend and comment on the project.

Published once at a total approx. cost of $39.00
c-44

RECEIVED
AUG - 7 2014

August 6, 2014

Mr. Kurt Pfeifle
General Manager – CEO
Mid Dakota Rural Water System
608 West 14th Street
P.O. Box 318
Miller, South Dakota 57362

RE: Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) System

Dear Mr. Pfeifle:

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

Quality On Tap!

MID DAKOTA RURAL WATER SYSTEM

BOARD OF DIRECTORS
RICK BENSON
Wolsey
Rural 5

LENNIS FAGERHAUG
Wessington Springs
Rural 4

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Highmore
Municipal

ROBERT JONES
Huron
Municipal

JAMES MCGILLYREY
Wolsey
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JEFFREY MCGIRR
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Municipal

STEVE ROBBENHOLT
Gettysburg
Rural 1

GARY STRASBURG
Pockham
Rural 3

BRUCE VENNER
Blunt
Rural 2

608 W. 14th Street
PO Box 318
Miller, SD 57362

PH 605-853-3799
TF 1-800-439-3079
FX 605-853-3245

www.mdrws.com
office@mdrws.com

KURT PFEIFLE
General Manager

Our mission is...
To enhance quality of life and promote economic development with high quality water and excellent service

July 25, 2014

U.S. Department of Agriculture
Natural Resources Conservation Service
200 Fourth Street SW
Huron, SD 57350

To whom it may concern,

Mid-Dakota Rural Water System, Inc. is a public utility whose mission is to provide potable drinking water to areas in east-central South Dakota. The Corporation is located in Miller, South Dakota and the service area encompasses all or portions of 13 Counties in a 7,000 square mile area.

Mid-Dakota is applying for State Revolving Fund (SRF) assistance, the purpose of the funding will be to purchase, construct and implement an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) System throughout the Mid-Dakota service area. A "Facilities Plan" providing details about the Project along with maps depicting the coverage area accompanies this letter.

Pursuant to sections 8.3.18 and 8.3.19 of the South Dakota State Water Planning process, certain agencies must be given the opportunity to review and comment on the proposed project. Your entity is among those agencies that must be contacted and given the opportunity to review. This letter and the accompanying documents represent your opportunity to review and comment on the proposed project.

Time is of the essence; Mid-Dakota must have the prerequisites (including agency comment) for the SRF application complete and comments addressed, prior to submittal of a SRF application. Only after the review and comment period has passed will the SD Board of Water & Natural Resources issue an environment review, which then must also be published in local newspapers. Mid-Dakota therefore, respectfully requests a judicious but concise review and comment period, in order to meet the chronological requirements of the application. It is also important that Mid-Dakota receive a positive response from you as proof that the review opportunity was provided.

If you have questions, need more information or to return your review acknowledgment and/or comments, you may contact Mid-Dakota by way of mail, email or telephone per the information provided on this letterhead.

Sincerely,

MID-DAKOTA RURAL WATER SYSTEM, INC.

Kurt Pfeifle, General Manager – CEO

Enclosures:

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MID DAKOTA RURAL WATER SYSTEM

RECEIVED
JUL 28 2014
U.S. FISH & WILDLIFE SERVICE

July 25, 2014

RECEIVED
AUG - 1 2014

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Wolsey
Municipal

JEFFREY MCGIRR
Huron
Municipal

STEVE ROBBENNOLT
Gettysburg
Rural 1

GARY STRASBURG
Rockham
Rural 3

BRUCE VENNER
Pierre
Rural 2

U.S. Department of the Interior
Fish & Wildlife Service
420 South Garfield Avenue
Pierre, SD 57501

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Sincerely,

MID-DAKOTA RURAL WATER SYSTEM, INC.

Kurt Pfeifle, General Manager – CEO

Enclosures:

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.

7/30/14
Date

Scott Larson
Field Supervisor

608 W. 14th Street
PO Box 318
Miller, SD 57362

PH: 605-853-3159
TF: 1-800-439-3079
FX: 605-853-3245

www.mdrws.com
office@mdrws.com

KURT PFEIFLE
General Manager

Our mission is...
To enhance quality of life and promote economic development, with high quality water and excellent service.

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MID DAKOTA RURAL WATER SYSTEM

July 25, 2014

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GARY STRASBURG
Redfield
Rural 3

BRUCE VERNER
Pierre
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Fish & Wildlife Service
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MID-DAKOTA RURAL WATER SYSTEM, INC.

Kurt Pfeifle, General Manager – CEO

Enclosures:

608 W 14th Street
PO Box 318
Miller, SD 57362

PH 605 853 0159
TF 1 800 439 3079
FX 605 853 3245

www.mdrws.com
office@mdrws.com

KURT PFEIFLE
General Manager

Our mission is...
To enhance quality of life and promote economic development with high quality water and excellent service

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

RECEIVED
JUL 30 2014

July 28, 2014

Mr. Kurt Pfeifle
Mid Dakota Rural Water System
608 W. 14th Street
PO Box 318
Miller, SD 57362

RE: Automatic Meter Reading & Advanced Metering Infrastructure System Installation

Dear Mr. Pfeifle:

The South Dakota Department of Game, Fish and Parks, Division of Wildlife, has reviewed the above referenced project involving the purchase, construction and implementation of Automatic Meter Reading and Advanced Metering Infrastructure systems to service the Mid-Dakota rural water system area.

At this time, the project as described will have no impacts on fish and wildlife resources. If you have any questions, please contact me at 605.773.6208.

Sincerely,

Leslie Murphy

Leslie Murphy
Senior Biologist

Quality On Tap!

MID DAKOTA RURAL WATER SYSTEM

July 25, 2014

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Rural 2

608 W. 14th Street
PO Box 318
Miller, SD 57362

PH 605 853 3459
TF 1-800-439-3073
FX 605 853 3245

www.midrws.com
office@midrws.com

KURT PFEIFLE
General Manager

Our mission is...
To enhance quality of life and promote economic development with high quality water and excellent service

South Dakota Game, Fish & Parks
Division of Wildlife
523 East Capitol Avenue
Pierre, SD 57501

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Sincerely,

MID-DAKOTA RURAL WATER SYSTEM, INC.

Kurt Pfeifle, General Manager – CEO

Enclosures:

Quality On Tap!

MID DAKOTA RURAL WATER SYSTEM

July 25, 2014

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Huron
Municipal
STEVE ROBBENHOLT
Gettysburg
Rural 1
GARY STRASBURG
Rockham
Rural 3
BRUCE VENNER
Pierre
Rural 2

U.S. Army Corps of Engineers
Omaha District – Planning Division
Attn: CENWO-PM-AE
106 South 15th Street
Omaha, NE 68102-4901

To whom it may concern,

Mid-Dakota Rural Water System, Inc. is a public utility whose mission is to provide potable drinking water to areas in east-central South Dakota. The Corporation is located in Miller, South Dakota and the service area encompasses all or portions of 13 Counties in a 7,000 square mile area.

Mid-Dakota is applying for State Revolving Fund (SRF) assistance, the purpose of the funding will be to purchase, construct and implement an Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) System throughout the Mid-Dakota service area. A "Facilities Plan" providing details about the Project along with maps depicting the coverage area accompanies this letter.

Pursuant to sections 8.3.18 and 8.3.19 of the South Dakota State Water Planning process, certain agencies must be given the opportunity to review and comment on the proposed project. Your entity is among those agencies that must be contacted and given the opportunity to review. This letter and the accompanying documents represent your opportunity to review and comment on the proposed project.

Time is of the essence; Mid-Dakota must have the prerequisites (including agency comment) for the SRF application complete and comments addressed, prior to submittal of a SRF application. Only after the review and comment period has passed will the SD Board of Water & Natural Resources issue an environment review, which then must also be published in local newspapers. Mid-Dakota therefore, respectfully requests a judicious but concise review and comment period, in order to meet the chronological requirements of the application. It is also important that Mid-Dakota receive a positive response from you as proof that the review opportunity was provided.

If you have questions, need more information or to return your review acknowledgment and/or comments, you may contact Mid-Dakota by way of mail, email or telephone per the information provided on this letterhead.

Sincerely,

MID-DAKOTA RURAL WATER SYSTEM, INC.

Kurt Pfeifle, General Manager – CEO

Enclosures:

8/26/2014
Spoke with COE, Omaha, NE. Tried to track down where my letter went and who and if it was responded to. COE took my information and said they would look into it.

608 W. 14th Street
PO Box 318
Miller SD 57362
PH 605-853-3135
TF 1-800-439-3079
FX 605-853-3245
www.mdrwa.com
office@mdrwa.com
KURT PFEIFLE
General Manager

Our mission is...
To enhance quality of life and promote economic development with high quality water and excellent service

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

REPLY TO
ATTENTION OF

August 27, 2014

Planning, Programs, and Project Management Division

RECEIVED
SEP - 5 2014

Mr. Kurt Pfeifle
Mid-Dakota Rural Water System
608 W. 14th Street
Miller, South Dakota 57362

Dear Mr. Pfeifle:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated July 25, 2014 (received July 29, 2014) regarding the proposed Automatic Meter Reading Study that would be performed throughout Central South Dakota, specifically in Hughes, Sully, Hyde, Hand, Beadle, and parts of Potter, Faulk, Spink, Kingsbury, Sanborn, Aurora, Jerauld, Buffalo, and Davison counties. It is understood that the proposed study would be performed to determine which areas of the rural water system may require improvements. 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.

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

WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: Dakota Dunes Community Improvement District

Project Title:	Clear Well Expansion and High Service Pump Addition
Funding Requested:	$1,600,000
Other Proposed Funding:	$0
Total Project Cost:	$1,600,000
Green Reserve Amount:	$0
Project Description:	This project will construct an additional 500,000-gallon clearwell, doubling the existing clearwell capacity and include the addition of a third high service pump at the water treatment plant. The proposed clearwell will be a below grade, cast-in-place concrete tank that will match the existing clear well. The water treatment plant was constructed to accommodate a third high service pump, and therefore, the additional pump will be sized to have the same operating characteristics. All piping, electrical, and controls for the third pump are in place. This proposed clearwell expansion and pump addition will not meet all water demand peak needs at current rates and projected growth. This proposed project will be one of a series of steps to be evaluated and implemented to meet the current and proposed peak demands.
Alternatives Evaluated:	1. No Action alternative was rejected because it does not address the potable water need of the community. 2. Clearwell expansion and addition of a third high service pump would match the existing clearwell at the same site and increase the delivery rate from the Sioux City water source to meet peak demands. 3. Elevated Storage option is not a desirable option due to costs and aesthetics. Since demand is not a concern in the winter, the elevated storage tank would be recommended to be taken offline during non-peak periods which would require shutdown/startup and disinfection. 4. Ground Storage option is not the desired option due to aesthetics and inefficient use of head pressure. Since demand is not a concern in the winter, the ground storage tank would

be recommended to be taken offline which would require shutdown/startup and disinfection.

5. Adding a second connection to Sioux City's potable water system would allow for meeting the peak demands when used in conjunction with the existing treatment plant and existing interconnection. This would allow for the lowest capital cost and operation and maintenance costs but is not considered a desirable option due to the increased dependence on Sioux City to meet the district's water needs.

6. Treatment capacity expansion with clearwell is a desirable option to lessen the dependence on Sioux City supplied water. This alone does not increase capacity for the facility to meet demand but would be done in conjunction with additional storage. The recommended treatment system is either the current filtration process or a pressure system.

Implementation Schedule:	Dakota Dunes CID plans to bid the project in Spring 2015 with a project completion in Fall 2015.
Service Population:	2,755
Current Domestic Rate:	$19.25 per 7,000 gallons
Proposed Domestic Rate at Project Completion:	$19.25 per 7,000 gallons

Interest Rate: 3.00% Term: 20 years Security: Water Revenue

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan, Dakota Dunes would have 221% coverage based on the current rate of $19.25 per 7,000 gallons.

25% Funding Subsidy:	$400,000 subsidy with a loan of $1,200,000
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $1,200,000, Dakota Dunes would have 295% coverage based on the current rate of $19.25 per 7,000 gallons.

50% Funding Subsidy:	$800,000 subsidy with a loan of $800,000
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $800,000, Dakota Dunes would have 442% coverage based on the current rate of $19.25 per 7,000 gallons.

75% Funding Subsidy:	$1,200,000 subsidy with a loan of $400,000
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $400,000, Dakota Dunes would have 884% coverage based on the current rate of $19.25 per 7,000 gallons.

ENGINEERING REVIEW COMPLETED BY: CLAIRE PESCHONG

FINANCIAL REVIEW COMPLETED BY: ELAYNE LANDE

7.3 Drinking Water Facilities Funding Application

Dakota Dunes Community Improvement District

Clear Well Expansion and Additional High Service Pump Project

September 30, 2014

RECEIVED
OCT - 1 2014
Division of Financial & Technical Assistance

Drinking Water Facilities Funding Application

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

Applicant	Proposed Funding Package	
Dakota Dunes Community Improvement Dist		
Address	CWFCP / DWSRF	$1,600,000
	Local Cash	
335 Sioux Point Road, Suite 200 Dakota Dunes, SD 57049	Other	
	Other	
Subapplicant	Other	
DUNS Number 955-663-8415	**TOTAL**	$1,600,000

Project Title: Clear Well Expansion and High Service Pump Addition

Description:

The project will expand the existing Dakota Dunes $500,000 gallon clear well tank to 1,000,000 gallons and add a third high service pump to the water treatment plant. See Facilities Plan for details.

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.

Kenneth Beaulieu, Chairman — Kenneth Beaulieu — 9/22/14

Name & Title of Authorized Signatory (Typed) — Signature — Date

Professional Consultants

Application Prepared By: Dakota Dunes Community Improvement District

Contact Person: Jeff Dooley

Mailing Address: PO Box 1997

City, State, and Zip: Dakota Dunes, SD 57049

Telephone Number: 605-232-4211 Fax: 605-235-1447

Email address: Jeff.dooley@dakotadunes.com

Consulting Engineering Firm: HDR, Inc.

Contact Person: Al Erickson

Mailing Address: 6300 S. Old Place, Suite 100

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

Telephone Number: 605-977-7741 Fax:

Email address: allen.erickson@hdr

Legal Counsel's Firm: Crary, Huff, Ringgenberg, Hartnett & Storm, P.C

Legal Counsel: Darrell Jesse

Mailing Address: 711 Sioux Point Road, Suite 200

City, State, and Zip: Dakota Dunes, SD 57049

Telephone Number: 605-232-4211 Fax:

Email address: djesse@craryhuff.com

This section applies only to political subdivisions

Bond Counsel's Firm: Davenport, Evans, Hurwitz & Smith, L.L.P.

Bond Counsel: Doug Hajek

Mailing Address: PO Box 1030

City, State, and Zip: Sioux Falls, SD 57101

Telephone Number: 605-336-2880 Fax: 605-335-3639

Email address: dhajek@dehs.com

BUDGET SHEET

Cost Classification	A CWFCP / DWSRF	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal including Bond Counsel	$20,000.00					$20,000.00
D. Other						
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$109,751.00					$109,751.00
B. Project Inspection Fees	$54,249.00					$54,249.00
C. Other						
4. Construction and Project Improvement	$1,274,400.00					$1,274,400.00
5. Equipment						
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$1,458,400.00					$1,458,400.00
10. Contingencies	$141,600.00					$141,600.00
11. Total (Lines 9 and 10)	$1,600,000.00					$1,600,000.00
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Columns A - E: Identify each funding source and enter the amounts budgeted by cost category.

Comments:

Method of Financing

Source Header	Secured Funds	Unsecured Funds (Date Anticipated)
Local Cash (Identify Source)		
Other (Explain) Drinking Water SRF Loan		$1,600,000.00 by 12/31/14
Other (Explain)		
Other (Explain)		
Other (Explain)		
Other (Explain)		
TOTAL		$1,600,000.00

Comments:

7.3.1 Repayment Information

Interest rate and term you are applying for: 3 %, 20 years.

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

- ☐ 1. General Obligation bond (requires bond election)
- ☒ 2. Water Revenue bond
- ☐ 3. Project Surcharge Revenue bond
- ☐ 4. Sales Tax Revenue bond

7.3.2 Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audit or unaudited financial statement to include specific accounting of pledged funds.
2. Current year's budget.

Planning and Legal Documents

1. Governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water SRF application and signing of payment requests. This resolution must also include the maximum loan amount requested, interest rate and term being applied for, description of proposed project, and security pledged towards repayment of the loan.
3. Facilities Plan (8.3.18).
4. Capacity Assessment Worksheets (section 8.3.16).

Items 5-7 apply to Nonprofit Entities only

5. By-laws
6. Articles of Incorporation
7. Certificate of Good Standing from Secretary of State

7.3.3 General Information

The month and day your fiscal year begins: 1/1

Population Served

Current 2,744 2000 1,500 1990 0

Top Five Employers Within 30 Miles	Number of Employees	Type of Business
Tyson Fresh Meats	3,300	Meat Processesing
Mercy Medical Center	2,000	Medical
Sioux City Community Schools	1,775	Education
Unity Point - St. Lukes	1,250	Medical
185th Air Refuiling Wing/ Iowa National Ga	1,000	Military

Please indicate employers within boundary of issuing entity with an asterisk (*).

7.3.4 Drinking Water Utility Information CIA has no Water related debt

Current Water Utility Debt

Year	2014						
Purpose							
Security Pledged							
Amount	$0.00						
Maturity Date (mo/yr)							
Debt Holder							
Debt Coverage Requirement							
Avg. Annual Required Payment							
Outstanding Balance							

Use additional sheets if more room is required to list all current water utility debt.

Drinking Water Utility Cash Flow

	Prior Year	Prior Year	Current Year	Future Year #
Fiscal Year	2012	2013	Proj 2014	Forecast 2016
OPERATING CASH FLOW				
Water Sales	$723,758	$552,435.00	$588,586.00	$640,000.00
Surcharge Fee				
Other (Explain)				
OPERATING PAYMENTS				
Personal Services	($186,277)	($201,725.00)	($192,256.00)	($211,680.00)
Chemical, Material & Supplies	($81,361)	($58,682.00)	($56,128.00)	($62,000.00)
Electric & Other Utilities	($39,094)	($32,886.00)	($34,189.00)	($38,000.00)
Other (Explain) Bulk Water Purchase	($116,449)	($76,529.00)	($68,211.00)	($75,000.00)
Supply, Distribution, Production Maintenance	($49,918)	($44,365.00)	($28,000.00)	($45,000.00)
NET CASH FROM OPERATIONS	$250,659	$138,248.00	$209,802.00	$208,320.00
NONOPERATING CASH FLOW				
Interest Income	$1,455.00	$2,273.00	$2,500.00	$2,500.00
Other Revenue (Explain) Rental income	$33,156.00	$29,996.00	$23,986.00	$25,000.00
Meter Installation, Late Fees, Rental, Misc				
Transfers In (Explain)	$0.00			
Fixed Asset Sale (Explain) Sale of	$515,000.00			
Antenna Lease				
Transfers Out (Explain)	$0.00			
Fixed Asset Purchases (Explain)	($4,004.00)	($14,531.00)	$0.00	($40,000.00)
Debt Payment (Principal Only)	($20,212.00)			($56,309.00)
Debt Payment (Interest Only)	($3,560.00)			($55,256.00)
Other Expenses (Explain) All other				
Cash Expe	($80,275.00)	($79,082.00)	($99,539.00)	($84,050.00)
NET CASH FROM NONOPERATING	$441,560	($61,344.00)	($73,053.00)	($208,115.00)
Net Increase (Decrease) in Cash	$692,219	$76,904.00	$136,749.00	$205.00
Beginning Cash Balance	$265,907	$958,126.00	$1,035,030.00	$1,165,333.00
Ending Cash Balance	$958,126	$1,035,030	$1,171,779.00	$1,165,538.00
RESTRICTED BALANCE				$22,320.00
UNRESTRICTED BALANCE	$933,538	$1,035,030	$1,173,454.00	$1,143,238.00

Future Year: First full year after project completion.

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

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

Check one: ____ Incorporated Municipality or Sanitary District

or

✓ Other Community Water System

Sept 2014

Monthly:	Current Rate	Proposed Rate	# of Accounts	Average use gallons/cubic feet
Domestic			1120	14,067 gallons
Business	See Attached		132	69,477 gallons
Other:				

Are fees based on usage or flat rate? Useage

When is proposed fee scheduled to take effect? New Rate effective May 2014

When did the current fee take effect? See Attached

What was the fee prior to the current rate? See Attached

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

Five Largest Customers	Type of Business	% of System Revenues
Two Rivers Golf Club	Golf Course	3%
Siouxland Surgery Center	Medical	2%
Tyson Foods	Corporate Headquarters	1%
Sterling Green Apartments - Irrigation	Apartment	1%
Sterling Green Apartments - Domestic	Apartment	1%

ORDINANCE NO. 2014-01

AN ORDINANCE ADOPTING CHAPTER 7 - UTILITIES;
ARTICLE II. RATES AND CHARGES CODE;
DIVISION 2. WATER

BE IT ORDAINED by the Board of Supervisors of the Dakota Dunes Community Improvement District, South Dakota, that the following article be adopted as follows:

ARTICLE II. RATES AND CHARGES CODE

Sec. 7-58. Rates and Charges – Meters Not Exceeding One Inch.

Each month, for all water sold or furnished by the District and for all metering services the District water system provides to the various consumers within the District, all consumers, whether residential, business, commercial or industrial, shall pay the District according to the following schedule:

GALLONS PER MONTH	CHARGE PER MONTH
0 - 7,000	$7.70 minimum charge per month plus $1.65 per 1,000 gallons up to 7,000 gallons
7,000 +	$1.85 per 1,000 gallons in excess of 1,000 gallons

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Sec. 7/59. Rates and Charges – Meters Greater Than One Inch.

(A) The above rates apply to those customers whose meters do not exceed one inch in size. For meters greater than one inch the following flat rates on a monthly basis shall apply as follows:

METER SIZE	MINIMUM CHARGE
1-1 1/2"	13.30
2"	25.20
3"	44.10
4"	84.00
6"	189.00
8"	245.00
10"	280.00

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(B) In addition to the minimum monthly charge in Section 7-59(A) and/or Section 7-58 above all consumers, whether residential, business, commercial or industrial shall pay in addition to the minimum charge identified above, **$1.65 per 1,000 gallons** for all non-irrigation use on a separate meter. In addition to the minimum monthly charge in Section 7-59(A) above all consumers, whether residential, business, commercial or industrial shall pay in addition to the minimum charge identified above **$1.85 per 1,000** gallons for all irrigation use on a separate meter.

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DRAFT

(C) The above rate schedule shall be charged to and paid by all users without exception other than the Dakota Dunes Community Improvement District.

Adopted this _____ day of _____, 2014, by the Board of Supervisors of the Dakota Dunes Community Improvement District.

_____
Kenneth Beaulieu, Chairman

ATTEST:

_____
Kim Hoffman, District Secretary

Date of First Reading: _____, 2014

Date of Second Reading and Passage: _____, 2014

The above Ordinance shall be in full force and effect 20 days after publication pursuant to South Dakota law.

DRAFT

Dakota Dunes Water Usage

2008	Residential (in 1,000 g)	# of Accts	Comm-Domestic (in 1,000 g)	Comm-Irrig (in 1,000 g)	# of Reg Accts	# of Irrig Accts	CID Irrig	Total Billed
January	4736	799	2558	0	50	40		7294
February	4476	800	2883	0	49	40		7359
March	4121	803	2588	0	49	40		6709
April	4904	810	3209	7	51	41		8120
May	10206	817	3636	1640	52	41	917	16399
June	16379	824	3333	3981	53	41	3351	27044
July	26924	829	3331	17078	52	43	6015	53348
August	29612	832	3588	11507	54	44	5491	50198
September	19619	833	3828	4785	57	43	3118	31350
October	12179	839	3129	2845	58	43	2265	20418
November	5302	840	3360	18	58	43		8680
December	4752	**847**	**2637**	**18**	**58**	**44**		7407
Totals	**143210**		**38080**	**41879**			**21157**	**244326**
2009	Residential	# of Accts	Comm-Domest	Comm-Irrig	# of Reg Accts	# of Irrig Ac	CID Irrig	Total Billed
January	4861	852	2902	99	57	46		7862
February	4437	858	2946	0	56	46		7383
March	4067	863	2578	0	57	46		6645
April	5357	877	2672	99	57	46		8128
May	12923	886	2933	2326	59	46	1549	19731
June	21519	888	3462	5703	62	50	4723	35407
July	22847	894	3383	5791	64	51	4938	36959
August	27545	898	3799	6873	64	51	5305	43522
September	17046	901	3643	4979	63	51	3805	29473
October	9901	912	2730	1874	65	52	626	15131
November	5310	909	3013	95	62	51		8418
December	4834	911	2525	0	62	52		7359
Totals	**140647**		**36586**	**27839**			**20946**	**226018**
2010	Residential	# of Accts	Comm-Dome	Comm-Irrg	# of Reg Accts	#of Irrg Ac	CID Irrig	Total Billed
January	5617	914	2816	0	63	53		8433
February	4633	918	2650	0	63	53		7283
March	4601	924	2639	1	63	53		7241
April	9298	938	3264	439	64	53		13001
May	14875	935	3320	2464	65	53	2179	22838
June	22404	942	3755	5777	67	53	5649	37585

July	27594	947	3672	6535	64	53	5352	43153
August	23470	949	3957	6130	65	53	4929	38486
September	24392	953	3669	5775	64	53	4017	37853
October	18870	957	3497	3531	65	53	2696	28594
November	6778	961	3170	157	65	53	0	10105
December	4944	961	2971	3	62	54	0	7918
Totals	**167476**	**11299**	**39380**	**30812**	**770**	**637**	**24822**	**262490**
2011	Residential	# of Accts	Comm-Dome	Comm-Irrg	# of Reg Accts	#of Irrg Ac	CID Irrig	Total Billed
January	5257	964	3157	3	62	54		8417
February	4888	968	3075	2	62	54		7965
March	4299	969	2641	4	64	54		6944
April	5496	973	2960	85	68	55		8541
May	13617	985	3544	1756	70	55		18917
June	1798	485	3086	1337	70	55		6221
July	3204	485	2957	3915	70	48		10076
August	8008	486	4672	6997	68	48		19677
September	8067	486	3014	5150	65	49		16231
October	22381	977	3334	6470	68	58		32185
November	9600	980	2764	470	65	57		12834
December	5700	979	2714	2	65	57		8416
Totals	**92315**		**37918**	**26191**			**0**	**156424**
2012	Residential	# of Accts	Comm-Dome	Comm-Irrg	# of Reg Accts	#of Irrg Ac	CID Irrig	Total Billed
January	6244	980	2703	2000	65	56		10947
February	4912	981	2851	4	65	56		7767
March	4936	984	2919	4	65	56		7859
April	18715	983	4731	786	66	56	1844	26076
May	26124	985	3656	4233	66	56	4193	38206
June	29266	989	3487	8111	66	57	5138	46002
July	43319	1000	3511	10886	66	57	7186	64902
August	46421	1003	4327	14164	66	57	9780	74692
September	39350	1003	3770	13556	66	57	6490	63166
October	23895	1007	3175	8810	68	57	5114	40994
November	7412	1007	3159	1377	68	57		11948

December	4477	1009	3143	28	68	57		7648
Totals								**400207**
2013	Residential	# of Accts	Comm-Dome	Comm-Irrg	# of Reg Accts	#of Irrg Ac	CID Irrig	Total Billed
January	6013	1004	3470	4	69	57		9487
February	5190	1006	3538	4	69	57		8732
March	4593	1007	3077	3	70	58		7673
April	5293	1016	3430	708	71	58		9431
May	12851	1020	3638	2244	71	58	871	19604
June	17323	1025	3435	3818	73	58	2689	27265
July	37005	1027	3978	9382	77	58	4660	55025
August	33484	1032	4243	11488	76	58	5614	54829
September	33022	1034	4478	9625	76	58	5205	52330
October	18919	1036	4017	5875	78	58	2690	31501
November	8575	1039	3545	1308	78	58		13428
December	5565	1040	3192	4	78	58		8761
Totals	187833	12286	44041	44463			21729	298066
2014	Residential	# of Accts	Comm-Dome	Comm-Irrg	# of Reg Accts	#of Irrg Ac	CID Irrig	Total Billed
January	6413	1043	3687	3	78	58		10103
February	5507	1044	3323	4	78	58		8834
March	4697	1046	3452	4	75	58		8153
April	7589	1050	3434	1269	72	58		12292
May	18168	1054	4005	4887	74	59	1389	28449
June	21371	1056	3969	5414	74	59	1877	32631
July	22919	1059	4693	6972	74	59	2688	37272
August	28599	1109	4099	7163	75	59	2389	42250
September	15756	1120	3975	5196	73	59	1109	26036
October								0
November								0
December								0
Totals	131019	9581	34637	30912			9452	206020

7.3.5 Property Tax Information N/Ap

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

Three year valuation trend:

Year	2012	2013	2014
Assessed Valuation			
Full & True Valuation			

Three year levies and collection trend:

Year	2011	2012	2013
Amount Levied			
Collected			
Penalties/Interest			
Late Payments			

Five Largest Taxpayers	Description	Assessed Valuation

Comments:

No General Obligations Bonds.

List all current debt secured by General Obligation bond: None

Year	2,014				
Purpose					
Security Pledged					
Amount	$0.00				
Maturity Date (mo/yr)					
Debt Holder					
Debt Coverage Requirement					
Avg. Annual Required Payment					
Outstanding Balance					

Use additional sheets if more room is required to list all current G.O. debt.

Comments:
Dakota Dunes has no general obligation debt.

7.3.6 Sales Tax Information

(Complete 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:

As a Community Improvement District, we are not allowed to levy a local sales tax.

List all current debt secured by sales tax: None

Year Issued	2,014				
Purpose					
Amount	$0.00				
Maturity Date (mo/yr)					
Debt Holder					
Debt Coverage Requirement					
Avg. Annual Required Payment					
Outstanding Balance					

Use additional sheets if more room is required to list all current sales tax debt.

Comments:

7.3.7 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

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 section 8.3.18.	×
♦ A public hearing held discussing the project and the use of an SRF loan to finance the project. (See section 8.3.15)	×
♦ Minutes of the public hearing prepared and submitted to the department for inclusion into the final Facilities Plan.	×
♦ The affidavit of publication of the public hearing received and submitted to the department for inclusion into the final Facilities Plan. (See section 8.3.15)	×
♦ The four review agencies contacted and responses received for inclusion into the final Facilities Plan. (See section 8.3.18)	×
♦ The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. (See section 8.3.20)	×

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	
Treatment	
Storage	$1,600,000.00
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	$1,600,000.00

Dakota Dunes Community Improvement District
Name of Applicant

Kenneth Beaulieu
Signature of Authorized Representative

9/22/14
Date

7.3.9 Preaward Compliance Review

FORM Approved By OMB: No. 2030-0020 Expires 12-31-2011

United States Environmental Protection Agency
Washington, DC 20460

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note : Read instructions on other side before completing form.

I. Applicant/Recipient (Name, Address, State, Zip Code).	DUNS No.
Dakota Dunes Community Improvement District, 335 Sioux Point Road, Suite 200, Dakota Dunes, SD 57049	95-663-8415

II. Is the applicant currently receiving EPA assistance? NO

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7. See instructions on reverse side.) None

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective action taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7. See instructions on reverse side.) None

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3)). None

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below. Yes

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable bypersons with disabilities, explain how a regulatory exception (40 C.F.R. § 7.70) applies.

VII.* Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex,age, or disability in its programs or activities? (40 C.F.R. § 5.140 and § 7.95) Yes

a. Do the methods of notice accommodate those with impaired vision or hearing? Yes b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communication? Yes c. Does the notice identify a designated civil rights coordinator? No

VIII.* Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. § 7.85(a)) Census

IX.* Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166) NO

X.* If the applicant/recipient is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator. N/ap

XI* If the applicant/recipient is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet address for, or a copy of, the procedures. N/AP

For the Applicant/Recipient I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official	B. Title of Authorized Official	C. Date
Kenneth Bemlui	Chairman	9/22/14

For the U.S. Environmental Protection Agency I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preawardcompliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisionsof 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized EPA Official See ** note on reverse side.	B. Title of Authorized EPA Official	C. Date

EPA Form 4700-4 (Rev. 03/2008). Previous editions are obsolete.

Instructions for EPA FORM 4700-4 (Rev. 03/2008) General

Recipients of Federal financial assistance from the U.S.Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment).

Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities.

Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities.

The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission.

Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note; an education program or activity is not limited to only those conducted by a formal institution.

40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972.

40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973.

The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items

"Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25.

"Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25.

"Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed.

"Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability.

Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission.

If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable."

In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification.

* Questions VII – XI are for informational use only and will not affect an applicant's grant status. However, applicants should answer all questions on this form. (40 C.F.R. Parts 5 and 7).

** Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.

Approval indicates, in the reviewer's opinion, questions I – VI of Form 4700-4 comply with the preaward administrative requirements for EPA assistance.

"Burden Disclosure Statement"

EPA estimates public reporting burden for the preparation of this form to average 30 minutes per response. This estimate includes the time for reviewing instructions, gathering and maintaining the data needed and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to
U.S. EPA, Attn: Collection Strategies Division (MC 2822T), Office of Information Collection, 1200 Pennsylvania Ave., NW, Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

The information on this form is required to enable the U.S.Environmental Protection Agency to determine whether applicants and prospective recipients are developing projects, programs and activities on a nondiscriminatory basis as required by the above statutes and regulations.

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.

Kenneth Beaulieu, Chairman

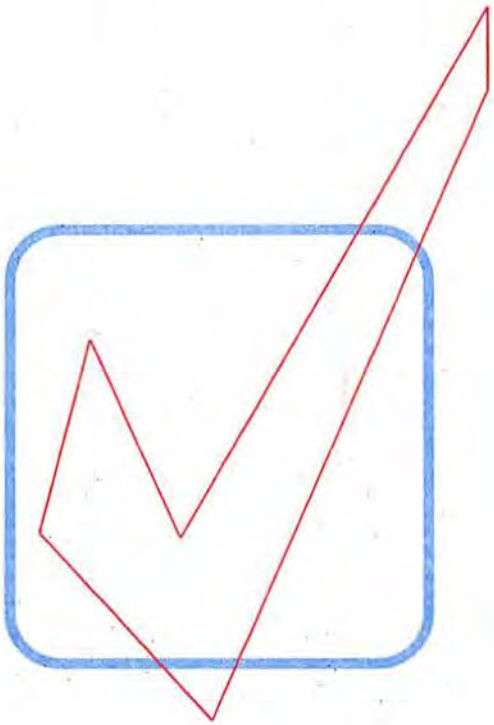
Name & Title of Authorized Representative

Kenneth Beaulieu 9/22/14

Signature of Authorized Representative 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: Dakota Dunes Community Improvement District

Prepared by: Jeff Dooley, Manager
Pat Freeman, Water Plant Operator

Phone #: 605-232-4211

Date: September, 2014

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:*** 913,000 gallons - 2013	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 3,420,112 - July 30, 2012	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 2.5 mgd from Dakota Dunes Plant 3 mgd from SC	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 38 Percent Higer	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** 48 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:*** odd/even irrigation ordinance per ordinance	☑	☐	☐	☐
Does your system have an emergency or supplemental water supply? ***Please specify:*** Dual Source - DD Water Plant and connection to SC	☑	☐	☐	☐
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):*** 5437-3 and 6074-3	☑	☐	☐	☐
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?*** City of Sioux City (SC)	☑	☐	☐	☐
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*** 2 @ 113' and 2 @ 300'	☑	☐	☐	☐
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** Missouri and Sandstone 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:*** 1990 and 2000	☑	☐	☐	☐
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:*** CL2 150# Gas Cylinder	☑	☐	☐	☐
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:*** 75 Min	☑	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** .54 mg/l ***Total Chlorine Residual:*** .60 mg/l (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:*** Sioux City - extended	☑	☐	☐	☐
Is there reserve capacity in the tank for fire protection support? ***Amount:*** 200000 gallongs	☑	☐	☐	☐
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:*** Once 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:*** 9-10 %	☑	☐	☐	☐
	Yes	**No**	**Unknown**	**NA**
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? ***Normal operating pressure:*** 80 static 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:*** 99 percent	☑	☐	☐	☐
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 in 2014 ***Most common complaint:*** One Class III and Two Class	☑	☐	☐	☐
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):*** One Class III and Two Class 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*** HDR, Inc	☑	☐	☐	☐

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?*** 7-10 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):*** District Manager or designee	☑	☐	☐	☐
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:*** All reserves are available - not used for operations	☐	☑	☐	☐
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 during budget	☑	☐	☐	☐
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:*** $7 + $1.65 domestic $1.85 for Irrigation (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: Rate increase for irr water. Comm Irr metered seperatly Res 7,000 +	☑	☐	☐	☐
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 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: Dakota Dunes Community Improvement District
Completed by: Jeff Dooley, Manager
Date: September, 2014

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2013	2014	2015	2016	2017
1. Beginning Cash on Hand	$958,126	$1,035,030	$1,171,779	$1,165,333	$1,183,989
2. Cash Receipts:					
a. Unmetered Water Revenue					
b. Metered Water Revenue	$552,435	$588,586	$610,000	$640,000	$655,000
c. Other Water Revenue					
d. Total Water Revenues (2a through 2c)	$552,435	$588,586	$610,000	$640,000	$655,000
e. Connection Fees					
f. Interest and Dividend Income	$2,274	$2,500	$2,500	$2,500	$2,500
g. Other Income	$29,996	$14,900	$14,900	$14,900	$14,900
h. Total Cash Revenues (2d through 2g)	$584,705	$605,986	$627,400	$657,400	$672,400
i. Transfers in/Additional Rev Needed					
j. Loans, Grants or other Cash					
Please specify					
SRF Loan for Clearwell Project			$1,600,000		
3. Total Cash Receipts (2h through 2j)	$584,705	$605,986	$2,227,400	$657,400	$672,400
4. Total Cash Available (1+3)	$1,542,831	$1,641,016	$3,399,179	$1,822,733	$1,856,389
5. Operating Expenses					
a. Salaries and wages	$147,805	$145,000	$149,350	$153,831	$158,445
b. Employee Pensions and Benefits	$53,918	$56,993	$60,686	$65,398	$70,128
c. Purchased Water	$76,529	$54,000	$56,000	$58,000	$60,000
d. Purchased Power	$32,886	$35,000	$38,000	$40,000	$42,000
e. Fuel for Power Production					
f. Chemicals	$58,682	$60,000	$65,000	$70,000	$75,000
g. Materials and Supplies					
h. Engineering Services	$2,218	$7,000	$5,000	$5,000	$5,000
i. Contractual Services – Other					
j. Equip. Rent/Real Property					
k. Transportation Expenses					
l. Laboratory					
m. Insurance	$6,404	$6,500	$68,000	$6,400	$7,000
n. Regulatory Commission Expenses					
o. Advertising	$1,162	$1,500	$1,700	$1,700	$1,700
p. Miscellaneous	$113,666	$103,244	$128,950	$126,850	$127,550
q. Total Cash O&M Expenses (5a through 5p)	$493,270	$469,237	$572,686	$527,179	$546,823
r. Replacement Expenditures					
s. Total OM&R Expenditures (5q+5r)	$493,270	$469,237	$572,686	$527,179	$546,823
t. Loan Principal/Capital Lease Payments				$56,309	$58,306
u. Loan Interest Payments				$55,256	$53,269
v. Transfers Out					
w. Capital Purchases (specify):					
	$14,531		$50,000		
Const of Clear Well and Engine			$1,600,000		
x. Other			$11,160		
6. Total Cash Paid Out (5s through 5x)	$507,801	$469,237	$2,233,846	$638,744	$658,398
7. Ending Cash Position (4 - 6)	$1,035,030	$1,171,779	$1,165,333	$1,183,989	$1,197,991

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	1,176	1,198	1,217	1,231	1,244
9. Avg Annual User Charge Account (2d/8)	$470	$491	$501	$520	$527
10. Coverage Ratio (2h-5s)/(5t+5u)	0.0	0.0	0.0	1.2	1.1
11. Operating Ratio (2d/5s)	1.1	1.3	1.1	1.2	1.2
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)	$1,035,030	$1,171,779	$1,165,333	$1,183,989	$1,197,991

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.**

Dakota Dunes Community Improvement District
Summary of Water Fund Financials 2007-2008
Created For Sept 2014 SRF Application

	Actual 2007	Actual 2008	Actual 2009	Actual 2010	Actual 2011	Actual 2012	Actual 2013	Projected 2014	Budget 2015	Forecast 2016	Forecast 2017
Revenues:											
Residential Water Sales	$287,407	$281,124	$282,258	$327,795	$197,774	$469,877	$357,471	$ 384,743	$ 395,000	$ 415,000	$ 425,000
Bulk Water Sales	$36,315	$46,886	$31,744	$40,460		$64,783	$35,419	$ 29,515	$ 30,000	$ 30,000	$ 30,000
Commercial Water Sales	$117,006	$125,927	$123,022	$130,874	$114,602	$189,098	$159,545	$ 174,329	$ 185,000	$ 195,000	$ 200,000
Meter Installation Revenues	$2,813	$3,586	$3,075	$2,663	$913	$1,108	$1,150	$ 1,750	$ 1,500	$ 1,500	$ 1,500
Late Fees	$3,062	$3,331	$3,071	$3,485	$2,589	$5,258	$2,534	$ 5,000	$ 3,000	$ 3,000	$ 3,000
Rental Revenues	$33,433	$33,433	$33,433	$43,222	$49,425	$25,591	$17,672	$ 6,500	$ 6,500	$ 6,500	$ 6,500
Contract Revenue							$8,640	$ 1,650	$ -	$ -	
Misc Revenues	$540			$5,655		$1,200					
Property damage Revenues				$273							
Interest Income	$24,362	$14,244	$7,736	$4,622	$1,482	$1,456	$2,274	$ 2,500	$ 2,500	$ 2,500	$ 2,500
Donated by DDD	$39,772										
Total Revenue/Sources	**$544,709**	**$508,531**	**$484,338**	**$559,047**	**$366,784**	**$758,371**	**$584,704**	**$ 605,987**	**$ 623,500**	**$ 653,500**	**$ 668,500**
Expenses:											
General Expenses -											
Board Fees	$1,463	$1,688	$1,688	$1,688	$2,063	$1,781	$1,688	$ 1,700	$ 1,700	$ 1,700	$ 1,700
District Manager Salary	$28,575	$27,330	$27,225	$29,639	$30,937	$30,035	$29,666	$ 30,000	$ 30,900	$ 31,827	$ 32,782
Legal Fees	$2,090	$1,388	$1,348	$2,050	$1,290	$3,611	$3,038	$ 3,000	$ 3,000	$ 3,000	$ 3,000
Accounting Fees	$2,231	$2,231	$2,250	$2,944	$2,381	$6,488	$6,675	$ 6,800	$ 6,800	$ 3,500	$ 3,500
Finance Officer Salary	$17,441	$17,567	$18,929	$19,666	$20,365	$20,906	$18,933	$ 19,500	$ 20,085	$ 20,688	$ 21,308
Depreciation	$184,406	$173,381	$174,931	$181,257	$181,739	$185,461	$181,889	$ 182,000	$ 182,000	$ 182,000	$ 182,000
Amortization					$9,674	$9,674	$9,674	$ 9,673	$ 9,673	$ 9,673	$ 9,673
Public Works - Manager Salary	$24,257	$23,380	$25,345	$26,015	$26,676	$26,296	$25,340	$ 26,000	$ 26,780	$ 27,583	$ 28,411
Public Works - Salaries & Wages	$44,056	$46,686	$46,442	$47,050	$50,178	$53,205	$56,438	$ 59,500	$ 61,285	$ 63,124	$ 65,017
Billing Clerk	$6,200	$6,391	$6,583	$6,969	$6,758	$10,101	$17,428	$ 10,000	$ 10,300	$ 10,609	$ 10,927
FICA	$8,956	$8,880	$9,122	$9,803	$11,293	$10,054	$10,489	$ 11,093	$ 11,425	$ 11,768	$ 12,121
Retirement (SDRS)	$6,743	$6,790	$6,927	$7,211	$8,389	$7,673	$8,242	$ 8,700	$ 8,961	$ 9,230	$ 9,507
Workmen's Compensation	$1,354	$2,676	$2,514	$2,375	$2,206	$2,041	$2,167	$ 2,200	$ 2,300	$ 2,400	$ 2,500
Group Medical Insurance	$21,577	$23,187	$26,214	$29,893	$33,156	$25,965	$33,022	$ 35,000	$ 38,000	$ 42,000	$ 46,000
Unemployment Compensation											
Insurance	$5,153	$5,119	$4,871	$4,789	$5,181	$7,988	$6,404	$ 6,500	$ 6,800	$ 7,200	$ 7,400
Professional Fees & Services	$1,311	$41,228	$5,827	$643		$529	$2,219	$ 7,000	$ 5,000	$ 5,000	$ 5,000
Publishing	$1,064	$1,420	$1,165	$1,793	$1,624	$1,546	$1,163	$ 1,500	$ 1,500	$ 1,500	$ 1,500
Rent	$11,922	$11,897	$11,879	$11,416	$11,734	$12,054	$12,024	$ 13,000	$ 13,500	$ 14,500	$ 15,000
Security Expense	$744	$744	$744	$744	$744	$744	$744	$ 744	$ 750	$ 750	$ 750
Billing & Collections	$4,428	$2,461	$3,096	$2,875	$2,660	$3,268	$3,069	$ 3,500	$ 3,700	$ 3,900	$ 4,100
Travel & Conference Expense	$1,536	$1,303	$1,246	$524	$892	$947	$965	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Telephone Expense	$3,820	$3,818	$3,762	$3,726	$3,721	$3,768	$3,246	$ 3,500	$ 3,500	$ 3,500	$ 3,500
Other Current Expense	$9,961	$9,525	$8,491	$10,094	$8,237	$8,442	$10,405	$ 10,000	$ 10,000	$ 10,000	$ 10,000
Interest Expense	$12,191	$7,689	$3,666	$2,161	$1,275	$357					

Total General Expenses	**$401,478**	**$426,780**	**$394,265**	**$405,324**	**$423,173**	**$432,934**	**$444,927**	**$ 451,910**	**$ 458,959**	**$ 466,451**	**$ 476,696**
Water Production & Distribution -											
Supply - Repairs & Maintenance	$37,919	$3,569	$7,371	$49,702	$3,095	$33,458	$23,368	$ 10,000.00	$ 15,000	$ 15,000	$ 15,000
Bulk Water Purchases	$22,480	$29,580	$44,925	$58,575	$129,989	$116,449	$76,529	$ 54,000.00	$ 56,000	$ 58,000	$ 60,000
Pumping - Utilities	$29,927	$30,412	$28,433	$28,585	$12,878	$39,094	$32,886	$ 35,000.00	$ 38,000	$ 40,000	$ 42,000
Water Distribution - Rep & Maint	$18,617	$6,856	$12,215	$4,179	$14,350	$4,129	$15,623	$ 8,000.00	$ 15,000	$ 15,000	$ 15,000
Water Distribution - Vehicle Maint	$3,872	$4,196	$3,769	$3,514	$3,616	$5,591	$6,036	$ 7,000.00	$ 5,000	$ 5,000	$ 5,000
Purification - Chemical Exp	$36,555	$42,557	$38,371	$42,192	$20,634	$81,361	$58,682	$ 60,000.00	$ 65,000	$ 70,000	$ 75,000
Purification - Lab Fees	$3,955	$2,359	$3,940	$5,363	$2,834	$5,579	$4,968	$ 5,500.00	$ 5,500	$ 5,500	$ 5,500
Purification - Repairs & Maint	$11,261	$8,962	$9,615	$16,804	$4,303	$12,331	$5,372	$ 10,000.00	$ 25,000	$ 25,000	$ 25,000
Water Meter Installation	$13,808	$17,368	$17,529	$18,022	$20,469	$17,940	$14,147	$ 18,000.00	$ 18,000	$ 18,000	$ 18,000
Total Water Expenses	**$178,393**	**$145,859**	**$166,168**	**$226,937**	**$212,169**	**$315,932**	**$237,610**	$ 207,500.00	**$ 242,500**	**$ 251,500**	**$ 260,500**
Total Expenditures	**$579,872**	**$572,638**	**$560,433**	**$632,261**	**$635,342**	**$748,866**	**$682,538**	**$ 659,410**	**$ 701,459**	**$ 717,951**	**$ 737,196**
Net Revenues/Expenditures	**($35,163)**	**($64,107)**	**($76,095)**	**($73,214)**	**($268,558)**	**$9,506**	**($97,833)**	$ (53,423)	**$ (77,959)**	**$ (64,451)**	**$ (68,696)**
Donated by DDD		$57,000	$216,413	$92,960			$57,854				
Dontated by Others		$41,810	$199,590								
Net Rev/Exp inc Capital Don	**($35,163)**	**$34,703**	**$339,908**	**$19,746**	**($268,558)**	**$9,506**	**($39,979)**				
Metered Water Revenue	$ 440,728	$ 453,937	$ 437,024	$ 499,128	$ 312,376	$ 723,758	$ 552,435	$ 588,587	$ 610,000	$ 640,000	$ 655,000
Salaries and Wages	$ 120,529	$ 121,354	$ 124,524	$ 129,340	$ 134,914	$ 140,543	$ 147,805	$ 145,000	$ 149,350	$ 153,831	$ 158,445
Employee Pensions and Benefits	$ 38,630	$ 41,534	$ 44,778	$ 49,282	$ 55,044	$ 45,734	$ 53,920	$ 56,993	$ 60,686	$ 65,398	$ 70,128
Purchased Water	$ 22,480	$ 29,580	$ 44,925	$ 58,575	$ 129,989	$ 116,449	$ 76,529	$ 54,000	$ 56,000	$ 58,000	$ 60,000
Purchased Power	$ 29,927	$ 30,412	$ 28,433	$ 28,585	$ 12,878	$ 39,094	$ 32,886	$ 35,000	$ 38,000	$ 40,000	$ 42,000
Chemicals	$ 36,555	$ 42,557	$ 38,371	$ 42,192	$ 20,634	$ 81,361	$ 58,682	$ 60,000	$ 65,000	$ 70,000	$ 75,000
Engineering Services	$ 1,311	$ 41,228	$ 5,827	$ 643	$ -	$ 529	$ 2,219	$ 7,000	$ 5,000	$ 5,000	$ 5,000
Insurance	$ 5,153	$ 5,119	$ 4,871	$ 4,789	$ 5,181	$ 7,988	$ 6,404	$ 6,500	$ 6,800	$ 7,200	$ 7,400
Miscelaneous	$ 128,690	$ 79,785	$ 90,107	$ 135,438	$ 84,012	$ 121,677	$ 112,530	$ 103,244	$ 128,950	$ 126,850	$ 127,550

Resolution 9-2014-1
AUTHORIZING RESOLUTION

Small Water Facilities Funding Application

Dakota Dunes Community Improvement District
Clear Well Expansion and High Service Pump Addition

WHEREAS, the Dakota Dunes Community Improvement District has identified the need for the to expand its Clear well from 500,000 gallons to 1 million gallons and add a third high service pump, and

WHEREAS, the Dakota Dunes Community Improvement District proposes to apply for Small Water Facilities Program assistance in the form of an State Revolving Fund (SRF) Loan in order to meet local needs; and

WHEREAS, the Dakota Dunes Community Improvement District is eligible for state assistance for the proposed project; and

WHEREAS, with the submission of the Small Water Facilities Program application, the Dakota Dunes Community Improvement District assures and certifies that all Small Water Facilities Program requirements will be fulfilled; then

THEREFORE, BE IT RESOLVED, that the Dakota Dunes Community Improvement District Board of Supervisors duly authorizes the submission of the Small Water Facilities Program application; and

BE IT FURTHER RESOLVED, that the Chairman of the Dakota Dunes Community Improvement District be authorized to execute the Small Water Facilities Program application for the Dakota Dunes Community Improvement District; and

BE IT FURTHER RESOLVED, that the Chairman of Dakota Dunes Community Improvement District Board of Supervisors be hereby designated as the grantee's official for the purpose of signing grant agreements and contracts, pay requests, and all other correspondence and required documents.

Dated this 22 day of Sept, 2014.

SIGNED: Kenneth Beaulieu
Kenneth Beaulieu, Chairman

ATTEST: Kim Hoffman
Kim Hoffman, Finance Officer

AFFIDAVIT OF PUBLICATION

State of South Dakota)
:ss
County of Union)

Bruce L. Odson,
the publisher of the Leader-Courier, deposes and says that

The Leader-Courier

is a legal weekly newspaper of a general circulation, printed and published in Elk Point, County of Union, State of South Dakota, and has been such legal newspaper during the time hereinafter mentioned, and that affiant is and was during all the time hereinafter mentioned in charge of the advertising department thereof, and has personal knowledge of all the facts stated in this affidavit: and that the notice and advertisement headed:

Notice of Public Hearing

a printed copy of which is hereunto attached and made a part hereof, was printed and published in the said newspaper at least once in

each week for 2 successive weeks; that said newspaper at the time of the first publication of said notice hereinafter stated, had, and still has, a bona fide circulation of over two hundred paid copies weekly, and had been published in the said County of Union for more than one year immediately prior to the date of the said publication of said notice, and that said newspaper during said times, was, and is, printed in part in an office maintained at said city of Elk Point, the said place of publication; that the first publication of said notice in said newspaper was

on Thursday, the 11 day of September, 2014

and that the succeeding publications were

on Thursday, the 18 day of September, 2014

on Thursday, the _____ day of _____, _____

on Thursday, the _____ day of _____, _____

that the fees for the printing and publishing of said notice and advertisement in said newspaper as aforesaid were

$ 21.13, that the full amount of the fee charged insures to the benefit of the publisher of the said newspaper, that no agreement or understanding for the 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 18 day of September, 2014

My commission expires 6-21-17

SUSAN GUSSON
NOTARY PUBLIC
SOUTH DAKOTA

Notary Public

NOTICE OF PUBLIC HEARING

Dakota Dunes Community Improvement District
Clear Well Expansion
and Additional High Service Pump Project.

Dakota Dunes Community Improvement District is proposing to upgrade the District's water infrastructure. The proposed project will include the expansion of a Clear Well Storage tank from 500,000 gallons to 1 million gallons and add a third high service pump.

Dakota Dunes Community Improvement District proposes to apply for up to $1.6 million of Drinking Water State Revolving Funds at 3.5% for 20 years. The District plans to pledge enterprise fund revenue to repay the loans. The total cost of the project is estimated to be $1.6 million. 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 Dakota Dunes Welcome Center, 335 Sioux Point Road, Suite 200, on Monday, September 22, 2014 at 7:00 pm.

Publish Sept. 11 and 18, 2014
Published twice at the total approximate cost of $21.13
37-7-39

NOTICE OF PUBLIC HEARING

for the

Dakota Dunes Community Improvement District Clear Well Expansion and Additional High Service Pump Project

Dakota Dunes Community Improvement District is proposing to upgrade the city's water infrastructure. The proposed project will include the expansion of a Clear Well Storage tank from 500,000 gallons to 1 million gallons and add a third high service pump.

Dakota Dunes Community Improvement District proposes to apply for up to $1.6 million of Drinking Water State Revolving Funds at 3.5% for 20 years. The City plans to pledge enterprise revenue to repay the loans. The total cost of the project is estimated to be $1.6 million. 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 Dakota Dunes Welcome Center on Monday, September 22, 2014 at 7:00 pm.

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT
BOARD OF SUPERVISORS REGULAR MEETING
SEPTEMBER 22, 2014 – 7:00 P.M.
335 SIOUX POINT ROAD, SUITE 200

MINUTES

The Board of Supervisors met in a regular session on September 22, 2014, at 7:00 p.m., at 335 Sioux Point Road, Suite 200. Members present were: Messrs. Anderson, Beaulieu, Kimmel, Melstad, and Ms. Grijalva. Also present was: Mr. Jesse, of Crary Law Firm. Employees present were: Dooley and Hoffman.

1. APPROVAL OF THE AUGUST 18, 2014 REGULAR MEETING MINUTES & SEPTMEBER 8, 2014 SPECIAL MEETING MINUTES

   A motion was made by Mr. Anderson and seconded by Mr. Melstad to approve the minutes of the August 18, 2014 regular meeting.

   Motion passed 5-0.

   A motion was made by Mr. Melstad and seconded by Ms. Grijalva to approve the minutes of the September 8, 2014 special meeting.

   Motion passed 5-0.

2. PUBLIC HEARING FOR SUBMITTAL OF LOAN APPLICATION SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

   The public hearing was opened at 7:02 pm. Mr. Dooley gave an overview of the loan application and information to be filed with it for SRF loan. The public hearing was closed at 7:15 pm, with no public in attendance.

3. CONSIDERATION OF RESOLUTION 9-2014-1 AUTHORIZING SUBMITTAL OF $1.6 MILLION SRF LOAN APPLICATION TO SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

   A motion was made by Mr. Melstad and seconded by Mr. Kimmel to approve Resolution 9-2014-1, authorizing submittal of the $1.6 million SRF loan application to the South Dakota Department of Environment and Natural Resources and authorizing the Chairman's signature.

   Motion passed 5-0.

4. TREASURER/FINANCIAL REPORT

A motion was made by Mr. Kimmel and seconded by Ms. Grijalva to approve the August 2014 financial statements and the regular vouchers payable in the amount of $134,554.95.

Motion passed 5-0.

A motion was made by Ms. Grijalva and seconded by Mr. Anderson to approve the special revenue fund vouchers payable in the amount of $30,945.14.

Motion passed 5-0.

5. NEW BUSINESS

- CONSIDERATION OF FINAL DRAFT 2015 GENERAL FUND OPERATING BUDGET

  Following discussion, a motion was made by Ms. Grijalva and seconded by Mr. Anderson to approve the 2015 General Fund Operating Budget, requesting $1,321,630 in property taxes, which will set the mill levy at $3.18.

  Motion passed 5-0.

- CONSIDERATION OF FINAL DRAFT OF 2015 SPECIAL REVENUE FUND (OPT OUT FOR FLOOD REPAIR DEBT SERVICE)

  Following discussion, a motion was made by Mr. Melstad and seconded by Mr. Kimmel to approve the 2015 Special Revenue Fund Budget, requesting $702,677 in opt out property taxes, which will set the opt out mill levy at $1.69.

  Motion passed 5-0.

- GOVERNMENT CERTIFICATE FOR LIBERTY NATIONAL BANK LOAN AUTHORIZATING SIGNATURES ON BIG SIOUX RIVER FLOOD LOAN TERM SHEET APPROVED AUGUST 18, 2014

  A motion was made by Mr. Kimmel and seconded by Mr. Anderson to authorize signatures on the Big Sioux River flood loan documents with Liberty National Bank, the term sheet was approved at the August 18, 2014 regular board meeting.

  Motion passed 5-0.

- DISCUSSION ON PURCHASE OF ADDITIONAL RIVER MONITORING GUAGE

  Messrs. Beaulieu and Dooley reported on the meeting they attended with South Dakota Lieutenant Governor Matt Michels, Union County Emergency Management, and North Sioux City Officials where the benefits of additional river monitoring gauges was discussed. The Board is in favor of helping obtain additional gauges, including one on the Missouri River. Mr. Dooley will gather more information and report back.

6. OTHER

   Mr. Dooley reported that he has been working with FEMA to submit some of the projects for reimbursement from the 2014 Big Sioux River flood event. There may be projects yet to be submitted as well, including the current work to remove the levee on the maintenance road.

7. ADJOURN

   A motion was made by Mr. Kimmel and seconded by Mr. Anderson to adjourn at 8:30 pm.

   Motion passed 5-0.

Submitted by,
Kim Hoffman, Secretary

ORDINANCE NO. 2014-01

AN ORDINANCE ADOPTING CHAPTER 7 - UTILITIES; ARTICLE II. RATES AND CHARGES CODE; DIVISION 2. WATER

BE IT ORDAINED by the Board of Supervisors of the Dakota Dunes Community Improvement District, South Dakota, that the following article be adopted as follows:

ARTICLE II. RATES AND CHARGES CODE

Sec. 7-58. Rates and Charges – Meters Not Exceeding One Inch.

Each month, for all water sold or furnished by the District and for all metering services the District water system provides to the various consumers within the District, all consumers, whether residential, business, commercial or industrial, shall pay the District according to the following schedule:

GALLONS PER MONTH	CHARGE PER MONTH
0 - 7,000	$7.70 minimum charge per month plus $1.65 per 1,000 gallons up to 7,000 gallons
7,000 +	$1.85 per 1,000 gallons in excess of 7,000 gallons

Sec. 7-59. Rates and Charges – Meters Greater Than One Inch.

(A) The above rates apply to those customers whose meters do not exceed one inch in size. For meters greater than one inch the following flat rates on a monthly basis shall apply as follows:

METER SIZE	MINIMUM CHARGE
1-1 1/2"	13.30
2"	25.20
3"	44.10
4"	84.00
6"	189.00
8"	245.00
10"	280.00

(B) In addition to the minimum monthly charge in Section 7-59(A) and/or Section 7-58 above all consumers, whether residential, business, commercial or industrial shall pay in addition to the minimum charge identified above, **$1.65 per 1,000 gallons** for all non-irrigation use on a separate meter. In addition to the minimum monthly charge in Section 7-59(A) above all consumers, whether residential, business, commercial or industrial shall pay in addition to the minimum charge identified above **$1.85 per 1,000** gallons for all irrigation use on a separate meter.

DATE	GF $ Market	GF $ Market	**GF $ Market**	EF Checking	EF $ Market	EF $ Market	Total Cash
		(Loan Proceeds)	**Restricted for Debt Service**				
8/31/2013	$204,091.81	$588,153.66	**$33,807.37**	$21,928.41	$486,776.77	$506,659.64	$1,841,417.66
9/30/2013	$139,309.23	$588,347.03	**$38,572.13**	$8,283.72	$512,125.75	$506,826.21	$1,793,464.07
10/31/2013	$154,755.79	$588,546.91	**$56,862.04**	$25,302.09	$429,885.98	$506,998.39	$1,762,351.20
11/30/2013	$435,246.78	$588,740.40	**$379,177.12**	$13,319.92	$584,401.37	$507,165.07	$2,508,050.66
12/31/2013	$169,256.23	$588,940.41	**$12,528.27**	$33,766.26	$749,383.63	$507,337.37	$2,061,212.17
1/31/2014	$193,615.90	$589,140.49	**$17,315.95**	$28,185.06	$653,833.38	$507,509.73	$1,989,600.51
2/28/2014	$174,728.14	$589,321.27	**$21,838.65**	$25,812.44	$579,037.60	$507,660.46	$1,898,398.56
3/31/2014	$145,759.94	$589,521.48	**$32,864.04**	$14,416.26	$587,121.37	$507,827.93	$1,877,511.02
4/30/2014	$212,269.95	$589,715.30	**$57,488.51**	$13,161.55	$500,854.36	$508,004.89	$1,881,494.56
5/31/2014	$527,476.23	$589,915.64	**$242,649.90**	$11,760.96	$585,075.54	$508,177.47	$2,465,055.74
6/30/2014	$501,927.96	$590,109.58	**$51,774.25**	$9,323.25	$592,019.23	$508,344.54	$2,253,498.81
7/31/2014	$383,652.42	$160,263.70	**$54,832.55**	-$15,730.31	$645,434.69	$508,517.24	$1,736,970.29
8/31/2014	$280,893.06	$140,186.23	**$57,188.82**	$13,031.33	$664,497.03	$508,690.00	$1,664,486.47
BANK	SNB	Liberty National	**Liberty National**	SNB	SNB	Liberty National	ALL

NOTES:

GF & EF Money Market Accounts at Security National earn about .06% interest.

GF Money Market Account at Liberty Bank is for Opt Out Property Taxes only and earns about .20% interest.

GF Money Market Account w/Loan Amounts earns about .39% interest.

EF Money Market Account at Liberty Bank is the Revenue from the Water Tower Lease Sale & earns about .40% interest.

Funds are transferred from Money Market Accounts to checking accounts for payment of invoices.

All CID deposits at Security National Bank are secured by FDIC Insurance and the balance by a Pledge of Funds for any amounts over the FDIC amounts. This is reviewed quarterly by Security National Bank.

Dakota Dunes Community Improvement District
Combined Fund Balance Sheet
August 31, 2014

	General Fund	Special Revenue Fund	Water Fund	Sewer Fund	Fixed Assets Fund	Totals
Current Assets:						
Cash	$ 478,268.11		$ 1,186,218.36			$ 1,664,486.47
CD's	$ -					$ -
Taxes Receivable - Current	$ 589,978.40					$ 589,978.40
Opt Out Taxes Receivable - Current	$ 216,381.66					$ 216,381.66
Taxes Receivable - Delinquent	$ 5,101.40					$ 5,101.40
Opt Out Taxes Receivable - Delinquent	$ 3,649.47					$ 3,649.47
Accounts Receivable	$ 260.88					$ 260.88
Accounts Receivable - Water			$ 80,000.33			$ 80,000.33
Accounts Receivable - Sewer				$ 42,735.10		$ 42,735.10
Due From General Fund						$ -
Due From Special Revenue Fund	$ 450,117.31					$ 450,117.31
Due From Water Fund	$ 47,108.08					$ 47,108.08
Due From Sewer Fund			$ 230,381.59			$ 230,381.59
Amount to be Provided by GF for Flood Loans					$ 1,625,252.39	$ 1,625,252.39
Inventory - Gas & Diesel in Tanks	$ 2,201.93					$ 2,201.93
Inventory - Street Signs						$ -
Inventory - Fertilizer & Weed Control	$ 12,024.37					$ 12,024.37
Inventory - Ice Melt Chemicals	$ 439.50					$ 439.50
Inventory - Large Sandbags		$ 106,411.50				$ 106,411.50
Inventory - Water Meters & Reading Devices			$ 579.79			$ 579.79
Inventory - Water Treatment Chemicals			$ 16,387.50			$ 16,387.50
Other Assets:						$ -
Deposits - SDPAA (Insurance Pool)	$ 12,190.43					$ 12,190.43
Total Assets	**$ 1,817,721.54**	**$ 106,411.50**	**$ 1,513,567.57**	**$ 42,735.10**	**$ 1,625,252.39**	**$ 5,105,688.10**
Fixed Assets:						
Machinery & Equipment			$ 63,551.38		$ 1,358,345.50	$ 1,421,896.88
Streets & Roadways					$ 14,410,641.86	$ 14,410,641.86
Storm Sewer Collection System					$ 5,403,063.68	$ 5,403,063.68
Landscaping Assets					$ 3,484,470.92	$ 3,484,470.92
Street Lights					$ 1,012,410.28	$ 1,012,410.28
Traffic Signal					$ 275,887.02	$ 275,887.02
Sidewalks					$ 421,934.03	$ 421,934.03
Bike Trail					$ 566,465.24	$ 566,465.24
Street Signage					$ 235,247.72	$ 235,247.72
Buildings					$ 15,000.00	$ 15,000.00
Sewer Collection System				$ 4,263,026.58		$ 4,263,026.58
Sewer Lift Stations				$ 1,008,228.56		$ 1,008,228.56
Water Distribution			$ 3,870,275.07			$ 3,870,275.07
Water Tower Assets			$ 804,830.47			$ 804,830.47
Water Treatment			$ 2,167,188.30			$ 2,167,188.30
Water Supply Assets			$ 1,267,494.74			$ 1,267,494.74
Intangible Asset - Military Road Upsize			$ 244,863.77			$ 244,863.77
Acc Depn - Machinery & Equipment					$ (754,648.25)	$ (754,648.25)
Acc Depn - Streets & Roadways					$ (6,138,886.86)	$ (6,138,886.86)
Acc Depn - Storm Sewer Collection System					$ (2,232,382.67)	$ (2,232,382.67)
Acc Depn - Landscaping Assets					$ (3,482,477.32)	$ (3,482,477.32)
Acc Depn - Street Lights					$ (816,937.53)	$ (816,937.53)
Acc Depn - Traffic Signal					$ (32,186.80)	$ (32,186.80)
Acc Depn - Sidewalks					$ (421,934.03)	$ (421,934.03)
Acc Depn - Bike Trail					$ (219,505.25)	$ (219,505.25)
Acc Depn - Street Signage					$ (204,235.11)	$ (204,235.11)
Acc Depn - Buildings					$ 1,000.00	$ 1,000.00
Acc Depn - Sewer Collection				$ (1,410,066.78)		$ (1,410,066.78)
Acc Depn - Sewer Lift Stations				$ (673,966.57)		$ (673,966.57)
Acc Depn - Water Distribution			$ (1,206,457.17)			$ (1,206,457.17)
Acc Depn - Water Tower			$ (577,736.04)			$ (577,736.04)
Acc Depn - Water Treatment			$ (987,125.52)			$ (987,125.52)
Acc Depn - Water Supply			$ (387,110.19)			$ (387,110.19)
Acc Depn - Machinery & Equip			$ (45,199.92)			$ (45,199.92)
Acc Amortization - Upsize Military Road			$ (75,169.26)			$ (75,169.26)
Work In Progress						$ -
Land			$ 72,925.80	$ 980.10	$ 2,503,680.04	$ 2,577,485.94
Total Fixed Assets	**$ -**	**$ -**	**$ 5,212,231.43**	**$ 3,188,201.89**	**$ 15,385,052.47**	**$ 23,785,485.79**
Amt Avail For Payment of Long-Term Debt						$ -
Total Other Assets	**$ -**		**$ -**			**$ -**
Total Assets	**$ 1,817,721.54**	**$ 106,411.50**	**$ 6,725,799.00**	**$ 3,230,936.99**	**$ 17,010,304.86**	**$ 28,891,173.89**
Current Liabilities:						
Accounts Payable	$ 40,470.13	$ 31,175.14	$ 20,836.96	$ 21,082.39		$ 113,564.62
Wages Payable						$ -
Federal Withholding Taxes Payable						$ -
State Withholding Taxes Payable	$ 103.23					$ 103.23
HSA Payable						$ -
SDRS Payable						$ -
Supplemental Retirement Payable						$ -
Health Insurance Payable						$ -
State Sales Taxes Payable	$ 258.05		$ 12.51			$ 270.56
State Excise Taxes Payable						$ -
Deferred Revenue	$ 811,790.13		$ 494,614.58			$ 1,306,404.71
Deferred Revenue - Franchise Fees						$ -
Due to General Fund		$ 450,117.31	$ 47,108.08			$ 497,225.39
Due to Water Fund	$ 2,507.84			$ 230,381.59		$ 232,889.43
Due to Sewer Fund						$ -
Total Current Liabilities	**$ 855,129.38**	**$ 481,292.45**	**$ 562,572.13**	**$ 251,463.98**	**$ -**	**$ 2,150,457.94**
Long-Term Liabilities:						
Accrued Leave Payable			$ 5,655.20	$ 1,885.08	$ 7,637.33	$ 15,177.61
Long-Term Debt - Levee Construction					$ 514,238.64	$ 514,238.64
State of South Dakota Flood Loan					$ 1,111,013.75	$ 1,111,013.75
Total Long-Term Liabilities	**$ -**	**$ -**	**$ 5,655.20**	**$ 1,885.08**	**$ 1,632,889.72**	**$ 1,640,430.00**
Fund Equity:						
Customer Deposits for Utility Services			$ 500.00			$ 500.00
Cont. From South Dakota			$ 471,292.00			$ 471,292.00
Contributions From DDD & DDCA			$ 10,248,254.94	$ 186,876.00	$ 1,021,072.00	$ 11,456,202.94
Contributions From Dunham & WE Investments			$ 709,931.00	$ 64,756.00	$ 438,808.00	$ 1,213,545.00
Cont. Capital - Fixed Assets						$ -
Unreserved Fund Balance	$ 905,403.34		$ (5,272,456.27)	$ 2,725,955.93	$ 13,917,535.14	$ 12,276,438.14
Reserved Fund Balance	$ 57,188.82	$ (374,880.95)				$ (317,692.13)
Total Fund Equity	**$ 962,592.16**	**$ (374,880.95)**	**$ 6,157,571.67**	**$ 2,977,587.93**	**$ 15,377,415.14**	**$ 25,100,285.95**
Total Liabilities & Fund Balance	**$ 1,817,721.54**	**$ 106,411.50**	**$ 6,725,799.00**	**$ 3,230,936.99**	**$ 17,010,304.86**	**$ 28,891,173.89**

Dakota Dunes CID Cash Flow 08/01/2014 To 08/31/2014 For General Fund	August-14		Year to Date
Cash Flow From All Activities	($70,422.06)		
Net Income (Loss)		**($70,422.06)**	**$8,473.81**
Accounts Receivable			
Current Taxes Receivable	$6,292.51		($573,389.40)
Current Opt Out Taxes Receivable	$2,319.63		($206,879.55)
Delinquent Taxes Receivable			($2,192.93)
Delinquent Opt Out Taxes Rec			($1,481.68)
Accounts Receivable	$5,922.03		$7,438.96
Due from Water	($68,750.70)		($319,176.51)
Due from Special Revenue			$0.00
Due From Sewer			$0.00
Total Accounts Receivable		**($54,216.53)**	**($1,095,681.11)**
Inventory			
Fuel Inventory - Gas	$504.59		$526.95
Fuel Inventory - Diesel	$104.94		$1,281.99
Fertilizer & Weed Control	$485.83		($3,752.55)
Ice Melt Chemicals	$0.00		$370.87
Total Inventory		**$1,095.36**	**($1,572.74)**
Changes in Current Liabilities			
Accounts Payable			
Accounts Payable	$11,663.83		$10,640.88
Due to Enterprise Fund			
Wages Payable			($2,200.83)
HSA Payable			($7,450.00)
State of South Dakota Loan for Flood			
Total Accounts Payable		**$11,663.83**	**$990.05**
Taxes Payable			
State Withholding Taxes Payable			$103.23
State Sales Tax Payable	$10.98		($27.19)
Payroll Taxes			$0.00
Total Taxes Payable		**$10.98**	**$76.04**
Other Current Liabilities			
Deferred Revenue	($8,612.14)		$795,257.15
Total Other Current Liabilities		**($8,612.14)**	**$795,257.15**
Total Cash Flow From Operating Activities		**($120,480.56)**	**($292,456.80)**
Retained Earnings			
Unreserved Fund Balance - Undesignated			
Total Retained Earnings			
Changes in Investments			
Short-Term Investments			
CD's @ 1st Fin Bank			
Total Changes to Investments		**$0.00**	**$0.00**
Total Cash Flow From Financing Activities			
Net Increase (Decrease) In Cash		**($120,480.56)**	**($292,456.80)**
Cash Accounts Beginning Balance			
General Fund Cash	$598,748.67		
Total Cash Account Beginning Balances		**$598,748.67**	**$770,724.91**
Net Increase (Decrease) In Cash		($120,480.56)	($292,456.80)
Ending Cash Balance		**$478,268.11**	**$478,268.11**

Dakota Dunes CID Cash Flow 08/01/14 to 08/31/14 For Water Fund	August-14		Year to Date
Cash Flow From Operating Activities	$33,906.23		
Net Income (Loss)		**$33,906.23**	**($5,777.36)**
Depreciation Expense			
General Government - Depreciation Expense	$15,049.12		$125,485.39
General Government - Amortization Expense	$806.16		$6,449.28
		$15,855.28	**$131,934.67**
Accounts Receivable			
Accounts Receivable	$0.00		$0.00
Accounts Receivable - Water	($10,013.42)		($58,164.15)
Due From General Fund	$49,615.92		($130,940.80)
Due From Sewer Fund	($46,628.10)		($41,108.91)
Total Accounts Receivable		**($7,025.60)**	**($230,213.86)**
Inventory			
Water Meter Inventory	$853.39		$4,582.17
Water Plant Chemical Inventory	$487.30		($9,118.91)
Total Inventory		**$1,340.69**	**($4,536.74)**
Changes In Current Liabilities			
Accounts Payable			
Accounts Payable	$3,970.14		$5,292.91
Due to General Fund			
Wages Payable	$0.00		($901.02)
Customer Deposits for Water Service	($50.00)		($100.00)
Accrued Leave Payable			
State Sales Taxes Payable			$12.51
Deferred Revenue			
Total Accounts Payable		**$3,920.14**	**$4,304.40**
Capital Donations or Purchases			
Total Cash Flow From Operating Activities		**$47,996.74**	**($104,288.89)**
Changes In Investments			
Short-Term Investments			
CD's			
Changes in Long-Term Debt			
Current Maturities of Long-Term Debt			
SRF Loan - Long-Term Debt			
Total Changes to Investments		**$0.00**	**$0.00**
Total Cash Flow From Financing Activities			**$0.00**
Net Increase (Decrease) In Cash		**$47,996.74**	**($104,288.89)**
Cash Accounts Beginning Balance			
Water Fund Cash	**$1,138,221.62**		
Total Cash Account Beginning Balances		**$1,138,221.62**	**$1,290,507.25**
Net Increase (Decrease) In Cash		$47,996.74	($104,288.89)
Ending Cash Balance		**$1,186,218.36**	**$1,186,218.36**

Dakota Dunes Community Improvement
Statement of Revenues & Expenditures
General Fund
Sunday, August 31, 2014

	Actual August 2014	Budgeted August 2014	Variance For Month	Year-to-Date Actual	Year-to-Date Budget	Year-to-Date Variance	Percent	2014 Budget
Revenues & Sources								
Property Taxes	$6,292.51	$39,000.00	($32,707.49)	$672,709.74	$664,000.00	$8,709.74	101%	$1,255,110.00
Opt Out Property Taxes	2,319.63		2,319.63	249,601.13		249,601.13	0%	
Property Tax Penalties	100.92	136.00	(35.08)	1,232.64	952.00	280.64	129%	1,500.00
Miscellaneous Revenues				715.62	600.00	115.62	119%	1,000.00
Contract Revenues	2,040.00	3,830.00	(1,790.00)	11,607.50	17,290.00	(5,682.50)	67%	25,000.00
Damage Revenues - Insurance Receipts				1,547.00		1,547.00	0%	
Cable Franchise Revenues				17,949.26	17,000.00	949.26	106%	17,000.00
Right of Way Revenues		100.00	(100.00)		500.00	(500.00)	0%	500.00
Solicitation Revenues				100.00	50.00	50.00	200%	50.00
Rental Revenues	187.50	208.00	(20.50)	1,500.00	1,664.00	(164.00)	90%	2,500.00
Interest Revenues	68.99	200.00	(131.01)	1,583.16	1,600.00	(16.84)	99%	2,400.00
Total Revenues	**11,009.55**	**43,474.00**	**(32,464.45)**	**958,546.05**	**703,656.00**	**254,890.05**	**136%**	**1,305,060.00**
General Expenditures								
Board Fees	187.50	188.00	(0.50)	1,562.50	1,504.00	58.50	104%	2,256.00
District Manager Salary	3,300.00	3,270.00	30.00	26,400.00	26,610.00	(210.00)	99%	38,920.00
Administrative Assistant		1,648.00	(1,648.00)	4,695.74	14,213.00	(9,517.26)	33%	20,657.00
Legal Fees	1,037.06	1,000.00	37.06	3,022.74	8,000.00	(4,977.26)	38%	12,000.00
Audit Fees							0%	18,000.00
Finance Officer	2,009.60	2,000.00	9.60	16,880.64	17,841.00	(960.36)	95%	25,441.00
FICA	1,332.27	1,500.00	(167.73)	11,730.43	12,000.00	(269.57)	98%	20,006.00
South Dakota Retirement	998.94	1,145.00	(146.06)	8,938.06	9,160.00	(221.94)	98%	13,741.00
Unemployment Insurance				8,183.50		8,183.50	0%	
Workers' Compensation				6,488.56	6,500.00	(11.44)	100%	6,500.00
Employee Group Health Ins	6,607.50	7,600.00	(992.50)	55,763.57	59,400.00	(3,636.43)	94%	87,200.00
Employee Group LTD Ins	208.26	209.00	(0.74)	1,204.98	1,672.00	(467.02)	72%	2,500.00
Liability Insurance				12,869.09	13,000.00	(130.91)	99%	13,000.00
Professional Fees		2,500.00	(2,500.00)	13,789.78	20,000.00	(6,210.22)	69%	30,000.00
Publishing	63.20	100.00	(36.80)	612.30	800.00	(187.70)	77%	1,200.00
Rent	4,019.19	4,400.00	(380.81)	32,565.46	35,200.00	(2,634.54)	93%	53,000.00
Travel & Conference		300.00	(300.00)	1,671.86	2,400.00	(728.14)	70%	3,600.00
Telephone	300.00	300.00		2,538.85	2,400.00	138.85	106%	3,600.00
Other Expense	950.84	100.00	850.84	6,073.43	800.00	5,273.43	759%	1,200.00
CID Programs		2,000.00	(2,000.00)	15,800.00	16,000.00	(200.00)	99%	24,000.00
Total General Expenditures	**21,014.36**	**28,260.00**	**(7,245.64)**	**230,791.49**	**247,500.00**	**(16,708.51)**	**93%**	**376,821.00**
Public Safety								
Building Inspections	420.00	550.00	(130.00)	3,820.00	4,100.00	(280.00)	93%	6,000.00
Security - Telephone	25.00		25.00	200.00		200.00	0%	
Security - Contract Labor	9,393.00	11,000.00	(1,607.00)	75,222.00	88,000.00	(12,778.00)	85%	132,000.00
Security - Other Safety				975.45		975.45	0%	
Total Public Safety	**9,838.00**	**11,550.00**	**(1,712.00)**	**80,217.45**	**92,100.00**	**(11,882.55)**	**87%**	**138,000.00**
Streets & Roadways Admin								
Public Works Mgr Salary	2,461.60	2,500.00	(38.40)	20,677.47	22,295.00	(1,617.53)	93%	32,295.00
Salaries				23,934.94	25,200.00	(1,265.06)	95%	25,400.00
Salaries - Snow Overtime				5,901.05	5,100.00	801.05	116%	7,400.00
Property & Auto Insurance				4,525.50	4,700.00	(174.50)	96%	4,700.00
Total Streets & Rdwys Admin	**2,461.60**	**2,500.00**	**(38.40)**	**55,038.96**	**57,295.00**	**(2,256.04)**	**96%**	**69,795.00**

Dakota Dunes Community Improvement
Statement of Revenues & Expenditures
General Fund
Sunday, August 31, 2014

	Actual August 2014	Budgeted August 2014	Variance For Month	Year-to-Date Actual	Year-to-Date Budget	Year-to-Date Variance	Percent	2014 Budget
Streets & Roadways								
Streets Repairs & Mtc	16,548.00	8,000.00	8,548.00	21,773.01	32,500.00	(10,726.99)	67%	40,500.00
Storm Drainage Maintenance		10,000.00	(10,000.00)	4,046.95	26,000.00	(21,953.05)	16%	50,000.00
Storm Drainage Utilities	81.42	150.00	(68.58)	598.64	1,200.00	(601.36)	50%	1,800.00
Street Light Maintenance		2,000.00	(2,000.00)	17,558.52	16,000.00	1,558.52	110%	24,000.00
Street Light Supplies		100.00	(100.00)		800.00	(800.00)	0%	1,200.00
Street Light Utilities	2,683.36	2,600.00	83.36	21,020.27	21,000.00	20.27	100%	31,800.00
Snow Removal	2,049.14		2,049.14	29,242.02	17,000.00	12,242.02	172%	30,500.00
Street Sign Maintenance	308.57	300.00	8.57	1,637.66	2,400.00	(762.34)	68%	3,600.00
Street Cleaning	1,471.44	500.00	971.44	10,182.96	3,400.00	6,782.96	299%	4,900.00
Total Streets & Roadways	**23,141.93**	**23,650.00**	**(508.07)**	**106,060.03**	**120,300.00**	**(14,239.97)**	**88%**	**188,300.00**
Parkways & Boulevards								
Salaries	8,590.16	8,900.00	(309.84)	47,764.12	43,300.00	4,464.12	110%	78,900.00
Seasonal Wages	3,486.00	10,300.00	(6,814.00)	26,224.05	32,500.00	(6,275.95)	81%	32,500.00
Repairs & Maintenance	4,370.15	2,500.00	1,870.15	25,720.81	20,000.00	5,720.81	129%	38,000.00
Supplies	174.64	500.00	(325.36)	2,783.40	4,000.00	(1,216.60)	70%	5,500.00
Landscape Materials	2,823.78	3,000.00	(176.22)	7,057.22	19,000.00	(11,942.78)	37%	19,000.00
Fertilizer & Weed Control	706.33		706.33	7,591.35	5,000.00	2,591.35	152%	10,000.00
Irrigation Maintenance	404.73	1,500.00	(1,095.27)	4,928.64	8,500.00	(3,571.36)	58%	10,500.00
Tree Maintenance		5,000.00	(5,000.00)	6,234.54	20,000.00	(13,765.46)	31%	30,000.00
Irrigation Water	4,419.93	9,000.00	(4,580.07)	15,434.76	27,000.00	(11,565.24)	57%	38,000.00
Emergency Disaster Prevention				1,988.78		1,988.78	0%	
Total Parkways & Boulevards	**24,975.72**	**40,700.00**	**(15,724.28)**	**145,727.67**	**179,300.00**	**(33,572.33)**	**81%**	**262,400.00**
Total Operating Expenditures	**81,431.61**	**106,660.00**	**(25,228.39)**	**617,835.60**	**696,495.00**	**(78,659.40)**	**89%**	**1,035,316.00**
Net Rev/Exp for Operations	**(70,422.06)**	**(63,186.00)**	**(7,236.06)**	**340,710.45**	**7,161.00**	**333,549.45**	**4758%**	**269,744.00**
Capital Outlay & Loan Payments								
Capital Outlay				122,071.93	65,000.00	57,071.93	188%	115,000.00
Flood Loan Principal Payments				169,720.55		169,720.55	0%	
Interest Expense Payments				40,444.16		40,444.16	0%	
Total Capital Expenditures				**332,236.64**	**65,000.00**	**267,236.64**	**511%**	**115,000.00**
Net Rev/Exp Incl Capital & Lease	**(70,422.06)**	**(63,186.00)**	**(7,236.06)**	**8,473.81**	**(57,839.00)**	**66,312.81**	**-15%**	**154,744.00**

Dakota Dunes Community Improvement
Statement of Revenues & Expenditures
Water Fund
Sunday, August 31, 2014

	Actual August 2014	Budgeted August 2014	Variance For Month	Actual	Year-to-Date Budget	Year-to-Date Variance	Percent	2014 Budget
Revenues & Sources								
Residential Water Sales	$59,890.24	$60,000.00	($109.76)	$257,932.74	$248,300.00	$9,632.74	104%	$375,000.00
Bulk Water Sales	4,419.93	8,500.00	(4,080.07)	15,434.76	23,000.00	(7,565.24)	67%	33,000.00
Commercial Water Sales	22,553.35	25,000.00	(2,446.65)	116,882.21	105,000.00	11,882.21	111%	160,000.00
Water Meter Installation	75.00	150.00	(75.00)	712.50	975.00	(262.50)	73%	1,500.00
Late Fees	636.77	300.00	336.77	2,554.00	2,400.00	154.00	106%	3,750.00
Rental Revenues	1,135.42	533.00	602.42	4,866.42	4,264.00	602.42	114%	6,500.00
Contract Revenues		787.50	(787.50)	1,670.62	6,300.00	(4,629.38)	27%	9,375.00
Interest Earned	197.99	200.00	(2.01)	1,552.51	1,600.00	(47.49)	97%	2,400.00
Total Revenues	**88,908.70**	**95,470.50**	**(6,561.80)**	**401,605.76**	**391,839.00**	**9,766.76**	**102%**	**591,525.00**
General Expenditures								
Board Fees	140.60	141.00	(0.40)	1,171.95	1,128.00	43.95	104%	1,688.00
District Manager Salary	2,475.00	2,381.25	93.75	19,800.00	19,050.00	750.00	104%	28,575.00
Legal Fees	259.27	300.00	(40.73)	1,725.20	2,400.00	(674.80)	72%	3,750.00
Accounting Fees							0%	6,675.00
Finance Officer Salary	1,507.20	1,506.75	0.45	12,660.48	12,807.75	(147.27)	99%	19,588.50
Depreciation	15,049.12	15,500.00	(450.88)	125,485.39	124,000.00	1,485.39	101%	186,000.00
Amortization	806.16	806.00	0.16	6,449.28	6,448.00	1.28	100%	9,672.00
Public Works Mgr	1,846.20	1,800.00	46.20	15,508.08	15,375.00	133.08	101%	23,550.00
Public Works Staff	4,087.00	4,200.00	(113.00)	34,944.07	33,375.00	1,569.07	105%	50,175.00
Administrative Assistant		1,233.00	(1,233.00)	3,521.80	10,481.50	(6,959.70)	34%	16,031.00
FICA	736.55	825.00	(88.45)	6,283.48	6,750.00	(466.52)	93%	10,125.00
South Dakota Retirement	577.70	750.00	(172.30)	5,028.99	5,550.00	(521.01)	91%	8,550.00
Workers Compensation				2,183.50	2,175.00	8.50	100%	2,175.00
Employee Group Health Ins	2,718.45	3,075.00	(356.55)	22,933.01	24,600.00	(1,666.99)	93%	37,800.00
Liability Insurance				5,935.91	6,750.00	(814.09)	88%	6,750.00
Professional Fees	2,608.59	375.00	2,233.59	8,728.17	3,000.00	5,728.17	291%	4,500.00
Publishing	75.20	112.50	(37.30)	1,037.41	900.00	137.41	115%	1,500.00
Rent Expense	989.01	975.00	14.01	7,913.45	7,800.00	113.45	101%	12,000.00
Security Expense	66.00	160.00	(94.00)	558.00	612.00	(54.00)	91%	1,000.00
Billing & Collection	456.53	291.00	165.53	2,362.78	2,328.00	34.78	101%	3,500.00
Travel & Conference				1,286.48	1,237.50	48.98	104%	2,250.00
Telephone Expense	176.74	337.50	(160.76)	1,920.27	2,700.00	(779.73)	71%	4,125.00
Other Expense	724.43	750.00	(25.57)	5,983.30	6,000.00	(16.70)	100%	9,750.00
Total General Expenditures	**35,299.75**	**35,519.00**	**(219.25)**	**293,421.00**	**295,467.75**	**(2,046.75)**	**99%**	**449,729.50**
Water Productions & Distribution								
Supply-Repairs & Maintenance		4,000.00	(4,000.00)	1,750.00	20,000.00	(18,250.00)	9%	20,000.00
Bulk Water Purchases	5,049.11	25,000.00	(19,950.89)	22,859.70	54,600.00	(31,740.30)	42%	80,000.00
Utilities - Gas & Electric	4,385.21	5,100.00	(714.79)	24,374.31	23,900.00	474.31	102%	33,000.00
Water Distribution - Repairs & Maintenance	577.96	2,000.00	(1,422.04)	5,386.23	10,000.00	(4,613.77)	54%	10,000.00
Water Distribution - Vehicle Maintenance	249.35	435.00	(185.65)	2,814.47	3,480.00	(665.53)	81%	5,250.00
Purification - Chemical Expense	8,074.68	9,000.00	(925.32)	37,303.05	42,100.00	(4,796.95)	89%	60,000.00
Purification - Lab Expense	221.08	400.00	(178.92)	3,263.06	3,200.00	63.06	102%	5,000.00
Purification - Repairs & Maintenance	38.63	3,000.00	(2,961.37)	4,707.14	15,000.00	(10,292.86)	31%	15,000.00
Water Meter Installation	1,106.70	1,500.00	(393.30)	11,504.16	12,000.00	(495.84)	96%	18,000.00
Total Water Expenditures	**19,702.72**	**50,435.00**	**(30,732.28)**	**113,962.12**	**184,280.00**	**(70,317.88)**	**62%**	**246,250.00**
Total Expenditures	**55,002.47**	**85,954.00**	**(30,951.53)**	**407,383.12**	**479,747.75**	**(72,364.63)**	**85%**	**695,979.50**
Net Rev/Exp from Operations	**33,906.23**	**9,516.50**	**24,389.73**	**(5,777.36)**	**(87,908.75)**	**82,131.39**	**7%**	**(104,454.50)**
Net Rev/Exp inc Capital Don	**33,906.23**	**9,516.50**	**24,389.73**	**(5,777.36)**	**(87,908.75)**	**82,131.39**	**7%**	**(104,454.50)**

Dakota Dunes Community Improvement
Statement of Revenues & Expenditures
Sewer Fund
Sunday, August 31, 2014

	Actual August 2014	Budgeted August 2014	Variance For Month	Actual	Year-to-Date Budget	Year-to-Date Variance	Percent	2014 Budget
Revenues & Sources								
Residential Sewer Sales	$21,812.60	$21,500.00	$312.60	$171,449.91	$172,000.00	($550.09)	100%	$260,000.00
Commercial Sewer Sales	9,328.00	9,500.00	(172.00)	69,873.74	70,600.00	(726.26)	99%	105,000.00
Water Meter Installation	25.00	50.00	(25.00)	237.50	325.00	(87.50)	73%	500.00
Late Fees	395.59	100.00	295.59	2,277.88	800.00	1,477.88	285%	1,250.00
Contract Revenues		262.50	(262.50)	556.88	2,100.00	(1,543.12)	27%	3,125.00
Interest Earned	8.40	8.33	0.07	63.30	66.64	(3.34)	95%	100.00
Total Revenues	**31,569.59**	**31,420.83**	**148.76**	**244,459.21**	**245,891.64**	**(1,432.43)**	**99%**	**369,975.00**
General Expenditures								
Board Fees	46.90	47.00	(0.10)	390.55	376.00	14.55	104%	563.00
District Manager Salary	825.00	793.75	31.25	6,600.00	6,350.00	250.00	104%	9,525.00
Legal Fees	86.42	100.00	(13.58)	248.06	800.00	(551.94)	31%	1,250.00
Accounting Fees							0%	2,225.00
Finance Officer Salary	502.40	502.25	0.15	4,220.17	4,269.25	(49.08)	99%	6,529.50
Depreciation	9,905.91	9,500.00	405.91	78,540.49	76,000.00	2,540.49	103%	114,000.00
Public Works Manager	615.40	600.00	15.40	5,169.37	5,125.00	44.37	101%	7,850.00
Public Works Staff	1,266.57	1,400.00	(133.43)	10,797.00	11,125.00	(328.00)	97%	16,725.00
Administrative Assistant		411.00	(411.00)	1,173.94	3,493.75	(2,319.81)	34%	5,343.00
FICA	245.52	275.00	(29.48)	2,094.50	2,250.00	(155.50)	93%	3,375.00
South Dakota Retirement	192.57	250.00	(57.43)	1,676.31	1,850.00	(173.69)	91%	2,850.00
Workers Compensation				727.94	725.00	2.94	100%	725.00
Employee Group Health Ins	906.14	1,025.00	(118.86)	7,644.34	8,199.50	(555.16)	93%	12,599.50
Liability Insurance				1,978.64	2,250.00	(271.36)	88%	2,250.00
Professional Fees		125.00	(125.00)	1,019.71	1,000.00	19.71	102%	1,500.00
Publishing	15.79	37.50	(21.71)	141.50	300.00	(158.50)	47%	500.00
Rent Expense	329.67	325.00	4.67	2,637.80	2,600.00	37.80	101%	4,000.00
Security Expense		180.00	(180.00)	540.00	540.00		100%	700.00
Billing & Collection	456.52	291.00	165.52	1,965.27	2,328.00	(362.73)	84%	3,500.00
Travel & Conference				374.45	412.50	(38.05)	91%	750.00
Telephone Expense	128.98	112.50	16.48	1,025.14	900.00	125.14	114%	1,375.00
Other Expense	241.48	250.00	(8.52)	1,784.79	2,000.00	(215.21)	89%	3,250.00
Total General Expenditures	**15,765.27**	**16,225.00**	**(459.73)**	**130,749.97**	**132,894.00**	**(2,144.03)**	**98%**	**201,385.00**
Sewer Collection								
Sewer - Repairs & Maintenance	323.15	4,000.00	(3,676.85)	14,255.95	20,000.00	(5,744.05)	71%	20,000.00
Sewer - Collection & Disposal	20,012.00	16,750.00	3,262.00	151,471.75	134,000.00	17,471.75	113%	201,000.00
Utilities - Gas & Electric	451.53	500.00	(48.47)	3,718.87	4,000.00	(281.13)	93%	6,000.00
Sewer - Vehicle Maintenance	83.11	145.00	(61.89)	938.16	1,160.00	(221.84)	81%	1,750.00
Sewer - Water Meter Installation	368.90	500.00	(131.10)	3,839.04	4,000.00	(160.96)	96%	6,000.00
Total Sewer Expenditures	**21,238.69**	**21,895.00**	**(656.31)**	**174,223.77**	**163,160.00**	**11,063.77**	**107%**	**234,750.00**
Total Expenditures	**37,003.96**	**38,120.00**	**(1,116.04)**	**304,973.74**	**296,054.00**	**8,919.74**	**103%**	**436,135.00**
Net Rev/Exp from Operations	**(5,434.37)**	**(6,699.17)**	**1,264.80**	**(60,514.53)**	**(50,162.36)**	**(10,352.17)**	**121%**	**(66,160.00)**
Donated Capital								
Net Rev/Exp inc. Cap Don	**(5,434.37)**	**(6,699.17)**	**1,264.80**	**(60,514.53)**	**(50,162.36)**	**(10,352.17)**	**121%**	**(66,160.00)**

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT
ALL FUNDS
VOUCHERS PAYABLE
SEPTEMBER, 2014

VENDOR NAME	AMOUNT ($)				
*Jeff Dooley - Salary	$ 4,756.56				
*Dave Fuehrer - Salary	$ 3,357.51				
*Kim Hoffman - Salary	$ 2,769.97				
*Brian Cline - Salary	$ 2,170.91				
*Pat Freeman - Salary	$ 3,085.67				
*Terry Jorgensen - Salary	$ 2,164.73				
*Larry Reemts - Salary	$ 2,321.08				
*Nadine Madsen - Salary	$ 742.45				
*Natalie Hoffman - Seasonal Wages	$ 293.33				
*Casey Johnson - Seasonal Wages	$ 517.16				
*Talon Grijalva - Seasonal Wages	$ 275.84				
*SDSRP - Employee Contribution to Supplemental Retirement	$ 300.00				
*Security National Bank - Employee HSA Contribution	$ 950.00				
*SDRS - Employee & Employer Contribution to SDRS	$ 3,538.40				
*Treasurer, State of Iowa - State Payroll Taxes	$ 268.00				
*AFLAC - Employee Contribution to Insurance	$ 27.70				
*IRS - Payroll Taxes - ACH Payments for August	$ 8,128.60				
*MB Cleaning Service - General Gov't - Other Expense	$ 100.00				
*Welcome Center, LLP - General Gov't - Rent Expense	$ 2,512.71				
*Wellmark Blue Cross - Employee Group Health Insurance Plan	$ 9,536.09				
*Principal Life Insurance - Employee Group Insurance	$ 555.59				
*Reliance Standard Dental Insurance - Employee Group Insurance	$ 462.75				
*Larry Reemts - Employee Expense Report	$ 39.58				
TOTAL OF INVOICES PAID PRIOR TO MEETINGS	**$48,874.63**	**GF**	**SRF**	**WA**	**SW**
Board Members - Board Fees for Month	$ 475.00	$ 237.50		$ 178.13	$ 59.38
Bader's - Streets - Maintenance	$ 8,274.00	$ 8,274.00			
Bear Graphics - General Gov't - Billing & Collection	$ 913.05			$ 456.53	$ 456.52
Ben Fish Tire	$ 52.00	$ 52.00			
Bomgaars - Pkwys - Supplies/Equip Mtc	$ 144.60	$ 133.84		$ 10.76	
Stephanie Brown - Refund Overpayment on Final Bill	$ 35.32			$ 35.32	
City of Sioux City - Bulk Water Purchase / Sewer Collection & Disposal	$ 25,061.11			$ 5,049.11	$ 20,012.00
Civil Engineers - FLOOD 2014	$ 11,235.64		$ 11,235.64		
Clemon Analytic - Purification - Lab Fees	$ 24.00			$ 24.00	
Crary Law Firm - Legal Fees	$ 2,216.25	$ 1,037.06	$ 833.50	$ 259.27	$ 86.42
Dakota Dunes Country Club - Rent Expense	$ 2,632.40	$ 2,632.40			
Dakota Dunes/North Sioux City Times - Publishing	$ 32.89	$ 16.45		$ 12.33	$ 4.11
Electronic Engineering - Telephone	$ 17.95			$ 13.46	$ 4.49
Ferguson Waterworks - Water Meter Inventory	$ 2,320.59			$ 2,320.59	
Gary Roan Construction - Inspection Fees	$ 420.00	$ 420.00			
Guarantee Oil - Pkwys - Supplies	$ 9.69	$ 9.69			
HDR Engineering - Professional Fees	$ 2,608.59			$ 2,608.59	
Hach Company - Purification - Lab fees	$ 267.89			$ 267.89	
Hawkins Inc - Water Chemical Inventory	$ 7,587.38			$ 7,587.38	
Hydraulic Sales & Service - Street Cleaning	$ 324.13	$ 324.13			
Iowa Prison Industries - Street Signs	$ 103.05	$ 103.05			
Istate Truck Center - Pkwys - Equipment Mtc / Snow Removal	$ 4,061.64	$ 4,061.64			
Jones Pest Control - General Gov't - Other Expense	$ 31.67	$ 15.84		$ 11.87	$ 3.96
K & P Service - Water Dist - Mtc/Sewer - Mtc	$ 76.96			$ 57.72	$ 19.24
Leader-Courier - Publishing	$ 58.60	$ 29.30		$ 21.98	$ 7.32
Lieber Construction Inc. - Flood 2014 - Fill Moved to KMEG Borrow Site	$ 18,876.00		$ 18,876.00		
Long Lines - Telephone	$ 592.44	$ 325.00		$ 147.44	$ 120.00
Malloy Electric - Sewer - Maintenance	$ 3,059.99				$ 3,059.99
Matheson Tri-Gas - Pkwys - Supplies	$ 44.81	$ 44.81			
Menard's - Pkwys - Supplies	$ 51.16	$ 51.16			
Metro Electric - Street Light - Maintenance	$ 669.40	$ 669.40			
MidAmerican Energy - Utilities	$ 7,992.84	$ 3,156.10		$ 4,385.21	$ 451.53
Mitchell Electric - Parkway - Landscape Materials	$ 638.78	$ 638.78			
Eric & Heather Naught - Refund Overpayment on Final Bill	$ 38.66			$ 38.66	
Oil Express Inc - Street Cleaning	$ 1,032.50	$ 1,032.50			
Perkins Office Solutions - General Gov't - Other Expense	$ 297.96	$ 148.98		$ 111.72	$ 37.26
Postmaster - General Gov't - Billing & Collection	$ 600.00			$ 300.00	$ 300.00
Reams Sprinkler Supply - Pkwys - Irrigation Maintenance	$ 142.27	$ 142.27			
Sanitation Products, Inc.	$ 270.00	$ 270.00			
Sapp Brothers - Gas & Diesel Inventory	$ 3,239.43	$ 3,239.43			
Sioux City Night Patrol - Public Safety - Contract Labor	$ 9,393.00	$ 9,393.00			
Sioux Valley Environmental - Water Chemical Inventory	$ 85.00			$ 85.00	
South Dakota Dept of Revenue - Purification - Lab Fees	$ 176.00			$ 176.00	
South Dakota One Call - Water Dist - Mtc/Sewer - Mtc	$ 55.65			$ 41.74	$ 13.91
Speedy Lube - Pkwys - Equipment Maintenance	$ 46.87	$ 46.87			
Union County - General Gov't - Other Expense	$ 30.00	$ 30.00			
UnityPoint Clinic - General Gov't - Other Expense	$ 60.00	$ 30.00		$ 22.50	$ 7.50
Yankton Daily Press & Dakotan - Publishing	$ 27.80			$ 27.80	
Zimco - Pkwys - Chemical Inventory/Expense	$ 220.50	$ 220.50			
Vouchers to be Paid at Meeting	**$ 116,625.46**	**$ 36,785.70**	**$ 30,945.14**	**$ 24,251.00**	**$ 24,643.63**
Voucher Totals	**$165,500.09**				

* Indicates payment made prior to meeting

	Mar - Feb 2013	Apr - Mar 2013	May - Apr 2013	Jun - May 2013	Jul - Jun 2013	Aug - Jul 2013	Sept - Aug 2013
90	$722,714.11	$722,381.05	$698,726.45	$667,831.04	$636,665.81	$620,523.14	$587,591.00
94	$563,025.57	$584,597.10	$579,058.00	$582,030.91	$586,701.85	$594,572.27	$549,376.83
96	**$159,688.54**	**$137,783.95**	**$119,668.45**	**$85,800.13**	**$49,963.96**	**$25,950.87**	**$38,214.17**
00	451,013.00	450,303.00	435,752.00	415,302.00	394,879.00	382,019.00	363,260.00
18	**$0.35**	**$0.31**	**$0.27**	**$0.21**	**$0.13**	**$0.07**	**$0.11**
12	**$1.25**	**$1.30**	**$1.33**	**$1.40**	**$1.49**	**$1.56**	**$1.51**

y	February	March	April	May	June	July	August
10	8,050.00	8,010.00	9,980.00	21,750.00	29,810.00	50,920.00	46,500.00
10	773.00	796.00	1,029.00	774.00	828.00	11,370.00	15,153.00
6	**8823**	**8806**	**11009**	**22524**	**30638**	**62290**	**61653**
7	**8732**	**7673**	**9431**	**19604**	**27265**	**55025**	**54829**
9	**91**	**1133**	**1578**	**2920**	**3373**	**7265**	**6824**
6	**-0.01**	**-0.13**	**-0.14**	**-0.13**	**-0.11**	**-0.12**	**-0.11**

- Feb 014	Apr - Mar 2014	May - Apr 2014	June - May 2014	July - June 2014	Aug - July 2014	Sept - Aug 2014
3,744.00	$554,505.37	$559,630.76	$583,935.16	$603,329.43	$587,144.16	$579,720.36
8,013.09	$490,896.48	$492,773.97	$492,544.72	$496,962.78	$460,504.23	$424,947.86
5,730.91	**$63,608.89**	**$66,856.79**	**$91,390.44**	**$106,366.65**	**$126,639.93**	**$154,772.50**
8,608.00	339,389.00	343,157.00	349,083.00	350,584.00	328,867.00	310,920.00
$0.16	**$0.19**	**$0.19**	**$0.26**	**$0.30**	**$0.39**	**$0.50**
$1.47	**$1.45**	**$1.44**	**$1.41**	**$1.42**	**$1.40**	**$1.37**

ebruary	March	April	May	June	July	August	Rolling Year
9,980.00	8,310.00	13,960.00	30,510.00	28,310.00	38,130.00	40,560.00	279600
816.00	1,277.00	817.00	1143	3829	2443	3146	29946
10796	**9587**	**14777**	**31653**	**32139**	**40573**	**43706**	**309546**
8834	**8153**	**12292**	**28449**	**32631**	**37272**	**42250**	**285995**
1962	**1434**	**2485**	**3204**	**-492**	**3301**	**1456**	**23551**
-0.18	**-0.15**	**-0.17**	**-0.10**	**0.02**	**-0.08**	**-0.03**	**-0.08**

ril & October every year)

Dakota Dunes Community Improvement District
Sewer Revenues and Expenditures
Enterprise Fund
Rolling One Year Totals

Description	Apr - Mar 2012	May - April 2012	Jun - May 2012	Jul - Jun 2012	Aug - Jul 2012	Sept - Aug 2012	Oct - Sept 2012	Nov - Oct 2012	Dec - Nov 2012	Jan - Dec 2012	Feb - Jan 2013	Mar - Feb 2013	Apr - Mar 2013	May - Apr 2013	Jun - May 2013
Sewer Segment															
Sewer Revenue	$281,476.67	$282,394.39	$282,488.87	$293,981.42	$306,280.50	$317,440.92	$329,813.39	$330,435.25	$331,079.32	$331,867.10	$332,553.93	$333,674.76	$334,537.45	$335,696.00	$336,421.55
Sewer Cost less Depreciation	$310,834.41	$307,948.75	$304,820.07	$302,677.92	$291,197.42	$285,175.26	$285,401.33	$280,015.79	$280,965.15	$282,604.09	$282,249.98	$295,664.65	$300,266.87	$309,414.49	$315,994.65
Net Income	($29,357.74)	($25,554.36)	($22,331.20)	($8,696.50)	$15,083.08	$32,265.66	$44,412.06	$50,419.46	$50,114.17	$49,263.01	$50,303.95	$38,010.11	$34,270.58	$26,281.51	$20,426.90
Gallons to Sioux City	93,920	92,806	93,315	92,153	86,796	83,128	80,846	79,114	79,338	79,403	79,403	79,765	78,672	78,962	78,909
Net per 1000 gallons	($0.31)	($0.28)	($0.24)	($0.09)	$0.17	$0.39	$0.55	$0.64	$0.63	$0.62	$0.63	$0.48	$0.44	$0.33	$0.26
Cost per 1000 gallons	$3.31	$3.32	$3.27	$3.28	$3.35	$3.43	$3.53	$3.54	$3.54	$3.56	$3.55	$3.71	$3.82	$3.92	$4.00

Dakota Dunes Community I
Sewer Revenues and Exper
Enterprise Fund
Rolling One Year Totals

Description	Jul - Jun 2013	Aug - Jul 2013	Sept - Aug 2013	Oct - Sept 2013	Nov - Oct 2013	Dec - Nov 2013	Jan - Dec 2013	Feb - Jan 2014	Mar - Feb 2014	Apr - Mar 2014	May - Apr 2014	Jun - May 2014	Jul - Jun 2014	Aug - Jul 2014	Sept - Aug 2014
Sewer Segment															
Sewer Revenue	$337,098.58	$339,368.67	$340,055.45	$342,262.70	$344,722.53	$346,236.10	$348,046.26	$350,483.00	$351,447.87	$352,848.24	$353,773.36	$355,749.03	$357,886.87	$358,288.07	$358,666.67
Sewer Cost less Depreciation	$324,899.05	$326,220.93	$331,318.65	$328,589.26	$331,693.90	$332,904.09	$328,551.56	$334,628.96	$326,711.32	$332,164.34	$335,018.01	$336,426.85	$338,194.53	$343,025.21	$336,433.48
Net Income	$12,199.63	$13,147.74	$8,736.80	$13,673.44	$13,028.63	$13,332.01	$19,494.70	$15,854.04	$24,736.55	$20,683.90	$18,755.35	$19,322.18	$19,692.34	$15,262.86	$22,233.19
Gallons to Sioux City	79,535	80,27	81,870	83,974	85,597	86,729	88,240	89,866	91,209	92,958	94,430	96,202	97,414	98,549	98,649
Net per 1000 gallons	$0.15	$0.16	$0.11	$0.16	$0.15	$0.15	$0.22	$0.18	$0.27	$0.22	$0.20	$0.20	$0.20	$0.15	$0.23
Cost per 1000 gallons	$4.08	$4.06	$4.05	$3.91	$3.88	$3.84	$3.72	$3.72	$3.58	$3.57	$3.55	$3.50	$3.47	$3.48	$3.41

Dakota Dunes Community Improvement District
Combined Revenues and Expenditures
2014 Enterprise Fund Budget Final - Water Portion

Description	Budget Janaay 2014	Budget February 2014	Budget March 2014	Budget April 2014	Budget May 2014	Budget June 2014	Budget July 2014	Budget August 2014	Budget September 2014	Budget October 2014	Budget November 2014	Budget December 2014	Budget Amounts 2014
Revenues:													
Residential Water Sales	$15,600.00	$14,200.00	$13,500.00	$14,000.00	$28,000.00	$38,000.00	$65,000.00	$60,000.00	$59,000.00	$35,000.00	$19,000.00	$13,700.00	$ 375,000
Bulk Water Sales	$0.00	$0.00	$0.00	$0.00	$1,500.00	$5,000.00	$8,000.00	$8,500.00	$7,000.00	$3,000.00	$0.00	$0.00	$ 33,000
Commercial Water Sales	$11,500.00	$6,300.00	$6,000.00	$7,800.00	$10,400.00	$15,000.00	$23,000.00	$25,000.00	$25,000.00	$16,000.00	$8,800.00	$5,200.00	$ 160,000
Meter Installation Revenues	$0.00	$75.00	$75.00	$150.00	$150.00	$225.00	$150.00	$150.00	$150.00	$150.00	$150.00	$75.00	$ 1,500
Late Fees	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$450.00	$ 3,750
Contract Revenue	$787.50	$787.50	$787.50	$787.50	$787.50	$787.50	$787.50	$787.50	$787.50	$787.50	$787.50	$712.50	$ 9,375
Rentals	$533.00	$533.00	$533.00	$533.00	$533.00	$533.00	$533.00	$533.00	$533.00	$533.00	$533.00	$637.00	$ 6,500
Interest Income	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00	$ 2,400
Total Revenue/Sources	**$ 28,921**	**$ 22,396**	**$ 21,396**	**$ 23,771**	**$ 41,871**	**$ 60,046**	**$ 97,971**	**$ 95,471**	**$ 92,971**	**$ 55,971**	**$ 29,771**	**$ 20,975**	**$ 591,525**
Expenses:													
General Expenses -													
Board Fees	$141.00	$141.00	$141.00	$141.00	$141.00	$141.00	$141.00	$141.00	$141.00	$141.00	$141.00	$137.00	$ 1,688
District Manager Salary	$2,381.25	$2,381.25	$2,381.25	$2,381.25	$2,381.25	$2,381.25	$2,381.25	$2,381.25	$2,381.25	$2,381.25	$2,381.25	$2,381.25	$ 28,575
Legal Fees	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$450.00	$ 3,750
Accounting Fees	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$6,675.00	$0.00	$0.00	$0.00	$ 6,675
Finance Officer Salary	$1,506.75	$1,506.75	$1,506.75	$1,506.75	$1,506.75	$1,506.75	$2,260.50	$1,506.75	$1,506.75	$1,506.75	$1,506.75	$2,260.50	$ 19,589
Depreciation	$15,500.00	$15,500.00	$15,500.00	$15,500.00	$15,500.00	$15,500.00	$15,500.00	$15,500.00	$15,500.00	$15,500.00	$15,500.00	$15,500.00	$ 186,000
Amortization	$806.00	$806.00	$806.00	$806.00	$806.00	$806.00	$806.00	$806.00	$806.00	$806.00	$806.00	$806.00	$ 9,672
Public Works - Manager Salary	$1,800.00	$1,800.00	$1,800.00	$1,800.00	$1,800.00	$1,800.00	$2,775.00	$1,800.00	$1,800.00	$1,800.00	$1,800.00	$2,775.00	$ 23,550
Public Works - Salaries & Wages	$2,250.00	$4,125.00	$4,125.00	$4,125.00	$4,125.00	$4,125.00	$6,300.00	$4,200.00	$4,200.00	$4,200.00	$4,200.00	$4,200.00	$ 50,175
Billing Clerk	$1,233.00	$1,233.00	$1,233.00	$1,233.00	$1,233.00	$1,233.00	$1,850.25	$1,233.00	$1,233.00	$1,233.00	$1,233.00	$1,850.25	$ 16,031
FICA	$600.00	$825.00	$825.00	$825.00	$825.00	$825.00	$1,200.00	$825.00	$825.00	$825.00	$825.00	$900.00	$ 10,125
Retirement (SDRS)	$525.00	$675.00	$675.00	$675.00	$675.00	$675.00	$900.00	$750.00	$750.00	$750.00	$750.00	$750.00	$ 8,550
Workmen's Compensation	$2,175.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$ 2,175
Group Medical Insurance	$3,075.00	$3,075.00	$3,075.00	$3,075.00	$3,075.00	$3,075.00	$3,075.00	$3,075.00	$3,075.00	$3,075.00	$3,525.00	$3,525.00	$ 37,800
Unemployment Compensation	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$ -
Insurance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$6,750.00	$0.00	$0.00	$0.00	$0.00	$ 6,750
Professional Fees & Services	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$ 4,500
Publishing	$112.50	$112.50	$112.50	$112.50	$112.50	$112.50	$112.50	$112.50	$112.50	$112.50	$112.50	$262.50	$ 1,500
Rent	$975.00	$975.00	$975.00	$975.00	$975.00	$975.00	$975.00	$975.00	$975.00	$975.00	$975.00	$1,275.00	$ 12,000
Security Expense	$0.00	$225.00	$49.50	$0.00	$225.00	$49.50	$0.00	$225.00	$0.00	$225.00	$49.50	$226.50	$ 1,275
Billing & Collections	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$465.00	$ 5,250
Travel & Conference Expense	$0.00	$112.50	$375.00	$375.00	$375.00	$0.00	$0.00	$0.00	$375.00	$0.00	$262.50	$375.00	$ 2,250
Telephone Expense	$337.50	$337.50	$337.50	$337.50	$337.50	$337.50	$337.50	$337.50	$337.50	$337.50	$337.50	$412.50	$ 4,125
Other Current Expense	$750.00	$750.00	$750.00	$750.00	$750.00	$750.00	$750.00	$750.00	$750.00	$750.00	$750.00	$1,500.00	$ 9,750
Flood Debt Service													
Interest Expense		$0.00	$0.00		$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
Total General Expenses	**$ 35,278**	**$ 35,691**	**$ 35,778**	**$ 35,728**	**$ 35,953**	**$ 35,403**	**$ 40,474**	**$ 42,478**	**$ 42,553**	**$ 35,728**	**$ 36,265**	**$ 40,427**	**$ 451,754**
Water Production & Distribution -													
Supply - Repairs & Maintenance	$0.00	$0.00	$0.00	$4,000.00	$4,000.00	$4,000.00	$4,000.00	$4,000.00	$0.00	$0.00	$0.00	$0.00	$ 20,000
Bulk Water Purchases	$1,200.00	$1,200.00	$1,400.00	$1,600.00	$1,200.00	$4,500.00	$18,500.00	$25,000.00	$17,500.00	$5,400.00	$1,300.00	$1,200.00	$ 80,000
Pumping - Utilities	$1,500.00	$1,400.00	$1,400.00	$1,400.00	$2,900.00	$3,800.00	$6,400.00	$5,100.00	$3,800.00	$2,500.00	$1,300.00	$1,500.00	$ 33,000
Water Treatment - Rep & Maint	$0.00	$0.00	$0.00	$3,000.00	$3,000.00	$3,000.00	$3,000.00	$3,000.00	$0.00	$0.00	$0.00	$0.00	$ 15,000
Chemicals	$1,400.00	$1,800.00	$1,700.00	$2,000.00	$6,200.00	$7,000.00	$13,000.00	$9,000.00	$8,500.00	$5,300.00	$1,900.00	$2,200.00	$ 60,000
Lab Fees	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$600.00	$ 5,000
Water Distrib - Repairs & Maint	$0.00	$0.00	$0.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$0.00	$0.00	$0.00	$0.00	$ 10,000
Vehicle Maint	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$435.00	$465.00	$ 5,250
Water Meter Installation	$1,500.00	$1,500.00	$1,500.00	$1,500.00	$1,500.00	$1,500.00	$1,500.00	$1,500.00	$1,500.00	$1,500.00	$1,500.00	$1,500.00	$ 18,000
Water Distrib - Supp & Materials													$ -
Total Water Expenses	**$ 6,435**	**$ 6,735**	**$ 6,835**	**$ 16,335**	**$ 21,635**	**$ 26,635**	**$ 49,235**	**$ 50,435**	**$ 32,135**	**$ 15,535**	**$ 6,835**	**$ 7,465**	**$ 246,250**
													$ -
Total Expenditures	**$ 41,713**	**$ 42,426**	**$ 42,613**	**$ 52,063**	**$ 57,588**	**$ 62,038**	**$ 89,709**	**$ 92,913**	**$ 74,688**	**$ 51,263**	**$ 43,100**	**$ 47,892**	**$ 698,004**
Net Revenues/Expenditures	**$ (12,793)**	**$ (20,030)**	**$ (21,217)**	**$ (28,293)**	**$ (15,718)**	**$ (1,992)**	**$ 8,262**	**$ 2,558**	**$ 18,283**	**$ 4,708**	**$ (13,330)**	**$ (26,917)**	**$ (106,479)**

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

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INDEPENDENT AUDITORS' REPORT

Board of Supervisors
Dakota Dunes Community
Improvement District
Union County, 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 DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT, Union County, South Dakota, as of and for the year ended December 31, 2013, and the related notes to the financial statements, which collectively comprise the District'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 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.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, and each major fund of the Dakota Dunes Community Improvement District as of December 31, 2013, and the respective changes in 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 on pages 4 through 11 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We 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 information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Dakota Dunes Community Improvement District's basic financial statements. The 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 Organizations,* and is not a required part of the basic financial statements. The budgetary comparison information on page 42 is presented for purposes of additional analysis and is not a required part of the basic 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 basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic 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 basic 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 September 17, 2014, on our consideration of the Dakota Dunes Community Improvement District'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 Dakota Dunes Community Improvement District's internal control over financial reporting and compliance.

Henjes, Conner, + Williams, P.C.

Certified Public Accountants

Sioux City, Iowa
September 17, 2014

MANAGEMENT'S DISCUSSION AND ANALYSIS

This section of the Dakota Dunes Community Improvement District's annual financial report presents management's discussion and analysis of the District's financial performance for the year ended December 31, 2013. Please read it in conjunction with the District's financial statements, which follow this section.

FINANCIAL HIGHLIGHTS

- The District's General Fund revenues generated from charges for services, property taxes, and other revenues typical to operations was $2,090,539 in 2013, as compared to $2,011,695 in 2012. This was a 3.9 percent increase mainly due to an increase in taxable value. Operating expenses decreased from $1,287,537 in 2012 to $991,781 in 2013. The difference can be attributed to less repair work in 2013 from 2011 flooding than in 2012.

- The District's business-type activities (Enterprise Fund) operating revenue decreased from $1,066,803 in 2012 to $930,975 in 2013, primarily due to the water sold to customers during 2012 for irrigation water being higher than normal levels following the drought in 2012 and to help establish the new landscape materials in 2012 following 2011 flooding. Expenses decreased by 2% from $1,146,663 in 2012 to $1,123,915 in 2013. The decrease in expenses was due primarily to the decrease in water production and associated costs.

- Dakota Dunes Community Improvement District operations in 2011 centered around flood protection and recovery. Some of the recovery carried over into 2012 and 2013, including riverbank reconstruction and enhancement activities. During 2013, the District received $1,631,092 in FEMA/State reimbursements, of which all was applied to the State loan amount leaving a loan balance at the end of 2013 of $1,256,153. In 2013, the District spent $158,198 on preventative measures and repair costs.

OVERVIEW OF THE FINANCIAL STATEMENTS

This annual report consists of three parts – management's discussion and analysis (this section), the basic financial statements, including related notes, and required supplementary information. The basic financial statements include two types of statements that present different views of the District:

- The first two statements are government-wide financial statements that provide both long-term and short-term information about the District's overall financial status.
- The remaining statements are fund financial statements that focus on individual parts of the District government, reporting the District's operations in more detail than the government-wide statements.
  - The governmental funds statements tell how general government services like public safety were financed in the short-term as well as what remains for future spending.
  - Proprietary fund statements offer short- and long-term financial information about the activities that the District operates like businesses. The District has two proprietary funds – the Water Fund and the Sewer Fund.

The financial statements also include notes that explain some of the information in the financial statements and provide more detailed information. The statements are followed by a section of required supplementary information that further explains and supports the information in the financial statements.

The following schedule summarizes the major features of the District's financial statements, including the portion of the District government they cover and the types of information they contain. The remainder of the overview section of the management's discussion and analysis explains the structure and contents of each of the statements.

Major Features of Dakota Dunes' Government-Wide and Fund Financial Statements

	Government-Wide Statements	Fund Statements	
		Governmental Funds	Proprietary Funds
Scope	Entire Dakota Dunes CID (except fiduciary funds and the fiduciary component units)	The activities of the District that are not proprietary or fiduciary, such as finance office, security, and parks	Activities the District operates similar to private businesses, the water and sewer systems
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
Accounting Basis and Measurement Focus	Accrual accounting and economic resources focus	Modified accrual accounting and current financial resources focus	Accrual accounting and economic resources focus
Type of Asset/Liability Information	All assets and liabilities, both financial and capital, and short-term and long-term	Only assets expected to be used up and liabilities that come due during the year or soon thereafter; no capital assets included	All assets and liabilities, both financial and capital, and short-term and long-term
Type of Inflow/Outflow Information	All revenues and expenses during the year, regardless of when cash is received or paid	Revenues for which cash is received during or soon after the end of the year; expenditures when goods or services have been received and payment is due during the year or soon thereafter	All revenues and expenses during the year, regardless of when cash is received or paid

Government-Wide Statements

The government-wide statements report information about the District as a whole using accounting methods similar to those used by private-sector companies. The statement of net position includes all of the government's assets and liabilities. All of the current year's revenues and expenses are accounted for in the statement of activities regardless of when cash is received or paid.

The two government-wide statements report the District's net position and how they have changed. Net position – the difference between the District's assets and liabilities – is one way to measure the District's financial health or position.

- Increases or decreases in the District's net position are an indicator of whether its financial health is improving or deteriorating, respectively.
- To assess the overall health of the District consideration needs to be given to additional nonfinancial factors such as changes in the District's property tax base.

The government-wide financial statements of the District are reported in two categories:

- Governmental Activities -- This category includes most of the District's basic services, such as security, public works, parks department and general administration. Property taxes, charges for services, state and federal grants and interest earnings finance most of these activities.
- Business-type Activities -- The District charges a fee to customers to help cover the costs of certain services it provides. The District's water and sewer systems are included here.

Fund Financial Statements

The fund financial statements provide more detailed information about the District's most significant funds – not the District as a whole. Funds are accounting devices that the District uses to keep track of specific sources of funding and spending for particular purposes.

- State Law requires some of the funds to be established.
- The District Board establishes other funds to control and manage money for particular purposes or to show that it is properly using certain taxes and grants.

The District has two kinds of funds:

- Governmental Funds – Most of the District's basic services are included in the governmental funds, which focus on (1) how cash and other financial assets that can be readily converted to cash, flow in and flow out of these funds and (2) the balances left at year-end that are available for spending. Consequently, the governmental funds statements provide a detailed short-term view that helps determine whether there are more or less financial resources that can be spent in the near future to finance the District's programs. Because this information does not encompass the additional long-term focus of the government-wide statements, additional information is provided on the subsequent page that explains the relationship (or differences) between the statements.
- Proprietary Funds – Services for which the District charges customers a fee are generally reported in proprietary funds. Proprietary funds, like the government-wide statements, provide both short- and long-term financial information. The District's enterprise funds are the same as its business-type activities, but provide more detail and additional information, such as cash flows.

FINANCIAL ANALYSIS OF THE DISTRICT AS A WHOLE

Net Position

The District's combined net position increased by 9.7% between fiscal year 2012 and 2013 - increasing by $2,148,034 (See Table 1).

Table 1
Summary of Net Position

	Governmental Activities		Business-type Activities		Total		Total Percent Change
	2012	2013	2012	2013	2012	2013	
Current and Other Assets	$ 996,119	$ 980,881	$ 1,195,687	$ 1,373,299	$ 2,191,806	$ 2,354,180	7.4%
Capital Assets	15,960,564	15,638,092	8,752,823	8,601,959	24,713,387	24,240,051	-1.9%
Total Assets	$ 16,956,683	$ 16,618,973	$ 9,948,510	$ 9,975,258	$ 26,905,193	$ 26,594,231	-1.2%
Long-term Liabilities Outstanding	$ 4,158,196	$ 1,806,204	$ 7,137	$ 10,068	$ 4,165,333	$ 1,816,272	-56.4%
Other Liabilities	50,526	(128,283)	132,343	214,092	182,869	85,809	-53.1%
Total Liabilities	$ 4,208,722	$ 1,677,921	$ 139,480	$ 224,160	$ 4,348,202	$ 1,902,081	-56.3%
Deferred Revenue	-	-	$ 507,490	$ 494,615	$ 507,490	$ 494,615	-2.5%
Total Deferred Inflows	-	-	$ 507,490	$ 494,615	$ 507,490	$ 494,615	-2.5%
Net Position:							
Net Investment in Capital Assets	$ 15,960,564	$ 15,638,092	$ 8,752,823	$ 8,601,959	$ 24,713,387	$ 24,240,051	-1.9%
Restricted	12,190	12,190	-	-	12,190	12,190	0.0%
Unrestricted	(3,224,793)	(709,230)	548,717	654,524	(2,676,076)	(54,706)	98.0%
Total Net Position	$ 12,747,961	$ 14,941,052	$ 9,301,540	$ 9,256,483	$ 22,049,501	$ 24,197,535	9.7%

The Statement of Net Position presents the assets and liabilities in order of relative liquidity. Liabilities are reported in two components – the amount due within one year and the amount due in more than one year. Long-term liabilities of the District, consisting of compensated absences payable, the State of South Dakota Loan and the Liberty National Bank Loan, have been reported in this manner on the Statement of Net Position. The difference between the District's assets and liabilities is its net position.

The District's net position reflects its investment in capital assets (e.g., land, buildings, machinery and equipment); less any related outstanding debt used to acquire those assets. The District uses these capital assets to provide services to citizens; consequently, these assets are not available for future spending. The increase in net position invested in capital assets, net of related debt is primarily the infrastructure for new additions donated by Dakota Dunes Development Company to the District.

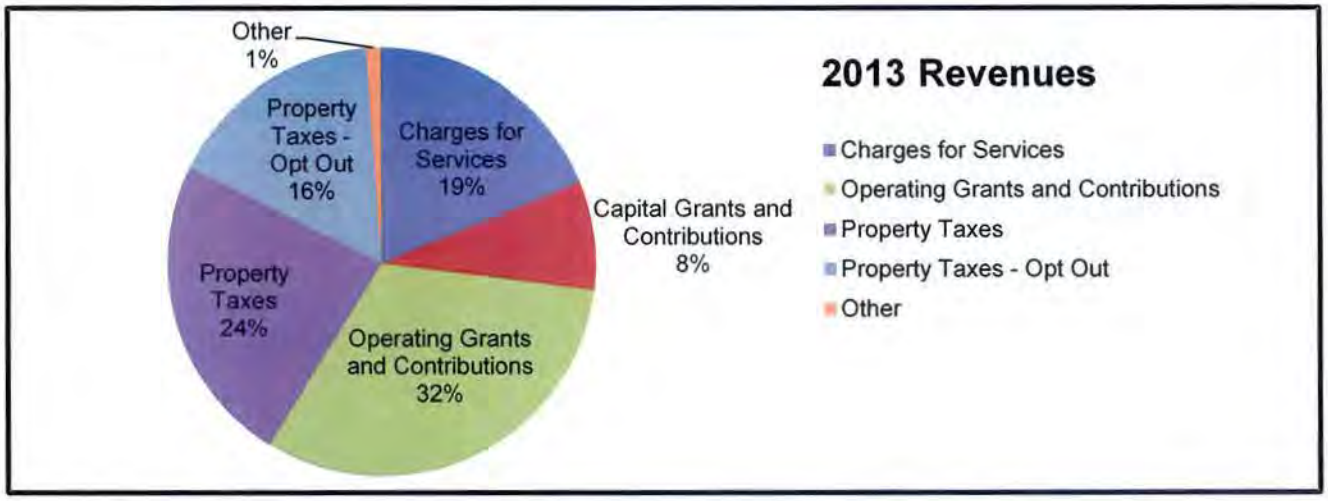
The District's restricted net position represent resources that are subject to external restrictions on how they may be used. These restrictions are normally set by state statute, federal regulations or debt covenants. There was no change in the restricted net position from 2012 to 2013.

The remaining balance of net position are unrestricted and may be used to meet the District's ongoing obligations to citizens and creditors.

At the end of the current year and prior year, the District is able to report positive balances in most of the three categories of net position, both for the government as a whole, as well as for its separate governmental and business-type activities. As noted in the Statement of Net Position the unrestricted balance of net position for governmental activities was negative for the current year and prior year. Unrestricted net position increased from a deficit of $(2,676,076) at the end of 2012 to a deficit of $(54,706) at the end of 2013. This is primarily due to the reduction of the loan with the State of South Dakota for the 2011 flood prevention, resulting from the reimbursements from State and Federal Agencies and the opt-out property tax collections used to pay down the loan balances. The Districts' assets show that it is able to finance day-to-day activities.

Changes in Net Position

The District's revenues (excluding special items) totaled $5,084,780. (See Table 2.) Over half of the District's revenue comes from charges for services and taxes, with 40 cents of every dollar raised coming from property taxes and 19 cents of every dollar raised coming from charges for services (primarily water and sewer operations). Another 32% came from state and federal grants for flood prevention costs and another 8% came from capital grants and contributions.



The total cost of all programs and services decreased by $1,402,884, primarily due to a decrease in public safety expenses incurred in 2013 as compared to 2012 related to the flood of 2011. The District's expenses cover a range of services, with over half related to public work services (road maintenance, water system services and sewer system services).

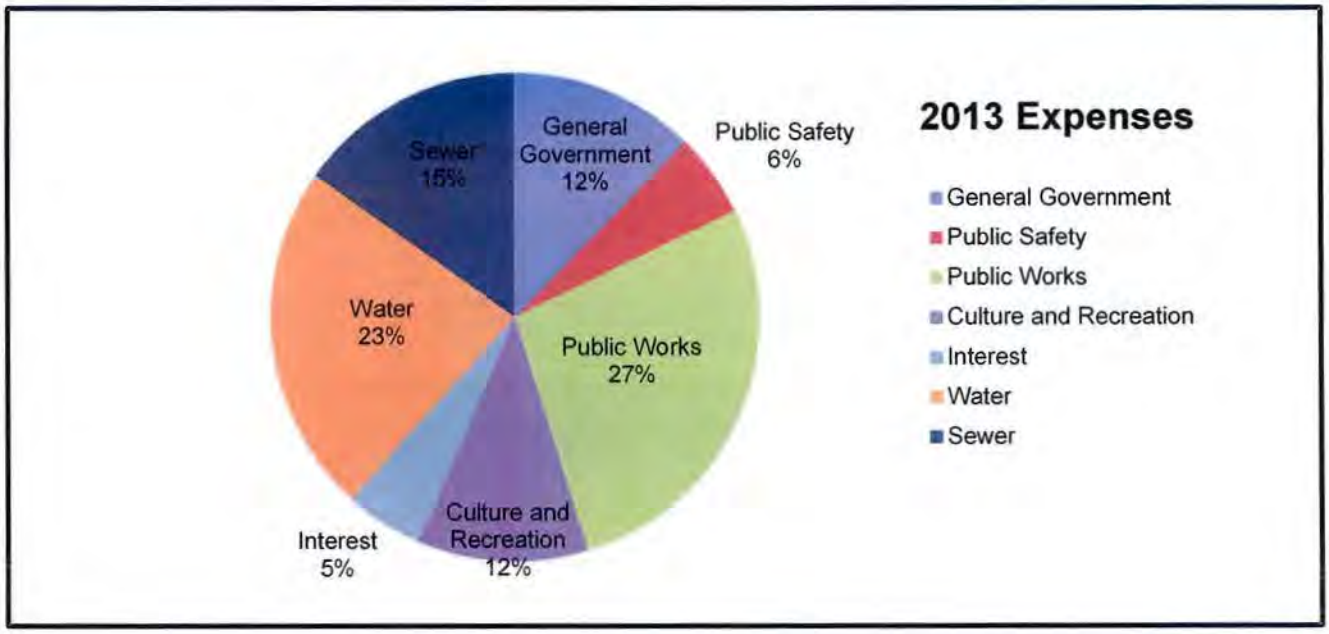


Table 2
Changes in Net Position

	Governmental Activities		Business-type Activities		Total		Total Percent
	2012	2013	2012	2013	2012	2013	Change
Revenues:							
Program Revenues:							
Charges for Services	$ 11,160	$ 27,336	$ 1,065,603	$ 930,975	$ 1,076,763	$ 958,311	-11.0%
Capital Grants and Contributions	-	287,244	-	127,854	-	415,098	0.0%
Operating Grants and Contributions	1,611,280	1,619,095	-	-	1,611,280	1,619,095	0.5%
General Revenues:							
Property Taxes	1,139,744	1,197,856	-	-	1,139,744	1,197,856	5.1%
Property Taxes - Opt Out	845,730	835,569	-	-	845,730	835,569	-1.2%
Other	67,067	38,822	28,450	20,029	95,517	58,851	-38.4%
Total Revenues	$ 3,674,981	$ 4,005,922	$ 1,094,053	$ 1,078,858	$ 4,769,034	$ 5,084,780	6.6%
Expenses:							
General Government	$ 314,897	$ 362,051	$ -	$ -	$ 314,897	$ 362,051	15.0%
Public Safety	1,691,238	161,971	-	-	1,691,238	161,971	-90.4%
Public Works	856,424	802,707	-	-	856,424	802,707	-6.3%
Culture and Recreation	329,080	334,757	-	-	329,080	334,757	1.7%
Interest	972	151,345	-	-	972	151,345	15470.5%
Water	-	-	748,865	680,139	748,865	680,139	-9.2%
Sewer	-	-	398,154	443,776	398,154	443,776	11.5%
Total Expenses	$ 3,192,611	$ 1,812,831	$ 1,147,019	$ 1,123,915	$ 4,339,630	$ 2,936,746	-32.3%
Change in Net Position	$ 482,370	$ 2,193,091	$ (52,966)	$ (45,057)	$ 429,404	$ 2,148,034	
Net Position - Beginning	12,265,591	12,747,961	9,354,506	9,301,540	21,620,097	22,049,501	
Net Position - Ending	$ 12,747,961	$ 14,941,052	$ 9,301,540	$ 9,256,483	$ 22,049,501	$ 24,197,535	

Governmental Activities

Table 2 and the narrative that follows consider the operations of the governmental activities.

Total revenues for the District increased by 6.6%, while total expenses decreased by 32.3%. The main reason for the increase in the revenues is due to an increase in the property tax base, which resulted in a 5.1% increase in property tax revenue. In addition, Capital Contributions donated by Dakota Dunes Development Company for infrastructure in a new addition increased. The primary reason for the large decrease in expenditures is the reduction in Public Safety expenses, which were related to recovering from the 2011 flood.

Business-type Activities

Revenues of the District's business-type activities decreased by 1.4% to $1,078,858 and expenses decreased by 2.0%. Factors contributing to these results included:

- Revenues for Charges for Services decreased due to water usage returning to a more normal level. Residents had new landscape materials to establish in drought conditions in 2012, following the 2011 flood.
- Water Expenses decreased by 9.2%. This is primarily due to a decrease in water produced and water sold following a record year in 2012 when residents were trying to establish new landscape materials in drought conditions.
- Sewer expenses increased due to an overall increase in general expenses and an increase in the amount of sewage sent to the City of Sioux City, primarily due to additional homes and commercial customers.

FINANCIAL ANALYSIS OF THE DISTRICT'S FUNDS

The financial analysis of the District's funds mirror those highlighted in the analysis of governmental and business-type activities presented above. The District currently has two governmental funds - the general fund and the flood prevention fund, and two business-type funds, water and sewer. The flood prevention fund had a deficit balance at December 31, 2013, which is related to the public safety expenses for flood protection and reconstruction activities.

General Fund Budgetary Highlights

General Fund 2013 revenues were over budget by $21,139. The General Fund expenditures consist of General Government, Public Safety, Public Works, Culture and Recreation, Capital Outlay, and Debt Service. Within this budget, Dakota Dunes Community Improvement District spent $69,969 less than budgeted in 2013. This can be explained by lower costs within the general government, public works, and culture and recreation line items. In contrast, public safety was over budget by approximately $2,000 due to higher payroll and vehicle maintenance expenses. Capital outlay was over budget by approximately $85,000 due to the purchase of a mower, two vehicles and computers and Construction in Progress for the Bay Hill Storm Sewer Improvement Project of $28,072.

CAPITAL ASSET ADMINISTRATION

By the end of 2013, the District had invested approximately $24,000,000 in a broad range of capital assets, including, land, buildings, various machinery and equipment. (See Table 3.) This amount represents a net decrease (including additions and deductions) of approximately $473,000, or 1.9%, less than last year.

Table 3
Capital Assets Net of Accumulated Depreciation

	Governmental Activities		Business-type Activities		Total Dollar	Total Percentage
	2012	2013	2012	2013	Change	Change
Land	$ 2,280,557	$ 2,390,402	$ 73,806	$ 73,806	$ 109,845	4.7%
Construction in Progress	-	28,072	-	-	28,072	0.0%
Improvements other than Buildings	13,057,148	12,642,229	8,466,374	8,322,990	(558,303)	-2.6%
Machinery and Equipment	258,971	237,896	26,825	29,019	(18,881)	-6.6%
Intangible Assets	363,888	339,493	185,818	176,144	(34,069)	-6.2%
Total Capital Assets (Net)	$ 15,960,564	$ 15,638,092	$ 8,752,823	$ 8,601,959	$ (473,336)	-1.9%

This year's major capital asset additions included:

- Governmental activities additions include Tract 1 and 2, Dakota Dunes Golf Course 29th Addition, East Pinehurst Trail, Phase IV, donated by Dakota Dunes Development Company
- Construction in Progress is the Bay Hill Storm Sewer Improvement Project. The work began in 2013, but will not be completed until 2014. The project will cost over $100,000.
- Business-type major additions also include donated property by Dakota Dunes Development Company, Tracts 1 & 2, DDGC 29th Addition, East Pinehurst Trail, Phase IV. In addition, two sewer manholes were replaced in the newly developed area.

LONG-TERM DEBT

At the end of 2013, the District had $1,816,272 in long-term obligations. This is a decrease of 56.4% as shown on Table 4 below.

Table 4
Outstanding Debt and Obligations

	Governmental Activities		Business-type Activities		Total Dollar	Total Percentage
	2012	2013	2012	2013	Change	Change
Compensated Absences	$ 7,079	$ 11,232	$ 7,137	$ 10,068	$ 7,084	49.8%
State of South Dakota Loan	3,564,617	1,256,153	-	-	(2,308,464)	-64.8%
Liberty National Bank Loan	586,500	538,819	-	-	(47,681)	-8.1%
Total Outstanding Debt and Obligations	$ 4,158,196	$ 1,806,204	$ 7,137	$ 10,068	$ (2,349,061)	-56.4%

The District is liable for the accrued vacation and sick leave payable to full-time employees who meet the length of service requirements. The increase is due to the District recording accrued vacation in 2013. This accrual had not been recorded prior to that date.

The District has an outstanding loan of $1,256,153 payable to the State of South Dakota. The loan is secured by a security interest in the District's Opt-Out Property Tax Collections and paid for from the Flood Prevention Fund. This loan was taken out in order to pay for flood prevention costs and will be fully paid off on December 15, 2017. Payments of $1,631,092 were made to the State of South Dakota during the year using State and Federal agency reimbursements for costs related to the 2011 flood.

The District has an outstanding loan of $538,819 payable to Liberty National Bank. The loan is secured by a security interest in the District's Opt-Out Property Tax Collections and paid for from the Flood Prevention Fund. This loan was taken out in order to pay for additional flood clean-up costs and will be fully paid off on December 15, 2022.

ECONOMIC FACTORS AND NEXT YEAR'S BUDGETS AND RATES

The District's current and economic position has been impacted by the 2011 flooding. In future years, and in addition to its normal operations, the District will have to generate revenue from its opt-out tax to service debt associated with the costs of the 2011 flood. The taxable value for the 2014 fiscal year increased 4.8% from 2013 to $394,440,731. The District set an operation levy of $3.18 per $1000 in valuation which is the same as 2013. In anticipation of debt payments, the District also set an opt out levy in 2014 of $1.17 per $1,000 in valuation, which is down from $2.22 in 2013. Given the 2014 taxable value, this should generate $462,000 in 2014 for servicing debt.

Unlike municipalities, the District does not have authority to assess a sales tax. Therefore, a substantial amount of General Fund revenues comes from property tax.

The District-adopted General Fund operating budget for the 2014 fiscal year decreased by 4.3% percent to $964,543 from $1,007,650 for the 2013 fiscal year. The decrease is due to less anticipated flood repair costs and a more normal year.

CONTACTING THE DISTRICT'S FINANCIAL MANAGEMENT

This financial report is designed to provide our citizens, taxpayers, customers, investors and creditors with a general overview of the District's finances and to demonstrate the District's accountability for the money it receives. If you have questions about this report or need additional information, contact the District's Finance Office, P.O. Box 1997, 335 Sioux Point Road, Suite 200, Dakota Dunes, South Dakota 57049.

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

STATEMENT OF NET POSITION

DECEMBER 31, 2013

	Primary Government		
	Governmental Activities	Business-Type Activities	Total
ASSETS			
Cash	$ 758,197	$ 1,290,507	$ 2,048,704
Restricted Cash	12,528		12,528
Taxes Receivable	28,168		28,168
Accounts Receivable - Net	25,649	64,669	90,318
Inventory	132,764	12,431	145,195
Prepaids	11,385	5,692	17,077
Deposits	12,190		12,190
Capital Assets:			
Land	2,390,402	73,806	2,464,208
Construction Work in Progress	28,072		28,072
Other Capital Assets, Net of Depreciation	12,880,125	8,352,009	21,232,134
Intangible Assets, Net of Amortization	339,493	176,144	515,637
Total Assets	$ 16,618,973	$ 9,975,258	$ 26,594,231
LIABILITIES			
Accounts Payable and Accrued Expenses	$ 49,766	$ 36,043	$ 85,809
Internal Balances	(178,049)	178,049	-
Long-Term Liabilities:			
Due Within One Year	343,056		343,056
Due in More than One Year	1,463,148	10,068	1,473,216
Total Liabilities	$ 1,677,921	$ 224,160	$ 1,902,081
DEFERRED INFLOWS OF RESOURCES			
Deferred Revenue		$ 494,615	$ 494,615
Total Deferred Inflows of Resources	-	$ 494,615	$ 494,615
NET POSITION			
Net Investment in Capital Assets	$ 15,638,092	$ 8,601,959	$ 24,240,051
Restricted for Risk Management	12,190		12,190
Unrestricted	(709,230)	654,524	(54,706)
Total Net Position	$ 14,941,052	$ 9,256,483	$ 24,197,535

See Accompanying Notes to Financial Statements

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

STATEMENT OF ACTIVITIES

FOR THE YEAR ENDED DECEMBER 31, 2013

		Program Revenues		
	Expenses	Charges for Services	Operating Grants and Contributions	Capital Grants and Contributions
GOVERNMENTAL ACTIVITIES				
General Government	$ 362,051			
Public Safety	161,971	$ 27,336	$ 1,619,095	
Public Works	802,707			$ 287,244
Culture and Recreation	334,757			
Interest on Long-Term Debt	151,345			
Total Governmental Activities	$ 1,812,831	$ 27,336	$ 1,619,095	$ 287,244
BUSINESS-TYPE ACTIVITIES				
Water	$ 680,139	$ 570,993		$ 57,854
Sewer	443,776	359,982		70,000
Total Business-Type Activities	$ 1,123,915	$ 930,975	-	$ 127,854
Total Primary Government	$ 2,936,746	$ 958,311	$ 1,619,095	$ 415,098

GENERAL REVENUES:

Property Taxes .....

Property Taxes - Opt Out .....

Unrestricted Investment Earnings .....

Gain on Disposal of Capital Assets .....

Rental Income .....

Miscellaneous .....

Total General Revenues .....

Change in Net Position .....

Net Position - Beginning .....

Net Position - Ending .....

Net (Expense) Revenue and Changes in Net Position		
Primary Government		
Governmental Activities	Business-Type Activities	Total
$(362,051)		$(362,051)
1,484,460		1,484,460
(515,463)		(515,463)
(334,757)		(334,757)
(151,345)		(151,345)
$ 120,844	-	$ 120,844
	$(51,292)	$(51,292)
	(13,794)	(13,794)
-	$(65,086)	$(65,086)
$ 120,844	$(65,086)	$ 55,758
$ 1,197,856		$ 1,197,856
835,569		835,569
2,758	$ 2,357	5,115
7,344		7,344
2,250	17,672	19,922
26,470		26,470
$ 2,072,247	$ 20,029	$ 2,092,276
$ 2,193,091	$(45,057)	$ 2,148,034
12,747,961	9,301,540	22,049,501
$ 14,941,052	$ 9,256,483	$ 24,197,535

See Accompanying Notes to Financial Statements

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

BALANCE SHEET

GOVERNMENTAL FUNDS

DECEMBER 31, 2013

	General Fund	Flood Prevention Fund	Total Governmental Funds
ASSETS			
Cash	$ 758,197		$ 758,197
Restricted Cash	12,528		12,528
Taxes Receivable	28,168		28,168
Accounts Receivable - Net	25,649		25,649
Interfund Receivable	49,669	$ 128,380	178,049
Inventories	13,093	119,671	132,764
Deposits	12,190		12,190
Prepaid Expenses	11,385		11,385
Total Assets	$ 910,879	$ 248,051	$ 1,158,930
LIABILITIES			
Accounts Payable	$ 37,565		$ 37,565
Accrued Wages	2,201		2,201
Total Liabilities	$ 39,766	-	$ 39,766
DEFERRED INFLOWS OF RESOURCES			
Deferred Revenue	$ 34,482		$ 34,482
Total Deferred Inflows of Resources	$ 34,482	-	$ 34,482
FUND BALANCES			
Nonspendable:			
Inventory	$ 13,093	$ 119,671	$ 132,764
Deposits	12,190		12,190
Prepaid Expenses	11,385		11,385
Unassigned	799,963	128,380	928,343
Total Fund Balances	$ 836,631	$ 248,051	$ 1,084,682
Total Liabilities, Deferred Inflows of Resources, and Fund Balances	$ 910,879	$ 248,051	$ 1,158,930

See Accompanying Notes to Financial Statements

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

RECONCILIATION OF THE BALANCE SHEET -
GOVERNMENTAL FUNDS TO THE STATEMENT OF NET POSITION

FOR THE YEAR ENDED DECEMBER 31, 2013

Total governmental fund balances (page 15)	$ 1,084,682
Amounts reported in 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	15,638,092
Long-term liabilities are not due and payable in the current period and therefore are not reported in the funds	(1,806,204)
Accrued expenses are not due and payable in the current period and therefore are not reported in the funds	(10,000)
Taxes receivable - delinquent and cable franchise fees are not available to pay for current period expenditures and therefore are deferred in the funds	34,482
Total net position of governmental activities (page 12)	$ 14,941,052

See Accompanying Notes to Financial Statements

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

STATEMENT OF REVENUES,
EXPENDITURES, AND CHANGES IN FUND BALANCE

GOVERNMENTAL FUNDS

FOR THE YEAR ENDED DECEMBER 31, 2013

	General Fund	Flood Prevention Fund	Total Governmental Funds
REVENUES			
Property Taxes	$ 1,196,517		$ 1,196,517
Property Taxes - Opt Out	834,118		834,118
Intergovernmental Revenue			
Federal		$ 1,428,613	1,428,613
State		190,482	190,482
Charges for Services	27,336		27,336
Rental Income	2,250		2,250
Interest	2,758		2,758
Miscellaneous	27,560		27,560
Total Revenues	$ 2,090,539	$ 1,619,095	$ 3,709,634
EXPENDITURES			
Current:			
General Government	$ 344,219		$ 344,219
Public Safety	72,538	$ 158,198	230,736
Public Works	229,675		229,675
Culture and Recreation	260,552		260,552
Capital Outlay	84,797		84,797
Debt Service:			
Principal		2,356,145	2,356,145
Interest		151,345	151,345
Total Expenditures	$ 991,781	$ 2,665,688	$ 3,657,469
Excess (Deficiency) of Revenues Over Expenditures	$ 1,098,758	$(1,046,593)	$ 52,165
OTHER FINANCING SOURCES (USES)			
Proceeds from Sale of Capital Assets	$ 7,344		$ 7,344
Interfund Transfer	(1,674,283)	$ 1,674,283	-
Total Other Financing Sources (Uses)	$(1,666,939)	$ 1,674,283	$ 7,344
Net Change in Fund Balance	$(568,181)	$ 627,690	$ 59,509
Fund Balance (Deficit) - Beginning of Year	1,404,812	(379,639)	1,025,173
Fund Balance - End of Year	$ 836,631	$ 248,051	$ 1,084,682

See Accompanying Notes to Financial Statements

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE - GOVERNMENTAL FUNDS TO THE STATEMENT OF ACTIVITIES

FOR THE YEAR ENDED DECEMBER 31, 2013

Net change in fund balances - total governmental fund (page 17)		$ 59,509
Amounts reported in governmental activities in the Statement of Net Position 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. Depreciation expense exceeded capital outlays in the current year as follows:		
Expenditures for Capital Outlays	$ 84,797	
Depreciation Expense	(694,513)	(609,716)
Donated capital assets increase net position in the Statement of Activities, but do not appear in the governmental funds because they are not reported as expenditures in governmental funds		287,244
Compensated absences reported in the Statement of Activities do not require the use of current financial resources and are not reported as expenditures in governmental funds		(4,153)
Public safety expenditures reported in the governmental funds, but not in the Statement of Activities since the expenses were accrued in the prior year		112,362
Accrued general government expenses reported in the Statement of Activities do not require the use of current financial resources and are not reported as expenditures in governmental funds		(10,000)
Revenue reported as deferred revenue in the governmental fund financial statements was recorded as revenue in the government-wide financial statements		1,700
Payment on loan is an expenditure in the governmental funds but reduces long-term liabilities in the Statement of Net Position		2,356,145
Change in net position of governmental activities (page 13-14)		$ 2,193,091

See Accompanying Notes to Financial Statements

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT
STATEMENT OF NET POSITION
PROPRIETARY FUNDS
DECEMBER 31, 2013

	Water Fund	Sewer Fund	Total Proprietary Funds
CURRENT ASSETS			
Cash	$ 1,290,507		$ 1,290,507
Accounts Receivable, Net	28,236	$ 36,433	64,669
Interfund Receivable	189,273		189,273
Inventories	12,431		12,431
Prepaid Expenses	4,269	1,423	5,692
Total Current Assets	$ 1,524,716	$ 37,856	$ 1,562,572
CAPITAL ASSETS			
Land	$ 72,826	$ 980	$ 73,806
Improvements Other Than Buildings	8,100,849	5,271,255	13,372,104
Machinery and Equipment	63,551		63,551
Intangible Assets	244,864		244,864
	$ 8,482,090	$ 5,272,235	$ 13,754,325
Less Accumulated Depreciation and Amortization	(3,146,873)	(2,005,493)	(5,152,366)
Capital Assets, Net	$ 5,335,217	$ 3,266,742	$ 8,601,959
Total Assets	$ 6,859,933	$ 3,304,598	$ 10,164,531
CURRENT LIABILITIES			
Accounts Payable	$ 15,544	$ 18,698	$ 34,242
Accrued Wages	901	300	1,201
Customer Deposits	600		600
Interfund Payable	178,049	189,273	367,322
Total Current Liabilities	$ 195,094	$ 208,271	$ 403,365
NON-CURRENT LIABILITIES			
Compensated Absences	$ 7,551	$ 2,517	$ 10,068
Total Non-Current Liabilities	$ 7,551	$ 2,517	$ 10,068
Total Liabilities	$ 202,645	$ 210,788	$ 413,433
DEFERRED INFLOWS OF RESOURCES			
Deferred Revenue	$ 494,615	-	$ 494,615
Total Deferred Inflows of Resources	$ 494,615	-	$ 494,615
NET POSITION			
Net Investment in Capital Assets	$ 5,335,217	$ 3,266,742	$ 8,601,959
Unrestricted	827,456	(172,932)	654,524
Total Net Position	$ 6,162,673	$ 3,093,810	$ 9,256,483

See Accompanying Notes to Financial Statements

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

STATEMENT OF REVENUES,
EXPENSES, AND CHANGES IN FUND NET POSITION

PROPRIETARY FUNDS

FOR THE YEAR ENDED DECEMBER 31, 2013

	Water Fund	Sewer Fund	Total Proprietary Funds
OPERATING REVENUES			
Charges for Services	$ 570,993	$ 359,982	$ 930,975
Total Operating Revenues	$ 570,993	$ 359,982	$ 930,975
OPERATING EXPENSES			
Personal Services	$ 205,309	$ 65,595	$ 270,904
Other Current Expense	283,268	262,189	545,457
Depreciation	181,888	115,992	297,880
Amortization	9,674		9,674
Total Operating Expenses	$ 680,139	$ 443,776	$ 1,123,915
Operating (Loss)	$(109,146)	$(83,794)	$(192,940)
NON-OPERATING REVENUES (EXPENSES)			
Rental Revenue	$ 17,672		$ 17,672
Investment Earnings	2,274	$ 83	2,357
Total Non-Operating Revenues	$ 19,946	$ 83	$ 20,029
(Loss) Before Contributions	$(89,200)	$(83,711)	$(172,911)
Capital Contributions	57,854	70,000	127,854
Change in Net Position	$(31,346)	$(13,711)	$(45,057)
Net Position - Beginning of Year	6,194,019	3,107,521	9,301,540
Net Position - End of Year	$ 6,162,673	$ 3,093,810	$ 9,256,483

See Accompanying Notes to Financial Statements

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

STATEMENT OF CASH FLOWS

PROPRIETARY FUNDS

FOR THE YEAR ENDED DECEMBER 31, 2013

	Water Fund	Sewer Fund	Total Proprietary Funds
CASH FLOWS FROM OPERATING ACTIVITIES			
Cash Received from Customers	$ 564,353	$ 355,048	$ 919,401
Cash Received (Paid to) Other Funds as Interfund Reimbursements	92,907	(9,972)	82,935
Cash Paid to Employees for Services	(210,372)	(67,283)	(277,655)
Cash Paid to Suppliers of Goods and Services	(284,532)	(263,570)	(548,102)
Net Cash Provided by Operating Activities	$ 162,356	$ 14,223	$ 176,579
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES			
Payment for Purchase of Capital Assets	$(14,531)	$(14,306)	$(28,837)
Net Cash (Used) by Capital and Related Financing Activities	$(14,531)	$(14,306)	$(28,837)
CASH FLOWS FROM INVESTING ACTIVITIES			
Rental Receipts	$ 4,797		$ 4,797
Interest Earned on Investments	2,274	$ 83	2,357
Net Cash Provided by Investing Activities	$ 7,071	$ 83	$ 7,154
Net Increase in Cash	$ 154,896	-	$ 154,896
Cash at Beginning of Year	1,135,611		1,135,611
Cash at End of Year	$ 1,290,507	-	$ 1,290,507
NON-CASH CAPITAL FINANCING ACTIVITIES			
Capital Assets Acquired Through Contributions from Developers	$ 57,854	$ 70,000	$ 127,854
NON-CASH NONCAPITAL FINANCING ACTIVITIES			
Revenue Recognized from Sale of Water Tower Leases	$ 12,875	-	$ 12,875

See Accompanying Notes to Financial Statements

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

STATEMENT OF CASH FLOWS

PROPRIETARY FUNDS

FOR THE YEAR ENDED DECEMBER 31, 2013

	Water Fund	Sewer Fund	Total Proprietary Funds
RECONCILIATION OF OPERATING (LOSS) TO NET CASH PROVIDED BY OPERATING ACTIVITIES			
Operating (Loss)	$(109,146)	$(83,794)	$(192,940)
Adjustments to Reconcile Net Operating (Loss) to Net Cash Provided by Operating Activities:			
Depreciation Expense	181,889	115,992	297,881
Amortization Expense	9,674		9,674
(Increase) Accounts Receivable	(6,490)	(4,934)	(11,424)
Decrease in Interfund Receivable	110,113		110,113
(Increase) in Inventory	(5,600)		(5,600)
(Increase) in Prepaid Expenses	(4,269)	(1,423)	(5,692)
Increase in Accounts Payable	8,604	42	8,646
(Decrease) in Accrued Wages	(7,261)	(2,421)	(9,682)
(Decrease) in Customer Deposits	(150)		(150)
(Decrease) Interfund Payable	(17,206)	(9,972)	(27,178)
Increase in Compensated Absences	2,198	733	2,931
Net Cash Provided by Operating Activities	$ 162,356	$ 14,223	$ 176,579

See Accompanying Notes to Financial Statements

Note 1 - SIGNIFICANT ACCOUNTING POLICIES

The following is a summary of the significant accounting policies followed in the preparation of these financial statements.

A - Financial Reporting Entity

The reporting entity of the Dakota Dunes Community Improvement District (District), 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. The District does not include any component units within its reporting entity.

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. 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 District and for each function of the District'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 for 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 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 District or it meets the following criteria:

Note 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Cont.) B - Basis of Presentation - (Continued)

1. Total assets, liabilities, revenues, or expenditures/expenses of the individual governmental or enterprise funds are at least 10 percent 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 percent 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 major funds of the District financial reporting entity are described below:

Governmental Fund

General Fund - The General Fund is the general operating fund of the District. 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.

Flood Prevention Fund - The Flood Prevention Fund is a special revenue fund used to account for intergovernmental revenue received from FEMA and the State of South Dakota to pay for flood prevention costs incurred from a significant flooding event during summer 2011 and the related clean-up costs during 2013 and 2012.

Proprietary Funds

Enterprise Funds - Enterprise funds may be used to report any activity for which a fee is charged to external users for goods or services. Activities are required to be reported as enterprise funds if any one of the following criteria is met. Governments should apply each of these criteria in the context of the activity's principal revenue sources.

1. The activity is financed with debt that is secured solely by a pledge of the net revenues from fees and charges of the activity. Debt that is secured by a pledge of net revenues from fees and charges and the full faith and credit of a related primary government or component unit - even if that government is not expected to make any payments - is not payable solely from fees and charges of the activity. (Some debt may be secured, in part, by a portion of its own proceeds but should be considered as payable "solely" from the revenues of the activity.)

2. Laws or regulations require that the activity's costs of providing services, including capital costs (such as depreciation or debt service), be recovered with fees and charges, rather than with taxes or similar revenues.

Note 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Cont.) B - Basis of Presentation (Continued)

3. The pricing policies of the activity establish fees and charges designed to recover its costs, including capital costs (such as depreciation or debt service).

Water Fund - Financed primarily by user charges, this fund accounts for the construction and operation of the District waterworks system and related facilities. This is a major fund.

Sewer Fund - Financed primarily by user charges, this fund accounts for the construction and operation of the District sanitary sewer 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.

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 fund types, while the "economic resources" measurement focus and the accrual basis of accounting are applied to the proprietary fund types.

Basis of Accounting

Government-Wide Financial Statements - In the government-wide Statement of Net Position and Statement of Activities, 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 fund types 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 for the District is 30 days. The revenues which are accrued at December 31, 2013, are cable franchise revenues and reimbursements.

Note 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Cont.) C - Measurement Focus and Basis of Accounting (Continued)

Fund Financial Statements (Continued)

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.

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 fund types 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:

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.

E - 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.

F - 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 a significantly greater number of years than most capital assets.

Note 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Cont.) F - Capital Assets (Continued)

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 Financial 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 life of a capital asset are also capitalized.

The total December 31, 2013, balance of governmental activities capital assets are valued at original cost or estimated fair value for donated assets. The total December 31, 2013, balance of business-type capital assets are valued at original cost or estimated fair value for donated assets.

Infrastructure assets used in general government operations, consisting of certain improvements other than buildings, including roads, bridges, sidewalks, drainage systems, and lighting systems are recorded at cost, and classified as "Improvements Other Than Buildings".

Depreciation and amortization of all exhaustible capital assets is recorded as an allocated expense in the government-wide Statement of Activities, with net capital assets reflected in the Statement of Net Position. Accumulated depreciation and amortization is reported on the government-wide Statement of Net Position and on the proprietary fund's Statement of Net Position.

Capitalization thresholds (the dollar values above which asset acquisitions are added to the capital asset accounts), depreciation and amortization methods, and estimated useful lives of capital assets reported in the government-wide financial statements and proprietary funds are as follows:

	Capitalization Threshold	Depreciation/ Amortization Method	Estimated Useful Life
Land and Land Rights	All	N/A	N/A
Buildings	$ 50,000	Straight-Line	50 Years
Improvements Other Than Buildings:			
Water/Sewer Lines	$ 25,000	Straight-Line	50 Years
Roads	$ 50,000	Straight-Line	15-75 Years
Other Improvements	$ 10,000	Straight-Line	15-50 Years
Machinery, Equipment and Vehicles	$ 2,500	Straight-Line	5-20 Years
Intangible Assets	$ 25,000	Straight-Line	15-30 Years

Land is an inexhaustible capital asset and is not depreciated.

Note 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Cont.) F - Capital Assets (Continued)

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 financial statements.

G - 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 financial statements. The long-term liabilities primarily consist of notes payable 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 financial statements.

H - Program Revenues

Program revenues derive directly from the program itself or from parties other than the District's taxpayers or citizenry, as a whole. Program revenues are classified into three categories, as follows:

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.

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.

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.

Note 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Cont.)

I - Deferred Inflows and Deferred Outflows of Resources

In addition to assets, the Statement of Net Position reports a separate section for deferred outflows of resources. 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 Net Position reports a separate section for deferred inflows of resources. 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 - Proprietary Funds Revenue and Expense Classifications

In the proprietary funds' Statement of Revenues, Expenses, and Changes in 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, non-capital financing activities, or investing activities are not reported as components of operating revenues or expenses.

K - Cash and Cash Equivalents

The District pools the cash resources of its proprietary 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.

L - Equity Classifications

Government-Wide Statements - Equity is classified as Net Position and is displayed in three components:

Net Investment in Capital Assets - Consists of capital assets, including restricted capital assets, net of accumulated depreciation and amortization (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.

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.

Unrestricted Net Position - All other net position that do not meet the definition of "Restricted" or "Net Investment in Capital Assets".

Note 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Cont.) L - Equity Classifications (Continued)

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.

M - Application of Net Position

It is the District's policy to first use restricted net position, prior to the use of unrestricted net position when an expense is incurred for purposes for which both restricted and unrestricted net positions are available.

N - 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 District classifies governmental fund balances as follows:

Non-Spendable - 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 by the government through formal action of 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 Finance Officer.

Unassigned - Includes positive fund balance within the General Fund which has not been classified within the above mentioned categories and negative fund balances in other governmental funds.

The Nonspendable Fund Balance is comprised of the following:

- Amount reported in non-spendable form such as inventory and prepaid expenses.
- Amount legally or contractually required to be maintained intact such as deposits.

Note 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Cont.) N - Fund Balance Classification Policies and Procedures (Continued)

The District uses *restricted/committed* amounts first when both 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 District would first use *committed*, then *assigned*, and lastly *unassigned* amounts of unrestricted fund balance when expenditures are made.

The District does not have a formal minimum fund balance policy.

The purpose of the District's major special revenue fund and revenue source is listed below:

Flood Prevention Fund	Intergovernmental revenue received from FEMA and the State of South Dakota

Note 2 - DEPOSITS AND INVESTMENTS

The District 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 District'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 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 District 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 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.

The District did not hold any investments at December 31, 2013.

Note 2 - DEPOSITS AND INVESTMENTS
(Cont.)

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 District's policy is to credit all income from deposits and investments to the fund making the investment.

Restricted Cash - Assets restricted to use for a specific purpose through segregation of balances in separate accounts are as follows:

Amount	Purpose
$ 12,528	Opt out property tax revenue required to be used for debt service.

Note 3 - RECEIVABLES AND PAYABLES

Receivables and payables due from or to a single party are not aggregated in these financial statements. The District expects all receivables to be collected within one year.

Note 4 - INVENTORY

Inventory in the General Fund consists of expendable supplies held for consumption. Supply inventories are recorded at cost. Inventory in the Flood Prevention Fund consists of expendable supplies held for sale or consumption. These inventories are recorded at their estimated market value (which is below 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, inventory is recorded as an asset at the time of purchase and charged to expense as it is consumed. Material supply inventories are off-set by a nonspendable fund balance which indicates that they do not constitute "available spendable resources" even though they are a component of net current assets.

Note 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.

Due to potential technology changes, consolidation in the communication industry and long-term lease risks, the District sold three long-term tower leases for $515,000 for the period May 10, 2012 through May 31, 2052. Current year rental income recognized in the water fund related to these sales was $12,875. The balance of unrecognized revenue was $494,615 at December 31, 2013 and is included as a deferred inflow of resources on the Statement of Net Position.

The District calculated the present value of the future revenues sold to be $515,000 which assumed a discount rate of 6.0%. The calculation assumed the renewal options under the leases would be exercised until they expire in 2025. The calculation assumed new leases will not be entered into after this date until 2052.

Note 6 - 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 the following 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 District is permitted by several state statutes to levy varying amounts of taxes per $1,000 of taxable valuation on taxable real property in the District. The maximum mill levy by state statute is 10.0.

Note 7 - CHANGES IN CAPITAL ASSETS

A summary of changes in capital assets for the year ended December 31, 2013, is as follows:

	Balance January 1, 2013	Increases	Decreases	Balance December 31, 2013
Governmental Activities:				
Capital Assets, Not Being Depreciated/Amortized:				
Land	$ 2,280,557	$ 109,845		$ 2,390,402
Construction Work in Progress		28,072		28,072
Total Not Being Depreciated/ Amortized	$ 2,280,557	$ 137,917	-	$ 2,418,474
Capital Assets, Being Depreciated/ Amortized:				
Improvements Other Than Buildings	$ 25,632,721	$ 177,400		$ 25,810,121
Machinery and Equipment	922,229	56,724	$(27,449)	951,504
Intangible Assets	365,921			365,921
Total Being Depreciated/ Amortized	$ 26,920,871	$ 234,124	$(27,449)	$ 27,127,546
Less Accumulated Depreciation/ Amortization:				
Improvements Other Than Buildings	$ 12,575,573	$ 592,319		$ 13,167,892
Machinery and Equipment	663,258	77,799	$(27,449)	713,608
Intangible Assets	2,033	24,395		26,428
Total Accumulated Depreciation/ Amortization	$ 13,240,864	$ 694,513	$(27,449)	$ 13,907,928
Total Capital Assets, Being Depreciated/ Amortized, Net	$ 13,680,007	$(460,389)	-	$ 13,219,618
Governmental Activities Capital Assets, Net	$ 15,960,564	$(322,472)	-	$ 15,638,092

Depreciation and amortization expense was charged to functions as follows:

General Government	$ 3,679
Public Safety	43,597
Public Works	573,032
Culture and Recreation	74,205
Total Depreciation Expense - Governmental Activities	$ 694,513

Note 7 - CHANGES IN CAPITAL ASSETS (Cont.)

	Balance January 1, 2013	Increases	Decreases	Balance December 31, 2013
Business-Type Activities:				
Capital Assets, Not Being Depreciated/Amortized:				
Land	$ 73,806			$ 73,806
Total Not Being Depreciated/ Amortized	$ 73,806	-	-	$ 73,806
Capital Assets, Being Depreciated/ Amortized:				
Improvements Other Than Buildings	$ 13,221,006	$ 151,098		$ 13,372,104
Machinery and Equipment	57,959	5,592		63,551
Intangible Assets	244,864			244,864
Total Being Depreciated/ Amortized	$ 13,523,829	$ 156,690	-	$ 13,680,519
Less Accumulated Depreciation/ Amortization:				
Improvements Other Than Buildings	$ 4,754,632	$ 294,482		$ 5,049,114
Machinery and Equipment	31,134	3,398		34,532
Intangible Assets	59,046	9,674		68,720
Total Accumulated Depreciation/ Amortization	$ 4,844,812	$ 307,554	-	$ 5,152,366
Total Capital Assets, Being Depreciated/ Amortized, Net	$ 8,679,017	$(150,864)	-	$ 8,528,153
Business-Type Activities Capital Assets, Net	$ 8,752,823	$(150,864)	-	$ 8,601,959

Depreciation and amortization expense was charged to functions as follows:

Water Fund	$ 191,562
Sewer Fund	115,992
Total Depreciation and Amortization Expense - Business - Type Activities	$ 307,554

Note 8 - LONG-TERM LIABILITIES

A summary of changes in long-term liabilities follows:

	Balance January 1, 2013	Additions	Deletions	Balance December 31, 2013	Due Within One Year
Primary Government:					
Government Activities:					
State of South Dakota Loan	$ 3,564,617		$(2,308,464)	$ 1,256,153	$ 293,400
Liberty National Bank Loan	586,500		(47,681)	538,819	49,656
Compensated Absences	7,079	$ 11,232	(7,079)	11,232	-
Total Governmental Activities	$ 4,158,196	$ 11,232	$(2,363,224)	$ 1,806,204	$ 343,056
Business-Type Activities:					
Compensated Absences	$ 7,137	$ 10,068	$(7,137)	$ 10,068	-
Total Business-Type Activities	$ 7,137	$ 10,068	$(7,137)	$ 10,068	-
Total Primary Government	$ 4,165,333	$ 21,300	$(2,370,361)	$ 1,816,272	$ 343,056

Debt Payable at December 31, 2013, is comprised of the following:

Compensated absences are amounts due to employees for accrued sick leave. Payments will be made from the General Fund.	$ 11,232
Compensated absences are amounts due to employees for accrued sick leave. Payments will be made from the Water Fund.	$ 7,551
Compensated absences are amounts due to employees for accrued sick leave. Payments will be made from the Sewer Fund.	$ 2,517
The State of South Dakota Loan is payable in semi-annual payments of $173,326 including interest on the 15th day of June and December and will mature December 15, 2017. The interest rate on the loan is 4.5%. Payments on the loan will be made from State and FEMA reimbursements and opt out property tax revenue. The loan is secured by a security interest in opt out property tax revenues.	$ 1,256,153
The Liberty National Bank Loan is payable in semi-annual payments of $36,839 including interest on the 15th day of June and December and will mature December 15, 2022. The interest rate on the loan is 4.5%, subject to a rate increase in 2017. Payments on the loan will be made from State and FEMA reimbursements and opt out property tax revenue. The loan is secured by a security interest in opt out property tax revenues.	$ 538,819

Note 8 - LONG-TERM LIABILITIES
(Cont.)

The annual requirements to amortize all debt outstanding as of December 31, 2013, except for compensated absences are as follows:

Ending	State of South Dakota Loan		Liberty National Bank Loan		Total	
December 31,	Principal	Interest	Principal	Interest	Principal	Interest
2014	$ 293,400	$ 53,252	$ 49,656	$ 24,022	$ 343,056	$ 77,274
2015	306,751	39,901	51,948	21,730	358,699	61,631
2016	320,700	25,952	54,289	19,389	374,989	45,341
2017	335,302	11,348	56,850	16,828	392,152	28,176
2018	-	-	59,473	14,204	59,473	14,204
2019 - 2022	-	-	266,603	28,104	266,603	28,104
Total	$ 1,256,153	$ 130,453	$ 538,819	$ 124,277	$ 1,794,972	$ 254,730

Note 9 - OPERATING LEASES

The District leases office space in the Dakota Dunes Welcome Center building. Payments are made from the General Fund, the Water Fund and the Sewer Fund. The initial lease term was five years, terminating November 30, 2006, with three five-year renewal options. During 2006, the District exercised the first five-year option. During 2011, the District exercised the second five-year option.

The District also leases a maintenance building and a cold storage facility. These leases were renewed during April 2010 for a five year period, with five one-year renewal options.

The following are the minimum payments on existing operating leases:

Years Ending	General Fund	Water Fund	Sewer Fund	Total
2014	$ 43,062	$ 9,046	$ 3,015	$ 55,123
2015	19,811	9,046	3,015	31,872
2016	11,056	8,292	2,764	22,112
	$ 73,929	$ 26,384	$ 8,794	$ 109,107

Total rental expenditures for operating leases for the year ended December 31, 2013, were $64,998.

Note 10 - INDIVIDUAL FUND INTERFUND RECEIVABLE AND PAYABLE BALANCES

Interfund receivable and payable balances at December 31, 2013, were:

Fund	Interfund Receivables	Interfund Payables
Governmental Funds:		
General Fund	$ 49,669	-
Flood Prevention Fund	128,380	-
Enterprise Funds:		
Water	189,273	$ 178,049
Sewer	-	189,273
Total	$ 367,322	$ 367,322

Interfund receivable and payable balances represent amounts due to/from other funds. Additionally, the water and sewer funds share a common cash account so the interfund balance between the water and sewer fund is the sewer fund's share of the cash balance on hand in the water fund. The general and flood prevention funds also share a common cash account so the interfund balance between the general and flood prevention fund is the flood prevention fund's share of the cash balance on hand in the general fund. All interfund activity is expected to be repaid within one year.

During 2013, $1,674,283 was transferred from the general fund to the flood prevention fund. This amount represents opt out property tax revenue earned in the general fund that can only be spent on debt service in the flood prevention fund.

Note 11 - RETIREMENT PLAN

All employees, except for part-time and/or temporary 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, South Dakota 57501-1098 or by calling (605) 773-3731.

Note 11 - RETIREMENT PLAN
(Cont.)

Full-time employees are required by state statute to contribute 6% of their salary to the plan. A full-time employee is defined as one who works at least twenty hours per week for six months of the year. State statute 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% for any compensation exceeding the maximum taxable amount for social security. The District's share of contributions to the SDRS for the fiscal years ended December 31, 2013, 2012 and 2011, were $27,908, $24,856, and $25,281, respectively, equal to the required contributions each year.

Note 12 - LITIGATION

During November 2011, the District received a 180-day statutory notice and a claimant report was received by the District's insurance carrier. As of the report date, a lawsuit has not been filed.

Note 13 - RISK MANAGEMENT

The District 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 year ended December 31, 2013, the District managed its risks as follows:

Liability Insurance - The District is a member of 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 District'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 District. The District 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 District pays an annual premium to the pool to provide coverage for torts, auto liability, and physical damage; and errors and omissions of public officials.

The agreement with the SDPAA provides that the above coverage will be provided to varying limits. 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 to the upper limit of $2,000,000 for liability coverage.

Note 13 - RISK MANAGEMENT
(Cont.)

A portion of the member premiums are also allocated to a cumulative reserve fund. The District 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 District's	First Full Year	50%
End of District's	Second Full Year	60%
End of District's	Third Full Year	70%
End of District's	Fourth Full Year	80%
End of District's	Fifth Full Year	90%
End of District's	Sixth Full Year and Thereafter	100%

As of December 31, 2013, the District has a vested balance in the cumulative reserve fund of $12,190 and a total balance, including the non-vested portion, of $12,841.

The District carries a $1,000 deductible for the automobile coverage, a $2,500 deductible for machinery coverage, $1,000 deductible for buildings, contents and municipal income, and $250 deductible for miscellaneous property coverage.

The District 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.

Workers' Compensation - The District is a member of the South Dakota Municipal League Workers' 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 workers' compensation coverage, to obtain lower costs for that coverage, and to develop a comprehensive loss control program. The District'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 workers' compensation claims. The District 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 $850,000 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 District 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.

Note 13 - RISK MANAGEMENT
(Cont.)

Unemployment Benefits - The District has elected to be self-insured and retain all risk for liabilities resulting from claims for unemployment benefits. At December 31, 2013, no claims for unemployment benefits were filed or paid. During the year ended December 31, 2013, the District terminated the employment of its security personnel. Three of these employees have filed unemployment claims in 2014. The District estimates approximately $10,000 of unemployment benefits will be paid in 2014 related to this termination. It is not anticipated that any additional claims for unemployment benefits will be filed in the next year.

Note 14 - RELATED PARTY TRANSACTIONS

A board member of the District is a key employee of a company that does business with the District, making the company a related party.

The District shares maintenance and other improvement costs with the related party. Total payments made to the related party for these shared costs were $15,836 for the year ended December 31, 2013. Total payments received from the related party for contract labor and other reimbursable expenses were $17,208.

Note 15 - 2011 FLOODING EVENT

The District experienced a significant flooding event from June 2011 through September 2011, requiring emergency construction of a levee system to protect the District's infrastructure and other real property within the District. In addition, other emergency actions were taken including the evacuation of approximately 50% of the residential area within the District. The District continued to incur substantial flood related costs throughout 2012 and 2013.

The State and Federal agency reimbursements received and the flood prevention expenditures are recorded in the District's Flood Prevention Fund.

All requested State and Federal agency reimbursements related to flood related expenses have been received as of December 31, 2013.

Note 16 - SUBSEQUENT EVENTS

In preparing the financial statements, the District has evaluated all subsequent events, for potential recognition or disclosure, through September 17, 2014, the date the financial statements were available to be issued.

In June of 2014, the District prepared for high water flows on the Big Sioux River that were projected to reach record levels at Dakota Dunes. Therefore, in preparation of the high water levels, contactors were hired to build a levee along the Big Sioux River to protect Dakota Dunes from the projected high water levels. Pumps were also leased to assist in removing any storm water which could accumulate on the Dakota Dunes property due to high water flows. Although, lower water levels occurred than was projected, costs were incurred to prepare for the high water flows and potential flooding. The District is inquiring about financial assistance for flood related costs through its insurance carrier and Federal Emergency Management Agency (FEMA). In addition, the District is pursuing a loan with Liberty National Bank to borrow money for the flood related costs. The District property opt out tax would be used to repay the loan.

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

OTHER SUPPLEMENTARY INFORMATION

BUDGETARY COMPARISON SCHEDULE - GENERAL FUND

FOR THE YEAR ENDED DECEMBER 31, 2013

	Budgeted Amounts Original and Final	Actual Amounts (Budgetary Basis)	Variance Positive (Negative)
REVENUES			
Property Taxes	$ 1,195,500	$ 1,196,517	$ 1,017
Property Taxes - Opt Out	835,500	834,118	(1,382)
Charges for Goods and Services	21,500	27,336	5,836
Investment Earnings	1,200	2,758	1,558
Rentals	2,250	2,250	-
Other	13,450	27,560	14,110
Total Revenues	$ 2,069,400	$ 2,090,539	$ 21,139
EXPENDITURES			
General Government	$ 380,790	$ 344,219	$ 36,571
Public Safety	70,500	72,538	(2,038)
Public Works	322,310	229,675	92,635
Culture and Recreation	288,150	260,552	27,598
Capital Outlay	-	84,797	(84,797)
Total Expenditures	$ 1,061,750	$ 991,781	$ 69,969
Excess of Revenues Over Expenditures	$ 1,007,650	$ 1,098,758	
OTHER FINANCING SOURCES (USES)			
Proceeds from Sale of Capital Assets	-	$ 7,344	
Interfund Transfer	-	(1,674,283)	
Total Other Financing Sources (Uses)	-	$(1,666,939)	
Net Change in Fund Balance	$ 1,007,650	$(568,181)	
Fund Balance - Beginning of Year	1,404,812	1,404,812	
Fund Balance - End of Year	$ 2,412,462	$ 836,631	

Notes:

1. The District does not have a state imposed requirement for a legally adopted budget; but is required to submit an annual budget to Union County. This budgetary comparison schedule is presented for supplementary analysis purposes and compares actual operating results for the general fund with amounts budgeted and approved by the District's Board of Supervisors.
2. The budget is prepared in accordance with the modified accrual basis of accounting.
3. The expenditures for public safety exceeded budgeted amounts due to higher payroll and vehicle maintenance expenses incurred than anticipated.
4. The expenditures for capital outlay exceeded budgeted amounts due to the purchase of a mower, two vehicles and computers by the District in 2013.
5. A budget was not adopted for the Flood Prevention Fund due to the unpredictable nature of the activity. The Opt Out Property Tax Revenue included above in the General Fund - Budgetary Comparison Schedule can only be used for Flood Prevention Fund expenses.

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

FOR THE YEAR ENDED DECEMBER 31, 2013

Grantor/Program	CFDA Number	Grant Number	Federal Expenditures
Indirect:			
U.S. Department of Homeland Security:			
Indirect Through State of South Dakota Department of Public Safety:			
Disaster Grants - Public Assistance	97.036	FEMA-PA-1984 PW1115.4, 2345.2, 2382.2	$ 1,439,199
		Total Federal Awards	$ 1,439,199

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

NOTE TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

FOR THE YEAR ENDED DECEMBER 31, 2013

Basis of Presentation - The accompanying Schedule of Expenditures of Federal Awards includes the federal grant activity of Dakota Dunes Community Improvement District and is presented on the modified accrual basis of accounting. The information on 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 basic financial statements.

HENJES, CONNER &
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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 Supervisors
Dakota Dunes Community
Improvement District
Union County, 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 DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT (the District), Union County, South Dakota, as of and for the year ended December 31, 2013, and the related notes to the financial statements, which collectively comprise the District's basic financial statements and have issued our report thereon dated September 17, 2014.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the District'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 District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District'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 and therefore, material weaknesses or significant deficiencies may exist that were not identified. 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. We did identify certain deficiencies in internal control, described in the accompanying schedule of findings and questioned costs that we consider to be a significant deficiency (2013-01).

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Dakota Dunes Community Improvement District'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*.

The District's Response to Findings

The District's response to the findings identified in our audit is described in the accompanying schedule of findings and questioned costs. The District's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

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 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. As required by South Dakota Codified Law 4-11-11, this report is a matter of public record and its distributions is not limited.

Heuijo, Lannes, + Williams, P.C.

Certified Public Accountants

Sioux City, Iowa
September 17, 2014

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WILLIAMS, P.C.
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INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR PROGRAM AND ON INTERNAL CONTROL OVER COMPLIANCE REQUIRED BY OMB CIRCULAR A-133

Board of Supervisors
Dakota Dunes Community
Improvement District
Union County, South Dakota

Report on Compliance for Each Major Federal Program

We have audited DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT'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 Dakota Dunes Community Improvement District's major federal programs for the year ended December 31, 2013. Dakota Dunes Community Improvement District's major federal program is 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 program.

Auditor's Responsibility

Our responsibility is to express an opinion on compliance for Dakota Dunes Community Improvement District's major federal program 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 Dakota Dunes Community Improvement District'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 Dakota Dunes Community Improvement District's compliance.

Opinion on Each Major Federal Program

In our opinion, Dakota Dunes Community Improvement District, complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended December 31, 2013.

Report on Internal Control Over Compliance

Management of Dakota Dunes Community Improvement District is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered Dakota Dunes Community Improvement District'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 the circumstances for the purpose of expressing an opinion on 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 Dakota Dunes Community Improvement District'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 type of compliance requirement of a federal program 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 over compliance 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. As required by South Dakota Codified Law 4-11-11, this report is a matter of public record and its distribution is not limited.

Hanjes, Conner, & Williams, P.C.

Certified Public Accountants

Sioux City, Iowa
September 17, 2014

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

SCHEDULE OF FINDINGS AND QUESTIONED COSTS

DECEMBER 31, 2013

Part I: Summary of the Independent Auditors' Results:

Financial Statements

Type of Auditor's Report Issued:	Unmodified		
Internal Control Over Financial Reporting:			
Material Weakness(es) Identified?	___ Yes	X	No
Significant Deficiencies Identified Not Considered to be Material Weakness(es)?	X Yes	___	None Reported
Noncompliance Material to Financial Statements Noted?	___ Yes	X	No

Federal Awards

Internal Control Over Major Programs:			
Material Weakness(es) Identified?	___ Yes	X	No
Significant Deficiencies Identified Not Considered to be Material Weakness(es)?	___ Yes	X	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 Circular A-133?	___ Yes	X	No

Major Program

- CFDA Number 97.036 Disaster Grants - Public Assistance

Dollar threshold used to distinguish between Type A and Type B programs: $ 300,000

Auditee Qualified as Low-Risk Auditee? ___ Yes X No

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

SCHEDULE OF FINDINGS AND QUESTIONED COSTS

DECEMBER 31, 2013

Part II: Findings Related to the Financial Statements

Significant Deficiency:

2013-01 Financial Statement Preparation

Condition - The District does not have a system of internal control over the preparation of the financial statements and note disclosures.

Criteria - The financial statements are the responsibility of the District's management. A system of internal control over financial reporting includes controls over financial statement preparation, including note disclosures.

Cause - The District does not have the resources available to draft the financial statements and note disclosures.

Effect - Henjes, Conner, & Williams, PC prepared various reclassification journal entries and drafted the financial statements and note disclosures.

Recommendation - We recommend that management and the Board review the process for financial statement preparation in order to maximize internal controls.

Response - The District reviews the financial statements and note disclosures and makes changes as appropriate. The District understands the nature of the control deficiency and will continue to assess the cost/benefit of designing and implementing controls over financial statement preparation.

DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT

SCHEDULE OF THE STATUS OF PRIOR AUDIT FINDINGS

DECEMBER 31, 2013

STATUS OF PRIOR AUDIT FINDINGS

2012-01 Financial Statement Preparation

Condition - The District does not have a system of internal control over the preparation of the financial statements and note disclosures.

Status - The District has determined that the costs outweigh the benefits and has continued to have the auditor draft the financial statements and note disclosures. See finding 2013-01 for similar current year finding.

2012-02 Financial Accounting - Recording Errors

Condition - We noted material reporting errors on the District's annual financial report related to capital assets and accrued expenses.

Status - The District has posted the required entries to correct the 2012 recording errors.

HDR

Facility Plan for SRF Funding

Dakota Dunes CID

Clearwell Expansion and High Service Pump Addition

Dakota Dunes, South Dakota

September 29, 2014

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1.0 Project Executive Summary

The facility plan presents evaluation of the existing conditions, need, potential alternatives to meet Dakota Dunes' potable water needs and financial considerations. A summary of the components evaluated and developed in this plan includes:

- A description of existing and future water demands, comparing to the estimates from the existing Master Plan (2009) with recent data. This will include an abnormally high usage during a dry year in 2012 following the flood of 2011.
- Evaluation of daily peaks which occur due to the high percentage of water use for irrigation.
- Evaluation the distribution system components with projected peaks to identify current and future deficiencies.
- Evaluation the potential for clearwell expansion at the Water Treatment Plant. This would increase the reliability of the treatment plant, allow for maintenance and will allow the delivery rate from the water treatment plant to be increased. Increasing the delivery rate from the plant serves as one component in reducing the peak water delivery capacity deficit from irrigation.
- Evaluation means to provide additional water to meet the potential peak demands, including:
  - Additional Elevated Storage
  - Increase Usage from Sioux City through Existing Connection
  - Provide a Second Interconnection to Sioux City
  - Expand Water Treatment Plant

The selected project improvements include an addition of a new 500,000 gallon clearwell, doubling the existing clearwell capacity and the addition of a third high service pump. The additional clearwell volume will allow for a higher pumping rate and longer duration to be available during the peak usage interval. Currently these are limited by the clearwell volume available and the need to retain a reserve for backwashing of the filters. The proposed clearwell addition will be a cast in place concrete structure. This will be below grade except for approximately the roof and approximately 18 inches of the sidewall, matching the existing clearwell.

The third high service pump provides firm capacity. Currently the Dakota Dunes Water Treatment Plant (WTP) has two pumps that are both operated to provide the peak pumping rate needed. If one of these is out of service that peak capacity would not be able to be met. The new pump will be sized to have the same operating characteristics (flow rate, pumping head and driver horsepower). The WTP was constructed to accommodate this third high service pump. The installation location exists with access for pump installation by removing a steel plate only. Likewise, the high service piping was installed with fittings and blind flanges to facilitate installation of the third pump. The electrical and controls for the third pump are in place and in the operational sequence in the SCADA (currently showing out of service).

The preliminary opinion of probable construction capital cost with engineering for the proposed project is summarized as follows:

500,000 gallon clearwell, and piping	$1,266,000
New High Service Pump No. 3 with piping and electrical:	$ 150,000
Total	$1,416,000

The project is proposed to be bid in early 2015 and constructed in the spring/summer of 2015.

No exterior work will be required for the addition of the third high service pump and only installing of the pump into an existing location will be required inside of the WTP. For the clearwell expansion, only previously disturbed areas will be modified in an area prepared for this expansion when the original clear4well was installed in 1997. The size of the anticipated disturbed area will be approximately 1/3 of an acre as show on Figure E-1.

There will not be any changes to the operation of the WTP and potable water system. This project is to allow for extended pumping at higher demand rates and to provide additional reliability and firm capacity by installing a third high service pump. Since no modifications are being made to the existing operation, there will ne no impact to the operation and maintenance costs or user rates.

In anticipation of the project, the Dakota Dunes Community Improvement District increased its water rates in May, 2014. Dakota Dunes implements an inclining block rate. It charges a flat fee based on meter size and a commodity rate for gallons used in 1000 gallon increments. There is a commodity rate for domestic use and a higher rate for irrigation use. Domestic residential use is considered water used up to 7,000 gallons/month and is charged at $1.65 per 1000 gallons. Residential usage above 7,000 gallons/month is considered irrigation use and is charged at $1.85 per 1000 gallons. Commercial users meter domestic and irrigation usage separately and the usage is charged accordingly. The rate adjustment in May o f2014 was designed to recoup all depreciation and amortization and make it available for debt service. A summary of the May, 2014 rate adjustment follows previous rates in parentheses.

Gallons Per Month	Charge Per Month
0 - 7,000	$7.70 ($5.50) minimum charge per month plus $1.65 ($1.46) per 1,000 gallons up to 7,000 gallons
7,000 +	$1.85 ($1.65) per 1,000 gallons in excess of 1,000 gallons

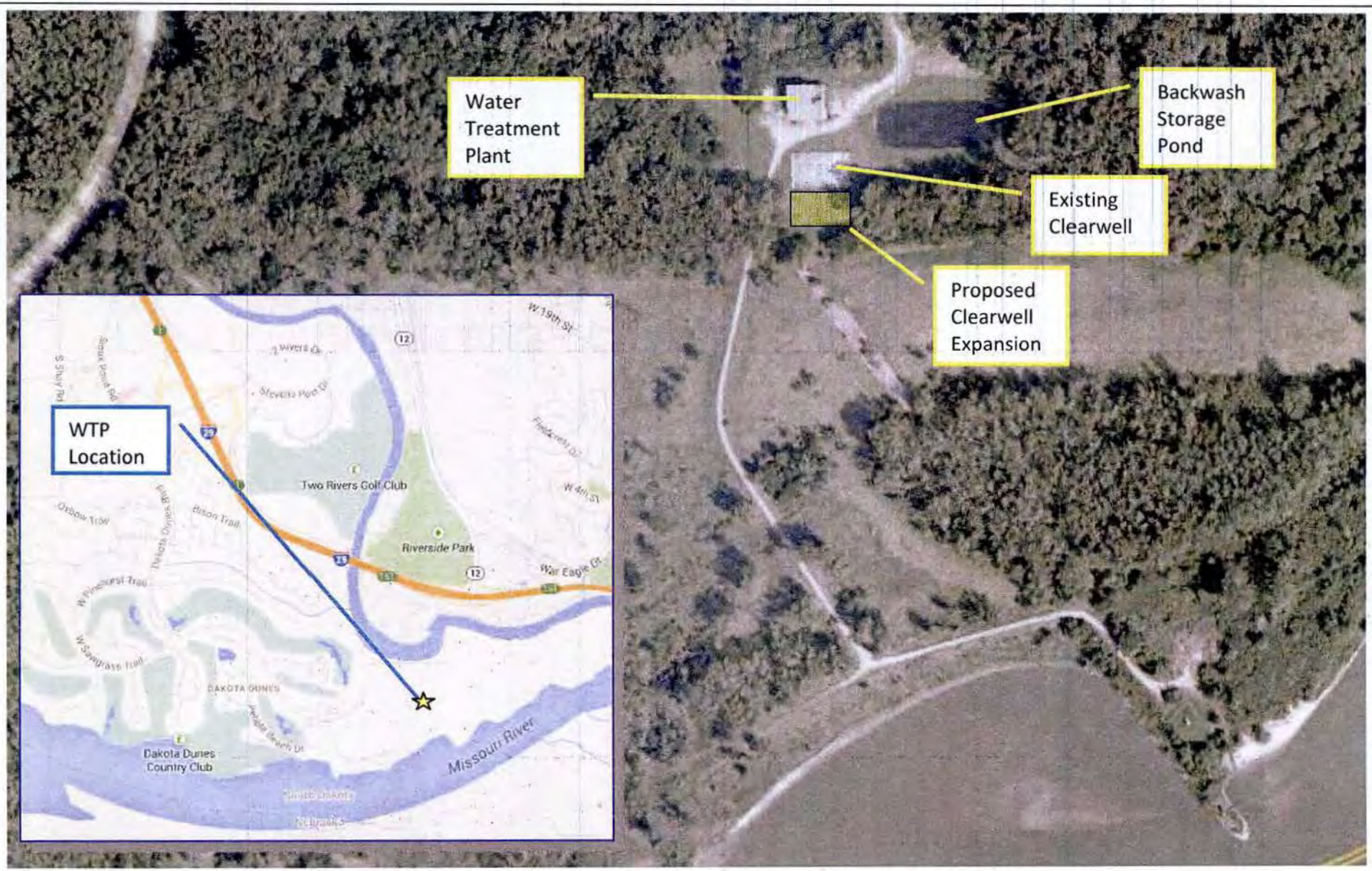


Figure E-1 Proposed Clearwell Expansion

2.0 Project Need & Development

2.1 Background on Dakota Dunes

The Dakota Dunes Community Improvement District (CID) is organized as a local unit of special purpose government, a subdivision of Union County which operates very similarly to a city. Like a city, Dakota Dunes provides its residents and businesses with potable water and sanitary sewer services. One unique aspect of the CID is that the boundaries of the community are defined and cannot expand outward as a typical city can. The CID can grow to fill its defined boundaries or to build-out. The CID has its own water treatment facilities, supplemented as needed by an interconnection with Sioux City's potable water system. This proposed project is to provide improvements to the CID's potable water system. Sanitary sewer is collected and pumped to Sioux City for treatment under a long-term contract.

2.2 Project Need

The need for the project is due to the fact that the CID has experienced difficulties meeting high summertime water demands and maintaining storage in the system, a situation that would continue and worsen as the community grows toward build out. The below summarizes the conditions and project needs.

- Summer water demands are high at Dakota Dunes in the summer due to irrigation as with most communities. The CID does have higher demands than typical communities since the lots are larger and there is more green space and landscaping (almost all of which is irrigated) than in typical communities.
- This demand due to irrigation has been even more significant in recent years, especially in 2012 when much of the community was reestablishing landscaping damaged in the 2011 flood. In addition, 2012 was a dry year.
- The peak demand is much higher than daily use since water is not used at a uniform rate throughout the day. At Dakota Dunes the peak occurs in the early morning due to irrigation, in a window from approximately 3:00 AM to 9:00 AM. Essentially all of the irrigation occurs in this window, resulting in a peak of 4 to 6 times higher than the average daily rate. This rate is difficult to satisfy with the current facilities and will become even more difficult or not achievable as growth continues if changes and/or improvements are not made.
- The Water Treatment Plant often operates at full capacity during summer, up to 22 hours per day. The existing clearwell size limits the delivery rate of treated water from the treatment plant to be essentially equal to the flow through treatment capacity of 1735 gpm. This requires that the high service pumps be throttled back to approximately 1800 gpm, whereas they could pump approximately 2200 gpm and more efficiently.
- Another limiting factor with delivery of treated water from the water treatment plant is that there are only two high service pumps. One pump can only deliver 1100 to 1200 gpm so both need to be in operation to pump the treatment capacity of 1800 gpm, or more desirably 2200 gpm as discussed above. Firm capacity is considered to be with one unit

out of service, so under current conditions the firm capacity is actually only 1100 to 1200 gpm or 1.6 to 1.7 MGD.

- The interconnection to Sioux City to meet peak demands has been supplying higher than desirable flowrate. This results in velocities in the piping in the metering station, through the river crossing and in portions of the distribution system being higher than desired. This can stress the system, especially if a valve is closed rapidly in the system causing surge or water hammer.
- Higher usage can result in lower water pressures in certain portions of the community which can cause complaints.

2.3 Existing Capacity

The existing Water Treatment Plant (WTP) is an iron and manganese removal, groundwater source plant with a rated capacity of 2.5 MGD (1735 gpm) with the following treatment components:

- Aeration for iron oxidation with an induced draft aerator
- Addition of potassium permanganate to oxidize the manganese
- Polymer addition to enhance settling
- Detention for reaction and settling of the oxidized iron and manganese
- Gravity filtration with conventional dual media filters
- Chlorination with chlorine gas for disinfection

The treated water flows to the existing 500,000 gallon clearwell for delivery to the distribution system and two high service pumps draw water from the clearwell and pump to the distribution system via a 16 inch pipeline from the plant.

In addition to the Dakota Dunes' WTP, the CID has an interconnection to Sioux City's potable water system which serves as a peak water source and also as a backup to the treatment plant and pumping facilities. This is a metering facility with a pressure sustaining valve and backflow prevention.

  - The current daily maximum allowed per the agreement with Sioux City is 2.7 MGD.
  - The flow from the connection to Sioux City is limited by the connection line size of 14 inch diameter. That connection size was selected due to the distribution system size that existed in the Two-Rivers Commercial Area where the interconnection was made.

Total available daily capacity = 2.5 MGD + 2.7 MGD = 5.2 MGD

2.4 Demand

The potable water used at Dakota Dunes can be split into domestic or common use for consumption, washing, toilet facilities, etc. and irrigation. The irrigation component at Dakota Dunes is extremely high when compared to typical use, largely due to the large lots, extensive landscaping, widespread use of automatic sprinkler systems and the sandy nature of the underlying soils. Some of the peaks experienced in 2012 can be considered abnormally high due to the fact that the community was reestablishing landscaping damaged in the 2011 flood

event and that 2012 was a dry year. The following summarizes some of the key demand observations and projections which are shown in Table 1.

- The current observed maximum day was on July 22, 2012 at 4.5 MGD. While this is less than what can be provided by the WTP and the Sioux City Connection, the rate of demand flow during irrigation in the early morning is higher than can be supplied and the water tower can be essentially emptied to the low water level by the end of the irrigation period.
- The Master Plan build out maximum day is estimated to be 6.4 MGD without Two Rivers Golf Course, or approximately 6.5 MGD with Two Rivers Golf Course. Again, the peak flow rate during the maximum hour(s) is much higher.
- The current peak hour as described by the Water Superintendent is approximately 1800 gpm from the plant plus approximately 5000 gpm through the metering structure from the Sioux City interconnection, and potentially another 1,100 gpm flowing from the elevated storage (water tower) or 7900 gpm total. This is equivalent to a pumping rate of 11.4 MGD; however that is not sustained over entire day, rather during the irrigation period as described above occurring over a 4 to 6 hour period.
- Additional Demand Projection to Build Out of the planned community:
  - Residential remaining: 18% (0.05 MGD winter, 0.29 MGD Summer)
  - Commercial Remaining: 67% (0.06 MGD winter, 0.28 MGD Summer)
- CID Usage: 0.04 MGD winter, 0.35 MGD Summer (peak is due to irrigation at an estimated rate of 800 gpm)
- Two Rivers Gold Course Usage: 0 MGD winter, 0.1 MGD Summer (peak is due to irrigation at an estimated rate of 300 gpm)

Table 1

Dakota Dunes Water Demand

Water Usage and Projected Demand to Buildout

Assumed | From CID

Use	Units	Winter[1] Domestic[3]	July[1,2] Domestic	July[1,2] Irrigation	July[1,2] Total	Winter[1] Domestic	July[1,2] Domestic	July[1,2] Irrigation	July[1,2] Total	Winter Domestic	July Domestic	July Irrigation	July Total
Residential Usage		(Gallons per Month per Lot)				(Gallons per Day per Lot)				(Gallons per Day)			
Built Lots (Average)	1,036	7,000	7,000	29,000	36,000	230	230	951	1,180	237,770	237,770	985,049	1,222,820
									Projected from Existing Residential	237,770	237,770	985,049	1,222,820
Remaining Lots	221												
Prairie	25	6,000	6,000	17,000	23,000	197	197	557	754	4,918	4,918	13,934	18,852
Meadows	28	6,000	6,000	29,000	35,000	197	197	951	1,148	5,508	5,508	26,623	32,131
Country Club	168	7,000	7,000	37,000	44,000	230	230	1,213	1,443	38,557	38,557	203,803	242,361
Total Lots	1,257								Projected New Residential	48,984	48,984	244,361	293,344
									Total Projected Residential	***286,754***	***286,754***	***1,229,410***	***1,516,164***
Commercial Usage		(Gallons per Acre per Month)				(Gallons per Day per Acre)				(Gallons per Day)			
Built Acres	210	3,978	3,978	9,382	13,360	130	130	308	438	27,390	27,390	64,597	91,987
Remaining Acres	433	3,978	3,978	9,382	13,360	130	130	308	438	56,475	56,475	133,194	189,668
									Total Projected Commercial	***83,864***	***83,864***	***197,791***	***281,655***
Two Rivers Golf Course		(Gallons per Month)				(Gallons per Day)				(Gallons per Day)			
Since Connection		0	0	2,400,000	2,400,000	0	0	78,689	78,689	0	0	78,689	78,689
Projected (Based on Golf Course Input; Usage in 2006)									***Projected Two Rivers Golf Course***	***0***	***0***	***113,000***	***113,000***
CID Usage[4]											(Gallons per Day)		
									Projected CID Usage	40,000	40,000	310,000	350,000
Non-Metered[4]									Projected Non-Metered Usage		(Gallons per Day)		
									Projected Non-Metered Usage				584,000
									Total Existing Usage	305,160	305,160	1,438,335	2,327,495
									Total Projected Usage at Buildout	648,389	648,389	2,835,250	4,067,639

1. For built lots used data from CID for average and max month in July '13 and projected based on July average (2010, 2012, 2013 for residential)
2. July 2013 (commercial)
3. No irrigation, domestic use only
4. Based on Water Master Plan (2009)

3.0 Environmental Considerations

3.1 LAND USE

3.1.1 Existing Conditions

Dakota Dunes is overseen by the Dakota Dunes Community Improvement District (CID) that operates under a board of supervisors. Dakota Dunes is a master-planned community. Of the 2,000 acres included in the development planned by an outside architectural and planning firm, approximately 434 acres have been reserved for office, light industrial and retail facilities; 543 acres for residential single-family houses, townhomes, and apartments; 343 acres for two golf courses and 627 acres for open space and right-of-way (ROW).

3.1.2 Impacts of Alternatives

The No-Action Alternative would not affect current or designated land use within the Study Area.

The selected alternative is consistent with the current land use of the area, and the vision of the Dakota Dunes CID. In addition, the property in the Study Area is currently owned by the Dakota Dunes CID, with no ROW additional ROW required for the Project.

3.2 Noise

3.2.1 Existing Conditions

Traffic noise from I-29 dominates the noise levels adjacent to the Study Area.

3.2.2 Impacts of Alternatives

The No-Action Alternative would not affect noise levels within the Study Area.

The selected alternative would not impact long-term noise levels within the Study Area. Temporary noise impacts on the surrounding areas would occur during the construction of the selected alternative. Activities such as excavation, etc. would create new and additional noise sources within the Study Area. For projects, Best Management Practices (BMPs) can be utilized to minimize construction-related noise impacts. For this Project, the specific BMP implemented would be to limit construction from 6 am to 7 pm. This BMP would include reducing noise levels in any neighboring residential areas during the evening and at night, the most sensitive timeframe for noise impacts. Therefore, the selected alternative would cause short term impacts to noise levels but the implemented BMPs would lessen the impact to areas adjacent to the Study Area.

3.3 Public Services and Facilities

3.3.1 Existing Conditions

Many public services are provided to the Study Area including emergency services such as ambulance emergency services and law enforcement.

Public facilities also include water supply and infrastructure. Dakota Dunes has a good raw water source, the Missouri River. The CID has a water plant with the ability to treat approximately 2.3 million gallons per day and also has a connection to Sioux City's water system that allows the CID to purchase up to an additional 2.7 million gallons per day. The community's wastewater is collected and pumped to Sioux City, IA for treatment under a long-term contract (Dakota Dunes, 2014).

3.3.2 Impacts of Alternatives

Under the No-Action Alternative, the water supply would be inadequate in the future without the Project.

The selected alternative would add a clearwell to the current water plant in Dakota Dunes, providing positive outcomes such as providing the City with additional water storage.

3.4 Parks and Recreational Areas

3.4.1 Existing Conditions

There are 5 parks and recreation areas within one mile of the Study Area.

- Dakota Dunes Country Club is located west of the Study Area adjacent to the Missouri River in Dakota Dunes, SD. The golf course includes 18 holes.
- Riverside Park is located north of I-29 and north of the Study Area in Sioux City, IA. The park is 100 acres, and includes a picnic area, restrooms, playground equipment, 8 ball diamonds, 6 tennis courts, a swimming pool, and soccer fields.
- War Eagle Park is located north of I-29 and northeast of the Study Area in Sioux City, IA. The park is 27 acres and includes a picnic area and restrooms.
- Covington Links Golf Course is located south of the Missouri River and southeast of the Study Area in South Sioux City, NE. The gold course includes 18 holes.
- Two Rivers Golf Club is located north of I-29 and northwest of the Study Area in Sioux City, IA. The golf course includes 18 holes.

3.4.2 Impacts of Alternatives

The No-Action Alternative and selected alternative would not impact the parks and recreational facilities.

3.5 Air Quality

3.5.1 Existing Conditions

The U.S. Environmental Protection Agency (EPA) regulates air pollutants in part by primary and secondary National Ambient Air Quality Standards (NAAQS). South Dakota Department of Environment and Natural Resources (SD DENR) has adopted the Federal regulations by reference and operates a network of air monitors that track the concentration of particulate matter, one of the regulated pollutants at various locations.

Throughout the state, monitors track the concentrations of particulate matter, ozone sulfur dioxide, nitrogen dioxide, and air toxics. Particulate matter is monitored at ten locations throughout the state. Union County is the closest location. The Study Area is in attainment of primary and secondary regulatory standards for ambient air quality, with air quality monitoring results well below the standards (SD DENR, 2013).

3.5.2 Impacts of Alternatives

The No-Action Alternative would not adversely impact air quality in the Study Area.

The selected alternative would not adversely impact air quality in the Study Area. Construction would cause air emissions to elevate in the short-term.

3.6 Regulated Materials

3.6.1 Existing Conditions

A file search of the Study Area was conducted to identify sites with recognized environmental conditions (RECs). HDR conducted a file search of the SD DENR Spill Events website to determine potential RECs within the Study Area. No RECs were found within the Study Area, but the closest in proximity to the Study Area RECs are listed in Table 2 and shown in Figure 1.

Table 2. RECs within 1 mile of the Study Area

ID #	Facility Name	Reason for Listing	Description of Event	Status of Event	Location
1	Diesel Spill – Transport Event	SPILLS	100 Gallons of Petroleum on 4/17/2013	Closed on 5/7/2013	I-29 Southbound, MM 0.2 (median)

3.6.2 Impacts of Alternatives

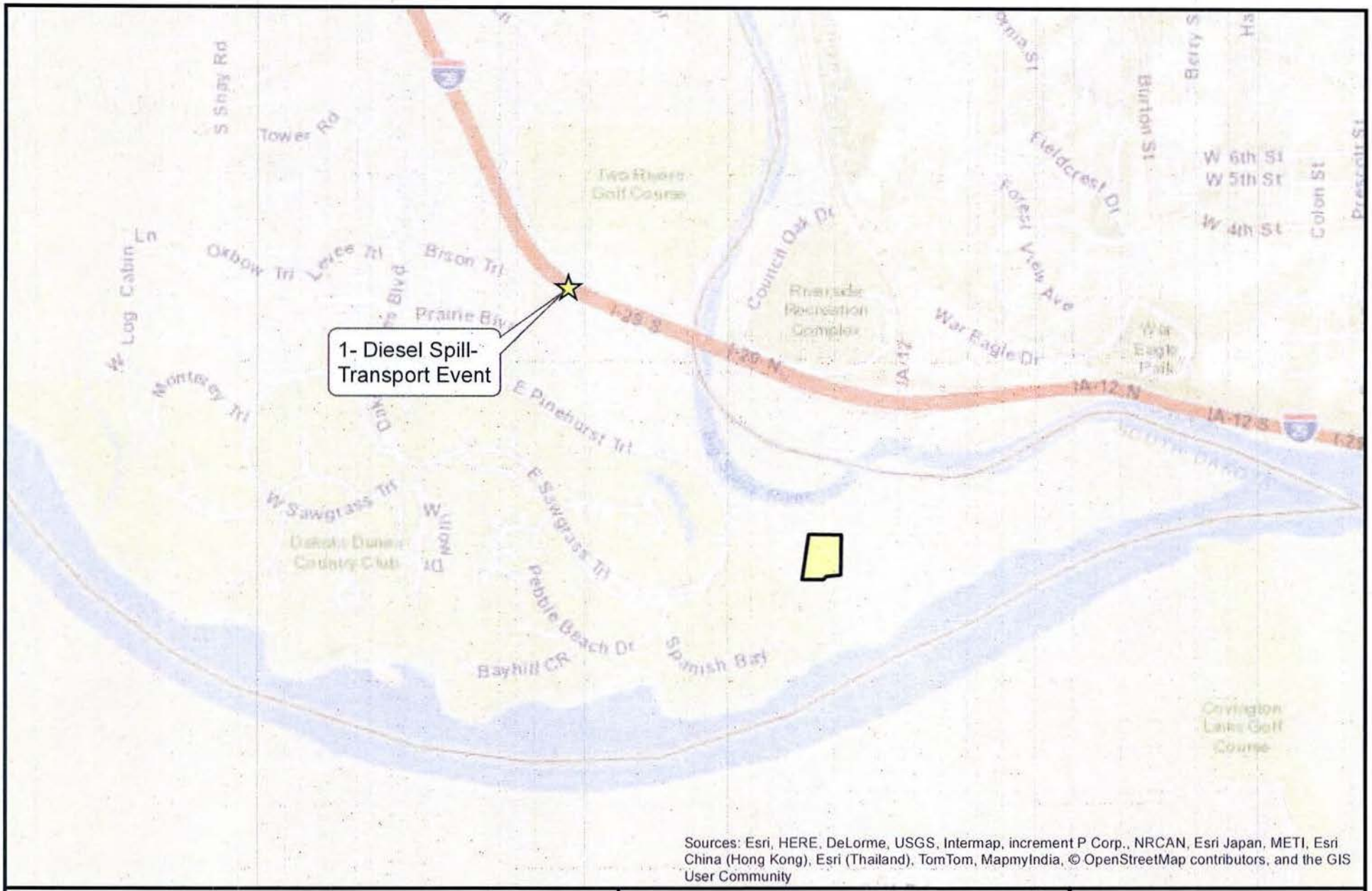
The No-Action Alternative would not impact the existing regulated material sites in the Study Area.

The selected alternative would not affect nor be affected by REC sites due to Project's distance from the site, and the SD DENR previously closing this event.

During construction, the contractor should be aware of any large areas of soil staining, buried drums, or USTs that are discovered and coordinate with SD DENR prior to continuing with work in those areas.

3.7 Historical and Archeological Sites

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires federal agencies to determine whether undertakings would have adverse impacts on historic properties that are listed on or are eligible for listing on the National Register of Historic Places (NRHP).



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Legend

Study Area

N

0 1,500 3,000 Feet

Regulated Materials

Recognized Environmental Conditions (RECs)

Figure
1

3.7.1 Existing Conditions

A records search was completed on September 11, 2014 for areas previously surveyed. The Study Area was surveyed in 1989 by Bradley and Zimmerman. The previous survey determined no archeological sites or historic structures are located within the Study Area.

3.7.2 Impacts of Alternatives

The No-Action Alternative would not affect any archeological sites or historic structures.

A determination of No Historic Properties Affected is recommended for the Project. This recommendation requires concurrence from the South Dakota State Historic Preservation Office (SHPO) (see Appendix B).

If buried prehistoric or historic cultural materials are encountered during construction, work should cease in that area and the SHPO should be contacted immediately.

3.8 Floodplains, Wetlands, and OWUS

3.8.1 Floodplains

3.8.1.1 EXISTING CONDITIONS

For the Dakota Dunes area, the Flood Insurance Rate Map (FIRM) panel became effective on February 23, 2001. The Study Area is located in the floodway of the Missouri River, in Zone AE.

3.8.1.2 IMPACTS OF THE ALTERNATIVES

The No-Action Alternative would not impact the existing floodplains in the Study Area.

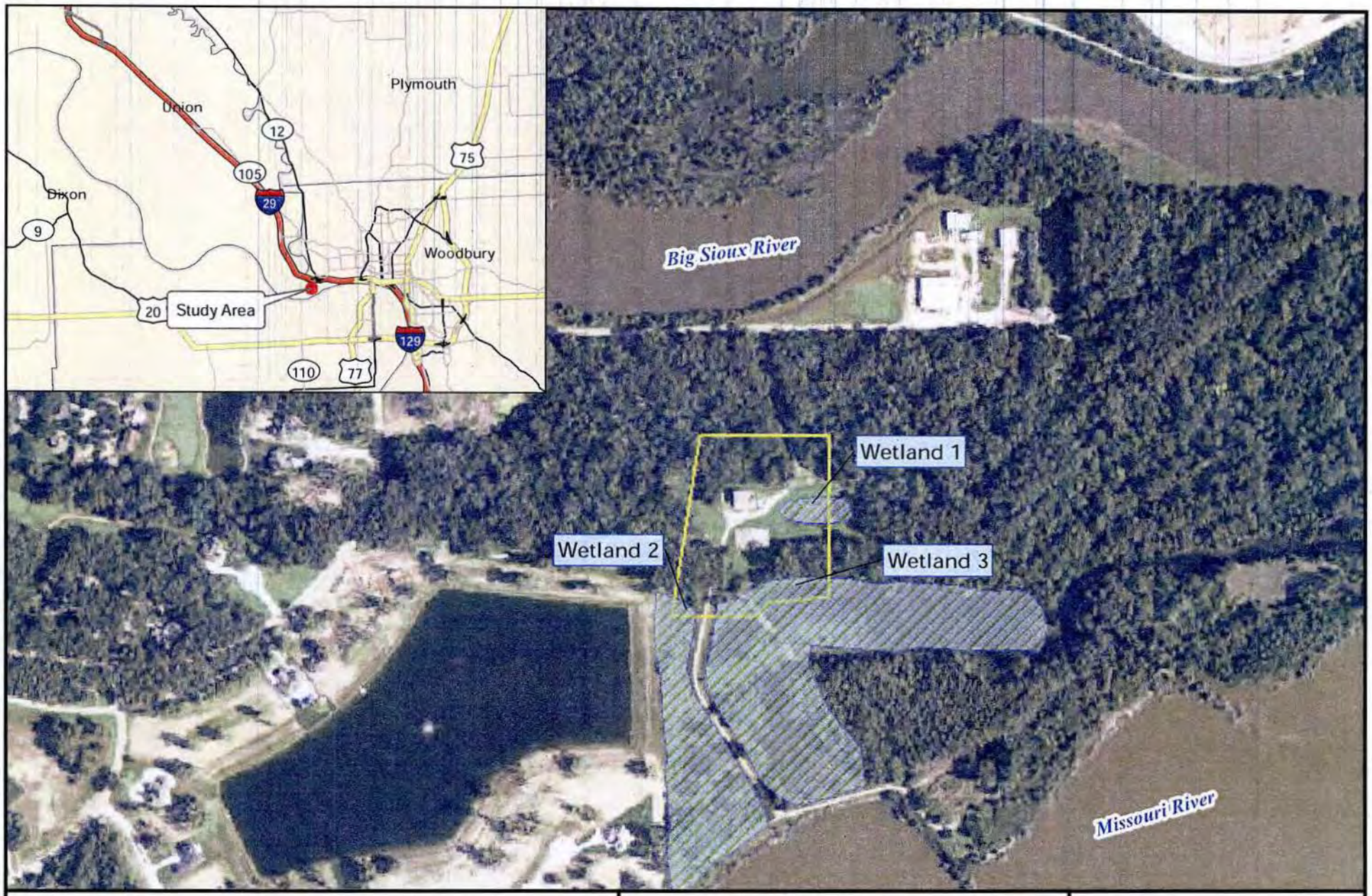
Although the floodplain is encroached, the selected alternative would replace the existing grade conditions once the proposed clearwell has been installed. Therefore, the selected alternative would not affect the Missouri River floodplain.

3.8.2 Wetlands and Waters of the U.S.

3.8.2.1 EXISTING CONDITIONS

Wetlands within the Study Area were previously delineated in November 2011 for the Dakota Dunes Community Levee Removal Project (see Appendix C). A field review was conducted to determine the wetland areas within the Study Area. The United States Army Corps of Engineers was coordinated with for the previous delineation. This delineation was done within the last five years and covers all of the Study Area for this Project. Therefore, the previous delineation will be cited for this clearwell addition.

Palustrine wetlands include all nontidal wetlands dominated by trees, shrubs, persistent emergent and emergent mosses and lichens. Palustrine system wetlands are generally bounded by uplands or by any other type of wetland system (Cowardin et al, 1979). Figure 2 displays the wetland areas that were delineated in the previous field survey within this Project's Study Area. Wetlands for this Project were referred to as Wetlands 1, 2, and 3 in the previous



Legend

2011 Delineated Wetlands

Study Area

N

0 375 750 Feet

Environmental Resources

Wetlands

Figure 2

delineation report in November 2011 for the Dakota Dunes Levee Removal Project (see Appendix C).

Waters of the U.S. include rivers, streams, and intermittent streams, lakes, ponds, and impoundments. The Waters of the U.S. adjacent to the Study Area are the Big Sioux River and the Missouri River (see Figure 2).

3.8.2.2 IMPACTS OF THE ALTERNATIVES

The No-Action Alternative and the selected alternative would not impact wetlands or Waters of the U.S.

3.9 Agricultural Lands

The Project would have no impact on prime or important farm land (NRCS, 2014).

3.10 Wild and Scenic Rivers

3.10.1 Existing Conditions

The Missouri River begins at the juncture of three tributaries at Three Forks, Montana, and flows southeast for 2,300 miles, joining the Mississippi River a few miles north of St. Louis, Missouri. The reach of the river adjacent to the Study Area is not designated as a wild and scenic river (USFWS, 2014).

3.10.2 Impacts of Alternatives

The No-Action Alternative and selected alternative would not impact any wild or scenic rivers.

3.11 Fish and Wildlife Protection

3.11.1 Existing Conditions

Wildlife habitat within the Study Area includes forested areas adjacent to the Missouri River.

Within Union County, SD, the eight Federal T&E species include piping plover, interior least tern, rufa red knot, northern long-eared bat, pallid sturgeon, Topeka shiner, western prairie fringed orchid, and scaleshell mussel (USFWS, 2014).

3.11.2 Impacts of Alternatives

The No-Action Alternative would not have a direct effect on fish or wildlife habitat.

The following paragraphs discuss the state and federal listed species for the selected alternative, the potential to occur within the Study Area, and the impacts from the selected alternative.

Piping plover- Piping plovers nest along river sandbars throughout the Great Plains Region. The nest in sparsely vegetated areas that are slightly raised in elevation (USFWS, 2014). The preferred habitat of the piping plover does not exist within the Study Area.

Interior least tern- Interior least terns nest on open shorelines, riverine sandbars, and mudflats throughout the Mississippi and Missouri River drainages (USFWS, 2014). The preferred habitat of the interior least tern does not exist within the Study Area.

Rufa red knot- In North America, red knots are commonly found along sandy, gravel or cobble beaches, mudflats or lagoons and feed on hard-shelled mollusks and invertebrates (USFWS, 2014). No sandy, gravelly or cobble beaches, mudflats, nor lagoons exists within the Study Area that would serve as appropriate stopover habitat for the species. Therefore, the preferred habitat of the rufa red knot does not exist within the Study Area.

Northern long-eared bat- The northern long-eared bat habitat typically includes cool, moist sites for hibernation, such as caves or mines. Roosting sites include live or dead tree snags, and less commonly, man-made structures (USFWS, 2014). The Study Area is adjacent to Dakota Dunes, with disturbance throughout. No caves or mines exist within the Study Area and no structures or trees are anticipated to be removed. Therefore, the preferred habitat of the northern long-eared bat does not exist within the Study Area.

Pallid sturgeon- Pallid sturgeons are found in turbid water, diverse habitat types and flow rates afforded by large, free flowing rivers. Historically, the pallid sturgeon is found in the Missouri River from Fort Benton, Montana to St. Louis, Missouri (USFWS, 2014). The preferred habitat of the pallid sturgeon does not exist within the Study Area.

Topeka shiner- Topeka shiners are found in small prairie streams and creeks that exhibit perennial or nearly perennial flow (USFWS, 2014). The preferred habitat of the Topeka shiner does not exist within the Study Area.

Western prairie fringed orchid- The western prairie fringed orchid is potentially found in areas of intact tallgrass prairies, or in disturbed areas of subirrigated prairies, swales in sand dune complexes, sedge meadows, wet uplands, and river bottom prairies and meadows (USFWS, 2014). The preferred habitat of the western prairie fringed orchid does not exist within the Study Area.

Scaleshell mussel- Scaleshell mussels live in medium sized and large rivers with stable channels and good water quality. They bury themselves in sand and gravel on the bottom with only the edge of their partially opened shells exposed. To date, the shells of the scaleshell mussel have been found, but no populations have been located (USFWS, 2014). The preferred habitat of the scaleshell mussel does not exist within the Study Area.

Osprey- Osprey are typically found by water such as river, lakes, ponds, and large open-top trees used for nesting and roosting (SDGFP, 2014). No trees are anticipated to be removed for this Project; therefore, the Project will avoid raptors nesting and habitat.

Bald eagle- The USFWS has clarified regulations implemented in the Bald and Golden Eagle Protection Act and published a set of National Bald Eagle Management Guidelines (SDGFP, 2014). No trees are anticipated to be removed for this Project; therefore, the Project will avoid eagles nesting and habitat.

Peregrine falcon- Peregrine falcons are found in open grasslands with suitable nesting cliffs and rock outcroppings near a concentrated prey base such as waterfowl and colonial ground squirrels (SDGFP, 2014). The preferred habitat of the peregrine falcon does not occur within the Study Area.

Whooping crane- Whooping cranes breed and nest along lake margins or among rushes and sedges in marshes and meadows. The water in their preferred habitats is anywhere from 8-10 inches to as much as 18 inches (USFWS, 2014). The preferred habitat of the whooping crane does not occur within the Study Area.

Northern river otter- The northern river otter are found in slow-moving rivers and streams with deep pools, abundant riparian vegetation, and plentiful fish (SDGFP, 2014). The Project will avoid the Missouri River and therefore the Project will avoid the northern river otter's preferred habitat.

False map turtle- The false map turtle prefers lakes, ponds, reservoirs, sloughs, and rivers and their backwaters. The false map turtle usually nests up to approximately 300 feet from water (SDGFP, 2014). The Project is further than 300 feet away from the Missouri River and therefore, the potential area that the false map turtle could occupy is not affected by the selected alternative.

Lined Snake- The lined snake Prefers open, grassy prairies with rich soils and sparsely wooded areas; often found on hillsides near rocky areas (SDGFP, 2014). The preferred habitat of the lined snake does not occur within the Study Area.

Eastern hognose snake- The eastern hognose snake is usually found in sandy floodplains of rivers and streams, sandy shorelines, and sandy upland grasslands (SDGFP, 2014). The preferred habitat of the eastern hognose snake does not occur within the Study Area.

The **banded killfish**, **blacknose shiner**, **finscale dace**, **longnose sucker**, **northern redbelly dace**, **northern pearl dace**, **sicklefin chub,** and **sturgeon chub** are all state listed fish species. The preferred habitat of each is not found within the Study Area as the Project will take place outside of the Missouri River.

3.12 Water Quality and Quantity

3.12.1 Existing Conditions

Groundwater resources within the Study Area include groundwater resources and the Missouri River. The Missouri River flows south of the Study Area.

The Dakota Dunes CID serves more than 2,750 customers on an average of 816,000 gallons of water per day, and is produced from local wells. Water treatment facilities are supplemented as needed by an interconnection with Sioux City's potable water system.

3.12.2 Impacts of Alternatives

Neither the No-Action Alternative nor the selected alternative will have long term impacts on water quantity or water quality. The clearwell expansion included in the selected alternative will allow the Dakota Dunes CID to better meet water demands.

The National Pollutant Discharge Elimination System (NPDES) permit requirements will prevent erosion during the construction of the selected alternative. The requirements include reestablishment of vegetation, structural devices such as berms and energy dissipation systems. BMPs and/or other erosion control measures will be implemented to minimize impacts to the Missouri River.

3.12.3 Review Agency Comments

Early agency coordination letters were sent on August 11, 2014 with the exception of the letter to NRCS which was sent on September 2, 2014. Table 3 summarizes agency responses (see Appendix A).

Table 3 - Agency Responses

Agency	Date	Response
U. S. Dept. of Agriculture	September 26, 2014	The Project will have no effect on prime or important farmland.
SD Dept. of Game, Fish, and Parks	August 20, 2014	No significant impact on fish and wildlife resources. Recommends disturbance to riparian areas be kept to a minimum and any unavoidable wetland impacts be mitigated.
U.S. Fish and Wildlife Service	September 2, 2014	This constitutes a report to 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.
U.S. Army Corps of Engineers, Omaha District	September 18, 2014	Your plans should be coordinated with the state water quality office in which your project is located. Please coordinate with SDDENR concerning state water quality programs. It is recommended you consult with USFWS, SDGFP, and SHPO, and the floodplain management office.
		Surface Water Quality Determination (Aug 27)- This project

		will have little or no impact on the surface water quality in this area. The project is approved.
SD Dept. of Environment and Natural Resources	August 2014	Air Quality Determination (Sept. 15)- This project will have little or no impact on the air quality in this area. The project is approved.
SD Dept. of Environment and Natural Resources	August 2014 (continued)	Drinking Water Quality Determination (Sept. 16)- This project will not have adverse environmental effects to drinking water in this area. The project is approved. Waste Management Determination (Sept. 16)- This project will have little or no impact on the waste management in this area. The project is approved. Ground Water Quality (Sept. 18)- The department does not anticipate any adverse impacts to ground water quality by this project. A stormwater permit may be required for areas of disturbance larger than one acre.

3.12.4 Future Actions

Future actions that may be required were addressed by specific resource sections, and are summarized here to provide a consolidated discussion.

- Best Management Practices (BMPs) would be utilized to minimize construction-related noise impacts. For this Project, the specific BMP implemented would be to limit construction from 6 am to 7 pm. This BMP would include reducing noise levels in any neighboring residential areas during the evening and at night, the most sensitive timeframe for noise impacts.
- The selected alternative would replace the existing grade conditions once the proposed clearwell has been installed. Therefore, the selected alternative would not affect the Missouri River floodplain.
- During construction, the contractor should be aware of any areas of soil staining, or if buried drums or underground storage tanks are discovered.

If any are noted during construction, coordination with SDDENR is required prior to continuing work in those areas.

- If buried prehistoric or historic cultural materials are encountered during the Project, work should cease in that area and the State Historical Preservation Office (SHPO) should be contacted immediately.
- If any federal or state listed T&E species are observed during construction of the Project, the appropriate agencies would be notified. As a result, the Project would have no long-term impacts on fisheries and wildlife.
- In regards to migratory birds, the clearing of trees would be avoided.
- The No-Action Alternative and the selected alternative would not impact wetlands or Waters of the U.S.

4.0 Alternative Development and Selection

4.1 Irrigation Rate Controlling Factors

There are a number of conditions and controlling factors that impact the ability to supply water during the high demand periods and were considered in development and evaluation of alternatives to improve the delivery capacity, including the following.

- The maximum flow rate occurs while irrigating, which is conducted overnight in approximately a 6-hour window, essentially increasing the flow by a factor of 4 over that period. To be able to follow the real-time needs during that window the flows will be discussed in gallons per minute (gpm).
- The residential and commercial users can be split at approximately the intersection of Dakota Dunes Boulevard and Bison and Levee Trails, considering everything south to be residential and north to be commercial.
- Commercial Peak Hours (from CID meter data) is estimated to be at an effective rate of 2.9 MGD or 2,000 gpm
- Residential Peak Hours (from CID meter data) is estimated to be at an effective rate of 11.2 MGD or 7,800 gpm
- The flow from the connection to Sioux City is limited by the connection line size of 14 inch diameter. That was sized due to the distribution system size that existed in the Two-Rivers Commercial Area. A recommended maximum flow through the metering structure and piping is approximately 3500 gpm.
- Assuming all commercial demand (2000 gpm) is supplied by the Sioux City connection (3500 gpm recommended max) there would still be 1500 gpm to serve the residential and CID irrigation needs.
- Assume the water tower has a usable volume of 400,000 gallons and that would be exhausted in the 6 hour irrigation window or at a rate of 1100 gpm. This would be available for residential and CID irrigation.
- Residential and CID available is then 1500 gpm (Sioux City connection) + 1100 gpm (water tower) and 1800 gpm from water treatment plant (without additional clearwell) for a total of 4400 gpm.
- Net deficit for residential would be 7800 gpm – 4400 gpm or 3400 gpm.
- Net deficit for residential with CID irrigation (800 gpm) is approximately 4200 gpm
- The net deficit can be met by providing:
    - Additional treatment capacity
    - A second connection to Sioux City near the maintenance shop. This would require a second pipeline running from the connection to East Pinehurst, paralleling the distribution main from the water treatment plant. The required additional capacity and the plant flow would be in excess of what the existing 16 inch diameter line could carry. The conceptual layout for this line is shown on Figure 3. Due to the preliminary nature of this evaluation we have not contacted Sioux City to determine if this is an option they would consider or to locate existing lines and sizes.
    - Additional storage to be consumed during the peak irrigation period that would need to be in the residential area where needed due to the size of the existing distribution system pipelines. A restriction to the flow would be encountered in the main along Dakota Dunes Boulevard from Courtyard Drive to Bison and Levee Trails where all flow must pass through a single 14 inch diameter line. A

similar condition exists where the main crosses under I-29 from the commercial park to the Dunes Business Park.
  - Additional storage would be required to meet the net deficit demand for the 6 hour irrigation window, or:
    - For residential only: 3400 gpm for 6 hours or 1.2 MG
    - For residential with CID irrigation: 4200 gpm for 6 hours or 1.5 MG

4.2 Potential to Reduce Demand

As one means of being able to meet the peak water demands options to reduce demand were investigated. While implementation of water reduction options can help meet the current high demand needs, they will not be able to do so as the community continues to grow to build-out. Options evaluated include:

- Take CID boulevard irrigation off the system; this would reduce the peak by about 0.31 MGD or 860 gpm.
- Reduce boulevard irrigation frequency which is currently conducted daily. By shifting to every other day (such as recommended for the commercial and residential customers) would result in an average water reduction of approximately 150,000 gallons per day. If one-half of the zones were operated each night the reduction in demand flow rate during the irrigation period would be approximately 430 gpm.
- Use a well for the Two Rivers Golf Course Green Watering which would remove a demand of 0.11 MGD and a peak of approximately 300 gpm.
- Conserve water by enforcing odd-even watering. Strict enforcement and working with irrigation contractors to reprogram system could result in a significant reduction.
- Look at using alternative water sources for park irrigation such as a local well.
- Using alternative water sources for a separated irrigation system for new commercial and new country club lots such as at Spanish Bay. Those lots could be irrigated via pumping from the lake which would eliminate the iron problems associated with using a groundwater source. This could be developer driven, used as a marketing incentive providing lower cost irrigation water.
- Extend watering period to reduce the peak. Extending from 6 hours to 8 hours would reduce the peaking factor from 4 to 3. This may be difficult due to mold development that can occur by watering too long before sunrise.
- Implement a more aggressive inclining rate.

4.3 Alternatives to Meet Peak Demands

4.3.1 General

In this section options for improving the ability to meet peak demands are presented and evaluated.

- No-Action Alternative - Since failure to move forward with a project will limit the ability for Dakota Dunes to adequately meet the potable water demand needs of the community, the No-Action alternative is not considered to be acceptable.
- Evaluation means to provide additional water to meet the potential peak demands, including:
  - Expand Water Treatment Plant

- Increase Usage from Sioux City through Existing Connection
- Provide a Second Interconnection to Sioux City
- Additional Storage out in the Distribution System

- Evaluation the distribution system components with projected peaks to identify current and future deficiencies.
- Evaluation the potential for clearwell expansion at the Water Treatment Plant. This would increase the reliability of the treatment plant, allow for maintenance and will allow the delivery rate from the water treatment plant to be increased. Increasing the delivery rate from the plant serves as one component in reducing the peak water delivery capacity deficit from irrigation.

4.3.2 Expand Treatment Capacity

Expanding treatment capacity alone would not be the most cost effective option for meeting the peak demand due to the very high peak rate that would be required. Increasing capacity in conjunction with providing additional storage can be more cost effective. Some options for expanding treatment include:

- Expand using gravity filters like the existing filters.
  - Pros
    - Familiarity with the process
    - Simple and filters can be viewed from above to inspect condition
    - Reduces dependence on Sioux City supply
  - Cons
    - Lower cost options are available.
- Expand using pressure filters.
  - Pros
    - Slightly lower in cost than gravity filters.
    - Can be provided in modules partially assembled reducing construction duration.
    - Can be factory tested before shipment
    - Reduces dependence on the Sioux City interconnection supply
  - Cons
    - Enclosed vessel so cannot observe backwashing and filtration.
    - Steel pressure vessels will require maintenance/painting.
- Pump and disinfect only.
  - Pros
    - Low cost
    - Quickly implementable
    - Reduces dependence on the Sioux City interconnection supply
  - Cons
    - Could be difficult to get regulatory approval
    - Water quality could be a significant issue. Iron and manganese will oxidize with the addition of chlorine and the residual can cause staining of clothes sidewalks home siding and stone, etc. In addition, the fluoride level in the Dakota Sandstone Aquifer wells is over the notice level which is not desirable. This option was eliminated from further consideration due to the concerns with water quality.

Figure 3

Second Interconnect to Sioux City's Potable Water System

4.3.3 Increasing Supplied Water Quantity from Sioux City

Some of the options discussed following include increasing the capacity from the existing Sioux City connection or adding another connection. Options considered for increasing supply from Sioux City's potable water system are summarized in the following bullets:

- Second Connection to Sioux City's Supply Near the CID Maintenance Building (Figure 3)
  - Pros
    - Relatively low capital cost option
    - Low operations and maintenance costs
    - Familiarity with agreement and facility to transfer water due to the existing interconnection.
  - Cons
    - Increases dependence on Sioux City to meet water demand
    - Inability to fully control water costs or quality to CID.
- Other interconnect options were investigated and modeled were found to have limited benefit and are not considered as viable or necessary. Those were:
  - Interconnect from SE of Tyson to Main in Meadows Blvd near the Park.
  - Interconnect from Behind Homes on the South Loop off Bluestem Trail, Along the Bike Trail to West Pinehurst.

4.3.4 Increase Treated Water Storage

Providing additional treated water storage would allow more potable water to be available to deliver at a higher rate than currently achievable. Options include storage at the plant, ground storage in the system and elevated storage in the system as presented following:

- Additional Clearwell Volume
  - Pros
    - The current high service pumping is limited at times due to clearwell storage and high service pump capacities and the interaction with the back washing procedures. Increasing capacity would reduce those limitations.
    - Adding clearwell can allow for storage to be built up at the plant during the low demand times during irrigation season, using Sioux City supplied water to meet daily demand and allowing the *delivery rate* from the plant to be four times greater than the current maximum limit of approximately 1735 gpm, or 6900 gpm during the irrigation window, if a second parallel discharge line is installed as described on page 4 of this TM.
    - Freezing not a significant concern.
    - Design would allow for isolating the existing clearwell and the proposed clearwell so the existing could be cleaned and maintained immediately after construction and both maintained periodically in the future. Currently there is no means for accomplishing that.
    - Could also be filled from Sioux City connection but the supplied head would be lost, requiring re-pumping.
  - Cons
    - More costly than ground storage.
    - Space limitations and dewatering for construction may be a consideration.
    - Relies more heavily on Sioux City supply if treatment capacity also not expanded.
    - Need to add additional pumping capacity.

- Elevated Storage
  - Pros
    - If using water supplied by Sioux City Connection their system provides water already at system pressure and therefore would not require re-pumping and construction of pumping facilities.
  - Cons
    - Highest cost option for finished water storage.
    - Maintenance required such as periodic painting.
    - Aesthetics may be a concern depending upon where installed. In the traffic circle would be an excellent location since the distribution system has four 12 inch lines radiating out from there.
    - Freezing issues in winter due to very low demand. Would be likely that it would need to be taken off line during the five to six month non-irrigation season or effective volume reduced significantly.
    - Relies more heavily on Sioux City supply if treatment capacity also not expanded.

- Ground Storage
  - Pros
    - Freezing not as significant of an issue as elevated.
    - Lowest cost for finished water storage.
    - Could put at plant or out in the system where needed such as at the traffic circle although aesthetics would be a concern.
  - Cons
    - If at the plant, would require addition of new pumps for low lift from treatment to ground storage (unless filled from Sioux City connection) and high service to distribution due to different head conditions than with existing hydraulic profile and high service pumps.
    - If filled by Sioux City supply it would waste the delivered head requiring re-pumping and wasting energy.
    - Aesthetics can be a concern. The lowest cost are bolted steel tanks which would not be desirable at the point or real need. The precast/pre-stressed can be more attractive but still may be objectionable at a community like Dakota Dunes. It would be recommended that any ground storage be limited to the treatment plant site behind the screening of the trees or near the maintenance facility, limiting visual impact.
    - Would likely not use in non-irrigation season to avoid re-pumping. This would require shutdown/startup & disinfection

4.4 Development of Selected Alternatives

The following presents additional detail on a few of the Options that were considered to warrant more discussion due to the applicability or complexity of the option. These are not necessarily the most favorable and recommended options. Tables 4 and 5 summarize all of the discussed options.

4.4.1 Clearwell Expansion and Addition of a Third High Service Pump

Adding a second clearwell is recommended regardless of capacity options selected either such that operation of the water treatment facilities can occur in a manner that is not limited by lack of clearwell storage, reducing the high service pumping delivery rate due to storage capacity and

reserves required for backwashing, which occurs now. In addition, this would provide redundancy allowing the existing clearwell to be taken out of service for cleaning and maintenance. In the most recent master plan maintenance of the clearwell was recommended to repair concrete/cover deterioration.

As described previously, the water treatment plant currently has only two high service pumps. One pump can only deliver 1100 to 1200 gpm so both need to be in operation to pump the treatment capacity of 1735 gpm. If the clearwell was expanded to provide additional storage that rate could be approximately 2200 gpm with both pumps running. Since firm capacity is the capacity with the largest unit out of service, the actual firm capacity would only be 1100 to 1200 gpm or 1.6 to 1.7 MGD with the current two-pump configuration. It is recommended that a third pump be installed in the existing space constructed specifically that purpose, to improve reliability and increase firm capacity. Another benefit of adding a third high service pump is that with a third pump running, the delivery capacity could be increased to be in the 3000 gpm to 3200 gpm range. This would not be considered firm capacity but would be available most of the time. To operate a third pump additional clearwell volume is required.

At a minimum a duplicate 500,000 gallon clearwell would be recommended but a larger clearwell should also be considered. While a 500,000 will help to provide additional peak flow rate, that is minimal compared to the actual additional dry weather irrigation needs. The purpose of the addition is to be more firm on the capacity of approximately 2200 gpm. As an example, increasing the clearwell size by 500,000 gallons for a total of 1 MG and assuming keeping 200,000 gallons in reserve for backwasing, the available storage is 800,000 gallons. If the clearwell were full at the beginning of irrigation and that volume was exhausted over the approximately 6 hour irrigation period, a pumping rate from the clearwell of 2200 gpm, matching the pumping capacity of two pumps could be achieved. At the same time, if the treatment plant is in operation, approximately another 1735 gpm would be available from treatment. With the third high service pump operating the plant would be able to deliver approximately 3000 to 3200 gpm as described above over the irrigation period.

4.4.2 Second Connection to Sioux City's Potable Water System

Adding a second connection to Sioux City such as shown in Figure 3 would allow for meeting peak demands when used in conjunction with the existing treatment plant and the existing interconnection. This would offer the lowest capital cost and operation and maintenance cost option. The drawback is that it increases the dependence on Sioux City to meet the CID's water needs.

4.4.3 Treatment Capacity Expansion with Clearwell

Increasing the treatment capacity is a desirable option in that it lessens the dependence on the Sioux City supply. In addition, it provides a degree of redundancy for the existing facility which has been in service for over 20 years. Treatment expansion would be conducted in conjunction with additional storage of some degree to provide clearwell redundancy and reduce overall costs. The sizing of the expansion can be optimized with storage expansion. Due to improved reliability and automation with the new system, it could be sized such that normal operation in

the non-irrigation system could be provided by the new system, reducing operation and maintenance costs for treatment. Unless there is a desire to stay consistent with filtration processes, it is recommended that a pressure system would be considered, installed in a slab on grade structure using insulated precast panels or an engineered metal structure to reduce costs.

4.4.4 Clearwell Expansion and Increasing Maximum Supply from Sioux City Connection

Adding clearwell can allow for storage to be built up at the plant during the low demand times during irrigation season, using Sioux City supplied water to meet daily demand, allowing the delivery rate from the plant to be greater than the current maximum limit of approximately 1735 gpm. Theoretically 2.5 MG could be treated and stored each day for deliver during the irrigation window. Assuming 6 hours that could result in a rate of up to 6900 gpm, however may be limited by distribution system piping (to be modeled if desired to be developed further). Since the residential demand peak rate is estimated to be 7800 gpm and additional from the Sioux City connection not consumed for commercial would be 1100 gpm (described previously) a capacity of 8000 gpm could be achieved. To accomplish this would require:

- Clearwell addition of approximately 1.4 MG for a total clearwell storage of 1.9 MG. This would need to be full at the beginning of irrigation and the plant would remain operating at full capacity during the 6 hour to deliver the full 2.5 MGD in the 6 hour irrigation window.
- Would need to add another main pipeline from the high service pumping to East Pinehurst.
- Additional high service pumping would need to be added.
- The Sioux City agreement would need to be modified to meet max day of 6.5 MGD to have a limit of at least 4 MGD, capable of up to 5 MGD.

Even if this option isn't pursued addition of another clearwell is recommended as previously discussed for operational and reliability reasons. With the Sioux City connection it does allow for maintenance to be accomplished outside of the irrigation window by taking the plant out of service. Unscheduled required maintenance on the existing clearwell without a backup would likely require the pant to be taken offline which could impact delivery capacity during irrigation.

4.4.5 Add Ground Storage and Increase Maximum Supply from Sioux City Connection

Adding ground storage would also allow for storage to be built up at the plant during the low demand times during irrigation season, using Sioux City supplied water as described above. At grade storage is a lower capital cost option than a below grade clearwell although maintenance of the above grade structure can be higher. Using ground storage filled from Sioux City's supply does waste energy by storing at a lower potential energy than elevated, but it would be higher than a clearwell, reducing pumping power costs when compared to storing below grade. Icing of ground storage is a higher potential than a clearwell but less than elevated. Since the demand is not a concern in the winter, any ground storage would be recommended to be taken offline during non irrigation periods.

4.4.6 Add Elevated Storage

Adding elevated storage would be a simple means of meeting the peak demands. The main concerns are a cost and aesthetics. To fully meet demand the following would be required:

- An elevated storage volume of approximately 1.2 MG in the residential area, with a desirable location being at the traffic circle.
- The Sioux City agreement would need to be modified to meet max day of 6.5 MGD to have a limit of at least 4 MGD, capable of up to 5 MGD.
- A combination of adding additional clearwell and elevated storage would reduce the required volume for elevated storage.

Again, since the demand is not a concern in the winter, elevated storage would be recommended to be taken offline during non irrigation periods.

4.5 Summary and Recommendation of Evaluated Alternatives

A number of options were evaluated to allow Dakota Dunes to meet the current peak water demands and into the future to build-out. Table 4 presents the conceptual capital costs for options considered for reducing the peak water demands and meeting those higher demands. Table 5 presents the concept costs along with demand reduction projections, a cost per gpm of peak reduction along with a recommendation for pursuing and a priority ranking. As shown in these tables, the options to reduce the peak demand and increase capacity from Sioux City connection(s) are the most cost effective options of meeting current and projected water demands.

As mentioned any improvements to the potable water system should include expansion of the clearwell and the addition of a third high service pump to fully develop the WTP delivery capacity without a major expansion and significant capital expenditures as would be incurred if an expansion of treatment and further expansion of the high service pumping were undertaken. This is the project recommended for design and to be constructed in 2015.

This proposed clearwell expansion and pump addition will not meet all water demand peak needs at current rates and projected growth. This proposed project will be one of a series of steps to be evaluated and potentially implemented to meet the current and proposed peak demands or reduce peak demands. Dakota Dunes is pursuing options in steps to meet the demand and measure the effectiveness of the implemented options. Dakota Dunes has already undertaken measures to reduce the peak such as converting a portion of the boulevard watering from the potable water supply to a supply form a pond supplied by groundwater, allowing natural oxidation and settling of the iron in the pond.

The proposed conceptual capital cost with engineering for the current proposed clearwell and addition of a third high service pump project is summarized as *follows:*

- Capital Cost
  - 500,000 gallon clearwell, and piping $1,266,000
  - New High Service Pump No. 3 with piping and electrical: $ 150,000
    Total $1,416,000

- Operation and Maintenance Cost Increase[1] NA

1 - Since this does not change operational procedures there will not be an increase in operation costs and since pumps are maintained on an hours of operation basis maintenance should also not be impacted or the resulting user rates.

Dakota Dunes adjusted its rate in May, 2014 to provide additional water revenue to service a SRF loan in the amount of $1.6 million amortized over 20 years at 3.5 percent. Dakota Dunes plans to pledge water revenues to service the loan.

Table 4
Dakota Dunes Capacity Expansion Options
Conceptual Opinion of Construction Costs

Potential Option	Description	Size/Length		Component Conceptual Cost	Pump Addition Cost	Total Conceptual Cost	Notes
Interconnects							
I-1	Second Connection to Sioux City Near Maintenance Facility w/ Meter Structure	2600	LF	$975,000	NA	$975,000	$0.20 /gal of daily capacity
I-2	Interconnect from SE of Tyson to Main in Meadows Blvd Near the Park w/o Meter Structure	3750	LF	$890,000	NA	$890,000	Dropped from consideration due to lack of benefit to demand.
I-3	Interconnect from Behind Homes on the South Loop off Bluestem Trail, Along the Bike Trail to West Pinehurst w/o Meter Structure	550	LF	$150,000	NA	$150,000	Dropped from consideration due to lack of benefit to demand.
Additional Storage							
S-1	Expansion of Clearwell	0.5	MG	$1,266,250	$150,000	$1,416,250	$ 2.83 /gal
		1	MG	$1,916,250	$250,000	$2,166,250	$ 2.17 /gal w/ Building Addition
		1.5	MG	$2,500,000	$280,000	$2,780,000	$ 1.85 /gal w/ Building Addition
S-2	Addition of Elevated Storage	0.5	MG	$2,100,000	$0	$2,100,000	$ 4.20 /gal
		1	MG	$3,500,000	$0	$3,500,000	$ 3.50 /gal w/ Building Addition
		1.5	MG	$4,500,000	$0	$4,500,000	$ 3.00 /gal w/ Building Addition
S-3	Addition of Ground Storage - Aquastore Bolted Tanks	0.5	MG	$600,000	$150,000	$750,000	$ 1.50 /gal
		1	MG	$975,000	$250,000	$1,225,000	$ 1.23 /gal w/ Building Addition
		1.5	MG	$1,350,000	$280,000	$1,630,000	$ 1.09 /gal w/ Building Addition
S-4	Addition of Ground Storage - Precast Concrete	0.5	MG	$1,102,500	$150,000	$1,252,500	$ 2.51 /gal
		1	MG	$1,449,000	$250,000	$1,699,000	$ 1.70 /gal w/ Building Addition
		1.5	MG	$1,795,500	$280,000	$2,075,500	$ 1.38 /gal w/ Building Addition
Expand Treatment							
T-1	Add Pressure Filters	2.5	MG	$2,900,000	$240,000	$ 3,140,000	$ 1.26 /MGD
		1.25	MG	$2,200,000	$200,000	$ 2,400,000	$ 1.92 /MGD
T-2	Expand Gravity Filters	2.5	MG	$3,400,000	$240,000	$ 3,640,000	$ 1.46 /MGD
		1.25	MG	$2,400,000	$200,000	$ 2,600,000	$ 2.08 /MGD

Note that these are conceptual cost estimates only for option evaluation purposes only.

Table 5
Dakota Dunes Water Demand Options
Conceptual Opinion of Construction Costs
25-Mar-14

Potential Option	Description	Demand Reduction*		Conceptual Cost	$ Per gpm Peak Reduction	Recommended	Recommendation Priority	Notes
Reduce Demand Peak		gpm	MGD					
D-1	Install well, fountian and pumping system in existing pond for boulevard irrigation, removing that significant demand from the potable water system.	850	0.31	$100,000	$118	Yes	1	No firm estimate, Dakota Dunes CID working with local contractor on this option. *Reduces revenue.*
D-2	Install well with submersible pump pitless adapter for Two Rivers Golf Course greens irrigation.	300	0.11	$50,000	$167	Yes	1	Can be done by CID or Golf Course. *Reduces revenue.*
D-3	Conservation by enforcement of odd-even watering. Assume an irrigation reduction of 20% could be achieved.	800	0.28	$0	NA	Yes	1	Depending upon level of enforcement. Implement public awareness and why this is required. *Reduces revenue.*
D-4	Using alternative water sources for park irrigation such as a local well.	100	0.04	$40,000	$400	Consider	2	Actual park use was not available. If usage is higher the cost/benefit ratio would make the option more attractive. *Reduces revenue.*
D-5	Using alternative water sources for a separated irrigation system for new commercial and new country club lots such as at Spanish Bay.	1050	0.38	$0	NA	Yes	1	
D-6	Extend watering period to reduce the peak. Extending from 6 hours to 8 hours would reduce the peaking factor from 4 to 3.	1975	0	$0	NA	Yes	1	This would not actually reduce water used, only the peak rate. This may be difficult due to mold development that can occur by watering too long before sunrise. *Would not reduce revenue.*
D-7	Implement more aggressive inclining water rate.	Negligable		$0	~~~	No	NA	Increasing rates has not been noticably successful in decreasing consumption at Dakota Dunes. *Could increase revenue if it doesn't curtail use sufficiently.*
Interconnects								
I-1	Second Connection to Sioux City Near Maintenance Facility w/ meter structure and new main to East Pinehurst.	3400	0	$975,000	$287	Yes	3	Recommend investigating option further to determine if there is a water main and capacity on the Sioux City side of the Big Sioux River near this location. *Would not reduce revenue.*
I-2	Interconnect from SE of Tyson to Main in Meadows Blvd Near the Park	0	0	$890,000	~~~	No	NA	Not a significant benefit since limited by Sioux City connection, river crossing and agreement.
I-3	Interconnect from Behind Homes on the South Loop off Bluestem Trail, Along the Bike Trail to West Pinehurst	0	0	$150,000	~~~	No	NA	Not a significant benefit to flow rate and pressure.

Table 5
Dakota Dunes Water Demand Options
Conceptual Opinion of Construction Costs

25-Mar-14

Potential Option	Description	Demand Reduction*		Conceptual Cost	$ Per gpm Peak Reduction	Recommended	Recommendation Priority	Notes
Additional Storage								
S-1a	Expansion of Clearwell by 0.5 MG (water from Sioux City connection unless additional treatment constructed)	1380	0.5	$1,416,250	$1,026	Yes	2	Recommended for operational and maintenance reasons with the benefit of additional storage.
S-1b	Expansion of Clearwell by 1.0 MG (water from Sioux City connection unless additional treatment constructed, maximum use would need to be increased in agreement)	2760	1.0	$2,121,250	$769	Consider	3	Requires the addition of pumping capacity for all of the S-1 options. Additional power costs will be incurred as well which have not been included.
S-1c	Expansion of Clearwell by 1.5 MG (water from Sioux City connection unless additional treatment constructed, maximum use would need to be increased in agreement)	4140	1.5	$2,780,000	$671	No	NA	
S-2a	Addition of 0.5 MG of Elevated Storage (water from Sioux City connection unless additional treatment constructed)	1380	0.5	$2,100,000	$1,522	No	NA	
S-2b	Addition of 1.0 MG of Elevated Storage (water from Sioux City connection unless additional treatment constructed)	2760	1.0	$3,500,000	$1,268	No	NA	No additional pumping required for S-2 options if supplied by Sioux City connections since pressure is adequate. Costs are for tanks & piping only.
S-2c	Addition of 1.5 MG of Elevated Storage (water from Sioux City connection unless additional treatment constructed)	4140	1.5	$4,500,000	$1,087	No	NA	
S-3a	Addition of 0.5 MG Ground Storage - Bolted Steel Tanks (water from Sioux City connection unless additional treatment constructed)	1380	0.5	$750,000	$543	Consider	3	
S-3b	Addition of 1.0 MG Ground Storage - Bolted Steel Tanks (water from Sioux City connection unless additional treatment constructed)	2760	1.0	$1,225,000	$444	Consider	3	Requires the addition of pumping capacity for all of the S-3 options. Additional power costs will be incurred as well which have not been included.
S-3c	Addition of 1.5 MG Ground Storage - Bolted Steel Tanks (water from Sioux City connection unless additional treatment constructed)	4140	1.5	$1,558,000	$376	Consider	3	
S-4a	Addition of 0.5 MG Ground Storage - Precast Concrete (water from Sioux City connection unless additional treatment constructed)	1380	0.5	$1,252,500	$908	No	NA	
S-4b	Addition of 1.0 MG Ground Storage - Precast Concrete (water from Sioux City connection unless additional treatment constructed)	2760	1.0	$1,699,000	$616	No	NA	Requires the addition of pumping capacity for all of the S-4 options. Additional power costs will be incurred as well which have not been included.
S-4c	Addition of 1.5 MG Ground Storage - Precast Concrete (water from Sioux City connection unless additional treatment constructed)	4140	1.5	$2,075,500	$501	No	NA	
Expand Treatment								
T-1	Add Pressure Filters w/ 2.5 MG Capacity	1735	2.5	$3,140,000	$1,809.80	Consider	3	If cost of Sioux City supplied water increases significantly could be more cost effective.
	Add Pressure Filters w/ 1.25 MG Capacity	870	1.25	$2,400,000	$2,758.62	Consider	3	
T-2	Expand Gravity Filters w/ 2.5 MG Capacity	1735	2.5	$3,640,000	$2,097.98	No	NA	Pressure filter option appears to be a lower cost option per MGD.
	Expand Gravity Filters w/ 1.25 MG Capacity	870	1.25	$2,600,000	$2,988.51	No	NA	

Note that these are conceptual cost estimates only for option evaluation purposes only

* Some options overlap such that reducing demand with multiple options will result in a lower overall reduction than the sum of all of the individual options

Recommended Options Priority

1 Implement now
2 Begin planning for incorporation
3 Consider if conditions dictate, higher priority items implemented were not able to adequately meet projected demands

5.0 Public Participation

The public hearing for the proposed project was held in conjunction with the Dakota Dunes' Board of Supervisors regular session meeting on September 22, 2014, at 7:00 p.m., at 335 Sioux Point Road, Suite 200. Notice of the meeting was published for two consecutive weeks in the Dakota Dunes/North Sioux City Times weekly newspaper.

The public hearing was opened at 7:02 pm. Mr. Dooley gave an overview of the loan application and information to be filed with it for SRF loan for the proposed project. The public hearing was closed at 7: 15 pm, with no public in attendance. Copies of the Affidavit of Publication and Meeting Minutes are attached in Appendix D. Since no comments were generated from this public hearing, no responses were required or included in this document.

USDA

United States Department of Agriculture

September 26, 2014

Ms. Rebecca Baker
Environmental Scientist
HDR Engineering, Inc.
6300 S. old Village Place Suite 100,
Sioux Falls, South Dakota 57108

RE: Dakota Dunes Community Improvement – Clearwell Expansion

Dear Ms. Baker:

Thank you for the opportunity to provide comments on the above project. The 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 (FSA) offices regarding any USDA easements or contract in the project area that may be affected.

If you have any questions, please contact Jeff Hemenway, Soil Health Specialist, at (605)352-1239.

Sincerely,

Nathan Jones
State Soil Scientist

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

HDR

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.

9/2/14 Scott Larson
Date Field Supervisor

RECEIVED
AUG 27 2014
U.S. FISH & WILDLIFE SERVICE

August 26, 2014

Ms. Natalie Gates
U.S. Fish and Wildlife Service
420 S. Garfield Avenue
Pierre, SD 57501-5408

Subject: Dakota Dunes Community Improvement District (CID) Clearwell Expansion & High Service Pump Addition

Dear Ms. Gates:

Dakota Dunes CID is currently developing a State Revolving Funds (SRF) Facility Plan for a proposed clearwell expansion to the existing Water Treatment Plant (WTP) (the Project). The Project was recommended by a Water Demand Planning Project completed by the consultant, HDR, earlier this year in order to allow the CID to meet high summer demands and allow the community to expand.

The WTP is located in the southeast corner of Dakota Dunes, between the Missouri and Big Sioux River (see Figure 1). The CID's WTP was placed in operation in 1990. The existing clearwell shown on Figure 1 was added and placed on line in 1997. The plant uses groundwater and the treatment process involves iron and manganese removal with disinfection. The clearwell stores treated water for distribution and also provides contact time for disinfection. The existing clearwell is insufficient in size to effectively allow the WTP to distribute the water at higher demand rates required in the summer and meet the future needs of the growing community. This project consists primarily of the design for a second, duplicate clearwell, adjacent to the existing.

The Project description is as follows:

- Excavation for construction of the proposed clearwell expansion.
- Construction of a cast in place below grade clearwell (roof exposed by approximately 2'). The size of the proposed clearwell expansion will match existing and have a volume of 500,000 gallons with dimensions of approximately 66w' x 111l' x 11'h.
- Minor piping modifications in the clearwell area to connect the existing to the proposed clearwell expansion and install isolation valves.
- Addition of a third backup high service pump to provide firm pumping capacity from the WTP. This will not require any construction outside of the existing building and only minor work inside.
- The project completion is anticipated for June 2015.

A Study Area has been identified to include any work associated with the Project (see Figure 1).

Agency coordination letters are being sent out as required for the SRF program facility plan and SRF loan application due on October 1, 2014. These letters are being sent to both state and federal agencies. As part of our early coordination efforts, we are alerting you to the initiation of this

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605.977.7740

study and requesting any comments you may have about the project due to your agency's area of expertise and/or jurisdiction by law.

According to the U.S. Fish & Wildlife Service (FWS) South Dakota Field Office's Endangered Species by County List (updated 25 August 2014), the following species are known to occur in Union County, SD:

County	Group	Species	Status	Project Determination
Union	Birds	Piping Plover	T	No Effect
	Birds	Interior Least Tern	E	No Effect
	Birds	Rufa Red Knot	PT	No Effect
	Mammal	Northern Long-Eared Bat	PE	No Effect
	Fish	Pallid Sturgeon	E	No Effect
	Fish	Topeka Shiner	E	No Effect
	Plant	Western Prairie Fringed Orchid	T	No Effect
	Mussel	Scaleshell Mussel	E	No Effect

Please let us know if you concur with the effect determination for each. Please send comments and concerns to the address below. If you have any questions regarding the enclosed information, please feel free to call me at (605) 977-7740. If desired or necessary, we can certainly set up a meeting with you or representatives of your agency to discuss the project. Thank you for your consideration of the project.

Sincerely,
HDR ENGINEERING, INC.

Rebecca Baker

Rebecca Baker
Environmental Scientist

Attachments: Figure 1- Project Location
Cc. Mr. Jeff Dooley, Dakota Dunes CID General Manager

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

REPLY TO
ATTENTION OF

September 18, 2014

Planning, Programs, and Project Management Division

Ms. Rebecca Baker
HDR Engineering, Inc.
6300 S Old Village Place, Suite 100
Sioux Falls, South Dakota 57108

Dear Ms. Baker:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated August 26, 2014 (received August 28, 2014) regarding the environmental review of the proposed Clearwell Expansion & High Service Pump Addition Project located in Dakota Dunes, South Dakota in Union 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.

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

Our Flood Risk and Floodplain Management Section has reviewed the proposed project and offer the following comments:

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel number 460242D, the proposed cast in place below grade clearwell is within the Missouri River and Big Sioux River one percent annual chance floodplain. The Federal floodplain management criterion basically states that construction which could be damaged by floodwaters or which could obstruct flood flows should not be located in the one percent annual chance floodplain. If this is not practicable, any residential construction that could be damaged by floodwater must be placed above the one percent annual chance floodwater surface elevation. Any nonresidential construction that could be damaged by floodwater must be placed above or flood proofed to above the one percent annual chance floodwater surface elevation. All construction should be designed to minimize potential harm to or within the floodplain. Higher levels of protection are encouraged to provide added safety. If the operation of the constructed facilities is considered critical during flood periods, the facilities should be protected from at least the 0.2 percent annual chance flood.

If construction must occur in the floodplain, it must be located outside the floodway. If a floodway has not been determined and designated, the construction should be as far from the stream channel as possible. The goal of any construction in the floodplain is to achieve the highest level of flood protection with zero impact to adjacent property.

To view the FEMA FIRM panels sited in this letter, please perform the following steps:

1. Navigate to the following website: https://msc.fema.gov/portal/.
2. Enter an address or a place (*i.e.*, city, county, or state) in the search box half way down the page.
3. Click on the desired panel.
4. Click on the "View" icon or "Download" icon in the left panel to view the map panel.

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 Union 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

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# 6507 in the subject heading.

Sincerely,

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

HDR RECEIVED

AUG 27 2014

SURFACE WATER PROGRAM

DRINKING WATER QUALITY DETERMINATION
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: Mark Mayer
Date: 9/16/14 ID No.: 2014091
605-773-3754 Fax 605-773-5286
SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

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 Schult
Date: 9/15/2014
(605) 773-6038 Fax (605) 773-5286
South Dakota Department of Environment And Natural Resources

August 26, 2014

Mr. John Miller
SD Department of Environment and Natural Resources
523 East Capitol Avenue
Pierre, SD 57501-3181

Subject: Dakota Dunes Community Improvement District (CID) Clearwell Expansion & High Service Pump Addition

Dear Mr. Miller,

Dakota Dunes CID is currently developing a State Revolving Funds (SRF) Facility Plan for a proposed clearwell expansion to the existing Water Treatment Plant (WTP) (the Project). The Project was recommended by a Water Demand Planning Project completed by the consultant, HDR, earlier this year in order to allow the CID to meet high summer demands and allow the community to expand.

The WTP is located in the southeast corner of Dakota Dunes, between the Missouri and Big Sioux River (see Figure 1). The CID's WTP was placed in operation in 1990. The existing clearwell shown on Figure 1 was added and placed on line in 1997. The plant uses groundwater and the treatment process involves iron and manganese removal with disinfection. The clearwell stores treated water for distribution and also provides contact time for disinfection. The existing clearwell is insufficient in size to effectively allow the WTP to distribute the water at higher demand rates required in the summer and meet the future needs of the growing community. This project consists primarily of the design for a second, duplicate clearwell, adjacent to the existing.

The Project description is as follows:

- Excavation for construction of the proposed clearwell expansion.
- Construction of a cast in place below grade clearwell (roof exposed by approximately 2'). The size of the proposed clearwell expansion will match existing and have a volume of 500,000 gallons with dimensions of approximately 66w' x 111l' x 11'h.
- Minor piping modifications in the clearwell area to connect the existing to the proposed clearwell expansion and install isolation valves.
- Addition of a third backup high service pump to provide firm pumping capacity from the WTP. This will not require any construction outside of the existing building and only minor work inside.
- The project completion is anticipated for June 2015.

A Study Area has been identified to include any work associated with the Project (see Figure 1).

hdrinc.com

6300 S. Old Village Place Suite 100, Sioux Falls, SD 57108
605.977.7740

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: 8-27-2014
(605) 773-3351 FAX - (605) 773-5286
SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

(see attached)

Agency coordination letters are being sent out as required for the SRF program facility plan and SRF loan application due on October 1, 2014. These letters are being sent to both state and federal agencies. As part of our early coordination efforts, we are alerting you to the initiation of this study and requesting any comments you may have about the project due to your agency's area of expertise and/or jurisdiction by law.

Please send comments and concerns to the address on this letterhead. If you have any questions regarding the enclosed information, please feel free to call me at (605) 977-7740. If desired or necessary, we can certainly set up a meeting with you or representatives of your agency to discuss the project. Thank you for your consideration of the project.

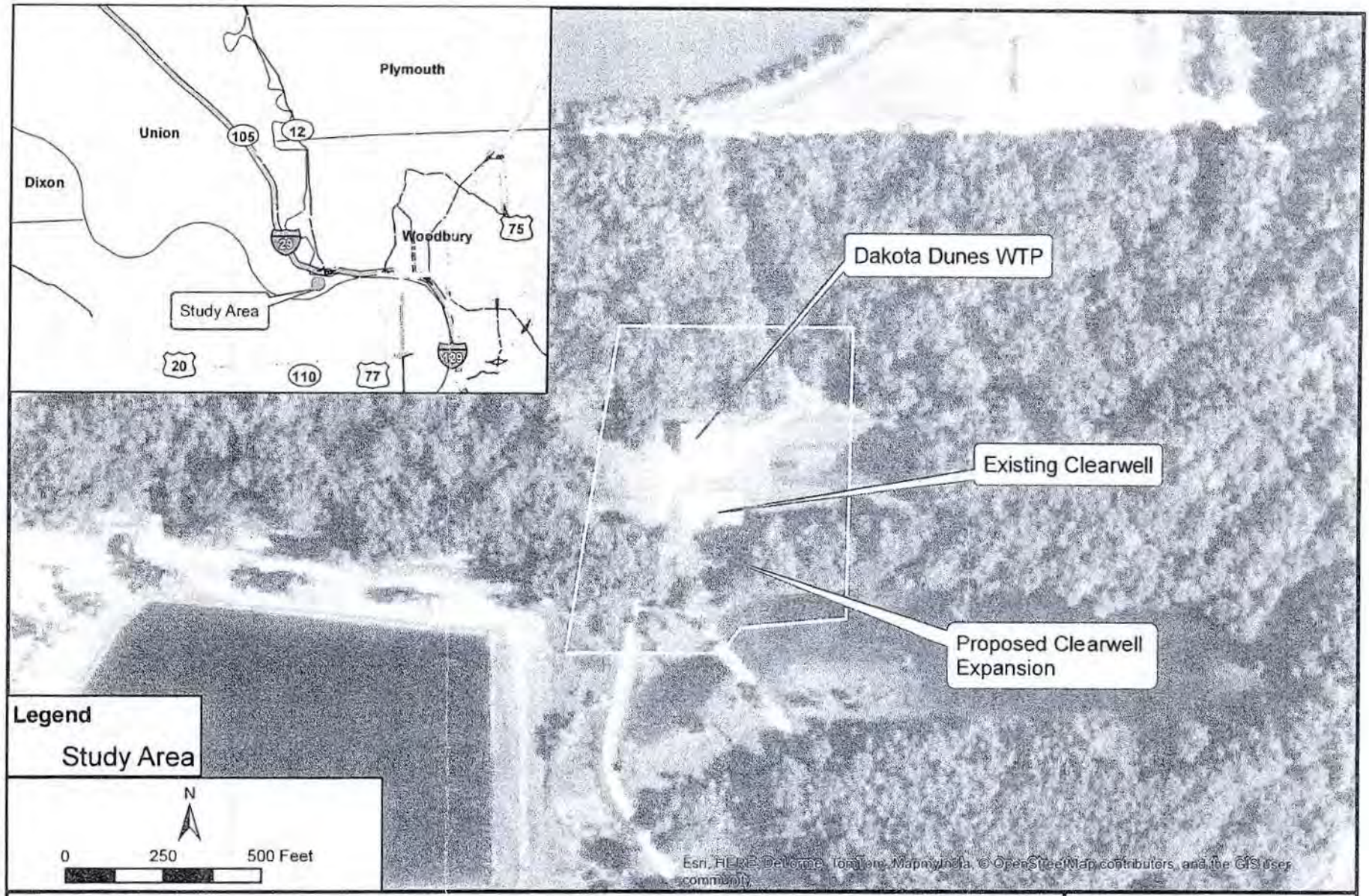
Sincerely,
HDR ENGINEERING, INC.

Rebecca Baker

Rebecca Baker
Environmental Scientist

Attachments: Figure 1- Project Location
Cc. Mr. Jeff Dooley, Dakota Dunes CID General Manager

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: 9-16-14
South Dakota Department of Environment & Natural Resources
Phone: (605) 773-3153 Fax: (605) 773-6035



Dakota Dunes Community Improvement District

Study Area

August 2014

Figure 1

DEPARTMENT OF ENVIRONMENT and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

September 18, 2014

Rebecca Baker
Environmental Scientist
HDR Engineering, Inc.
6300 S. Old Village Place Suite 100
Sioux Falls, SD 57108

Re: Dakota Dunes Community Improvement District (CID) Clearwell Expansion and High Service Pump Addition

Dear Ms. Baker:

The Ground Water Quality Program of the South Dakota Department of Environment and Natural Resources has reviewed the above-referenced project for potential impacts to ground water quality. Based on the information submitted in your letter dated August 26, 2014 the department does not anticipate adverse impacts to ground water quality by this project. If construction for this project disturbs one or more acre(s) of soil, a storm water permit may be required. For more information or to obtain a storm water permit, please contact the Department at 1-800-SD-Storm or visit:

http://denr.sd.gov/des/sw/StormWaterandConstruction.aspx.

There have been numerous petroleum and other chemical releases throughout the state. Of the releases reported to DENR, we have not identified any release cases potentially in the vicinity of your project. However, the locational information provided to us regarding releases is sometimes inaccurate or incomplete. If you would like to do more research, additional information on reported releases in South Dakota may be obtained at the following website: http://denr.sd.gov/des/gw/Spills/dbspillsearch.aspx.

Plans and specifications for the Dakota Dunes Community Improvement District system improvements must be submitted to the Department for approval prior to construction. This is to ensure that any improvements and/or expansion plans meet the Department recommended design criteria for water treatment systems.

If contamination is encountered during construction activities or caused by the construction work, Dakota Dune Community Improvement District or its designated representative must report the contamination to the department at (605) 773-3296.

Any contaminated soil encountered or caused by the construction must be temporarily stockpiled and sampled to determine disposal requirements.

Thank you for providing the opportunity to comment on this project. If you have any questions regarding the information provided, please contact me at the number below.

Sincerely,

Georgina McKee
Environmental Scientist 1
Ground Water Quality Program
SD Department of Environment and Natural Resources
Telephone: 605-773-3296

C. Raymond Roggow, Union County Emergency Manager, Elk Point, SD
Mr. Jeff Dooley, Dakota Dunes CID General Manager, 335 Sioux Point Road, Suite 200
Dakota Dunes, SD 57049

5.12.3 CULTURAL RESOURCES EFFECTS ASSESSMENT SUMMARY

Applicant: Dakota Dunes CID
Address: 6300 S. Old Village Place, Suite 100, Sioux Falls, SD

Project Contact: Al Erickson
Telephone Number: (605) 977-7741

Legal Location of Project: The study area is situated in Township 89 North, Range 48 West, Section 35, N1/2

City: Dakota Dunes County: Union

Project Description:

- Excavation for construction of the proposed clearwell expansion.
- Construction of a cast in place below grade clearwell (roof exposed by approximately 2'). The size of the proposed clearwell expansion will match existing and have a volume of 500,000 gallons with dimensions of approximately 66w' x 111l' x 11'h.
- Minor piping modifications in the clearwell area to connect the existing to the proposed clearwell expansion and install isolation valves.
- Addition of a third backup high service pump to provide firm pumping capacity from the WTP. This will not require any construction outside of the existing building and only minor work inside.
- The project completion is anticipated for June 2015.

For projects that involve new construction or vacant land please include information as to what previously occupied the site and whether that site has any known historic or archaeological significance.

The site is adjacent to an existing water treatment plant. An archaeology survey was completed by Bradley and Zimmerman in 1989 (see Figure A-1). No cultural resources were identified in the Study Area for the previous survey.

Please describe below or attach information supporting the determination of effect.

See the attached Figure A-1 for the areas that have been previously surveyed.

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 Places.

[ ] 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 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).

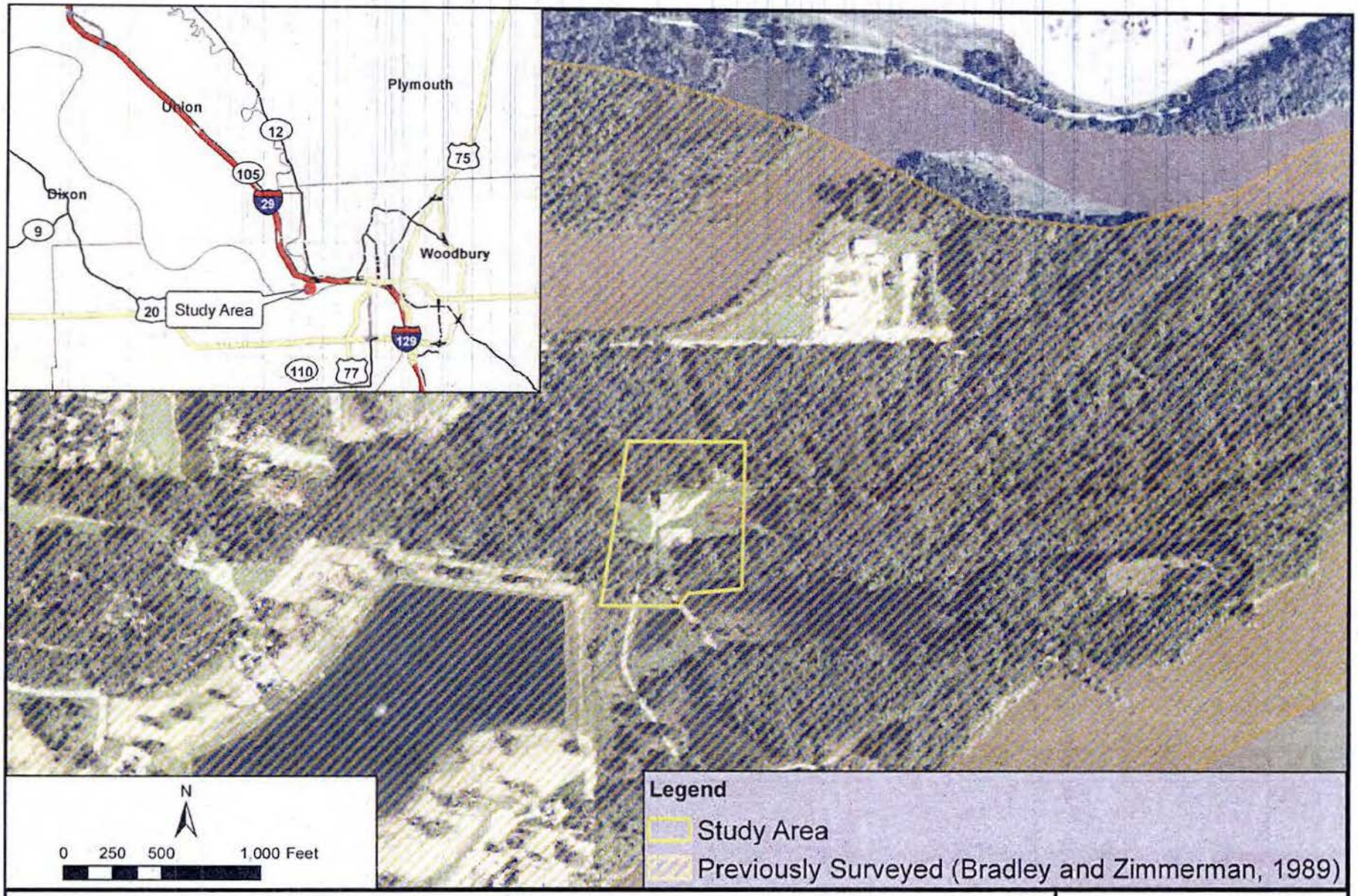
Prepared by: _____ Date: 9/26/2014

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 Historic Preservation Officer.

Approved by_____ Date_____

SD Department of Environment and Natural Resources



Dakota Dunes Community Improvement District
Clearwell Expansion & High Service Pump Addition

Previously Surveyed Areas

Figure A-1

Dakota Dunes Clearwell Expansion, Union County			
T. Bruce 9/11/14			
Surveys			
Archive No	**Author(s)**	**Year**	**Report Title**
AUN-0041	Palmer, Linda and Edward Lueck	2001	A Reconnaissance Cultural Resources Survey of DPRA Incorporated's Proposed Telecommunication Towers Near North Sioux City in Union County, South Dakota
AUN-0116	Bradley, Lawrence E., and Larry J. Zimmerman	1989	A Reconnaissance Cultural Resource Survey of the Dakota Dunes Development Project, Union County, South Dakota
Bridge			
SHPIO ID	**Eligibility**		
UN00000907	Not Eligible		

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Appendix A ..... Routine Wetland Determination Data Forms
Appendix B ..... Site Photographs

1.0 INTRODUCTION

The Missouri River system experienced unprecedented releases from the main stem dams in the summer of 2011, which resulted in significant flooding along the Missouri River, including the Dakota Dunes Community Improvement District (Dakota Dunes). An emergency levee system was constructed to provide protection from the river during the extended flood. This levee was never breached or overtopped; however, significant damage was incurred from the flood due to its prolonged duration.

Dakota Dunes retained HDR Engineering, Inc. (HDR) to assist with the concept development of flood restoration procedures and risk reduction against future flooding. These concepts will be used to guide the design of proposed improvements. In order to gather information about the area for the design, HDR conducted a wetland delineation within the Project Area on November 1, 2011. The delineation was performed to identify wetlands and waterways within the Project Area. Several of the areas were disturbed installation of the emergency levees, removal of those levees and from the prolonged flooding of the area. The level of disturbance was considered during the delineation.

2.0 METHODS

A wetland delineation within the Project Area as shown in Figure 1 was conducted in November 2011. The wetland delineation was conducted utilizing the methodology outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (USACE, 2010).

A desktop review was conducted by evaluating U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps, U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), contours, and Farm Service Agency (FSA) aerials. The USFWS developed the NWI maps for the Project corridor in the 1970s and 1980s using older aerial photographs. Therefore, the NWI maps provide guidance in determining areas to be evaluated for wetland characteristics, and are not used as the sole basis for wetland delineations. This information was combined with the Project limits and illustrated using Geographic Information System (GIS) mapping. The desktop review was used to identify potential wetland areas requiring further on-site evaluation. See Figure 2 for the NWI wetland areas.

After the desktop review was complete, a field review was conducted to determine the wetland boundaries within the Project Area. HDR surveyed the potential wetland areas for the three wetland parameters: hydric soils, surface or subsurface hydrology, and hydrophytic vegetation. If all three indicators were present during the growing season, then the area was identified as wetland.

Upland and wetland sampling points were evaluated and recorded at representative and/or unique wetland sites. At such sites, a soil pit was dug for observation of soil and hydrologic characteristics. Hydric soil characteristics were identified using methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (USACE, 2010). Hydrology was described based on primary and secondary indicators (USACE, 2010). The vegetation was analyzed for species dominance. The wetland indicator status of plants was determined using the *USFWS 1988 National List of Plant Species that Occur in Wetlands (Region 4).*

Sampling points and the wetland boundaries were mapped using a global positioning system (GPS). Using GIS, an accurate delineation map was created from the GPS data providing a permanent record of the on-site delineation wetland boundaries within the Project Area.

A summary of the wetland delineation is presented in Table 1. Copies of the data sheets are attached as Appendix A. Seventeen wetland determination data sheets were prepared for the Project.

Wetland boundaries were field-identified for the 10 wetlands within the Project Area. Figure 3 shows the delineated wetland boundaries. Photographs of the area are presented in Appendix B.

Table 1
Wetland Determination Data Sheet Summary

Sampling Point #	Dominant Vegetation	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Wetland ID
1	*Ulmus americana* (T) FAC 65% *Populus deltoids* (T) FAC 35%	Yes	No	No	N/A
2	*Salix sp.* (S) OBL 40%	Yes	Yes	Yes	Wetland 2 & 3
3	*Bare Ground* 100%	No	No	Yes	N/A
4	*Populus deltoides* (T) FAC 60% *Acer negundo* (T) FAC 30%	Yes	No	No	N/A
5	*Bare Ground* 100%	Yes	Yes	Yes	Wetland 4 & 11
6	*Fraxinus pennsylvanica* (T) FAC 100%	Yes	Yes	Yes	Wetland 5
7	*Bare Ground* (100%)	No	No	No	N/A
8	*Eleocharis erythropoda* (H) OBL 15% *Spartina pectinata* (H) FACW 20%	Yes	Yes	Yes	Wetland 6
9	*Poa pratensis* (H) FACU 50% *Fraxinus pennsylvanica* (H) FAC 25%	No	No	No	N/A
10	*Populus deltoides* (T) FAC 90% *Phalaris arundinacea* (H) FACW+ 40% *Spartina pectinata* (H) FACW 20% *Poa pratensis* (H) FACU 10%	Yes	Yes	Yes	Wetland 7
11	*Fraxinus pennsylvanica* (T) FAC 50% *Rhamnus cathartica* (S) FACU 50% *Juniperus virginiana*(S) FACU 10% *Bromus inermis* (H) UPL 20%	No	No	No	N/A
12	*Populus deltoides* (T) FAC 90% *Phalaris arundinacea* (H) FACW+ 20%	Yes	Yes	Yes	Wetland 7
13	*Bare Ground* 100%	Yes	Yes	Yes	Wetland 8 & 9
14	*Populus deltoids* (T) FAC 40% *Digitaria ischaemum* (H) UPL 10% *Poa pratensis* (H) FACU 10%	No	No	No	N/A
15	*Populus deltoides* (T) FAC 100%	Yes	Yes	Yes	Wetland 10
16	*Populus deltoides* (T) FAC 100% *Salix exigua* (T) FACW+ 20%	Yes	Yes	Yes	Wetland 10
17	*Bromus inermis* (H) UPL 100%	No	No	No	N/A

Table 2 displays the total area of the wetland within the Project Area. Wetland 6 extends outside of the Project Area and if areas were delineated past the boundaries of the Project Area, those wetlands areas are noted on Figure 3 as Delineated Wetlands.

Table 2
Total Area of Wetlands within Project Area

Wetland ID	Total Area of Wetland within Project Area (acres)
1	0.43
2	3.02
3	2.92
4	1.61
5	1.14
6	0.36
7	0.13
8	3.70
9	0.45
10	6.65
Total Area	**0.86**

3.0 DAKOTA DUNES DELINEATION OVERVIEW

The wetlands and other Waters of the U.S. within the Project Area are described below. See Figure 3 for the location and boundaries of the wetlands and other Waters of the U.S.

Wetland 1

Wetland appears to be a water treatment pond. The wetland was all open water and steep side slopes. Based on deep surface water present and that the areas was man- made, a soil pit was not taken within this wetland.

Wetland 2 & 3

Wetlands 2 and 3 is a large wetland complex located near the Missouri River. Much of the area had bare ground with shrubs throughout that had died from prolonged flooding. Open water exists in the northwest portion of the wetland, but most of the area is bare ground(See Sampling Point 2, Appendix A and Photos 2-5 in Appendix B).

Wetland 4

Wetland 4 is directly adjacent to the Missouri River. Prior to flooding, a portion of the area had been part of the Dakota Dunes golf course and a wetland was located between the walking/cart path and the green. Extensive flooding has removed vegetation in the area(See Sampling Point 5, Appendix A and Photo 13 in Appendix B).

Wetland 5

Wetland 5 is a forested basin located within the Dakota Dunes neighborhood. There was 100% bare ground within the herbaceous layer and Green Ash (*Fraxinus pennsylvanica*) was the dominant tree species. Much of Wetland 5 was open water and may be a man-made pond for nearby residences and golf course(See Sampling Point 6, Appendix A and Photo 16 in Appendix B).

Wetland 6

Wetland 6 is a small, linear pond likely created as part of the Dakota Dunes golf course. The sampling point was taken on edge of pond and areas adjacent to the pond were disturbed by levee construction. (See Sampling Point 8, Appendix A and Photo 18 in Appendix B).

Wetland 7

Wetland 7 is a forested depression area along walking/cart trail and east of levee. Areas adjacent to the sampling point were disturbed during levee construction. Much of the herbaceous layer was bare ground (See Sampling Point 10 and 12 and Photo 19 in Appendix B).

Wetland 8 and 9

Wetland 8 and 9 are located on the west side of the Project Area along the Dakota Dunes neighborhood. Vegetation and soils were highly disturbed through levee construction, removal activities, and through extensive flooding. Bare ground was present in much of the area (See Sampling Point 13, Appendix A and Photos 20 and 21 in Appendix B).

Wetland 10

Wetland 10 is a large forested terrace along the Big Sioux River. The herbaceous layer was 100% bare ground with the tree layer composed of cottonwoods and willows (See Sampling Points 15 and 16, Appendix A and Photos 25 and 26 in Appendix B)

Wetland 11

Wetland 11 is a highly disturbed area adjacent to the Missouri River. The extent of the wetland was bare ground with much of the area consisting of sand. This area was highly disturbed during flooding earlier in the year and portions of the area were disturbed during levee construction. Prior to flooding this area included a fairway and green as part of the Dakota Dunes golf course and no wetlands were present as indicated by aerial photographs (See Sampling Points 5 in Appendix B and Photographs 14, 15, and 17 in Appendix B).

Big Sioux River and Missouri River

The Big Sioux River runs along the eastern edge of the Project Area and flows into the Missouri River just outside the Project Area. Much of the Big Sioux River banks within the Project Area were steep and no wetlands were associated with them.

The Missouri River flows along the southern portion of the Project Area. Many new sandbars exist within the Missouri River and outside the Project Area. Extensive flooding of the Missouri River caused disturbance to hydrology and vegetation in many of the upland and wetland areas along the Project Area.

4.0 CONCLUSIONS

Based on the desktop review and site visit, the wetland areas within the proposed Project Area have been identified. This report will be used to identify avoidance and minimization opportunities, as well as to identify unavoidable wetland impacts for the Project. Dakota Dunes Community will work with the USACE to obtain appropriate permits for the temporary and/or permanent impacts. Permanent impacts to wetlands and other Water of the U.S. will be mitigated according to regulatory requirements.

5.0 REFERENCES

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of wetlands and deepwater habitats of the United States*. United States Department of Interior, Fish and Wildlife Service. FWS/OBS-79/31. 103 p.

U.S. Army Corps of Engineers. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS, 100 pp. and appendices.

U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Department of Agriculture, NRCS. 2006. *Field Indicators of Hydric Soils in the United States – Guide for Identifying and Delineating Hydric Soils*, Version 6.0. G.W. Hurt, P.M. Whited, and R.F. Pringle (eds.). USDA, NRCS in cooperation with the National Technical Committee for Hydric Soil, Fort Worth, TX.

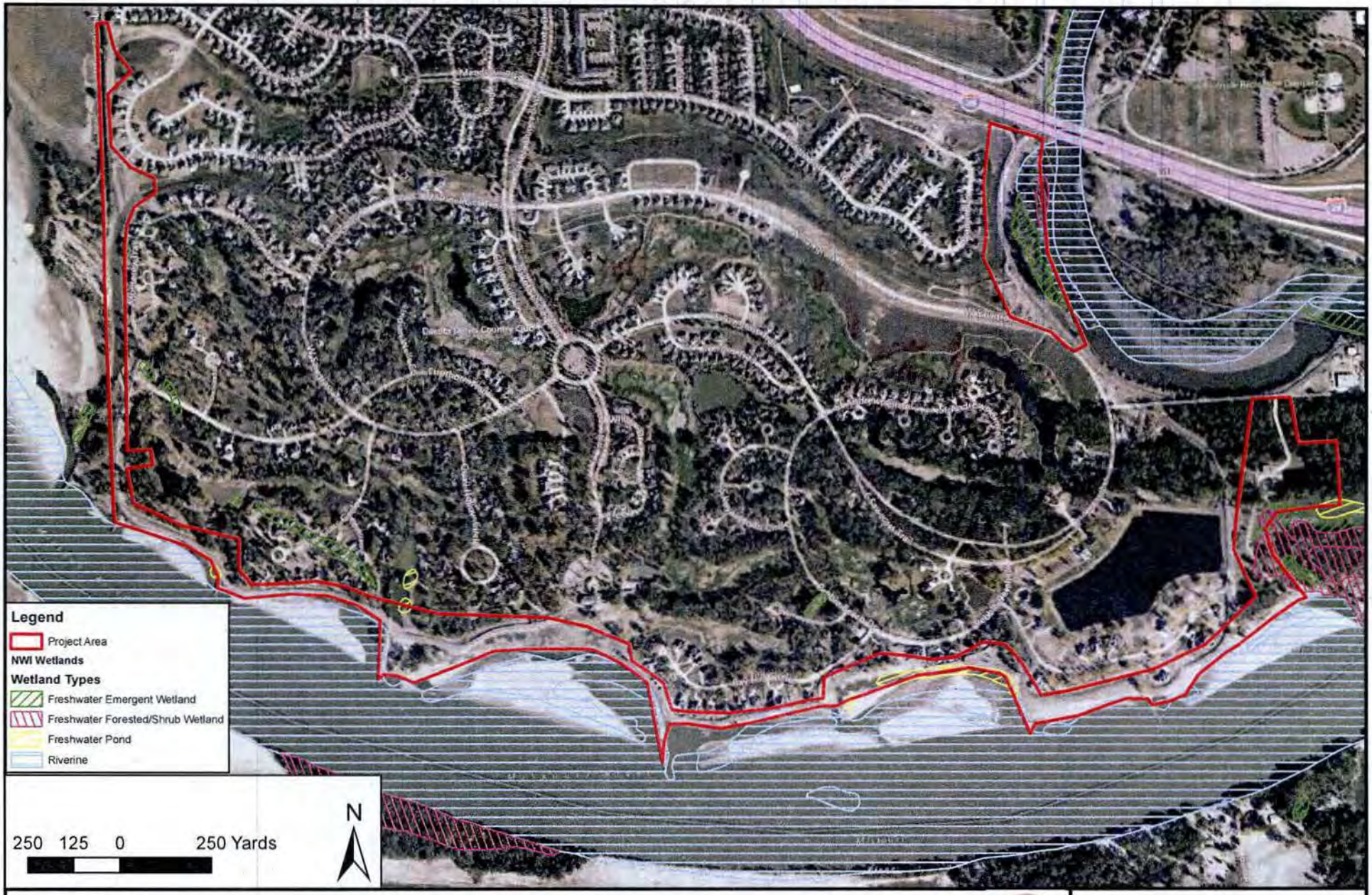
U.S. Department of Agriculture, NRCS. Web Soil Survey for Union County, South Dakota. http://websoilsurvey.nrcs.usda.gov/app/

Dakota Dunes Community Improvement District
Project Location
Wetland Delineation Report

November 2011

Figure 1

H:\GIS\Projects\Dunes\mxd\Env_Memo_Figure1.mxd



Dakota Dunes Community Improvement District
NWI Wetlands
Wetland Delineation Report

November 2011

Figure 2

Dakota Dunes Community Improvement District
Delineated Wetlands
Wetland Delineation Report

November 2011

Figure 3

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 01

Investigators: Jill Rust Section, Township, Range S 35 T 89 R 48

Landform (hillslope, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave

Slope(%): 0 Lat: 42.4886325041508 Long: -96.471325232932 Datum: GCS_WGS_1984

Soil Map Unit Name: Percival Silty Clay NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If No, explain in Remarks)

Are Vegetation ____, Soil ____, Hydrology ____, significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, Hydrology ____, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** **X**
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Point taken within a low, forested area north of the Missouri River.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 Ft)			
Ulmus americana	65	Y	FAC
Populus deltoides	35	Y	FAC
	100	=Total Cover	
Shrub Stratum			
Herb Stratum			
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		300 (B)

Prevalence Index = B/A= 3.00

Hydrophytic Vegetation Indicators:

X Dominance Test > 50%

X Prevalence Index ≤ 3.0

____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)
No understory or herbaceous ground cover wtihin plot.

SOIL

Sampling Point: 01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)		Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 14	10YR	4.0 / 2	100					SILT LOAM	
14 to 24	10YR	4.0 / 2	80					SILTY CLAY LOAM	
14 to 24	10YR	3.0 / 2	20					SILTY CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:
No hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	--
Water Table Present?	Yes ____	No X	Depth (inches):	--
Saturation Present?	Yes ____	No X	Depth (inches):	--

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Aerial Photographs

Remarks:
Although point was within low, forested area, hydrology was not present within the stream. No primary indicators present and only one secondary indicator observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 02

Investigators: Jill Rust Section, Township, Range S 89 T 48 R 35

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.4848540746254 Long: -96.4723725723614 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: PSSC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If No, explain in Remarks)

Are Vegetation X, Soil ___, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation ___, Soil ___, Hydrology ___, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** **Yes X No**
Hydric Soil Present?	Yes X	No ___	
Wetland Hydrology Present?	Yes X	No ___	

Remarks:
Point taken within low area long access road and between access road and home/yard. Area appeared to have standing water at some point, but surface was dry at time of delineation. Flood damage, berm construction, and berm removal areas present adjacent to wetland area.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum			
Shrub Stratum (Plot size: 30 Ft)			
Salix sp.	40	Y	OBL
	40 =Total Cover		
Herb Stratum			
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	40 (A)		40 (B)

Prevalence Index = B/A= 1.00

Hydrophytic Vegetation Indicators:

X Dominance Test > 50%

X Prevalence Index ≤ 3.0

___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Bare ground at 100% and appeared to have been caused by standing water. Unknown shrub, likely willow (drowned out) throughout the low area.

SOIL

Sampling Point: 02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 8	10YR 2.0 / 1	85	10YR 5/6	15	C	M	SILT LOAM	
8 to 24	10YR 4.0 / 1	90	10YR 4/6	10	C	M	VERY FINE SANDY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type:

Depth (inches):

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☑ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☑ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	–
Water Table Present?	Yes ___	No X	Depth (inches):	–
Saturation Present?	Yes X	No ___	Depth (inches):	4

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Aerial Photographs

Remarks:
Several hydrology indicators present at point.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 03

Investigators: Jill Rust Section, Township, Range S 35 T 89 R 48

Landform (hillslope, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.48390 Long: -96.47197 Datum: GCS_WGS_1984

Soil Map Unit Name: See Note NWI Classification: R2UBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If No, explain in Remarks)

Are Vegetation ___, Soil ___, Hydrology ___, significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation ___, Soil ___, Hydrology ___, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No X	**Is the Sampled Area within a Wetland?** **Yes** **No** **X**
Hydric Soil Present?	Yes ___	No X	
Wetland Hydrology Present?	Yes X	No ___	

Remarks:
Point taken within sand bar formed from recent flooding on the Missour River. The 2010 aerials did not show this sand bar. Mapped soils name this area as "Water"

VEGETATION– Use scientific names of plants.

Absolute % Cover	Dominant Species	Indicator Status

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across all Strata:	0	(B)
Percent of Dominant Species That are OBL, FACW, or FAC:	0.0%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A= ___

Hydrophytic Vegetation Indicators:

___ Dominance Test > 50%

___ Prevalence Index ≤ 3.0

___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

Remarks: (Include photo numbers here or on a separate sheet.)
Bare ground 100% All fine sand.

SOIL

Sampling Point: 03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type:

Depth (inches):

Hydric Soil Present? Yes ___ No X

Remarks:
Sand is only material present at 100%. All material Fine Sand. No soil matrix present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No	X	Depth (inches):	--
Water Table Present?	Yes ___	No	X	Depth (inches):	--
Saturation Present?	Yes ___	No	X	Depth (inches):	10

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Sand is saturated at about 10" deep.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 04

Investigators: Jill Rust Section, Township, Range S 89 T 48 R 35

Landform (hillslope, terrace, etc.): Toe of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.484057156497 Long: -96.4793229180931 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If No, explain in Remarks)

Are Vegetation X, Soil X, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, Hydrology ____, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** **No X**
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Point taken within small forested depression along roadway. Flood damage apparent in some areas adjacent to the point location.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 Ft)			
Populus deltoides	60	Y	FAC
Acer negundo	30	Y	FAC
	90	=Total Cover	
Shrub Stratum			
Herb Stratum			
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	90	x 3 =	270
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		270 (B)

Prevalence Index = B/A= 3.00

Hydrophytic Vegetation Indicators:

X Dominance Test > 50%

X Prevalence Index ≤ 3.0

____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No** ____

Remarks: (Include photo numbers here or on a separate sheet.)
Bare ground present within the understory.

SOIL

Sampling Point: 04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 4	10YR 3.0 / 2	100					SILT LOAM	
4 to 4	10YR 4.0 / 2	100					VERY FINE SANDY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type:

Depth (inches):

Hydric Soil Present? Yes ___ No X

Remarks:
No soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	--
Water Table Present?	Yes ___	No X	Depth (inches):	--
Saturation Present?	Yes X	No ___	Depth (inches):	16

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Saturation present below 12 inches. Only one secondary indicator present. No hydrological indicators present.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 05

Investigators: Jill Rust Section, Township, Range S 35 T 89 R 48

Landform (hillslope, terrace, etc.): Toe of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.48300 Long: -96.48409 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: PUBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If No, explain in Remarks)

Are Vegetation X, Soil X, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, Hydrology ____, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Area highly disturbed through Missouri River flooding. Area appears to have been part of green of Dakota Dunes golf course. Point is within depresssion along Missouri River.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across all Strata: 0 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A= ____

Hydrophytic Vegetation Indicators:

____ Dominance Test > 50%

____ Prevalence Index ≤ 3.0

____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)
Bare ground at 100%. Some remnant Poa pratensis was evident on the putting green (outside plot area), but had died from flooding of the area. Point assumed hydric.

SOIL

Sampling Point: 05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 6	10YR 3 / 1	100					SANDY LOAM	
6 to 20	10YR 3 / 1	90	10YR 5/6	10	C	M	SANDY CLAY LOAM	
20 to 25	10YR 4 / 1	95	10YR 5/6	5	C	M	SANDY CLAY	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☑ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:
Point meets hydric soil criteria.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☑ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☑ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	--
Water Table Present?	Yes ___	No X	Depth (inches):	--
Saturation Present?	Yes X	No ___	Depth (inches):	0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Saturation at surface. Point is also adjacent to Missouri River.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 06

Investigators: Jill Rust Section, Township, Range S 34 T 89 R 48

Landform (hillslope, terrace, etc.): Toe of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.48463 Long: -96.49548 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If No, explain in Remarks)

Are Vegetation X, Soil X, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, Hydrology ____, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes X No**
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Point taken within basin along berms. Area highly disturbed from berm construction.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 Ft)			
Fraxinus pennsylvanica	20	Y	FAC
	20	=Total Cover	
Shrub Stratum			
Herb Stratum			
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	20 (A)		60 (B)

Prevalence Index = B/A= 3.00

Hydrophytic Vegetation Indicators:

X Dominance Test > 50%

X Prevalence Index ≤ 3.0

____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No ____**

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation highly distrubed through berm construction and flooding. Most vegetation absent.

SOIL

Sampling Point: 06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 8	10YR 3 / 1	90	10YR 6/6	10	C	M	SANDY CLAY LOAM	
8 to 24	10YR 4 / 1	90	10YR 6/6	10	C	M	SANDY CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☑ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type:

Depth (inches):

Hydric Soil Present? Yes X No ___

Remarks:
Soil pit taken where berm construction wasn't as apparent. Hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches):	2-3 feet
Water Table Present?	Yes X	No ___	Depth (inches):	0
Saturation Present?	Yes X	No ___	Depth (inches):	0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Area is ponded adjacent to the point location. Unclear how deep pond gets.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 07

Investigators: Jill Rust Section, Township, Range S 34 T 89 R 48

Landform (hillslope, terrace, etc.): Top of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.48463 Long: -96.49560 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If No, explain in Remarks)

Are Vegetation X, Soil X, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, Hydrology ____, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Point area highly disturbed through berm construction and flooding. Point much higher elevation from wetland point 08.

VEGETATION– Use scientific names of plants.

Absolute % Cover	Dominant Species	Indicator Status

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across all Strata: 0 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A= ____

Hydrophytic Vegetation Indicators:

____ Dominance Test > 50%

____ Prevalence Index ≤ 3.0

____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No vegetation present. Removed through berm construction and flooding. Green ash (Fraxinus pennsylvanica) present on fringe of wetland area (point 08). Bare ground 100%

SOIL

Sampling Point: 07

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 24	10YR 2/1	100					SILTY CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type:

Depth (inches):

Hydric Soil Present? Yes ___ No X

Remarks:
Soils highly disturbed. No hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	--
Water Table Present?	Yes ___	No X	Depth (inches):	--
Saturation Present?	Yes ___	No X	Depth (inches):	--

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrology not present.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 08

Investigators: Jill Rust Section, Township, Range S 26 T 89 R 48

Landform (hillslope, terrace, etc.): Toe of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.48477 Long: -96.49785 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: PUBFx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If No, explain in Remarks)

Are Vegetation X, Soil X, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, Hydrology ____, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes X No**
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Point taken on edge of pond area. Areas adjacent to pond disturbed by berm construction. Most of ponde seems to be undisturbed except for indications of high water.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum			
Shrub Stratum			
Herb Stratum (Plot size: 6 Ft)			
Spartina pectinata	20	Y	FACW
Eleocharis erythropoda	15	N	OBL
	35	=Total Cover	
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	20	x 2 =	40
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	35 (A)		55 (B)

Prevalence Index = B/A= 1.57

Hydrophytic Vegetation Indicators:

X Dominance Test > 50%

X Prevalence Index ≤ 3.0

____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No** ____

Remarks: (Include photo numbers here or on a separate sheet.)
65 % bare ground. Area contains hydric vegetation.

SOIL

Sampling Point: 08

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 4	10YR 5 / 1	90	10YR 5/6	10	C	M	SILTY CLAY LOAM	
4 to 15	10YR 3 / 1	90	10YR 5/6	10	C	M	SILTY CLAY LOAM	
15 to 24	10YR 3 / 2	95	10YR 5/6	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☑ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:
Hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches):	1 foot
Water Table Present?	Yes ____	No X	Depth (inches):	--
Saturation Present?	Yes X	No ____	Depth (inches):	0

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Point on edge of small pond where surface water is presnt. Point location was saturated at surface. Wetland hydrology present.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 09

Investigators: Jill Rust Section, Township, Range S 34 T 89 R 48

Landform (hillslope, terrace, etc.): Top of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.48464 Long: -96.49764 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If No, explain in Remarks)

Are Vegetation X, Soil X, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, Hydrology ____, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** **No** **X**
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Adjacent areas disturbed through flooding and berm construction. Ponit upslope from wetland poin 10.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 Ft)			
Fraxinus pennsylvanica	25	Y	FAC
	25	=Total Cover	
Shrub Stratum			
Herb Stratum (Plot size: 6 Ft)			
Poa pratensis	50	Y	FACU
	50	=Total Cover	
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	75 (A)		275 (B)

Prevalence Index = B/A= 3.67

Hydrophytic Vegetation Indicators:

- ____ Dominance Test > 50%
- ____ Prevalence Index ≤ 3.0
- ____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks: (Include photo numbers here or on a separate sheet.)
Some upland areas bare ground through flooding. Bare ground at approximately 50%. Wetland vegetation criteria not met.

SOIL

Sampling Point: 09

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 15	10YR 2/2	100					SILT LOAM	
15 to 25	10YR 3/2	100					SILT LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type:

Depth (inches):

Hydric Soil Present? Yes ___ No X

Remarks:
No soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):		
Water Table Present?	Yes ___	No X	Depth (inches):		
Saturation Present?	Yes ___	No X	Depth (inches):		

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 10

Investigators: Jill Rust Section, Township, Range S 27 T 89 R 48

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.48834 Long: -96.50513 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If No, explain in Remarks)

Are Vegetation X, Soil X, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation ___, Soil ___, Hydrology ___, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** Yes ___ No X
Hydric Soil Present?	Yes X	No ___	
Wetland Hydrology Present?	Yes X	No ___	

Remarks:
Point taken within forested depression along trail and east of berm. Areas adjacent to the point appear to be disturbed through flooding and berm construction and removal.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 Ft)			
Populus deltoides	90	Y	FAC
	90	=Total Cover	
Shrub Stratum			
Herb Stratum (Plot size: 6 Ft)			
Phalaris arundinacea	40	Y	FACW+
Spartina pectinata	20	Y	FACW
Poa pratensis	10	N	FACU
	70	=Total Cover	
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across all Strata:	3	(B)
Percent of Dominant Species That are OBL, FACW, or FAC:	100.0%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	60	x 2 =	120
FAC species	90	x 3 =	270
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	160 (A)		430 (B)

Prevalence Index = B/A= 2.69

Hydrophytic Vegetation Indicators:

X Dominance Test > 50%

X Prevalence Index ≤ 3.0

___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
Bare ground at approximately 30%. Point meets hydric vegetation criteria.

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 6	10YR 3 / 1	100					SILT LOAM	
6 to 15	10YR 4 / 1	95	10YR 5/6	5	C	M	SILTY CLAY LOAM	
15 to 28	10YR 3 / 2	95	10YR 5/6	5	C	M	SILTY CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:
Point meet hydric soil criteria.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☑ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	--
Water Table Present?	Yes ____	No X	Depth (inches):	--
Saturation Present?	Yes ____	No X	Depth (inches):	--

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Drift deposits present (possibly from flooding). Secondary indicators also present.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 11

Investigators: Jill Rust Section, Township, Range S 27 T 89 R 48

Landform (hillslope, terrace, etc.): Top of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.48840 Long: -96.50522 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If No, explain in Remarks)

Are Vegetation X, Soil X, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation ___, Soil ___, Hydrology ___, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X
Hydric Soil Present?	Yes ___	No X	
Wetland Hydrology Present?	Yes ___	No X	

Remarks:
Area possibly disturbed through flooding.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 Ft)			
Fraxinus pennsylvanica	50	Y	FAC
	50	=Total Cover	
Shrub Stratum (Plot size: 30 Ft)			
Rhamnus cathartica	50	Y	FACU
Juniperus virginiana	10	N	FACU-
	60	=Total Cover	
Herb Stratum (Plot size: 6 Ft)			
Bromus inermis	20	Y	UPL
	20	=Total Cover	
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	50	x 3 =	150
FACU species	60	x 4 =	240
UPL species	20	x 5 =	100
Column Totals:	130 (A)		490 (B)

Prevalence Index = B/A= 3.77

Hydrophytic Vegetation Indicators:

___ Dominance Test > 50%

___ Prevalence Index ≤ 3.0

___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Bare ground at approximately 80% in herbaceous layer. Point does not meet hydric vegetation criteria.

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 10	10YR 3/1	100					SILT LOAM	
10 to 24	10YR 3/2	100					SILTY CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type:

Depth (inches):

Hydric Soil Present? Yes ___ No X

Remarks:
Point does not meet hydric criteria.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	–
Water Table Present?	Yes ___	No X	Depth (inches):	–
Saturation Present?	Yes ___	No X	Depth (inches):	–

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators present.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 12

Investigators: Jill Rust Section, Township, Range S 27 T 89 R 48

Landform (hillslope, terrace, etc.): Toe of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.48986 Long: -96.50520 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If No, explain in Remarks)

Are Vegetation X, Soil X, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation ___, Soil ___, Hydrology ___, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** **Yes** **No** **X**
Hydric Soil Present?	Yes X	No ___	
Wetland Hydrology Present?	Yes X	No ___	

Remarks:
Point taken within forested depression along trail and east of berm. Areas adjacent to the point appear to be disturbed through flooding and berm construction and removal.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 Ft)			
Populus deltoides	90	Y	FAC
	90	=Total Cover	
Shrub Stratum			
Herb Stratum (Plot size: 6 Ft)			
Phalaris arundinacea	20	Y	FACW+
Spartina pectinata	15	N	FACW
	35	=Total Cover	
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	90	x 3 =	270
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	125 (A)		340 (B)

Prevalence Index = B/A= 2.72

Hydrophytic Vegetation Indicators:

X Dominance Test > 50%

X Prevalence Index ≤ 3.0

___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** **X** **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Approximately 65% bare ground within herbaceous stratum. Cottonwood dominant in tree stratum. Hydric vegetation present.

SOIL

Sampling Point: 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 4	10YR 3.0 / 1	100					CLAY LOAM	
4 to 20	10YR 4.0 / 1	90	10YR 4/6	10	C	M	CLAY LOAM	
20 to 36	10YR 3.0 / 1	95	10YR 4/6	5	C	M	CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:
Hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☑ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No	X	Depth (inches):	--
Water Table Present?	Yes ____	No	X	Depth (inches):	--
Saturation Present?	Yes ____	No	X	Depth (inches):	10

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrology present at site.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 13

Investigators: Jill Rust Section, Township, Range S 27 T 89 R 48

Landform (hillslope, terrace, etc.): Toe of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.49426 Long: -96.50606 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If No, explain in Remarks)

Are Vegetation X, Soil ___, Hydrology ___, significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation ___, Soil ___, Hydrology ___, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** **Yes X No**
Hydric Soil Present?	Yes X	No ___	
Wetland Hydrology Present?	Yes X	No ___	

Remarks:
Point taken within long basin area between open field and housing area. Area highly disturbed through berm construction and removal.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across all Strata:	0	(B)
Percent of Dominant Species That are OBL, FACW, or FAC:	0.0%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A= ___

Hydrophytic Vegetation Indicators:

___ Dominance Test > 50%

___ Prevalence Index ≤ 3.0

___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

X Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Bare ground 100% within bottom of depression. Assumed point would meet hydric vegetation based on soils and hydrology.

SOIL

Sampling Point: 13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 6	10YR 3 / 1	95	10YR 5/6	5	C	M	SANDY CLAY LOAM	
6 to 24	10YR 3 / 2	95	10YR 5/6	5	C	M	SANDY CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☑ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:
Point meets hydric soils criteria.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No	X	Depth (inches): --
Water Table Present?	Yes		No	X	Depth (inches): --
Saturation Present?	Yes	X	No		Depth (inches): 0

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Saturation present at site. Point meets wetland hydrology criteria.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 14

Investigators: Jill Rust Section, Township, Range S 27 T 89 R 48

Landform (hillslope, terrace, etc.): Top of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.49444 Long: -96.50586 Datum: GCS_WGS_1984

Soil Map Unit Name: Norway loamy sand NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If No, explain in Remarks)

Are Vegetation X, Soil ___, Hydrology ___, significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, Hydrology ___, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No X	**Is the Sampled Area within a Wetland?** Yes ___ No X
Hydric Soil Present?	Yes ___	No X	
Wetland Hydrology Present?	Yes ___	No X	

Remarks:
Vegetation and soils disturbed through flooding and berm construction. Point taken upslope from sampling point 14.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 Ft)			
Populus deltoides	40	Y	FAC
	40	=Total Cover	
Shrub Stratum			
Herb Stratum (Plot size: 6 Ft)			
Digitaria ischaemum	10	Y	UPL
Poa pratensis	10	Y	FACU
	20	=Total Cover	
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	10	x 4 =	40
UPL species	10	x 5 =	50
Column Totals:	60 (A)		210 (B)

Prevalence Index = B/A= 3.50

Hydrophytic Vegetation Indicators:

___ Dominance Test > 50%

___ Prevalence Index ≤ 3.0

___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Bare vegetation at about 80%. Point does not meet hydric vegetation criteria as indicated by the UPL and FACU species found.

SOIL

Sampling Point: 14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 4	10YR 4 / 1	100					LOAMY SAND	
4 to 12	10YR 3 / 2	100					SANDY CLAY LOAM	
12 to 24	10YR 3 / 3	100					CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:
Soils do not display hydric characteristics.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	--
Water Table Present?	Yes ____	No X	Depth (inches):	--
Saturation Present?	Yes ____	No X	Depth (inches):	--

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 15

Investigators: Jill Rust Section, Township, Range S 26 T 89 R 48

Landform (hillslope, terrace, etc.): Toe of Slope Local Relief (concave, convex, none): Concave

Slope(%): 10 Lat: 42.4923089089916 Long: -96.47841703029 Datum: GCS_WGS_1984

Soil Map Unit Name: Chaska loam NWI Classification: PEMC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If No, explain in Remarks)

Are Vegetation ____, Soil ____, Hydrology ____, significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, Hydrology ____, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes X No**
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Point taken at bottom of slope near Big Sioux River. Area appears to be a forested terrace on banks of the Big Sioux River.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 Ft)			
Populus deltoides	100	Y	FAC
	100	=Total Cover	
Shrub Stratum			
Herb Stratum			
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		300 (B)

Prevalence Index = B/A= 3.00

Hydrophytic Vegetation Indicators:

X Dominance Test > 50%

X Prevalence Index ≤ 3.0

____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No ____**

Remarks: (Include photo numbers here or on a separate sheet.)
Point within a forested terrace allong Big Sioux River. Bare ground present beneath tree canopy.

SOIL

Sampling Point: 15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 6	10YR 2 / 1	100					SANDY CLAY LOAM	
6 to 16	10YR 3 / 1	95	10YR 5/6	5	C	M	CLAY LOAM	
16 to 30	10YR 3 / 1	90	10YR 5/6	10	C	M	CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	___
Water Table Present?	Yes ___	No X	Depth (inches):	___
Saturation Present?	Yes X	No ___	Depth (inches):	10

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrology present at point.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 16

Investigators: Jill Rust Section, Township, Range S 26 T 89 R 48

Landform (hillslope, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.4923022293724 Long: -96.4784195648939 Datum: GCS_WGS_1984

Soil Map Unit Name: Chaska loam NWI Classification: PEMC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If No, explain in Remarks)

Are Vegetation X, Soil X, Hydrology ___, significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation ___, Soil ___, Hydrology ___, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** Yes ___ No X
Hydric Soil Present?	Yes X	No ___	
Wetland Hydrology Present?	Yes X	No ___	

Remarks:
Point taken on forested terrace adjacent to the Big Sioux River.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 Ft)			
Populus deltoides	80	Y	FAC
Salix exigua	20	Y	FACW+
	100	=Total Cover	
Shrub Stratum			
Herb Stratum			
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	80	x 3 =	240
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		280 (B)

Prevalence Index = B/A= 2.80

Hydrophytic Vegetation Indicators:

X Dominance Test > 50%

X Prevalence Index ≤ 3.0

___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
Bare ground within herb stratum at 100%. Wetland vegetation present at site.

SOIL

Sampling Point: 16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 8	10YR 2.0 / 1	60	10YR 6/6	40	C	PL	SILTY CLAY	
8 to 24	10YR 3.0 / 1	90	10YR 5/6	10	C	M	CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☑ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type:

Depth (inches):

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☑ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	--
Water Table Present?	Yes ___	No X	Depth (inches):	--
Saturation Present?	Yes X	No ___	Depth (inches):	8

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrological indicators present at the point.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project Site: Dakota Dunes City/County: Union County Sampling Date: 11/1/2011

Applicant/Owner: Dakota Dunes Community State: SD Sampling Point: 17

Investigators: Jill Rust Section, Township, Range S 26 T 89 R 48

Landform (hillslope, terrace, etc.): Top of Slope Local Relief (concave, convex, none): Concave

Slope(%): 5 Lat: 42.4921365123143 Long: -96.4786748675234 Datum: GCS_WGS_1984

Soil Map Unit Name: Modale silt loam NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If No, explain in Remarks)

Are Vegetation ____, Soil ____, Hydrology ____, significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, Hydrology ____, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Point taken adjacent to the Big Sioux River on higher terrace than point 5 & 6.

VEGETATION– Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum			
Shrub Stratum			
Herb Stratum (Plot size: 6 Ft)			
Bromus inermis	100	Y	UPL
	100	=Total Cover	
Vine Stratum			

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A= 5.00

Hydrophytic Vegetation Indicators:

- ____ Dominance Test > 50%
- ____ Prevalence Index ≤ 3.0
- ____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No wetland vegetation present.

SOIL

Sampling Point: 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type [1]	Loc [2]	Texture	Remarks
0 to 8	10YR 3.0 / 2	100					SILTY CLAY LOAM	
8 to 24	10YR 4.0 / 2	100					SILTY CLAY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils: [3]

- ☐ Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Dark Surface (S7)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

☐ **Restrictive Layer (if observed):**

Type:

Depth (inches):

Hydric Soil Present? Yes ___ No X

Remarks:
No wetland soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surf. (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	–
Water Table Present?	Yes ___	No X	Depth (inches):	–
Saturation Present?	Yes ___	No X	Depth (inches):	–

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No wetland hydrology present at point.

Photo #1. Facing West. Photo taken at Point 01 within forested area.

Photo #2. Facing Southwest. Photo taken within Wetland 2 looking at berm along large man-made pond.

Photo #3. Facing East. Photo taken looking at Wetland 3 in large ponded area.

Photo #4. Facing East. Photo taken at Point 02 within Wetland 2. Area has been flooded in recent past and all vegetation as died off.

Photo #5. Facing South. Photo taken at Point 02 within wetland 2.

Photo #6. Facing South. Photo taken from temporary access road/berm looking south from Wetland 2 at sand bar near Point 3.

Photo #7. Facing West. Photo taken at Point 3 on sand bar.

Photo #8. Facing East. Photo taken from Point 3 on sand bar.

Photo #9. Facing West. Photo taken from berm adjacent to Missouri River. Berm removal activities pictured in distance. Photo taken just southwest of Point 02.

Photo #10. Facing West. Photo taken from berm showing sand bars along Missouri River. Photo taken between Points 02 and 04.

Photo #11. Facing South. Photo taken in forested area at Point 04.

Photo #12. Facing South. Photo taken from atop berm looking at Missouri River and large unvegetated sandbar. Photo taken south of Point 04.

Photo #13. Facing South. Photo taken near Point 05. Golf course putting green shown in distance past walking bridge. Missouri River is past (south) the putting green.

Photo #14. Facing West Northwest. Photo taken from atop berm at sand dune are within Missouri River. Photo taken between Point 07.

Photo #15. Facing South. Photo looking south at Missouri River showing highly disturbed areas along berm construction and removal areas

Photo #16. Facing North. Photo taken from atop berm at pond area. Note disturbed soils along berm and pond. Photo taken near Point 07.

Photo #17. Facing South. Photo taken at Missouri River near Point 07. Note disturbed areas.

Photo #18. Facing North. Photo taken from atop berm near Point 08.

Photo #19. Facing East. Photo taken near Point 11 within wooded area.

Photo #20. Facing West. Photo taken from south end of Wetland 8. Large linear depression.

Photo #21. Facing North. Photo taken near middle of Wetland 8 showing portion of large linear wetland.

Photo #22. Facing Southeast. Photo taken atop berm showing Wetland 9.

Photo #23. Facing South. Photo taken near Wetland 9 showing berm removal activities in the distance.

Photo #24. Facing North. Photo taken near Point 17 on top of terrace.

Photo #25. Facing South. Photo taken from lower terrace near Points 15 and 16 showing forested riparian area along Big Sioux River.

Photo #26. Facing West. Photo taken from lower terrace near Points 15 and 16 along Big Sioux River.

WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: Colonial Pine Hills Sanitary District

Project Title:	Croyle/Nonanna Wells Filtration System
Funding Requested:	$400,000
Other Proposed Funding:	$371,000 – Local Cash $705,000 – Drinking Water SRF Loan C462270-03
Total Project Cost:	$1,476,000
Green Reserve Amount:	$0
Project Description:	The Colonial Pine Hills Sanitary District is proposing to install a new microfiltration water treatment unit at the location of the Croyle Well House and construct 500 feet of effluent force main from the well house to a manhole connected to the Rapid City sewer system. The District is also proposing to construct an 8-inch water main along Pinewood Drive. Because actual project costs exceeded the initial estimates, additional funding is required to complete the project.
Alternatives Evaluated:	"No Action" the district would continue to rely on existing water supply wells, one of which exceeds maximum contaminant levels for gross alpha. The district's water supply is currently below recommended levels and doing nothing will only further add to this problem. This alternative was not selected. The District considered constructing a new well or wells to provide the additional water supply needed. The proximity to existing wells and the availability of land on which to construct may prove difficult, as well as the water quality in the aquifers underlying the District is variable and the same situation as currently exists may be found. This alternative would exceed $1 million in costs if a suitable construction site could be obtained. This alternative was not recommended. Treatment of the Whispering Pines well was evaluated, but the treatment type required would require a well house building for which land on site is not available. Additionally, the well was constructed in the 1970s and the well casing condition is unknown. This alternative was not recommended. Treatment of the Countryside South well was evaluated and

determined to be unsuitable do the high iron content, which would require additional treatment, and the low production capacity not meeting the District's supply needs. This alternative was not recommended.

The District evaluated connecting to the city of Rapid City for its water supply. The city would likely require the District to be annexed for this to occur, which the District residents do not favor. Without annexation, the city charges rates that are typically 150 percent of city rates with summer peak rates of 300 to 500 percent of city rates. Additionally, Rapid City does not have water supply infrastructure in place to provide service to the District. This would need to be constructed at a cost to the users, and annexation would likely require the District's other utilities to be brought to city standards adding costs. This alternative was not recommended.

The District examined regionalization of its system by combining with other small area subdivisions. However, none of these subdivisions could provide an additional water supply of meaningful quantities and as such this alternative was not recommended.

Implementation Schedule:	Colonial Pine Hills Sanitary District bid the project on December 16, 2014 with a completion date of early 2016.
Service Population:	1,250
Current Domestic Rate:	$53.75 per 5,000 gallons
Proposed Domestic Rate at Project Completion:	$59.00 per 5,000 gallons

Interest Rate: 3.00% Term: 20 years Security: Project Surcharge Revenue Bond

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan the Colonial Pine Hills would have to enact a surcharge of approximately $5.77. When added to current rate of 53.75/5,000 gallons residents would be paying $59.52/5,000 gallons.

25% Funding Subsidy:	$100,000 subsidy with a loan of $300,000
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $300,000 the Colonial Pine Hills would have to enact a surcharge of approximately $4.33 thereby paying a rate $57.33/5,000 gallons.

50% Funding Subsidy:	$200,000 subsidy with a loan of $200,000
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $200,000 the Colonial Pine Hills would have to enact a surcharge of approximately $2.89 thereby paying a rate $55.89/5,000 gallons.

75% Funding Subsidy:	$300,000 subsidy with a loan of $100,000
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $100,000 the Colonial Pine Hills would have to enact a surcharge of approximately $1.45 thereby paying a rate $54.45/5,000 gallons.

ENGINEERING REVIEW COMPLETED BY: DREW HUISKEN

FINANCIAL REVIEW COMPLETED BY: DAVID RUHNKE

RECEIVED
SEP 24 2014
Division of Financial
Technical Assistance

Drinking Water Facilities Funding Application

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

Applicant	Proposed Funding Package		
Colonial Pine Hills Sanitary District	CWFCP / DWSRF		$400,000
Address	Local Cash		$371,000
8215 Dunsmore Road Rapid City, SD 57702	Other	DW SRF #3	$705,000
	Other		
Subapplicant	Other		
N/A			
DUNS Number		**TOTAL**	$1,476,000
047893644			

Project Title: Croyle/Nonanna Wells Filtration System

Description:

The Colonial Pine Hills Sanitary District is seeking Drinking Water Facilities funding in order to install filtration and disinfection equipment at their facility. The District applied and received DENR funding in 2012 to complete the project. Since that time, some elements of the project have changed and the costs of the project have exceeded initial cost estimates. The District has awarded a contract to construct a portion of the project that includes the installation of an 8-inch water main and 6-inch raw water line at Pinewood Drive.

The District is requesting additional funding to complete the construction of the treatment system to achieve three-log giardia removal. Raw water will be pumped from the Nonanna Well to the district's Croyle II Well via the raw water line. The existing Croyle II well house has a backwash system already in place and is available to use to treat the Nonanna well water. A microfiltration package skid and related components will be installed within the existing Croyle II well house.

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.

Robert S. Truman, President

Name & Title of Authorized Signatory (Typed)

Robert S Truman 9/16/14

Signature Date

Professional Consultants

Application Prepared By: Black Hills Council of Local Governments/ Colonial Pine Hills SD

Contact Person: Ali DeMersseman/ Jim Martin

Mailing Address: 730 East Watertown Street, Suite 102

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

Telephone Number: (605) 394-2681 Fax: (605) 394-6140

Email address: ademersseman@tie.net or cphsd@rapidnet.com

Consulting Engineering Firm: AE2S

Contact Person: Ted Schultz

Mailing Address: 1560 Concourse Drive

City, State, and Zip: Rapid City, SD 57703

Telephone Number: (605) 341-7800 Fax: (605) 341-7864

Email address: Ted.Schultz@AE2S.com

Legal Counsel's Firm: Gunderson, Palmer, Goodsell & Ashmore, LLP

Legal Counsel: Talbot J. Wieczorek

Mailing Address: P.O. Box 8045

City, State, and Zip: Rapid City, SD 57709

Telephone Number: (605) 342-1078 Fax: (605) 342-0480

Email address: tjw@gpgnlaw.com

This section applies only to political subdivisions

Bond Counsel's Firm: Davenport, Evans, Hurwitz & Smith, LLP

Bond Counsel: Douglas J. Hajek

Mailing Address: P.O. 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 CWFCP / DWSRF	B DW SRF 3	C Local	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal including Bond Counsel	$7,500.00	$7,500.00				$15,000.00
D. Other						
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees						
B. Project Inspection Fees						
C. Other Engineering Fees	$114,485.00	$105,274.00				$219,759.00
4. Construction and Project Improvement	$242,667.00	$563,873.00	$370,913.00			$1,177,453.00
5. Equipment						
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$364,652.00	$676,647.00	$370,913.00			$1,412,212.00
10. Contingencies	$35,000.00	$28,353.00				$63,353.00
11. Total (Lines 9 and 10)	$399,652.00	$705,000.00	$370,913.00			$1,475,565.00
12. Total %	27.08%	47.78%	25.14%	0.00%	0.00%	100.00%

Columns A - E: Identify each funding source and enter the amounts budgeted by cost category.

Comments:

Method of Financing

Source Header		Secured Funds	Unsecured Funds (Date Anticipated)
Local Cash (Identify Source)	Reserves	$371,000.00	
Other (Explain)	Drinking Water SRF Loan 3	$705,000.00	
Other (Explain)	Drinking Water SRF Loan 4		$400,000.00 January 2015
Other (Explain)			
Other (Explain)			
Other (Explain)			
TOTAL		$1,076,000.00	$400,000.00

Comments:

7.3.1 Repayment Information

Interest rate and term you are applying for: 3 %, 20 years.

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

- ☐ 1. General Obligation bond (requires bond election)
- ☐ 2. Water Revenue bond
- ☒ 3. Project Surcharge Revenue bond
- ☐ 4. Sales Tax Revenue bond

7.3.2 Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audit or unaudited financial statement to include specific accounting of pledged funds.
2. Current year's budget.

Planning and Legal Documents

1. Governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water SRF application and signing of payment requests. This resolution must also include the maximum loan amount requested, interest rate and term being applied for, description of proposed project, and security pledged towards repayment of the loan.
3. Facilities Plan (8.3.18).
4. Capacity Assessment Worksheets (section 8.3.16).

Items 5-7 apply to Nonprofit Entities only

5. By-laws
6. Articles of Incorporation
7. Certificate of Good Standing from Secretary of State

7.3.3 General Information

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

Population Served

Current 1,250 2000 1,000 1990 550

Top Five Employers Within 30 Miles	Number of Employees	Type of Business
Ellsworth AFB	3,504	Gov't/Military
Rapid City Regional Hospital	2,850	Health Care
Federal Government	2,616	Government
Rapid City School District	1,593	Education
City of Rapid City	1,385	Local Government

Please indicate employers within boundary of issuing entity with an asterisk (*).

7.3.4 Drinking Water Utility Information

Current Water Utility Debt

Year	2002	2010	2012				
Purpose	Well SRF Loan	Well SRF Loan	Filtration				
Security Pledged	Water Revenues	Water Revenues	Property Taxes				
Amount	$659,000.00	$753,608.00	$705,000.00				
Maturity Date (mo/yr)	01/2023	04/2031	9/2032				
Debt Holder	BWNR	BWNR	BWNR				
Debt Coverage Requirement	110%	110%	110%				
Avg. Annual Required Payment	$44,283.00	$50,245.00					
Outstanding Balance	$291,586.80	$629,570.08	$85,659.00				

Use additional sheets if more room is required to list all current water utility debt.

Drinking Water Utility Cash Flow

	Prior Year	Prior Year	Current Year	Future Year #
Fiscal Year	2012	2013	2014	2016
OPERATING CASH FLOW				
Water Sales	$353,485	$319,301.00	$310,805.00	$340,000.00
Surcharge Fee	$0	$0.00	$0.00	$26,712.00
Other (Explain) Fees/Fines	$5,688	$3,293.00	$3,600.00	$3,600.00
OPERATING PAYMENTS				
Personal Services	($63,892)	($76,314.00)	($87,947.00)	($82,180.00)
Chemical, Material & Supplies	($46,947)	($42,247.00)	($78,505.00)	($83,165.00)
Electric & Other Utilities	($37,703)	($39,831.00)	($40,600.00)	($40,600.00)
Other (Explain) Dues and Subscriptions	($730)	($730.00)	($730.00)	($730.00)
Professional Fees & Misc	($48,412)	($16,640.00)	($33,613.00)	($39,504.00)
NET CASH FROM OPERATIONS	$161,489	$146,832.00	$73,010.00	$124,133.00
NONOPERATING CASH FLOW				
Interest Income	$996.00	$1,187.00	$540.00	$500.00
Other Revenue (Explain)				
Loans			$195,659.00	$200,000.00
Transfers In (Explain)				
Property tax revenue	$109,416.00	$119,706.00	$121,000.00	$122,500.00
Fixed Asset Sale (Explain)				
Transfers Out (Explain)				
Fixed Asset Purchases (Explain) Capital Purc	($19,472.00)	($49,226.00)	($275,352.00)	($798,550.00)
Debt Payment (Principal Only)	($59,164.00)	($61,116.00)	($76,061.00)	($109,652.00)
Debt Payment (Interest Only)	($35,364.00)	($33,412.00)	($41,919.00)	($58,600.00)
Other Expenses (Explain) Misc			($900.00)	($900.00)
NET CASH FROM NONOPERATING	($3,588)	($22,861.00)	($77,033.00)	($644,702.00)
Net Increase (Decrease) in Cash	$157,901	$123,971.00	($4,023.00)	($520,569.00)
Beginning Cash Balance	$146,715	$304,616.00	$428,587.00	$824,794.00
Ending Cash Balance	$304,616	$428,587.00	$424,564.00	$304,225.00
RESTRICTED BALANCE	$120,981	$120,981.00	$120,981.00	$120,981.00
UNRESTRICTED BALANCE	$183,635	$307,606.00	$303,583.00	$183,244.00

Future Year: First full year after project completion.

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber
$26,388.00	Meter Deposits	Motion
$94,529.00	One-year Debt Payment	Motion
$64.00	CU Share Account	Credit Union Requirement

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

Check one: ✓ Incorporated Municipality or Sanitary District

or

____ Other Community Water System

Monthly:	Current Rate	Proposed Rate	# of Accounts	Average use gallons/cubic feet
Domestic	$53.75	$59.00	422	12,085
Business	$53.75	$59.00	2	12,085
Other:				

Are fees based on usage or flat rate? Usage

When is proposed fee scheduled to take effect? December 1, 2014

When did the current fee take effect? January 1, 2009

What was the fee prior to the current rate? $35

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

Five Largest Customers	Type of Business	% of System Revenues
Corner Pantry	Convenience Store	93%
Tuma, Joseph	Residence	52%
Orrock, Kenneth	Residence	48%
Oberg, Jennifer	Residence	44%
Nedued, Craig	Residence	43%

7.3.5 Property Tax Information

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

Three year valuation trend:

Year	_____	_____	_____
Assessed Valuation	_____	_____	_____
Full & True Valuation	_____	_____	_____

Three year levies and collection trend:

Year	_____	_____	_____
Amount Levied	_____	_____	_____
Collected	_____	_____	_____
Penalties/Interest	_____	_____	_____
Late Payments	_____	_____	_____

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

Comments:

List all current debt secured by General Obligation bond:

Year	2,012				
Purpose	Filtration				
Security Pledged	Property Taxes				
Amount	$705,000.00				
Maturity Date (mo/yr)	9/2032				
Debt Holder	BWNR				
Debt Coverage Requirement	110%				
Avg. Annual Required Payment					
Outstanding Balance	$85,659.00				

Use additional sheets if more room is required to list all current G.O. debt.

Comments:

As of the date of this application, the District has not started making payments on this loan. The amount recorded above is the amount that has been drawn down.

7.3.6 Sales Tax Information

(Complete 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:

List all current debt secured by sales tax:

Year Issued					
Purpose					
Amount					
Maturity Date (mo/yr)					
Debt Holder					
Debt Coverage Requirement					
Avg. Annual Required Payment					
Outstanding Balance					

Use additional sheets if more room is required to list all current sales tax debt.

Comments:

7.3.7 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

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 section 8.3.18.	×
♦ A public hearing held discussing the project and the use of an SRF loan to finance the project. (See section 8.3.15)	×
♦ Minutes of the public hearing prepared and submitted to the department for inclusion into the final Facilities Plan.	×
♦ The affidavit of publication of the public hearing received and submitted to the department for inclusion into the final Facilities Plan. (See section 8.3.15)	×
♦ The four review agencies contacted and responses received for inclusion into the final Facilities Plan. (See section 8.3.18)	×
♦ The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. (See section 8.3.20)	×

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	
Treatment	$400,000.00
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	$400,000.00

Colonial Pine Hills Sanitary District

Name of Applicant

Robert S Jacoman

Signature of Authorized Representative

9/16/14

Date

7.3.9 Preaward Compliance Review

FORM Approved By OMB: No. 2030-0020 Expires 12-31-2011

United States Environmental Protection Agency
Washington, DC 20460

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note : Read instructions on other side before completing form.

I. Applicant/Recipient (Name, Address, State, Zip Code).	DUNS No.
Colonial Pine Hills Sanitary District, 8251 Dunsmore Road, Rapid City, SD 57702	047893644

II. Is the applicant currently receiving EPA assistance? Yes, the District currently has 3 SRF loans

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7. See instructions on reverse side.) N/A

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective action taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7. See instructions on reverse side.) N/A

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3)). N/A

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below. No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable bypersons with disabilities, explain how a regulatory exception (40 C.F.R. § 7.70) applies.

VII.* Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex,age, or disability in its programs or activities? (40 C.F.R. § 5.140 and § 7.95) No

a. Do the methods of notice accommodate those with impaired vision or hearing? b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communication? c. Does the notice identify a designated civil rights coordinator?

VIII.* Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. § 7.85(a)) No

IX.* Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166) No

X.* If the applicant/recipient is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator. N/A

XI* If the applicant/recipient is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet address for, or a copy of, the procedures. N/A

For the Applicant/Recipient I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official	B. Title of Authorized Official	C. Date
Robert S Unumsa	President	9/16/14

For the U.S. Environmental Protection Agency I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preawardcompliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisionsof 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized EPA Official See ** note on reverse side.	B. Title of Authorized EPA Official	C. Date

Instructions for EPA FORM 4700-4 (Rev. 03/2008) General

Recipients of Federal financial assistance from the U.S.Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment).

Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities.

Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities.

The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission.

Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution.

40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972.

40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973.

The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items

"Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25.

"Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25.

"Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed.

"Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability.

Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission.

If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable."

In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification.

* Questions VII – XI are for informational use only and will not affect an applicant's grant status. However, applicants should answer all questions on this form. (40 C.F.R. Parts 5 and 7).

** Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.

Approval indicates, in the reviewer's opinion, questions I – VI of Form 4700-4 comply with the preaward administrative requirements for EPA assistance.

"Burden Disclosure Statement"

EPA estimates public reporting burden for the preparation of this form to average 30 minutes per response. This estimate includes the time for reviewing instructions, gathering and maintaining the data needed and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to
U.S. EPA, Attn: Collection Strategies Division (MC 2822T), Office of Information Collection, 1200 Pennsylvania Ave., NW, Washington, D.C. 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

The information on this form is required to enable the U.S.Environmental Protection Agency to determine whether applicants and prospective recipients are developing projects, programs and activities on a nondiscriminatory basis as required by the above statutes and regulations.

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.

Robert S. Truman, President

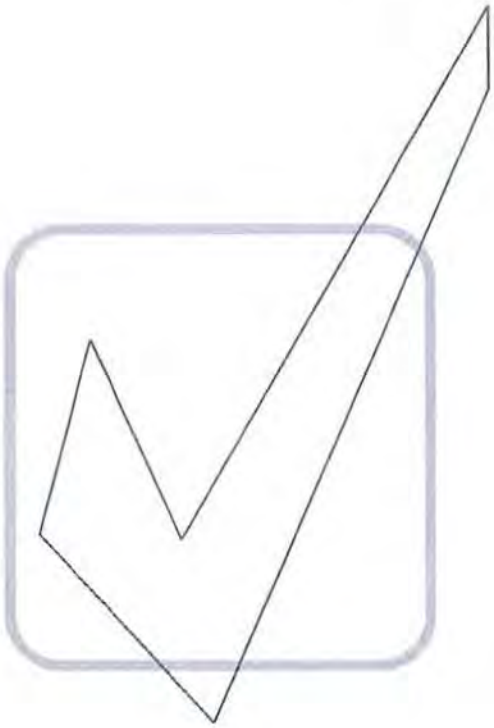
Name & Title of Authorized Representative

Robert S Truman 9/16/14

Signature of Authorized Representative 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

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.

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: Colonial Pine Hills Sanitary District

Prepared by: Jim Martin
825 Dunsmore Road
Rapid City, SD 57702

Phone #: 605-348-3113

Date: 9/9/2014

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:*** 134,000 gallons	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** 288,000 gallons	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 600,000 gallons daily	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 50%	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** infinite	☑	☐	☐	☐
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:*** conservation restrictions June thru September	☑	☐	☐	☐
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):*** 2607A-2, 1726-2, 2108-2, 2295-2 2461-2, 2623-2	☑	☐	☐	☐
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?***	☐	☐	☐	☑
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*** 1000 - 1250 feet	☑	☐	☐	☐
Do you know the geologic name of the aquifer system from which your water is drawn? ***If yes, geologic name:*** Madison and Deadwood Formations	☑	☐	☐	☐
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:*** weekly	☐	☐	☐	☑
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:*** 2002, 2010	☑	☐	☐	☐
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:*** chemical injection pump ***How often?*** weekly ***Disinfectant used:*** A Zone 15	☑	☐	☐	☐
Do you have back-up equipment? ***Type:*** additional pumps	☑	☐	☐	☐
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:*** 5-20 minutes	☑	☐	☐	☐
Can you detect a chlorine residual at taps at the ends of the distribution system? ***Free Chlorine Residual:*** 0.5 - 1.0 ***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:*** 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

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:*** 300,000 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:*** 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:*** 10 %	☑	☐	☐	☐
	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?	☑	☐	☐	☐
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:*** 75%	☑	☐	☐	☐
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 ***Most common complaint:*** Class II Distribution & Tream	☑	☐	☐	☐
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 Distribution & Tream	☑	☐	☐	☐
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, AE2S	☑	☐	☐	☐

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):*** system 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:*** Capital Improvement, Loan Repayment	☑	☐	☐	☐
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:*** $45 per 200 cu/ft with step increases (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: Colonial Pine Hills Sanitary District
Completed by: Jim Martin
Date: September 2, 2014 - Revised Nov. 13, 2014

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2013	2014	2015	2016	2017
1. Beginning Cash on Hand	$304,616	$428,586	$424,563	$824,794	$304,225
2. Cash Receipts:					
a. Unmetered Water Revenue	$0	$0	$0	$0	$0
b. Metered Water Revenue	$319,301	$310,805	$340,000	$340,000	$340,000
c. Other Water Revenue	$3,293	$3,600	$3,600	$3,600	$3,600
d. Total Water Revenues (2a through 2c)	$322,594	$314,405	$343,600	$343,600	$343,600
e. Connection Fees	$0	$0	$0	$0	$0
f. Interest and Dividend Income	$1,187	$540	$500	$500	$500
g. Other Income	$119,706	$121,000	$122,000	$122,500	$123,000
h. Total Cash Revenues (2d through 2g)	$443,487	$435,945	$466,100	$466,600	$467,100
i. Transfers in/Additional Rev Needed			$26,712	$26,712	$26,712
j. Loans, Grants or other Cash		$195,659	$709,341	$200,000	$0
Please specify					
3. Total Cash Receipts (2h through 2j)	$443,487	$631,604	$1,202,153	$693,312	$493,812
4. Total Cash Available (1+3)	$748,103	$1,060,190	$1,626,716	$1,518,106	$798,037
5. Operating Expenses					
a. Salaries and wages	$76,314	$87,947	$81,408	$82,180	$82,960
b. Employee Pensions and Benefits	$0	$0	$0	$0	$0
c. Purchased Water	$0	$0	$0	$0	$0
d. Purchased Power	$39,831	$40,600	$40,600	$40,600	$40,600
e. Fuel for Power Production	$0	$0	$0	$0	$0
f. Chemicals	$9,523	$10,641	$14,900	$14,900	$14,900
g. Materials and Supplies	$27,902	$65,225	$65,625	$65,625	$65,625
h. Engineering Services	$0	$2,400	$2,400	$2,400	$2,400
i. Contractual Services – Other	$4,161	$16,000	$3,000	$18,000	$3,000
j. Equip. Rent/Real Property	$4,822	$2,640	$2,640	$2,640	$2,640
k. Transportation Expenses	$2,090	$2,160	$2,400	$2,400	$2,400
l. Laboratory	$1,188	$3,330	$5,000	$5,000	$5,000
m. Insurance	$7,785	$7,875	$9,964	$9,964	$9,964
n. Regulatory Commission Expenses	$0	$0	$0	$0	$0
o. Advertising	$1,205	$1,500	$1,500	$1,500	$1,500
p. Miscellaneous	$941	$1,078	$970	$970	$970
q. Total Cash O&M Expenses (5a through 5p)	$175,762	$241,396	$230,407	$246,179	$231,959
r. Replacement Expenditures	$0	$0	$0	$0	$0
s. Total OM&R Expenditures (5q+5r)	$175,762	$241,396	$230,407	$246,179	$231,959
t. Loan Principal/Capital Lease Payments	$61,116	$76,061	$102,614	$109,652	$113,162
u. Loan Interest Payments	$33,412	$41,919	$58,966	$58,600	$55,090
v. Transfers Out	$0	$0	$0	$0	$0
w. Capital Purchases (specify):					
Attached detail	$49,226	$275,352	$409,035	$798,550	$6,550
x. Other		$900	$900	$900	$900
6. Total Cash Paid Out (5s through 5x)	$319,516	$635,628	$801,922	$1,213,881	$407,661
7. Ending Cash Position (4 - 6)	$428,587	$424,562	$824,794	$304,225	$390,376

Financial Spreadsheet

Applicant: Colonial Pine Hills Sanitary District
Completed by: Jim Martin
Date: September 2, 2014 - Revised Nov. 13, 2014

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	424	424	424	424	424
9. Avg Annual User Charge Account (2d/8)	$761	$742	$810	$810	$810
10. Coverage Ratio (2h-5s)/(5t+5u)	2.8	1.6	1.5	1.3	1.4
11. Operating Ratio (2d/5s)	1.8	1.3	1.5	1.4	1.5
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	$0	$0	$0	$0	$0
d. Replacement Reserve	$0	$0	$0	$0	$0
e. Other		$0	$0	$0	$0
13. Total Reserves (12a through 12e)	$0	$0	$0	$0	$0
14. Year End Operating Cash (7 – 13)	$428,587	$424,562	$824,794	$304,225	$390,376

8.3.16.1 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.)

COLONIAL PINE HILLS SANITARY DISTRICT

AUTHORIZING 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.

RESOLUTION # 2014 -- 1

WHEREAS, the Colonial Pine Hills Sanitary District (the "District") has determined it is necessary to proceed with improvements to its Water System, including but not limited to the installation of a new filtration system (the "Project"); and

WHEREAS, the District 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 District 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 District and to certify and sign payment requests in the event financial assistance is awarded for the Project,

NOW THEREFORE BE IT RESOLVED by the District as follows:

1. The District 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 President of the Board, or in his absence the Vice-President of the Board, 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. Jimmy L. Martin, Manager, is hereby designated as the authorized representative of the District to do all things on its behalf to certify and sign payment requests in the event financial assistance is awarded for the Project.

COLONIAL PINE HILLS SANITARY DISTRICT

8251 Dunsmore Road, Rapid City, SD 57702
348-3113

There is a minimum charge of $45.00 monthly
New Rates Effective January 1, 2009

Monthly Cu/Ft to Cu/Ft		Amount Due	
0	100	$45.00	0-200 Cu/Ft
101	200	$45.00	Minimum $45.00
201	300	$46.75	201-1000 Cu/Ft
301	400	$48.50	$1.75 per 100 Cu/Ft
401	500	$50.25	
501	600	$52.00	
601	700	$53.75	
701	800	$55.50	
801	900	$57.25	
901	1000	$59.00	
1001	1100	$61.00	1001-2000 Cu/Ft
1101	1200	$63.00	$2.00 per 100 Cu/Ft
1201	1300	$65.00	
1301	1400	$67.00	
1401	1500	$69.00	
1501	1600	$71.00	
1601	1700	$73.00	
1701	1800	$75.00	
1801	1900	$77.00	
1901	2000	$79.00	
2001	2100	$81.25	2001-3000 Cu/Ft
2101	2200	$83.50	$2.25 per 100 Cu/Ft
2201	2300	$85.75	
2301	2400	$88.00	
2401	2500	$90.25	
2501	2600	$92.50	
2601	2700	$94.75	
2701	2800	$97.00	
2801	2900	$99.25	
2901	3000	$101.50	
3001	3100	$104.00	3001-4000 Cu/Ft
3101	3200	$106.50	$2.50 per 100 Cu/Ft
3201	3300	$109.00	
3301	3400	$111.50	
3401	3500	$114.00	
3501	3600	$116.50	
3601	3700	$119.00	
3701	3800	$121.50	
3801	3900	$124.00	
3901	4000	$126.50	
4001	4100	$129.50	4001-5000 Cu/Ft
4101	4200	$132.50	$3.00 per 100 Cu/Ft
4201	4300	$135.50	
4301	4400	$138.50	
4401	4500	$141.50	
4501	4600	$144.50	
4601	4700	$147.50	
4701	4800	$150.50	
4801	4900	$153.50	
4901	5000	$156.50	
5001	5100	$160.25	5301-6000 Cu/Ft
5101	5200	$164.00	$3.75 per 100 Cu/Ft
5201	5300	$167.75	
5301	5400	$171.50	
5401	5500	$175.25	
5501	5600	$179.00	
5601	5700	$182.75	
5701	5800	$186.50	
5801	5900	$190.25	
5901	6000	$194.00	
6001	6100	$198.50	6001-7000 Cu/Ft
6101	6200	$203.00	$4.50 per 100 Cu/Ft
6201	6300	$207.50	
6301	6400	$212.00	
6401	6500	$216.50	
6501	6600	$221.00	
6601	6700	$225.50	
6701	6800	$230.00	
6801	6900	$234.50	
6901	7000	$239.00	
7001	7100	$244.50	7001-8000 Cu/Ft
7101	7200	$250.00	$5.50 per 100 Cu/Ft
7201	7300	$255.50	
7301	7400	$261.00	
7401	7500	$266.50	
7501	7600	$272.00	
7601	7700	$277.50	
7701	7800	$283.00	
7801	7900	$288.50	
7901	8000	$294.00	

1 Cubit Foot of Water equals 7.48052 Gallons

Monthly Cu/Ft to Cu/Ft		Amount Due	
8001	8100	$302.00	8100-9000 Cu/Ft
8101	8200	$310.00	$8.00 per 100 Cu/Ft
8201	8300	$318.00	
8301	8400	$326.00	
8401	8500	$334.00	
8501	8600	$342.00	
8601	8700	$350.00	
8701	8800	$358.00	
8801	8900	$366.00	
8901	9000	$374.00	
9001	9100	$384.00	9001-10000 Cu/Ft
9101	9200	$394.00	$10.00 per 100 Cu/Ft
9201	9300	$404.00	
9301	9400	$414.00	
9401	9500	$424.00	
9501	9600	$434.00	
9601	9700	$444.00	
9701	9800	$454.00	
9801	9900	$464.00	
9901	10000	$474.00	
10001	10100	$486.00	10001-11000 Cu/Ft
10101	10200	$498.00	$12.00 per 100 Cu/Ft
10201	10300	$510.00	
10301	10400	$522.00	
10401	10500	$534.00	
10501	10600	$546.00	
10601	10700	$558.00	
10701	10800	$570.00	
10801	10900	$582.00	
10901	11000	$594.00	
11001	11100	$608.00	11001-12000 Cu/Ft
11101	11200	$622.00	$14.00 per 100 Cu/Ft
11201	11300	$636.00	
11301	11400	$650.00	
11401	11500	$664.00	
11501	11600	$678.00	
11601	11700	$692.00	
11701	11800	$706.00	
11801	11900	$720.00	
11901	12000	$734.00	
12001	12100	$750.00	12001-13000 Cu/Ft
12101	12200	$766.00	$16.00 per 100 Cu/Ft
12201	12300	$782.00	
12301	12400	$798.00	
12401	12500	$814.00	
12501	12600	$830.00	
12601	12700	$846.00	
12701	12800	$862.00	
12801	12900	$878.00	
12901	13000	$894.00	
13001	13100	$912.00	13001-14000 Cu/Ft
13101	13200	$930.00	$18.00 per 100 Cu/Ft
13201	13300	$948.00	
13301	13400	$966.00	
13401	13500	$984.00	
13501	13600	$1,002.00	
13601	13700	$1,020.00	
13701	13800	$1,038.00	
13801	13900	$1,056.00	
13901	14000	$1,074.00	
14001	14100	$1,094.00	14001 & Above Cu/Ft
14101	14200	$1,114.00	$20.00 per 100 Cu/Ft
14201	14300	$1,134.00	
14301	14400	$1,154.00	
14401	14500	$1,174.00	
14501	14600	$1,194.00	
14601	14700	$1,214.00	
14701	14800	$1,234.00	
14801	14900	$1,254.00	
14901	15000	$1,274.00	
15001	15100	$1,294.00	
15101	15200	$1,314.00	
15201	15300	$1,334.00	
15301	15400	$1,354.00	
15401	15500	$1,374.00	
15501	15600	$1,394.00	
15601	15700	$1,414.00	
15701	15800	$1,434.00	
15801	15900	$1,454.00	
15901	16000	$1,474.00	

COLONIAL PINE HILLS SANITARY DISTRICT

FINANCIAL STATEMENTS AND INDEPENDENT AUDITOR'S REPORT
DECEMBER 31, 2013 AND 2012

Ketel Thorstenson, LLP
Certified Public Accountants/Business & Personal Consultants

810 Quincy Street • Rapid City, SD 57701 • www.ktllp.com

Ketel Thorstenson, LLP
Certified Public Accountants/Business & Personal Consultants

810 Quincy Street
P.O. Box 3140, Rapid City, South Dakota 57709
Telephone (605) 342-5630 • e-mail: ktllp@ktllp.com

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
Colonial Pine Hills Sanitary District
Rapid City, South Dakota

Report on the Financial Statements

We have audited the accompanying financial statements of **COLONIAL PINE HILLS SANITARY DISTRICT** (the District), which comprise the balance sheets as of December 31, 2013 and 2012, and the related statements of revenues, expenses, and changes in net position 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 audits. 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 audits 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 opinion.

Opinion
In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of **COLONIAL PINE HILLS SANITARY DISTRICT** as of December 31, 2013 and 2012, and the changes in its net position and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Report on Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 through 5 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We 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 information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated July 15, 2014 on our consideration of the District'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 the District's internal control over financial reporting and compliance.

Ketel Thorstenson, LLP

KETEL THORSTENSON, LLP
Certified Public Accountants

July 15, 2014

COLONIAL PINE HILLS SANITARY DISTRICT

MANAGEMENT'S DISCUSSION AND ANALYSIS
DECEMBER 31, 2013 AND 2012

This section of Colonial Pine Hills Sanitary District's (the District) annual financial report presents our discussion and analysis of the District's financial performance during the fiscal years ended on December 31, 2013 and 2012. Please read it in conjunction with the District's financial statements, which follow this section.

FINANCIAL HIGHLIGHTS

- The District's net position increased in 2013 by $117,999 over 2012 after increasing by $118,788 from 2011. The increase in both years was primarily due to property tax revenue and continued paydown of long term debt. Current assets increased $142,464, or 41% percent from 2012 to 2013 as operating expenses decreased $23,534 for the same period.
- Operating revenue decreased by $36,756 from 2012 to 2013 and increased $47,139 from 2011 to 2012. The decrease for 2013 was, in part, due to decreased water sales because of cool, wet weather. The increase for 2012 was due primarily to hot, dry weather. Variations in water sales is directly proportional to the type of weather; it its dry we sell more water, if wet we sell less. Most other revenue is constant.

OVERVIEW OF THE FINANCIAL STATEMENTS

This annual report consists of two parts – management's discussion and analysis (this section) and the basic financial statements, including related notes. The basic financial statements offer short- and long-term financial information about the District's activities.

The financial statements also include notes that explain some of the information in the financial statements and provide more detailed data.

The District operates similar to a private business. The required financial statements include balance sheets, statements of revenue, expenses, and changes in net position, and the statements of cash flows. The District applies the accrual basis of accounting and an economic resources measurement focus. Inflows and outflows include all revenues and expenses during the year, regardless of when cash is received or paid. (The Financial Analysis section of the management's discussion and analysis explains the structure and contents of the statements.)

FINANCIAL ANALYSIS OF THE DISTRICT AS A WHOLE

Balance Sheet
The District's net position changed as follows:

	2013	2012	2011
Current Assets	$ 489,961	$ 347,497	$ 180,385
Capital Assets	2,570,818	2,657,832	2,767,323
Total Assets	$ 3,060,779	$ 3,005,329	$ 2,947,708
Long-Term Debt Outstanding	$ 1,015,306	$ 1,076,422	$ 1,135,586
Other Liabilities	49,324	50,757	46,750
Total Liabilities	$ 1,064,630	$ 1,127,179	$ 1,182,336
Net Position:			
Net Investment in Capital Assets	$ 1,555,512	$ 1,581,410	$ 1,631,737
Unrestricted	440,637	296,740	133,635
Total Net Position	$ 1,996,149	$ 1,878,150	$ 1,765,372
Beginning Net Position As Previously Stated	$ 1,878,150	$ 1,765,372	$ 1,839,744
Prior Period Adjustment (Note 5)	-	(6,010)	-
Change in Net Position	117,999	118,788	(74,372)
Percentage of Change in Net Position	6.28%	6.73%	-4.04%

COLONIAL PINE HILLS SANITARY DISTRICT

MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)
DECEMBER 31, 2013 AND 2012

FINANCIAL ANALYSIS OF THE DISTRICT AS A WHOLE (CONTINUED)

The balance sheet reports all financial and capital resources. The statement presents the assets and liabilities in order of relative liquidity. The liabilities with maturities greater than one year are reported in two components – the amount due within one year and the amount due in more than one year. The long-term liabilities of the District have been reported in this manner on the Balance Sheet. The difference between the District's assets and liabilities is its net position.

Statement of Revenues, Expenses, and Changes in Net Position

	2013	2012	2011
Operating Revenues	$ 337,446	$ 374,202	$ 327,063
Non-Operating Revenue	120,893	110,412	1,341
Total Revenue	458,339	484,614	328,404
Operating Expenses	(306,928)	(330,462)	(363,758)
Non-Operating Expense	(33,412)	(35,364)	(39,018)
Total Expenses	(340,340)	(365,826)	(402,776)
Change in Net Position	$ 117,999	$ 118,788	$ (74,372)
Net Position -- End of Year As Previously Stated	$ 1,996,149	$ 1,884,160	$ 1,765,372
Prior Period Adjustment (Note 5)	-	(6,010)	-
Net Position -- End of Year	$ 1,996,149	$ 1,878,150	$ 1,765,372

Operating revenue from 2012 to 2013 decreased $36,756 and increased $47,139 from 2011 to 2012. The decrease for 2013 was, in part, due to decreased water sales because of cool, wet weather. The increase for 2012 was due primarily to hot, dry weather. Variations in water sales is directly proportional to the type of weather; if it's dry we sell more water, if wet we sell less. Most other revenue is constant. Operating expenses decreased $23,534 from 2012 to 2013 and decreased $33,296 from 2011 to 2012 due primarily to a reduction in maintenance expenses. The District experienced fewer repairs for faulty equipment, leaks, etc. in both years, although there was an increase in payroll expenses in 2012 with the hiring of an administrative assistant, increased electrical and chemical expenses but a decrease in professional fees since we did not perform an audit in 2013.

The Statement of Revenues, Expenses, and Changes in Net Position presents the revenues earned and expenses incurred during the year. Activities are reported as either operating or non-operating. The utilization of capital assets is reflected in the financial statements as depreciation, which amortizes the cost of an asset over its expected useful life.

CAPITAL ASSET ADMINISTRATION

During 2012-2013, the District made several capital improvements. All together capital investments totaled $67,455 for the period.

	2013	2012	2011
Capital Assets Being Depreciated			
Buildings	$ 49,356	$ 49,356	$ 49,356
Machinery and Equipment	175,733	166,179	159,183
Well Systems	3,338,443	3,338,443	3,338,443
	3,563,532	3,553,978	3,546,982
Less Accumulated Depreciation	1,208,798	1,077,616	944,838
Net Capital Assets Being Depreciated	$ 2,354,734	$ 2,476,362	$ 2,602,144

COLONIAL PINE HILLS SANITARY DISTRICT

MANAGEMENT'S DISCUSSION AND ANALYSIS (CONCLUDED)
DECEMBER 31, 2013 AND 2012

CAPITAL ASSET ADMINISTRATION (CONTINUED)

Capital Assets Not Being Depreciated			
Land	**$ 111,982**	$ 111,982	$ 111,982
Construction in Progress	**104,102**	69,488	53,197
Total Capital Assets Not Being Depreciated	**$ 216,084**	$ 181,470	$ 165,179

The 2012-2013 major capital asset additions included:

- Engineering for a new filtration system

Fiscal years 2010 and 2011 laid the framework for a new filtration system at the Nonanna well. Engineering and other miscellaneous costs were incurred for the project. Funding will include a $120,000 property tax assessment per year for 10 years and a $705,000 State Revolving Loan, which was obtained during 2012. The total estimated cost of completion is approximately $1,000,000. The District currently plans on starting construction on this project in the summer of 2014.

LONG-TERM DEBT

During 2013 and 2012, the District continued making loan payments on State Revolving Fund loans that had been obtained in prior years for various construction projects. The following is a summary of the changes in long-term debt:

Balance -- December 31, 2011	$ 1,135,586
Principal Repayments	(59,164)
Balance -- December 31, 2012	1,076,422
Principal Repayments	(61,116)
Balance -- December 31, 2013	**$ 1,015,306**

ECONOMIC FACTORS AND NEXT YEAR'S BUDGETS AND RATES

The District's current economic position is good. Cash assets include **$237,967** available for operations and debt reduction. Another **$220,000** at December 31, 2013, is set aside by the board for the Croyle II/Nonnana Wells projects. This project funding is augmented by a State Revolving Fund loan and future property tax assessment receipts. Repayment for this new debt will be made with property tax receipts. Current debt will still be repaid using water sales receipts. Additionally, we have cash assets on hand that can be used in an emergency situation. Our operating expenses are paid using water sale and fee revenue.

Although our Long Range Strategic Plan contains several projects that will improve water quality, pressure, and water quantity, as well as reduce system maintenance, all of those are pending the completion of the current project to filter the Nonanna Well water within a micro-filtration water treatment plant located within the Croyle II well house. Once this project is on-line we will begin to collect data as to its operational cost; chemicals, electrical, personnel, etc. so we can predict these costs and incorporate them into our long range plans. Once this is completed we will once again begin to prioritize other projects as funds become available.

CONTACTING THE DISTRICT'S FINANCIAL MANAGEMENT

This financial report is designed to provide our citizens, taxpayers, customers, investors and creditors with a general overview of the District's finances and to demonstrate the District's accountability for the money it receives. If you have questions about this report or need additional information, contact the Colonial Pine Hills Sanitary District, 8251 Dunsmore Road, Rapid City, SD 57702.

COLONIAL PINE HILLS SANITARY DISTRICT

BALANCE SHEETS
DECEMBER 31, 2013 AND 2012

ASSETS	2013	2012
Current Assets		
Cash and Cash Equivalents	$ 457,967	$ 318,029
Accounts Receivable and Unbilled Receivables	30,347	27,821
Well Supplies	1,647	1,647
Total Current Assets	489,961	347,497
Capital Assets Being Depreciated (Note 3)		
Buildings	49,356	49,356
Machinery and Equipment	175,733	166,179
Well Systems	3,338,443	3,338,443
	3,563,532	3,553,978
Less Accumulated Depreciation	1,208,798	1,077,616
Net Capital Assets Being Depreciated	2,354,734	2,476,362
Capital Assets Not Being Depreciated (Note 3)		
Land	111,982	111,982
Construction in Progress	104,102	69,488
Total Capital Assets Not Being Depreciated	216,084	181,470
TOTAL ASSETS	$ 3,060,779	$ 3,005,329
LIABILITIES AND NET POSITION		
Current Liabilities		
Current Maturities of Long-Term Debt (Note 4)	$ 62,839	$ 60,826
Accounts Payable	9,875	11,901
Accrued Expenses	5,700	5,197
Meter Deposits	33,749	33,659
Total Current Liabilities	112,163	111,583
Long-Term Debt, Net of Current Maturities (Note 4)	952,467	1,015,596
Commitment (Note 4)		
Net Investment in Capital Assets	1,555,512	1,581,410
Unrestricted	440,637	296,740
	1,996,149	1,878,150
TOTAL LIABILITIES AND NET POSITION	$ 3,060,779	$ 3,005,329

The accompanying notes are an integral part of these statements.

COLONIAL PINE HILLS SANITARY DISTRICT

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

	2013	2012
Revenue		
Water Sales (Note 4)	$ 319,301	$ 353,484
Septic Sales	14,852	15,030
Other Income	3,293	5,688
Total Revenue	337,446	374,202
Operating Expenses		
Depreciation	131,182	132,778
Salaries	67,801	56,391
Electric Charges	39,831	37,703
Repairs and Maintenance	11,439	18,686
Chemicals	9,523	8,560
Office Expenses	8,269	8,813
Insurance	7,785	6,454
Telephone	7,753	7,510
Payroll Taxes	5,413	4,321
Tools and Equipment	4,822	2,592
Professional Fees	4,161	31,245
Trustee Fees	3,100	3,180
Travel and Transportation	2,090	2,100
Printing and Publications	1,647	2,786
Water Testing	1,188	5,719
Dues and Subscriptions	730	730
Miscellaneous	194	894
Total Operating Expenses	306,928	330,462
Operating Income	30,518	43,740
Non-Operating Revenue (Expense)		
Property Taxes (Note 6)	119,706	109,416
Interest Income	1,187	996
Interest Expense	(33,412)	(35,364)
	87,481	75,048
Change in Net Position	117,999	118,788
Net Position -- Beginning of Year	1,878,150	1,765,372
Net Position -- End of Year, As Previously Stated	1,996,149	1,884,160
Prior Period Adjustment (Note 5)	-	(6,010)
Net Position -- End of Year	$ 1,996,149	$ 1,878,150

The accompanying notes are an integral part of these statements.

COLONIAL PINE HILLS SANITARY DISTRICT

STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

	2013	2012
Cash Flows From Operating Activities		
Receipts from Customers	$ 335,010	$ 373,494
Payments to Suppliers	(107,286)	(142,351)
Payments to Employees	(67,801)	(56,391)
Net Cash Flows Provided by Operating Activities	159,923	174,752
Cash Flows Provided by Noncapital Financing Activities		
Property Taxes	119,706	109,416
Cash Flows From Capital and Related Financing Activities		
Purchases of Capital Assets	(46,350)	(19,472)
Repayments on Long-Term Debt	(61,116)	(59,164)
Interest Expense	(33,412)	(35,364)
Net Cash Flows Used in Capital and Related Financing Activities	(140,878)	(114,000)
Cash Flows From Investing Activities		
Interest Received	1,187	996
Net Increase in Cash and Cash Equivalents	139,938	171,164
Cash and Cash Equivalents -- Beginning of Year	318,029	146,865
Cash and Cash Equivalents -- End of Year	$ 457,967	$ 318,029
Reconciliation of Operating Income to Net Cash Flows Provided by Operating Activities		
Operating Income	$ 30,518	$ 43,740
Adjustments to Reconcile Operating Income to Net Cash Flows Provided by Operating Activities:		
Depreciation	131,182	132,778
Changes to Working Capital Increasing (Decreasing) Cash:		
Accounts Receivable and Unbilled Receivables	(2,526)	(1,958)
Accounts Payable	156	(2,111)
Accrued Expenses	503	1,053
Meter Deposits	90	1,250
Net Cash Flows Provided by Operating Activities	$ 159,923	$ 174,752
Supplemental Disclosures of Non Cash Activities		
Capital Asset Purchases Included in Accounts Payable	$ 4,726	$ 6,908

The accompanying notes are an integral part of these statements.

COLONIAL PINE HILLS SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2013 AND 2012

(1) Nature of Activities and Summary of Significant Accounting Policies

Operations

Colonial Pine Hills Sanitary District (the District) provides water to the residents of the Countryside South (CSS) and Whispering Pines (WP) subdivisions in Rapid City, South Dakota. The District collects monthly water payments and maintains the water systems. The District also charges a monthly septic administration fee for maintenance of the sewer system.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts and disclosures reported in the financial statements. Actual results could differ from those estimates.

Method of Accounting

The District uses the accrual method 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). The accounting policies of the District conform to generally accepted accounting principles applicable to enterprise funds of a government entity. In the Statements of Revenues, Expenses and Changes in Net Position, revenue 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, non-capital financing activities, or investing activities are reported as components of operating revenues or expenses.

Capital Assets

Capital assets are stated at cost. Donated property and equipment (Countryside South Water System) is stated at the estimated fair market value at the date of the donation. The District capitalizes assets purchased over $500 and expenses all others. Depreciation expense is computed using the straight-line method over the following estimated useful lives:

Buildings	20-28 Years
Machinery and Equipment	5-15 Years
Well Systems	8-75 Years

Federal Income Tax

Under South Dakota Codified Law, the District is considered to be a sanitary district form of local government, and therefore is not obligated to pay federal income tax.

Cash and Cash Equivalents

The District considers all highly liquid debt instruments with original maturities of three months or less to be cash equivalents. As of December 31, 2013 and 2012, the District's cash and cash equivalents consisted only of checking, savings, certificates of deposit and money market accounts.

Deposits and Investments

All of the District's accounts are insured or collateralized in the District's name. The District does not have an investment policy that would limit credit risk, custodial credit risk, and interest rate risk. Investments consist of certificates of deposit and are classified as cash and cash equivalents on the balance sheet. Various restrictions on deposits and investments are imposed by statutes. These restrictions are summarized below.

COLONIAL PINE HILLS SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2013 AND 2012

(1) Nature of Activities and Summary of Significant Accounting Policies (Continued)

Deposits and Investments (Continued)

Deposits - The District's deposits are made in qualified public depositories as defined by SDCL 4-6A-1, 13-16-15, 13-16-15.1 and 13-16-18.1. 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 District 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) 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 in (b) above. 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.

Accounts Receivable

Accounts receivable are recorded at the time revenue is earned and are billed monthly. No interest is accrued on accounts receivable. Receivables older than 30 days are considered delinquent. Management considers all receivables to be fully collectible. Accordingly, no allowance for doubtful accounts is recorded at December 31, 2013 or 2012.

Application of Net Position

It is the District's policy to first use restricted net position, prior to the use of unrestricted net position, when an expense is incurred for purposes for which both restricted and unrestricted net position are available.

Well Supplies

Well supplies consist of sleeves, pipe, extensions, and wire. The well supplies are stated at the lower of cost or market on the first-in, first out basis.

(2) Risk Management

The District 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. The District managed its risks by purchasing from a commercial insurance carrier liability and property insurance for risks related to torts; theft, damage, or destruction of property; and errors and omissions of public officials, as well as liability insurance for workmen's compensation. The District provides coverage for unemployment benefits by paying into the Unemployment Compensation Fund established by state law and managed by the state of South Dakota.

COLONIAL PINE HILLS SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2013 AND 2012

(3) Changes in Capital Assets

Changes in capital assets were as follows during the year ended December 31, 2012:

	Balance December 31, 2011	Additions	Disposals	Balance December 31, 2012
Capital Assets Being Depreciated				
Buildings	$ 49,356	$ -	$ -	$ 49,356
Machinery and Equipment	159,183	6,996	-	166,179
Well Systems	3,338,443	-	-	3,338,443
	3,546,982	6,996	-	3,553,978
Less Accumulated Depreciation	944,838	132,778	-	1,077,616
Net Capital Assets Being Depreciated	$ 2,602,144	$ (125,782)	$ -	$ 2,476,362
Capital Assets Not Being Depreciated				
Land	$ 111,982	$ -	$ -	$ 111,982
Construction in Progress	53,197	16,291	-	69,488
Total Capital Assets Not Being Depreciated	$ 165,179	$ 16,291	$ -	$ 181,470

Changes in capital assets were as follows during the year ended December 31, 2013:

	Balance December 31, 2012	Additions	Disposals	Balance December 31, 2013
Capital Assets Being Depreciated				
Buildings	$ 49,356	$ -	$ -	$ 49,356
Machinery and Equipment	166,179	9,554	-	175,733
Well Systems	3,338,443	-	-	3,338,443
	3,553,978	9,554	-	3,563,532
Less Accumulated Depreciation	1,077,616	131,182	-	1,208,798
Net Capital Assets Being Depreciated	**$ 2,476,362**	**$ (121,628)**	**$ -**	**$ 2,354,734**
Capital Assets Not Being Depreciated				
Land	$ 111,982	$ -	$ -	$ 111,982
Construction in Progress	69,488	34,614	-	104,102
Total Capital Assets Not Being Depreciated	**$ 181,470**	**$ 34,614**	**$ -**	**$ 216,084**

At December 31, 2013 and 2012, construction in progress includes preliminary costs for equipment and engineering fees related to a new filtration system. The estimated total cost of the project is approximately $1,000,000. No work was done on the project in 2013 or 2012, other than engineering costs. Management plans on completing the project in the future using SRF funds and cash from property tax assessments.

COLONIAL PINE HILLS SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2013 AND 2012

(4) Long-Term Debt

The following is a summary of the changes in long term debt:

Balance -- December 31, 2011	$ 1,135,586
Principal Repayments	(59,164)
Balance -- December 31, 2012	1,076,422
Principal Repayments	(61,116)
Balance -- December 31, 2013	$ **1,015,306**

Long-term debt consists of the following at December 31:

	2013	2012
State Revolving Fund Loan, due in quarterly installments of $11,071 including interest accruing at 3.5 percent, maturing in 2022, secured by a pledge of net revenue.	$ **340,615**	$ 372,281
State Revolving Fund Loan, due in quarterly installments of $12,561 including interest accruing at 3.0 percent, maturing in 2031, secured by a pledge of net revenue.	**674,691**	704,141
	1,015,306	1,076,422
Less: Current Portion	**62,839**	60,826
	$ **952,467**	$ 1,015,596

The annual requirements to amortize all debt outstanding are as follows:

	Principal	Interest
2014	$ 62,839	$ 31,690
2015	64,919	29,610
2016	67,068	27,460
2017	69,289	25,239
2018	71,584	22,944
2019-2023	350,211	78,046
2024-2028	215,546	35,681
2029-2033	113,850	5,109
	$ **1,015,306**	$ **255,779**

The District has pledged future revenues associated with its debt agreements. The debt funded capital projects and improvements. The current principal balance plus interest at the stated applicable rate over the life of the debt represents the amount of future revenue pledged. Pledged revenues associated with the debt issue have been pledged through the maturity dates listed above. The 2013 principal and interest on the debt was **$94,528** while the pledged revenue totaled **$319,301.** The debt agreements state net revenues available for debt service must be equal to or greater than 110 percent of its systems debt service. At December 31, 2013 and 2012, the District is in compliance with this debt covenant.

An election to authorize General Obligation Bonds was held on May 29, 2012 and passed by an 84 percent majority. This election authorized the District to proceed with its State Revolving Fund loan application for $705,000 that was subsequently approved by the State Water Board on June 28, 2012. The loan will be used to construct a micro-filtration treatment plant, and property tax assessment will be used to repay the loan.

COLONIAL PINE HILLS SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONCLUDED)
DECEMBER 31, 2013 AND 2012

(5) Prior Period Adjustment

In 2012, the District implemented a new accounting standard issued by the Governmental Accounting Standards Board, GASB 65, which requires bond issuance costs to be recognized as an expense in the period incurred. The implementation of this standard resulted in a prior period adjustment to write-off bond issuance costs previously capitalized as deferred charges totaling $6,556 with accumulated amortization of $546 at December 31, 2011. This result was a net decrease to net position of $6,010.

(6) Property Tax

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 are payable in two installments on or before April 30 and October 31 of the following year. The County bills and collects the District's taxes and remits them to the District. State statute allows the tax rates to be raised by special election of the voters.

As required by Governmental Accounting Standards Board (GASB) Statement No. 34, property taxes are recorded as receivables in the year that the enforceable legal claim to property taxes arises or when the resources are received, whichever occurs first. Property tax revenue is recognized in the year for which the taxes are levied. Accordingly, taxes levied in October 2012 and October 2013, have not been recorded as a receivable or revenue in the accompanying Balance Sheets and Statements of Revenue, Expenses and Changes in Net Position as the legal claim to the assets and resources were not received until the 2013 and 2014 fiscal years, respectively.

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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*

To the Board of Directors
Colonial Pine Hills Sanitary District
Rapid City, South Dakota

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to the financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of **Colonial Pine Hills Sanitary District** (the District) as of and for the years ended December 31, 2013 and 2012, and the related notes to the financial statements, which collectively comprise the District's basic financial statements, and have issued our report thereon dated July 15, 2014.

Internal Control over Financial Reporting

In planning and performing our audit, we considered the District'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 the District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District'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 Auditor's Comments, we identified certain deficiencies in internal control that we consider to be material weaknesses and significant deficiencies.

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 District'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, Corrective Action Plans and Prior Year Findings as #1, #2, and #3 to be material weaknesses.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the District'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 resulted in no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

District's Response to Findings

The District's response to the findings identified in our audit is described in the accompanying Schedule of Findings, Corrective Action Plans, and Prior Year Findings. The District's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on the response.

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 District'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 District's internal control and compliance. Accordingly, this communication is not suitable for any other purpose. As required by SD Codified Law 4-11-11, this report is a matter of public record and its distribution is not limited.

Ketel Thorstenson, LLP

KETEL THORSTENSON, LLP
Certified Public Accountants

July 15, 2014

COLONIAL PINE HILLS SANITARY DISTRICT

SCHEDULE OF FINDINGS, CORRECTIVE ACTION PLANS, AND PRIOR YEAR FINDINGS (CONTINUED)
DECEMBER 31, 2013 AND 2012

Material Weaknesses (Continued):

3. **Lack of Segregation of Duties**

Condition/Cause: The District has a general lack of segregation of duties due to the limited number of staff.

Criteria and Effect: As a result of the inadequate segregation of duties of the District, this deficiency could result in a material misstatement to the financial statements would not be prevented or detected by the District's management.

Recommendation: This is not an uncommon problem in an organization of this size. A proper system of segregation of duties and functions assures adequate internal control over the safeguarding of assets and the reliability of financial records and reporting. Without proper segregation of duties, the likelihood of detection is reduced. We recommend the board designate an individual, the President or the Treasurer, to review the general ledger detail and bank statements, to include the cancelled check images, on a monthly basis. We recommend the District strive for as much segregation of duties as possible with the limited number of personnel.

Corrective Action Plan: At this time, the District is aware of the segregation of duties limitations and will evaluate internal controls from time to time as changes in personnel or procedures occur. The District Manager is responsible for the corrective action plan for this finding.

Prior Year Audit Findings:

All of the above findings are repeated from the December 31, 2011 and 2010, Schedule of Significant Deficiencies. Due to feasibility, these deficiencies have not been corrected.

	2014 Proposed	2013 Actual
Revenue		
Total Revenue	**$450,498.45**	**$455,631.12**
Water Sales	$310,805.45	$316,832.39
Property Tax Receipts	$121,000.00	$119,705.87
Late Fees	$3,600.00	$3,270.00
Septic Fees	$1,385.40	$2,774.56
LT Improv Fund	$13,167.60	$12,077.01
Hook-up Fees	$0.00	$23.20
Returned Check Fees	$0.00	$0.00
Interest on General Investment	$540.00	$948.09
EXPENSES		
Chemical Systems	**$10,640.78**	**$9,466.72**
Chlorine Chemical	$4,221.25	$3,827.25
Corrosion Chemical	$819.40	$819.40
Fluoride Chemical	$1,713.20	$1,395.64
Other Chemicals (Bleach, etc.)	$441.57	$41.57
Environmental Fees	$667.00	$654.00
Freight	$290.50	$241.00
Testing Equipment	$732.21	$732.21
Repair	$1,755.65	$1,755.65
Education & Training	**$730.00**	**$730.00**
Training Costs	$0.00	$0.00
Dues, Subscriptions & Memb.	$730.00	$730.00
Electric Charges:	**$40,600.00**	**$38,875.16**
Storage Tank	$0.00	$243.20
Clarkson Well	$0.00	$1,130.06
Conifer Well	$0.00	$12,209.04
CSS Main Well	$0.00	$0.00
Croyle Well	$0.00	$0.00
WP Main Well	$0.00	$1,308.87
Naylor Well	$0.00	$0.00
Nonanna Well	$0.00	$1,816.38
Croyle II Well	$40,600.00	$22,167.61
Insurance	**$7,838.50**	**$7,785.00**
Bond	$107.50	$0.00
Commercial Auto	$616.00	$616.00
Director Liability	$881.00	$881.00
General Liability	$1,626.00	$1,626.00
Property Insurance	$3,101.00	$3,101.00
Workman Comp	$1,507.00	$1,561.00

SRF I Loan Repayment	**$44,283.20**	**$44,283.20**
Interest Expense	$11,494.27	$12,617.22
Principle Reduction	$32,788.93	$31,665.98
SRF II Loan Repayment	**$50,245.20**	**$50,245.20**
Interest Expense	$20,013.60	$20,794.99
Principle Reduction	$30,231.60	$29,450.21
SRF III Loan Repayment	**$23,451.46**	**$0.00**
Interest Expense	$10,522.96	$0.00
Principle Reduction	$12,928.50	$0.00
Laboratory Testing	**$3,330.00**	**$1,856.30**
Water Testing	$3,330.00	$1,856.30
Maintenance & Repairs	**$48,424.68**	**$10,428.31**
Storage Tank	$0.00	$0.00
Telemetry System	$0.00	$1,401.15
Clarkson Well	$0.00	$187.20
Conifer Well	$0.00	$0.00
CSS Main Well	$0.00	$0.00
Croyle Well	$0.00	$0.00
Croyle II Well	$0.00	$304.62
Naylor Well	$0.00	$0.00
Nonanna Well	$0.00	$0.00
WP Main Well	$0.00	$127.65
Distribution System	$0.00	$210.12
Grounds	$48,000.00	$7,780.27
Garbage Services	$424.68	$417.30
Materials & Supplies:	**$8,580.00**	**$8,423.14**
Office Equipment	$600.00	$0.00
Office Supplies	$4,200.00	$5,281.80
Postage	$3,780.00	$3,141.34
Miscellaneous:	**$348.00**	**$194.96**
Bad Debt	$0.00	$0.00
Public Relations	$180.00	$16.70
Bank Service Charges	$168.00	$178.26

Payroll Expenses:	**$6,729.96**	**$5,374.15**
Federal Unemployment Tax	$0.00	$0.00
State Unemployment Tax	$800.04	$257.72
FICA - Manager/Clerk	$1,932.72	$1,846.69
FICA - Admin Asst	$209.28	$84.30
FICA - Operator	$774.96	$669.60
FICA - Operator Assistant	$1,721.64	$1,385.40
FICA - Meter Reader	$167.40	$160.65
Medicare - Manager/Clerk	$452.04	$431.89
Medicare - Admin Asst	$48.96	$19.72
Medicare - Operator	$181.20	$156.60
Medicare - Operator Assistant	$402.60	$324.01
Medicare - Meter Reader	$39.12	$37.57
Printing & Publications	**$2,220.00**	**$1,646.74**
Advertising-Legal Notices	$1,500.00	$1,205.12
Printing Costs	$720.00	$441.62
Professional Fees	**$18,400.00**	**$4,034.90**
Accounting Fees	$0.00	$0.00
Audit Fees	$13,000.00	$0.00
Contract Operator	$0.00	$0.00
Engineering Fees	$2,400.00	$766.40
Legal Fees	$3,000.00	$3,268.50
Salaries:	**$77,517.12**	**$67,361.47**
Manager/Clerk	$31,173.24	$30,265.32
Admin Asst	$3,375.84	$1,359.75
Operator	$12,500.04	$10,800.00
Operator Assistant	$27,768.00	$22,345.24
Meter Reader	$2,700.00	$2,591.16
Telephone:	**$7,500.00**	**$7,943.24**
Business Phone	$4,140.00	$4,117.12
Cell Phone	$960.00	$1,275.10
Internet Connection	$0.00	$220.46
Long Distance	$0.00	$0.00
SD One Call	$300.00	$234.15
Telemetry	$2,100.00	$2,096.41
Tools & Equipment:	**$2,640.00**	**$2,635.46**
Tools & Equipment	$420.00	$434.54
Equipment Repair, Gasoline	$2,220.00	$2,200.92
Rental Equipment	$0.00	$0.00
Transportation Expenses:	**$2,160.00**	**$2,405.51**
Mileage - Manager/Clerk	$1,080.00	$900.31
Mileage - Operator	$720.00	$611.55
Mileage - Operator Assistant	$0.00	$233.69
Vehicle Expense	$360.00	$659.96

Croyle/Nonanna Wells Filtration System and Raw Water Main

Colonial Pine Hills Sanitary District **7/22/2014**

Bid Tabulation Summary

Schedule	Description	Estimate	RCS Construction	Site Work Specialists	Highmark, Inc.
A	Croyle Filtration	$577,500	**$788,000.00**	No Bid	No Bid
B1	Pinewood Drive and Raw Water Force Main	$371,406	$733,448.22	**$437,666.00**	$541,613.50
B2	Schedule B2: Croyle Avenue 6" Raw Water Ma	$121,931	$215,108.47	**$144,227.00**	$198,104.25
C	Effluent Force Main	$56,142	$77,446.40	**$43,247.00**	$78,008.60

Nonanna/Croyle Filtration Cost Estimate

Item	Description	Engineer's Estimate Lump Sum Price
A1	Furnish Filtration Membrane Process Equipment on Skid.	$420,000
A2	Furnish Membranes for Treatment Skids.	$50,000
A3	Furnish Process Support Equipment.	$105,000
A4	Furnish Chemicals for 5-MG Treated Water.	$10,000
A5	Equipment Start-up and Training Services.	$30,000
A6	Installation and Labor required for Installation and Assembly of all Filtration Equipment, Pumps, Instruments, and Related Work.	$80,000
A7	Furnish and Install all Piping, Pipe Supports, Equipment Pads, Building Modifications and Related Work.	$100,000
	TOTAL CONSTRUCTION ESTIMATE	**$795,000**

Schedule B1: Pinewood Drive 8" Water Main and 20 Water Services

Includes 6" Raw Water Main from Nonanna Well to Croyle Well along Pinewood Dr.

Item No.	Item Description	Estimated Quantity	Units	Engineer's Estimate		RCS Construction		SiteWork Specialists		Highmark, Inc.	
				Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total
1.	Mobilization	1	LS	$ 25,000.00	$ 25,000.00	$ 66,588.70	$ 66,588.70	$ 2,500.00	$ 2,500.00	$ 22,650.00	$ 22,650.00
2.	Traffic Control	1	LS	$ 10,000.00	$ 10,000.00	$ 2,213.37	$ 2,213.37	$ 3,000.00	$ 3,000.00	$ 1,850.00	$ 1,850.00
3.	Incidental Work	1	LS	$ 10,000.00	$ 10,000.00	$ 29,179.38	$ 29,179.38	$ 18,000.00	$ 18,000.00	$ 19,550.00	$ 19,550.00
4.	Remove & Dispose Asphalt Concrete Pavement	578	SY	$ 7.00	$ 4,046.00	$ 2.71	$ 1,566.38	$ 4.00	$ 2,312.00	$ 25.00	$ 14,450.00
5.	10" PVC Water Main	5	LF	$ 40.00	$ 200.00	$ 53.29	$ 266.45	$ 50.00	$ 250.00	$ 65.00	$ 325.00
6.	8" PVC Water Main	2,800	LF	$ 35.00	$ 98,000.00	$ 45.96	$ 128,688.00	$ 34.00	$ 95,200.00	$ 39.75	$ 111,300.00
7.	6" PVC Water Main and Raw Water Main	3,000	LF	$ 16.00	$ 48,000.00	$ 32.67	$ 98,010.00	$ 31.00	$ 93,000.00	$ 35.65	$ 106,950.00
8.	3" Ductile Iron Pipe	10	LF	$ 16.00	$ 160.00	$ 834.52	$ 8,345.20	$ 140.00	$ 1,400.00	$ 100.00	$ 1,000.00
9.	8" Gate Valve w/Box	10	EA	$ 1,750.00	$ 17,500.00	$ 2,313.05	$ 23,130.50	$ 1,725.00	$ 17,250.00	$ 1,740.00	$ 17,400.00
10.	6" Gate Valve & Box	3	EA	$ 1,500.00	$ 4,500.00	$ 1,653.62	$ 4,960.86	$ 1,200.00	$ 3,600.00	$ 1,350.00	$ 4,050.00
11.	8" Bend	18	EA	$ 425.00	$ 7,650.00	$ 504.56	$ 9,082.08	$ 385.00	$ 6,930.00	$ 420.00	$ 7,560.00
12.	6" Bend	28	EA	$ 375.00	$ 10,500.00	$ 410.69	$ 11,499.32	$ 530.00	$ 14,840.00	$ 350.00	$ 9,800.00
13.	4" Bend	-	EA	$ 375.00	$ 0	$ 316.22	$ 0	$ 275.00	$ 0	$ 305.00	$ 0
14.	3" Bend	2	EA	$ 350.00	$ 700.00	$ 472.84	$ 945.68	$ 230.00	$ 460.00	$ 395.00	$ 790.00
15.	8" x 6" Tee	4	EA	$ 500.00	$ 2,000.00	$ 815.28	$ 3,261.12	$ 500.00	$ 2,000.00	$ 545.00	$ 2,180.00
16.	4"x4" Tee	-	EA	$ 500.00	$ 0	$ 511.98	$ 0	$ 350.00	$ 0	$ 375.00	$ 0
17.	6" x 4" Tee	2	EA	$ 500.00	$ 1,000.00	$ 647.05	$ 1,294.10	$ 415.00	$ 830.00	$ 475.00	$ 950.00
18.	8" x 8" Tee	1	EA	$ 525.00	$ 525.00	$ 891.19	$ 891.19	$ 550.00	$ 550.00	$ 600.00	$ 600.00
19.	10" x 10"x8" Tee	1	EA	$ 400.00	$ 400.00	$ 1,158.45	$ 1,158.45	$ 700.00	$ 700.00	$ 750.00	$ 750.00
20.	3"x6" Increaser	1	EA	$ 500.00	$ 500.00	$ 445.30	$ 445.30	$ 225.00	$ 225.00	$ 225.00	$ 225.00
21.	10" Std. Coupling	1	EA	$ 500.00	$ 500.00	$ 815.84	$ 815.84	$ 480.00	$ 480.00	$ 500.00	$ 500.00
22.	8" High Deflection Coupling	2	EA	$ 475.00	$ 950.00	$ 411.02	$ 822.04	$ 140.00	$ 280.00	$ 125.00	$ 250.00
23.	3" Transition Coupling	1	EA	$ 300.00	$ 300.00	$ 332.44	$ 332.44	$ 175.00	$ 175.00	$ 185.00	$ 185.00
24.	Air Release Manhole and Valve	2	EA	$ 2,000.00	$ 4,000.00	$ 3,411.08	$ 6,822.16	$ 2,740.00	$ 5,480.00	$ 2,560.00	$ 5,120.00
25.	Fire Hydrant w/Aux Valve & Lead	4	EA	$ 3,900.00	$ 15,600.00	$ 7,343.38	$ 29,373.52	$ 4,860.00	$ 19,440.00	$ 5,880.00	$ 23,520.00
26.	Connect to Existing Water Main	4	EA	$ 400.00	$ 1,600.00	$ 701.35	$ 2,805.40	$ 780.00	$ 3,120.00	$ 1,500.00	$ 6,000.00
27.	1" Water Service Piping	750	LF	$ 20.00	$ 15,000.00	$ 41.75	$ 31,312.50	$ 24.50	$ 18,375.00	$ 55.50	$ 41,625.00
28.	8"x1" Tapping Saddle and Corporation Stop	20	EA	$ 250.00	$ 5,000.00	$ 423.84	$ 8,476.80	$ 350.00	$ 7,000.00	$ 250.00	$ 5,000.00
29.	6"x1" Tapping Saddle and Corporation Stop	2	EA	$ 250.00	$ 500.00	$ 422.25	$ 844.50	$ 340.00	$ 680.00	$ 200.00	$ 400.00
30.	1" Curb Stop and Box	20	EA	$ 300.00	$ 6,000.00	$ 356.50	$ 7,130.00	$ 250.00	$ 5,000.00	$ 310.00	$ 6,200.00
31.	Reconnect Water Services	20	EA	$ 175.00	$ 3,500.00	$ 246.90	$ 4,938.00	$ 500.00	$ 10,000.00	$ 225.00	$ 4,500.00
32.	12" CMP	36	LF	$ 25.00	$ 900.00	$ 53.26	$ 1,917.36	$ 44.00	$ 1,584.00	$ 57.50	$ 2,070.00
33.	12" CMP Flared End Section	1	EA	$ 200.00	$ 200.00	$ 469.19	$ 469.19	$ 375.00	$ 375.00	$ 280.00	$ 280.00
34.	Type 2 Foundation Material	150	TON	$ 19.00	$ 2,850.00	$ 29.54	$ 4,431.00	$ 32.00	$ 4,800.00	$ 19.00	$ 2,850.00
35.	Rock Excavation	300	CY	$ 50.00	$ 15,000.00	$ 519.21	$ 155,763.00	$ 50.00	$ 15,000.00	$ 125.00	$ 37,500.00
36.	Limestone Base Course	450	TON	$ 20.00	$ 9,000.00	$ 27.84	$ 12,528.00	$ 25.00	$ 11,250.00	$ 25.00	$ 11,250.00
37.	Asphalt Concrete, Class G, Type I, 5"	185	TON	$ 110.00	$ 20,350.00	$ 202.58	$ 37,477.30	$ 155.00	$ 28,675.00	$ 152.00	$ 28,120.00
38.	Sawcut Asphalt Concrete Pavement	900	LF	$ 2.00	$ 1,800.00	$ 2.03	$ 1,827.00	$ 0.50	$ 450.00	$ 2.00	$ 1,800.00
39.	Remove and Reset Street Sign	5	EA	$ 150.00	$ 750.00	$ 112.54	$ 562.70	$ 90.00	$ 450.00	$ 100.00	$ 500.00
40.	Remove and Dispose Tree/Bush, 2" - 6" Ø	5	EA	$ 150.00	$ 750.00	$ 239.00	$ 1,195.00	$ 250.00	$ 1,250.00	$ 500.00	$ 2,500.00
41.	Remove and Dispose Tree, 8" - 24" Ø	4	EA	$ 500.00	$ 2,000.00	$ 768.33	$ 3,073.32	$ 550.00	$ 2,200.00	$ 750.00	$ 3,000.00
42.	Remove and Reset Chainlink Fence, 4' High	100	LF	$ 15.00	$ 1,500.00	$ 20.26	$ 2,026.00	$ 16.00	$ 1,600.00	$ 8.50	$ 850.00
43.	Remove and Reset Chainlink Fence, 6' High w/Mow Stri	80	LF	$ 15.00	$ 1,200.00	$ 52.98	$ 4,238.40	$ 22.00	$ 1,760.00	$ 12.00	$ 960.00
44.	Remove and Reset Mailbox	12	EA	$ 110.00	$ 1,320.00	$ 172.84	$ 2,074.08	$ 150.00	$ 1,800.00	$ 150.00	$ 1,800.00
45.	Erosion Control Wattle, 6" Ø	450	LF	$ 5.00	$ 2,250.00	$ 2.85	$ 1,282.50	$ 4.50	$ 2,025.00	$ 4.75	$ 2,137.50
46.	Seeding, Fertilizing, & Mulching	6,500	SY	$ 1.00	$ 6,500.00	$ 1.50	$ 9,750.00	$ 1.75	$ 11,375.00	$ 1.75	$ 11,375.00
47.	Class III Riprap	20	Tons	$ 50.00	$ 1,000.00	$ 52.83	$ 1,056.60	$ 85.00	$ 1,700.00	$ 42.00	$ 840.00
48.	Place Topsoil (2")	750	CY	$ 5.00	$ 3,750.00	$ 6.25	$ 4,687.50	$ 7.50	$ 5,625.00	$ 6.00	$ 4,500.00
49.	Furnish Topsoil (2")	750	CY	$ 12.00	$ 9,000.00	$ 30.35	$ 22,762.50	$ 21.50	$ 16,125.00	$ 25.00	$ 18,750.00
50.	Remove & Replace 6" Concrete Sidewalk	32	SF	$ 15.00	$ 480.00	$ 12.38	$ 396.16	$ 15.00	$ 480.00	$ 15.50	$ 496.00
	Totals				**$ 374,231.00**		**$ 752,716.89**		**$ 441,601.00**		**$ 547,258.50**
	Alternate Schedule No. 2 Deduct						$ 14,000.00		$ -		$ -
	Schedule B1 Total with Schedule No. 2						**$ 738,716.89**		**$ 441,601.00**		**$ 547,258.50**

Bid Tabulation Certification: Theodore J. Schultz Date: July 22, 2014

Colonial Pine Hills Sanitary District
Schedule C: Croyle Avenue amd Nonanna Wells Effluent Forcemain

May 7, 2014

Item No.	Item Description	Estimated Quantity	Units	Engineer's Estimate		RCS Construction		Site Work Specialists		Highmark Inc.	
				Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total
1.	Mobilization	1	LS	$ 2,000.00	$ 5,000.00	$ 3,191.84	$ 3,191.84	$ 2,000.00	$ 2,000.00	$ 11,000.00	$ 11,000.00
2.	Traffic Control	1	LS	$ 1,000.00	$ 2,500.00	$ 2,280.89	$ 2,280.89	$ 3,200.00	$ 3,200.00	$ 1,850.00	$ 1,850.00
3.	Incidental Work	1	LS	$ 1,000.00	$ 2,000.00	$ 18,263.17	$ 18,263.17	$ 7,500.00	$ 7,500.00	$ 7,700.00	$ 7,700.00
4.	Remove & Dispose Concrete Sidewalk	20	SF	$ 4.75	$ 95.00	$ 2.90	$ 58.00	$ 15.00	$ 300.00	$ 25.00	$ 500.00
5.	4" Certa-Lok Effluent Forcemain	526	LF	$ 35.00	$ 18,410.00	$ 40.90	$ 21,513.40	$ 17.50	$ 9,205.00	$ 50.85	$ 26,747.10
6.	4" x 45 Degree Bend	1	EA	$ 375.00	$ 375.00	$ 337.14	$ 337.14	$ 200.00	$ 200.00	$ 295.00	$ 295.00
7.	4" x 22.5 Degree Bend	2	EA	$ 375.00	$ 750.00	$ 334.00	$ 668.00	$ 200.00	$ 400.00	$ 295.00	$ 590.00
8.	4" x 11.25 Degree Bend	1	EA	$ 375.00	$ 375.00	$ 319.64	$ 319.64	$ 200.00	$ 200.00	$ 285.00	$ 285.00
9.	4" R.J Coupling	1	EA	$ 375.00	$ 375.00	$ 341.31	$ 341.31	$ 200.00	$ 200.00	$ 200.00	$ 200.00
10.	Connect to Existing Effluent Main	1	EA	$ 400.00	$ 400.00	$ 401.97	$ 401.97	$ 400.00	$ 400.00	$ 1,500.00	$ 1,500.00
11.	6" Core and Connect to Exiting Manhole	1	EA	$ 1,000.00	$ 1,000.00	$ 311.14	$ 311.14	$ 950.00	$ 950.00	$ 1,100.00	$ 1,100.00
12.	Install 8" Steel Casing, Bored and Jacked	80	LF	$ 250.00	$ 20,000.00	$ 302.03	$ 24,162.40	$ 160.00	$ 12,800.00	$ 250.00	$ 20,000.00
13.	Remove and Reset 24" RCP Flared End Section	1	EA	$ 250.00	$ 250.00	$ 137.28	$ 137.28	$ 350.00	$ 350.00	$ 400.00	$ 400.00
14.	Insatll 4" Concrete Sidewalk	20	SF	$ 8.00	$ 160.00	$ 11.23	$ 224.60	$ 25.00	$ 500.00	$ 12.00	$ 240.00
15.	Erosion Control Wattle, 6" Ø	100	LF	$ 5.00	$ 500.00	$ 2.85	$ 285.00	$ 4.50	$ 450.00	$ 4.75	$ 475.00
16.	Seeding, Fertilizing, & Mulching	678	SY	$ 2.00	$ 1,356.00	$ 2.25	$ 1,525.50	$ 2.00	$ 1,356.00	$ 1.75	$ 1,186.50
17.	Sodding and Fertilizing	112	SY	$ 8.00	$ 896.00	$ 12.01	$ 1,345.12	$ 3.00	$ 336.00	$ 7.50	$ 840.00
18.	Place Topsoil (2")	100	CY	$ 5.00	$ 500.00	$ 6.25	$ 625.00	$ 7.50	$ 750.00	$ 6.00	$ 600.00
19.	Furnish Topsoil (2")	100	CY	$ 12.00	$ 1,200.00	$ 30.35	$ 3,035.00	$ 21.50	$ 2,150.00	$ 25.00	$ 2,500.00
	Totals				**$ 56,142.00**		**$ 79,026.40**		**$ 43,247.00**		**$ 78,008.60**
	Alternate Schedule No. 2 Deduct						$ 1,580.00		$ -		$ -
							$ 77,446.40		**$ 43,247.00**		**$ 78,008.60**

Bid Tabulation Certification: Theodore J. Schultz Date: July 22, 2014

RECEIVED
DEC - 1 2014
Division of Financial
& Technical Assistance

Croyle/Nonanna Wells Filtration System and Raw Water Main

#14-087R

Colonial Pine Hills Sanitary District

Specifications and Bid Documents
for

Schedule A

Croyle/Nonanna Wells Filtration System

Schedule B1

Pinewood Drive Water Main and Raw Water Line

Schedule C

Effluent Force Main Line

Colonial Pine Hills Sanitary District
Pennington County, South Dakota

BOARD OF TRUSTEES
Bob Truman, President
Gerald Burdick, Vice President
Edward Mills
Bob Evans
Katie Peterson

OPERATOR
Mike Riker

MANAGER
Jim Martin

Engineer:

AE2S

1560 Concourse Drive
Rapid City, SD
57703

November 17, 2014

3

PROJECT DIRECTORY

Croyle/Nonanna Wells Filtration System and Raw Water Main

Colonial Pine Hills Sanitary District

Schedule A

Croyle/Nonanna Wells Filtration System

Schedule B1

Pinewood Drive Water Main and Raw Water Line

Schedule C

Effluent Force Main Line

OWNER:

Colonial Pine Hills Sanitary District
8251 Dunsmore Road
Rapid City, SD 57702-8950

Contact: Jim Martin, Manager
Telephone: (605) 348-3113 Fax: (605) 348-4253

PRINCIPAL ENGINEER:

Advanced Engineering and Environmental Services, Inc.
1560 Concourse Drive
Rapid City, SD 57703

Contact: Ted Schultz, P.E., Project Engineer
Telephone: (605) 341-7800 Fax (605) 341-7864

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Croyle/Nonanna Wells Filtration System and Raw Water Main

Colonial Pine Hills Sanitary District

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15000	Mechanical General Provisions
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APPENDICES

Appendix A	*Geotechnical Exploration Program, Proposed Colonial Pine Hills Sanitary District Well House Improvements, 7804 Croyle Avenue, Pennington County, South Dakota, AET No. 18-03227,* September 28, 2009, American Engineering Testing, Inc.
Appendix B	South Dakota Water Permit No. 2607 A-2
Appendix C	Existing Project Photographs

NOTICE FOR BIDS

Croyle/Nonanna Wells Filtration System and Raw Water Main

Colonial Pine Hills Sanitary District

Schedule A

Croyle/Nonanna Wells Filtration System

Schedule B1

Pinewood Drive Water Main and Raw Water Line

Schedule C

Effluent Force Main Line

Date: November 15, 2014

1. Sealed bids will be received by the Colonial Pine Hills Sanitary District, Pennington County, South Dakota, hereinafter referred to as the "Owner," for performing the work as described as follows: Croyle/Nonanna Wells Filtration System and Raw Water Main, Schedule A: Croyle/Nonanna Wells Filtration System, Schedule B1: Pinewood Drive Water Main and Raw Water Line and Schedule C: Effluent Force Main Line

as described more fully in the Plans and Specifications attached hereto, on or before 10:00 o'clock AM MDT, Tuesday, December 16, 2014 at the office of Advanced Engineering and Environmental Services, Inc., 1560 Concourse Drive, Rapid City, South Dakota, at which time said bids will be publicly opened and read.

2. All bids must be made on the blank form of proposal attached hereto. Upon request, in accordance with South Dakota Codified Law 5-18B-1, one copy of plans and specifications shall be furnished, without charge, to each contractor resident in South Dakota who intends, in good faith, to bid upon the project. Copies of the specifications and other proposed contract documents are on file at the office of Advanced Engineering and Environmental Services, Inc., 1560 Concourse Drive, Rapid City, South Dakota. A refundable deposit of $50 is required for all requests outside of the state of South Dakota.

3. Each bid must be accompanied by a certified check or bank draft payable to the order of the Colonial Pine Hills Sanitary District in an amount equal to five percent of the total bid. A bid bond in the amount equal to ten percent of the total bid will be accepted in lieu of a certified check or bank draft. Surety for bid bond must be authorized to do business in the State of South Dakota.

4. A bidder may withdraw any proposal submitted prior to the hour set for the closing of the bids provided the request is signed in a manner identical with the proposal being withdrawn.

5. Davis-Bacon and related acts provisions apply to this project. All provisions relative to those acts must be met.

6. Bidders on this work will be required to comply with the Presidents Executive Order numbers 11246 to ensure equal employment opportunity, 11518, and 11625.; and that the bids may be held for a period of not more than thirty days from the date of opening bids for the purpose of reviewing the bids, investigating the qualification of the bidders and completing financial arrangements prior to awarding the work.

7. Bidders on this work will be required to comply with Title 40 CFR 33 and Executive Order 12138. The goals and other requirements for Bidders and Contractors under this regulation which concerns utilization of Minority Business Enterprises (MBE) and Women's Business Enterprises (WBE) are

explained in the Specifications. The MBE goal for this project is 1% of the total dollar value of the job while the WBE goal is 4% of the total dollar value of the job.

8. During the performance of this contract, the bidder agrees as follows:

The Bidder will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Bidder will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Bidder shall comply with the requirements of 41CFR Part 60-1.4(b).

The Owner reserves the right to reject any or all bids or to waive informalities and to accept the bid or bids that are to the advantage of and in the best interests of the Colonial Pine Hills Sanitary District.

10. The owner will be responsible for payment in accordance with the terms of the contract when the work is completed.

All Work shall be performed in accordance with the Bidding Documents on file in the Office of Colonial Pine Hills Sanitary District. Complete digital project bidding documents are available at www.AE2S.com or www.questcdn.com. You may download the digital plan documents by inputting Quest project # 3606018 on the website's Project Search page. Please contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership subscription, downloading and working with this digital project information.

Colonial Pine Hills Sanitary District
(Owner)

Bob Truman, President

INSTRUCTIONS TO BIDDERS

Croyle/Nonanna Wells Filtration System and Raw Water Main
Colonial Pine Hills Sanitary District

Schedule A

Croyle/Nonanna Wells Filtration System

Schedule B1

Pinewood Drive Water Main and Raw Water Line

Schedule C

Effluent Force Main Line

SRF Project Number C462270-03

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ARTICLE 1 – DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the advertisement or invitation to bid may be obtained from the Issuing Office. The deposit will be refunded to each document holder of record who returns a complete set of Bidding Documents in good condition within 30 days after opening of Bids.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, within five days of Owner's request, Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be requested.

3.02 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 *Subsurface and Physical Conditions*

A. The Supplementary Conditions identify:

1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site.

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2. Those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site.

B. Copies of reports and drawings referenced in Paragraph 4.01.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 *Underground Facilities*

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.03 *Hazardous Environmental Condition*

A. The Supplementary Conditions identify any reports and drawings known to Owner relating to a Hazardous Environmental Condition identified at the Site.

B. Copies of reports and drawings referenced in Paragraph 4.03.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.06 of the General Conditions has been identified and established in Paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 4.06 of the General Conditions.

4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

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4.06 A. Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of contract documents (other than portions thereof related to price) for such other work.

B. Paragraph 6.13.C of the General Conditions indicates that if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.07 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, and the other related data identified in the Bidding Documents;

B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;

D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Paragraph 4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in the Paragraph 4.06 of the Supplementary Conditions as containing reliable "technical data";

E. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;

F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;

G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

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H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and

I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – DBE REQUIREMENTS OF 40 CFR §35.3145(D).

5.01 The recipient and prime contractor will exercise good faith efforts to attract and utilize small, minority, and women's business enterprises primarily through outreach, recruitment, and race/gender neutral activities; at a minimum, fulfillment of the six affirmative steps set forth below:

A. Including disadvantaged businesses on solicitation lists;

B. Assuring that disadvantaged businesses are solicited whenever they are potential sources;

C. Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by disadvantaged businesses;

D. Establishing delivery schedules, when the requirements of the work permit, which will encourage participation by disadvantaged businesses;

E. Using the services of the Small Business Administration and the Office of Minority Business Enterprise of the U.S. Department of Commerce, as appropriate; and

F. Require A. through E. to be taken if subcontracts are awarded.

5.02 FAIR SHARE OBJECTIVE

A. The fair share objective for this project is **__1%__ MBE's and __4%__ WBE's.**

5.03 Additional DBE Information is presented in Section 00701 on Pages 3 through 14 (DBE 1 – DBE-12).

5.04 Additional information to locate MBE/DBE/WBE businesses may be found at the following website: www.bpn.gov/CCRSearch/Search.aspx

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ARTICLE 6 – PRE-BID CONFERENCE

6.01 *A pre-Bid conference will not be held.*

ARTICLE 7 – SITE AND OTHER AREAS

7.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 8 – INTERPRETATIONS AND ADDENDA

8.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

8.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

ARTICLE 9 – BID SECURITY

9.01 *A Bid must be accompanied by Bid security made payable to Owner in an amount of* 10 percent of Bidder's maximum Bid price and in the form of a Bid bond (on the form attached) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions. In lieu of a Bid Bond, bid security in the amount of 5 percent of the bid price in the form of cash or money order is acceptable.

9.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 30 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

9.03 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

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ARTICLE 10 – CONTRACT TIMES

10.01 The number of days within which, or the dates by which, [Milestones are to be achieved and] the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 11 – LIQUIDATED DAMAGES

11.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 12 – SUBSTITUTE AND "OR-EQUAL" ITEMS

12.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or those substitute or "or-equal" materials and equipment approved by Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function and quality to be met by any proposed substitute or "or-equal" item. No item of material or equipment will be considered by Engineer as a substitute or "or-equal" unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each such request shall conform to the requirements of Paragraph 6.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

12.02 Where products are specified by naming one or more manufacturers and the term "or equal" is not included, the Bidder is not limited to those manufacturers listed.

ARTICLE 13 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

13.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, without an increase in the Bid.

13.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such

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acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.

13.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 14 – PREPARATION OF BID

14.01 The Bid Form is included with the Bidding Documents.

14.02 All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each [section, Bid item, alternative, adjustment unit price item, and unit price item] listed therein. In the case of optional alternatives the words "No Bid," "No Change," or "Not Applicable" may be entered.

14.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.

14.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.

14.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.

14.06 A Bid by an individual shall show the Bidder's name and official address.

14.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.

14.08 All names shall be printed in ink below the signatures.

14.09 *The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.*

14.10 *Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.*

14.11 *The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.*

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ARTICLE 15 – BASIS OF BID; COMPARISON OF BIDS

15.01 *Unit Price*

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid Schedule, or on the basis of a Lump Sum bid price when so described in the Bid Schedule.

B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 16 – SUBMITTAL OF BID

16.01 An entire bound copy of the Specifications and Bid Documents is not required for submittal at the time of bid. The Bidder may submit all forms required for bidding on the sheets provided in the bid package. Pages shall be assembled in order and stapled together.

16.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to Advanced Engineering and Environmental Services, Inc., 1560 Concourse Drive, Rapid City, SD 57703.

ARTICLE 17 – MODIFICATION AND WITHDRAWAL OF BID

17.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

17.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 18 – OPENING OF BIDS

18.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

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ARTICLE 19 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

19.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 20 – EVALUATION OF BIDS AND AWARD OF CONTRACT

20.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluati*on, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project* to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

20.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

20.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the pre*scribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.*

20.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and exp*erience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.*

20.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in *accordance with the Contract Documents.*

20.06 If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.

ARTICLE 21 – CONTRACT SECURITY AND INSURANCE

21.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds.

ARTICLE 22 – SIGNING OF AGREEMENT

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22.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which *are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement* and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

ARTICLE 23 – SALES AND USE TAXES

23.01 Contractors will be liable for City, County, State and Federal use, sales and excise taxes due under South Dakota law.

23.02 The Contractor shall be liable for the use tax on tangible personal property that is supplied by the Owner to the Contractor for performance of the Contractor. The value of said personal property is estimated to be _$0.00_ on t*his project. This amount shall be used in determining the Contractor's liability for tax.*

23.03 *Excise Tax Liability:*

1. The Contractor or Subcontractors shall be liable for payment of any State excise tax required for realty improvements under SDCL 10-46B-1.

ARTICLE 24 – RETAINAGE

24.01 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

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BID FORM

Project Identification: **Croyle/Nonanna Wells Filtration System and Raw Water Main**
Schedule A: Croyle/Nonanna Wells Filtration System
Schedule B1: Pinewood Drive Water Main and Raw Water Line
Schedule C: Effluent Force Main Line

Colonial Pine Hills Sanitary District
Pennington County, South Dakota

SRF Project Number: C462270-03

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ARTICLE 1 – BID RECIPIENT

This Bid is submitted to: **Colonial Pine Hills Sanitary District**
c/o Advanced Engineering and Environmental Services, Inc.
1560 Concourse Drive
Rapid City, SD 57703

1.01 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance

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for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in SC-4.02 as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in SC-4.06 as containing reliable "technical data."

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

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1. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 General Requirements for Bidding:
The Basis of Bid and General Conditions for Bidding all Schedules of Work are as follows:

A. Bids shall include all applicable State and Municipal Sales and Use Taxes on materials, and State and Municipal Excise Taxes, and all other applicable State, Local or Federal Taxes or Fees that will affect the amount of the Bid. This project is a qualifying utility project and the contract is subject to the alternate Contractor's excise tax under SDCL 10-46-B. Owner-furnished materials are not subject to excise tax.

B. Bids shall include all equipment, equipment accessories, start-up services, training and other manufacturer's obligations as described in the bid documents and specifications.

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C. In accordance with SDCL 34-44-8, all bidders and contractors are hereby notified that this project does not involve asbestos-containing materials. This statement constitutes the warning and specifications required by SDCL 34-44-8. The Owner or those representing the Owner shall not be held responsible or liable for any injury to any individual resulting from his handling of or proximity to such materials. Bidders are further instructed that no asbestos-containing materials are to be installed on the project.

D. The Bidder agrees and states that he has read the advertisement calling for bids, has studied the Contract Documents, is familiar with the terms and conditions stipulated therein, agrees to enter into the attached Contract and acknowledges the receipt of Addenda listed on the prior page, "Bidder's Proposal".

E. In case of error in extension of a unit price to an item total, the unit price will govern. In case of error in summation of item totals, the corrected summation will govern over the incorrect summation.

F. The Bidder's Proposal is based upon the conditions and stipulations within the Contract Documents named in Section 00700 and Section 00800 which shall be considered a part of this contract as if written herein at length.

G. The Bidder shall demonstrate that he has successfully completed at least five (5) similar South Dakota water projects in the last ten (10) years. The Engineer and Owner shall evaluate the qualifications of each bidder and determine if bidder is considered responsive.

H. PERMITS.

1. The Contractor shall secure and pay fees for any and all mechanical and electrical permits required for the work.
2. The Contractor shall apply for and secure SDDENR permits for construction dewatering, storm water runoff and related permits.
3. The Owner shall secure the Pennington County Highway Utility Permit. The Contractor shall furnish a 2-year warranty for pavement repair work.
4. The Owner shall secure the building permit and pay fees for the project from Pennington County.

I. It is understood that this project will be bid in multiple schedules: Schedule A: Croyle/Nonanna Wells Filtration System; Schedule B1: Pinewood Drive Water Main and Raw Water Line, Schedule and Schedule C: Effluent Force Main Line. Bidders may bid only Schedule A, but will be required to bid both Schedules B1 and C if any of those schedules are bid.

J. This project contains multiple schedules of work and the Owner reserves the right to award the project under separate Contracts based on the lowest responsible bid of each schedule.

K. The Owner reserves the right to award the project to the lowest responsible combined bidder of Schedules A, B and C.

1. The Owner also reserves the right to cancel Schedule A, B1 or C at its sole discretion.

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2. The Owner may award any combination of schedules based on a combined low bid or based on single schedules of work.

3. If a Contractor bids B1 or C, that Contractor must bid both schedules for B1 and C and is not required to bid Schedule A.

L. The Owner reserves the right to reject any and all Bids and Bid Schedules within 30 days of Bid opening.

5.02 In submitting this proposal for **Schedules A, B1 and C**, bidder acknowledges the following:

A. The contract completion dates are listed below. Liquidated damages will accrue at the rate of $500/day for failure to complete the project within the contract time per Article 4.02 of the Agreement Between Owner and Contractor.

B. Time of Completion:

Completion Milestones

Milestone	Schedule Name	Substantial Completion Date	Final Completion Date
		Base Schedule	Base Schedule
A	Croyle/Nonanna Wells Filtration System	October 22, 2015	November 23, 2015
B1	Pinewood Drive Water Main and Raw Water Line	October 7, 2015	November 2, 2015
C	Effluent Force Main Line	October 7, 2015	November 2, 2015

Final Completion (4):

Final completion includes completion of all work including surface restoration as required by the contract documents. The time of completion for the project is based on an anticipated contract award notification date of January 15, 2015. In the event that a contract award notification is made after January 15, 2015, the contract completion date and milestones will be extended by one day for each day until contract award.

C. Liquidated Damages: $500 per calendar day for Schedule A. Liquidated damages shall apply to only the final completion milestones.

D. Bidder will complete the Work for Schedule A in accordance with the Contract Documents for the following price(s):

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BID SCHEDULE A
Croyle/Nonanna Wells Filtration System

Item	Description	Lump Sum Price
Schedule A Base Bid		
A1	Furnish Filtration Membrane Process Equipment on Skid.	
A2	Furnish Membranes for Treatment Skids.	
A3	Furnish Process Support Equipment.	
A4	Furnish Chemicals for 5-MG Treated Water.	
A5	Equipment Start-up and Training Services.	
A6	Installation and Labor required for Installation and Assembly of all Filtration Equipment, Pumps, Instruments, and Related Work.	
A7	Furnish and Install all Piping, Pipe Supports, Equipment Pads, Building Modifications and Related Work.	

TOTAL BID -- SCHEDULE A $ _____

Alternate Schedule No. 2 Deduct $ _____

SCHEDULE A TOTAL BID WITH SCHEDULE NO. 2 $ _____

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5.03 Bidder will complete the Work for **Schedule B1** in accordance with the Contract Documents for the following price(s):

BID SCHEDULE B1
Pinewood Drive Water Main and Raw Water Line

Bid Item	Item Description	Estimated Quantity	Units	Unit Price	Extended Price
1.	Mobilization	1	LS		
2.	Traffic Control	1	LS		
3.	Incidental Work	1	LS		
4.	Remove & Dispose Asphalt Concrete Pavement	578	SY		
5.	10" PVC Water Main w/Bedding	5	LF		
6.	8" PVC Water Main w/Bedding	2,800	LF		
7.	6" PVC Water Main and Raw Water Main w/Bedding	3,000	LF		
8.	3" Ductile Iron Pipe w/Bedding	10	LF		
9.	8" Gate Valve w/Box	10	EA		
10.	6" Gate Valve & Box	3	EA		
11.	8" Bend	18	EA		
12.	6" Bend	28	EA		
13.	3" Bend	2	EA		
14.	8" x 6" Tee	4	EA		
15.	6" x 4" Tee	2	EA		
16.	8" x 8" Tee	1	EA		
17.	10" x 10" x 8" Tee	1	EA		
18.	3" x 6" Increaser	1	EA		
19.	10" Std. Coupling	1	EA		
20.	8" High Deflection Coupling	2	EA		
21.	3" Transition Coupling	1	EA		
22.	Air Release Manhole and Valve	2	EA		
23.	Fire Hydrant w/Aux Valve & Lead	4	EA		
24.	Connect to Existing Water Main	4	EA		
25.	1" Water Service Piping w/Crusher Fines	750	LF		

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Bid Item	Item Description	Estimated Quantity	Units	Unit Price	Extended Price
26.	8" x 1" Tapping Saddle and Corporation Stop	20	EA		
27.	6" x 1" Tapping Saddle and Corporation Stop	2	EA		
28.	1" Curb Stop and Box	20	EA		
29.	Reconnect Water Services	20	EA		
30.	12" CMP	36	LF		
31.	12" CMP Flared End Section	1	EA		
32.	Type 2 Foundation Material	150	TON		
33.	Rock Excavation	300	TON		
34.	Limestone Base Course / Gravel Surfacing	450	TON		
35.	Asphalt Concrete, Class G, Type I, 5"	185	TON		
36.	Sawcut Asphalt Concrete Pavement	900	LF		
37.	Remove and Reset Street Sign	5	EA		
38.	Remove and Dispose Tree/Bush, 2" - 6" Ø	5	EA		
39.	Remove and Dispose Tree, 8" - 24" Ø	4	EA		
40.	Remove and Reset Chainlink Fence, 4' High	100	LF		
41.	Remove & Reset Chain Link Fence, 6' High w/Mow Strip	80	LF		
42.	Remove and Reset Mailbox	12	EA		
43.	Erosion Control Wattle, 6" Ø	450	LF		
44.	Seeding, Fertilizing, & Mulching	6,500	SY		
45.	Class III Riprap	20	Tons		
46.	Place Topsoil (2")	750	CY		
47.	Furnish Topsoil (2")	750	CY		
48.	Remove & Replace 6" Concrete Sidewalk	32	SF		

TOTAL BID -- SCHEDULE B1: $ _____

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5.04 Bidder will complete the Work for **Schedule C** in accordance with the Contract Documents for the following price(s):

BID SCHEDULE C
Effluent Force Main Line

Bid Item	Item Description	Estimated Quantity	Units	Unit Price	Extended Price
1	Mobilization	1	LS		
2	Traffic Control	1	LS		
3	Incidental Work	1	LS		
4	Remove & Dispose Concrete Sidewalk	20	SF		
5	4" Certa-Lok Effluent Forcemain	526	LF		
6	4" x 45 Degree Bend	1	EA		
7	4" x 22.5 Degree Bend	2	EA		
8	4" x 11.25 Degree Bend	1	EA		
9	4" R.J. Coupling	1	EA		
10	Connect to Existing Effluent Main	1	EA		
11	6" Core and Connect to Exiting Manhole	1	EA		
12	Install 8" Steel Casing, Bored and Jacked	80	LF		
13	Remove and Reset 24" RCP Flared End Section	1	EA		
14	Install 4" Concrete Sidewalk	20	SF		
15	Erosion Control Wattle, 6" Ø	100	LF		
16	Seeding, Fertilizing, & Mulching	678	SY		
17	Sodding and Fertilizing	112	SY		
18	Place Topsoil (2")	100	CY		
19	Furnish Topsoil (2")	100	CY		

TOTAL BID -- SCHEDULE C: $ _____

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ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security in the form of a Bid Bond (EJCDC No. C-430) or Cashiers Check (circle type of security provided);

B. DBE Subcontractor Solicitation Information (DBE-6 in the SRF General Conditions);

C. DBE Subcontractor Performance Form to be submitted by the apparent low bidder within 10 days of the bid opening (DBE-9 in the SRF General Conditions);

D. DBE Subcontractor Utilization Form (DBE-11 in the SRF General Conditions);

E. Signed Certification Regarding Debarment, Suspension, and Other Responsibility Matters – (Debar-2 in the SRF General Conditions).

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

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A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____
Type (General Business, Professional, Service, Limited Liability):_____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____
(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in South Dakota is ____/____/____.

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____(SEAL)

By: _____
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

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Bidder's Business Address _____

_____

Phone No. _____ Fax No. _____

E-mail _____

SUBMITTED on _____, 20____.

State Contractor License No. _____.

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DBE SUBCONTRACTOR SOLICITATION INFORMATION

PROJECT NAME: Croyle/Nonanna Wells Filtration System and Raw Water Main

Subcontractor Name and Telephone Number	MBE or WBE	Description of Work Offered	Date of Phone Follow-up & Person Contacted	Amount of Bid or Reason for not Quoting	Bid Accepted or Rejected? Include Reason for Rejection

This information is true and correct to the best of my knowledge

Contractor Name, Address and Telephone Number

Signature Title Date

This form shall be submitted as part of the contractor's bid.

EJCDC C-410 Suggested Bid Form for Construction Contracts
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C462270-03

SRF Project Number

United States Environmental Protection Agency
Washington, DC 20460

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 judgement 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 (1)(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 USC Sec. 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

_____

Typed Name & Title of Authorized Representative

_____

Signature of Authorized Representative Date

_____ I am unable to certify to the above statements. My explanation is attached.

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OMB Control No:	_____
Approved:	_____
Approval Expires:	_____

Environmental
Protection Agency

Disadvantaged Business Enterprise Program
DBE Subcontractor Performance Form

NAME OF SUBCONTRACTOR[1]	PROJECT NAME
ADDRESS	BID/PROPOSAL NO.
TELEPHONE NO.	E-MAIL ADDRESS
PRIME CONTRACTOR NAME	

CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES BID TO PRIME	PRICE OF WORK SUBMITTED TO PRIME CONTRACTOR

Currently certified as an MBE or WBE under EPA's DBE Program? _____ Yes _____ No

Signature of Prime Contractor	Date
Print Name	Title
Signature of Subcontractor	Date
Print Name	Title

[1]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

EPA FORM 6100-3 (DBE Subcontractor Performance Form)

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OMB Control No: _____
Approved: _____
Approval Expires: _____

Environmental
Protection Agency

Disadvantaged Business Enterprise Program
DBE Subcontractor Performance Form

The public reporting and recordkeeping burden for this collection of information is estimated to average fifteen (15) minutes. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Performance Form to this address.

EPA FORM 6100-3 (DBE Subcontractor Performance Form)

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OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

Environmental
Protection Agency

Disadvantaged Business Enterprise Program
DBE Subcontractor Utilization Form

BID/PROPOSAL NO.	**PROJECT NAME**
NAME OF PRIME BIDDER/PROPOSER	**E-MAIL ADDRESS**
ADDRESS	
TELEPHONE NO.	**FAX NO.**

The following subcontractors will be used on this project:

COMPANY NAME, ADDRESS, PHONE NUMBER, AND E-MAIL ADDRESS	TYPE OF WORK TO BE PERFORMED	ESTIMATED DOLLAR AMOUNT	CURRENTLY CERTIFIED AS AN MBE OR WBE?

I certify under penalty of perjury that the forgoing statements are true and correct. In the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302(c)

Signature of Prime Contractor _____ Date _____

Print Name _____ Title _____

[1]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

EPA FORM 6100-4 (DBE Subcontractor Utilization Form)

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OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

Environmental
Protection Agency

Disadvantaged Business Enterprise Program
DBE Subcontractor Utilization Form

The public reporting and recordkeeping burden for this collection of information is estimated to average fifteen (15) minutes. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Utilization Form to this address.

EPA FORM 6100-4 (DBE Subcontractor Utilization Form)

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BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:

SURETY *(Name and Address of Principal Place of Business)*:

OWNER *(Name and Address)*:

BID
Bid Due Date:
Description *(Project Name and Include Location)*:

BOND
Bond Number:
Date *(Not earlier than Bid due date)*:
Penal sum _____ $ _____
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
_____ (Seal)	_____ (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

Notice of Award

Date: _____

Project: Croyle/Nonanna Wells Filtration System and Raw Water Main	
Owner: Colonial Pine Hills Sanitary District Pennington County, South Dakota	Owner's Contract No.:
Contract:	Engineer's Project No.: 07196.01
Bidder:	
Bidder's Address:	

You are notified that your Bid dated _____ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for _____

The Contract Price of your Contract is _____Dollars ($_____).

_____ copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

_____ sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner [_____] fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20) and General Conditions (Paragraph 5.01).
3. Other conditions precedent:

_____

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

Colonial Pine Hills Sanitary District
Owner

By:_____
Authorized Signature

_____
Title

Copy to Engineer

EJCDC C-510 Notice of Award
Prepared by the Engineers Joint Contract Documents Committee and endorsed by the Construction Specifications Institute.

AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

Croyle/Nonanna Wells Filtration System and Raw Water Main
Colonial Pine Hills Sanitary District

Schedule _____

THIS AGREEMENT is by and between Colonial Pine Hills Sanitary District, Pennington County, South Dakota ("Owner") and _____ ("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Construction of a new microfiltration water treatment unit at the Croyle well house and installation of 2,000 feet of transmission line from the Nonanna well to the filtration unit, which will treat water from both wells.

Schedule A - Croyle/Nonanna Wells Filtration System

Schedule B1 - Pinewood Drive Water Main and Raw Water Line

Schedule C – Effluent Force Main Line

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Croyle/Nonanna Wells Filtration System and Raw Water Main

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Advanced Engineering and Environmental Services, Inc. (Engineer), which is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

EJCDC C-520 Agreement Between Owner and Contractor for Construction Contract (Stipulated Price)
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ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Dates for Substantial Completion and Final Payment*

A. The Work will be substantially completed with the following schedule. The Contract Times shall commence and run as provided in Paragraph 2.03 of the General Conditions and Paragraph 14.07 of the General Conditions.

	Contract Time Final Completion
Schedule A:	November 23, 2015
Schedule B1:	November 2, 2015
Schedule C:	November 2, 2015

4.02 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), for Schedule A, Contractor shall pay Owner $500.00 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete and for Schedules B and C, Contractor shall pay Owner $500.00 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A, 5.01.B, and 5.01.C below:

The Bid prices for Unit Price Work set forth as of the Effective Date of the Agreement are based on estimated quantities. As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions.

A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

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ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 15th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

a. 95 percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less 100 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

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ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of the maximum legal rate.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph SC-4.06 of the Supplementary Conditions as containing reliable "technical data."

E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

EJCDC C-520 Agreement Between Owner and Contractor for Construction Contract (Stipulated Price)
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H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 8, inclusive).
2. Performance bond (pages 1 to 3, inclusive).
3. Payment bond (pages 1 to 3, inclusive).
4. Other bonds (pages _____ to _____, inclusive).
   a. _____ (pages _____ to _____, inclusive).
   b. _____ (pages _____ to _____, inclusive).
   c. _____ (pages _____ to _____, inclusive).
5. Standard General Conditions (pages 1 to 62, inclusive).
6. SRF General Conditions (pages 1 to 36, inclusive).
7. Specifications as listed in the table of contents of the Specifications and Bid Documents.
8. Drawings bearing the following general title: Croyle/Nonanna Wells Filtration System and Raw Water Main.
9. Addenda (numbers _____ to _____, inclusive).
10. Exhibits to this Agreement (enumerated as follows):
    a. Contractor's Bid (pages _____ to _____, inclusive).
    b. Documentation submitted by Contractor prior to Notice of Award (pages _____ to _____, inclusive).
    c. *[List other required attachments (if any), such as documents required by funding or lending agencies].*

EJCDC C-520 Agreement Between Owner and Contractor for Construction Contract (Stipulated Price)
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11. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

    a. Notice to Proceed (pages 1 to 1, inclusive).

    b. Work Change Directives.

    c. Change Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

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10.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

This Agreement will be effective on _____ (which is the Effective Date of the Agreement).

OWNER:	CONTRACTOR
Colonial Pine Hills Sanitary District Pennington County, South Dakota	_____
By: _____	By: _____
Title: _____	Title: _____
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest: _____	Attest: _____
Title: _____	Title: _____

EJCDC C-520 Agreement Between Owner and Contractor for Construction Contract (Stipulated Price)
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Address for giving notices:

8251 Dunsmore Road

Rapid City, SD 57702-8950

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

Address for giving notices:

License No.: _____

(Where applicable)

Agent for service of process:

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Notice to Proceed

Date: _____

Project: Croyle/Nonanna Wells Filtration System and Raw Water Main	
Owner: Colonial Pine Hills Sanitary District Pennington County, South Dakota	Owner's Contract No.:
Contract:	Engineer's Project No.: 07196.01
Contractor:	
Contractor's Address: *[send Certified Mail, Return Receipt Requested]*	

You are notified that the Contract Times under the above Contract will commence to run on_____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion is_____, and the date of readiness for final payment is _____ [(or) the number of days to achieve Substantial Completion is _____ _____, and the number of days to achieve readiness for final payment is _____].

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds and loss payees) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must contact the Owner and Engineer, and acquire all necessary permits.

_____ _____

Owner – Colonial Pine Hills Sanitary District
Pennington County, South Dakota
Given by:

_____ _____

Authorized Signature

_____ _____

Title

_____ _____

Date

Copy to: Advanced Engineering and Environmental Services, Inc.

EJCDC C-550 Notice to Proceed
Prepared by the Engineers Joint Contract Documents Committee and endorsed by the Construction Specifications Institute.

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONTRACT
Effective Date of Agreement:
Amount:
Description (*Name and Location*):

BOND
Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

_____ (Seal)
Contractor's Name and Corporate Seal

By: _____
Signature

_____
Print Name

_____
Title

Attest: _____
Signature

_____
Title

SURETY

_____ (Seal)
Surety's Name and Corporate Seal

By: _____
Signature (Attach Power of Attorney)

_____
Print Name

_____
Title

Attest: _____
Signature

_____
Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

EJCDC C-610 Performance Bond
Prepared by the Engineers Joint Contract Documents Committee.

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.

2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
   - 2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
   - 2.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1; and
   - 2.3 Owner has agreed to pay the Balance of the Contract Price to:
     1. Surety in accordance with the terms of the Contract; or
     2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.

3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:

   - 3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
   - 3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
   - 3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
   - 3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
     1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
     2. Deny liability in whole or in part and notify Owner citing reasons therefor.

4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

6. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.

7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.

8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

10. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

11. Definitions.

11.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.
11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
11.4 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other party*):

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONTRACT
Effective Date of Agreement:
Amount:
Description *(Name and Location)*:

BOND
Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____ (Seal)	_____ (Seal)
Contractor's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with Contractor:

1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. Reserved.

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address, and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other*):

DBE SUBCONTRACTOR SOLICITATION INFORMATION

PROJECT NAME: Croyle/Nonanna Wells Filtration System and Raw Water Main

Subcontractor Name and Telephone Number	MBE or WBE	Description of Work Offered	Date of Ph1one Follow-up & Person Contacted	Amount of Bid or Reason for not Quoting	Bid Accepted or Rejected? Include Reason for Rejection

This information is true and correct to the best of my knowledge

Contractor Name, Address and Telephone Number

Signature Title Date

This form shall be submitted as part of the contractor's bid.

C462270-03

SRF Project Number

United States Environmental Protection Agency
Washington, DC 20460

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 judgement 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 (1)(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 USC Sec. 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

_____

Typed Name & Title of Authorized Representative

_____

Signature of Authorized Representative Date

_____ I am unable to certify to the above statements. My explanation is attached.

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*—The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

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12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*—See Paragraph 11.01 for definition.

17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*—The individual or entity named as such in the Agreement.

20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*—Sections of Division 1 of the Specifications.

22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.

23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

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27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*—Polychlorinated biphenyls.

31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.

37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

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40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.

46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.

47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.

48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work*—Work to be paid for on the basis of unit prices.

50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

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addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents; or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

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E. *Furnish, Install, Perform, Provide:*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

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2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on

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Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

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3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work*: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work*: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation , (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

   a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or

   b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

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1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or

2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

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ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and

2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

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4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

   a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

   b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

   a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

   b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and

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contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

a. reviewing and checking all such information and data;

b. locating all Underground Facilities shown or indicated in the Contract Documents;

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the

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consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

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C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

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H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also

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meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.

E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

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a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

6. include completed operations coverage:

a. Such insurance shall remain in effect for two years after final payment.

b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

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5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

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members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

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1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's

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interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

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B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

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2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and

3) it has a proven record of performance and availability of responsive service.

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,

b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

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c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services; and

4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. *Engineer's Cost Reimbursement*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be

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required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner,

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Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

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6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought

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by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and

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shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is

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required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

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2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

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6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

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B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

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E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

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B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

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8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or

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continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

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9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not

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exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

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10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required*: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data

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shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action*: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part;

2. approve the Claim; or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

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1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

   a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

   b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

   c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of

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said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not

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limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances:*

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance:*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to

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the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect to any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

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C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

   a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

   b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

   c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

   d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

   e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

   f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or

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neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

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13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

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C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

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1. repair such defective land or areas; or

2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

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13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an

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Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or

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involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

   a. to supervise, direct, or control the Work, or

   b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

   c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

   d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

   e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

   a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

   b. the Contract Price has been reduced by Change Orders;

   c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

   d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due:*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

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D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

   a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

   b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

   c. there are other items entitling Owner to a set-off against the amount recommended; or

   d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before

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final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

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4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;

   b. consent of the surety, if any, to final payment;

   c. a list of all Claims against Owner that Contractor believes are unsettled; and

   d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying

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documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

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ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's repeated disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when

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so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days

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to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or

2. agrees with the other party to submit the Claim to another dispute resolution process; or

3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

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1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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STATE REVOLVING FUND (SRF)

GENERAL CONDITIONS

with

DAVIS-BACON

South Dakota
Department of Environment
and Natural Resources

These provisions must be included in the specifications for all Clean Water SRF and Drinking Water SRF projects.

April 2014

00701.1

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GUIDANCE FOR UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES REQUIREMENTS OF 40 CFR §33.

A. REQUIREMENTS

1. The recipient and prime contractor will exercise good faith efforts to attract and utilize small, minority, and women's business enterprises primarily through outreach, recruitment, and race/gender neutral activities; at a minimum, fulfillment of the six affirmative steps set forth below:

    a. Including disadvantaged businesses on solicitation lists;

    b. Assuring that disadvantaged businesses are solicited whenever they are potential sources;

    c. Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by disadvantaged businesses;

    d. Establishing delivery schedules, when the requirements of the work permit, which will encourage participation by disadvantaged businesses;

    e. Using the services of the Small Business Administration and the Office of Minority Business Enterprise of the U.S. Department of Commerce, as appropriate; and

    f. Require a. through e. to be taken if subcontracts are awarded.

B. FAIR SHARE OBJECTIVE

1. The fair share objective for this project is __1__% MBE's and __4__% WBE's.

C. DEFINITIONS

1. Disadvantaged Business Enterprise (DBE) is a business concern which meets the qualifications of a Minority Business Enterprise (MBE), Women's Business Enterprise (WBE), Small Business (SBE), or Small Business in a Rural Area (SBRA).

2. Minority Business Enterprise (MBE) is a business concern which is:

    a. Certified as socially and economically disadvantaged by the Small Business Administration;

        (1) Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities.

        (2) Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free enterprise system is impaired due to diminished capital and credit opportunities, as compared to others in the same business area who are not socially disadvantaged. In determining the degree of diminished credit and capital opportunities, the Small Business Administration shall consider, but not be limited to, the assets and net worth of such socially disadvantaged individuals. Individuals who certify that they are members of named groups (Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asian-Indian Americans), are to be considered socially and economically disadvantaged. Economically and socially disadvantaged individuals are deemed to include women.

    b. Certified as a minority business enterprise by a State or Federal agency; and

c. An independent business concern which is at least 51 percent owned and controlled by minority group member(s).

(1) A minority group member is an individual who is a citizen of the United States and one of the following:

(a) Black American;

(b) Hispanic American (with origins from Puerto Rico, Mexico, Cuba, South or Central America)

(c) Native American (American Indian, Eskimo, Aleut, native Hawaiian); or

(d) Asian-Pacific American (with origins from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, Taiwan or the Indian subcontinent).

(2) In order to satisfy this third criteria of the MBE definition, the minority ownership's interest must be real, substantial and continuing. Such interest is characterized by:

(a) Risk of loss/share of profit commensurate with the proportional ownership; and

(b) Receipt of the customary incidents of ownership, such as compensation (i.e., salary and other personnel compensation).

(3) A minority owner must have and exercise control of the business decisions. Characteristics of control include, but are not limited to:

(a) Authority to sign bids and contracts;

(b) Decisions in price negotiations;

(c) Incurring liabilities for the firm;

(d) Final staffing decisions;

(e) Policy-making; and

(f) General company management decisions.

(4) Only those firms performing a useful business function according to custom and practice in the industry, are qualified as MBEs. Acting merely as a passive conduit of funds to some other firm where such activity is unnecessary to accomplish the project does not constitute a "useful business function according to custom and practice in the industry." The purpose of this approach is to discourage the use of MBE "fronts" and limit the creation of an artificial supplier and broker marketplace.

3. Women's Business Enterprise (WBE) is a business which is certified as such by a State or Federal agency, or which meets the following definition:

"A women's business enterprise is an independent business concern which is at least 51 percent owned by a woman or women, who also control and operate it. Determination of whether a business is at least 51 percent owned by a woman or otherwise qualified WBE which is 51 percent owned by a married woman in a community property State will not be disqualified because her husband has a 50 percent interest in her share. Similarly, a business which is 51 percent owned by a married man and 49 percent owned by an

unmarried woman will not become a qualified WBE by virtue of his wife's 50 percent interest in his share of the business."

As in the case of a MBE, only United States citizens will be deemed to be WBEs. Similar to the MBE criteria, WBE should meet the criteria cited in subparagraphs B.1.c.(2), (3), and (4).

4. Fair Share or Fair Share Objective A fair share or a fair share objective is an amount of funds reasonably commensurate with the total project funding and the availability of qualified MBEs and WBEs, taking into account experience on EPA-funded projects and other comparable projects in the area. A fair share objective does not constitute an absolute requirement, but a commitment on the part of the bidder to exercise good faith efforts as defined in this section to use MBEs and WBEs to achieve the fair share objective.

5. Small Business (SBE) Any business entity, including its affiliates, that is independently owned and operated, and not dominant in its field of operations in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards set forth in 13 CFR Part 121.

6. Small Business in a Rural Area A small business in a rural area (SBRA) is a business entity meeting the definition of a small business, and is located and conducts its principal operations in a geographical area (county) listed in the Small Business Administration's Listing of Non-Metropolitan Counties by State.

7. Recipient A party receiving SRF financial assistance.

8. Project The scope of work for which an SRF loan is awarded.

9. Bidder A party seeking to obtain a contract with a recipient through a competitive, advertised, sealed bid process.

10. Offeror A party seeking to obtain a contract with a recipient through a negotiative procurement process.

11. Prime Contractor A party that has obtained a contract with a recipient through a competitive, advertised, sealed bid process.

12. Good Faith Efforts Good faith efforts by a recipient, prime contractor, and/or bidder/offeror means efforts to attract and utilize DBEs primarily through outreach, recruitment, and race/gender neutral activities. The following are examples of activities to assist recipients, prime contractors and/or bidders/offerors to comply with good faith efforts.

    a. Include qualified DBEs on solicitation lists.

        (1) Maintain and update a listing of qualified DBEs that can be solicited for supplies, construction and/or services.

        (2) Provide listings to all interested parties who requested copies of the bidding or proposing documents.

        (3) Contact appropriate sources within your geographic area and State to identify qualified DBEs for placement on your minority and women's business listings.

        (4) Utilize other DBE listings such as those of the State's Minority Business Office, the Small Business Administration, Minority Business Development Agency, US EPA- Office of Small Business Programs and the Department of Transportation.

        (5) Have the State environmental agency personnel review this solicitation list.

b. Assure that DBEs are solicited.

(1) Conduct meetings, conferences, and follow-ups with DBEs, small, minority and/or women's business associations, minority media, etc., to inform these groups of opportunities to provide supplies, services, and construction.

(2) MBE Utilization is facilitated if the recipient or prime contractor advertises through the minority media. Such advertisements may include, but are not limited to, contracting and subcontracting opportunities, hiring and employment, or any other matter related to the project.

(3) Conduct pre-bid, pre-solicitation, and post-award conferences to ensure that consultants, suppliers, and builders solicit DBEs.

(4) Provide bidders and offerors with listings of qualified DBEs and establish that a fair share of contracts/procurements should be awarded to these groups.

(5) Advertise in general circulation, trade publications, State agency publications of identified source, disadvantaged business focused media, etc., concerning contracting opportunities on your projects. Maintain a list of disadvantaged business-focused publications that may be utilized to solicit MBEs or WBEs.

(6) Provide interested DBEs with adequate information about plans, specifications, timing and other requirements of the proposed projects.

(7) Provide DBE trade organizations with succinct summaries of solicitations.

(8) Notify DBEs of future procurement opportunities so that they may establish bidding solicitations and procurement plans.

c. Divide total requirements when economically feasible, into small tasks or quantities to permit maximum participation of DBEs.

(1) Perform an analysis to identify portions of work that can be divided and performed by qualified DBEs.

(2) Scrutinize the elements of the total project to develop economically feasible units of work that are within the bonding range of DBEs.

(3) Analyze bid packages for compliance with the good faith efforts to afford DBEs maximum participation.

d. Establish delivery schedules, where requirements of the work permit, which will encourage participation by DBEs.

(1) Consider lead times and scheduling requirements often needed by DBE participation.

(2) Develop realistic delivery schedules which may provide for greater DBE participation.

e. Use the services and assistance of the Small Business Administration and the Minority Business Development Agency of the US Department of Commerce, as appropriate.

(1) Use the services of outreach programs sponsored by the Minority Business Development Agency and/or the Small Business Administration to recruit bona fide firms for placement on DBEs' bidders lists to assist these firms in the development of bid packaging.

(2) Seek out Minority Business Development Centers (MBDCs) to assist recipients and prime contractors in identifying MBEs for potential work opportunities on this project.

D. ADDITIONAL CONTRACT PROVISIONS (New Requirements)

1. The prime contractor must pay its subcontractors for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the owner.

2. The prime contractor must notify the owner in writing prior to any termination of a DBE subcontractor for convenience.

3. If a DBE subcontractor fails to complete work under the subcontract for any reason, the prime contractor must employ the good faith efforts if soliciting a replacement subcontractor, even if the fair share objectives have already been achieved.

4. Each procurement contract signed by an EPA financial recipient, including those for an identified loan under an EPA financial assistance agreement capitalizing a revolving loan fund, must include the following term and condition:

   The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 40 CFR 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies.

E. REPORTING

1. Bidders/offerors shall demonstrate compliance with good faith efforts in order to be deemed responsible. To demonstrate compliance, the "DBE Subcontractor Solicitation Sheet" (pg. DBE - 6) shall be submitted as part of its bid or proposal package. Information shall be included for each DBE subcontractor contacted by the bidder/offeror, not just those used to meet the fair share objective.

2. The prime contractor must distribute DBE Program Subcontractor Participation Form (EPA Form 6100-2) to all of its DBE subcontractors. The subcontractors can submit completed forms to the South Dakota Department of Environment and Natural Resources, Water Resources Assistance Program.

3. The prime contractor must have its DBE subcontractors complete DBE Program Subcontractor Performance Form (EPA Form 6100-3) and should include completed forms in its bid or proposal package.

4. The prime contractor must complete DBE Program Subcontractor Utilization Form (EPA Form 6100-4) which should be submitted as part of its bid or proposal package.

5. Form 6100-3 and Form 6100-4 must be submitted by the apparent low-bidder within ten calendar days of the bid opening. Failure to submit this information will be viewed as a non-responsive bid.

Additional DBE forms can be downloaded at http://www.epa.gov/osbp/grant.htm

DBE SUBCONTRACTOR SOLICITATION INFORMATION

PROJECT NAME: Croyle/Nonanna Wells Filtration System and Raw Water Main

Subcontractor Name and Telephone Number	MBE or WBE	Description of Work Offered	Date of Ph1one Follow-up & Person Contacted	Amount of Bid or Reason for not Quoting	Bid Accepted or Rejected? Include Reason for Rejection

This information is true and correct to the best of my knowledge

Contractor Name, Address and Telephone Number

Signature Title Date

This form shall be submitted as part of the contractor's bid.

OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

Environmental
Protection Agency

Disadvantaged Business Enterprise Program
DBE Subcontractor Participation Form

NAME OF SUBCONTRACTOR[1]	PROJECT NAME
ADDRESS	CONTRACT NO.
TELEPHONE NO.	EMAIL ADDRESS
PRIME CONTRACTOR NAME	

Please use the space below to report any concerns regarding the above EPA-funded project (e.g., reason for termination by prime contractor, late payment, etc.).

CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES RECEIVED FROM THE PRIME CONTRACTOR	AMOUNT SUBCONTRACTOR WAS PAID BY PRIME CONTRACTOR

Subcontractor Signature

Title/Date

[1]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

EPA FORM 6100-2 (DBE Subcontractor Participation Form)

OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

Environmental
Protection Agency

Disadvantaged Business Enterprise Program
DBE Subcontractor Participation Form

The public reporting and recordkeeping burden for this collection of information is estimated to average fifteen (15) minutes. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Participation Form to this address.

EPA FORM 6100-2 (DBE Subcontractor Participation Form)

OMB Control No: _____
Approved: _____
Approval Expires: _____

Environmental
Protection Agency

Disadvantaged Business Enterprise Program
DBE Subcontractor Performance Form

NAME OF SUBCONTRACTOR[1]	PROJECT NAME
ADDRESS	BID/PROPOSAL NO.
TELEPHONE NO.	E-MAIL ADDRESS
PRIME CONTRACTOR NAME	

CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES BID TO PRIME	PRICE OF WORK SUBMITTED TO PRIME CONTRACTOR

Currently certified as an MBE or WBE under EPA's DBE Program? _____ Yes _____ No

Signature of Prime Contractor	Date
Print Name	Title
Signature of Subcontractor	Date
Print Name	Title

[1]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

EPA FORM 6100-3 (DBE Subcontractor Performance Form)

OMB Control No:	_____
Approved:	_____
Approval Expires:	_____

Environmental
Protection Agency

Disadvantaged Business Enterprise Program
DBE Subcontractor Performance Form

The public reporting and recordkeeping burden for this collection of information is estimated to average fifteen (15) minutes. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Performance Form to this address.

EPA FORM 6100-3 (DBE Subcontractor Performance Form)

OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

Environmental
Protection Agency

Disadvantaged Business Enterprise Program
DBE Subcontractor Utilization Form

BID/PROPOSAL NO.	**PROJECT NAME**
NAME OF PRIME BIDDER/PROPOSER	**E-MAIL ADDRESS**
ADDRESS	
TELEPHONE NO.	**FAX NO.**

The following subcontractors will be used on this project:

COMPANY NAME, ADDRESS, PHONE NUMBER, AND E-MAIL ADDRESS	TYPE OF WORK TO BE PERFORMED	ESTIMATED DOLLAR AMOUNT	CURRENTLY CERTIFIED AS AN MBE OR WBE?

I certify under penalty of perjury that the forgoing statements are true and correct. In the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302(c)

Signature of Prime Contractor _____ Date _____

Print Name _____ Title _____

[1]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

EPA FORM 6100-4 (DBE Subcontractor Utilization Form)

OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

Environmental
Protection Agency

Disadvantaged Business Enterprise Program
DBE Subcontractor Utilization Form

The public reporting and recordkeeping burden for this collection of information is estimated to average fifteen (15) minutes. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Utilization Form to this address.

EPA FORM 6100-4 (DBE Subcontractor Utilization Form)

EQUAL EMPLOYMENT OPPORTUNITY and AFFIRMATIVE ACTION REQUIREMENTS on FEDERALLY ASSISTED CONSTRUCTION CONTRACTS

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Offerer's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area as follows:

Goals for minority participation in each trade - 3.4%
(See Appendix A for goals by county)
Goals for female participation in each trade - 6.9%

As used in this notice, and in the contract resulting from this solicitation, the "covered area" is Pennington County.

These goals are applicable to all the contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. **The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation.** The notification shall list the name, address and telephone number for the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed. A form is provided on page EEO - 7 that the contractor may use for this purpose.

This notice shall be included in, and shall be a part of, all solicitations for offers and bids on all federal and federally assisted construction contracts or subcontracts.

EQUAL OPPORTUNITY CLAUSES

The Equal Opportunity Clause published at 41 CFR Part 60-1.4(b) is required to be included in, and is part of, all nonexempt federally assisted construction contracts and subcontracts. The Equal Opportunity Clause shall be considered to be a part of every contract and subcontract required by the regulations in this part to include such a clause, whether or not it is physically incorporated in such contracts.

In addition to the clauses described above, all federal contracting officers, all applicants, and all non-construction contractors, as applicable, shall include the specifications set forth in this section in all federal and federally assisted construction contracts in excess of $10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part and in construction subcontracts in excess of $10,000 necessary in whole or in part to the performance of non-construction Federal contracts and subcontracts covered under the Executive Order.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:

    a. "Covered Area" means the geographical area described in the solicitation from which this contract resulted;

    b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

    c. "Employer identification number" means the Federal Social Security number used on the employer's quarterly Federal Tax Return, U.S. Treasury Department Form 941.

    d. "Minority" includes:

        (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

        (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

        (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands);

        (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area, (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The contractor shall implement the specific affirmative action standards provided in paragraphs (7)(a) through (p) of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the FEDERAL REGISTER in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the areas which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under (7)(b) above.

f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7)(a) through (p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be

asserted as fulfilling any one or more of its obligations under (7)(a) through (p) of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally, the contractor may be in violation of the Executive order if a specific minority group of women is under-utilized).

10. The contractor shall not use the goals and timetables of affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to Executive Order 11246.

12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph (7) of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

APPENDIX A

GOALS FOR MINORITY PARTICIPATION ON EACH TRADE

Counties	Goal
Aurora, Beadle, Brookings, Brule, Charles Mix, Davison, Douglas, Gregory, Hand, Hanson, Hutchinson, Jerauld, Kingsbury, Lake, Lincoln (excluding Sioux Falls), McCook, Miner, Moody, Sanborn, Turner	0.8
Bon Homme, Clay, Minnehaha (including all of Sioux Falls), Union, Yankton	1.2
Brown, Clark, Codington, Day, Deuel, Edmunds, Faulk, Grant, Hamlin, McPherson, Marshall, Roberts, Spink	1.3
Meade, Pennington	3.4
Bennett, Buffalo, Butte, Campbell, Corson, Custer, Dewey, Fall River, Haakon, Harding, Hughes, Hyde, Jackson, Jones, Lawrence, Lyman, Mellette, Perkins, Potter, Shannon, Stanley, Sully, Todd, Tripp, Walworth, Ziebach	7.9

CONTRACTOR'S NAME, ADDRESS & TELEPHONE NUMBER

_____

_____

_____

_____

Contractor Employer ID Number: _____

Return to:

Joan Ford, Regional Director
US Department of Labor
Federal Building, Room 840
525 South Griffin St.
Dallas, TX 75202

CONTRACT INFORMATION

PROJECT AND LOCATION:				
Dollar Amount of Contract	Estimated Start Date	Estimated Completion Date	Contract No.	Geographical Area (County, State)

NOTIFICATION OF SUBCONTRACTS AWARDED (>$10,000)

Subcontractor's Name Address, and Phone Number	Employer ID Number of Subcontractor	Estimated $ Amount of Subcontract	Estimated Start Date	Estimated Completion Date

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

A. INSTRUCTIONS

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 subagreement thereunder for $25,000 or more. The status of prospective individuals or organizations can be checked at:

http://epls.arnet.gov/

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or subagreement participant thereunder must complete the attached certification or provide an explanation why they cannot complete the certification. For further details, see 40 CFR 32.510, Participants Responsibilities.

B. WHERE TO SUBMIT

A prospective prime contractor must submit a completed certification or explanation to the project owner for the project. Each prospective subcontractor must submit a completed certification or explanation to the prime contractor for the project.

C. HOW TO OBTAIN FORMS

This form may reproduced as necessary. If needed, additional forms may be obtained from the Department of Environment and Natural Resources.

C462270-03

SRF Project Number

United States Environmental Protection Agency
Washington, DC 20460

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 judgement 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 (1)(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 USC Sec. 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

_____

Typed Name & Title of Authorized Representative

_____

Signature of Authorized Representative Date

_____ I am unable to certify to the above statements. My explanation is attached.

PROHIBITION AGAINST LISTED VIOLATED FACILITIES

A. REQUIREMENTS

(1) To comply with all the requirements of section 114 of the Clean Air Act, as amended (42 U.S.C. 1857, et seq., as amended by Pub. L. 92-604) and section 308 of the Clean Water Act (33 U.S.C. 1251, as amended), respectively, which relate to inspection, monitoring, entry, reports, and information, as well as other requirements specified in section 114 and section 308 of the Air Act and the Water Act, respectively, and all regulations and guidelines issued thereunder before the award of this contract.

(2) That no portion of the work required by this prime contract will be performed in a facility listed on the Environmental Protection Agency list of violating facilities on the date when this contract was awarded unless and until the EPA eliminates the name of such facility or facilities from the listing.

(3) That the best efforts to comply with clean air and clean water standards at the facilities in which the contract is being performed.

(4) To insert the substance of the provisions of this clause, including this paragraph (4), in any nonexempt subcontract.

B. DEFINITIONS

(1) Air Act means the Clean Air Act, as amended (42 U.S.C. 1857 et seq.).

(2) Water Act means the Clean Water Act, as amended (33 U.S.C. 1251 et seq.).

(3) Clean Air Standards means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, or other requirements which are contained in, issued under, or otherwise adopted under the Air Act or Executive Order 11738, an applicable implementation plan as described in section 110 (d) of the Air Act (42 U.S.C. 1857c-5(d)), an approved implementation procedure or plan under section 111 (c) or section 111(d), or an approved implementation procedure under section 112(d) of the Air Act (42 U.S.C. 1857c-7(d)).

(4) Clean Water Standards means any enforceable limitation, control, condition, prohibition, standard, or other requirement which is promulgated under the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. 1342), or by a local government to ensure compliance with pretreatment regulations as required by section 307 of Water Act (33 U.S.C. 1317).

(5) Compliance means compliance with clean air or water standards. Compliance shall also mean compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency in accordance with the requirements of the Air Act or Water Act and regulations.

(6) Facility means any building, plant, installation, structure, mine, vessel, or other floating craft, location, or site of operations, owned, leased, or supervised by a contractor or subcontractor, to be used in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location or site shall be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are located in one geographical area.

DISCOVERY OF ARCHAEOLOGICAL AND OTHER HISTORICAL ITEMS

In the event of an archaeological find during any phase of construction, the following procedure will be followed:

(1) Construction shall be halted, with as little disruption to the archaeological site as possible.

(2) The Contractor shall notify the Owner who shall contact the State Historical Preservation Officer.

(3) The State Historical Preservation Officer may decide to have an archaeologist inspect the site and make recommendations about the steps needed to protect the site, before construction is resumed.

(4) The entire event should be handled as expediently as possible in order to hold the loss in construction time to a minimum while still protecting archaeological finds.

A similar procedure should be followed with regard to more recent historical resources. Should any artifacts, housing sites, etc., be uncovered, the same procedure should be followed as for an archaeological find.

In the event archaeological/historical data are evaluated to meet National Register criteria, the Advisory Council on Historic Preservation may be notified and asked to comment by the South Dakota Department of Environment and Natural Resources.

WILLIAMS-STEIGER OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

A. AUTHORITY

(1) The contractor is subject to the provisions of the Williams-Steiger Occupational Safety and Health Act of 1970.

(2) These construction documents and the joint and several phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of the Federal law(s), including but not limited to the latest amendment of the following:

a. Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 94-596;

b. Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;

c. Part 1926 - Safety and Health Regulations for Construction, Chapter XVII of Title 29, Code of Federal Regulations.

B. SAFETY AND HEALTH PROGRAM REQUIREMENTS

(1) This project, its prime contractor and its subcontractors, shall at all times be governed by Chapter XVII of Title 29, Code of Federal Regulations, Part 1926 - Safety and Health Regulations for Construction (29 CFR 22801), as amended to date.

(2) To implement the program and to provide safe and healthful working conditions for all persons, general project safety meetings will be conducted at the site at least once each month during the course of construction, by the construction superintendent or his/her designated safety officer. Notice of such meeting shall be issued not less than three (3) days prior, stating the exact time, location, and agenda to be included. Attendance by the owner, architect, general foreman, shop steward(s), and trades, or their designated representatives, witnessed in writing as such, shall be mandatory.

(3) To further implement the program, each trade shall conduct a short gang meeting, not less than once a week, to review project safety requirements mandatory for all persons during the coming week. The gang foreman shall report the agenda and specific items covered to the project superintendent, who shall incorporate these items in his/her daily log or report.

(4) The prime contractor and all subcontractors shall immediately report all accidents, injuries, or health hazards to the owner and architect, or their designated representatives, in writing. This shall not obviate any mandatory reporting under the provisions of the Occupational Safety and Health Act of 1970.

(5) This program shall become a part of the contract documents and the contract between the owner and prime contractor, prime contractor and all subcontractors, as though fully written therein.

DAVIS-BACON AND RELATED ACTS

LABOR STANDARDS

Contractors performing work on construction projects which have been provided assistance through the State Revolving Fund must fulfill the requirements of the Labor Standards Provisions for federally assisted construction contracts. These standards are located at the end of this section.

WEEKLY CONTRACTOR PAYROLLS

Each week as work progresses, the contractor must submit to the Owner a copy of all weekly payrolls and required attachments stipulated therein. Sample suggested payrolls may be obtained from the Owner upon request. All weekly payrolls shall contain or have attached the following:

1. Name of each employee and the last four digits of the social security number.
2. Classification of employees (same as shown on wage determination).
3. Rate of pay not less than that shown on the wage determination.
4. Hours worked each day and total for each week for each employee.
5. All deductions made.
6. Net amount paid to employee.
7. The following certification:

"I certify that the payroll is correct and complete, that the wage rates contained therein are not less than the applicable rates contained in the Wage Determination decision of the Secretary of Labor and that the classification set forth for each laborer or mechanic conform with the work he performs."

_____ _____

(Signature) (Title)

COMPLIANCE WITH THE COPELAND (ANTI-KICKBACK) ACT

The following anti-kickback statement must be submitted with each set of weekly payrolls:

"I, (name of signatory party), (title), do hereby state: That I pay or supervise the payment of the persons employed by (contractor or subcontractor) on the (work or building); that during the payroll period commencing on the _____ day of _____, 20____, and ending the _____ day of _____, 20____, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly from the full weekly wages earned by any person, other than permissible deductions, as defined in Regulations, Part 3 (CFR Part 3) issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948; 63 Stat. 108; 72 Stat. 967; and 40 U.S.C. 276c), and described below: (Paragraph describing deductions, if any)"

_____ _____

(Signature) (Title)

All prime contractors shall include the wage determination and all the labor standards provisions in all subcontracts as herein specified.

The Contractor shall make employment records available for inspection by authorized representatives of the State of South Dakota and the Department of Labor, and will permit employees to be interviewed during working hours by these representatives. Payroll records will be maintained during the course of the work by the Prime Contractor, including a copy of the payroll of each Subcontractor and they shall be preserved for a period of three years thereafter.

Each monthly engineering estimate must be accompanied by the following certificate executed by each Prime Contractor employing mechanics and laborers at the site on work in which the Federal government is to participate:

Principal Contractor _____

Project Name _____

Project No. _____

I, _____, as official representative of the above named principal contractor do hereby certify as follows:

☐ All Labor Standards Requirements have been fulfilled by principal contractor and all subcontractors under this contract; or

☐ There is an honest dispute regarding the required provisions.

Explanation: _____

_____. _____

(Signature) (Title)

In the event of a violation of the Labor Standards provisions of the contract by the Prime Contractor or any Subcontractor, the owner may, after notice to the Contractor, suspend further payments or proceed to terminate the contract as provided in the Labor Standards section of the Contract.

FEDERAL LABOR STANDARDS PROVISIONS

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A.1 **Minimum Wages**

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act(29CFR Part 3), the full amount of wages and bona fide fringe benefits(or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR Part 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. EPA shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and EPA or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by EPA or its designee to the Administrator of the Wage and Hour Division, Employment standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise EPA or its designee or will notify EPA or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and EPA or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), EPA or its designee shall refer the questions, including the views of all interested parties and the recommendation of EPA or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise EPA or its designee or will notify EPA or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding.

EPA or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the

event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, EPA or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. EPA or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. Payrolls and basic records

(i) Basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents there of the types described in Section 1(b)(2)B of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Certified weekly payrolls shall contain the name and last four digits of the social security number. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(b) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB control Numbers 1215-0140 and 1215-0017.)

(ii)(a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to EPA or its designee if the agency is a party to the contract, but if the agency is not such party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to EPA or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR Part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

That the payroll for the payroll period contains the information required to be maintained under 29 CFR Part 5.59(a)(3)(i) and that such information is correct and complete;

That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3.

That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of compliance" required by paragraph A.3(ii)(b) of this section.

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph A.3(i) of this section available for inspection, copying, or transcription by authorized representatives of EPA or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, EPA or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR Part 5.12.

4. **Apprentices and trainees.**

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program

for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevail for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) **Equal employment opportunity.** The utilization of apprentices, trainees, and journeymen under this part shall be in conformity with the equal and employment opportunity requirements of executive order 11246, as amended, and 29 CFR Part 30.

5. **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. **Subcontracts.** The contractor or subcontractor will insert in any subcontracts the clauses contained in 29 CFR 5.5 (a)(1) through (10) and such other clauses as EPA or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. **Contract termination; debarment**. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. **Compliance with Davis-Bacon and Related Act Requirements**. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. **Disputes concerning labor standards**. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and EPA or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. **Certification of Eligibility**

    (i). By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded EPA contracts or participate in EPA programs pursuant to 24 CFR Part 24.

    (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded EPA contracts or participate in EPA programs pursuant to 24 CFR Part 24.

    (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part "Whoever, for the purpose of...influencing in any way the action of such Administration...makes, utters or publishes any statement, knowing the same to be false...shall be fined not more than $5,000 or imprisoned not more than two years or both."

11. **Complaints, Proceedings, or Testimony by Employees**. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. **Contract Work Hours and Safety Standards Act.** As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek, whichever is greater.

Violation: liability for unpaid wages: liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic

including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

Withholding for unpaid wages and liquidated damages. EPA or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. **Health and Safety**

No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly part 1518) and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54,83 Stat.96).

The Contractor shall include the provisions of this Article in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Administrator of Environment and Natural Resources or the Secretary of Labor shall direct as a means of enforcing such provisions.

The Building wage rates will govern Schedule A only.
The Heavy and Highway wage rates will govern Schedules B1, B2 and C.

General Decision Number: SD140003 03/21/2014 SD3

Superseded General Decision Number: SD20130003

State: South Dakota

Construction Type: Building

County: Pennington County in South Dakota.

BUILDING PROJECTS (Does not include single family homes and apartments up to and including 4 stories)

Modification Number	Publication Date
0	01/03/2014
1	03/21/2014

BRSD0004-002 05/01/2013

	Rates	Fringes
BRICKLAYER	$ 31.65	3.35

ELEC1250-001 07/01/2013

	Rates	Fringes
Electricians: (Includes Low Voltage Wiring for Fire Alarm Systems, Security Systems, Phones & Computers)	$ 20.82	7.74

SHEE0010-017 06/01/2008

	Rates	Fringes
Sheet metal worker (All related HVAC Work, Including Pipe & Duct Work and Installation of the System)	$ 18.68	9.37

SUSD2000-003 03/29/2000

	Rates	Fringes
Carpenters:		
Acoustical Work	$ 12.24	
Drywall Hanging & Metal Stud Work	$ 11.83	
Form Building/Form Setting	$ 11.52	.69
All Other Work	$ 11.31	
Cement Mason/Concrete Finisher	$ 11.88	

Electricians:
All Work, other than Low
Voltage Wiring for Fire
Alarms, Security
Systems, Phones & Computers.$ 13.79 1.47

Ironworkers:
Reinforcing.....$ 9.93
Structural.....$ 11.96 2.36

Laborers:
Brick Tender.....$ 9.00
Common.....$ 7.34

Painters:
Brush; Roller & Spray.....$ 11.50 1.00

Power equipment operators:
Backhoe.....$ 10.50
Excavator.....$ 13.50
Front End Loader.....$ 10.13 .47

ROOFER.....$ 10.00

Truck drivers:
Dump.....$ 9.29

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the

effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

The Building wage rates will govern Schedule A only.
The Heavy and Highway wage rates will govern Schedules B1, B2 and C.

General Decision Number: SD140009 01/03/2014 SD9

Superseded General Decision Number: SD20130009

State: South Dakota

Construction Types: Heavy and Highway

Counties: South Dakota Statewide.

Modification Number	Publication Date
0	01/03/2014

* SUSD2013-001 08/16/2013

	Rates	Fringes
Carpenter/Form Builder	$ 21.82	
CONCRETE FINISHER	$ 20.81	
ELECTRICIAN	$ 21.84	
LABORER		
Group 1	$ 15.08	
Group 2	$ 16.78	
Group 3	$ 18.42	
Group 4	$ 20.81	

LABORER CLASSIFICATIONS:

GROUP 1: Air Tool Operator; Common Laborer; Landscape Worker, Flagger, Pilot Car Driver; Trucks under 26,000 GVW; Blue-top Checker, Materials Checker.

GROUP 2: Mechanic Tender; Pipe Layer (except culvert); Form Builder Tender; Special Surface Finish Applicator; Striping.

GROUP 3: Asphalt Plant Tender; Pile Driver Leadsman; Form Setter, Oiler/Greaser.

GROUP 4: Grade Checker

PAINTER	$ 20.81	
POWER EQUIPMENT OPERATOR:		
Group 1	$ 16.15	
Group 2	$ 17.62	
Group 3	$ 19.33	
Group 4	$ 19.73	
Group 5	$ 21.80	

POWER EQUIPMENT OPERATORS CLASSIFICATIONS:

GROUP 1: Concrete Paving Cure Machine; Concrete Paving Joint Sealer; Conveyor; Tractor (farm type with attachments); Self-Propelled Broom; Concrete Routing Machine; Paver Feeder; Pugmill; Skid Steer.

GROUP 2: Bull Dozer 80 HP or less; Front End Loader 1.25 CY or less; Self-Propelled Roller (except Hot Mix); Sheepsfoot/50 Ton Pneumatic Roller; Pneumatic Tire Tractor or Crawler (includes Water Wagon and Power Spray Units); Wagon Drill; Air Trac; Truck Type Auger; Concrete Paving Saw.

GROUP 3: Asphalt Distributor; Bull Dozer over 80 HP; Concrete Paving Finishing Machine; Backhoes/Excavators 20 tons or less; Crusher (may include internal screening plant); Front End Loader over 1.25 CY; Rough Motor Grader; Self-Propelled Hot Mix Roller; Push Tractor; Euclid or Dumpster; Material Spreader; Rumble Strip Machine.

GROUP 4:Asphalt Paving Machine Screed; Asphalt Paving Machine; Cranes/Derricks/Draglines/Pile Drivers/Shovels 30 to 50 tons; Backhoes/Excavators 21 to 40 tons; Maintenance Mechanic; Scrapers; Concrete Pump Truck.

GROUP 5:Asphalt Plant; Concrete Batch Plant; Backhoes/Excavators over 40 tons; Cranes/Derricks/Draglines/Pile Drivers/Shovels over 50 tons; Heavy Duty Mechanic; Finish Motor Grader; Automatic Fine Grader; Milling Machine; Bridge Welder.

TRUCK DRIVER

Group 1.....$ 15.88
Group 2.....$ 18.29

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Tandem Truck without trailer or pup; Single Axle Truck over 26,000 GVW with trailer.

GROUP 2: Semi-Tractor and Trailer; Tandem Truck with Pup.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

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0000/9999: weighted union wage rates will be published annually each January.

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Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

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* a survey underlying a wage determination
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On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed. With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

SECTION 00800

SUPPLEMENTAL CONDITIONS

PART 1 - GENERAL

1.1 General.

A. These Supplemental Conditions amend or supplement the STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT (EJCDC C-700, 2007 Ed.) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.
B. Refer to the SRF General Conditions for additional requirements.

1.2 Defined Terms (GC-1.01).

A. The terms used in these Supplemental Conditions which are defined in the Standard General Conditions of the Construction Contract have the meanings assigned to them in the General Conditions.

1.3 Subsurface Conditions (GC-4.02 - 4.03).

A. A geotechnical exploration program report is included in Appendix A. This information should be used by the Contractor as reference only.
B. There is no express or implied guarantee as to the accuracy or completeness of the subsurface information, nor of the interpretation thereof by the Owner, the Engineer, or any of their representatives. Each prospective bidder shall make his own interpretation of subsurface information and shall, at his own expense, make any surveys and investigations as he may deem necessary to evaluate conditions which will affect performance of the work.
C. Delete paragraph 4.03 and all of its subparagraphs in their entirety and insert the following paragraphs 4.03.1 and 4.03.2 in its place:
   4.03.1 Notice of Differing Subsurface or Physical Conditions: If Contractor believes that any subsurface or physical condition at or contiguous to the site that is uncovered or revealed either fits the material descriptions of paragraph 4.06 or is of an historic or paleontologic nature, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any work in connection therewith (except in an emergency as permitted by paragraph 6.16), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such conditions or perform any work in connection therewith (except as aforesaid) until receipt of written to do so.
   4.03.2 Contractor shall not construe this paragraph 4.03 or any of its subparagraphs to infer that a contract change may be made for varying subsoil types or for varying groundwater levels.
D. Add the following language immediately prior to the first sentence of 4.06.D. of the General Conditions:

   The Contractor shall acknowledge that the cost of cleanup of newly exposed polluted or contaminated conditions is directly related to the extent of the exposure. The Contractor shall employ personnel who are trained in recognizing polluted or contaminated conditions. Failure to stop work in connection with newly exposed polluted or contaminated conditions will be construed to increase the Contractor's liability relative to cleanup of continued construction beyond the time of initially uncovering the polluted or contaminated condition.

1.4 Contract Bonds, Workmen's Compensation and Insurance (Article 5).

A. Contract Bond.
   1. The Contractor shall furnish a performance bond and a labor and material payment bond to the Owner for the full amount of the Contract price. This bond shall have a maintenance guarantee for a period of one year form final completion.
   2. Under this maintenance guarantee, the Owner shall waive subrogation rights against the Contractor, Subcontractors, and Engineer.

B. Liability Insurance.
   1. The Contractor shall, as provided in the General Conditions, obtain insurance acceptable to the Owner in a company or companies acceptable to the Owner and shall furnish copies of all policies of insurance (except Workmen's Compensation Insurance, in which case a certificate of insurance is adequate) to the Owner at the time he executes the Contract.
   2. The Contractor shall not commence work nor shall allow his employees or subcontractors or anyone to commence work until all required insurance has been obtained and certificates of insurance submitted to the Owner.
   3. The Contractor shall take out and maintain at all times during the entire period of performance and until the work is accepted by the Owner under this Contract the required policies of insurance.
   4. The limits of liability for the insurance required by paragraph 5.02 and 5.03 of the General Conditions shall provide coverage for not less than the amounts stated in the Purchase Order Terms and Conditions or greater where required by Laws and regulations.
      (a) Workers' Compensation, etc., under paragraphs 5.02 and 5.03 of the General Conditions:
         (1) State: Statutory
         (2) Applicable Federal
         (e.g. Longshoreman's): Statutory
         (1) Employer's Liability: $500,000
         (2) Include right of subrogation against Owner or its employees for any injury to a covered employee while working on Owner's premises.
      (b) Comprehensive General Liability under paragraph 5.04 of the General Conditions which shall also include completed operations and product liability coverages.

$2,000,000	General Aggregate (Except Products-Completed Operations)
$1,000,000	Products-Completed Operations Aggregate
$1,000,000	Personal and Advertising Injury (Per Person/Organization)
$1,000,000	Each occurrence (Bodily Injury and Property Damage)
$10,000	Limit (Per Person Medical Expense)

- Property Damage liability insurance will provide Explosion, Collapse and Underground coverages where applicable.
- Excess Liability

$5,000,000	General Aggregate
$5,000,000	Each Occurrence

      (c) Comprehensive Automobile Liability under paragraphs 5.3.6 of the General Conditions:

- Bodily Injury:

$1,000,000	Combined Single Limit Each Accident

Property Damage:

$1,000,000	Each Occurrence or combined single limit of $3,000,000

C. Contractual Liability Insurance
   1. The Contractual Liability required by paragraph 5.4 of the General Conditions shall provide coverage for not less than the following amounts:

$1,000,000	General Aggregate
$1,000,000	Each Occurrence (Bodily Injury and Property Damage)

D. Owner's Liability Insurance
   1. The Owner, Engineer and First National Bank of Sioux Falls shall be named and listed as additional insureds on the Contractor's general liability policy. The inclusion of more than one named insured shall not operate to impair the rights of one insured against another insured, and the coverages afforded shall apply as though separate policies had been issued to each insured.
   2. The Owner endorsement as additional insureds or Contractor's Liability Policy shall state the endorsement refers to "Owner and/or its subsidiaries, associated, affiliated, owned, or controlled companies as now or hereafter constituted with respect to Project."

E. "All-Risk" Property Insurance
   1. Contractor shall purchase and maintain until final payment property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in these Supplemental Conditions or required by Laws and Regulations). This insurance shall include the interests of Owner, Contractor, Subcontractors, Engineer, Engineer's consultants, and the First National Bank of Sioux Falls in the Work (all of whom shall be listed as insureds or additional insured parties), shall insure against the perils of fire and extended coverage, shall include "all-risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in these Supplemental Conditions, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineer, architects, attorneys and other professionals). If not covered under the "all-risk" insurance or otherwise provided in these Supplemental Conditions, Contractor shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment.

F. Receipt and Application of Property Insurance Proceeds
   1. If Contractor is required to purchase property insurance, then any insured loss will be adjusted with Contractor and payable to Contractor.

G. Certificates of Insurance
   1. Certificates and endorsements of all required insurance policies thereof shall be submitted prior to commencing the work. Proof of insurance shall be submitted directly to the Owner for review and approval with a record copy only to the Engineer for his files. The Contractor shall not begin any work until the Owner has reviewed and approved the Insurance Certificate. If the Insurance Agent executing the Insurance Certificate indicates that there are special limitations on the Insurance Policy, then a copy of policy exclusions must be submitted with the Insurance Certificate.
   2. Errors and Omissions Coverage: Any insurance agent who signs the certificate of insurance shall furnish with it a certificate that the agent has Errors and Omissions coverage with limits of at least $600,000 per occurrence.

1.5 <u>"Or Equal" Equipment or Substitution (GC-6.05)</u>

A. Major items of mechanical equipment, electrical equipment, and process equipment have been specified by name followed by the works "or equal." In all cases, the dimensions shown on the plans are based on the named equipment.
B. It shall be fully acknowledged and understood that the furnishing and installing of any "or equal" equipment shall include the preparation and submission of all details, shop and construction drawings showing all modifications necessary of accommodate such equipment.
C. It shall be further acknowledged and understood that if any "or equal" is bid, the bid shall include all costs necessary to make any and all architectural, structural, mechanical and electrical changes

required to incorporate such equipment into the project. No extras will be allowed after the award of the Contract for any modifications required to install or properly operate "or equal" equipment.

D. All "or equal" equipment shall conform to the requirements of the respective parts and sections of the plans and specifications and shall be equal to the specified item. Guarantees shall also conform to the Contract Documents.

E. The Contractor shall pay for all redesign costs associated with the retrofitting required for the installation and use of "or equal" equipment.

1.6 Subcontractors and Suppliers (GC-6.06)

A. Refer to Instructions to Bidders for any further requirements regarding subcontractor and supplier approval.

1.7 Separate Contractor Claims

A. Should Contractor cause damage to the work or property of any separate Contractor at the site, or should any claim arising out of Contractor's performance of the Work at the site be made by any separate Contractor against Contractor, Owner, Engineer, the Construction Coordinator or any other person, Contractor shall promptly attempt to settle with such other Contractor by agreement, or to otherwise resolve the dispute by arbitration or at law. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold Owner, Engineer and the Construction Coordinator harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate Contractor against Owner, Engineer or the Construction Coordinator to the extent based on a claim arising out of Contractor's performance of the Work. Should a separate Contractor cause damage to the Work or property of Contractor or should the performance of Work by any separate Contractor at the site give rise to any other claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer or the construction coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer or the Construction Coordinator on account of any such damage or claim. If Contractor is delayed at any time in performing or furnishing Work by any act or neglect of a separate Contractor and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Time attributable thereto, Contractor may make a claim for an extension of time. An extension of the Contract Time shall be Contractor's exclusive remedy with respect with respect to Owner, Engineer and Construction Coordinator for any delay, disruption, interference or hindrance caused by any separate Contractor. This paragraph does not prevent recovery from Owner, Engineer or Construction Coordinator for activities that are their respective responsibilities.

1.8 Engineer's Status During Performance of the Work (GC Article 9)

A. This section is a supplement to Article 9-Engineer's Status During Construction of the General Conditions.

B. Owner's Consultant

1. The Engineer, as the design professional will be the Owner's consultant during the performance of the work. The duties and responsibilities and the limitations of authority of the Engineer as the Owner's consultant during this period are set forth in these Contract Documents and will not be extended without written consent of the Owner and the Engineer. In the event of an extension of the Engineer's duties and responsibilities, the Contractor will provide with written notice of such amendment.

C. Role as Interpreter

1. The Engineer will be the initial interpreter of the terms and conditions of the Contract Documents and the judge of the performance thereunder. All matters relating to the execution and progress of the work, or the interpretation of or performance under the Contract Documents, shall be referred initially to the Engineer for decision which will be rendered promptly.

2. The Engineer will issue such written interpretation of the Contract Documents (in the form of drawings or otherwise) as he may determine necessary which will be consistent with or reasonably inferable from the overall intent of the Contract Documents.

D. Communications With Contractor

1. All communications with the Contractor pertaining to performance of the work will normally be issued through the Engineer.

E. Resident Project Representative

1. The Resident Project Representative will be either the Engineer or the Engineer's agent, as so designated. The Resident Project Representative is responsible for assisting the Project Engineer in determining that the project is completed in accordance with the Plans and Specifications and Contract Documents.
2. Communications pertaining to compliance submittals, written interpretations, and amendments shall be directed to the Engineer at his home office with copies to the Resident Project Representative.
3. Communications pertaining to day-to-day operations at the site shall be directed to the Resident Project Representative.

F. Authority to Disapprove or Reject Defective work

1. All equipment and materials used and all work done with at all times will be subject to the inspection, tests, and approval of the Engineer or his authorized representatives.
2. The Engineer has the authority to disapprove or reject any work which is "defective." He also has the authority to require special inspection or testing of the work.
3. The Engineer has the authority to disapprove or reject any defective workmanship, equipment, or material.
4. If the work is defective, or the Contractor fails to supply sufficient skilled workmen or suitable equipment or materials, the Engineer may order the Contractor to stop the work or any portion thereof until the cause for such order has been eliminated; however, this right of the Engineer to stop the work will not give rise to any duty on the part of the Engineer to exercise this right for the benefit of the Contractor or any other party.

G. Limitations on Engineer's Responsibilities

1. This article states the limitations on the Engineer's responsibility as between the Engineer and the Contractor.
2. Neither Engineer's authority to act under these Contract Documents nor any decision made by him in good faith either to exercise or not exercise such authority will give rise to any duty or responsibility of the Engineer to the Contractor, any subcontractor, supplier or manufacturer, any of their agents or employees, or any other person performing any of the work.
3. The Engineer is not responsible for construction, safety precautions, and programs incidental thereto. Neither is he responsible for the Contractor's failure to perform the work in accordance with the Contract Documents.
4. The Engineer is not responsible for the acts or omissions of any Contractor or any subcontractors, Contractor's supplier or manufacturer, or any of his or their agents or employees.
5. The presence or absence of the Engineer or his representative will not relieve the Contractor of any responsibility or of any guarantee of his performance. Neither will observation by the Engineer or his representative in any way be understood to relieve the Contractor of any responsibility for proper supervision of the work at all times.
6. The review and acceptance of the Contractor's compliance submittals by the Engineer will be understood to be only for conformance with the design concept, for compliance with the intent of the Contract Documents, and to assist the Contractor in interpreting the Contract Documents, so as to preclude delivery of the equipment or materials not acceptable for the work. The Engineer's acceptance of compliance submittals will not place upon him any responsibility for any deviations from the requirements of the Contract Documents unless the Contractor has in writing called the Engineer's attention to such deviation at the time of the submission and the Engineer has given written concurrence on the specific deviation. Such deviations will be included in a contract amendment.

H. Engineer's Pay Estimates
   1. Any Engineer's pay estimate will constitute a representation by the Engineer to the Owner that work has progressed to the extent indicated. To the best of his knowledge, the quality of the work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the amount shown in the Engineer's pay estimate.
   2. Rendering the Engineer's pay estimate is not an approval of the quality or quantity of the work, the means or methods of construction, or the monetary methods used by the Contractor.
   3. The Engineer may refuse to render an Engineer's pay estimate for the whole or any part of any payment if, in his opinion, it would be an incorrect representation to the Owner.

1.9 Application for Progress Payment (GC-14.02)

A. Change the last sentence to read as follows:

The Owner shall retain from each payment prior to final completion and acceptance of all works covered by the Contract Documents an amount as follows:

12% of the first $50,000 of earned contract value.
5% of the next $200,000 of earned contract value.
2 ½% of the earned contract value over $250,000.

1.10 Arbitration/Dispute Resolution (GC-16)

A. Add the following paragraph:

The Contractor will carry on the work and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing. The Owner reserves the right to deny arbitration and to resolve any dispute in a court of law.

1.11 Conflict (GC-2.05)

A. In case of conflict between the "General Conditions and Supplemental Conditions" and applicable federal regulations for federally assisted projects (including 40 CFR Part 31), the provisions of the federal regulations shall govern.

1.12 Contract Time and Liquidated Damages

A. The contract time and liquidated damages are stated in the Agreement.
B. Time being an essential element of the Contract, it is hereby agreed that the Owner will be entitled to damages for failure on the part of the Contractor to complete the work within the prescribed time. In view of the difficulty in making a precise determination of actual damages incurred, the Contractor will be assessed a daily charge in the amount stipulated, not as a penalty, but as liquidated damages to compensate for the additional costs incurred.
C. In any suit involving assessment or recovery of liquidated damages, the reasonableness of daily charges shall be presumed and the amount assessed will be in addition to every other remedy not or hereinafter enforceable at law, in equity, by statute, or under the Contract.
D. In the event that the work is not completed within the time constraints specified, the Contractor agrees to pay the Owner liquidated damages for each calendar day that all work is not completed within the time constraints specified in the Agreement. This amount is in addition to the liquidated damages specified for substantial completion, if applicable.
E. No liquidated damages will accrue during periods of authorized suspension.
F. Permitting the Contractor to continue to finish the work or any part of it after the time fixed for its completion shall not in any way operate as a waiver on the part of the Owner of any of its rights under the contract. Neither by the act of taking over the work nor by annulment of the Contract shall the Owner forfeit the right to recover liquidated damages from the Contractor or his Sureties.

1.13 Permits (GC-6.08)

A. Add the following Paragraph B:

B. Contractor shall obtain dewatering and/or storm water permits for the construction site, if required, and shall be responsible for compliance with SDDENR regulations for construction sites. The Owner will sign and approve the permit application.

1.14 Sales Tax (GC-6.10)

A. Contractor shall include state sales tax, use tax and excise tax in the bid price and shall copy all supply invoices to Owner for Owner's use in collecting any tax refund.

**** END OF SECTION ****

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.1 Scope of Work Under This Contract. The project work consists generally of the construction of the following:

Schedule A: Croyle/Nonanna Wells Filtration System

Schedule B1: Pinewood Drive Water Main and Raw Water Line

- OR -

Schedule B2: Nonanna to Croyle Raw Water Main

Schedule C: Effluent Force Main Line

The Contractor will furnish all equipment materials, supplies and appurtenances; and provide all construction equipment and tools; and perform all necessary labor and project supervision.

The Contractor will coordinate the progress of the work, including coordination of subcontractors, suppliers, utilities and Owner to facilitate completion of the work.

1.2 Work by Owner.

A. Work by Owner.
   1. Colonial Pine Hills Sanitary District or Contractor for the Colonial Pine Hills Sanitary District will complete the following items as indicated on the plans.
      a. Colonial Pine Hills Sanitary District will contract with their own SCADA Controls Contractor to install a SCADA control panel and make terminations at the panel. Contractor shall bring all SCADA wiring to the panel for integration of the existing system with the new treatment facility. The Contractor will be required to fully furnish and install SCADA systems and panels required to operate the filtration equipment.
   2. Work not specifically described above or shown otherwise on the plans shall be by the Contractor.

B. Water System Operations.
   1. Colonial Pine Hills Sanitary District forces will coordinate system operations with the Contractor and will operate valves and assist with water system operation.

1.3 Contractor's Use of Premises. The Contractor shall limit his use of the project site to those areas within the Owner's property as shown on the Plans.

1.4 Owner's Access to Site. The Contractor shall cooperate with the Owner in all construction operations to minimize conflict. The contractor shall at all times allow for access by the Engineer and Owner's personnel and equipment.

1.5 Protection of Property. The Contractor shall protect, shore, brace, support and maintain all underground pipes, conduits, drains and other underground construction uncovered or otherwise affected by construction operations.

Lawn sprinklers may be present on this project. The Contractor is responsible for locating and repairing if damaged during construction.

The Contractor shall restore to their original condition roadways, utilities, fences, landscaping and other surface features affected by construction operations.

The Contractor will be responsible for damage to roads or pavements which may be caused by transporting equipment or materials to or from the project site, or at the project site, whether by his own forces or by supplier or subcontractors.

**** END OF SECTION ****

SECTION 01200

PROJECT MEETINGS

1.1 Description. A preconstruction meeting and periodic progress meetings will be required on this project. The Engineer and Contractor will share responsibilities for meetings as follows:

The Engineer will:

A. Suggest meeting dates and times to be verified and agreed to by the Contractor.
B. Prepare an agenda for meetings.
C. Preside at meetings.
D. Record minutes to include important decisions and other significant items.
E. Reproduce and distribute minutes to affected parties, including Contractor, Owner and regulatory agencies.

The Contractor will make notification of meetings to subcontractors as necessary.

1.2 Preconstruction Meeting. A preconstruction meeting shall be scheduled after issuance of Notice to Proceed, with meeting responsibilities as set forth above.

Meeting attendance must include the following, unless prior arrangements are made otherwise:

A. Owner's representative(s).
B. Engineer and principal consultants.
C. Contractor's Project Manager and Project Superintendent.
D. Major Subcontractors and Suppliers.

The agenda will include the following minimum items:

A. Review of project documents, including contracts, insurance forms, bonds and related documents.
B. General conditions of the contract.
C. Subcontractors and Suppliers.
D. Construction schedules and work sequence.
E. Project coordination responsibilities and job communication.
F. Procedures for field orders, change orders, proposals, shop drawings, submittals.
G. Payment procedures.
H. Use of premises, office, storage areas, utilities.
I. Construction facilities, equipment, storage and security.

1.3 Progress Meetings. Periodic progress meetings may be scheduled by the Engineer during the course of the work if deemed appropriate by the Engineer and Owner.

Meeting attendance shall include those individuals set forth under paragraph 1.2, except that suppliers and subcontractors need attend only when included in the agenda. Others, such as utility company representatives, shall be notified when appropriate to the agenda.

Agenda items shall include the following:

A. Progress review.
B. Identification of problems, scheduling conflicts.
C. Revisions to construction schedule.
D. Projection of upcoming work progress.
E. Review of submittal status and schedules.
F. Review of payment schedules and status.
G. Other business as appropriate.

**** END OF SECTION ****

SECTION 01340

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

1.1 General

A. The Contractor shall submit shop drawings, product data and samples for all equipment and materials as set forth in the specifications.
B. The Contractor is required to submit to the Engineer a detailed schedule of necessary shop drawings and product data.

1.2 Submittal Requirements

A. Shop Drawings:
   1. Shop drawings shall be submitted in sufficient detail to show the type, size, arrangement and function of all components.
   2. Details shall refer to Plan Sheet number, specification section, schedule or other reference to the Contract Documents.
B. Product Data:
   1. Product data shall clearly show the pertinent product, model number, size, performance characteristics, connections, anchorages and other data necessary to evaluate compliance with project requirements.
   2. Delete extraneous information not applicable to the work and supplement with additional information where standard literature or drawings do not provide information specifically applicable to the work.
C. Samples: Submit samples in sufficient size or quantity to fully illustrate characteristics, color, texture, pattern and details of the product.

1.3 Procedures

A. Contractor Responsibility:
   1. The Contractor shall review all shop drawings and samples prior to submission and shall verify the complete conformance of the submittal with project requirements.
   2. Field measurements shall be verified before submittals and any variation from project requirements shall be identified and brought to the attention of the Engineer in writing.
B. Submittal Requirements:
   1. Submit shop drawings, product data and samples in strict accordance with the approved schedule.
   2. Submit five (5) copies for use and distribution by the Engineer and such additional number of copies needed for his own use or for the use of his subcontractors, or suppliers.
   3. Coordinate with the Engineer for quantities or volumes of samples required.
   4. Each submittal shall contain the following minimum information:
      a. Date of submission.
      b. Project title and number.
      c. Contractor's name.
      d. Supplier or manufacturer's names and addresses.
      e. Identification of product with reference to specification number and/or plan sheet.
      f. Field measurements and dimensions.
      g. Reference to applicable standards (ASTM, etc.).
      h. Clear identification of deviations from standard items or deviations from specifications.
      i. A Contractor's stamp certifying as to his review and verification of all criteria and field measurements. Stamp must be signed and dated.

C. Engineer's Review:
   1. The Engineer will review submittals and mark as "reviewed," "rejected," "revise and resubmit" or "make corrections."
   2. Three (3) copies will be retained for the Engineer's use, with all other copies returned to the Contractor.
   3. If resubmission is required, the Contractor shall make the necessary corrections and make an entirely new submittal with the same number of copies as required for an initial submittal.
   4. Resubmitted data must clearly show changes other than those requested by the Engineer.
   5. The Engineer will review submittals with reasonable promptness and in accordance with the submittal schedule.
   6. The Engineer will return without review any material not submitted directly from the Contractor, such as submittals from subcontractors or suppliers.

D. Engineer's Responsibility:
   1. The Engineer will assume no responsibility for the correctness, dimensional accuracy or completeness of submittals.
   2. The Engineer's review will in no way relieve the Contractor of his responsibility to furnish materials and products in compliance with the Contract Documents.
   3. Unless deviations from Contract Documents are clearly identified in the submittal, the Engineer's review does not constitute an acceptance by the Engineer.

1.4 Substitutions

A. The contract is based on the standards of quality established in the Contract Documents.
B. Substitutions will be permitted only with the approval of the Engineer.
C. Submit complete product data for proposed substitutions not later than seven (7) days in advance of the bid opening date.
D. Products or equipment which are specified by reference to standard specifications (ASTM, etc.), and products specified by reference to a specific manufacturer's name and catalogue number do not require further approval, except as provided by the normal submittal process after contract award.
E. "Or Equal" Provisions:
   1. Where the phrase "or equal" or "Engineer approved equal" is used in the specifications, do not assume that a substitute material or product will be approved as equal unless the item has been specifically approved by the Engineer.
   2. The Engineer is solely responsible for evaluating and approving substitutions, and his decision shall be final.

**** END OF SECTION ****

SECTION 01360

CONSTRUCTION STAKING AND LAYOUT

1.1 General

A. The Engineer will furnish basic survey control and limited amounts of construction staking services for use by the Contractor as described herein. The Contractor will be responsible for the accurate construction of all work to the lines, grades and elevations shown on the drawings.

1.2 Survey Control and Construction Staking Provided by the Engineer

A. The Engineer will provide the following basic survey control and construction staking on this project:
   1. Offset and grade stakes appropriate intervals for piping and pipe appurtenances.
   2. Offset and grade stakes at structure.
   3. Blue top grade and/or slope stakes at appropriate intervals for finish site grading.

B. The Engineer furnished staking will be performed generally in the sequence and at such time as the Contractor requests provided that at least 48 hours advance notification is given to the Engineer of staking requirements.

C. The Engineer will charge the Contractor for replacement of lost or destroyed staking. The basic charge rate of a 2-man survey crew will be $116 per hour plus expenses and applicable taxes. No replacement staking will be performed without the Contractor's written request and acknowledgment of payment obligations.

1.3 Survey and Staking to be Provided by Contractor

A. Survey and staking needs beyond that described in 1.2 above will be the responsibility of the Contractor.

1.4 Changes or Discrepancies on Survey Layout

A. The Engineer shall be promptly notified of any discrepancies discovered during layout work. The Contractor shall not make changes or relocations without written approval of the Engineer.

**** END OF SECTION ****

SECTION 01390

PAYMENT REQUESTS

1.1 General. In accordance with the applicable provisions of the General Conditions of the Contract, the Contractor shall be responsible for preparation and submittal of partial payment requests.

1.2 Format and Data Required. Submit only typewritten applications on preprinted forms (NSPE Document 1910-8-E, or equivalent), with supplemental data, continuations or itemization on plain 8 ½" x 11" paper.

Complete all information, including change orders approved before the application date. Dollar summaries must agree with itemizations and continuation sheets. The application must be signed by an officer of the company.

Itemize work in the exact sequence and numbering as the Bid Schedule. Fill in dollar amounts of earned values, rounding to the nearest dollar. Payments will be made on a monthly basis for work completed during the previous period. No materials stored payment will be made on this project.

1.3 Supplemental Data. Each partial payment request must include the following substantiating data:

A. Quantity records and invoices from any materials for which payment is being requested.

1.4 Submittal Procedure. Submit three copies of the payment application and all supplemental items to the Engineer. The Engineer will require a minimum of 3 working days to evaluate a properly completed application before forwarding to the Owner with a Certificate for Payment. The Contractor is solely responsible for the timing of applications, and the Engineer assumes no responsibility for processing delays. Improperly completed applications or incomplete submittals will be returned to the Contractor, and must be resubmitted until satisfactory.

**** END OF SECTION ****

SECTION 01400

TESTS AND INSPECTIONS

PART 1 - GENERAL

1.1 Scope of Tests

A. All materials, equipment, installation, and workmanship included in this contract, if so required by the Engineer, shall be tested and inspected to prove compliance with the contract requirements.
B. No tests specified herein shall be applied until the item to be tested has been inspected and approval given for the application of such test.
C. Tests and inspections shall include:
   1. The delivery acceptance of tests and inspections.
   2. The installed tests and inspections of items as installed.
   3. Performance guarantee tests.
   4. Final testing and start-up.
D. Tests and inspections, unless otherwise verified, shall be in accordance with the recognized standards of the industry.
E. The Contractor shall pay for tests and inspections which may be so specified herein. The Owner shall pay the cost of testing and inspection not normally conducted by manufacturers or material suppliers or not specified herein.
F. Contractor shall conduct field tests on his work as required to comply with applicable codes to determine acceptability of workmanship, and as specified including, but not limited to, the following:
   1. Hydrostatic testing of piping, equipment and water retaining structures. Calibration tests.
   2. Preliminary tests and checks associated with placing equipment and systems into service.
   3. Other tests as defined in the specifications.

1.2 Evidence Of Test

A. The form of evidence of satisfactory fulfillment of delivery acceptance test and of installed test and inspection requirements shall be, at the discretion of the Engineer, either by tests and inspections carried out in his presence or by certificates or reports of tests and inspections carried out by approved persons or organizations.

1.3 Delivery Acceptance Tests

A. The delivery acceptance tests and inspections shall be at the Contractor's expense for any materials or equipment specified herein and shall include the following:
   1. Test of items during the process of manufacture and/or on completion of manufacture, comprising material test, hydraulic pressure tests, electric tests, performance and operating tests, and inspections in accordance with the relevant standards of the industry and, more particularly, as detailed in individual clauses of these specifications or as may be required by the Engineer to satisfy himself that the items tested and inspected comply with the requirements of this contract.
   2. Inspection of all items delivered at the site in order that the Engineer may be satisfied that such items are of the specified quality and are in good order and condition at the time of delivery.

1.4 Installed Tests and Inspections of Items as Installed

A. All mechanical and electrical equipment shall be tested by the Contractor to the satisfaction of the Engineer before any facility is put into operation. Tests shall be as specified herein and shall be made to determine whether the equipment has been properly assembled, aligned, adjusted, and connected. Any changes, adjustments, or replacements required to make the equipment operate as specified shall be carried out by the Contractor as part of the work.

1.5 Performance Guarantee Test

A. Where performance tests are required, the Contractor shall conduct the test as specified in the presence of Engineer.

1.6 Final Testing and Start-up

A. At lease 30 days before the time allowed in his construction schedule for commencing testing and start-up procedures, the Contractor shall submit to the Engineer, in duplicate, details of the procedures he proposes to adopt for testing and start-up of all mechanical and electrical equipment to be operated singly and together, except when such procedures have been covered in the specifications.
B. During the testing of mechanical, instrumentation, and electrical equipment, the Contractor shall make available experienced factory-trained representatives of the manufacturers of all the various pieces of equipment, who shall instruct the Owner's personnel in the operation and care thereof. Instruction shall include step-by-step troubleshooting procedures with all necessary test equipment.
C. After successful testing, the manufacturer's representative shall provide the Contractor with an affidavit that the equipment installation is complete and has been carried out in full conformance with the manufacturer's recommendations. The Contractor shall forward to the Engineer copies of each affidavit received prior to final payment.
D. If, under test, any portion of the work fails to fulfill the contract requirements and is altered, renewed or replaced, tests on that portion so altered, removed replaced, together with all other portions of the work as are affected thereby, shall, if so required by the Engineer, be repeated within reasonable time and in accordance with the specified conditions, and the Contractor shall pay to the Owner all reasonable expenses incurred by the Owner as a result of the carrying out of such tests.
E. Before final acceptance of the work, the Contractor shall return any units which have been put in temporary storage to an operating condition. He shall demonstrate that all components of the mechanical systems are properly functioning and in a fully operational condition. All pumps, motors, and related equipment shall be operated during the trial period. A range of discharge head conditions shall be effected for pumping units by partially closing valves as directed by the Engineer. In the event malfunctions are discovered, the Contractor shall correct them. If necessary, manufacturer's representatives shall be recalled to make corrections or adjustments.
F. Final testing and start-up shall be combined with the instruction of operating personnel to the end that when final testing is completed, the stations can be turned over to the Owner in an operating condition and the Owner will be prepared to continue the operation in an orderly manner. Instruction of operating personnel by manufacturer's representatives shall be performed during this period.

1.7 Repeat Tests

A. Where, in the case of an otherwise satisfactorily installed test, any doubt, dispute or difference should arise between the Engineer and the Contractor regarding the test results or the methods or equipment used in the carrying out by the Contractor of such test, then the Engineer may order the test to be repeated. If the repeat test, using such modified methods or equipment as the Engineer may require, substantially confirms the previous test, then all costs in connection with the repeat test will be paid by the Owner; otherwise, the costs shall be borne by the Contractor. Where the results of any installed test fail to comply with the contract requirements for such test, then such repeat tests as may be necessary to achieve the contract requirements shall be made by the Contractor at his own expense.

1.8 Testing and Laboratory Services

A. Independent Testing Laboratory: Where tests or inspections by an independent testing laboratory are required by this specification, the Contractor shall employ and arrange for, at his expense, the services of an approved independent testing laboratory satisfactory to the Engineer to perform the testing utilizing recognized standard procedures and criteria.
B. Reports and Certificates: The Contractor shall submit reports and certificates of all inspections and tests to Engineer in duplicate. The reports and certificates become the property of the Owner. Sample Materials: The Contractor shall furnish all sample materials required for these tests and shall deliver

same without charge to the testing laboratory or other designated agency when and where directed by them.

C. Additional Tests: Any additional tests required beyond these required under this specification may be ordered by the Engineer to settle disagreements with the Contractor regarding quality of work done. If the work is defective, the Contractor shall pay all costs of the extra tests and shall correct the work. If the work is satisfactory, the Owner will pay for extra tests.

1.9 Engineer's Representative and Testing

A. The Engineer will provide a part-time Resident Project Representative (RPR) to ascertain that the work is accomplished properly and in accordance with the plans and specifications. Whether in the field or in the Contractor's shop or shops of his subcontractors, the RPR shall have full access to the work and shall be given full cooperation. The RPR shall have the authority, subject to the final decision of the Engineer, to reject any defective work or material or to suspend the work if not being properly performed. The RPR shall have no authority to permit any deviation from the plans and specifications except on written order from the Engineer.

B. The Contractor is responsible for communicating with the Engineer and/or the Resident Project Representative (RPR) when project work is not occurring or will be resuming. In the event the Engineer or RPR travels to the project site and the Contractor is not working, and the Contractor has failed to notify the engineer or RPR that work has been suspended, then the Engineer or RPR may bill the Contractor for mileage and time spent traveling to and from the project site.

C. The Owner will retain and compensate a qualified testing laboratory to provide testing of concrete, earthwork, and similar items of work. The Contractor shall cooperate with testing personnel, and provide such samples and jobsite access as may be necessary to accomplish the work.

1.10 Leakage Testing and Disinfection

A. General

1. Except as otherwise provided herein, the Contractor shall furnish all equipment, labor and materials required for testing pipelines and hydraulic structures as specified. Water for testing and disinfecting will be furnished by the Owner; however, the Contractor shall make all necessary provisions for conveying the water from the-designated source to the points of use.
2. All pressure pipelines shall be tested; however, disinfection shall be limited to pipelines, tanks, and structures designed for potable water service. Disinfection shall be accomplished by chlorination. Chlorine dosages will be computed by the Contractor and verified by the Engineer. The Contractor is responsible for proper application of the chlorine. All chlorinating and testing operations shall be done in the presence of the Engineer.
3. Disinfection operations shall be scheduled by the Contractor as late as possible during the contract time period, so as to assure maximum degree of sterility of the facilities at the time work is accepted by the Owner. Bacteriological testing shall be performed by a certified testing laboratory acceptable to the Owner; results of the testing shall be satisfactory to the Department of Health. The Contractor shall arrange for and pay for the bacteriological testing.
4. Release of water from pipelines, after testing and disinfecting have been completed, shall be as directed by the Engineer.
5. Prior to both testing and disinfecting, all hydraulic structures shall be cleaned by thoroughly hosing down all surfaces with a high pressure hose and nozzle of sufficient size to deliver a minimum flow of 50 gpm; all pipelines shall be thoroughly flushed or blown out, as appropriate.

B. Disinfection of Hydraulic Structures and Appurtenant Pipelines.

1. All hydraulic structures which store or convey potable water shall be disinfected by chlorination. Chlorination of hydraulic structures shall be performed in accordance with the requirements of AWWA C652 using Method 1, 2 or 3 or a combination of methods.

C. Bacteriological Testing: Before placing pipelines into service, the Contractor shall collect two consecutive samples at least 24 hours apart for bacteriological testing and shall submit these samples to an approved testing laboratory. Test results for each of the two samples must indicate the absence of bacteria before pipelines are placed into service.

D. Hydrostatic Testing of Pipelines.

1. Ductile Iron Pipe:

   a. Potable water piping shall be field tested for leakage in accordance with the appropriate section (hydrostatic tests) of AWWA C600-10. Test pressure and duration shall be per AWWA C600-10, and allowable leakage shall be determined in accordance with the following formula:

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

Where: L = testing allowance (makeup water), gallons per hour.
S = length of pipe tested, in feet
D = nominal diameter of pipe, in inches
P = average test pressure during the hydrostatic test, in pounds per square inch (gauge)

2. PVC Pipe:

   a. Hydrostatic testing must be completed in accordance with ANSI/AWWA C605-11 (PVC pipe) or most current edition for every section of water main between successive valves or other closures.

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

Where:

Q = quantity of makeup water, in gallons per hour.
L = length of pipe section being tested, in feet.
D = nominal diameter of the pipe in inches.
P = average test pressure during the hydrostatic test, in pounds per square inch (gauge).

3. Contractor shall conduct tests in the presence of the Engineer.

**** END OF SECTION ****

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 Work Included

A. Contractor's Field Office.
B. Electricity and Lighting.
C. Potable Water.
D. Temporary Heating.
E. Sanitary Facilities.
F. Telephone.
G. Contractor's Storage Facilities.
H. Temporary Controls.

1.2 Contractor's Office At Site Of Work

A. The Contractor shall maintain an office or vehicle at or near the site of work which shall be the headquarters of his representative authorized to receive drawings, instructions or other communications or articles. Any communication given to the said representative or delivered at the Contractor's office at the site of work shall be deemed to have been delivered to the Contractor.
B. Copies of drawings, specifications and other contract documents shall be kept at the Contractor's office at the site of work and available for use at all times.

1.3 Electricity And Lighting

A. The Contractor shall provide construction power, if necessary, at his own expense. No power is available on the property.

1.4 Potable Water

A. Potable water for filling and testing of pipelines will be furnished by the Owner.
B. Potable drinking water for construction personnel is the responsibility of the Contractor.

1.5 Temporary Heating

A. The Contractor shall provide temporary heat where required for work during cold weather periods.

1.6 Sanitary Facilities

A. The Contractor shall provide portable toilets for construction personnel and maintain facilities as required by law and regulation.

1.7 Telephone

A. Jobsite telephone service may be provided by the Contractor, but is not required. The Contractor shall bear all costs associated with jobsite telephone service, if provided.

1.8 Contractor's Storage Facilities

A. The Contractor shall provide satisfactory weathertight storage on-site for protection of materials and products prior to their incorporation into the work. Provide heat and ventilation as necessary for the products stored.

1.9 Temporary Controls

A. The Contractor shall install and maintain all temporary utilities, structures, construction aids, fences barriers, and similar items of a temporary nature necessary for the execution and security of the work. The Contractor shall remove temporary facilities at the completion of the work.

**** END OF SECTION ****

SECTION 01730

OPERATION AND MAINTENANCE DATA AND PRODUCTS

PART 1 - SPARE PARTS AND MAINTENANCE MATERIALS

1.1 General

A. The Contractor shall provide spare parts, maintenance materials, special tools and other similar items as specified in the individual specification section. Provide also any unspecified items which are furnished by the manufacturer or supplier.
B. Maintenance items shall be properly stored in weathertight facilities until delivered to the Owner.

1.2 Delivery to Owner

A. At or prior to the time of inspection for substantial completion, deliver all required items to the Owner and place in storage locations designated by the Owner.
B. Prepare an inventory invoice of all items delivered and verify with the Engineer. Identify any damage or deficiency in delivered items, and any missing items.
C. The Owner, Engineer, and Contractor shall sign the invoice certifying that all listed items were delivered in good condition unless noted otherwise.
D. The contractor shall promptly obtain and deliver all items to replace damaged, defective or missing items noted on the original invoice. Prepare and submit invoices for replacement items and obtain Owner's and Engineer's signature.
E. Final payment will not be made until the above-described procedures have been satisfied.

PART 2 - OPERATION AND MAINTENANCE MANUALS

2.1 General

The Contractor shall compile product data, maintenance information and related materials necessary for the Owner's proper use and operation of products furnished under the Contract. The Contractor shall further fully instruct Owner's personnel in product maintenance and equipment operation.

2.2 Quality Of Submittals

All operation and maintenance data shall be prepared by professionally trained personnel, completely familiar with the product. Written and graphic instructions shall be thorough, legible and complete in all respects.

2.3 Format

A. All operations and maintenance submittals shall be in 8 ½" x 11" size or 11" x 17" folded to 8 ½" x 11". Larger drawings shall be reduced in scale or may be folded and inserted in 8 ½" x 11" envelopes if reduction is impractical. Provide indexed tabs for each component or section.
B. Each volume of operating and maintenance data for the various categories of products or equipment shall have an identifying cover sheet on heavy paper with typed or commercially printed titles, including "Operating and Maintenance Instructions," project title, subject matter covered, manufacturer's identification, other applicable identification.

2.4 General Contents of Manuals

Each volume of manuals shall have the following minimum information:

A. Table of Contents:
   1. Contractors name, address, phone.

2. Product or system tabulation and index.
3. Listing with each product or system of subcontractor or installer, maintenance contractor or service representative, area of responsibility and local supply source for parts and replacements. Include all names, addresses, phone numbers.
4. Product identification reference to plans and specification numbers.

B. Product Data: Include only material which is relevant to the project and clearly identify all data applicable to the installation.

C. Drawings: Drawings shall be used to supplement written data as necessary and shall show only relevant features. Coordinate drawings with project record drawings to assure correct illustration of completed installation.

D. Written Text: Written instructions and data shall be organized in a consistent format with logical and clearly written instructions for each procedure.

E. Copies of Warranties, Bonds and Service Contract: An instruction sheet shall accompany each item with proper instructions regarding claims procedures in the event of failure, plus any special instructions which might affect the validity of warranties or bonds.

2.5 Contents of Manuals For Equipment and Systems

The Contractor shall provide an operation and maintenance manual for each item listed hereinafter under the schedule of manuals. Manual content shall include the following:

A. Description of unit and component part including function, operations characteristics and limiting conditions.
B. Performance curves, engineering data and factory-performed tests.
C. Complete nomenclature and parts identification system for replaceable parts.
D. Operating procedures, including start-up, break-in and normal operation. Include regulation and control, stopping, shut-down and emergency requirements. Include summer/winter and other special conditions as applicable.
E. Maintenance procedures including routine operations, trouble-shooting, repair and adjustment.
F. Servicing and lubrication schedule including specific lubricants required or recommended.
G. Control and sequence of operation instructions.
H. Tabulation of anticipated wear life of components and stock of spare parts provided and recommended.
I. As-built control diagrams by controls manufacturer/installer.
J. As-built color-coded piping diagrams with valve locations, functions and tag number identification system.
K. Miscellaneous data not listed above, but required by the various sections of specifications, or necessary for proper operation of equipment.

2.6 Procedures For Submittal

A. Equipment and Systems:
1. Submit two (2) preliminary copies of manual prior to the date of shipment of the equipment or system.
2. Engineer will review and return one (1) copy with review comments and deficiencies noted.
3. No partial payments will be made for equipment or systems delivered or installed until preliminary manuals are approved.
4. Submit three (3) final copies of manuals within thirty (30) days after placing equipment into service and performing manufacturer's field services.
5. Submit one (1) copy of any supplemental data or revisions to preliminary manual for insertion in previously approved preliminary manuals to conform to final manuals.
6. Engineer will review final submittals and notify Contractor of discrepancies. All final manuals will be retained by Engineer for subsequent transfer to Owner.
7. No portion of work will be considered substantially complete until review of final manuals.
8. Any changes to manual found necessary after submittal of final manuals shall be submitted in four (4) copies with instructions for insertion.

2.7 Instruction Of Owner's Personnel

A. Prior to final inspection or acceptance, the Contractor shall arrange for instruction of Owner's operating personnel in the operation, adjustment and maintenance of all product, equipment and systems.
B. Manuals must be complete and accepted in preliminary form before conducting instructions to Owner's personnel.

2.8 Schedule Of Manuals

Submit manuals for the following items in connection with this project:

A. Equipment and Systems:

Specification Section	Description of Equipment
11345	Chemical Feed Equipment
11400	Process Instrumentation
11601	Ultra Filtration Process Equipment
15000	Mechanical General Provisions
15100	Process Piping and Valves
15400	Plumbing

**** END OF SECTION ****

SECTION 02000

GENERAL INFORMATION

PART 1 - GENERAL

1.1 The Requirements

A. The Contractor shall furnish all labor, materials, tools, equipment and perform all site work and services in accordance with the requirements of the Contract Documents.
B. The site work includes, but is not limited to, the following major items of work:
   1. Site Preparation.
   2. Excavation, Backfill and Grading.
   3. Pipeline Installation.
   4. Surface Restoration.
   5. Interior Well House Modifications.
   6. Tank and Drainfield work.

PART 2 - PRODUCTS

2.1 Shop Drawings

A. All submittals of Shop Drawings and Equipment Data shall be as specified Section 01340.

PART 3 - EXECUTION

3.1 Mobilization

A. Mobilization shall consist of preparatory work and operations including, but not limited to, the necessary movement of personnel, equipment and materials to the project site, and for the establishment of temporary facilities and related work which must be performed before starting work on the various contract items.
B. When an item for mobilization is included in the Bid Schedule payment will be made at the contract lump sum price. Partial payments for Mobilization will be based on the following schedule:

Project Completion Status	% of Contract Amount for Mobilization
10%	50%
50%	100%

3.2 Right-Of-Way

A. The Contractor shall confine his area of operations to the space within the boundaries of the easements, property lines, and work limits shown on the plans.
B. The Contractor shall be held responsible for unnecessary damage to all the existing facilities. Care shall be used to avoid injury to property.
C. It shall be the responsibility of the Contractor to comply with local road restrictions.

3.3 Establishing Line and Grade

A. Survey control monuments, benchmarks, or other reference points shall be protected. If damaged or destroyed through negligence of the Contractor, they shall be replaced at the Contractor's expense. The Engineer shall provide qualified personnel, and necessary equipment to properly set horizontal and vertical control stakes for laying out the various structures and piping. The survey control points shall be set by the Engineer.

B. In the event of apparent or questionable errors or inconsistencies in such stakes or references set for the control of line and/or grade, the Contractor shall promptly notify the Engineer of such error or inconsistency and shall not proceed with the work until such stake, grade or mark has been verified or corrected by the Engineer.

3.4 Interference of Underground Structures

A. The Contractor shall protect from damage all existing sanitary sewer and sanitary sewer manholes, storm sewer and storm sewer manholes, gas lines and regulators, water mains, water main valve boxes, underground or overhead telephone wires or cables, underground or overhead electric wires or cables and all other similar utilities, including service connections, curb and gutter and sidewalk, except as required to be removed for the actual construction of the project.
B. The existing utilities must remain in service throughout the construction period. The Contractor shall provide all labor, equipment and appurtenances, to properly perform this requirement. This work shall be considered incidental to the construction.
C. The utility information shown on the plans may not be completely accurate and is furnished from information supplied by the various utility companies and the Owner as an indication of the presence of utility lines in the vicinity of construction. It is the sole responsibility of the Contractor to contact the utility companies to determine the extent and exact location of their facilities and to ascertain whether they are likely to be affected by the construction. The Contractor shall review with them the location of any and all of their utilities and improvements within the project limits and shall discuss his intended progress. In the event of accidental or necessary damage to any such facility, he shall immediately notify the utility company and shall cooperate fully in whatever is necessary to repair such facility or restore service. Exploratory excavation shall be coordinated with the utility companies to assure the exact locations.
D. The Contractor shall assume full responsibility for all damages to property of such character, resulting from any act, omission, neglect or misconduct in the execution or non-execution of the work, except that he will not be held responsible for damage to underground property within the right of way if its existence and approximate location was not made known to him before the damage was done. To the extent of his liability, and his own expense, the Contractor shall restore damaged property to a condition equal to that existing before the damage was done, by repairing, rebuilding or replacing it as directed, or he shall otherwise compensate for the damage in an acceptable manner.
E. Any services which are cut or otherwise damaged shall be repaired and/or rebuilt with the same materials or structurally heavier material than that which the service is constructed.
F. It is recommended that the Contractor conduct exploratory excavations ahead of the construction to locate utilities and reduce conflicts which may affect the progress of the project. These excavations are at the Contractor's expense, unless the excavations are requested by the Owner.
G. Existing sanitary sewer or other pipes which are not removed and which are not intended to remain in service as part of the finished work, shall be abandoned. Plug all open ends with brick and mortar or concrete. This will be considered incidental work and shall be performed by the Contractor without separate or additional compensation.

3.5 Protection of Surface Improvements

A. The Contractor shall provide protection during construction for buildings, structures, street crossing, and other facilities located within the construction and/or perpetual easement areas which are not noted to be removed in the plans.
B. The Contractor shall protect existing trees, shrubs, lawns, utilities, buildings, fencing and other features or facilities, on or adjacent to the site from damage where such items are not designated to be removed. The Contractor shall replace damaged items at his own expense.
C. Lawn sprinklers may be present on this project. The Contractor is responsible for locating and repairing if damaged during construction.
D. No direct compensation shall be paid to provide the necessary protection (such as sheeting, shaping, bracing, tunneling, etc.) for the facilities. This work shall be considered incidental to the project.

3.6 Sheeting and Bracing Excavation

A. All excavations shall be sheeted, shored, and braced as will meet all requirements of the applicable safety codes and regulations; comply with any specific requirements of the contract; and prevent disturbance or settlement of adjacent surfaces, foundations, structures, utilities, and other properties. Any damage to the work under contract or to adjacent structures or property caused by settlement, water or earth pressures, slides, cave-ins, or other causes due to failure or lack of sheeting, shoring, or bracing or through negligence or fault of the Contractor in any manner shall be repaired at the Contractor's expense and without delay.

B. The Contractor shall assume full responsibility for proper and adequate placement of sheeting, shoring, and bracing, wherever and to such depths that soil stability may dictate the need for support to prevent displacement. Bracing shall be so arranged as to provide ample working space and so as not to place stress or strain on the in-place structures to any extent that may cause damage.

C. Sheeting, shoring and bracing materials shall be removed only when and in such manner as will assure adequate protection of the in-place structures and prevent displacement of supported grounds. Sheeting and bracing shall be left in place only as required by the Plans, Specifications, and Special Provisions or ordered by the Engineer. Otherwise, sheeting and bracing may be removed as the backfilling reaches the level of respective support. Wherever sheeting and bracing is left in place, the upper portions shall be cut and removed to an elevation of three feet or more below the established surface grade as the Engineer may direct.

D. All costs of furnishing, placing, and removing sheeting, shoring, and bracing materials, including the value of materials left in place as required by the contract, shall be incidental to the contract and will not be compensated for separately.

**** END OF SECTION ****

SECTION 02010

SUBSURFACE INVESTIGATION

PART 1 - GENERAL

1.1 It shall be the responsibility of the Contractor to examine the site of the project and become familiar with all site conditions relating to the construction of the project.

1.2 The Contractor shall accept the site in the condition it is in.

1.3 Soil Information

A. Limited geotechnical investigation of the site has been performed and the results are presented in the appendices.
B. Neither the Owner nor the Engineer represents that the information being made available shows the complete range of conditions which will be encountered in the construction of the Project. The information furnished in the referenced document represents only the opinion of the Owner and the Engineer as to the character of materials encountered during field investigations. All surface water and ground water levels indicated in the soils report refer to levels at the time of the field investigation only.
C. The Owner and the Engineer disclaim responsibility for any opinions, conclusions, interpretations, or deductions that may be expressed or implied in any of the information and data contained in the referenced document, it being expressly understood that the making of deductions, interpretations, and conclusions is the Contractor's sole responsibility.

1.4 Groundwater

A. Subsurface investigation does not indicate the presence of groundwater in the work area.
B. However, the Contractor is cautioned that underground work may encounter groundwater, and that appropriate dewatering techniques may be required, and that dewatering activities shall comply with DENR Dewatering Permit SDG 070000.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 02100

CLEARING AND TREE REMOVAL

PART 1 - GENERAL

1.1 Description

A. Included in this section is the clearing, grubbing, removing and disposing of vegetation, trees, shrubs and debris within the work area and/or clearing limits as established on the plans.
B. Objects and structures which are designated to be removed as part of selective demolition work are not included under this specification.

1.2 Related Work Specified Elsewhere

A. Trenching and Backfilling for Pipelines: Section 02221.

1.3 Measurement and Payment

A. Field measurement for the item "Tree Removal" will be made on the per-each basis for sizes: 2" – 6" diameter and 8" – 18" diameter.

PART 2 - PRODUCTS

2.1 Materials and Equipment

A. Furnish equipment and facilities necessary to accomplish the required clearing work.

PART 3 - EXECUTION

3.1 Staking

A. The Engineer will establish construction lines and clearing limits. Clearing shall stay within existing utility easements.

3.2 Clearing Requirements

A. Surface objects, trees, stumps, roots and other protruding obstructions within the clearing limits shall be cleared and grubbed. When authorized, the Contractor may leave stumps and non-perishable objects located more than one foot below subgrade or slope of embankments, provided that they do not extend more than 6 inches above the ground line.
B. Burning of timber, slash or other debris is not permitted.
C. Stumps and inert debris shall be disposed of away from the project site in accordance with Specification 02227.
D. Low hanging, unsound or unsightly branches on remaining trees shall be removed. Trimming shall be done carefully and in accordance with good trimming practices. Slash from trimming shall be hauled off site.

**** END OF SECTION ****

SECTION 02140

DEWATERING AND STORMWATER PERMIT

PART 1 - GENERAL

1.1 Scope

A. The Contractor shall perform necessary stormwater protection and dewatering of trench excavations for construction of pipelines, structures and related work under unwatered conditions.

1.2 Measurement and Payment Conditions

A. No measurements of dewatering or stormwater activities will be made.
B. All costs associated with construction dewatering, including sampling, testing and reporting, will be considered incidental to the various bid items to which it relates.

1.3 Submittals

A. Submit copies of SDDENR permit authorization applications at time of submittal to SDDENR.
B. Submit completed copies of permit(s) authorization from SDDENR.
C. Submit dewatering plan including proposed dewatering methods, anticipated locations and proposed methods of assuring compliance with water quality parameters of the permit.
D. Submit Stormwater Pollution Control Plan to SDDENR.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 Groundwater Discharge Permit

A. Dewatering activities, if needed, shall be conducted in accordance with the "General Permit to Discharge Under the Surface Water Discharge System For Temporary Dewatering Activities in South Dakota", SDDENR Permit No. SDG 070000.
B. A copy of the permit may be found on the SDDENR website at "www.state.sd.us/denr".
C. The Owner is responsible for providing the "Request for Authorization" documents set forth in the permit conditions. The Contract is responsible for completing the application and presenting to the Owner.
D. The Contractor is responsible for performing self-monitoring activities, including sampling, testing, and reporting as may be determined to be required under the authorization to discharge.
E. No dewatering activities may commence until the Contractor has obtained the necessary authorization to discharge and furnish copies to the Engineer.

3.2 Stormwater Discharge Permit

A. Stormwater control activities shall be conducted in accordance with the "General Permit for Stormwater Discharges Associated with Construction Activities".
B. A copy may be found on the SDDENR website at "www.state.sd.us/denr".
C. The Contractor is responsible for completing the application and for following requirements set forth by the Permit and furnishing it to the Owner prior to work.
D. Quantities for erosion control materials have been included in the project. Additional erosion control quantities must be justified and approved by the Engineer.
E. No payment will be made for preparation, monitoring, sampling, testing, reporting for stormwater activities.

3.3 Dewatering

A. The Contractor shall be responsible for evaluating soil and groundwater conditions and for furnishing and maintaining necessary and suitable dewatering devices and equipment.
B. The Contractor shall provide for positive drainage away from the excavation or otherwise take steps to protect the excavation and backfill from becoming excessively wet prior to placing the finished surface.
C. Should the Engineer determine that any portion of the backfill or trench has become excessively wet during excavation and/or backfill operations, the Contractor shall, at his own expense, remove the material to the satisfaction of the Engineer and furnish an approved backfill and/or bedding material meeting specifications.
D. The Contractor shall provide and maintain at all times ample means and devices with which to remove promptly and to properly dispose of all water entering the excavation.

   The Contractor shall dispose of water in a suitable manner without damage to adjacent property or without creating a health hazard or nuisance condition and in compliance with applicable permit conditions.

E. Dewatering may be accomplished by well points, sumping, or any other acceptable method which will insure a dewatered trench or excavation. Any proposed dewatering method shall be subject to the approval of the Engineer.

**** END OF SECTION ****

SECTION 02221

TRENCHING AND BACKFILLING FOR PIPELINES

PART 1 - GENERAL

1.1 Description

A. Included in this section is the trenching and backfilling of all pipeline trenches, as shown on the drawings and/or specified herein.
B. The work shall include the excavation and backfill of whatever substances are encountered to the depths shown on the drawings.

1.2 Related Work Specified Elsewhere

A. Gravel Sub-base, Base Course and Surfacing: Section 02611.
B. Water Main and Appurtenances: Section 02660.
C. Process Piping and Valves: Section 15100.

1.3 Submittals

A. Submit source description and laboratory gradation reports for bedding materials and granular foundation materials proposed for use on the project work.

1.4 Measurement and Payment Conditions

A. Earth Excavation: Trenching and backfilling of materials classified as "earth excavation" will not be measured or paid for directly. Payment will be taken to be included in the pipeline bid items to which it relates.
B. Gravel Bedding: Measurement of gravel bedding used for pipeline installations will be based on the total weight of material in tons furnished and installed as determined from valid scale receipts. The Engineer must approve the use of gravel bedding, and valid receipts must be delivered to the Engineer within 48 hours of installation. Payment for gravel bedding will be to the nearest 0.1 tons, and shall include compensation for all costs of delivery and placement into the trench.
C. Granular Foundation Material: Measurement of foundation material used for trench bottom stabilization will be based on the total weight of material furnished and installed as determined from valid scale receipts. The Engineer must approve the use of foundation material, and receipts for approved uses must be delivered to the Engineer within 48 hours of installation. Payment for granular foundation material will be to the nearest 0.1 tons, and shall include compensation for delivery and placement into the trench, and for associated overexcavation and disposal of unsuitable material.
D. Muck Excavation: No payment will be made for muck excavation. Payment for removing and disposing of muck which is replaced by an approved soil material from another project location which is reasonably convenient to the work area will not be paid for directly, but will be considered subsidiary work to the pipe installation to which it relates.
E. Rock Excavation: Measurement will be based on the measured and/or calculated volume of the open trench to the nearest whole cubic yard and will be limited to a maximum trench width of 4'. At structures, the allowable trench width for computation will be 2' outside of each structure. Payment for rock excavation will be made under the bid item "Rock Excavation" at the contract unit price.
F. Salvaging, Stockpiling and Placing Topsoil: No measurement of topsoil stripping, salvaging, stockpiling or placing will be made for this project. Payment for this work shall be included under the Bid Item "Incidental Work".

PART 2 - PRODUCTS

2.1 Backfill Materials. All materials required for backfilling shall be obtained from the trenching operations. Fill material not capable of being properly placed and compacted shall not be used unless approved by the Engineer

2.2 Granular Foundation Material. 1½" uniformly graded coarse aggregate conforming to ASTM C-33, "Standard Specification for Concrete Aggregate" grading size No. 4 or other material specifically approved by the Engineer. The following sieve analysis is listed as size No. 4 in ASTM C-33.

Sieve Size	Total Passing by Sizes (Percent by Weight)
2"	100%
1½"	90% to 100%
1"	20% to 55%
¾"	0% to 15%

The Engineer must approve foundation materials before materials are ordered. Foundation materials will be used for stabilization of unstable trench bottoms only, and may not be required. Refer to paragraph 3.4 for description of procedures for using foundation material.

2.3 Gravel Bedding. Imported aggregate conforming to ASTM C-33, "Standard Specifications for Concrete Aggregate", grading size listed below or other material specifically approved by the Engineer.

Sieve Size	Total Passing by Sizes (Percent by Weight)
1"	95% to 100%
3/4"	75% to 100%
3/8"	10% to 55%
#4	0% to 10%
#8	0% to 5%

All bedding material must be approved by the Engineer before it is ordered. Use of gravel bedding materials on this project is anticipated, but may be waived at the discretion of the Engineer. Refer to trench details on drawings for locations where gravel bedding is required.

2.4 Flowable Fill Concrete. Flowable fill for embedding utilities shall be a mixture of Portland Cement, fine aggregate (sand), fly ash and water with a 28-day compressive strength between 50 and 150 psi. The suggested mix proportion is as follows;

Quantity of Dry Material per CY	
Cement	40-100 lbs.
Fly Ash	300 lbs.
Aggregate	2,600-2,800 lbs.

PART 3 - EXECUTION

3.1 Clearing and Grubbing

A. Prior to stripping topsoil, remove trees, stumps, roots, rocks, trash, fencing and other objectionable material in the work area.
B. No trees or shrubs shall be removed without permission from Owner.
C. Sod and/or crop residue may remain in place to be stripped along with the topsoil.
D. Limit clearing operations to the areas indicated on the drawings and do not disturb vegetation outside of the work area.

3.2 Stripping and Salvaging Topsoil

A. Remove topsoil from all areas within the areas shown on the drawings which will be disturbed by trenching or other construction. Limit topsoil removal to trenching areas within the right-of-way.
B. Remove topsoil to its entire depth, or to a depth which will provide the quantity required for topsoiling as part of finish grading operations.
C. Stockpile topsoil in convenient locations for subsequent spreading and placing.
D. When trenching is through grassed or cultivated areas, strip all topsoil over the trench line to its entire depth, or 4", whichever is greater. Stockpile this topsoil separately from other excavated material and replace at the surface after pipe installation and backfilling.

3.3 Trenching for Pipelines.

A. Methods:

The Engineer may grant permission to tunnel under walks, curbs and other utility installations. Such tunnels shall not exceed 10' in length. Trench to depths and configurations shown on the drawings or specified.

Limit length of trench open at any one time to no more than that necessary to lay pipe, backfill and compact in one continuous operation.

When trenching is through asphalt pavements or concrete pavements, the existing pavement structure shall be sawcut in advance of trenching work to confine pavement damage and removal to the limits of the trench. Pavement shall be sawcut a horizontal distance of 12" from the edge of the trench excavation and to the full depth of the pavement. If the pavement edge is to be re-sawed prior to placing the finished pavement, the initial sawcut may be closer than 12" to the edge of the trench.

When trenching through gravel roadway surfacing, care shall be taken to limit contamination of adjacent gravel surfaces with excavated materials. Unless authorized otherwise by the Engineer, gravel surfacing shall not be salvaged and used for resurfacing at the completion of backfilling.

B. Trench Width: The minimum clear trench width measured at the top of the pipe barrel shall be not less than the outside pipe diameter, plus 12" or such width as is approved by the Engineer which is demonstrated to allow the proper positioning and bedding of pipe.

For all pipe, the maximum clear trench width measured at a point 12" above the top of the pipe barrel shall be not greater than the trench width shown on the following table.

MAXIMUM TRENCH WIDTH TABLE

Pipe Diameter Inches	Maximum Trench Inches
4	24
6	30
8	30
10	30
12	36

If, by exceeding the maximum trench width, the Engineer determines that backfilling will exceed the safe loading on the pipe, remedial measures such as cradling the pipe in concrete or gravel will be required. The cost of any remedial measures will be at the Contractor's expense.

C. Trench Walls: Generally, the Contractor will be required to keep tie sides of the trench excavation vertical by bracing or sheeting, either movable or stationary. Failure to properly brace and sheet trenches will be at the risk of the Contractor. Where such failure results in the slides or caving producing displacement of the pipe, the Contractor will be required to remove and replace the pipe in a manner approved by the Engineer without extra compensation.

Where surface conditions allow, the Contractor will be permitted to slope or bench the trench sidewalls. When trench sidewalls are sloped or benched, the sloping or benching shall terminate at a depth not less than 1' above the top of the pipe barrel and from that point down the trench wall shall be vertical. If sloping or benching is employed by the Contractor, care shall be taken to confine the entire trenching operations to right-of-way or easement limits as shown on the drawings.

A clear area shall be maintained a sufficient distance back from the top edge of the excavation to avoid overloading which may cause slides or caving of the trench walls.

D. Trench Depth: In excavating for pipe, the trench ahead of the pipe shall not be excavated below the elevation necessary to provide for the specified thickness of bedding material, if required, below the bottom of the pipe. Should the trench be excavated to a greater depth than required to provide the proper bedding thickness, the Contractor will refill it to grade at his own expense with good, well-tamped material, approved by the Engineer. If suitable material is not available from the project work, it will be necessary for the Contractor to bring in material from another locality or to purchase suitable material to provide an unyielding bed for the pipe.

When an unstable trench bottom is encountered at the planned pipe depth, the trench shall be over-excavated and granular "Foundation Material" placed as described in paragraph 3.4.

E. Shoring: As needed, all trench sidewalls shall be properly sheeted and braced to furnish safe working conditions. The shoring shall be arranged so as not to place any stress on portions of the completed work until the general construction thereof has proceeded far enough to provide ample strength. Any damage to pipes or structures occurring through settlements, heaving, water or earth pressures, slides, caving or other causes, due to lack of sheeting or bracing, or due to failure of shoring or due to improper shoring or due to any other negligence on the part of the Contractor shall be repaired by the Contractor at his own expense.

The Contractor shall be solely responsible for the safe execution of his work. He shall take all precaution necessary, at his own expense, to accomplish the work without damage to facilities or injury to persons.

F. Removal of Water: The Contractor shall provide and maintain at all times ample means and devices with which to remove promptly and to properly dispose of all water entering the trench excavation.

Water shall be disposed of in a suitable manner without damage to adjacent property.

The Contractor shall be responsible for selecting the trench dewatering method but the selected method must permit placing of pipe bedding materials in a stable unwatered condition. The Engineer may require that alternate dewatering procedures be used if, in his opinion, the procedure used by the Contractor does not provide a suitable foundation for the pipe. Trench dewatering discharges shall not be allowed to enter the sanitary sewer collection system at any time.

G. Muck Excavation: Muck excavation shall consist of the removal and disposal of soft saturated soils which, in the opinion of the Engineer, are not suitable as backfill material. Disposal of muck shall be the responsibility of the Contractor. The Owner will provide an acceptable disposal site for muck within 2 miles of the project site.

The shortage of backfill material created by muck removal shall be replaced by the Contractor using excess soil from other project areas, Engineer approved granular material or Engineer approved soil borrow sources.

H. Rock Excavation: A limited geotechnical investigation was performed on this project. The surface conditions, road excavations, and previous excavations for utilities were observed within the work areas. Conclusive evidence of rock was not made at the work sites. The amount of rock excavation, if any, will be measured and paid for upon construction according to the specifications.

Rock excavation shall include solid rock in ledges, bedded deposits, un-stratified masses and conglomerate deposits so firmly cemented as to present the characteristics of solid rock which must be removed by drilling, blasting, jack hammering, hydraulic ripper, or similar methods. Shale, regardless of the nature of deposit, or loose boulders or large fieldstone will not be considered rock excavation unless so designated on the plans. The responsibility and cost of satisfactorily demonstrating to the Engineer

that the material being considered for rock excavation cannot be removed by means other than drilling, blasting, jack hammering, hydraulic ripper, or similar methods shall be the obligation of the Contractor.

At a minimum, it shall be demonstrated that a normal excavating machine being skillfully operated cannot effectively remove said material.

A normal excavating machine will be considered to be a +230 HP hydraulic excavator, crawler weighing +78,000 pounds with a – 1-CY bucket equipped with rock or ripper teeth.

The Contractor shall dispose of all unsuitable excavated material. The Contractor shall provide a disposal site for unsuitable backfill materials. The disposal site shall be approved by the Engineer.

The Contractor shall furnish an approved backfill material to fill the void left by rock excavation.

The Contractor shall keep accurate daily records of the quantity of rock removed so a comparison can be made with the Inspector's records. The Contractor shall deliver his records of Rock Excavation to the Engineer or his representative within 48 hours. Records of Rock Excavation delivered after this period shall be declared invalid and no payment for Rock Excavation will be made.

I. Blasting and the Use of Explosives: All materials removed by blasting which cannot be shoveled as earth shall be deemed unsuitable and shall be handled and disposed of separately from other suitable backfill materials as directed by the Engineer. The Contractor shall provide a disposal site for unsuitable backfill materials. The disposal site shall be approved by the Engineer.

Where blasting is necessary, the Contractor shall comply with the laws, ordinances, and applicable safety code requirements relative to the handling, storage and use of explosives and the protection of life and property. Suitable covering or shielding shall be provided to confine all materials lifted by blasting, within the limits of the trench of excavation, and prevent injury to property or life. The Contractor shall be responsible for all damages caused by his blasting operations. The Contractor will demonstrate that he is in compliance with applicable laws, rules, and regulations, and that he has the required expertise in advance of any blasting work. The Contractor shall notify all governmental agencies, property owners and utility owners that may be affected by the blast 48 hours in advance.

The Contractor shall receive "approval", in writing, for any proposed blasting in the public Right of Way, easement, or that is within 100' of an underground public utility. The Contractor shall request the "approval" at least 48 hours prior to blasting. The Contractor shall be responsible for any safeguards or monitoring required by the Engineer for the blasting operations and shall be responsible for any and all damages resulting from the blasting operations.

When the use of explosives is necessary for the prosecution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives and shall meet all local, State, and Federal laws and requirements pertaining to explosives as well as Title 29 and Tile 30, Code of Federal Regulations, Part 1926, Occupational Safety and Health Act regulations for construction (OSHA), whichever is most restrictive, in the use, loading, transportation, and storage of explosives and blasting agents.

The Contractor shall obtain a blasting permit and/or notify the Whispering Pines Volunteer Fire Department prior to the use of any explosives. The Fire Department may impose restrictions on the quantities, methods, and materials utilized for blasting.

The Contractor shall notify property owners and public and private utility companies having structures or facilities in proximity to the site of the work of their intention to use explosive. Such notice shall be given sufficiently in advance to enable them to protect their property from injury. In no case shall notice be given less than five (5) calendar days prior to the desired date of usage. The Engineer may require the Contractor to monitor certain properties during actual blasting in order to determine effects of blasting. In some cases, the Engineer may require the use of a seismograph to document the forces of blasting. It is recommended that, prior to blasting, the Contractor document the condition of structures in the vicinity of the work.

3.4 Bedding and Backfilling Piping.

A. Foundation Material: In the event the trench is required to be overexcavated because an unstable foundation is encountered, the Contractor shall excavate the unstable material and backfill the overexcavation with "granular foundation material". The required depth of stabilization shall be determined by trial and observation on the job and is subject to approval of the Engineer.

Foundation material shall not be used unless specifically authorized by the Engineer. If the use of foundation material is authorized by the Engineer, payment will be made to the Contractor in accordance with the payment conditions for Foundation Material.

B. Gravel Bedding: When required by the trench detail on the plans or when directed by the Engineer, pipes shall be bedded on gravel bedding.

Placement of gravel pipe bedding shall conform to the detail drawings. The bedding shall be compacted by vibratory tampers, tee bars or other approved methods. The method of compaction shall insure proper placement of the bedding below the pipe haunches and along the sides of the pipe.

Bedding materials other than those specified, when approved by the Engineer, may require extra compactive effort. Relative density acceptance tests may be required to confirm the adequacy of construction practice. Compaction is not acceptable if voids or areas of unconfined bedding material are located by simple manual inspection beneath the pipe barrel.

C. Specially Placed Backfill: After the specified gravel bedding or select soil bedding has been placed and has been approved, and after the pipe has been installed and approved, the pipe trench shall be backfilled with "Specially Placed Backfill". Such backfill shall consist of suitable approved fine material, taken from the excavated earth and having no stones greater than 1" diameter.

Unless otherwise shown on the drawings and/or described herein, this backfill shall be placed in lifts not exceeding 8" loose thickness and compacted in place to an elevation 12" above the top of the pipe. This backfill shall be placed and consolidated along the sides and over the top of the pipe, and shall be thoroughly tamped to a density equal or greater than 95% of the maximum dry density as determined by ASTM D-698.

D. Normal Backfill: Unless otherwise shown on the drawings and/or described herein, all backfill placed above the "Specially Placed Backfill" shall be considered as normal backfill and will consist of excavated material obtained from the trenching work.

Backfill methods, procedures and equipment shall be at the discretion of the Contractor as long as the backfill is compacted to a density not less than indicated in the following table. Backfill shall be compacted in lifts not exceeding 8" loose thickness in areas under roadway and driveways.

Location	% of Max. Dry Density (ASTM D-698)
Under streets, buildings, structures, highways and driveways and within 5' of all pavements.	95%
In grass areas	90%

E. Flowable Fill: Where specifically called for on the plans or directed by the Engineer, utilities shall be backfilled with flowable fill in lieu of bedding or soil. Flowable fill shall be placed uniformly in layers less than 2' thickness. Backfilling and compacting flowable fill shall not commence until the strength has achieved 20 psi, and in no case sooner than 24 hours after placement.

F. Surface Restoration: Unless otherwise provided for, restore the surface to as nearly as possible the condition that existed prior to construction. Replace topsoil which has been stripped and separately stockpiled at the beginning of trench work. Replace gravel road and driveway surfacing.

Where shown on the plans, the Contractor shall provide embankment over the pipe to provide minimum pipe cover. Construct embankment to the cross-section or contours indicated on the Plans. No separate or additional compensation for embankment will be made unless a specific bid item in included in the Proposal.

G. Turfed Areas: Level all previously grassed areas with topsoil salvaged from trenching operations. Topsoil shall be raked clean and conform to preconstruction contours, except that a free draining condition shall be provided regardless of preconstruction conditions. Remove rocks larger than 2" in any dimension from areas to be seeded by mechanical raking and/or hand picking. Seed disturbed areas as set forth in Specification 02901.

H. Maintenance of Backfill: All backfill shall be maintained in a satisfactory condition, and all places showing signs of settlement shall be filled and maintained during the life of the contract and for a period of one (1) year following the date of final acceptance of all work performed under the Contract. When backfill settlement creates a hazardous condition, the Contractor shall correct such hazardous condition immediately.

3.5 Protection of Existing Facilities

A. Support and protect all existing facilities encountered or adjacent to trenching operations, unless such facilities are indicated to be removed. Such facilities may include buildings, power lines, telephone lines, shrubbery, water lines, gas lines, sewer lines, cables, conduits, ditches, embankments, traffic signs, mailboxes, fences, posts, culverts, curbs and others. Contractor shall be liable for any and all damages to such existing facilities and he shall hold harmless the Owner from any liability, damages, repairs or expense for injury to such facilities during the construction work. Location of underground utilities which may interfere with pipe alignment and grade shall be verified by exploratory digging prior to construction in the vicinity.

B. Where trenching operations require temporary removal of surface obstruction or existing facilities, the Contractor shall carefully remove and reinstall each item at completion of backfilling. The cost of such temporary removal and reinstallation will be considered a subsidiary obligation to trenching work, and no separate payment will be provided.

C. Underground Utilities: The type, size and number of all known underground utilities have been shown on the drawings; however, no guarantee is made as to the true type, size, location or number of such utilities. It shall be the Contractor's responsibility to determine the existence and location of all underground utilities. The omission from, or the inclusion of, utility locations on the drawing is not to be considered as the nonexistence of, or a definite location of, existing underground utilities.

D. If subsurface obstructions or conflicting utilities require that the obstruction or utility be moved, the Owner will make arrangements with the appropriate utility company ahead of construction, or alternatively may request that the Contractor perform such removal or relocation work. Payment for such extra work, if authorized, shall be agreed upon by the Owner and Contractor prior to commencing work.

3.6 Field Quality Control.

A. Where embankment or backfill is required to be compacted to a specified density, tests for compliance may be made by Owner designated representative, at the expense of the Owner, using the appropriate test procedures.

B. Field density tests will be performed in accordance with test procedures established in "Standard Test Methods for Density of Soil in Place by the Sand Cone Method" ASTM D-1556, or "Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)," ASTM D-2922.

C. The Contractor shall cooperate with testing by the Engineer by allotting sufficient time for testing each layer. Any layer that does not meet density requirements shall be reworked and re-compacted until it meets the specified density.

D. Retesting of non-complying embankment or backfill will be at the Contractor's expense.

**** END OF SECTION ****

SECTION 02222

STRUCTURE EXCAVATION AND BACKFILLING

PART 1 - GENERAL

1.1 Description

A. Scope: Excavate, backfill, compact and grade for structures as required.

1.2 Related Work Specified Elsewhere

A. Trenching and Backfilling for Pipelines: Section 02221

1.3 Measurement and Payment Conditions

A. No measurements will be made in connection with structure excavation.
B. Payment for structure excavation and backfill will be taken to be included in the lump sum amount bid for the structure to which it relates.

PART 2 - PRODUCTS

2.1 Soil Materials

A. Fill and Backfill Materials:
   1. Soil materials shall be existing on-site material obtained from excavation work and shall be free from organic matter and deleterious substances, containing no rocks or lumps over 6" in greatest dimension, and with not more than 15% of the rocks or lumps larger than 2" in their greatest dimension.
   2. Fill material is subject to the approval of the Engineer, and is that material removed from excavations.
   3. Do not permit rocks having a dimension greater than 2" in the upper 12" of fill or embankment.
B. Topsoil: On site material salvaged from stripping operations in connection with excavation work.
C. Aggregate Bedding: Aggregate bedding shall be a manufactured or classified crushed stone or gravel obtained from an off-site source. Aggregate bedding shall conform to the following gradation requirements:

Sieve Size	% Passing
1"	100
¾"	90-100
⅜"	20-55
No. 200	0-10

Where the term granular fill, granular bedding, gravel fill or gravel bedding is used on the plans or elsewhere in the specifications, it shall be taken to have the same meaning as aggregate bedding, and these specifications shall apply.

PART 3 - EXECUTION

3.1 Finish Elevations and Lines

A. Comply with provisions of the detailed drawings.

3.2 Procedures

A. Utilities:
   1. Unless shown to be removed, protect active utility lines shown on the Drawings or otherwise made known to the Contractor prior to excavating. If damaged, repair or replace at no additional cost to the Owner.
   2. If active utility lines are encountered, and are not shown on the Drawings or otherwise made known to the Contractor, promptly take necessary steps to assure that service is not interrupted.
   3. If service is interrupted as a result of work under this Section, immediately restore service by repairing the damaged utility at no additional cost to the Owner.
   4. If existing utilities are found to interfere with the permanent facilities being constructed under this Contract, the Contractor shall perform excavations and adjustment of utility lines in coordination with the utility owner's direction. No payment will be made for working around utilities and performing excavations to adjust such lines.
B. Protection of Persons and Property:
   1. Barricade open holes and depressions occurring as part of the Work.
   2. Protect structures, utilities, and other facilities from damage caused by settlement, lateral movement, and other hazards created by operations under this Section.
C. Dewatering:
   1. Remove all water, including rainwater, encountered during trench and substructure work to an approved location by pumps, drains and other approved methods.
   2. Keep excavations and site construction area free from water. All construction shall occur under dry conditions.

3.3 Excavating

A. Perform excavating of every type of material encountered within the limits of the Work to the lines, grades and elevations indicated and specified herein.
B. Stripping Topsoil: Strip all topsoil from within the limits of the excavation, salvage and stockpile for finish grading operations.
C. Surplus Materials: Dispose of unsatisfactory excavated material, and surplus satisfactory excavated material, away from the site.
D. Excavate and backfill in a manner and sequence that will provide proper drainage at all times.
E. Unauthorized excavation:
   1. Unauthorized excavation consists of removal of materials beyond indicated sub-grade elevations or dimensions without specific instruction from the Engineer.
   2. Under footings, foundations, or retaining walls:
      a. Fill unauthorized excavations by extending the indicated bottom elevation for the footing or base to the excavation bottom, without altering the required top elevation.
      b. When acceptable to the Engineer, lean concrete fill may be used to bring the bottom elevation to proper position.
   3. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations, unless otherwise directed by the Engineer.
F. Excavation for structures:
   1. Conform to elevations and dimensions shown within a tolerance of 0.10 ft., and extending a sufficient distance from footings and foundations to permit placing and removing concrete formwork, installation of services, and other construction required, and for inspection.
   2. Scarify and re-compact footing areas as described in the geotechnical report.
G. Cold weather protection: Protect excavation bottoms against freezing when atmospheric temperature is less than 35° F.

3.4 Filling and Backfilling

A. General:
   1. Backfill structure excavation areas with on-site excavation material or borrow if suitable backfill materials cannot be obtained from excavation work.

B. Backfill excavations as promptly as progress of the Work permits, but not until completion of the following:
   1. Acceptance of construction below finish grade.
   2. Inspecting, testing, approving and recording locations of underground utilities.
   3. Removing concrete formwork.
   4. Removing shoring and bracing, and backfilling of voids with satisfactory materials.

C. Placing and compacting:
   1. Place backfill and fill materials in layers not more than 8" in loose depth.
   2. Before compacting, moisten or aerate each layer as necessary to provide moisture content in the range of ± 3% of optimum moisture.
   3. Compact each layer to 90% of maximum density per ASTM D698.
   4. Do not place backfill or fill material on surfaces that are muddy, frozen or containing frost or ice.
   5. Place backfill and fill materials evenly adjacent to structures, to required elevations.
   6. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around the structure to approximately the same elevations in each lift.

3.5 Grading

A. Grading outside building lines:
   1. Grade areas adjacent to structures to achieve drainage away from the structures, and to prevent ponding.
   2. Finish the surfaces to be free from irregular surface changes.
   3. Underfill backfill to allow for finish grade to be achieved with salvaged topsoil during finish grading work.
   4. Place salvaged topsoil material at the surface for all areas for which pavement, or another type of surfacing is not required.

3.6 Compacting

A. Control soil compaction during construction to provide the minimum percentage of density specified for each area.

B. Moisture Control:
   1. Where sub-grade or layer of soil material must be moisture-conditioned before compacting, uniformly apply water to surface of sub-grade or layer of soil material and prevent free water appearing on surface during or subsequent to compacting operations.
   2. Remove and replace, or scarify and air dry, soil material that is too wet to permit compacting to the specified density.

3.7 Maintenance

A. Protection of newly graded areas:
   1. Protect newly graded areas from traffic and erosion, and keep from trash and weeds.
   2. Repair and re-establish grades in settled, eroded and rutted areas to the specified tolerances.

3.8 Waste Excavation Material

A. Soil material taken from excavations shall be utilized to the extent possible for backfilling and finish grading work at the project site. Excess soil, if any, shall be disposed away from the project site unless the Engineer specifically directs a change in grading which will allow the excess material to be disposed of on site.

**** END OF SECTION ****

SECTION 02227

WASTE MATERIAL DISPOSAL

PART 1 - GENERAL

1.1 Description

A. Disposal of excess and/or unsuitable excavated material.
B. Disposal of demolition waste materials.
C. Disposal of construction wastes, packing materials, damaged materials.

1.2 Related Work Specified Elsewhere

A. Trenching and Backfilling for Pipelines: Section 02221.
B. Gravel Sub-base, Base Course and Surfacing: Section 02611.
C. Water Mains and Appurtenances: Section 02660.

1.3 Measurement and Payment

A. No direct measurement or payment will be made for this work.
B. Payment will be taken to be absorbed into the various contract items to which it relates.

PART 2 - PRODUCTS

2.1 Materials and Equipment

A. Furnish equipment and facilities necessary to accomplish required waste disposal.

PART 3 - EXECUTION

3.1 Disposal

A. Waste excavation material or material unsuitable for use as fill or embankment.
   1. Dispose of all excess or unsuitable excavated material away from the project site at a Contractor provided site.
B. Asphalt and Concrete Disposal.
   1. The Contractor shall remove and dispose of existing asphalt and concrete at a Contractor provided site outside of the project boundaries.
C. Perishable Construction Waste.
   1. Disposal of perishable waste material such as packing materials is the sole obligation of the Contractor and he shall be responsible for all disposal expenses.
   2. The Contractor shall haul all perishable wastes from the project site and dispose of this material.
D. All waste disposal identified in this project and specification shall be performed lawfully in compliance with all local, state and federal regulations.
E. All material generated by this project must be disposed of at a permitted site. Depending on what material is generated and whether it is contaminated or uncontaminated will determine which permitted facility can accept it. Permitted facilities include construction and demolition debris sites, restricted use sites, and regional landfills. Contact the SD DENR Waste Management Program at 605-773-3153 to identify locally permitted disposal sites for various categories of contaminated and uncontaminated materials.

**** END OF SECTION ****

SECTION 02575

PAVEMENT REMOVAL, REPAIR AND RESURFACING

PART 1 - GENERAL

1.1 Description

A. Scope:
   1. Restoration of bituminous surfaced streets and driveways disturbed by excavating for pipelines and appurtenances.
   2. Asphalt and concrete pavement removal.

1.2 Additional Requirements

A. Summary of Work: Section 01010.
B. Shop Drawings, Product Data and Samples: Section 01340.
C. Construction Facilities and Temporary Controls: Section 01500.
D. Waste Material Disposal: Section 02227.
E. Gravel Sub-base, Base Course and Surfacing: Section 02611.

1.3 Related Work Specified Elsewhere

A. Trenching and Backfilling for Pipelines: Section 02221.
B. Cast-in-Place Concrete: Section 03300.

1.4 Quality Assurance

A. Allowable Tolerances:
   1. Asphalt Concrete:
      a. Thickness: ± 1/2".
      b. Smoothness:
         (1) ¼" per ft. from nearest contact point when checked with 10' straightedge.
         (2) No depressions which will pond water.
B. Source Quality Control:
   1. Asphalt Concrete: Furnish job mix formula and laboratory tests demonstrating compliance with specified criteria.
C. Codes and Standards:
   1. All asphalt concrete resurfacing work in State or County highway right-of-way shall conform to the requirements of SDDOT "Specifications for Open Cut Method for Repair of Asphalt Pavement," as included hereinafter in this specification, unless a more restrictive procedure is required by these specifications.
   2. Work shall generally conform to South Dakota Department of Transportation Standard Specifications for Roads and Bridges, Current Edition Section 320, unless a more restrictive procedure is required by these specifications.
   3. The warranty period on street repairs within County right-of-way shall be 2 years.

1.5 Job Conditions

A. Weather Limitations:
   1. Do not lay gravel surfacing, base course or asphalt surfacing when underlying surface is muddy, frozen or wet.
   2. Asphalt work permitted only at atmospheric temperatures above 50° F.
B. The Contractor shall maintain a clean work area by removing excavated material and debris from the roadway areas in a thorough and timely manner.

1.6 Measurement and Payment

A. Unit Price Contract.
   1. Measurement of asphaltic surfacing materials shall on the basis of weight, in tons, of materials actually furnished for use on the project for authorized repair resurfacing work. Measurement of asphalt concrete will include the weight of the asphalt cement and asphalt for tack, unless a separate item is included in the Bid Schedule.
   2. Payment will be at the contract unit price per ton.
   3. Payment will include full compensation for materials, hauling, placing and compacting surfacing materials. Payment for asphalt concrete materials will be on a composite basis, where the cost of the asphalt cement is included in the contract price of the mixture.
   4. No payment will be made for surfacing materials needed to repair roadways where such repairs are necessitated by Contractor's carelessness or as a result of damage to pavements by Contractor's work forces outside of the project areas. Unless prior authorization of the Engineer is obtained, the estimated width of authorized asphalt pavement repair as shown on the plans shall be used as payment limits. If trenching conditions require additional width, approval must be obtained from Engineer. Widths in excess of 10 feet for open cut trenches will not be acceptable unless authorized by the Engineer.

B. Pavement Removal and Sawcutting.
   1. Pavement sawing will not be measured, but shall be absorbed into the item to which it relates.
   2. Concrete curb and gutter and concrete gutter removal will be measured in linear feet to the nearest linear foot. Payment will be at the contract unit price per linear foot.
   3. Concrete pavement removal will be measured in square feet to the nearest one square foot. Payment will be at the contract unit price per square foot.
   4. Asphalt concrete pavement removal will be measured in square yards to the nearest one square yard. Payment will be at the contract unit price per square yard.

PART 2 - PRODUCTS

2.1 Materials

A. Aggregate for Asphalt Concrete: Sound angular crushed stone or crushed gravel (ASTM D-692).
B. Asphalt Cement: 58-28 or 64-22.
C. Tack Coat: Emulsified asphalt, SS-lh or CSS-lh; ASTM D-977.

2.2 Asphalt Concrete Design Mix

A. Class G, Type I gradation per Section 880, South Dakota Department of Transportation "Standard Specifications for Roads and Bridges," Current Edition.
B. Asphalt content between 4.5 to 6.0% by weight.

PART 3 - EXECUTION

3.1 Asphalt Surfacing

A. Preparation:
   1. Sawcut full-depth, both edges of the trench line or repair area on parallel lines a distance of approximately 9" outside of the limits of the previous pavement removal limits during trenching operations. The pavement removal limits shown on the drawings are the final limits unless a change is approved by the Engineer.
   2. Remove all material to the sub-grade depth to provide neat vertical lines at the pavement edges.
   3. Compact the sub-grade to the required density per Specification 02221.
   4. Tack coat vertical contact surfaces of existing pavement immediately prior to placing asphalt concrete.

B. Placing Asphalt Concrete:
   1. Place asphalt concrete in not less than two distinct lifts of not more than 3" loose thickness.
   2. Asphalt tack not required when asphalt concrete placed in successive lifts.
   3. Spread, tamp and finish mixture by machine spreading where possible and by hand in areas where machine placement is impractical. The contractor may use hand placement only in irregular shaped areas with approval by the Engineer.
   4. Maintain minimum temperature of 225° F.
   5. Compact mixture by rollers, or by vibrating plate compactors in non-accessible areas.
   6. Perform finish rolling with steel faced, self-propelled type rollers, of sufficient weight and size to produce a properly compacted and smooth surface finish.
   7. Check surface smoothness and crown slope with a straightedge while the mix is warm enough for adjustments, and rake, loosen and add mixture as necessary to achieve a smooth uniform surface free of roller marks, water puddles or other irregularities.

C. Asphalt Surfacing Thickness: Thickness of asphalt surfacing shall be as shown on the plans or as directed by the Engineer. The Engineer may direct placement of asphalt surfacing at thicknesses greater or less than that of existing surfacing at the time of construction.

D. Scheduling Surfacing Repairs:
   1. Asphalt surfacing replacement shall be completed as soon as is practical after completion of trenching and backfilling operations.
   2. Gravel surfacing at asphalt repair areas is permitted on an interim basis only when construction areas must be opened to traffic in advance of permanent pavement repair.
   3. The Contractor shall maintain temporary surfacings in a smooth and well compacted condition at all times.
   4. The Contractor shall be responsible for coordinating traffic control during pavement repair. The Contractor is solely responsible for determining closure length for asphalt surfacing and routing traffic to alternate routes until the pavement is opened to traffic.

3.2 Pavement Sawing

A. Description: This work shall consist of sawcutting existing concrete or bituminous pavements with power driven pavement sawing equipment to facilitate pavement removal.

B. Sawing shall be performed on those lines marked in the field by the Engineer or on lines designated on plans where paved surfaces are to be removed. Sawing shall extend to the full depth of the pavement, or to a sufficient depth to insure a clean break from the paved surface to remain in place, but in no case less than 3 inches.

C. Pavements shall be pulverized and broken in place, if necessary, to insure that paving to remain will not be damaged by removal effort.

D. Sawing shall be done on neat straight lines insofar as possible unless otherwise directed.

E. The Contractor may elect to sawcut pavement prior to the trenching work and prior to the pavement repair, but sawcutting will be measured only prior to the pavement replacement.

F. The Contractor shall sawcut and remove any damaged asphalt edge due to Contractor negligence at no additional cost.

3.3 Curb and Gutter Removal

A. Existing concrete curb and gutter shall be removed where shown on the plans or directed by the Engineer. Removal shall be facilitated by sawing the curb and gutter section to a depth of at least ½ of the total depth of the section.

B. Curb and gutter shall be broken in place into pieces which can be conveniently handled without damage to adjacent curb or pavement sections.

C. Removed concrete shall be disposed of at approved waste disposal areas designated in the specifications or by the Owner.

3.4 Pavement Removal

A. Description: This work shall consist of removal and disposal of concrete pavements, bituminous pavements, driveway, sidewalk, valley gutters and all other similar concrete work which is not classified as curb and gutter.
B. Concrete and bituminous pavements shall be removed and disposed of in accordance with the Section 02227. Removal shall be facilitated by sawing a neat line at least 3 inches deep into the section to confine breakage to the desired location. Limits of removal shall be confined to existing contraction joints where possible.

3.5 Traffic Control

A. Signing and safety devices shall be utilized in accordance with requirement of Part VI of the *Manual on Uniform Traffic Control Devices* as shown on the approved traffic control plan.

3.6 Excavation

A. All unstable material, as determined by the Engineer, shall be removed and disposed of by the Contractor.

**** END OF SECTION ****

SECTION 02611

GRAVEL SUB-BASE, BASE COURSE AND SURFACING

PART 1 - GENERAL

1.1 Description

A. Scope:
1. Aggregate base course for use in pavement construction.
2. Aggregate sub-base for use in soil stabilization and roadway construction.
3. Gravel surfacing for roadways and driveways.

1.2 Quality Assurance

A. Allowance Tolerances:
1. Gravel Base Course:
a. Thickness: Specified Thickness ± ½".
2. Gravel Sub-base:
a. Thickness: Specified Thickness ± ½".
3. Gravel Surfacing:
a. Thickness: Specified Thickness ± ½".
b. Smoothness: No depressions which will pond water.

B. Source Quality Control:
1. Gravel Base Course, Sub-base and Surfacing: Furnish source description of each product laboratory sieve analysis (ASTM C-136), plasticity index and L.A. Abrasion Test loss results.

1.3 Job Conditions

A. Weather Limitation:
1. Do not lay gravel base when underlying surface is muddy, frozen or wet, or during periods of precipitation.

1.4 Measurement and Payment

A. Gravel surfacing materials will be measured to the nearest 0.1 tons. The Contractor shall provide scale receipts for all materials furnished, installed and accepted within 48 hours of placement.
B. Base course will not be measured and paid for. The base course is incidental to the water main road crossing and structure.
C. The accepted quantities of granular surfacing will be paid for at the contract unit price per ton.
D. No payment will be made for water for compaction. Payment for water for compaction shall be absorbed into the granular material to which it relates.
E. No payment will be made for earth excavation which is replaced by granular material. Such work shall be incidental to furnishing and placing granular materials. The excess material removed and disposed of will not be paid for directly but shall be incidental to the granular materials.

PART 2 - PRODUCTS

2.1 Materials

A. Gravel Surfacing / Base Course:
1. Sound angular crushed stone from limestone or ledge-rock sources.
2. Base Course, temporary surfacing and gravel surfacing on this project shall be the same material and will be paid for under the same item.

3. Gradation:

Sieve Size	Total % Passing by Weight
1"	100
¾"	80-100
½"	68-90
No. 4	42-70
No. 8	29-53
No. 40	10-28
No. 200	3-12

The fraction passing the No. 200 sieve shall not be greater than 2/3 of the fraction passing the No. 40 sieve.

PART 3 - EXECUTION

3.1 Base Course, Gravel Surfacing and Gravel Sub-base

A. Preparation:
   1. Prepare sub-grade of all roadway and driveways to density requirements specified in Specifications 02221 and 02222.
   2. Remove loose and foreign material from disturbed areas.
   3. Shape sub-grade to the plan cross-section, and to an elevation which will allow placement of the required compacted thickness of sub-base, base course and surfacing.

B. Equipment:
   1. The Contractor shall provide equipment of such capacity and character as will insure proper mixing, placing and compaction of the base material and completion of the work in a timely manner.
   2. The Contractor shall furnish equipment to provide that moisture content of the base material shall be maintained near optimum until compaction is complete and final surfacing is in-place.

C. Placing Base Course and Surfacing
   1. Spread gravel uniformly over the prepared sub-grade in loose lifts of 4" or less, and water and compact. Shape and compact before the succeeding layer is placed.
   2. Compact to not less than 95% of maximum density per Modified Proctor (ASTM D-1557) using pneumatic-tired, vibratory or steel faced rollers. When completed, the base course shall be firm, smooth and well bonded.
   3. Shape the finished base to the lines and grade called for on the plans.
   4. For surfacing layer, finish grade for uniform texture and free draining surfaces.

3.2 Field Quality Control

A. General: All field testing shall be performed by the Engineer at the expense of the Owner.
B. Base Course: Field tests of base course moisture and density will be conducted at the locations and frequency selected by the Engineer.

**** END OF SECTION ****

SECTION 02660

WATER MAINS AND APPURTENANCES

PART 1 - GENERAL

1.1 Description

A. Scope: Water mains and appurtenances for exterior underground installation.

1.2 Quality Assurance

A. Regulatory Agencies: Pipe for potable water service shall bear the National Sanitation Foundation Seal.
B. Source Quality Control: Pipe shall be clearly marked with pipe size, class, type, test pressure and manufacturer's name.
C. Reference Standards:
   1. AWWA C-900, PVC Pressure Pipe.
   2. Unibell Plastic Pipe Association "Recommended Standards for Installation of PVC Pressure Pipe."

1.3 Submittals

A. Shop Drawings and Product Data:
   1. Submit dimensional data for all pipe and fittings (5 copies).
   2. Submit descriptive literature and specifications for all products proposed for use on this project, including valves, fittings, hydrants and accessory items.

1.4 Product Delivery, Storage and Handling

A. Pipe and accessories shall be unloaded and stored at the jobsite in a manner that will not damage pipe or fittings.
B. The Contractor is responsible for safe storage of all materials until they have been incorporated into the completed project.

1.5 Measurement and Payment Conditions

A. Unit Price Contract.
   1. Water Mains:
      a. Pipelines will be measured by the horizontal linear foot of installed pipe, including measurement through valves and fittings. Measurement will be to the nearest 0.1'.
      b. Payment will be at the contract unit price per foot of pipe actually furnished and installed for the type and size installed.
      c. Payment will be considered full compensation for the complete pipe installation, including trenching, pipe laying, backfilling, testing, disinfecting, locator wire and subsidiary work required by the plans and specifications, but not specifically described elsewhere as a separate pay item.
      d. No separate payment will be made for removal of existing pipelines and fittings, which are to be removed as part of new pipeline installation. Where pipeline removal is required, such removal will be considered to be a subsidiary obligation to pipe installation, and no separate payment for removal will be made.
   2. Pipe Fittings:
      a. Pipe fittings over 2" for water mains will be measured by the unit each for each type of fitting furnished and installed.
      b. Pipe fittings 2" and smaller will not constitute separate pay items and shall be included in the unit price per foot of water service.
      c. Payment will be at the contract unit price per each fitting of the respective type and size.

d. Payment will include full compensation for furnishing and installing the fitting and thrust blocking or joint restraint system.
e. Fittings which are not specifically called for on the plans or authorized for use by the Engineer, but which are used for the convenience of the Contractor, or due to laying methods used by the Contractor, will not be paid for by the Owner.
f. No direct payment will be made for reconnections to water services or for water main connections. Couplings over 2" in size will be paid for on the per-each basis.

3. Gate Valves and Boxes:
   a. Gate valves will be measured by the unit each for each respective size.
   b. Payment will be at the contract unit price per each valve and valve box.
   c. Payment will include full compensation for furnishing and installing valve box, concrete blocking, debris cap, valve box adaptor and restraints when specified.
   d. When auxiliary gate valves are furnished and installed as part of fire hydrant installations, the cost of the auxiliary gate valve and box will not be paid for separately, but will be paid for as part of the fire hydrant installation.
4. Flushing and Standard Fire Hydrants:
   a. Furnishing and installing fire hydrants will be measured by the unit each for each respective type.
   b. Payment will be at the contract unit price per each hydrant installation.
   c. Payment will be full compensation for excavating, furnishing and installing the hydrant, auxiliary thrust blocking, gravel drain, back-filling and subsidiary work. The 6" PVC hydrant leads and auxiliary valves shall be included in Bid Item 20. Fire Hydrant w/Aux. Valve & Lead. Bends on the hydrant lead are paid for separately under their corresponding bid item. Hydrant extensions will not be paid for but shall be absorbed into the unit cost for the fire hydrant if required.
5. Service Taps:
   a. Service taps with tapping saddle and corporation stop will be measured by the unit each for each respective size.
   b. Payment will be at the contract unit price for "tapping saddle and corporation stop" for the respective size and will include full compensation for tapping the new or existing main, furnishing and installing all materials, excavation and backfill, and labor for the appropriate corporation stop fittings and service saddle of the size indicated on the drawings.
6. Curb Stops and Boxes:
   a. Curb stops and boxes will be measured by the unit each for each respective size.
   b. Payment will be at the contract unit price per each curb stop and box and will include full compensation for furnishing and installing all materials and labor for the appropriate curb stop and box as indicated on the drawings.
7. Water Service Line and Conduit (2" Diameter and Smaller).
   a. Payment will be at the contract unit price per linear foot measured to the nearest 0.1'. Payment will include full compensation for furnishing and installing all materials and labor using open-cut trenching for the appropriate size of water service line piping as indicated on the drawings.
8. Abandon Valve/Piping:
   a. Gate valves and piping to be abandoned will not be measured. Payment for abandonment work shall be absorbed into the project or to the item to which it relates.
9. Remove Curb Stop and Box:
   a. Removal of existing curb stop and box will not be paid for, but shall be absorbed into the project or to the item to which it relates.

PART 2 - PRODUCTS

2.1 Pipe Materials

A. Distribution System Pipe:

C-900:

1. Polyvinyl Chloride (PVC) pressure pipe shall conform to AWWA C-900, Class 150.

2. PVC pipe shall have bell ends with elastometric gaskets and shall use the Rieber joining system, which has the gasket formed into the pipe during the pipe manufacturing process. Installation procedures shall conform to AWWA C-605.
3. Ductile Iron Piping per Section 15100.

B. Ductile Iron Fittings:
1. Ductile iron, compact type, ANSI/AWWA C-153/A21.53, or standard, ANSI/AWWA C-110/A21.l0, Pressure Class 350.
2. Joints: mechanical joints, ANSI/AWWA C-lll/A21.ll.
3. Interior and Exterior Coating: Epoxy coated.
4. Gaskets: Transition type for IPS and CIOD pipe, vulcanized rubber, non-tipped, ANSI/AWWA C-lll/A21.ll.
5. Bolts for mechanical joints and restraints shall be NSS "Cor-Ten Blue" or "Birmingham" fluorocarbon coated corrosion resistant type.
6. Joint restraints Systems:
   a. All fittings shall be mechanically restrained, ductile iron AWWA C153, Class 350 with mechanical joint retainer glands or approved joint restraining devices. Retainer glands, where required, shall be EBBA: Series 2000 PV Series 2000SV, or Series 15PF00, Romac Field Flange or Uni-Flange for PVC or DI pipe. The cost of the restraining devices needed is considered subsidiary to the item, fitting and/or pipe to which it applies.
   b. Pipe joints for PVC water main shall be push-on bell and spigot. Where water main pipe joints are located closer than the restraining length (as noted in the table) to a restrained valve or fitting, the bell joint shall be restrained with a bell restraint fitting, EBBA: Series 2500 or Series 1600, Uni-Flange Series 1390, or equal.
   c. Joint restraints shall be coated with Megabond by EBBA or equal.

C. Transition Sleeve Couplings:
1. Comply with ANSI/AWWA C219.
2. Ductile iron or stainless steel construction.
3. Ductile iron shall be epoxy coated.
4. Bolts and nuts shall be stainless steel.
5. Ford FC1-ESH, Romac Style 501, or equal.

D. Tapping Sleeves:
1. Ductile iron or stainless steel construction, 200 psi rating.
2. Branch end shall be flanged.
3. Stainless steel tapping sleeves shall be provided with stainless steel bolts and nuts.
4. Ductile iron sleeves shall be epoxy coated.

E. Service Line Piping:
1. 1" through 2" diameter shall be Type "K" copper piping when copper pipe is called for on the drawings.
2. PVC service line pipe shall comply with ASTM D-2241, 200 psi, SDR 21, CertainTeed or equal.
3. HDPE Water Service Line: High density polyethylene iron pipe size water service line piping 1-1/2" size and larger shall be per PE 3408/3608, DR8, 200 PSI rating, ANSI/NSF-61, 14 Listed. Provide connector inserts and fittings to connect to proposed corporation stops, cub stops, and existing piping connections.

2.2 Pipe Accessories

A. Gate Valves:
1. Iron body resilient seated solid wedge, non-rising stem per AWWA C-509 and C-515 with a 250-psi pressure rating, Mueller R/S, or Engineer approved equal.
2. Mechanical joint ends per ANSI/AWWA C-lll/A21.ll.
3. Wrench nuts per AWWA C-500.
4. Valves shall be internally coated per AWWA C-550 with fusion bonded epoxy coating.
5. Gate valves used as tapping valves or auxiliary gate valves mounted directly to hydrant shoes shall meet the requirements of this specification, but shall have one mechanical joint end and one flanged end (ANSI B.16.l).
6. Bonnet bolts and nuts shall be Series 300 stainless steel.

B. Standard Fire Hydrants:
   1. AWWA C-502, Waterous WB-67 or "Mueller Co. A-423" Only Waterous or Mueller fire hydrants will be acceptable.
   2. Size: 5 1/4" main valve, 2-2 1/2" hose nozzles and 1-4" pumper nozzle, National Standard threads.
   3. Inlet connection: 6" mechanical joint standard.
   4. Bury Depth: 6'6" minimum; provide bury depth required by pipe grades and ground surface elevations shown on plans. Provide hydrant extensions as required.

C. Flushing Hydrants:
   1. Eclipse No. 2 non-freezing post hydrant or Kupferle Blow-OFF style, or equal.
   2. Hydrants shall be self-draining, non-freezing, compression type with 2 3/16" main valve opening.
   3. Inlet connection shall be 2" MJ, minimum.
   4. Outlet shall be 2 ½" NST.
   5. Bury depth 6' minimum.

D. Valve Boxes:
   1. Cast iron, screw-type extension sleeve, 5 1/4" diameter with 3/16" casting thickness, adjustable to the heights indicated on the drawings using extension pieces. The top piece shall be at least 24" in length.
   2. Furnish with drop lids marked "water." Provide Mueller 666-S, or equal.
   3. Valve Adaptor: Furnish and install valve box adaptor to stabilize valve box and prevent settling or shifting of the box. The adaptor shall be a Valve Box Adaptor II manufactured by Adaptor, Inc. or equal. The adaptor shall match the type and size of valve installed.

E. Service Line Valves and Fittings (No Lead):
   1. Copper splicing couplings shall be pack joint couplings for flared or compression type such as Ford, Mueller 110 conductive compression, or equal. Soldered joints shall not be used for service lines installed underground.
   2. General: Service line valves and fitting shall meet AWWA C-800. All castings shall be 85/5/5/5 copper alloy.
   3. Curb Stop Valves: Curb stop valves shall be ball valve type with a 300 psig working pressure rating, with a cylindrical plug provided with a pressure-activated 0-ring sealed in a machined groove to close the inlet. A 90-degree operation is required, with internal checks. Drains are not permitted on valves. Provide straight levers where required. Curb stop valves shall be:
      a. Mueller 300 ball curb valve with Mueller 110 conductive compression connection; Model B-25155;
      b. A.Y. McDonald Minneapolis pattern ball valves – 300-psig water; Model 6104Q or 6100Q.
      c. Ford B44 Series; and
      d. Or equal.
   4. Curb Boxes: Curb boxes shall be Mueller H-10350, or equal and shall be cast-iron, telescope to a length of 6'. Lids shall be marked "water" and have a 13/16" pentagon brass nut, and 1 ¼" plug in lid.
   5. Corporation Stops: shall be a "ball valve" type with a 300-psig working pressure rating. The inlet shall have a tapper thread (AWWA Standard) and the outlet shall be a conductive compression connection for type "K" copper or Class 200 PVC pipe. Copper pipe connections shall be Mueller 110 conductive compression, A.Y. McDonald McQuick compression – Q Series, Hayes-Tite, or equal. Corporation stops shall be:
      a. Mueller 300 ball with Mueller 110 conductive compression connection; Model B-25008;
      b. A.Y. McDonald ball valves – 300 psig water; Model 4701BQ;
      c. Ford FB1000 Series, and;
      d. Or equal.
   6. Tapping Saddles: Service saddles for 1" through 2" copper service pipe shall be 304 stainless steel band (double strap), tap, nuts and bolts. Tapered Buna-N ASTM D2000 rubber gasketed, Ford FS 303, or equal.
   7. Poly Connections: Provide steel insert stiffeners for poly connections on existing lines. Mueller, Ford, or equal compression couplings.
   8. Air Release Pits: shall be rigid PVC 18" x 72" pit with standard single setting coil polyethylene piping, 1" coil and 1" MIP in/out, 4" insulating foam disc, standard lid frame, and 18" cast iron side locking lid with the words "Valve" or an Engineer Approved Equal marked on the lid. Valve shall be 1" nylon by ARI or equal. Provide ball valves and related components as shown on the drawings.

2.3 Miscellaneous Accessories

A. Pipe Lubricant: Per pipe manufacturer's recommendations.
B. Concrete for Thrust Blocking: 28-day compressive strength of 3000 psi (min.).
C. Locator Wire: Solid soft drawn copper AWG #14, meeting requirements of ASTM B-3 or B-8. Insulation shall be low density, high molecular weight polyethylene insulation suitable for direct bury applications with a minimum 3/64" thickness. Splicing shall be accomplished using 3M fusible heat shrink tubing or 3M DBY connectors. PVC adhesives or scaling compounds are not acceptable.
D. PVC Encasing Pipe: Where PVC Pipe is used to encase the water main due to inadequate vertical clearance at a sewer main crossing, the PVC pipe shall be PVC sewer pipe per ASTM D 3034.
E. Polyethylene encasement: ANSI A21.5, seamless tube, black ASTM D1248, Type 1, Class C, Grade
F. G-l, 8-mil thickness. Tape for joints in polyethylene shall be 3M "Scotchwrap 50," or equal.
G. Concrete for Thrust Blocks: Cement Content - 610 lbs. per cubic yard (min.); Maximum coarse aggregate of 1". Maximum slump of 6" admixtures for air entraining; Minimum compressive strength of 3,000 psi at 28 days.
H. Pipeline Insulation:
   1. Polystyrene sheet per AASHTO M230-70.
   2. 2.0-pcf density.
   3. Thickness per plans, 2" minimum.
I. Hydrant Protection Posts (Pipe Bollards).
   1. Post shall be steel and sized per standard detail.
   2. Posts and base shall be filled with 3,000-psi concrete.
   3. The exterior surface shall be painted with an Engineer-approved safety yellow paint.
   4. Posts shall be paid for under "incidental work", when used.

PART 3 - EXECUTION

3.1 Alignment and Grade

A. Lay water main to lines and grades established and indicated on the plans. If grade is not indicated, provide cover depth shown, but not less than 6'-0" unless directed otherwise by the Engineer.
B. If unforeseen obstructions are encountered during the progress of the work and interfere with the proposed vertical or horizontal alignment of the pipeline, the Engineer will alter the plans and order a deviation in line, and/or grade, or may arrange for the removal or relocation of the obstruction. If pipe grades are established on the plans, the Contractor shall not deviate from plan line or grade without Engineer's approval.
C. The Contractor shall provide 6'-0" cover over all new mains and services.

3.2 Installation

A. Cutting Pipe:
   1. Cut pipe neatly without damage to pipe.
   2. Cut smooth, straight, and at right angles to the pipe axis using saw or abrasive wheel.
   3. Dress and bevel end of cut pipe to remove roughness and sharp corners.
B. Cleaning:
   1. Thoroughly clean pipe and fittings of foreign matter before installation.
   2. Keep pipe and fittings clean until piping system placed into service.
   3. Clean joint contact surfaces immediately prior to jointing.
   4. Trenching:
      a. Comply with the requirements of Section 02221.
C. Jointing and Laying Pipe:
   1. Lay pipe with bell ends facing in the direction of laying.
   2. Comply with pipe manufacturer's recommended laying and joining instructions, and with Unibell Standards, unless specifically required otherwise by these specifications.

3. Mechanical Joints:
   a. Do not over tighten joints; if an effective seal is not obtained, disassemble joint, clean thoroughly, and reassemble.
   b. Where tie rods are used for restraining joints, align holes carefully to permit installation of harness bolts.
4. Push on Joints:
   a. Clean and lubricate joint surfaces immediately before completing the joint.
   b. Bevel the spigot ends of field cut piping.
5. Mechanical Sleeve Type Couplings.
   a. Cut pipe ends clean square and smooth.
   b. Leave a space not less than 1/4" or more than 1" between pipe ends.

D. Anchorage.
1. Thrust restraint shall be completed in accordance with ANSI/AWWA C605-94/5.7, ANSI/AWWA 907-91 and AWWA Manual M23 or most current edition of these standards and should adhere to the manufacturer's recommendations.
2. Provide a complete system of reaction blocking and mechanical restraint to prevent pipe movement caused by internal pressure.
3. Provide (precast concrete) thrust blocking and restraining system at a tees, crosses, bends deflecting 11 1/4° or more, plugs, caps and similar locations whether specifically indicated on the drawings or not.
4. Concrete thrust blocking shall:
   a. Concrete thrust blocks shall be precast concrete when a joint is mechanically restrained.
   b. Blocking shall extend from the fitting to solid undisturbed earth, and shall be installed such that the joints are not covered by concrete.
   c. Provide polyethylene encasement completely over the fitting to protect the bolts from concrete.
   d. The minimum thickness of concrete between the fitting and the soil bearing area shall be 6".

E. Placing Hydrants and Auxiliary Valves.
1. Fire hydrants shall be installed in accordance with ANSI/AWWA C600-93/3.7, AWWA Manual M17 or most current edition and the recommendations of the manufacturer.
2. Hydrants and auxiliary gate valves and boxes shall be placed in a vertical position (plumb) at the locations indicated on the plans.
3. Excavate an area not less than 18" square and 18" deep below the base of each hydrant and fill this excavation with 3/4" to 1" clean rock or gravel before placing the hydrant.
4. After the hydrant is placed, construct a concrete thrust block between the back of the hydrant and the firm undisturbed earth at the back of the hydrant excavation.
5. Place an additional quantity of clean rock or gravel at the base of the hydrant to completely cover the base of the hydrant to a depth of at least 6" above the barrel drain ports.
6. Place the hydrant auxiliary gate valve in the position indicated on the plans.
7. Set the hydrant with the bury line at the finished ground surface. Contractor shall refer to plans for finish grade elevations which vary from existing ground elevations. Provide hydrant extension if required.

F. Placing Valves and Valve Boxes.
1. Valves shall be placed on a precast concrete block, with a thickness of at least 6" and a surface area of at least 8" x 18", and centered at the valve center.
2. Valves and boxes shall be placed in a vertical position, with the top of the valve box flush with the pavement in paved areas, and approximately 1" above finish grade in turfed areas.
3. Where the plans indicate that the future grade at the valve location will be higher or lower than the surface elevation at the time of valve installation, the Contractor shall provide the correct combination of extension pieces such that the elevation of the valve box can be adjusted to the future finish grade without replacing the valve box.
4. Install valve adaptor and debris cap on each valve and box.

G. Locator Wire:
1. Lay locator wire along with the pipe near the top of the pipe embedment zone, taking care not to damage the wire during backfilling.

2. Bring the locator wire to the surface to the tracer wire access box. Connect the wire to the access box lid and backfill around the box leaving the lid 0.1' above finish grade. Provide slack in the wire as required.

3.3 Water Main Replacement

A. Removal of Existing Water Mains.
   1. Unless indicated otherwise on the plans, the Contractor shall remove and lawfully dispose of existing water main pipe and fittings as part of the Contract work.
   2. The Owner may want to retain possession of some fittings. If Owner does want fittings, Contractor shall deliver removed fittings to an area designated by the Owner.
   3. Pipeline removal is required when the new main is to be located on essentially the same alignment as the existing pipeline to be replaced.
   4. When existing pipelines are found to be located at a depth more than 12" below the depth required for 6'- 0" of soil cover over the pipe, the Contractor may request the approval of the Engineer to abandon the existing water main in place.
   5. When existing pipelines are found to be located at a depth below finish grade where the pipe cover is less than 6'- 0", the Contractor shall excavate below the existing water main depth to provide a finish cover depth of 6'- 0".
   6. Pipe profiles of existing pipes shown on the plans are shown to illustrate assumed pipe depths and grades and to show potential conflicts with other utilities. The actual depth of existing pipelines may vary from the profiles shown on the drawings, and the Contractor shall comply with the requirements of this specification to provide the necessary frost protection.
   7. Existing valves shall be abandoned when called for on the drawings. The valves shall be placed in the closed position, box removed and hole backfilled.
B. Temporary Water Service.
   1. Prior to commencing any water main replacement work, the Contractor shall provide for temporary water service to any residences or businesses where the water main service will be discontinued for 8 hours or more. Temporary water main plugs required for construction sequencing will be the responsibility of the Contractor and no payment will be made.
   2. Acceptable temporary service shall consist of safe and reliable piping with a capacity sufficient for normal domestic needs.
   3. The Contractor is responsible for all temporary piping and service equipment needed to provide temporary water service, and for maintaining the temporary equipment in a serviceable condition.
   4. The Contractor is responsible for investigating the conditions for temporary service in advance of construction, and for having the needed fitting and connection devices at the jobsite.
C. Service Interruption.
   1. The Contractor shall provide not less than 24 hours advance written notification to affected property owners when service interruption is anticipated.
   2. Service interruption, when needed, shall be limited to between the hours of 8:00 A.M. and 5:00 P.M., Monday through Friday, unless special arrangements with the affected owner have been made in advance.
   3. No weekend service interruptions are permitted without special arrangements with property owners and Engineer.
D. Restoring Service.
   1. Do not reconnect existing services to new mains until mains are satisfactorily tested and disinfected.
   2. Cooperate with property owners to minimize service interruption time and to assure that services are properly flushed and operating properly.

3.4 Disinfection of Water Main

A. Before being placed into service, each portion of water main shall be disinfected by introduction of chlorine solution into the mains.
B. After-completion of pressure testing, mains shall be flushed to remove dirt or other debris.
C. Pipeline disinfection shall comply with the requirements of AWWA C-651.

D. Chlorine solution shall be prepared using sodium hypochlorite or calcium hypochlorite conforming to AWWA B-300, and introduced into the piping in an approved manner to achieve a uniform dosage of 50 ppm in the piping system.
E. The disinfecting solution shall be allowed to stand in the pipe for a period not exceeding 5 days or less than 24 hours, during which time all valves and hydrants shall be operated.
F. At the end of 24 hours, the treated water shall not contain less than 25 ppm of available chlorine in all parts of the system.
G. The system shall be flushed with clean water to reduce the residual chlorine to approximately 0.2 ppm. During the flushing period, each hydrant shall be operated to insure complete flushing.
H. Disposal of chlorinated water shall be performed in a manner which will not endanger aquatic life in adjacent watercourses. Neutralization of chlorinated water by approved means will be required.
I. After disinfection, the waterlines must be flushed and the disinfected line must be sampled. Two consecutive samples of water from the end of the disinfected line must be collected at least 24 hours apart. These samples must be submitted to the State Health Laboratory in Pierre, or other laboratory acceptable to the department. The samples must be free of coliform bacteria before the system is placed into service. When flushing the line, the water used for disinfecting the water line must not reach a stream, river, or other waterway if chlorine is detected in the water. Contact the Department of Environment and Natural Resources Surface Water Quality Program at (605) 773-3351 for more information.
J. The Contractor shall not proceed with disinfection until a disinfection plan has been submitted to the Owner and Engineer and approved.

3.5 Pressure Testing

A. Hydrostatic testing must be completed in accordance with ANSI/AWWA C605-94/Section 7.3 (PVC pipe) or most current edition for every section of water main between successive valves or other closures.
B. Each section shall be tested by applying a hydrostatic pressure of 150 psi as measured by a gauge at the lowest hydrant.
C. Lines shall be filled slowly (velocity less than 2 fps) and all air completely expelled from pipes prior to pressure testing.
D. Allowable leakage shall be calculated using the following formula. Leakage tests shall be for a duration of 2 hours or more.

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

Where: Q = quantity of makeup water, in gallons per hour.
L = length of pipe section being tested, in feet.
D = nominal diameter of the pipe in inches.
P = average test pressure during the hydrostatic test, in pounds per square inch (gauge).

1. Example leakage calculation:
Max. L (8") = 0.66 gallons per hour per 1,000 linear feet at 150 psi.
Max. L (6") = 0.50 gallons per hour per 1,000 linear feet at 150 psi.

E. The above-described tests shall be made under the observation of the Engineer. The Contractor shall correct and/or replace any faulty material or workmanship at his expense to the satisfaction of the Engineer. Tests shall be repeated after any replacements have been made.
F. All necessary pumps, appliances, gauges and labor for the test shall be furnished by the Contractor at his own expense.
G. Replace all defective fittings pipe or other accessories with new material. The use of repair clamps or sleeves to repair defective materials will not be permitted.

3.6 Separation of Water Mains and Sewers

A. Horizontal Separation:
   1. Sewers shall be laid at least 10' horizontally from any existing or proposed water main. The distance shall be measured edge to edge.
   2. In cases where it is not practical to maintain a 10' separation, the SDDENR may allow deviation on a case-by-case basis, if supported by data from the design engineer. Such deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or in an undisturbed earth shelf located on one side of the sewer and at an elevation so the bottom of the water main is at least 18" above the top of the sewer.
   3. If it is impossible to obtain proper horizontal separation as described above, both the water main and sewer shall be constructed of slip-on or mechanical joint pipe complying with public water supply design standards of the SDDENR and be pressure tested to 150 psi to assure watertightness before backfilling.
B. Vertical Separation:
   1. Sewers Crossing Under Water Mains.
      a. The sewer shall be laid to provide a minimum of 18" from the top of the sewer to the bottom of the water main.
      b. The crossing shall be arranged so the sewer joints will be equidistant and as far as possible from the water main.
   2. Sewers Crossing Over Water Mains.
      a. Either the water main or the sewer main must be encased in a watertight carrier pipe that extends 10' on both sides of the crossing, measured perpendicular to the water main.
      b. The carrier pipe shall be PVC, ABS or HDPE, and the ends sealed with a rubber gasket or boot.
C. Special Conditions: When it is impossible to obtain the proper horizontal and vertical separation as stipulated above, one of the following methods shall be specified.
   1. Water Pipe.
      a. The sewer shall be designed and constructed equal to water pipe and shall be pressure tested at 150 psi prior to backfilling to assure watertightness; or
   2. Carrier Pipe.
      a. Either the water main or the sewer main may be encased in a watertight carrier pipe that extends 10' on both sides of the crossing, measured perpendicular to the water main.
      b. The carrier pipe shall be PVC, ABS or HDPE, and the ends sealed with a rubber gasket or boot.

3.7 Trenchless Service Line Installation

A. General: The Owner and Pennington County Highway Department prefer that the Contractor install the proposed water services via trenchless methods. Payment will be made to the Contractor for complete installation of service line per foot. Payment will also be made for the plans quantity of asphalt pavement removal, replacement of asphalt, and sawcutting. Bid Items C: 4, 39 and 40.
B. Protection of Roadbed and Pavement:
   1. No excavation for access pits will be permitted within 3 feet of the pavement edge or curb of any highway unless shown otherwise on the plans.
   2. The sides of pits shall be supported by sheetpiling or shoring placed in such a manner as to prevent any movement or slippage of earth during the excavation and boring operations.
   3. The Contractor shall work in close cooperation with roadway and utility authorities to insure the protection of their property and traffic.
   4. If limits of open cut excavation are not indicated on the plans, the Contractor shall ascertain the spacing requirements from the roadway authority prior to commencing work.
C. Trenchless Service Line Installation Method.
   1. Trenchless Boring Pits:
      a. The boring pit shall be excavated on one side of the right-of-way under which the pipe is to be installed. The pits shall be excavated within the existing right-of-way.
      b. The pit shall be only of sufficient length to provide room for the boring machine, and required equipment.
      c. The pit shall be of sufficient width to permit ample working space.

d. The end of the pit nearest the roadbed shall present a vertical face into which is to be excavated the adit for the pipe.
e. Shielding of the working face with steel plate may be necessary to prevent voids or caving.
f. Pits shall be maintained in a dewatered condition throughout the construction period.

D. Trenchless Procedure.
1. The water services shall be installed and pulled through the void prepared by a pneumatic boring or directional drilling device. The void for the water service shall not be enlarged to cause surface depressions or failures. The Contractor shall repair any settling or surface problems at no cost to the Owner.

E. Line and Grade.
1. The completed service shall be true to plan line and grade to a tolerance of 0.5 ft. maximum with a minimum 7.5 ft. of cover under asphalt pavement unless the Engineer specifically approves deviation of a greater amount from the plan grade.
2. If the Contractor is unable to maintain this tolerance, he shall bear the full responsibility for corrective work and/or redesign and relocation.

F. Underground Utilities:
1. The Contractor bears full responsibility for any change to underground utilities and for pothole locations.

**** END OF SECTION ****

SECTION 03100

CONCRETE FORMWORK

PART 1 - GENERAL

1.1 The Requirements

A. All formwork shall comply with all the recommendations of ACI 347 "Recommended Practice for Concrete formwork" except as modified herein.
B. The Contractor shall assume full responsibility for the design and construction of all formwork.

1.2 Reference Specifications, Codes, and Standards

A. Commercial Standards
ACI 117..... Specifications for Tolerances for Concrete Construction and Materials.
ACI 301..... Specifications for Structural Concrete.
ACI 347..... Guide to Formwork for Concrete.

1.3 Quality Assurance

A. The Contractor shall set and maintain concrete forms and perform finishing operations so as to ensure that the completed work conforms to the shape, line, grade and dimensions as shown on the Drawings. Formwork tolerances shall not exceed permissible deviations given in ACI 117. Use Class A formwork facing material offset. Use "very flat floor" finishing tolerance. See Section 03300, 1.5 C. for additional construction tolerances. Tolerances is the specified permissible variation from lines, grades or dimensions shown. Surface defects and irregularities are defined as finishes and are to be distinguished from tolerances.

1.4 Measurement and Payment

A. No direct measurement of work under this specification will be made.
B. Payment will be taken to be included under the various unit price or lump sum bid items to which it relates.

PART 2 - PRODUCTS

2.1 Materials

A. For all concrete surfaces to be unexposed, form surfaces that will be in contact with concrete shall be of No. 2 common or better lumber or other material producing equivalent finish.
B. For all concrete surfaces to be exposed, finishes shall be as specified in Section 03300 – Cast-in-Place Concrete.
C. Form ties shall be factory-fabricated, snap-off metal ties of design that will not allow form deflection and will not spall concrete upon removal. Wire ties will not be permitted. Ties shall be free of devices that will leave a hole larger than 1" or less than ½" in diameter in the concrete surface. The portion of the tie remaining in the concrete after removal of the exterior parts shall not project beyond the surface of the concrete and shall be at least 1-1/2" back from any surface of the concrete that will be exposed, painted, damp-proofed, waterproofed, or receive direct applications of plaster.
D. Forms for exposed or painted surfaces shall be coated with a form release agent before reinforcement is placed. The form release agent shall be a commercial formulation of satisfactory and proven performance that will not bond with, stain, or adversely affect concrete surfaces, and will not impair subsequent treatment of concrete surfaces. Release agent shall be used as recommended in the manufacturer's printed or written instructions. Forms for unexposed surfaces, other than retained in-place metal forms, may be wet with water in lieu of coating immediately before placing concrete, except

that in cold weather with probable freezing temperatures, coating shall be mandatory. Surplus de-bonding agent on form surfaces, reinforcing steel and construction joints shall be removed before concrete is placed.

E. Prior to coating with the above specified release agent, wood forms shall be sealed with a penetrating type wood sealer. The sealer shall be applied in strict accordance with the manufacturer's recommendations.

2.2 Design

A. Formwork must be designed, constructed, supported, braced and maintained so that it will safely support all dead and live loads to which it may be subjected. Formwork shall be sufficiently tight to prevent leakage of mortar so finished concrete will conform to shapes, lines, grades, and dimensions indicated on the Drawings.

B. The weight of the formwork, freshly placed concrete, workman and equipment, rate of placement and temperature, tamping and vibration of the concrete shall all be considered in the design of the formwork. Forms and false work to support roof and floor slabs shall be designed for a loading of at least that required by ACI 347.

PART 3 - EXECUTION

3.1 Construction

A. Formwork - Forms shall be designed, constructed and maintained to insure that after removal of forms the finished concrete members will have true surfaces free of deformities or bulges, conforming accurately to the indicated shapes, dimensions, lines, elevations, and positions. Recommendations given in ACI 347 shall be followed. Form surfaces that will be in contact with concrete shall be thoroughly cleaned before each use.

B. Studs - Studs shall be spaced to prevent deflection of form material. Forms and joints shall be sufficiently tight to prevent leakage of grout and cement paste during placing of concrete. Joints in forms shall be arranged vertically or horizontally to conform to the pattern of the design. Insofar as practicable, juncture of formwork panels shall occur at architectural lines, vertical control joints, including alignment with masonry control joints, and construction joints. Forms placed on successive units for continuous surfaces shall be fitted to accurate alignment to assure smooth completed surfaces free from irregularities. Temporary openings shall be arranged in wall and column forms and where otherwise required to facilitate cleaning and inspection. Forms shall be readily removable without impact, shock or damage to the concrete.

C. External Corners - External corners of columns, girders, beams or their juncture with masonry, foundation walls projecting beyond overlying masonry and other external corners that will be exposed shall be beveled, rounded, or chamfered by moldings placed in the forms unless the drawing specifically states that chamfering is to be omitted.

3.2 Form Ties

A. Embedded Ties: Wire ties for holding forms will not be permitted. No form-tying device or part thereof, other than metal, shall be left embedded in the concrete. Ties shall not be removed in such manner as to leave a hole extending through the interior of the concrete members. The use of snap-ties which cause spalling on the concrete upon form stripping or tie removal will not be permitted. If steel panel forms are used, rubber grommets shall be provided where the ties pass through the form in order to prevent loss of cement paste. Where metal rods extending through the concrete are used to support or to strengthen forms, the rods shall remain embedded and shall terminate not less that 1-1/2" back from the formed face or faces of the concrete.

B. Removable Ties: Where taper ties are approved for use, after the taper tie is removed, the hole shall be thoroughly cleaned and roughened for bond. A precast neoprene or polyurethane tapered plug shall be located at the wall centerline. The hole shall be completely filled with non-shrink or regular cement grout. Exposed faces of walls shall have at least the outer 2" of the exposed face filled with a cement

grout which shall match the color and texture of the surrounding wall surface. The Contractor shall be responsible for water-tightness and any repairs needed.

3.3 Form Removal

A. Forms shall be removed in a manner to insure complete safety of the structure. Where the structure as a whole is supported on shores, forms for beam and girder sides, columns, and similar vertical structural members may be removed after 48 hours, provided concrete is sufficiently hard not to be injured thereby. Supporting forms or shoring shall not be removed until structural members have acquired sufficient strength to support safely their own weight and any construction and/or storage load to which they may be subjected, but in no case shall they be removed in less than 7 days, nor shall forms used for curing be removed before expiration of curing period. Care shall be taken to avoid spalling the concrete surface or damaging concrete edges. Wood forms shall be completely removed.

B. Supporting forms or shoring shall not be removed until strength of control test specimens has attained a value of at least 1,500 psi for column and 2,000 psi for all other work. Test specimens required for control tests to determine form removal time shall be provided in numbers as directed and shall be in addition to those otherwise required for concrete control. Test specimens shall be removed from molds after 24 hours and stored adjacent to that portion of the structure which they represent and shall receive, insofar as practicable, the same protection from the elements during curing as is given those portions of the structure which they represent, and shall not be removed from the structure for transmittal to the laboratory prior to expiration of three-fourths of the proposed period before removal of the forms. Care shall be exercised to assure that the newly unsupported portions of the structure are not subjected to heavy construction or material loading.

C. Forms for all parts of the work not specifically mentioned herein shall remain in place for periods of time as determined by the Engineer.

D. Recommendations for shoring given in ACI 347 shall be followed for all re-shoring.

**** END OF SECTION ****

SECTION 03200

CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.1 The Requirements

A. Contractor shall include all the necessary ties, chairs, and accessories required for support and spacing of the reinforced steel, reinforcement in masonry bond beams, all mesh columns and end reinforcing as detailed.
B. All concrete and steel have been designed to conform to ACI 318, and details on all steel shall conform therewith, and with Chapter 5 of ACI 301.
C. Fabrication tolerances, placement, detailing, and estimating practice shall be in accordance with the "Manual of Standard Practice", latest edition of the CRSI, and as covered in Chapter 8, "Placing Reinforcing Bars".

1.2 Related Work Specified Elsewhere

A. Cast-in-Place Concrete: Section 03300.

1.3 Reference Specifications, Codes and Standards

A. Commercial Standards
ACI 301..... Specifications for Structural Concrete.
ACI 315..... Details and Detailing of Concrete Reinforcement.
ACI 318..... Building Code Requirements for Structural Concrete.
ASTM A185..... Specification for Welded Steel Wire Fabric for Concrete Reinforcement.
ASTM A615..... Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
AWS D1.4..... Structural Welding Code - Reinforcing Steel.

1.4 Submittals

A. Contractor shall submit four (4) copies and one (1) sepia of shop drawings to the Engineer for review prior to fabrication. Sizes, dimensions for fabrication and diagram for placement of bars, and type and location of all accessories shall be indicated. No fabrication shall proceed on any section until reviewed drawings are received on such section.

PART 2 - PRODUCTS

2.1 Materials

A. Deformed billet steel bars shall conform to ASTM A615, Grade 60.
B. Welded steel wire shall conform to ASTM A185.
C. Chairs for slabs exposed to view shall be plastic coated steel, or approved equal, to prevent rust stains on the exposed concrete.

2.2 Spacers

A. Provide spacers with tie wire at proper intervals to hold slab bars in position and to raise them above forms to distances shown. Support reinforcing on bolsters or chairs and carrying bars whether or not specifically called for on Drawings. Provide wire bar type supports complying with ACI 315, unless otherwise indicated. Do not use wood, brick, and other unacceptable materials.

PART 3 - EXECUTION

3.1 Fabrication

A. Reinforcing bars shall be bent cold, in the shop, with proper equipment for making cold bends. Field bending of reinforcement will not be allowed.

3.2 Cleaning and Storage

A. Reinforcement upon delivery and before installation shall be cleaned and free of rust, scale, dirt, grease, oil, snow, ice, etc.
B. Reinforcement shall be protected from rusting in storage. Steel having deposits of scale will be rejected.

3.3 Placement

A. Reinforcement shall be placed accurately according to the plans and secured in position by approved accessories. Minimum clear distance between parallel bars shall not be less than 1-1/2 times the normal size of the coarse aggregate, and shall be as required by ACI 318.
B. No splices of reinforcement shall be made except as shown on the plans, or as specified or authorized by the Engineer. Reinforcing shall be kept in the proper position during concrete placement.

3.4 Reinforcement Cover

A. The reinforcing shall be protected by the thickness of concrete indicated on the plans. Where not shown otherwise, concrete coverage over the reinforcement shall be as follows:

Location of Reinforcement	Cover
Surfaces where concrete is deposited directly against ground (footings).	3" Clear bottom and sides
Formed surfaces exposed to ground, water or weathering (walls).	2" - Both faces
Beams, girders and columns	1-1/2" - Clear to ties or stirrups
Joists, slabs	1" Bottom and top.

B. Exposed reinforcing bars intended for bonding with future extensions shall be protected from corrosion by concrete or other adequate approved coverings, or as shown on the drawings.

****END OF SECTION****

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 The Requirements

A. Concrete has been designed to conform to ACI 318 (latest edition). Concrete construction shall also conform to ACI 301 and ACI 350. Except where this section is in variance therewith, such publications are hereby made a part of this specification.
B. Except as mentioned in Paragraph 1.2, this section shall include (but is not limited to) the following:
   1. Footings and foundation walls of all descriptions.
   2. Installation of vapor barrier under concrete floors of buildings on gravel fill.
   3. Bases, pads and footings for equipment.
   4. Concrete fill in concrete block and bond beams
   5. Concrete accessories, and building in cast-in-place items furnished under other sections
   6. Dovetail insert slots as necessary for masonry.
   7. All design mixes and tests.
   8. Expansion joints in concrete.

1.2 Related Work Specified Elsewhere

A. Concrete Formwork: Section 03100
B. Concrete Reinforcement: Section 03200
C. Process Piping and Valves: Section 15100

1.3 Reference Specifications, Codes and Standards

A. Commercial Standards

ACI 211.1 ..... Recommended Practice for Selecting Proportions.
ACI 212.2R ..... Guide for Use of Admixtures in Concrete.
ACI 214 ..... Recommended Practice for Evaluation of Strength Test Results of Concrete.
ACI 304 ..... Recommended Practice for Measuring, Mixing and Placing Concrete.
ACI 305 ..... Recommended Practice for Hot Weather Concreting.
ACI 306 ..... Recommended Practice for Cold Weather Concreting.
ACI 308 ..... Recommended Practice for Curing Concrete.
ACI 315 ..... Details and Detailing of Concrete Reinforcement.
ACI 318 ..... Building Code Requirements for Structural Concrete.
ACI 347 ..... Guide to Formwork for Concrete.
ACI 350R ..... Environmental Engineering Concrete Structures.
ASTM C31 ..... Methods for Making and Curing Concrete Test Specimens in the Field.
ASTM C33 ..... Specification for Concrete Aggregates.
ASTM C39 ..... Test Method for Compressive Strength of Cylindrical Concrete Specimens.
ASTM C94 ..... Specification for Ready-Mixed Concrete.
ASTM C143 ..... Test Method for Slump of Portland Cement Concrete.
ASTM C150 ..... Specification for Portland Cement.
ASTM C192 ..... Methods for Making and Curing Concrete Test Specimens in the Laboratory.
ASTM C260 ..... Specifications for Air-Entraining Admixtures for Concrete.
ASTM C494 ..... Specifications for Chemical Admixtures for Concrete.

1.4 Submittals

A. Mix Design:

The Contractor shall submit a design mix at least 3 weeks prior to scheduled concrete placement for each type and strength of concrete used for compliance with the specifications. An independent testing laboratory shall design a mix for each type of concrete specified.

B. Certified Delivery Tickets:

Where ready-mix concrete is used, the Contractor shall provide delivery tickets at the time of delivery of each load of concrete. Each certificate shall show the total quantities by weight of cement, sand, each class of aggregate, admixtures, and the total gallons of water in the load. Each certificate shall, in addition, state the mix number, total yield in cubic yards and the time of the day when the batch was dispatched.

C. Admixture:

When a water-reducing admixture is to be used, the Contractor shall furnish mix designs for concrete with and without admixture.

1.5 Quality Assurance

A. Tests on component materials and for compressive strength of concrete will be performed as specified herein.
   1. Slump.
      a. Slump test will be done in accordance with ASTM C143.
   2. The concrete shall be designed for as low a slump as is practical to fill the form, embed the reinforcing steel, and be free of voids or honeycomb. Use lower range for machine vibration. The Slump shall be as follows:
      a. 1" minimum
      b. 3" maximum for footings, caisson, substructure walls.
      c. 4" maximum for slabs, beams, reinforced walls, columns.
      These slump values do not apply when an approved high-range water reducer is used.
   3. Slump shall be measured for each mixed batch of concrete, or each load delivered to the site.

B. Compression Tests
   1. Engineer will take one (1) set of concrete cylinders for each day's pour of 25 cubic yards or less, plus one set for each additional 50 cubic yards poured on that day. Cylinders shall be of representative concrete, taken from mixer discharge at actual time of pouring. Owner will pay all costs of preparing, transporting to laboratory, and making of tests. All such tests shall be made at an independent testing laboratory approved by the Engineer. Contractor shall assist Engineer in making the test cylinders.
   2. Each set shall consist of four cylinders. Cylinders shall be prepared as per ASTM C31. For first 24 hours, cylinders shall be stored and cured in 60 to 80 degree temperature range, and protected so no injury to the cylinders will occur. The cylinders from each set shall be sent to the testing laboratory after the initial 24-hour period, and one shall be tested at seven (7) days and two (2) at twenty-eight (28) days. One cylinder shall be held in reserve for later testing if needed. The cylinders shall be numbered consecutively and labeled with date of pour, slump when poured, location in building at which representative concrete is placed and name of Contractor and project. Copies of test shall be sent to the Engineer and Contractor. Compression tests shall be performed in accordance with ASTM C39.
   3. Remaining test requirement shall follow ACI 301, except that if the average strength of any set of job-cured cylinders falls below the required strength, the cost of any additional cement found necessary to correct subsequent mixes shall be borne by the Contractor. Also, if the strength is found deficient, the cost of hardened concrete or load tests shall be borne by the Contractor. The Engineer reserves the right to reject any portions of such questionable areas, if in his opinion, the tests indicate that such areas will not safely carry the design load.
   4. All concrete which fails to meet these specifications is subject to removal and replacement at the cost of the Contractor.

C. Construction Tolerances.

Finish concrete shall meet the following tolerances:

1. Variations from plumb	± ¼ " per 10' but not more that 1" maximum for entire length.
2. Variations from level or indicated grade.	± ¼" per 10' but not more than ½" for entire length.
3. Variations from horizontal	± ¼" per 10' but not more than ½" total variation.
4. Variations in size and locations of openings or sleeves	± ¼".
5. Reinforcing steel placement	ACI 318. Section 7.5.2

Where tolerances are not stated in the specification, permissible deviations will be in accordance with ACI 347.

1.6 Product Delivery, Storage and Handling

A. The Contractor shall be responsible for the delivery, storage and handling of products.
B. Damaged or unsuitable product shall be removed promptly from the job site.

1.7 Job Conditions

A. Methods outlined in ACI 306 shall be followed if concrete is to be placed when ambient temperature is expected to be less than 40° F.
B. Methods outlined in ACI 305 shall be followed if concrete is to be placed when ambient temperature is expected to exceed 90° F.

PART 2 - PRODUCTS

2.1 Materials

A. Cement:
   1. The Portland Cement to be used shall meet the conditions to ASTM Specification C150, or Air-Entraining Cement ASTM C175, (Type II or IIA). All cement shall be from same manufacturer. High early strength cement may be used only upon the Engineer's approval.
   2. The C3A content of the Portland Cement shall be less that 8 percent in all concrete. Where aggregates are alkali reactive, a cement containing less that 0.60 percent alkalis shall be used. Fly ash shall not be used in the concrete mix design.
B. Aggregate:
   1. All fine and coarse aggregate shall be natural sands and gravels or crushed stone, washed and cleaned, and conforming to ASTM C33 and shall be free of shale, chert, coal, iron oxide and other deleterious material.
   2. The maximum size of coarse aggregate shall not be larger than one-fifth the narrowest dimension between forms of the member for which the concrete is to be used, nor larger than three-fourths of the minimum clear spacing between reinforcing bars. The coarse aggregate shall conform to Table II of ASTM Specification C33.
C. Water:
   1. Water shall be potable, clean, and free from strong acids, alkalis, oils or organic materials.
D. Admixtures (Air-entrained Concrete):
   1. Admixtures for air-entrained concrete shall be used for sidewalks and all concrete exposed to the weather or wastewater.
   2. Air-entraining admixtures shall meet the requirements of ASTM C260.
   3. The air content of air-entrained concrete shall be 5 to 7 percent for concrete with ¾" maximum size aggregate and 4 ½ to 6 ½ percent for concrete with 1½" maximum size aggregate.

4. Manufacturer or Equal:
   a. Darex
   b. Toch Toxement AEA
   c. Sika AEA
   d. Protex

E. Chemical Admixture:
   1. The use of chemical admixture shall be in accordance with ACI 212.2R and shall be approved by the Engineer.
   2. The admixture shall meet the requirements of ASTM C494.
   3. No chlorides shall be used.

F. Expansion Joints:
   1. Expansion joints in walks and curbs shall be pre-molded cork and asphalt.
   2. Manufactures or Equal:
      a. Brock White #3720

G. Waterstops:
   1. PVC waterstops shall be provided as shown in the drawings and shall meet the Corps of Engineers specification CRD-C572.
   2. All waterstops shall be 4" minimum.
   3. Waterstops shall be applied continuously and all joints heat welded.
   4. Waterstops shall be tied in place prior to pouring of concrete as recommended by the manufacturer.
   5. Manufacturer or Equal:
      a. Greenstreak
         Style 782 (Horizontal Joints)
         Style 703 or 723 (Vertical Joints)
         Style 790 for Labyrinth (Attached Joints)
   6. Bentonite based strip type waterstops, American Colloid R or equal, may be used only where detailed on the plans.

H. Non-Shrink Grout
   1. All grout shall be non-metallic, non-gaseous which can be poured, pumped or damp packed. The grout shall be suitable for both interior and exterior application. It shall be non-shrink when tested in accordance with ASTM C1107 at a fluid consistency of 20-30 seconds.
   2. The grout shall be a one-step product delivered to the job site in bags containing a premixed formulation requiring only the addition of water prior to use.
   3. Precision non-shrink grout shall be used on all pumps, blowers, and equipment bases.
   4. Manufacturer or Equal:
      a. General Purpose: (attain 7000 psi strength in 28 days)
         (1) Masterflow 713
         (2) Duragrout - L&M 14K
      b. Pump Bases, Equipment Pads: (shall attain 9000 psi strength in 28 days)
         (1) Masterflow 928
         (2) Crystex - L&M
         (3) Fivestar

I. Water Plug
   1. Water plug shall be used to seal any unused existing pipe penetration openings, seepage through floors and walls.
   2. Manufacturer or equal
      a. Brock White C-7160

2.2 Concrete Strength

A. Mixes shall be designed to secure concrete having the compressive strength required by the drawings or stated in these specifications. Water/cement ratio shall be consistent with the concrete strength requirements. Surface water contained in the aggregate shall be included as part of the mixing water. Consistency shall be designed for good workability and plasticity for proper placing.

B. Concrete of the various mixes indicated and as required in all sections of these specifications of drawings shall be proportioned and mixed for the following requirements:

Mix Number	1	2	3	4
Compressive Strength at 28 Days	4,000	4,000	4,000	3,000
Minimum Cement Content	517 lbs. per CY	578 lbs. per CY	564 lbs. per CY	470 lbs. per CY
Maximum Water-Cement Ratio	0.45	0.45	0.45	0.53
Portion of Structure	Slabs in contact w/water, wastewater or fill.	Slabs, piers, and walls in contact w/water, wastewater or fill, slabs on grade.	Leveling slabs or topping.	Footings & pipe encasement.
Size of Coarse Aggregate	1½"	¾"	3/8" - #8	¾"
Slump Maximum	4"	4"	4"	3"
Air Content	4 ½ - 6 ½ %	5-7%	5-7%	

2.3 Ready -Mixed Concrete

A. At the Contractor's option, ready-mixed concrete may be used meeting the requirements as to materials, batching, mixing, transporting and placing as specified herein and in accordance with ASTM C94.
B. Ready-mixed concrete shall not be allowed to stand in the truck more than one hour before placing in forms, including time en route.
C. Each batch of ready-mixed concrete delivered at the job site shall be accompanied by a certified weigh master delivery ticket furnished to the Engineer in accordance with Paragraph 1.4 C, specified herein.
D. Water shall not be added at the job site unless authorized by the Engineer.

PART 3 - EXECUTION

3.1 Subgrade Preparation

A. Subgrade shall be free from standing water, mud and debris at the time of placing concrete.
B. Earth surface shall be firm and damp.
C. When concrete is to be placed on highly pervious materials which might allow flowing groundwater to damage fresh concrete, the contact surface shall be covered with a layer of asphalt-impregnated building paper or polyvinyl chloride sheeting prior to placement of the concrete.

3.2 Proportioning and Mixing

A. Proportioning of concrete mix shall conform to the requirements of Chapter 3 of ACI 301.
B. Mixing of concrete shall conform to the requirements of Chapter 7 of ACI 301.
C. Slump: Maximum slump shall be as specified in Paragraph 1.5 B.
D. Re-tempering: Re-tempering of concrete or mortar which has partially hardened will not be permitted.

3.3 Placing Of Concrete

A. Placing of concrete shall conform to Chapter 8 of ACI 301.
B. Plant-mixed concrete shall not be allowed to stand in the truck more than one hour before placing in forms, including time en route.

3.4 Curing and Cold Weather Requirements

A. Curing of concrete shall conform to Chapter 12 of ACI 301 and to these specifications.
B. Concrete must be kept wet at least five days. Any concrete subject to rapid drying from wind or sun shall be protected by canvas, straw, polyethylene, curing compound or other approved methods for this period.
C. Floors or walks shall not be used for any purpose until curing is complete. Floor, when used, shall be kept clean of nails, sand, and all abrasive materials.
D. For cold weather work, the Contractor shall also follow recommendations in ACI 306. The Contractor shall be familiar with these procedures and shall provide protection as outlined in ACI 306. From October 15 to April 15, the concrete shall be delivered to the site at a temperature not less than 60° F. The Contractor may request a variance on a daily basis if the expected low temperature for the day is to be above 32° F.
E. The Contractor shall maintain a daily log outlining the cold weather concreting protection methods used. A signed copy of these logs shall be submitted to the Engineer weekly. The log shall be a thorough, dated, daily diary giving clear reference to structure, location and quantity of each concrete pour. At a minimum the following information as outlined in ACI 306 shall be included in the diary:
   1. Date, time, and quantity of pour.
   2. Daily outside high temperature.
   3. Daily outside low temperature.
   4. Basic daily weather conditions including wind conditions, cloud conditions, and precipitation.
   5. Concrete temperature in truck at time of delivery.
   6. Concrete temperature ranges throughout the entire pour at the end of pour of on grade placements with a sketch and the temperature of the concrete at the end of the pour for walls and columns.
   7. Protection methods being utilized.
   8. Period of protection and temperatures of the concrete at 12-hour intervals during this protection period.
   9. If shelters are utilized, interior air temperatures of the shelter at 12 hour intervals.
   10. Precautions utilized to prevent the drying and carbonation of the concrete protected by shelters.
   11. Relative humidity inside the shelters.
   12. Method of gradual cooling of the concrete at the end of the protection period.
   13. Preparation and protection of the subgrade, forms, reinforcing steel, etc., prior to placement of the concrete.
F. Ready mix suppliers log outlining the methods of heating the materials used in the concrete mixture for each pour.
G. All admixtures to be used for cold weather concreting shall be submitted with the design mix data for approval. No calcium chloride accelerators will be allowed in the concrete.

3.5 Placing Reinforcement

A. Steel shall be placed according to Section 03200, and also according to Section 5.5 of ACI 301, whichever is more rigid.
B. Immediately after delivery, reinforcing shall be sorted for size, shape and length or by final usage. Store on racks clear of the ground and protect at all times from the weather.
C. The Contractor shall cooperate with Engineer to permit inspection of reinforcement before concrete is placed. The Contractor shall notify Engineer 24 hours in advance of any concrete pour.
D. Inspection by the Engineer does not relieve the Contractor of his responsibility to comply with the drawings and specifications. Pouring of the concrete signifies that the Contractor is satisfied with the placing of reinforcement, levels and lines of forms, placement of sleeves and forms for holes, locations of accessories, etc.

3.6 Construction Joints

A. Construction joints shall be made only at points shown on the drawings or approved by the Engineer. All such joints shall be keyed with reinforcement as shown; joining faces shall be thoroughly cleaned, wetted and slushed with neat Portland Cement paste immediately before next pour.

3.7 Concrete Finish

A. Finish on sidewalk shall be troweled and broomed. Remaining finished concrete floors, tank bottoms, or stairs shall be smooth trowel finish.
B. Steel trowel finishing shall be done in such manner as to produce a dense, smooth, impervious surface, free of blemishes, waves, dips, humps, pockets, cat-faces, or trowel marks. Care shall be taken that no excess water is present when the finish is started. Troweling shall be delayed until water sheen produced by floating is disappearing. Apply resin based concrete sealer (Sonneborn SONOCLEAR, L&M Lumiseal Plus, or North Central Klear Kote) immediately after troweling, then cure as per manufacturer's recommendations. If liquid curing compound is used, do not apply sealer immediately. Sealant is not required on floors which are to be painted. Tank bottoms need not be sealed.
C. Concrete floors and tank bottoms shall be finished monolithically with no special concrete or cement mortar topping for finish. The slabs shall be brought to an even and true finish slightly above elevations given on the drawings, so that when properly consolidated and finished, the surface will be at the grades shown. Concrete shall then be tamped, straight-edged, floated and finished as above.

3.8 Concrete Block Bond Beams

A. All concrete for concrete block bond beams shall conform to specifications on strength and mixes herein mentioned. All such units shall have concrete block facing units as scheduled, laid in place by a mason with masonry mortar in conventional 3/8" tooled joints, then have steel as required set in place, then filled with well puddled concrete. All corners shall be sharp and undamaged, and units shall be carefully protected from damage until completion of masonry work.

3.9 Patching Defective Concrete Work and Finish For Concrete Walls

A. After removing forms, all concrete surfaces shall be inspected and any poor joints, voids, stone pockets, all tie holes and any other defective areas marked by the Engineer shall be patched.
B. Where necessary, defective areas shall be chipped away to a depth of not less that one" with edges perpendicular to the surface. The area to be patched and a space at least 6" wide entirely surrounding it shall be wetted to prevent absorption of water from the patching mortar.
C. A grout of equal parts Portland Cement and sand, with sufficient water to produce a brushing consistency, shall then be well brushed into the surface, followed immediately by the patching mortar.
D. Patching materials shall be of the same material and approximately the same proportions as used for the concrete, except that the coarse aggregate shall be omitted. The mortar shall not be richer than one part cement to three parts sand. The amount of mixing water shall be as little as consistent with the requirements of handling and placing. The mortar shall be re-tempered without the addition of water by allowing it to stand for a period of one hour during which time it shall be mixed occasionally with a trowel to prevent setting.
E. The mortar shall be thoroughly compacted into place and screeded off so as to leave the patch slightly higher that the surrounding surface. It shall then be left undisturbed for a period of one to two hours to permit initial shrinkage before being finally finished.
F. The patch shall be finished in such a manner as to match the adjoining surface. On exposed surfaces where unlined forms have been used, the final finish shall be obtained by striking off the surface with straight-edge spanning the patch and held parallel to the direction of the form marks.
G. All patches shall be cured as herein specified.
H. Tie holes left by withdrawal of rods or the holes left by removal of ends of ties shall be filled solid with mortar after first being thoroughly wetted. For holes passing entirely through the wall, a plunger-type grout gun shall be used to force the mortar through the wall starting at the back face. A piece of burlap or canvas shall be held over the hole on the outside and when the hole is completely filled, the excess

mortar shall be struck off with the cloth flush with the surface. Holes not passing entirely through the wall shall be filled with a small tool that will permit packing the hole solid with mortar. Any excess mortar at the surface of the wall shall be struck off flush with a cloth.

I. All concrete ridges and protrusions, such as left by nail holes or insufficient joining of forms, shall be removed by hammering and grinding to the satisfaction of the Engineer. No grout wash shall be applied until ridges, protrusions and other marks left by he forms have been removed to the satisfaction of the Engineer.

3.10 Finish for Concrete Walls

A. All concrete surfaces to receive paint or exposed above grade shall receive a grout finish. Cleaning operations shall not be undertaken until all contiguous surfaces to be cleaned are completed and accessible. Grout shall consist of one part Portland Cement and 1½ parts fine sand with sufficient water to produce a mixture having consistency of thick paint. White Portland Cement shall be substituted for a part of gray Portland Cement to produce a color matching color of surrounding concrete as determined by a trial patch. Surface of concrete shall be wetted sufficiently to prevent absorption of water from grout. Grout shall be uniformly applied with brushes or a spray gun. Immediately after applying grout, surface shall be scrubbed vigorously with a cork float or stone to coat surface and fill all air bubbles and holes. While grout is still plastic all excess grout shall be removed by working surface with a rubber float, sack or other means. After surface whitens from drying (about thirty minutes at normal temperatures), it shall be rubbed vigorously with clean burlap. Surface shall be kept damp for at least 36 hours after final rubbing.

B. Tie holes left by withdrawal of rods or the holes left by removal of ends of ties shall be filled solid with mortar after first being thoroughly wetted. For holes passing entirely through the wall, a plunger-type grout gun shall be used to force the mortar through the wall starting at the back face. A piece of burlap or canvas shall be held over the hole on the outside and when the hole is completely filled, the excess mortar shall be struck off with the cloth flush with the surface. Holes not passing entirely through the wall shall be filled with a small tool that will permit packing the hole solid with mortar. Any excess mortar at the surface of the wall shall be struck off flush with a cloth.

C. All concrete ridges and protrusions, such as left by nail holes of insufficient joining of forms, shall be removed by hammering and grinding to the satisfaction of the Engineer. No grout wash shall be applied until ridges, protrusions and other marks left by the forms have been removed to the satisfaction of the Engineer.

D. The exposed tops of concrete walls shall be chamfered in the forming and placement process, or finished to a rounded edge with an edging tool as part of the top finishing process.

**** END OF SECTION ****

SECTION 06100

CARPENTRY

PART 1 - GENERAL

1.1 Description

A. Rough carpentry and framing.
B. Prefabricated wood trusses.
C. Sidings.
D. Soffit Panels.

1.2 Additional Requirements Specified Elsewhere

A. Shop Drawings, Product Data and Samples: Section 01340.

1.3 Quality Assurance

A. Source Quality Control:
   1. Lumber grading rules and wood species: WWPA.
   2. Plywood grading rules: Softwood Plywood - APA.
   3. Grade marks:
      a. Identify lumber and plywood by official grade mark.
      b. Lumber:
         (1) Grade stamp to contain symbol of grading agency certified by Board of Review, American Lumber Standards Committee, mill number or name, grade of lumber, species or species grouping or combination designation, rules under which graded where applicable, and condition of seasoning at time of manufacture.
         (2) S-Grn: Unseasoned.
         (3) S-Dry: Max. 19% moisture content.
         (4) MC-15: Max. of 15% moisture content.
         (5) Dense: Density classification applies to Douglas Fir and Southern Pine, when applicable.
      c. Softwood plywood and OSB: Appropriate grade trademark of American Plywood Association on each plywood panel.
   4. Testing: ASTM E-84, max. 25 flame spread rating.
B. Requirements of Regulatory Agencies:
   1. Preservative treated lumber and plywood: American Wood Preservers Bureau, quality mark.
   2. Pressure treated material: American Wood Preservers Bureau Standards.
   3. Span tables: National Forest Products Association.
   4. Working stresses: Softwood Lumber, UBC, WWPA.
   5. Uniform Building Code Requirements.
   6. Wood Trusses: Truss Plate Institute.

1.4 Product Delivery, Storage and Handling

A. Immediately upon delivery to job site, place materials in area protected from weather.
B. Store materials a minimum of 6" above ground on framework or blocking and cover with protective waterproof covering providing for adequate air circulation or ventilation.
C. Do not store seasoned materials in wet or damp portions of building.
D. Protect sheet materials from corners breaking and damaging surfaces, when unloading.

1.5 Submittals

A. Wood Truss Shop Drawings:
   1. Show species, sizes and stress grades of lumber to be used as members.
   2. Show pitch, span, camber, configuration and spacing.
   3. Indicate connection types, thicknesses, size, design values.
   4. Illustrate bearing details.
   5. Shop drawings shall be sealed and signed by a structural engineer licensed to practice in South Dakota.
B. Product Data.
   1. Submit manufacturer's data and color charts for prefinished hardboard siding.
   2. Submit manufacturer's data for soffit panel system.

PART 2 - PRODUCTS

2.1 Materials

A. Lumber:
   1. Dimensions:
      a. Specified lumber dimensions are nominal.
      b. Actual dimensions to conform to WWPA.
   2. Surfacing: Surface 4 sides (S4S), unless specified otherwise.
   3. End Jointed Lumber:
      a. Structural purposes interchangeable with solid saw lumber.
      b. Glued joints of loadbearing lumber; PS 56.
   4. Framing Lumber:
      a. Hem-fir.
      b. Light framing:
         (1) General framing: Construction grade.
         (2) Plates, blocking, bracing, and nailers: Standard grade.
         (3) Bracing, blocking, bulk headings and general utility purpose: Standard grade.
      c. Studs: Loadbearing: Construction grade.
      d. All other structural framing: No. 2 or better.
      e. Plates in contact with concrete or masonry: Construction grade redwood or treated wood.
B. Plywood and OSB.
   1. Comply with American Plywood Association requirements for structural sheathing.
   2. Bear APA stamp for span rating and exposure durability classification.
   3. Structural 1 Exposure Class.
C. Preservative Treated Wood:
   1. Water-borne salt preservatives:
      a. AWPB LP-21 above ground application.
      b. AWPB LP-22 ground contact applications.
      c. Lumber redried to maximum moisture content of 19%, stamped "DRY".
D. Rough Hardware:
   1. Bolts:
      a. FS FF-B-575.
      b. FS FF-B-584.
   2. Nuts: FS FF-N-836.
   3. Expansion shields: FS FF-B-561.
   4. Lag screws and bolts: FS FF-B-561.
   5. Toggle bolts: FS FF-B-588.
   6. Wood screws: FS FF-S-111.
   7. Nails and staples: FS FF-N-105.
   8. Metal nailing discs:
      a. Flat caps, minimum 1" dia.

b. Minimum 30 ga. Sheet metal.
c. Formed to prevent dishing.
d. Bell or cup shapes not acceptable.

9. Joist hangers: 18 ga. Zinc-coated steel.
10. Metal cross bridging, 16 ga. zinc-coated steel.
    a. Nailable type with 2 holes in each end.
    b. Compression type with prongs at each end.
11. Bar or strap anchors: ASTM A-525, zinc-coated steel, 18 ga. minimum.
12. Ply-clips: Extruded 6063-T6 aluminum alloy.

E. Siding:
1. Manufactured hardboard with permanent colored finish and simulated wood texture. Finish and siding shall have a 20-year warranty.
2. Nominal 3/8" x 8" or 4" dimension with ½" width at bottom exposure.
3. Built-in weather sealing horizontal spline at lap joint.
4. Canexel or engineer-approved equal.
5. Siding Accessories: Provide starter strips, corner finish, joint moldings, J-trim and colored nails which are specifically manufactured for the siding system and are an exact color match.

F. Soffit Panel and Facia System.
1. Interlocking prefinished galvanized steel, 26 ga., with permanent baked enamel or PVC color coating.
2. Louvered vent or unvented per drawings.
3. Rollex, System 3 or equal.

2.2 Truss Fabrication

A. Performance and Design Requirements:
1. Uplift Load: 20 psf.
2. Dead Load: 20 psf.
3. Snow Load: 30 psf.
4. Maximum deflection under live load: L/360.

B. Manufacture trusses in permanent facility, open to inspection by Engineer.
C. Cut truss members to accurate length, angle, and size to assure tight fit of joints.
D. Assemble members in design configuration by securing tightly in jigs or with clamps.

PART 3 - EXECUTION

3.1 Inspection

A. Verify that surfaces to receive rough carpentry materials are prepared to required grades and dimensions.

3.2 Installation

A. Sills:
1. Set level 1/16" in 6", in mortar bed, flush with exterior face of foundation, or as detailed.
2. Join solid sill members with halved joints, where not continuous and at corners, minimum of 1' lapped joint.
3. Lap built-up sill members minimum distance of 2'.

B. Post or columns:
1. Provide 2 surfaces on posts at right angles to each other for installation of interior finish materials.
2. Built-up posts: Arranged and nailed together to accommodate type of construction.
3. Erect posts straight, plumb with straight edge and level, and brace with tack boards at plate and sill.

C. Stud Framing:
1. Plates and stud members.
    a. Provide single bottom plate and double top plates for loadbearing partitions, thickness as indicated on drawings.

b. Provide single bottom plates and single plates for nonloading partitions, 2" thick by width of studs.
c. Provide studs in continuous lengths without splices.
d. End nail studs to bottom plate and end-nail to lower top plate.
e. Overlap double top plates minimum of 6" at corners and intersections.
f. Face nail upper top plate to lower top plate.
g. Anchor bottom plate to concrete structure with anchor bolts.
h. Triple studs at corners and partition intersections.
i. Anchor studs abutting masonry or concrete with 12" anchor bolts, maximum spacing of 4' o.c.
j. Partition parallel with joists: Locate joists directly below studs.

2. Headers:
   a. Continuous headers, same width as studs, depth required to span widest opening, as indicated on drawings.
   b. Toenail headers to studs and opening framing, or as indicated on drawings.
   c. Stagger joints in individual header members a minimum of 3 stud spaces, allowing no joints to occur over opening.
   d. Lap headers at intersections with bearing partitions or tie with metal straps.
3. Blocking:
   a. Install in continuous horizontal row at mid-height of single story partitions over 8' high and multi-story partitions.
   b. Wedge, align, and anchor blocking with nails.
   c. Locate blocking to facilitate installation of finishing materials, fixture, specialty items and trim.
4. Sheathing:
   a. Comply with APA nailing tables.
   b. Use only galvanized nails for exterior sheathing applications.

D. Miscellaneous Framing:
1. Firestops:
   a. Stud walls: 2" thick x depth of member blocking at each floor and top story ceiling level.
   b. Floor and ceiling framing: 2" thick x depth of wood member blocking, fitted to fill openings from one space to another to prevent drafts.
2. Framing for mechanical work:
   a. Frame members for passage of pipes and ducts to avoid cutting structural members.
   b. Do not cut, notch, or bore framing members for passage of pipes or conduits without concurrence of Engineer.
   c. Reinforce framing members where damaged by cutting.

E. Trusses:
1. Hoist trusses into position, secured at designated lift points.
2. Install temporary horizontal and cross bracing to hold trusses plumb and in safe condition until permanent bracing is installed.
3. Install permanent bracing prior to application of loads to trusses.
4. Tighten loose connectors.
5. Restrict construction loads to prevent overstressing of truss members.

F. Siding:
1. Install prefinished hardboard siding using manufacturer supplied or recommended nails and sealing trim.
2. Accurately fit siding at corners and adjoining surfaces and caulk with manufacturer recommended colored caulk.

G. Soffit Panels and Facia System:
1. Provide and install manufacturer supplies supporting channels and framework suited to application conditions indicated by drawings.
2. Where required, provide and install wood blocking for continuous, rigid and substantial support.
3. Install panels snug against adjoining panels.
4. Accurately cut and fit at terminations and where partial panel sections are required.

**** END OF SECTION ****

SECTION 09901

PROCESS PIPE AND EQUIPMENT PAINTING

PART 1 - GENERAL

1.1 Description

A. Preparation and field painting of mechanical process pipe and equipment.
B. The term "paint" as used herein, includes emulsions, enamels, stains, sealers, and similar coatings.

1.2 Additional Requirements Specified Elsewhere

A. Shop Drawings, Product Data and Samples: Section 01340.

1.3 Related Work Specified Elsewhere

A. Process Piping and Valves: Section 15100.

1.4 Quality Assurance

A. Container labels shall include manufacturer's name, type of paint, manufacturer's stock number, color, ingredient analysis, federal specification number, instruction for reduction, if applicable and instruction for Use.
B. Acceptable manufacturers:
   1. Tnemec (specified).
   2. Sherwin-Williams (specified).
   3. Or Engineer approved equal.
C. Painting work shall comply with the following standards:
   1. American National Standards (ANSI)
      a. A13.1 – Scheme for the Identification of Piping Systems.
      b. Z53.1 – Safety Code for Marking Physical Hazards.
   2. Steel Structures Painting Council (SSPC) Surface Preparation Specifications.
      a. SP 1 - Solvent cleaning. Removes oil, grease, soil, etc. with other methods to remove rust, paint and mill scale.
      b. SP 3 – Power Tool Cleaning. Removes loose material. Not intended to remove all scale or rust.
      c. SP 5 – Whit Metal Blast Cleaning. Removes all scale, rust, foreign matter. Leaves surface gray-white uniform metallic color.
      d. SP 6 – Commercial Blast Cleaning. Two-thirds of each square inch free of all visible residues; remainder only light discoloration.
      e. SP 7 – Brush-Off Blast Cleaning. Removes only loose material, remaining surface tight and abraded to give anchor pattern.
      f. SP 10 – Near-White Blast Cleaning. At least 95 percent of each square inch shall be free of all visible residues.
D. The Contractor shall control the dry film thickness of the coatings on metal surfaces with a correctly calibrated thickness gage, type to be approved by Engineer. Contractor shall supply gage thickness samples for gage reference and calibration.

1.5 Submittals

A. Submit, at least one month prior to the start of any painting work, a complete schedule listing the painting materials proposed for use, including the type of material as listed in the painting schedule, trade name of the specific product and manufacturer.
B. Schedule shall include complete information on shop prime coat as well as materials to be used for finish field painting.

C. Submit color cards in triplicate for each material for tentative color selection.

1.6 Product Delivery, Storage and Handling

A. Materials shall be delivered in original containers with labels intact and seals unbroken.
B. Only acceptable materials shall be stored on the project site.
C. Store in a suitable location, restricting storage to paint materials and related equipment complying with health and fire regulations.

PART 2 - PRODUCTS

2.1 General

A. All painting materials must be delivered in the original containers with seals unbroken and labels intact.
B. All painting materials shall be pure and of highest quality, and bear an identifying label on the container.
C. All paints shall be from one manufacturer insofar as possible.
D. The Contractor shall coordinate the prime coat materials and finish coat materials to insure that both are of the same manufacturer.
E. Applying one manufacturer's finish coat over another manufacturer's prime will not be permitted, except that factory-applied primers will be accepted with certification of compatibility with proposed primer touch-up and finish coats.

2.2 Mixing

A. Paints and enamels shall be delivered ready-mixed and factory tinted to job site.
B. Job mixing and tinting will be permitted only on agreement with the Engineer.

2.3 Painting Systems

Paint and related products of the Tnemec and Sherwin Williams Company are listed as standards of quality. Products of other manufacturers may be acceptable when comparable in quality and character to those specified.

Material or Surface to be painted	Coats	Tnemec Coatings	Sherwin Williams	Coating Thickness Mils (Min. Dry)
SYSTEM A Ferrous metals not in contact with water including steel, ductile iron & cast iron (galvanized items 3rd coat to be painted as directed by Engineer)	1st Prime Coat	37-H Chem-Prime Primer (phenolix alkyd)	Epolon II	3 mils
	2nd Primer Touch-up	37-H Chem-Prime Primer	Epolon II	
	3rd Coat	66 Hi-Build Epoxoline (polyamide epoxy)	Tile-Clad HS (polyamide epoxy)	4 mils
Surface Preparation: SSPC-SP6	4th, Finish Coat Interior Metal	66 Hi-Build Epoxoline	Tile-Clad HS (polyamide epoxy)	4 mils
	Exterior Metal	73-Endurashield (polyurethane)	Acrolon 218 HS (polyurethane)	(2) mils
			Total:	11 (9) mils

Material or Surface to be painted	Coats	Tnemec Coatings	Sherwin Williams	Coating Thickness Mils (Min. Dry)
SYSTEM B Chemical Containment Surfaces.	1st Coat	230 Polymortar (polyamine epoxy w/aggregate)	Epoxy Mortar	1/8"
	2nd Coat	66 Hi-Build Epoxoline	Armorseal 1000 HS (polyamide epoxy)	2 to 4 mils
Surface Preparation: Acid etch or as per manufacturer.	3rd Coat	66 Hi-Build Epoxoline (polyamide epoxy)	Armorseal 1000 HS (polyamide epoxy)	2 to 4 mils
			Total:	4 to 8 mils

PART 3 - EXECUTION

3.1 Inspection

A. Contractor shall examine surfaces scheduled to receive paint and finishes for conditions that will adversely affect execution, permanence or quality of work and which cannot be put into acceptable condition through preparatory work as included below.
B. Contractor shall notify Engineer and General Contractor in writing if unacceptable condition exists.
C. Contractor shall not proceed with surface preparation or coating applicable until conditions are satisfactory.

3.2 Preparation

A. General:
   1. All surfaces to be painted must be clean and free of loose dirt, dust, scale or any other defects.
   2. All surfaces and floors adjacent to areas to be painted shall be clean and free of dust.
B. Ferrous Metal Surfaces:
   1. Prepare surface in accordance with recommendations and directions of coatings manufacturer.
   2. Feather edges of sound paint, or factory applied paints by sanding or grinding as required for uniform finish coating.
C. Concrete Surfaces (Floor).
   1. Cure a minimum of 28 days.
   2. Clean thoroughly by shot blasting or chemical etching per manufacturer recommendations.

3.3 Protection

A. The Contractor shall furnish and lay drop cloths in all areas where painting is done to protect all adjacent finished surfaces from damage during the prosecution of his work.
B. Equipment shall be masked and protected from overspray when spray application of coatings is used.

3.4 Application

A. Paint shall be applied with suitable brushes, rollers or spraying equipment (method requires Engineer's approval), with the rate of application as recommended by the paint manufacturer for the surface Involved. Brushes, rollers and spraying equipment shall be kept clean, dry, free of contaminants and suitable for the finish required.
B. Application shall comply with paint manufacturer's recommendations for drying time between coats. Additional coats shall not be applied until completed coating has been inspected and approved by the Engineer. Only inspected coats of paint will be considered in determining the number of coats applied.

Succeeding coats shall vary slightly in color. The surface shall be sanded and dusted between coats to remove defects visible at 5 feet.

3.5 Cleaning

A. Finish shall be touched up and restored where damaged.
B. Spilled, splashed or splattered paint shall be removed from all surfaces.
C. Surface finish or item being cleaned shall not be marred.
D. Storage space shall be clean and in condition required for equivalent spaces in project.

3.6 Paint Schedule

A. The following surfaces require painting set forth on drawings, or as set forth hereinbefore for the particular substrate and exposure conditions encountered.
   1. Exposed ferrous surfaces of piping and accessories, including hangers and metal supports.
   2. Pumps, motors and related exposed metal items.
   3. Paint floor and sidewalls to height of containment curb in fluoride storage room with System B.
B. Do not paint the following surfaces:
   1. PVC Pipe.
   2. Aluminum pipe or equipment.
   3. Copper or brass pipe and fittings.
   4. Polished nickel or stainless steel pipe or equipment finishing.
   5. Concrete pipe supports
   6. Any factory-applied coating of equipment which is specifically intended to be the permanent exterior coating. Engineer will determine if factory finish is suitable for permanent exterior finish at shop drawing review stage.

3.7 Mechanical Systems Identification

A. Identify piping service in accordance with ANSI A 13.1 unless specifically directed or authorized otherwise.
B. Color code shall pertain to exposed piping and piping concealed in accessible chases, attics or similar areas. Color code does not pertain to buried or permanently concealed piping.
C. Color code for this project.

Piping	Color of Exposed Piping
Potable Water	Blue
Valve Operators	Blue
Non-Potable	Green
Backwash	Brown

**** END OF SECTION ****

SECTION 11345

CHEMICAL FEED EQUIPMENT

PART 1 - GENERAL

1.1 Description

A. The Contractor shall furnish and install chemical feed equipment for chlorination, fluoridation and backwash chemicals as shown on the plans and as required for the equipment.
B. The system shall include, but is not necessarily limited to the following:
   1. Pumps.
      a. Positive displacement air driven double diaphragm style pumps for hypochlorite solution, fluoride, polymer, acids and related chemicals.
      b. Suction and discharge tubing, valves, fittings, mounting brackets, injection assemblies, storage tank and all related and accessory items to provide a complete and functioning system.
      c. Pertains to Schedule A at the Croyle Treatment Building.

1.2 Related Work Specified Elsewhere

A. Operation and Maintenance Data and Products: Section 01730.
B. Filtration Process Equipment: Section 11601.
C. Process Piping and Valves: Section 15100.

1.3 Submittals

A. Submit a complete materials list for all items to be furnished under this section.
B. Submit manufacturer's specifications, product data and drawings for all items.
C. Submit manufacturer's recommended installation details and the proposed mounting location, heights and methods for all equipment.
D. Submit operation and maintenance manuals in accordance with Section 01730.

1.4 Quality Assurance

A. Acceptable Manufacturers
   1. Acceptable manufacturers for chemical feed pumps on this project include: Jesco, Prominent, and Grundfos. Pumps shall be capable of 4-20 mA control. The chemical feed system shall be complete with tubing, foot valves, degassing heads, injection nozzles, fittings and related components to provide a complete chemical feed injection system. The pumps and materials shall all be rated to 150 psig.
   2. Chemical feed equipment specified herein by reference by brand name is intended to indicate standard of quality and function, and to provide for consistency and compatibility with chemical equipment at other locations operated by the Owner.
   3. Other equipment manufacturers may be acceptable subject to compliance with specifications, and Owner approval. The named equipment shall be used for bidding. The Owner will review alternate equipment only after bidding.
B. Field Service
   1. The chemical equipment supplier shall provide up to one (1) day service by a qualified service technician to inspect the completed installation and to instruct the Owner's operating personnel in the proper operation and maintenance of the equipment. This service is in addition to time for coordination and assistance to other building trades.
   2. At completion of the start-up work, the manufacturer's representative shall provide a written report of start-up activities and shall certify that the equipment has been installed properly and is functioning satisfactorily.

3. The manufacturer's representative shall re-visit the site on one subsequent occasion at the request of the Owner to review operations, repair any defects and verify proper operation.

1.5 Measurement and Payment

A. No measurement of work quantities under this specification will be made. Payment will be taken to be included under the lump sum contract amount for the project work to which it relates as outlined in Section 11601.

PART 2 - PRODUCTS

2.1 Chlorine System

A. General Requirements
   1. Equipment to be furnished under this specification shall provide manually controlled feeding of liquid sodium hypochlorite for water disinfection purposes.
   2. These specifications are intended to provide for a complete and operable system.
   3. Accessory items for a complete system shall be furnished whether or not specifically described herein.
   4. Pump type shall be a type with variable stroke length and frequency, specifically intended for chemical feed application.
B. Performance Requirements:
   1. Treated Flow Rates: 170 gpm minimum.
   2. Finish Water Sodium Hypochlorite and Fluoride shall be capable of providing 0.5 mg/l to 3 mg/l at 170 gpm for system pressure of 110 – 120 psi.
   3. Chemical treatment and backwash sizes and pressure requirements per Filtration Equipment provider.
   4. Manufacturer: Prominent, or equal.
   5. Pumps shall be connected to the treatment SCADA and control system.
C. Control Requirements
   1. Feed pumps shall be manually on-off controllable with external switch.
   2. Power to pumps will be controlled by electrical current sensor with well pump per electrical drawings.
D. Pump Accessories
   1. Multi- function anti-siphon, backpressure relief, priming and pressure relief valve with degassing feature for discharge of each pump.
   2. Foot valve and strainer assembly.
   3. Suction and discharge tubing, vent tubing, fittings and valves.
   4. Injection check valve assembly.
   5. Ball type sight flow indicator.
   6. Pumps shall be furnished with cordset and plug for 120 vac.
E. Storage Tank
   1. Vertical cylindrical tank.
   2. Double wall linear polyethylene or crosslinked polyethylene.
   3. Tanks per Section 11601 and filtration equipment requirements.
   4. Built-in graduation markings.
   5. 8" fill opening and lid.
   6. Venting tube and connection (to exterior) through wall.
F. Start-Up Chemicals
   1. Contractor to furnish chemicals for 5-MG of production water.

2.2 Pump Support Framing

A. Provide pump support systems and shelving.
B. Support systems shall be fabricated from non-metallic (fiberglass) strut framing and accessories, Unitstrut, B-Line, Aikinstrut, or equal.

C. Hardware shall be stainless steel.

PART 3 - EXECUTION

3.1 Inspection

A. All equipment shall be inspected by the Contractor and supplier upon delivery to the site with findings reported to the Engineer.
B. The Contractor shall remove from the site any damaged or unacceptable products, and shall replace with new equipment.

3.2 Coordination with Building, Mechanical and Electrical Systems

A. Chemical system supplier shall consult with the general contractor and mechanical and electrical subcontractors at shop drawing stage and provide instructions and/or recommendations regarding chemical system interfaces, locations, floor and wall penetrations, and related items.
B. Chemical system supplier shall furnish all sleeves, brackets, mounting hardware and accessories necessary for the complete installation unless agreed upon otherwise with the other trades.

3.3 Installation

A. The Contractor shall consult with the equipment supplier, Owner and Engineer prior to beginning equipment installation. The Contractor will be directed regarding specific mounting locations, heights, and anchorage methods of equipment. Consult with Owner and Engineer regarding sleeved penetrations and underground pipe and conduit locations at the appropriate time during building construction.
B. All items shall be installed in accordance with manufacturer's printed instructions, or as may be directed by the Engineer.
C. Openings through walls, floors or ceilings of chemical storage areas shall be sealed airtight.
D. All liquid piping systems shall be carefully installed and tested to ensure no leakage.

3.4 Manufacturer's Service

A. Provide manufacturer's start-up and training services per Specification 01730.
B. The time at the site for the manufacturer's representative shall be as required to accomplish the required services, make all systems operational, demonstrate full and satisfactory operation of all equipment, and train Owner's personnel in the necessary operation and maintenance activities.

**** END OF SECTION ****

SECTION 11400

PROCESS INSTRUMENTATION

PART 1 - GENERAL

1.1 Description

A. Scope of Work.
   1. The work included under this section consists of furnishing and installing process instrumentation: Including turbidity monitors, chlorine residual analyzer, wet floor alarm, intrusion alarms, pressure transmitters, flow switches, magnetic flow meters, complete with converters, including supports and all appurtenances, fully tested as shown on the Drawings and/or as specified herein.
   2. Pertains to Schedule A.

1.2 Additional Work Specified Elsewhere

A. Shop Drawings, Product Data and Samples: Section 01340.
B. Operation and Maintenance Data and Products: Section 01730.
C. Filtration Process Equipment: Section 11601.

1.3 Quality Assurance

A. The equipment items covered by these specifications are intended to be units of proven ability as manufactured by reputable manufacturers having long experience in the production of this equipment.
B. The Contractor shall supply the services of a qualified factory trained service representative. The representative shall inspect the completed equipment installation to ensure that it meets the manufacturer's recommendations. Any adjustments or modifications shall be made, at no additional cost to the Owner, to place the equipment in trouble free operation. Factory representative shall train the operational personnel in the proper operation and maintenance of the equipment.

1.4 Submittals

A. Materials and Shop Drawings: The Contractor shall submit shop drawings to the Engineer for approval:
   1. Manufacturer's literature, illustrations, and applicable data for the individual system components, including the weight of each major equipment item.
   2. Certified shop drawings showing all important details of construction of all components of the system.
   3. A complete total bill of materials for all equipment.
   4. A list of manufacturer's recommended spare parts to be supplied with the manufacturer's current price for each item.
B. Operation Instruction:
   1. Operating and maintenance manuals shall be furnished. The manuals shall be prepared specifically for this installation and shall include all required cuts, drawings, equipment lists, descriptions, etc., that are required to instruct operating and maintenance personnel unfamiliar with such equipment.
C. Certifications: The Contractor shall furnish the Engineer with a written certification signed by the manufacturer's representative that the equipment has been properly installed, is in accurate alignment, is free from undue stress imposed by piping or mounting bolts, and has been operated under full load conditions and that satisfactory operation has been attained.
D. Calibration: Meters should be hydraulically calibrated at a facility traceable to the National Institute of Science and Technology and supplied with certified calibration data.

1.5 Product Delivery, Storage and Handling

A. All parts and pieces of equipment shall be properly protected so that no damage or deterioration will occur during a prolonged delay from the time of shipment until installation is complete and the equipment is ready for operation.
B. Factory assembled parts and components shall not be dismantled for shipment unless permission is received in writing from the Engineer.
C. Finished surfaces of all exposed openings shall be protected by wooden blanks, strongly built and securely bolted thereto.

1.6 Warranty and Guarantees

A. The equipment manufacturer shall warrant the equipment being supplied to the Owner against defects in workmanship and material for a minimum period of one (1) years. In the event that the equipment fails to perform as specified, the equipment manufacturer shall promptly repair or replace the defective equipment without any cost to the Owner (including handling and shipment costs).

PART 2 - PRODUCTS

2.1 Flow Tube Type Magmeters

A. Performance and Manufacture.
   1. The magnetic flow meter shall operate on Faraday's Law, whereby a voltage is induced by a conducting media passing through a magnetic field.
   2. There shall be furnished a pulsed DC electromagnetic closed pipe flow meter suitable for fixed-site monitoring. Meters shall consist of a flow tube and an integral transmitter displaying and transmitting directional (forward and reverse) flow data.
   3. Accuracy: ±0.25% (V=1 to 30 fps), ±.5% (V=0.1 to 1 fps).
   4. Repeatability: ±0.1% of reading.
B. Flow Tube and Sensors.
   1. The nominal diameter of the flow tubes shall be as shown in the drawings.
   2. The flow tube shall be made of carbon steel and shall be epoxy, hard rubber or polyurethane coated.
      a. The flow tube shall be supplied with face carbon steel flanges to ANSI Class 150.
      b. Flow tube shall be designed for a 150-psi working pressure with minimum 2:1 safety factor at 100°F temperature.
   3. Liner and electrode assemblies shall be selected by the manufacturer for the following media and conditions: potable water, max. 115°F. Normal temperature 100°F to 115°F.
   4. 316 stainless steel tube and stainless steel grounding rings.
   5. Meters shall be bidirectional.
   6. Alloy C electrodes.
C. Amplifier/Transmitter.
   1. Transmitter shall be integrally mounted with the flow tube and shall provide continuous digital display of flow rate in gpm and total flow in gallons.
   2. Power supply: 120 vac.
   3. Analog output: 4-20 ma.
   4. Unit shall include local programming calibration and diagnostic capability from operator interface.
   5. Provide manufacturer's recommended signal cable in sufficient unspliced lengths as required for locations shown on drawings.
   6. Nema 4X enclosure.
D. Acceptable Manufacturers.
   1. Per Section 11601.
   2. Or Equal.

2.2 Turbidity Monitors: Furnish and install turbidity monitors for the applications listed herein and at the location generally indicated on the plans.

A. General Requirements: The turbidity monitors shall meet the following specifications:
1. Measuring ranges: 0 – 100 NTU.
2. Accuracy: ±5% of the range.
3. Analog output: 4-20 mA.
4. Alarm settings: 3 setpoint alarms.
5. Alarm contacts: Unpowered, SPDT contacts designed for up to 5-amp resistive load.
6. Power supply: 115 VAC.
7. Sample flow rate required: Up to 2 L/min (30 gph). Connect drain to PVC pipe drain.
8. Method of measurement: Surface scatter of light beam on surface of sample stream.
9. Display: 4-digit LED or LCD.
10. Bubble trap on sample line ahead of sensor: Required for each installation.
11. Pump to be furnished: 1 to 2 L/min.
12. Recorder outputs: 4-20 mA with sc100 controller.
13. Sample inlet fitting: ¼" NPT female, ¼" compression fitting.
14. Drain fitting: ½" NPT female to floor drain.
15. Enclosure: NEMA-4X/IP66 controller.
16. Communication: Laptop computer download via MODBUS.
17. Size: Turbidity body and cap: 10" x 12" x 16", sc100 controller, 6" x 6" x 6".
18. Mounting: Mount body and head assembly with sc100 controller on tubular floor stand. See Detail.
19. Sample flow: 3-12 gallons/hour.
20. Displayed resolution: 0.0001 NTU to 9.9999 NTU.
21. Provide all communication cables and power cords.
22. Provide calibration kit and solution.

B. Specific Application Requirements.

Installation Identification	Range	Size and Installation Notes
Effluent Finish-water Turbidity Meter	0-100 NTU	Install sample supply connection on finish water line to distribution.
Raw Water Turbidimeter		Install connection to skid and controls.

C. Approved Manufacturers: The low-range turbidity meter installed on the influent line shall be Hach Model 1720E Low Range Process Turbidity monitor or approved equal. Provide sc100 with MODBUS/RS232 output.

2.3 Chlorine Residual Analyzer: The instrument shall measure the concentration of total and free chlorine in the water. The instrument shall follow the standards for public water systems.

A. General requirements for the analyzer and transmitter are as follows:
1. Output signal: 2 x 4-20 MA DC.
2. Speed of response: Adjustable, averaging from 1 sec to 1 min.
3. Flow rate: Intermittent flow unit. Connect drain to PVC pipe drain.
4. Hose connection: Inlet – ½"; Outlet – ¾" barb type.
5. Accuracy: 0.1% (on an adequately mixed sample).
6. Transmitter enclosure: NEMA 4x enclosure.
7. Display on transmitter: Dual 3 ½-digit LED.
8. Power supply: Line powered, 110 VAC.
9. Zero adjustments: Automatic.
10. Alarm: High, low, relays.
11. Indicators: High, low alarm indicators.
12. Mounting: Floor stand mounted cabinet. See Detail.
13. Sample rate: Every 2.5 minutes.
14. Reagent: Provide 90 days of reagent.
15. Display: Provide LCD display with keypad.

16. Enclosure: NEMA-4x / IP-66.
17. Communication: Laptop computer download via MODBUS.
18. Size: 10.6" x 9.8" for main body, SC-100 controller, 6" x 6" x 6".
19. Measurement: Continuous measurement with recording option intervals.
20. Provide all communication cables and power cords.
21. Provide calibration kit.

2.4 Pressure Switch: The pressure switch shall be used to signal an increase in pressure and send communication to the well pump to shut down.

A. The requirements for the pressure switch are as follows:
1. Media: Drinking water.
2. Operating pressure range: 35-150 psi.
3. Factory setting: 100-120 psi.
4. Differential pressure: 30-50 psi.
5. Electrical rating: 120 VAC/20 amp.
6. Connection: ¼" NPT or larger.
7. Prevent pump operation upon adjustable differential pressure setting and easy calibration.
8. High pressure / low setpoint adjustable.
9. Install with isolation valve.

2.5 Flow Switch:

A. Mountable in horizontal pipeline of 4" diameter using a 1" saddle type connection.
B. 120 V.
C. Actuate at velocity down to 0.5 fps with indicator light.
D. Watts FS-10CL or equal.

2.6 Wet Floor Alarms: Furnish and install wet floor alarm switches in each of the locations indicated on the plans and in the schedule in this section. The wet floor alarm sensors shall utilize a float-actuated magnetic switch to sense water on the floor in the building or pit and generate a contact closure signal compatible with the SCADA system. The contact closure shall be suitable for operation on either a 110-VAC circuit or a 24-VDC circuit. The alarms shall be activated by a water depth of not more than ½" at the location of the sensor. Alarms shall cause a contact closure signal to be transmitted to the central control system.

A. Specific application requirements.
1. Install in main filter floor area in lowest area of well house.
2. Approved manufacturers: Wet floor alarm sensors shall be Series F7 level switches as manufactured by the WE Anderson division of Dwyer Instruments, Inc., in Kobold, PA or Engineer-approved equal.

PART 3 - EXECUTION

3.1 General

A. General: In addition to the shop drawings and descriptive literature required by the General Requirements, the supplier shall provide complete system documentation necessary for installation, operation and maintenance. The documentation shall be provided prior to shipment of hardware. The documentation shall include, but not necessarily be limited to the following:
1. General description of equipment.
2. Dimension drawings.
3. Wiring diagrams for connection to process control system.
4. Listing and description of routine maintenance requirements and equipment necessary to perform required maintenance. (Include O&M Manual only).

5. Installation and Start-up: Process instrumentation installation shall be inspected by a qualified representative of the manufacturer. Installation shall include, but not necessarily be limited to setting equipment in place and connection of power and signal wiring. Power wiring shall consist of connecting 115-VAC circuits from distribution panels supplied by the electrical contractor. Connections shall be made to screw-type terminals. The control system integrator will provide terminal-to-terminal interconnection drawings for all terminations between control panels and field-mounted instruments. The electrical contractor will install wiring between the process control panels and instruments and shall make wiring terminations. The control integrator shall verify terminations in the process control and monitoring panels.

B. Equipment shall be delivered to the site in undamaged condition. Equipment shall be stored above ground and protected from the weather. Equipment shall be installed in strict accordance with manufacturer's recommendations, the Plans and Specifications. Contractor shall supply all materials, labor and appurtenances, etc. to provide functional Process Instrumentation.

C. The Contractor and manufacturer shall be responsible for coordinating with the System Integrator to supply all the necessary equipment.

3.2 Product Handling

A. Comply with the pertinent provisions of the delivery schedule.

B. Fabricated parts, when delivered to the site, shall be stored off the ground and protected from weather and damage. Control and electrical devices shall be stored indoors.

3.3 Installation and Equipment

A. The Contractor shall erect and install equipment in strict conformance with the printed manuals provided by the equipment manufacturer.

B. All anchor bolts and miscellaneous hardware shall be stainless steel. All bolted connections shall be provided with lock washer.

C. The Contractor shall adjust equipment for proper alignment, both horizontal and vertical, in strict conformance with the printed manuals provided by the equipment manufacturer.

D. Installation and grounding shall be in strict accordance with the manufacturer's instructions and recommendations in the locations shown on the drawings.

E. Coordinate power supply and signal cable routing and location with electrical and control contractor. Do not run signal cable with power supply lines.

F. The Contractor shall submit a certificate from the equipment manufacturer stating that the installation of the equipment is satisfactory, that the equipment is ready for operation, and that the operating personnel have been suitably instructed in the operation and care of the equipment.

G. Installation of Instrumentation Conduit and Cables

1. Furnishing and installation of all conduits needed for instrumentation and/or any other instrumentation or control conduit shall be the responsibility of the electrical contractor. Furnishing and installation of the instrumentation or control wiring shown on the plans shall be the responsibility of the electrical system contractor. Control system supplier shall supervise wiring connections in the process control and monitoring panels.

3.4 Acceptance

A. The Contractor shall field test instruments after erection in the presence of the Engineer and equipment manufacturer to verify operation, uniformity and compliance with the requirements specified by the manufacturer.

B. The Contractor shall provide all labor, materials and test apparatus necessary to conduct testing at no additional cost to the Owner.

3.5 Inspection and Testing

A. Provide manufacturer's field services, demonstration, and training services in accordance with Section 01730.

3.6 Installation, Operation and Maintenance Manuals

A. The Contractor shall furnish a minimum of four (4) Operation and Maintenance Manuals for each instrument provided in accordance with Section 1340, Shop Drawings, Product Data and Samples.

**** END OF SECTION ****

SECTION 11601

FILTRATION PROCESS EQUIPMENT

PART 1 - GENERAL REQUIREMENTS

1.1 General Description

The full scale water treatment process equipment shall be designed to provide ultra or micro-filtration treatment of ground water from the Nonanna Well. The Nonanna Well is under the direct influence of surface water (GWUDI) and the proposed treatment includes a membrane treatment process skid with a minimum average final filtrate production capacity of 170 gallons per minute with flow rates and volume totals listed below. The equipment shall be furnished as a system integrated by one manufacturer who will assume responsibility for the interconnections and operation of the treatment process and process controls. This section of the specifications includes requirements for the filtration membrane treatment process pertaining to average system flux rate, cleaning requirements, and initial operating parameters; equipment specifications for the full scale treatment process equipment; and requirements for information to be provided with a proposal to furnish equipment for the project. The equipment provider shall provide a final design layout for the system within the building footprint and shall provide all equipment and tanks. The General Contractor will provide piping, fittings, stands, equipment pads and pipe supports between skids and tanks. The filtration equipment provider is anticipated to provide instrumentation, all pumps, and actuator valves that are required for the treatment system. The General Contractor is responsible to verify inclusion of an operational system.

1.2 Supplemental Specification Sections

A. Refer to all specifications in the contract documents which cover detailed specifications and requirements of treatment equipment, electrical, and instruments for this project. Specifically refer to Sections 11345 and 11400 for additional information.

1.3 Reference Materials

A. AWWA Manual of Water Supply Practices M53, Microfiltration and Ultrafiltration Membranes for Drinking Water shall be referenced and used as a design guideline for this project. The use of microfiltration (MF) and ultrafiltration (UF) in water treatment applications is an accepted method of water treatment. The Long Term 2 Enhanced Surface Water Treatment Rule and its associated Membrane Filtration Guidance Manual, provides federal regulatory framework that addresses membrane filtration. The following ASTM Standards are also included for reference.

B. ASTM Standards:
D1129 Terminology Relating to Water
D4516 Practice for Standardizing Reverse Osmosis Performance Data
D5090 Practice for Standardizing Ultrafiltration Permeate Flow Performance Data
D6161 Terminology Used for Microfiltration, Ultrafiltration, Nanofiltration and Reverse Osmosis Membrane Processes
D6908 Practice for Integrity Testing of Water Filtration Membrane Systems
D7285 Guide for Recordkeeping Microfiltration and Ultrafiltration Systems

1.4 Design Criteria

A. The Bidder shall provide values for the following for their membrane system treating the water parameters provided. Bidder shall provide proposal and pricing based on the specified design criteria in the plans and specifications.
1. Influent and effluent turbidity. Must meet minimum specified requirements.
2. Flow rate and membrane flux rate. Maximum instantaneous design flux rate of 40 gfd at a minimum design temperature of 50 degrees F.
3. Trans-membrane pressure.

4. Recovery shall be greater than or equal to 95% at all times.
5. Operating pressures of the membrane treatment process.
6. Frequency and duration of backwashes. Provide details on chemical enhanced backwash and maintenance frequencies.
7. Offline cleaning (CIP) frequency shall be no more than once every 30 days. System manufacturer shall provide details on CIP chemicals to be used, chemical concentrations, detailed procedure and quantities per million gallons.
8. Volume of and method backwash water expressed in gallons and in percent of total water production.
9. pH and Temperature of the water at both the influent and effluent.
10. Results of membrane integrity testing. Testing shall be once per day per manufacturers recommendations.
11. System manufacturer to provide stabilized temperature corrected membrane permeability in gfd/psi. Stabilization shall occur within 90 days of system start-up.
12. System manufacturer to specify maximum TMP.
13. The treatment facility is designed to operate for an average of 16 hours per day with a maximum of 18 hours per day.

B. Treatment Requirements:
1. Filtrate recovery rate of at least 95% of raw water pumped to the system.
2. Turbidity – Maximum filtrate turbidity of 0.3 NTU
3. Filtrate turbidity of < 0.1 NTU typical and not greater than 0.3 NTU in a 24 hour run.
4. TOC – not to exceed that of the raw water
5. CIP cycle – 30 days or greater
6. Provide pretreatment requirements or maximum turbidity – identify size, type, feed rates, and location of pretreatment required for full scale installation and limits on influent turbidity to the membrane treatment units. Note pretreatment is proposed at the Nonanna Well which will provide 20 to 30 minutes of contact time.
7. Backwash waste volume not to exceed 9,000 gallons per day

C. Typical Flow Rate Parameters
1. Annual treatment quantity: 20 million gallons of production to distribution system
2. Minimum treatment quantity: 0 gallons to 10,200 gallons per day (1 hr @ 170 gpm)
3. Maximum treatment quantity: 163,200 gallons per day (16 hrs @ 170 gpm)
4. Minimum monthly treatment quantity: 0 gallons to 250,000 gallons
5. Maximum monthly treatment quantity: 5 million gallons of production to treatment system
6. Annual Treated Production Estimate Table:

Month	(Gallons) Treatment Production
Jan	250,000
Feb	250,000
Mar	250,000
April	800,000
May	1,250,000
June	2,500,000
July	5,000,000
Aug	5,000,000
Sept	2,700,000
Oct	1,500,000
Nov	250,000
Dec	250,000
Annual	**20,000,000**

D. Bidder/Equipment provider shall develop a report which shall include all data requested. Four copies of the report shall be provided to the Engineer for distribution to the Owner, regulatory agencies, and operating staff for the system. The report shall also include the manufacturer's recommendations on clean-in-place frequency, chemical types and quantities required for the clean-in-place process, and projected efficiency in terms of restoration of trans-membrane pressures at the design flux rates. The report shall be delivered with the sealed bid and included with the General Contractors bid. The quantities and frequencies shall be provided by the equipment bidder/designer. The actual production rates and volumes will vary from listed estimates, but are assumed to fall within the given parameters. An annual production of 20 million gallons is estimated.

E. Nonanna Well Water Pretreatment:

1. The source well water for this treatment process is located approximately 2,200 ft to 3,200 ft from the Croyle treatment facility. The well will include a VFD installed under this project and the water will be chemically treated at the Nonanna Well. The Nonanna Well flow is estimated to produce 170-180 gpm and will be delivered to the Croyle treatment facility in approximately 20 to 30 minutes of travel time. The chemical treatment at the Nonanna Well is anticipated to be as follows:
   a. Sodium Hypochlorite: 0.5 to 1.5 mg/l or per designer recommendation.
   b. Coagulant: 10-20 mg/l or per designer recommendation.

1.5 <u>Requirements for Submittal of a proposal to furnish equipment for the project.</u>

A. Bid Submittal Checklist - Proposals for process equipment shall include the following items:

1. Report: see requirements of previous section. Schematic drawings and basic process equipment information is required to be submitted with the bid. The level of detail is not required to be a full submittal for manufacture of the equipment, but shall provide adequate information so that the general contractor and engineer may evaluate the package being provided and understand piping requirements. A full detailed design submittal is required following award during the submittal stage.
2. Basic drawings and schematics showing the size, arrangement, weight, and connection requirements for installation of the process equipment.
3. Electrical schematics and/or list of equipment showing the size and locations of the electrical loads to be connected.
4. Control and instrumentation schematics and/or list showing the location and connection requirements for process instrumentation and the process controller and operator interface terminal system proposed for the project.
5. Drawings of appurtenances that will be required for an operating system including the chemical storage tanks and pumps for the clean in place process, air compressor and filter/dryer system, pumps, water heater, control panels, and associated instrumentation. Information shall include size and general description of piping connections required.
6. Process and instrumentation diagrams for all supplied equipment which include all valves, instrumentation, piping, pumps, tanks, membranes, and all other ancillary components. P&IDs shall include all equipment tag numbers.
7. Manufacturer's recommendations on membrane replacement frequency. This information shall also include identification of the parameters used to define when membrane replacement is required. The Owner shall assume the module will require replacement when a module has 50 repaired fibers.
8. Provide two additional spare modules to the Owner with the equipment package for future use as replacement modules. These additional modules should be furnished at the time of delivery of the filtration equipment.
9. The equipment manufacturer shall provide a complete equipment package to the General Contractor including necessary startup services which shall consist of not less than one week of on-site supervision by a qualified factory trained individual during equipment installation and testing and not less than one week of startup services and operator training after the equipment has been placed in service. Price shall include shipping and all applicable state of South Dakota taxes which shall be itemized in the package. The Contractor is responsible for delivery, unloading, storage, and handling.
10. A spare parts list and list of equipment for three years operation is required with the bid and should list all supplies and materials required for proper operation and maintenance of the system.
11. Provide chemical quantity estimates for one year of operation at an annual production rate of 20 million gallons per year.

12. Black Hills Electric Cooperative is the electrical provider. 480 Volt power is available for the system.
13. Chemicals that may be available from local suppliers:
    1 gal. bulk Sodium Hypochlorite 12.5%
    570# drum Citric Acid 50%
    1 lb. bulk Aqua Hawk 607
    1 gal. bulk Sodium Bisulfite 40%
    5 gal. carboy Clearitas 401
    52 gal. Caustic Soda 25%
    Hydrochloric Acid 36% 4X1 gal. case
14. Statement of warranty terms and provisions for filtration membranes. Statement shall address number of years for full warranty coverage and provisions for pro-rated warranty for a total period of not less than 10 years. The first 3 years of warranty shall include full replacement of the modules and the additional 7 year extended warranty shall include a pro-rata warranty to total 10 years. The filtrate module shall be determined to be ready for replacement when the number of repaired fibers reaches 50 individual repairs per module or 0.1% of total fibers whichever is lower. All other equipment and workmanship shall include a two year warranty.
15. Installation list documenting a minimum of five similar drinking water filtration treatment installations, including installation dates, location, size, water source, and purpose.
16. Approval letters and documentation verifying completion of membrane challenge testing and verification of accreditation for a minimum of 4-log removal of Giardia and Cryptosporidium sized particles.
17. Experience: The membrane filtration system is to be furnished by an experienced supplier who has been active in supplying ultrafiltration or microfiltration equipment for a minimum of five years and can provide a list documenting a minimum of five filtration installations.
18. Approved Suppliers: Westech, H2O Innovation, Pall Corporation and Tonka Water.

1.6 Bid price to remain in effect:

The price bid for the equipment shall remain in effect for not less than 120 days from the date on which the bids are read. The price bid to the general contractor for the water treatment equipment should include the purchase, delivery, installation and startup assistance, and all required documentation for the process equipment. The equipment will be furnished to the general contractor. The general contractor will be responsible for applicable taxes. Payments for materials and services will be made by the Owner to the General Contractor. Payment for equipment stored will be eligible upon approval of all shop drawings and delivery of the equipment to the site or to a protected and insured location in Rapid City, South Dakota. The payments will be applied to the appropriate bid items for the project.

PART 2 - TECHNICAL REQUIREMENTS FOR FILTRATION PROCESS EQUIPMENT

2.1 General: The filtration process equipment shall be provided in a size and configuration that includes one process train. The minimum average filtrate production capacity of the treatment system shall be 170 gallons per minute providing a net treated water volume of 163,200 gallons per day. The membrane modules, supporting framework and piping, pumps, and appurtenances shall be designed for a direct flow configuration. The process shall include all equipment necessary to complete treatment, backwashing, clean-in-place (CIP), chemical feed, storage, instruments and related items necessary for treatment.

2.2 Submittals:

Bidder shall provide Owner with a minimum of six (6) copies of submittal drawings, design and specifications providing detailed information on the equipment dimensions, electrical and control connection requirements, materials of construction, and process and control equipment provided as a part of the equipment package. Bidder shall also provide the General Contractor a minimum of six (6) copies of the installation, operation and maintenance manuals for the equipment and appurtenances. The manuals shall be prepared by the supplier and furnished to the General Contractor at the time of delivery of the equipment.

2.3 Startup Supervision and Operator Training:

The Bidder shall include startup supervision and operator training in the price quoted for the equipment. At a minimum, the Bidder shall provide 5 days of on-site assistance during equipment installation and startup testing. Bidder shall provide an additional 5 days of on-site assistance for training, operator assistance, and response to questions. The 10 days shall be provided in at least two separate trips during the first three months of operation of the plant. The technical assistance will include incorporation of the new treatment equipment software and outputs to work with the Owner's SCADA system and Owner's integrator. The startup assistance shall also include phone consultation, technical support, and internet access and support for one year from the date of final acceptance.

2.4 Process Design Conditions:

The filtration process shall be designed to treat feed water under the following conditions:

A. Supply pressure – not more than 5 psi, pressure will be governed by selection of pumping equipment to pump water from a raw water supply tank at the site into the treatment process.
B. Raw water flow shall be controlled with a level control valve on the raw water line and raw water tank.
C. The treatment room dimensions for the equipment are as follows: 13' wide x 23' long x 11'11" floor to ceiling. The door is centered on the 13' east wall as shown on the drawings. The door height will require modification to fit skid equipment into the room based on the equipment provided.
D. Refer to the locations of the existing facility, including: electrical room, chemical room, and mechanical room. There is space for chemical pumps within the Chemical Room.
E. An existing empty single 175 gallon polyethylene tank is available for chemical feed for the treatment system within the Croyle chemical room. A chemical feed pump, tubing, valves, and equipment may be installed on the wall of the chemical room and fed to the treatment skid in the adjacent room.
F. The Croyle system currently includes an existing 175 gallon polyethylene tank for sodium hypochlorite feed for the existing Croyle Well. The Croyle well will typically utilize 75 gallons of sodium hypochlorite in peak months and the additional 100 gallons may be utilized for use in the treatment process. A chemical feed pump, tubing, valves, and related equipment will be required for the chemical feed to the treatment facility.
G. The designer of the chemical feed system shall assume that the chemicals may be refilled on a 2-3 week cycle during peak month production of 5 million gallons.
H. The equipment designer must take into account the available space to fit the equipment within the existing building.
I. Raw Water Quality characteristics :

Raw Water Parameter	Typical Raw Water Operating Condition	Min/Max Parameter Range	Units
Production Filtrate Design Flow	170		Gal/Min
Daily Flow	10,200-163,200		Gallons
Total Suspended Solids	1	0.5-5	mg/l
Typical Particle Size	1-5	5-50	microns
Temperature	55	50-60	F
Raw Water Turbidity	1-5	0.5-80	NTU peak may seasonally reach 100 NTU
Iron Content	0.3	0.2-0.6	mg/l
Manganese	0.03	0.015-0.08	mg/l
Hardness	150	140-175	mg/l
Conductivity	350	340-440	umhos/cm2
pH	8.00	7.5-8.2	SU
Total Dissolved Solids	190	175-225	mg/l (may reach 300 -500 range)
Alkalinity	140	130-160	mg/l
Bicarbonate	175	150-200	mg/l
Chloride	10	7-30	mg/l
Fluoride	0.2	0.15-0.3	mg/l
Langelier Scale	0.2	0.0-0.5	LSI

Raw Water Parameter	Typical Raw Water Operating Condition	Min/Max Parameter Range	Units
Total Dynamic System Head	270-280	240-290	ft.
TOC	1	1-6	mg/l

Treated Water Requirements	Maximum	Units
Finish Water Turbidity	0.2	NTU
Iron Content	0.2	mg/l
TOC	Not to exceed raw water	

		Units	
Reclaim Water Turbidity	50-200	NTU	Variable
Initial Filtrate Recovery	95	%	Minimum
Allowable Reclaim discharge to Drainfield	9,000	gpd	Maximum
Allowable Reclaim discharge to Concrete Tank	600	gpm	Up to 9,000 gpd

Notes:

1. Provide treatment of Giardia and Cryptosporidium to 4 log removal.

2. 95% of the time the turbidity is anticipated be below 10-20 NTU. Typical conditions will likely be 4-8 NTU. Control of the skid should include alarms so that it completely shuts down if turbidity exceeds 40 NTU. An existing turbidimeter at the Nonanna Well House should be tied to the controls to allow shut down if turbidity exceeds 40 NTU. The system will be set up to rarely see NTU at 80 or higher based on previous observations and conditions.

2.5 System components:

A. Support structure: all pressure vessels, piping, instrumentation and controls, and other appurtenances which make up the filtration process shall be supported on a structural steel frame. The frame shall be fabricated from carbon steel and shall have a surface finish consisting of a zinc primer, an epoxy coating and a final coat of urethane or equivalent coat to provide moisture and corrosion resistance. The support frame shall be designed to resist the gravity forces of the vessels, piping, pumps, and appurtenances supported from the structure as certified by a registered professional engineer. Pipe supports and rigid restraint will be required for certain equipment not intended for skid mount.

B. Filtration Assemblies:

1. The filtration membrane modules shall be supported by a manifold frame. The rack supplied may be sized to accommodate multiple sizes and brands of filtration modules, but is not required. Modules shall be connected to the associated manifolds using Victaulic style clamps at top and bottom and clear slip couplings. The module rack shall be designed to accommodate different membrane modules without replacing the entire feed or filtrate header or any motorized equipment.
2. All module components in contact with the filtrate shall be NSF certified for potable water or food production applications.
3. Pressure module integrity shall be tested by pressure differential by a minimum pressure differential necessary to demonstrate a 3 micron breach for a minimum of 5 minutes total pressure hold time. Test time shall not exceed 10 minutes total. Fiber failure shall be visually detected via the clear opening at the top of the module and without the use of special devices. Modules must be designed to permit repair in place in less than one hour.
4. The module permeate connection and backwash waste connection at the module shall be clear pipe to allow visible inspection of the flow. The filtrate module connection lines shall be a minimum diameter of 2 inch and shall include a ball valve at the top and bottom of the module for complete isolation within the filtrate module train. The filtrate module header piping shall also include gate or butterfly valves to manually isolate 50% of the modules on the filtration train for maintenance purposes. The Operator will manually isolate 50% of the treatment modules to complete additional backwashing and chemical treatments.
5. The modules shall be manufactured to handle the high strength chemical treatment and cleaning proposed for the system, including: sodium hypochlorite, hydrochloric acid, citric acid and related chemicals. The modules fibers must be guaranteed to meet the conditions proposed for the project.

The modules shall be able to withstand sodium hypochlorite contact time in excess of 1,000,000 ppm-hr.

6. The filtration system shall also include provisions to allow for off-peak system shutdown of production up to 6 consecutive months. The system shall be capable of automatically circulating treated water through the filtrate system to prevent bacteria growth within the modules and filtrate system. The Operator will monitor chlorine residual levels weekly for the system.
7. A single integrated skid that has both filtration and the cleaning cycle capabilities combined is desired. Tanks may be skid mounted. Space saving measures are recommended.
8. The skid is not required to be fully assembled and tested by the equipment manufacturer prior to shipment. The assembly may be completed onsite by either the equipment provider or the General Contractor.
9. Filtration shall provide 4.0 log removal of Cryptosporidium and Giardia, and 1.5 log removal of virus with verification documentation.
10. Filtration Modules:
    a. Outside –in configuration is required. The filter material shall be PVDF material due to high levels of chemical application.

C. Piping and Valves: Piping and valves required for the operation of the process shall be furnished as a part of the equipment package. Piping shall be NSF rated Schedule 80 PVC, HDPE, epoxy coated flanged ductile iron, stainless steel, or epoxy coated steel pipe as required for the process application. Actuator valves shall be as appropriate to the filtration system and shall be Tyco or Bray. System isolation valves shall be AWWA standard design full bodied gate, wafer or butterfly valves with flanged connections. Valves requiring pneumatic operators shall utilize pneumatic cylinder operators designed for operation on 90 psig compressed air. The piping layout shall include sample taps for raw and finish water sampling along with connections for turbidimeters and chlorine analyzers.

D. Automatic Screen Filter: One duty automatic self-cleaning screen filter with no larger than 300 um filtration degree shall be installed upstream of the membrane modules to filter out particulate matter and debris. Screen filters shall be mesh wire, weave wire or equal.

E. Pumps: The filtration skid shall be equipped with pumps as follows: one for feed water, one for CIP, one for backwash supply, one for chemical metering of sodium hypochlorite, one for metering of citric acid, neutralization chemical pumps, one for waste to neutralization tank, and one finished water distribution pump.

1. The feed and CIP pumps will be capable of delivering the appropriate flow and pressure required for operation of the system to achieve manufacturer recommended trans-membrane pressure across the membrane modules.
2. The backwash pump will be capable of delivering the appropriate flows of backwash water through the modules necessary for cleaning at flows required by the equipment designer.
3. The finish water pump shall be equipped with variable frequency drives (VFD's) to allow optimized operation of water flows and pressures. VFD's shall be Square D Altivar or Allen Bradley.
4. Raw water, finished water, and waste to neutralization pumps shall be centrifugal pumps with close coupled motors, stainless steel construction, and mechanical seals. Centrifugal Pumps shall be similar to the Goulds SSH series, Summit, Flowserve, Grundfos, or approved equal.
5. The total dynamic head for the finish water pump is estimated at 285 ft. The pump shall be produce 170 gpm minimum at 285 ft of head. The typical pressure at the well house is in the 110-115 psi range. The finish water pump will be required to be set up to run based on flow.
6. The neutralization waste pump shall be capable of producing 60 gpm at 30' TDH.
7. Refer to Section 11345 for requirements for Chemical Feed Pumps.

F. Compressed Air System: A complete compressed air system shall be provided with the equipment package. The system shall be sized to provide the air flow and pressure necessary integrity testing the membranes and operation of the pneumatically actuated valves in the system. The system shall include the stainless steel, HDPE or black steel pipe network necessary to distribute process air to the membrane modules for backwashing and routine operation and testing.

1. Air Compressor System: The compressed air package shall include one factory packaged air compressor, receiver, filter with air dryers rated to meet the requirements of the filtration system for air scouring, integrity testing, backwash, valve actuator operations, and other loads as determined by the equipment manufacturer. The air compressor sizing is the responsibility of the manufacturer and may be 480 V based on compressor selected. The compressor system shall be oil-free and equipped

with high efficiency TEFC motors, remote receiver tank, controls, valves, and appurtenances necessary for a complete operating installation. Manufacturer may be Ingersoll Rand, Atlas Copco, Quincy or equal. The air compressor shall be equipped with noise reduction measures which provide operation between 60 and 70 decibels maximum.

2. Appurtenances: The system shall include two coalescing membrane filter assemblies, an appropriately sized ASME rated receiver tank stamped for operating pressures of up to 200 psig, manual drain valve, and a pressure relief valve. The filtration skid shall have a control air regulator assembly furnished complete with isolation valves, coalescing filters, filter housing, regulator and pressure control and relief valves, an air isolation valve for each membrane equipment skid, and a 0.3-micron membrane filter housing.

G. Electrical Requirements: The system shall be designed to operate on 480 volt, 3 phase power for all three phase loads. Low voltage AC single phase loads shall be designed to operate at 120 Volts AC. Step down transformers not identified in the drawings will be the requirement of the Contractor if necessary. The electrical panel furnished with the equipment shall be built to NFPA or UL standards and shall be complete with necessary process controllers and instrumentation for operation and monitoring of the system. Submittal drawings furnished for the equipment shall identify all field wiring connections and circuit sizes required for power and control connections. Electrical power and control equipment shall be housed in a NEMA 4 rated electrical enclosure. All electrical components shall be UL Listed and shall include waterproof covers, panels and enclosures. Wiring materials and methods shall meet appropriate NEC requirements.

H. Process Controllers: The Owner's SCADA controls include GE Versamax Ethernet PLC's. The Owner would prefer the filtration treatment skid includes compatibility with the GE Versamax equipment although Allen Bradley equipment is acceptable. The process controller for the treatment system skid shall be a programmable logic controller equipped with an Ethernet communications card. PLC systems shall be similar and equal to the Allen Bradley Compactlogix series controller utilizing RSLogix 5000 software or approved equal. The PLC shall be capable of controlling the equipment associated with the filtration process for each skid and shall provide the means for communication with the treatment plant supervisory control and data acquisition (SCADA) system via Ethernet communications. Coordination of the operation of multiple filtration operations shall be accomplished by the plant SCADA system. The Ethernet communications shall provide addressable data for incorporation into the operator displays and interface screens on the SCADA system. Alarms generated shall be annunciated by the programmable controller on the treatment process unit skid and shall be transmitted to the plant SCADA system for remote monitoring and reporting purposes. The status and control inputs for each treatment skid shall include indicators and control panel components as follows:

1. Master control panel operator interface, industrial PC with 8" minimum touchscreen HMI mounted on the control panel door.
2. Connection and software to the Owner provided laptop for complete equipment controls
3. Contactors-ABB
4. Solenoid valve block
5. Ethernet switch
6. Operating Mode – i.e. Filtration, backwash, air scour, membrane integrity test, off-line
7. Total Flow – gallons. Flow rates – gpm
8. Specific Flow Rate or Flux – Gallons per day per square foot
9. Operating pressures – supply, discharge
10. Trans-membrane pressure
11. Alarm status
12. Motor status and alarm conditions for motors controlled by the process controller.
13. High and low pressure alarm conditions
14. High turbidity alarm
15. Effluent turbidity

Controls for operation of the treatment process shall be based on the water level in the treated water tank. When the level drops below the operator entered start setpoint, the treatment process and raw water pumps shall be called to start. The operation shall continue until the finish tank level reaches the stop setpoint. Rate of flow through the process shall be controlled by a setpoint controller. The setpoint for raw water flow rate shall be entered by the operator at the control panel in the water treatment plant.

Backwashes, air scour and maintenance cleans, or chemically enhanced backwash shall be both automatic and manually initiated. In normal operation, these backwash or cleaning sequences shall be automatically initiated based on either elapsed time or volume of filtrate produced. Operator shall enter the setpoint for operating time or volume of filtrate as a limit that will initiate a backwash sequence. Once a backwash sequence is initiated, the control system shall complete the sequence and return the treatment process unit to operational status. Operator shall be able to manually initiate a backwash sequence from the process control panel if desired.

Chemical CIP cleaning of the membranes shall be manually initiated and shall be performed when the treatment unit is off-line. The need for a chemical cleaning of the membranes shall be indicated by the trans-membrane pressure following conventional backwash. If the trans-membrane pressure exceeds an operating setpoint following a backwash, a message shall be provided to the operator indicating a need for a chemical clean in place process. Following the chemical cleaning, the filtrate shall be diverted to waste until the turbidity returns to preset limits for the treated water.

Membrane integrity validation shall be a part of the control system. The membrane integrity shall be validated using a pressure decay test pressure necessary to demonstrate a 3 micron breach allows testing of the membranes with air or water to determine whether or not failed membranes exist in the membrane packs. The pressure decay test shall be performed automatically at prescribed intervals. Decay time will be measured over 5 minutes minimum and total time shall not exceed ten minutes. A pressure decay test initiation control shall be provided to permit manual initiation of the pressure decay test. Submerged no-pressure membrane systems are not allowed.

I. Process Instrumentation: Instrumentation required for operation of the filtration equipment shall be furnished and installed as a part of the process equipment package. Instruments may be loose shipped and installed onsite at the bidder's choice. This shall include all instrumentation within the filtration unit framework and instrumentation outside the framework which is required to provide signals necessary for operation and maintenance of the treatment system. Equipment within the filtration system framework shall be pre-installed and tested during the factory acceptance testing completed prior to shipment to the site. All instrument data and trending shall be shown in the master control panel HMI. The instrumentation to be provided with the equipment shall include the following items:

1. The equipment provider may submit manufacturer's standard instrumentation and equipment for consideration as an equal during the bidding process. The Engineer will respond within 5 days of submittal if equipment meets the minimum requirements
2. Flowmeters for measurement of rate of feed flow to the membrane treatment system, filtrate flow from the system, backwash flow and CIP flow rates. Meters shall be magnetic flowmeters. Magmeters may be manufactured by Rosemount, ABB, Siemens, Endress & Hauser, or Badger.
3. Turbidity measurement to measure raw water turbidity, effluent turbidity and backwash water turbidity. Effluent turbidity meter shall meet requirements for Safe Drinking Water Act compliance. Turbidity meters shall be furnished complete with calibration standards and shall be Hach 1720E.
4. Temperature of water entering the system – a continuously measuring temperature transmitter shall be furnished, installed and connected to the process control panel for the treatment process unit. The temperature transmitter shall have a measuring range of 0-50° C and shall provide a 4-20 mA signal proportional to temperature.
5. Continuously measuring pressure transmitter shall be furnished, installed and connected to the process control panel for the treatment process unit for the feed and filtrate side of the modules. The pressure transmitter shall have a measuring range of 0-100 psig or 0-50 psig based on manufacturer recommendations and shall provide a 4-20 mA signal proportional to pressure measured at the inlet to the process.
6. Pressure transmitters shall be Endress Hauser, Hach, Rosemount, Wika or ABB.
7. Pressure on the discharge side of the membrane - a continuously measuring pressure transmitter shall be furnished, installed and connected to the process control panel for the treatment process unit. The pressure transmitter shall have a measuring range of 0-50 psig and shall provide a 4-20 mA signal proportional to pressure measured at the discharge of the membrane process.
8. Conductivity measurement of treated water is not needed unless required by the system design.

9. Trans-membrane pressure: Trans-membrane pressure (TMP) shall be calculated based on the difference between feed and filtrate pressure. TMP values shall be calculated by the PLC and displayed on the operator interface screen.
10. Chlorine analyzers are required for measurement prior to the filtration skid and at the finish water discharge point. Chlorine analyzers shall be Hach brand.

J. Backwash and Process Chemical Storage and Handling: The full scale treatment system shall include chemical feed pumps, and CIP waste neutralization tanks necessary for both routine operation and more extensive clean-in-place procedures for restoration of membrane operating parameters. The citric acid feed and sodium hypochlorite feed shall be sequenced to allow neutralization during cleaning and discharged to a polyethylene neutralization tank.

1. Hot Water and Neutralization tanks: Hot Water heater and Neutralization tank for the supply of CIP water and neutralization of Spent CIP solutions prior to discharge shall be HDPE or cross-linked polyethylene or fiber reinforced polymer with a SG of 1.9 and of a size suitable to contain the volume of water required for the CIP and Neutralization of Cleaning solutions. The water heating temperature shall be assumed to be 40 degrees Celsius.
2. The neutralization process may be operated manually. The sodium hypochlorite and citric acid may be operated to allow neutralization of the waste. The Operator will manually check the pH and ORP with a grab sample and then add chemical accordingly to neutralize.
3. Storage tank sizing and dimensions shall be identified in the proposal for the process equipment.
4. Tanks may be constructed and located on the skid equipment.
5. All neutralization, feed and backwash tanks should be supplied by the equipment manufacturer. Tanks shall meet the following:
   a. Feed Tank: The feed tank shall be a closed top, white translucent HDPE tank of sufficient size to contain the UF feed water, with a minimum size of 500 gallons. The tank shall be supplied with flanged connections for inlet, outlet, and overflow. Tank shall have level transmitter and drain connections.
   b. Permeate / Backwash Supply Tank: A single tank shall serve as the permeate / backwash supply tank. The tank shall be a closed top, white translucent HDPE tank of sufficient size to contain the UF backwash supply water, with a minimum size of 500 gallons. The tank shall be supplied with flanged connections for inlet, outlet, and overflow. Tank shall have level transmitter and drain connections.
6. HDPE Tanks shall comply with applicable provisions of the following standards: A ASTM (American Society for Testing and Materials) Standards: D618 Conditioning Plastics and Electrical Insulating Materials for Testing, D638 Tensile Properties of Plastics, D790 Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials, D883 Definitions of Terms Relating to Plastics, D1505 Density of Plastics by the Density-Gradient Technique, D1525 Test Method for Vicat Softening Temperature of Plastics, D1693 Test Method for Environmental Stress-Cracking of Ethylene Plastics, D1998 Standard Specification for Polyethylene Upright Storage Tanks, D2765 Degree of Crosslinking in Crosslinked Ethylene Plastics as Determined by Solvent Extraction, D2837 Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials, D3892 Practice for Packaging/Packing of Plastics, F412 Definitions of Terms Relating to Plastic Piping Systems.
7. Chemical Feed Pumps: CIP solutions will be made on demand and not stored for extended periods of time. A hot water pump will deliver water at the appropriate temperature to the filtration skid. During water transfer a chemical injection pump will dose the appropriate amount of chemical into the water to make up the CIP solution. Hot water pump assemblies shall include motors, dosing valves, anti-siphon valves, flow switches, and support frames. Motors shall be powered and controlled from the electrical panel furnished with the filtration equipment skid. Chemical delivery pumps shall be positive displacement air driven double diaphragm style pumps or engineer approved alternative. Chemical Pumps shall be positive displacement air driven double diaphragm style pumps and shall be manufactured from chemical resistant materials designed for operation at the normal operating temperature of the hot water required for the CIP process. Requirements for field wiring shall be clearly identified in the process equipment drawings furnished with the submittal package.
8. Chemicals: Initial fill for treatment of 5 million gallons of chemical for the chemical cleaning process for the membrane and pretreatment shall be furnished with the full scale equipment

installation. Chemical shall be delivered to the site and tanks filled to provide chemicals to treat 5 million gallons and shall include pretreatment chemicals and backwash CIP chemicals.

9. Backwash: The system back wash may be discharged to the exterior detention storage tanks. The existing facility includes 6 – 4,500 gallon detention storage tanks that will allow settlement of solids within the tanks. The last tank no. 6 includes a recycle pump that will pump water to the backwash tank for treatment within the filtration system. The backwash reclaim tank should be set up to allow a feed rate of 30 gpm to mix and treat with the raw water.
10. Raw Water and Backwash Strainer: The system shall include an automatic backwashing strainer prior to the filtrate modules. The strainer size shall be per the designer's recommendation, but shall be between 200 and 400 microns.
11. Neutralization Discharge: The chemical backwash not suitable for reclaim shall be discharged to the force main disposal or by pumping of a septic hauler furnished by the Owner. The frequency and quantity of this water shall be included in the report.

PART 3 - EXECUTION AND DELIVERY REQUIREMENTS

3.1 General Requirements: The bidder shall provide drawings and specification information sufficient to describe the dimensions, materials of construction, connection requirements, and weights of all materials and equipment to be furnished under this scope of supply.

3.2 Documentation: Bidder shall provide shop drawing submittals within 4 weeks of notice of selection as successful bidder. Any revisions to the shop drawings to reflect changes made in the manufacturing process shall be submitted for approval by the engineer before the changes are affected. Installation, operation and maintenance manuals shall be submitted as specified in Section 2 of this specification.

3.3 Delivery: Process equipment and materials shall be delivered to the custody of the general contractor at the site in new and undamaged condition. Bidder shall coordinate delivery schedule and unloading requirements with the General Contractor. General contractor shall provide suitable storage space at the site until the equipment can be installed.

PART 4 - MEASUREMENT AND PAYMENT

4.1 Process Equipment Package: The price for the process equipment package shall be included in the general construction contract for the project. The price bid for the equipment, design, shop drawings, delivery, startup, taxes, and related work shall be included as identified below.

A. Bid Item A1: Furnish filtration membrane treatment process skid(s) with a filtrate capacity of a minimum of 170 gpm. Skid shall include framework, piping, pumps, valves, and instrumentation required for a complete treatment process unit along with any appurtenant equipment on the skid such as air compressor, storage tanks, and pumps. Does not include membranes.
B. Bid Item A2: Furnish membranes price for the treatment process skids. Price shall be sufficient to provide complete set of replacement membranes for skids. Membrane replacement price shall include all gaskets, connections, and other materials normally replaced at the time the membranes are replaced.
C. Bid Item A3: Furnish support equipment that is shipped loose off of the skid including but not limited to CIP pumps/skid, air compressors and air receivers and dryers, backwash storage vessels, water heater, instruments, chemical storage tanks for clean in place cleaning process, pumps, piping, valves, controls, instrumentation and appurtenances for the skid installation. If all equipment is provided on the skid, it is included in Bid Item 1.
D. Bid Item A4: Furnish chemical for chemical cleaning of membranes. Chemical quantity shall be sufficient for chemical cleaning of all membranes in the treatment process skid with a minimum capacity of 170 gpm. Chemical pricing shall be based on furnishing chemicals to treat and pretreat the first 5 million gallons of treated water production.
E. Bid Item A5: Furnish startup services at the site. Price quoted shall provide for 10 days of on-site services furnished on not less than two trips to the site. Price shall include travel, lodging, and meals and all associated taxes and appurtenant expenses.
F. Bid Item A6: Furnish installation and labor for installation and assembly of all filtration equipment, pumps, instruments and related work.

G. Bid Item A7: Furnish and install all piping, pipe supports, equipment pads, building modifications and related work.

****END OF SECTION****

SECTION 15000

MECHANICAL GENERAL PROVISIONS

PART 1 - GENERAL

1.1 The Requirements

A. These provisions shall apply to all work under Division 15.

1.2 Summary Of Work

A. The work to be done under this specification and the accompanying drawings includes the furnishing of all labor, materials, equipment, and services necessary for the completion of all mechanical work. In general, this consists of the plumbing, process piping and related mechanical work.
B. The omission of express reference to any parts necessary for or reasonably incidental to a complete installation shall not be construed as releasing the Contractor from furnishing such parts.

1.3 Inspection Of Site

A. Before submitting a proposal on the work contemplated in this specification and accompanying drawings, each bidder shall examine the site and check as to the means of making connections to services and shall familiarize himself with all the existing conditions and limitations. No extras will be allowed because of the Contractor's misunderstanding as to the amount of work involved or his lack of knowledge of any site conditions which may affect his work. Any apparent variance of the plan or specification from the existing conditions at the site shall be called to the attention of the Engineer.
B. The existence of any wires, conduits, pipes, ducts or other facilities is shown in a general way only. It will be the duty of the Contractor to visit the site and make exact determination of the existence of any such facilities prior to the submission of his bid. It is understood that he will be responsible for making the exact determination of the location and condition of such facilities.

1.4 Fees, Permits, and Inspections

A. All required permits and inspections shall be obtained by the Contractor under the section of the specifications and the fees for such permits and/or inspection shall be paid by the Contractor.

1.5 Codes and Standards

A. All materials and workmanship shall comply with all applicable codes, specifications, local ordinances, industry standards and utility company regulations.
B. In case of difference between building codes, specifications, state laws, local ordinances, industry standards and utility company regulations and the contract documents, the most stringent shall govern. The Contractor shall promptly notify the Engineer in writing of any such difference.
C. Non-Compliance - should the Contractor perform any work that does not comply with the requirements of the applicable building codes, state laws, local ordinances, industry standards and utility company regulations, he shall bear all costs arising in correcting the deficiencies.
D. Applicable codes and standards shall include all state laws, local ordinances, industry standards and utility company regulations.

1.6 Drawings

A. The drawings are to scale as noted but the Contractor shall refer to architectural and structural drawings for exact location of partitions, walls, beams, shafts, equipment, etc.
B. The drawings show the general arrangement of all piping, equipment, and appurtenances and shall be followed as closely as actual building construction and the work of other trades will permit. The

mechanical work shall conform to the requirements shown on all of the drawings. General and structural drawings shall take precedence over mechanical drawings. Because of the small scale of the mechanical drawings, it is not possible to indicate all offsets, fittings and accessories which may be required.

C. The Contractor, before roughing in any facilities or installation of any equipment shall consult all drawings, general, structural, mechanical, electrical, etc., and shall inform himself of materials, finishes, locations of ceilings, structural members, pipes, ducts, recessed lighting fixtures, conduits, etc., which may affect the installation. The Contractor in installing his equipment shall leave adequate room for the installation of equipment by other Contractors where space is limited. Consideration has been given to such conditions of limited space in the preparation of the drawings and the locations and dimensions of equipment have been selected accordingly. The Contractor shall be warned that in certain instances, space may be limited to the extent that there may be only one arrangement of equipment or facilities which will allow installation of same.

D. Discrepancies discovered before or after work has started, shall be brought to the attention of the Engineer immediately and the Engineer reserves the right to require minor changes in the work of any Contractor to eliminate such discrepancies with no change in contract cost.

E. The plans and specifications are complementary and what is called for in either one shall be as binding as if called for in both.

1.7 Approved Manufacturers

A. Throughout these specifications, manufacturers and materials are listed as approved equal. The approval applies only insofar as they comply with the requirements of the drawings and specifications and is subject to final approval with submission of shop drawings.

B. Any extra costs of any changes in any trades' work as a result of any substitutions shall be borne by the Contractor making the substitutions.

PART 2 - PRODUCTS

2.1 Holes Through Masonry and Concrete

A. Each Contractor shall provide all holes and openings required for his work unless such openings are shown on the architectural and/or structural drawings which are included in the bidding documents. The notes on structural drawings are included in the bidding documents. The notes on structural drawings are particularly significant when pre-cast and pre-stressed members are used.

B. Holes made in the field for piping shall be core drilled large enough to receive a pipe sleeve. Pipe insulation shall be continuous wherever a vapor barrier is specified on the piping. Size hole accordingly. Grout steel into wall or floor for watertightness.

C. The above method shall be employed whenever holes are made on the job including holes required by change orders or omissions made inadvertently by the Contractor.

D. Each Contractor shall be responsible for grouting airtight any openings adjacent to his work when such openings affect air balance (such as in a plenum) or in a shaft wall when it might affect the fire rating or the seal against passage of smoke or vapors.

E. Each Contractor shall be responsible for providing and disposing of water used in the core drilling operation. Work shall be scheduled and other trades coordinated so that damage will not result form the use of water. Special attention shall be given to core drilling operations which occur in areas adjacent to or over finished rooms which could be damaged by water. Contractor shall provide collection pans and other means of containing water.

2.2 Cutting and Patching

A. Each Contractor shall perform all cutting and patching necessary in order to perform his work unless such work has been delegated to the General Contractor. However, special permission shall be obtained from the Engineer before cutting structural members or finished material. All patching shall be performed in such a manner as to leave no visible trace and to return the part affected to the condition of undisturbed work. Patching work shall be performed by personnel experienced, skilled and licensed for

the particular type of work involved. Inferior work will not be accepted. All holes in masonry shall be drilled with rotary drills. Impact tools shall not be used.

B. Pavements, sidewalks, roads and curbs shall be cut, patched, repaired and/or replaced as required. The patching, repairing and replacing shall be the responsibility of and paid for by the Contractor under the section of the specifications for the trade requiring the work.

C. Each trade shall bear the expense of all cutting, patching, repairing or replacing of the work of other trades required because of his fault, error or tardiness or because of any damage done by him.

D. Pipe hangers, supports, brackets, equipment supports and related items required to provide complete support of piping and equipment shall be provided and included with the mechanical work.

PART 3 - EXECUTION

3.1 Entry of Equipment

A. The Contractor shall make all provisions for the entry of the equipment provided under his contract including, but not limited to, building openings, excavation, backfilling and repairs necessary to restore site and building to original condition.

3.2 Prefabrication by Contractor

A. If a Contractor elects to prefabricate piping and ductwork, he is still obligated to abide by all requirements for cooperation with other trades. He shall not assume that this material will be installed first and other trades must follow. If changes are made by the Engineer reasonably in advance of installation, the Owner shall not be penalized for the use of prefabricated materials.

3.3 Cleanup

A. Contractor shall periodically clear away all debris, surplus materials, etc., resulting from his work or operations, leaving the job and the equipment furnished under any or all contracts in a clean condition.

3.4 Temporary Services

A. The Contractor shall carefully examine all parts of the specification for requirements regarding temporary heat and other services. Contractor shall include in his bid, an amount to cover this portion of such services.

3.5 Tests

A. The Contractor shall test the equipment installed under this specification and shall demonstrate its proper operation to the Owner's operating Engineer.

B. No equipment shall be tested, or operated for any purpose until it has been fully lubricated and properly connected and ready for normal operation. Any change to equipment occasioned by improper or ill-timed operation or testing shall be made good, at the Contractor's own expense, before final inspection and acceptance.

**** END OF SECTION ****

SECTION 15100

PROCESS PIPING AND VALVES

PART 1 - GENERAL

1.1 Description

A. The Contractor shall furnish and install process piping complete as shown on the plans and as enumerated in this specification. Included shall be all pipe and fittings, valves and other piping appurtenances and supports necessary to complete the installation. Piping systems and corresponding system materials are listed herein and on the drawings.
B. Applicable to Well House.

1.2 Additional Requirements Specified Elsewhere

A. Shop Drawings, Product Data and Samples: Section 01340.
B. Tests and Inspections: Section 01400.

1.3 Related Work Specified Elsewhere

A. Section 15000 Mechanical General Provisions.

PART 2 - PRODUCTS

2.1 Fittings

A. PVC Schedule 80
   1. SW or flanged per drawings.
   2. Van Stone Flanges are acceptable.

2.2 Couplings

A. PVC Flanged Couplings
   1. Use solvent welded socket by flange couplings, Schedule 80, Class 150.
   2. Use stainless steel bolts and nuts for PVC flanged fittings.

2.3 Valves

A. PVC Ball Valves (2" and Smaller).
   1. Full Port Opening.
   2. Double o-ring stem seals.
   3. For Schedule 80 pipe, 230-psi rating.
   4. Flanged end connection.
   5. NSF-61 certification.
   6. ASAHI/America, Hayward, or equal.

2.4 Pipe Hangers and Supports

A. Pipe hangers or supports shall be furnished and installed for all interior or exposed process piping as shown on the plans not to exceed 4'-0" for PVC pipe.
B. Unless shown otherwise on the plans, PVC pipe shall be wall supported using non-metallic (fiberglass) strut framing and accessories, Unistrut B-Line, Akinstrut, or equal. All supports shall be adjustable except when specifically shown otherwise on the Plans.

2.5 Piping, Fittings and Couplings

A. Ductile Iron Pressure Pipe and Fittings:
   1. Ductile iron pipe shall conform to the requirements of ANSI/AWWA C-151 standard specification for centrifugally cast ductile iron pipe for water or other liquids
   2. Ductile iron pipe in interior locations shall be provided with flanged type ends as shown on the plans and all interior ductile iron piping shall be ANSI/AWWA thickness as follows:
      a. 6" and smaller: Class 52 minimum.
      b. 8: and larger: Class 50 minimum.
   3. Flanges shall be ductile iron of ANSI/AWWA standard 125 lb. template, or 250 lb. where required for fittings or devices specified to be supplied with 250 lb. flanges.
   4. Unless otherwise shown on the plans, ANSI/AWWA standard fittings shall be furnished. Standard fittings shall conform to ANSI/AWWA C110 standard specification for gray iron and ductile iron fittings for water and other liquids. Flanged long radius elbows, reducing on-the-run tees, side outlet fittings, reducers and laterals shall conform to ANSI B16.1 standard specification for flanged fittings and flanges.
   5. Flanged coupling adapters for plain end pipe connection to flanged fittings shall be EBBA Series 2100 Megaflange, Uni-flange, or equal.
   6. Ductile iron pipe shall be furnished with cement mortar interior coating per ANSI A21.4. Pipe used for interior and exposed locations shall not have a bituminous exterior coating but shall be furnished with a shop primed coating. Buried piping shall include a bituminous coating.
   7. Ductile iron fittings shall be epoxy coated on the interior and exterior as specified in Section 02660.
   8. Polyethylene encasement for all buried ductile iron pipe and fittings: ANSI A-21.5, seamless tube, black, ASTM D-1248, Type 1, Class C, Grade G-l, 8-mil thickness.

B. Copper Tubing (2" and smaller).
   1. Water tubing:
      a. Hard drawn: ASTM B-88, Type L.
   2. Instrument Tubing: ASTM B-280, soft annealed.
   3. Fittings:
      a. Flared ANSI B-16.26.
      b. Solder Joint: ANSI B-16.18, or B-16.22.
      c. Compression: Bass, Crawford "Swaselok", or equal.
      d. Press fitting technology acceptable. Viega Propress System or equal.
   4. Solder: Solid wire, ASTM B-32, Alloy Grade 5b5.

C. Steel Pipe (2" and smaller).
   1. ASTM A-53, seamless (Type 5) or electric resistance welded (Type B), grade A or B, galvanized.
   2. Nipples: ASTM A-733, seamless, extra strong, Schedule 80.
   3. Fittings: Malleable iron, ANSI B-16.3, class 150, galvanized.
   4. Stainless Steel Pipe and Fittings: Stainless steel press fitting technology and piping acceptable. Viega Propress System or equal. Stainless or copper piping ma be substituted for galvanized steel piping.

D. Piping Materials Schedule: Refer to drawings.

	Application	Size	Pipe Material
1.	Well House Piping (Interior and buried within 5' of structure)	As noted	Ductile Iron
2.	Potable Water, 1" and smaller	1" and smaller	Copper (Type L)
3.	Drain Piping	4"	PVC: SDR 35, C-900, or Sch. 40

E. Flap Gate.
   1. Material: Cast iron.
   2. Mounting: Flanged.
   3. Hinges: Self-lubricating bushing.

4. Seat: Neoprene seat.
5. Neenah, R-5004 or equal.
6. Coating: Primer and field finish coat.

F. Floor Drains
1. Manufacturer: Josam, Smith, Wade, or Zurn.
2. Size: 4" pipe size, 7" strainer size, with trap.
3. Materials: Cast iron body and flashing collar, nickel bronze strainer.
4. Construction Features: 2-piece body, threaded collar, adjustable height strainer head, plastic protector cap.

2.6 Valves

A. General.
1. End Connections.
a. Above ground locations:
(1) 2 1/2" and smaller: Threaded.
(2) 3" and larger: Flanged, ANSI, 125 lb.
2. Coatings.
a. Exposed interior locations:
(1) Ferrous substrate: Rust inhibitive primer, suitable for field painting.
(2) Brass or bronze: Uncoated.
3. Actuators.
a. Provide manual actuators for all valves not specified to be power actuated or designated for automatic operation.
b. Interior Locations:
(1) 2 1/2" and smaller: Handwheel or T-handle for ¼-turn valves.
(2) 3" and larger: Handwheel.
c. Rotation: Counterclockwise to open.
4. Bolts and Fasteners.
a. Provide stainless steel bolts and fasteners in all valves and flanged connections.

B. Gate Valves.
1. 3" and larger: Iron body, non-rising stem, resilient seated, AWWA C509, interior epoxy coating.
2. 2 1/2" and smaller: Bronze, solid wedge, 125 lb. WOG.

C. Ball Valves (Bronze).
1. Water Service: 2 1/2" and smaller, Watts Series B-6000, or equivalent, lever operator.
2. Stainless steel handle and nut.
3. 316 stainless steel ball and stem.

D. Air Release Valve.
1. Combination air release valve, nylon base/high-strength plastic body, rolling seal mechanism, NPT inlet and outlet connections.
2. Working pressure: 10-150 psi.
3. Inlet size: 1".
4. Water at 110°F.
5. Manufacturer: D-040 "BARAK", ARI or equal.

E. Silent Check Valve.
1. Hydraulically operated silent watertight check valve with spring-loaded poppet.
2. Globe style, 125-lb. pressure class, flanged, ductile iron body, epoxy coated and horizontally installed per the drawings.
3. Body: Cast iron ASTM A126, Class B, epoxy coated.
4. Resilient seat.
5. Plug and Bushing: Bronze ASTM B584.
6. Spring: Stainless steel T302 ASTM A313.5.
7. Screw: Stainless steel T304 ASTM A276.
8. Provide 1 set of spare springs.
9. CLA-VAL 581 Series or Val-Matic 1800 Series.

F. Pressure Reducing Valve.
   1. Size: ¾" or 1" per drawings.
   2. Pressure Range: 20-200 psi.
   3. Pressure Setting: 75 psi.
   4. CLA-VAL or equal.

G. Diaphragm Check Valve.
   1. Hydraulically operated No-Slam check valve with dual speed controls for opening and closing.
   2. Pilot system materials: Stainless steel for fittings and stainless steel tubing.
   3. Size: 6".
   4. Maximum suggested flow rate: 550 gpm, min. at 6 ft./sec.
   5. Globe style, 150 lb. pressure class, flanged, ductile iron body, and horizontally installed per the drawings.
   6. Diaphragms: Nylon reinforced Buna-N-Rubber.
   7. Indicator stem required.
   8. Cla-Val 81-02 or equal.

H. Deep Well Pump Control Valve.
   1. Hydraulically operated diaphragm valve which is controlled by a solenoid pilot valve.
   2. Separate adjustable flow control valves in the pilot system regulate the opening and closing rates.
   3. Limit switch on the valve stem serves as an electrical interlock between the valve and pump motor.
   4. Ductile iron globe valve body and cover per ASTM A-536, flanged, pressure Class 150 lb. Globe valve installed horizontally per drawings.
   5. Size: 4".
   6. Trim: Stainless steel.
   7. Disc: Buna-N-Rubber.
   8. Diaphragm: Nylon – reinforced Buna-N-Rubber
   9. Stem, Nut: Stainless steel.
   10. Pilot System Materials: Pilot-Bronze ASTM B 62, Trim-SS Type 303, Rubber-Buna-N-Synthetic Rubber, stainless steel fittings and tubing.
   11. Solenoid Voltage: 120V or per electrical drawings and specifications.
   12. Normally open (energize to close).
   13. Indicator stem required.
   14. Drain to atmosphere to floor.
   15. Speed control.
   16. Cla-Val Model 61-02 or equal.

2.7 Piping Accessories

A. Pressure Gauges.
   1. Dial size 4 ½", ¼" stem connection, glycerin filled shock resistant type, stainless steel case, 0-160 psi range.
   2. Furnish with snubber and shut-off valve.
   3. Ashcroft, Ametek, Ametek Model 656 Stainless Steel or equal.

B. Bolts and Fasteners.
   1. All interior bolts and fasteners shall be corrosion resistant, 300 series stainless steel for the project.

C. Link Seal.
   1. Thunderline Link Seal or equal.
   2. Size per drawings.
   3. Stainless steel type with EPDM seal.

D. Flow Switch.
   1. Mountable in horizontal pipeline of 4" diameter using a 1" saddle type connection.
   2. 120 V.
   3. Actuate at velocity down to 0.5 fps with indicator light.
   4. Watts FS-10CL or equal.

E. Frost-Proof Hose Bib.
   1. Provide frost-proof automatic draining wall hydrant for exterior use with backflow preventer.

2. Inlet: ½".
3. Outlet: 5/8" hose thread.
4. Length: 12".
5. Solid Brass body, seat and stem ends.
6. Watts, AY McDonald, or equal.

F. Interior Hose Bib.
1. Heavy-duty brass components with handwheel, and vacuum breaker.
2. Inlet: ½".
3. Outlet: 5/8" hose thread.
4. Watts HB-1, AY McDonald, or equal.

G. Sampling Tap.
1. Heavy duty cast brass components with tee handle.
2. Inlet: ½" MIP.
3. Outlet: No hose thread: Plain spout.
4. Watts, AY McDonald, or equal.

H. Service Saddles
1. Body: High strength ductile iron, per ASTM A-536.
2. Gaskets: Buna-N-Rubber.
3. Double Straps: Stainless steel.
4. Sizes: ½" through 2 ½" taps.
5. Designed for ductile iron piping.
6. Ford FS 202 or equal.

I. Water Meter. (Refer to Section 11400)

J. Butterfly Valves.
1. 3" and larger: Iron body with interior and exterior epoxy coating.
2. Lever T-handle manual operator.
3. Flanged connections.
4. Stainless steel one-piece valve stem.
5. Valve seat: EPDM.
6. DeZurik, Pratt or equal.

PART 3 - EXECUTION

3.1 General Requirements

A. Exposed Piping:
1. Install piping as detailed, or if not detailed, install as closely as possible to walls, ceilings and equipment (consistent with proper space requirements for maintenance and operational requirements) so as to occupy a minimum of space. Furnish all offsets, fittings, etc. required to accomplish the required results.
2. Provisions for flexibility are not always shown, and the Contractor may add flexible joints where required with review of the Engineer.
3. Install pipe parallel with or at right angles to adjacent walls and floors.
4. Provide a shut—off valve and union at the connection of air, water or gas lines to each fixture or piece of equipment whether shown on the drawings or not.
5. Provide a union within 2' of all threaded valves or other similar items unless other means for easy removal of the valve is provided.
6. Taps for pressure gauge connections shall include nipple, snubber and gauge cock.
7. Provide expansion joints at 50' maximum spacing in rigid PVC piping (exposed or buried). Provide expansion joints in PVC piping adjacent to taps or connections to rigid piping in buried locations.

B. Buried Piping:
1. Provide polyethylene tube encasement of all buried ductile iron pipe and fittings.
2. Provide expansion joints in buried rigidly jointed PVC piping per paragraph A.7, above.

3.2 Jointing Pipe

A. Threaded (Steel):
   1. Comply with ANSI B2.1, NPT, fully and cleanly cut threads.
   2. No more than three threads exposed after joint complete.
   3. Ream pipe ends to remove burrs.
   4. Use thread tape on all joints in PVC or stainless steel pipe, thread tape or joint compound on steel or cast iron threaded joints.
B. Compression (Copper):
   1. Cut pipe ends squarely, remove burrs, clean contact surfaces with steel wool.
C. Flared (Copper):
   1. Cut pipe ends squarely, remove burrs.
   2. Scratches in grooved or flared ends are not permitted.
D. Flanged (Steel, Ductile Iron):
   1. Tighten bolts loosely until overall equipment setting and pipe alignment accomplished.
   2. Tighten bolts sufficiently to compress gasket and effect a good seal, but not so much as to distort flanges.

3.3 Setting Valves and Fittings

A. Valves and fittings shall be set and fastened generally as described for pipe laying.
B. Check Valves: Install ball check valves in vertical runs of piping.
C. Air Release Valves: Pipe exhaust to a floor or sump.
D. Check and adjust valves and accessories in accordance with manufacturer's instructions.

3.4 Hydrostatic Testing

A. Ductile Iron Pipe:
   1. Potable water piping shall be field tested for leakage in accordance with the appropriate section (hydrostatic tests) of AWWA C600-10. Test pressure and duration shall be per AWWA C600-10, and allowable leakage shall be determined in accordance with the following formula:

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

Where: L = testing allowance (makeup water), gallons per hour.
S = length of pipe tested, in feet
D = nominal diameter of pipe, in inches
P = average test pressure during the hydrostatic test, in pounds per square inch (gauge)

B. PVC Pipe:
   1. Hydrostatic testing must be completed in accordance with ANSI/AWWA C605-11 (PVC pipe) or most current edition for every section of water main between successive valves or other closures.

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

Where:

Q = quantity of makeup water, in gallons per hour.
L = length of pipe section being tested, in feet.
D = nominal diameter of the pipe in inches.

P = average test pressure during the hydrostatic test, in pounds per square inch (gauge).

Contractor shall conduct test under supervision of the Engineer and/or Owner. Schedule of test pressure required:

Mechanical Piping Systems 150 psi

* Test pressure based on the elevation of the lowest point in the line under test and corrected to the elevation of the test gauge.

C. General. The inside of all pipe, valves, fittings shall be smooth, clean and free from blisters, mill scale, dirt or other matter before installing. Blow out or flush all lines as appropriate before testing or placing in service.

3.5 Pipeline Cleaning

A. General. The inside of all pipe, valves, fittings shall be smooth, clean and free from blisters, mill scale, dirt or other matter before installing. Blow out or flush all lines as appropriate before testing or placing in service.

3.6 Pipeline Disinfection

A. Disinfect potable water piping in compliance with AWWA C651.
B. Buried piping shall be disinfected using hypochlorite tablets glued to the top of the pipe during installation using Permatex No. 1 adhesive.
C. Comply with AWWA requirements for 50-ppm dosage, 24-hr. retention period.
D. Flush system after testing.
E. Two consecutive tests 24 hours apart shall be performed to test for presence of bacteria. System may be placed into service upon negative test results of two consecutive tests.

3.7 Supporting Pipe

A. In general, hanger and support systems are not indicated or detailed on drawings. The Contractor shall provide a complete system of supports and anchors for pipes, conduits, and other mechanical devices.
B. Pipe Supports:
   1. Designed to support above floor piping.
   2. Material: Steel with prime shop coat ready for field painting (ASTM A-36) per Section 09901.
   3. Spacing: As detailed or recommended by manufacturer.
   4. Pipe size: Ductile Iron Pipe per drawings.
   5. Adjustable Pipe Saddle Support style. Adjustable vertically from 3" below or above design height.
   6. Threaded Base Stand. Plate shall be secured to floor with concrete anchors and leveled with grout as required.
C. Equipment. Do not support equipment from piping unless authorized by the Engineer. Provide supplemental brackets, braces and reinforcing to allow equipment to be self-supporting. Design supports to allow servicing and removal of equipment.

3.8 Flanged Joints

A. The pipe end flange face shall be finish machined in a single operation.
B. Flange faces shall be flat and perpendicular to the pipe centerline.
C. When bolting flanged joints, care shall be taken to avoid restraint on the opposite end of the pipe or fitting which would prevent uniform gasket compression or which would cause unnecessary stress in the flanges.
D. One flange shall be free to move in any direction while the flange bolts are being tightened.
E. Bolts shall be tightened gradually and at a uniform rate, so that gasket compression is uniform.

F. Special care shall be taken when connecting to equipment to insure that no stresses are transmitted to the flanges by the connected piping. All such piping shall be permanently supported so that accurate matching of bolt holes an uniform contact over the entire surface of abutting piping flanges are obtained before installation of any bolts in those flanges.

3.9 Water Discharge

A. The proposed pump by-pass discharge line will be utilized with a pump control valve and diaphragm check valve set-up. The well by-pass line shall operate for a short duration at the start of the pump cycle. The operator may adjust the amount of by-pass pumping as determined by the water quality from the well and for seasonal operations. The discharge shall be water pumped from the aquifer and solids such as sand from the well. The water shall be detained within the tanks and drainfield areas on the property and be contained. All water discharges for pipe disinfection shall also be detained. The water shall not contain chlorine or other pollutants and must not reach a stream, river or other waterways of the State. The SDDENR Surface Water Quality Program shall be notified if any deviation occurs during operation of the system.

****END OF SECTION****

SECTION 15400

PLUMBING

PART 1 - GENERAL

1.1 Description

A. Scope: Complete following systems, including materials devices, appliances, fixtures equipment and appurtenances.
   1. Floor drains complete with piping.
   2. Plumbing fixtures not specified elsewhere.
   3. Service water piping system.
B. Applicable to Well House.

1.2 Additional Requirements Specified Elsewhere

A. Shop Drawings, Product Data and Samples: Section 01340.

1.3 Related Work Specified Elsewhere

A. Trenching and Backfilling for Pipelines: Section 02221.
B. Process Piping and Valves: Section 15100.

1.4 Quality Assurance

A. Regulatory Requirements:
   1. South Dakota Plumbing Code. (National Standard Plumbing Code).

1.5 Submittals

A. Shop Drawings and Product Data:
   1. Submit manufacturer's product data for all fixtures and equipment sufficient to verify compliance.

PART 2 - PRODUCTS

2.1 Pipe Materials

A. PVC Drain, Waste and Vent Pipe.
   1. Where permitted by code or scheduled on drawings, provide PVC DWU systems.
   2. Pipe and fittings (interior use): ASTM D-2665, Schedule 40, Type 1, Grade 1, SW joints.
   3. Pipe and fittings (exterior, buried locations): ASTM D-3034, SDR 35, gasketed joints (solid or perforated).
   4. Solvent Cement: ASTM D-2564.
B. Cast iron soil pipe.
   1. Where permitted by code or scheduled on drawings, provide either hubless cast iron soil pipe or centrifugally cast service weight soil pipe.
   2. Service weight: SV, ASTM A-74.
   3. Joints.
      a. Hubless, CISPI 301.
      b. Hub and Spigot: Rubber compression gasket per ASTM C-564.

2.2 Fixtures and Drains

A. Floor Drains.
   1. Manufacturer: Josam, Smith, Wade, or Zurn.
   2. Size: 4" pipe size, 7" strainer size, with trap.
   3. Materials: Cast iron body and flashing collar, nickel bronze strainer.
   4. Construction Features: 2-piece body, threaded collar, adjustable height strainer head, plastic protector cap.

B. Cleanouts.
   1. Exterior Cleanout: Sewed plug type, PVC, raised square lug.
C. Hose Valve (Interior).
   1. Brass construction, handwheel operator, 5/8" hose connection, with vacuum breaker.
   2. Watts HB-1, or equal.
D. Ball Valves (2" and smaller).
   1. Bronze, 2 piece construction
   2. 400 psi pressure rating.
   3. Screwed or solder ends per application and piping materials.
   4. SS Lever handle, ¼ turn operator, 316 SS ball and stem.
   5. Watts Series B-6000, or equal.
E. Sampling Fixture.
   1. ½" MIP inlet x plain spout outlet.
   2. Cast brass, tee handle operator.
F. Flap Gates.
   1. Material: Stainless steel or ductile iron.
   2. Mounting: On a pipe end with slip-on seal.
   3. Hinges: Self-lubricating bushing to prevent metal-to-metal contact.
   4. Seal: Neoprene ASTM D-2000 Grade 2 BC-510.
   5. Manufacturer: Fontaine, or equal.

PART 3 - EXECUTION

3.1 Installation

A. Drainage Piping:
   1. Conform generally to locations indicated on drawings.
   2. Slope horizontal drain piping at not less than ¼" per foot.
   3. Trenching, pipe embedment and backfill per Section 02221.
B. Joints:
   1. Gasketed or no-hub: Per manufacturer's recommended procedures with proper lubricants where required.
C. Floor Drains:
   1. Locate generally as indicated on drawings.
   2. Adjust floor drains to correct elevation for proper drainage.
   3. Trap in accordance with code.
D. Cleanouts:
   1. Y-branch or combination double 1/8 bend fittings.

3.2 Cleaning and Adjustment

A. General:
   1. Thoroughly clean and flush all parts after installation.
   2. Remove all grease, metal cuttings and debris.

3.3 Testing

A. Drain and Vent Leak Test:
   1. Plug openings and fixtures as required.
   2. Fill with water to highest level of vent stack.
   3. One-hour duration, no detectable leakage.

3.4 Pipe Schedule

Service	Material
Drain lines outside of buildings	PVC, ASTM D-3034.
Drainage piping buried under floors	Cast iron soil pipe or PVC, ASTMD-3034.
Service Water	Copper.
Other	Refer to Section 15100.

****END OF SECTION****

Appendix A

Geotechnical Exploration Program

Proposed Colonial Pine Hills Sanitary District
Well House Improvements

7804 Croyle Avenue
Pennington County, South Dakota

AET No. 18-03227

September 28, 2009

American Engineering Testing, Inc.

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CONSULTANTS
· GEOTECHNICAL
· MATERIALS
· ENVIRONMENTAL

September 29, 2009

Mr. Ted Schultz P.E.
CETEC Engineering Services, Inc.
1560 Concourse Drive
Rapid City, South Dakota 57703

Subject: Geotechnical Exploration Program
Proposed Colonial Pine Hills Sanitary District Well House Improvements
7804 Croyle Avenue
Pennington County, South Dakota
AET No. 18-03227

Dear Ted:

INTRODUCTION

American Engineering Testing, Inc. (AET) is pleased to present the results of our subsurface exploration program and geotechnical engineering review for the proposed Colonial Pine Hills Sanitary District (CPHSD) Well House Improvements in Pennington County, South Dakota. These services were performed according to our proposal to you dated September 14, 2009 and your written authorization on September 15, 2009.

PROJECT INFORMATION

The project site is located on Croyle Avenue within the Whispering Pines Subdivision, southwest of Rapid City. We understand the project will include a new well house, well and water main. We understand the finish floor of the north side of the new well house building will be at elevation 3975 feet and the south side slab will be at 3973. We anticipate the depth to the water line will be 10 feet or less.

A percolation study is also being requested at the site. The area of the proposed on-site waste water system is immediately to the east of the well house location.

FIELD EXPLORATION

One (1) SPT boring and five (5) percolation test borings were drilled for the project on September 17, 2009. The borings were drilled at the approximate locations selected by CETEC and are illustrated on the attached Boring Location Map at the end of this letter.

Soil sampling was performed according to the procedures described by ASTM: D 3550. Using this procedure, a 2-inch O.D. split barrel sampler is driven into the soil by a 140 pound weight falling 30 inches. After an initial set of 6 inches, the number of blows required to drive the sampler an additional 12 inches is known as penetration resistance or N value. The N value is an index of the relative density of cohesionless soils and the consistency of cohesive soils.

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Chanhassen • Duluth • Mankato • Marshall • Rochester • St. Paul, MN/ Pierre • Rapid City • Sioux Falls, SD/ La Crosse • Wausau, WI
AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

As the samples were obtained in the field they were visually and manually classified by the crew chief in accordance with ASTM: D 2488. Representative portions of all samples were then sealed and returned to the laboratory for further examination and for verification of the field classification. Included at the end of this report is the Subsurface Boring Log for the Well House location indicating the depth and identification of the various strata, the N value, the laboratory test data, water level information and pertinent information regarding the method of maintaining and advancing the drill holes. A copy of the Unified Soil Classification System is included for reference.

The soil samples remaining after the laboratory testing is complete will be retained for a period of fifteen (15) days. At that time they will be discarded. Please advise us in writing if you wish to have us retain them for a longer period of time.

SUBSURFACE CONDITIONS

A brief description of the general subsurface conditions encountered at the boring location follows. We wish to point out that the subsurface conditions at other times and locations at the site may differ from those found at our test boring location. If different conditions are encountered during construction, it is necessary that you contact us so that our recommendations can be reviewed.

In general, the borings indicated the site soils consist of approximately 3 inches of topsoil overlying medium dense to dense, moist sandy gravel with silt and possible cobbles and boulders to the final depth drilled/sampled of 16 1/2-feet.

At the time of drilling, groundwater was not encountered in any of the soil borings. Groundwater levels should be expected to fluctuate seasonally and yearly. The time of year that the borings were drilled and the history of precipitation prior to drilling should be known when using the water level information on the soil boring logs to extrapolate water levels at other points in time.

LABORATORY TESTING

Representative samples of the soils encountered were selected for laboratory testing to determine characteristic engineering and index properties. The tests included the determination of moisture content, dry density, Atterberg Limits and percent passing the #200 sieve. The laboratory tests were performed in accordance with appropriate American Society for Testing and Materials (ASTM) procedures. The test results can be noted on the attached boring log opposite the samples upon which the tests were performed.

CONCLUSIONS & RECOMMENDATIONS

The following recommendations are based on the soil conditions observed in the soil borings at the time of our exploration. The soils between the boring locations may differ significantly from those encountered at the boring locations. Furthermore, changes in climatic conditions between the time of exploration and the time of construction may also affect soil conditions, particularly groundwater levels and the moisture content of the soils.

Site Preparation

We recommend the topsoil be removed from within the proposed building and construction limits. The site soils, cleaned of all rock greater than 4 inches in maximum dimension, are suitable for use as fill across the site. Prior to the placement of fill the exposed subgrade soils should be scarified to a depth of 12 inches, the moisture content of the scarified soils adjusted to within 3% of optimum moisture content and the soils recompacted to at least 92 of maximum dry density (ASTM D 1557).

If import fill material is required to obtain building pad grades, the import fill should be pre-approved by the geotechnical engineer prior to its use. All import fill should be a non-expansive granular material with a maximum size of 4 inches, no more than 25% passing the #200 sieve with a Liquid Limit less than 30.

Foundation Recommendations

It is our opinion the proposed well house may be founded on a conventional shallow spread footing foundation system placed on the reconditioned sandy gravel soils. Once the required excavation is complete, the geotechnical engineer should be allowed to observe the exposed subgrade soils to verify their suitability for foundation and slab support

Reconditioning of the site soils should consist of moisture conditioning to within 3% of the optimum moisture content and compaction to at least 92% of maximum dry density in accordance with the modified Proctor method (ASTM D: 1557). Spread footings placed on the reconditioned sandy gravels may be designed for an allowable bearing capacity of 3000 psf. All footings should bear at an elevation of at least 4 feet below exterior grades for frost protection.

The on-site soils, cleaned of all aggregate greater than 4 inches in diameter, may be used as exterior backfill around the new foundations. Based on the laboratory tests, the current moisture contents of the site soils range from approximately 3% to 9%. To facilitate proper compaction we recommend the backfill soils be moisture conditioned to within 3% of optimum moisture content and compacted to at least 92% of maximum dry density in accordance with the modified proctor method (ASTM D:1557).

The exterior grades around the well house should be constructed with a positive slope away from the foundation walls. We recommend the exterior backfill be graded to provide at least 6 inches of drop within the first 10 feet of the completed foundations.

Floor Slabs

Concrete slab-on-grade floors should bear on the reconditioned site soils and/or compacted fill. We also recommend providing a 4 to 6-inch thick continuous sand cushion layer directly below the floor slab to prevent capillary moisture rise to the slab. This granular fill should have a maximum aggregate size of 1 inch and contain less than 12% by weight passing the #200 sieve.

We recommend the floor slabs be constructed independent of the foundations, in the event some movement does occur.

Utility Placement

We recommend all utility lines be placed in accordance with Sections 8 and 9 of the "City of Rapid City Standard Specifications for Public Works Construction", 2007 edition. All trench excavation and backfilling should be performed in accordance with Section 11 "Utility Excavation and Backfill" of the same publication with the following exception: We recommend the moisture content of the compacted fill be within 3% of the optimum moisture content if the on-site soils are used.

It is our opinion that excavation in the existing soils should be possible with conventional large excavation equipment. We recommend all excavation work be conducted according to the Federal Register, Tuesday, October 31, 1989, Part II, Department of Labor, Occupational Safety and Health Administration, 29 CFR Part 1926, Occupational Safety and Health Administration, Standards-Excavation.

It is our opinion that the on-site soils within the project area should be classified as Type C soils, according to the OSHA Classification System, with a recommended cut slope (less than 20 feet in depth) of 1 horizontal to 1 ½ vertical (1H:1½ V). Final slope laybacks should be observed on a daily basis by either the contractor or engineer to provide on-going evaluation of the stability of the above recommended cut slopes. Excavations deeper than 20 feet and/or in saturated soils or below the groundwater table should be considered on an individual basis.

The on-site soils, cleaned of all organic/frozen material and rock greater than 4 inches in diameter, may be used as backfill. Backfill should be placed and compacted as indicated below. All recommendations are based on the Modified Proctor method (AASHTO T-180 - ASTM D1557).

1. All engineered fill for this project should be moisture conditioned to within 3% of optimum moisture content prior to being placed.

2. All engineered fill should be placed in loose lift thicknesses of eight inches or less. If hand operated compaction equipment is used, the loose lift thickness should be reduced to 4-inches or less.

3. Each lift should be compacted to at least 92% of maximum proctor density.

4. Compaction density tests should be performed on alternating lifts to ensure the minimum density is maintained.

It is our opinion that settlement could occur above underground utility trenches. The exact amount of settlement cannot be predicted; however, we strongly recommend that compaction tests be taken in the trenches to assure that proper compaction does exist.

Percolation Tests

Percolation tests were conducted within Borings B-2 through B-6 at the approximate locations indicated on the attached Boring Location Map. The drilling was performed on September 17, 2009

at which time one (1) 8-foot deep profile hole was drilled along with the 5 percolation holes at the site. In general, the site soils consisted of approximately 3inches of topsoil overlying sandy gravel with silt to the final depth drilled of 8 feet. The soils were relatively moist however no groundwater was encountered at the time of drilling.

Percolation holes were drilled to approximately 42 inches in depth and were prepared for testing in general accordance with the guidelines presented in Chapter 74:03:01 "Individual and Small On-Site Wastewater Systems." The percolation tests were run on September 18, 2009 with results indicating percolation rates ranging from 18 min/in to 29 min/in with a combined average rate of 24 min/in. The percolation rates for the specific test holes are presented on the Percolation Test Information sheet at the end of this report.

CONSTRUCTION CONSIDERATIONS

The recommendations contained in this letter report have been made based on the subsurface conditions found at the boring location. It is possible there are soil conditions on site that were not represented by these borings. Consequently, on-site observation during construction is considered integral to the successful implementation of the recommendations. We believe qualified field personnel need to be on site at the following times to observe the site conditions and effectiveness of the construction.

Footing Excavation

We recommend the footing areas be observed by our geotechnical engineer or his representative to determine if the exposed soils are similar to those encountered at the boring locations. The observation should take place prior to the casting of foundations.

Placement of Fill

After the subgrade is observed by a geotechnical engineer or his representative and approved, we recommend a representative number of compaction tests be taken during placement of the controlled fill. The tests should be performed to determine if the required compaction was achieved. The actual number of tests should be left to the discretion of the geotechnical engineer.

Observation & Testing

The construction plans and specifications should be reviewed by our firm to judge the applicability of the recommendations presented in this report. The recommendations in this report are based on the subsurface conditions found at our test boring location. Since the soil conditions can be expected to vary away from the soil boring location, we recommend on-site observation by a geotechnical engineer/technician during construction to review these potential changes. Soil compaction testing should be performed on new fill placed in order to judge that project specifications for compaction have been satisfied.

CLOSING

The recommendations contained in this letter represent our professional opinions. These opinions were arrived at in accordance with currently accepted engineering practices at this time

and location. Other than this, no warranty is intended or implied. If you have any questions or need additional information, please call our office at (605) 388-0029.

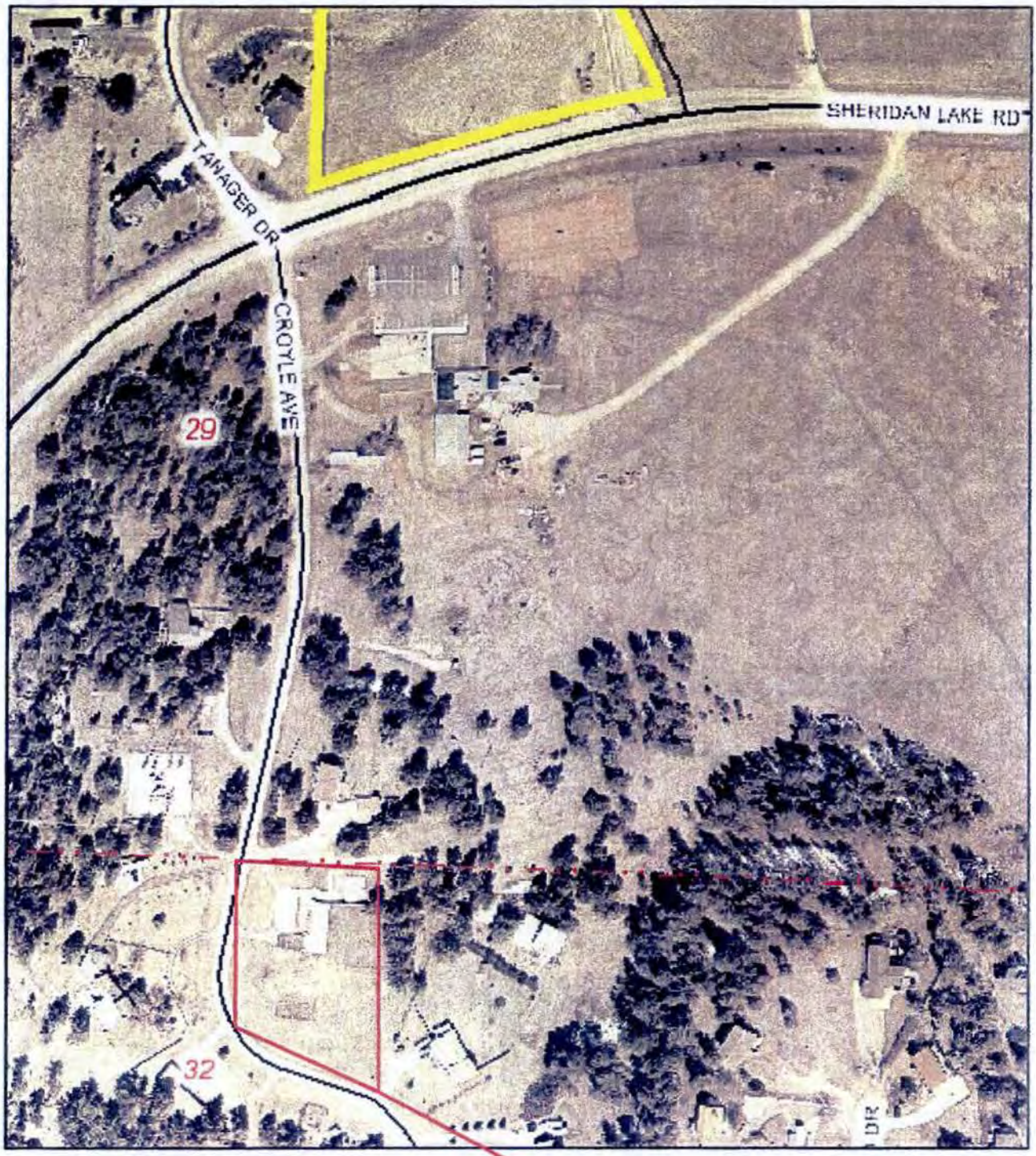
Report Prepared by:

Robert Temme P.E.
South Dakota Operations Manager

Reviewed By:

Ray Atkins, P.E.
Materials Engineer

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 4538
ROBERT TEMME
SOUTH DAKOTA



AMERICAN ENGINEERING TESTING, INC.	PROJECT: COLONIAL PINE HILLS WELL HOUSE IMPROVEMENTS		PROJECT NO. 18-03227
	SUBJECT: SITE LOCATION MAP		DATE: SEPT. 22, 2009
	SCALE: NOT TO SCALE	DRAWN BY: KY	REVIEWED BY: RNT

**ORIGINAL DRAWING FROM CETEC MODIFIED FOR BORING/ TEST HOLE LOCATION PURPOSES.

AMERICAN ENGINEERING TESTING, INC.	PROJECT: COLONIAL PINE HILLS WELL HOUSE IMPROVEMENTS		PROJECT NO. 18-03227
	SUBJECT: BORING LOCATION MAP		DATE: SEPT. 22, 2009
	SCALE: 1-INCH = 60-FEET	DRAWN BY: KY	REVIEWED BY: RNT

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **18-03227** LOG OF BORING NO. **B-1**

PROJECT: **Colonial Pine Hills Well House Improvements; Rapid City, South Dakota**

SURFACE ELEVATION: **3974.0**

DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	GW	SAMPLE TYPE	REC. IN.	WC	DEN	LL	PL	%-#200
	TOPSOIL Silty Gravel, brown to gray, dry (GM)	Topsoil									
1	**SANDY GRAVEL** with silt, reddish brown, yellow, and brown mix, moist, medium dense to dense (GP)	Terrace Deposits									
2											
3			26		2L	18	9	104	27	23	
4											
5			47		2L	18	6	115			18
6											
7											
8			51		2L	18					
9											
10			50/.3		2L	4	6				19
11											
12											
13	possible cobbles and boulders present at 12.5'		50/.2		2L	3					
14											
15			50/.4		2L	5	3	137			9
16											
	Bottom of Boring										

DEPTH:	DRILLING METHOD	WATER LEVEL MEASUREMENTS						
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
15.0	4" FA	9/17/09	15:00	16.5	NA	14.5	NA	None
BORING COMPLETED:	9/17/09							
CC: BT	CA: KY	Rig:						

AET_CORP 18-03227.GPJ AET WITH PID INFO 9/28/09

2/99

BORING LOG NOTES

DRILLING AND SAMPLING SYMBOLS

Symbol	Definition
B,H,N:	Size of flush-joint casing
CA:	Crew Assistant (initials)
CAS:	Pipe casing, number indicates nomial diameter in inches
CC:	Crew Chief
COT:	Clean-out tube
DC:	Drive casing; number indicates diameter in inches
DM:	Drilling mud or bentonite slurry
DR:	Driller (initials)
DS:	Disturbed sample from auger flights
FA:	Flight Auger; number indicates outside diameter in inches
HSA:	Hollow stem auger; number indicates inside diameter in inches
LG:	Field logger (initials)
MC:	Column used to describe moisture condition of samples and for the ground water level symols
N (BPF):	Standard penetration resistance (N-value) in blows per foot (see notes)
NQ:	NQ wireline core barrel
PQ:	PQ wireline core barrel
RD:	Rotary drilling with fluid and roller or drag bit
REC:	In california-spoon, split-spoon (see notes) and thin-walled tube sample, the recovered length (in inches) of sample. In rock coring, the length of core recovered (expressed as percent of the total core run.) Zero indicates no sample recovered.
REV:	Revert drilling fluid
2L:	California-spoon sampler (stee; 2" inside diameter with 4" long brass liners; 3" outside diameter)
SS:	Standard split-spoon sample (steel; 1⅜" inside diameter; 2" outside diameter); unless indicated otherwise
SU:	Spin-up sample from hollow stem auger
TW:	Thin-walled tube; number indicates inside diameter in inches
WASH:	Sample of material obtained by screening returning rotary drilling fluid or by which has collected inside the borehole after "falling" through drilling fluid
WH:	Sampler advanced by static weight of drill rod and 140-pound hammer
WR:	Sampler advanced by static weight of drill rod
94mm:	94 millimeter wireline core barrel
▼:	Water level directly measured in boring
▽:	Estimated water level based solely on sample appearance

TEST SYMBOLS

Symbol	Definition
CONS:	One-dimensional consolidation test
DEN:	Dry density; pcf
DST:	Direct shear test
E:	Pressuremeter Modulus, tsf
HYD:	Hydrometer analysis
LL:	Liquid Limit, %
LP:	Pressuremeter Limit Pressure, tsf
OC:	Organic Content, %
PERM:	Coefficient of permeablility (K) test; F- Field; L - Laboratory
PL:	Plastic Limit, %
q_p:	Pocket Penetrometer strength, tsf (approximate)
q_c:	Static cone bearing pressure, tsf
q_u:	Unconfined compressive strength, psf
R:	Electrical Resistivity, ohm-cms
RQD:	Rock Quality Designation of Rock Core, in precent (aggregate length of core pieces 4" or more in length as a percent of total core run)
SA:	Sieve Analysis
TRX:	Triaxial compression test
VSR:	Vane shear strength, remoulded (field), psf
VSU:	Vane shear strength, undisturbed (field) psf
WC:	Water content, as percent of dry weight
%-200:	Percent of material finer than #200 sieve

STANDARD PENETRATION TEST NOTES

The standard penetration test consists of driving the sampler with a 140 pound hammer and counting the number of blows applied in each of three 6" increments of penetration. If the sampler is driven less than 18" (usually in highly resistant material), permitted in ASTM:D1586, the blows for each complete 6" increment and for each partial increment is on the boring log. For partial increments, the number of blows is shown to the nearest 0.1' below the slash.

The length of the sample recovered, as shown on the "REC" column, may be greater than the distance indicated in the N column. The disparity is because the N-value is recorded below the intial 6" set (unless partial penentration defined in ASTM:D1586 is encountered) whereas the length of sample recoveres is for the entire sampler driver (which may even extend more than 18").

UNIFIED SOIL CLASSIFICATION SYSTEM
ASTM Designations: D 2487, D2488

AMERICAN ENGINEERING TESTING, INC.

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A]				Soil Classification: Group Symbol	Soil Classification: Group Name[B]
Coarse-Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines[C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$[E]	GW	Well graded gravel[F]
			$Cu < 4$ and/or $1 > Cc > 3$[E]	GP	Poorly graded gravel[F]
		Gravels with Fines more than 12% fines[C]	Fines classify as ML or MH	GM	Silty gravel[F,G,H]
			Fines classify as CL or CH	GC	Clayey gravel[F,G,H]
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines[D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$[E]	SW	Well-graded sand[I]
			$Cu < 6$ and $1 > Cc > 3$[E]	SP	Poorly-graded sand[I]
		Sands with Fines more than 12% fines[D]	Fines classify as ML or MH	SM	Silty sand[G,H,I]
			Fines classify as CL or CH	SC	Clayey sand[G,H,I]
Fine-Grained Soils 50% or more passes the No. 200 sieve (see Plasticity Chart below)	Silts and Clays Liquid limit less than 50	inorganic	PI>7 and plots on or above "A" line[J]	CL	Lean clay[K,L,M]
			PI<4 or plots below "A" line[J]	ML	Silt[K,L,M]
		organic	Liquid limit–oven dried / Liquid limit – not dried < 0.75	OL	Organic clay[K,L,M,N] Organic silt[K,L,M,O]
	Silts and Clays Liquid limit 50 or more	inorganic	PI plots on or above "A" line	CH	Fat clay[K,L,M]
			PI plots below "A" line	MH	Elastic silt[K,L,M]
		organic	Liquid limit–oven dried / Liquid limit – not dried < 0.75	OH	Organic clay[K,L,M,P] Organic silt[K,L,M,Q]
Highly organic soil			Primarily organic matter, dark in color, and organic in odor	PT	Peat[R]

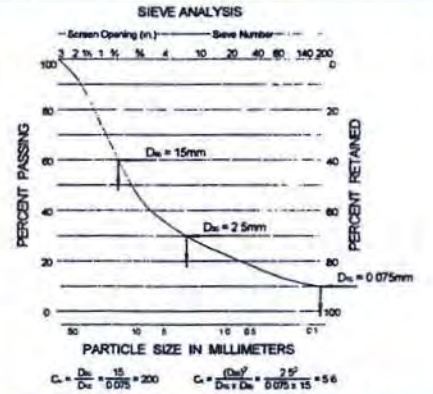
Notes

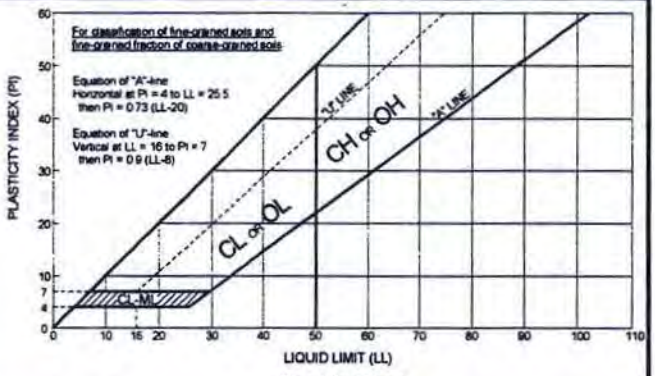
[A]Based on the material passing the 3-in (75-mm) sieve.
[B]If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
[C]Gravels with 5 to 12% fines require dual symbols:
- GW-GM well-graded gravel with silt
- GW-GC well-graded gravel with clay
- GP-GM poorly graded gravel with silt
- GP-GC poorly graded gravel with clay

[D]Sands with 5 to 12% fines require dual symbols:
- SW-SM well-graded sand with silt
- SW-SC well-graded sand with clay
- SP-SM poorly graded sand with silt
- SP-SC poorly graded sand with clay

[E]$Cu = D_{60}/D_{10}$ $Cc = (D_{30})^2 / D_{10} \times D_{60}$

[F]If soil contains ≥15% sand, add "with sand" to group name.
[G]If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.
[H]If fines are organic, add "with organic fines" to group name.
[I]If soil contains ≥15% gravel, add "with gravel" to group name.
[J]If Atterberg limits plot is hatched area, soils is a CL-ML silty clay.
[K]If soil contains 15 to 29% plus No. 200 add "with sand" or "with gravel", whichever is predominant.
[L]If soil contains ≥30% plus No 200, predominantly sand, add "sandy" to group name.
[M]If soil contains ≥30% plus No. 200, predominantly gravel, add "gravelly" to group name.
[N]PI≥4 and plots on or above "A" line.
[O]PI<4 or plots below "A" line.
[P]PI plots on or above "A" line.
[Q]PI plots below "A" line.
[R]Fiber Content description shown below.





Plasticity Chart

ADDITIONAL TERMINOLOGY NOTES USED BY AET FOR SOIL IDENTIFICATION AND DESCRIPTION

Grain Size

Term	Particle Size
Boulders	Over 12"
Cobbles	3" to 12"
Gravel	#4 sieve to 3"
Sand	#200 to #4 sieve
Fines (silt & clay)	Pass #200 sieve

Gravel Percentages

Term	Percent
A Little Gravel	3% - 14%
With Gravel	15% - 29%
Gravelly	30% - 50%

Consistency of Plastic Soils

Term	N-Value, BPF
Very Soft	less than 2
Soft	2 - 4
Firm	5 - 8
Stiff	9 - 15
Very Stiff	16 - 30
Hard	Greater than 30

Relative Density of Non-Plastic Soils

Term	N-Value, BPF
Very Loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	Greater than 50

Moisture/Frost Condition (MC Column)

- D (Dry): Absence of moisture, dusty, dry to touch.
- M (Moist): Damp, although free water not visible. Soil may still have a high water content (over "optimum").
- W (Wet/ Waterbearing): Free water visible intended to describe non-plastic soils. Waterbearing usually relates to sands and sand with silt.
- F (Frozen): Soil frozen

Layering Notes

- Laminations: Layers less than ½" thick of differing material or color.
- Lenses: Pockets or layers greater than ½" thick of differing material or color.

Fiber Content of Peat

Term	Fiber Content (Visual Estimate)
Fibric Peat:	Greater than 67%
Hemic Peat:	33 – 67%
Sapric Peat:	Less than 33%

Organic/Roots Description (if no lab tests)

Soils are described as *organic*, if soil is not peat and is judged to have sufficient organic fines content to influence the soil properties. *Slightly organic* used for borderline cases.

- With roots: Judged to have sufficient quantity of roots to influence the soil properties.
- Trace roots: Small roots present, but not judged to be in sufficient quantity to significantly affect soil properties.

AMERICAN ENGINEERING TESTING, INC.

Percolation Test Information
7804 Croyle Avenue
Pennington County, South Dakota
AET # 18-03227

September 18, 2009

	Test Hole #1		Test Hole #2		Test Hole #3		Test Hole #4		Test Hole #5	
Inch 1	21	Min	23	Min	19	Min	26	Min	16	Min
Inch 2	21	Min	25	Min	22	Min	27	Min	17	Min
Inch 3	25	Min	27	Min	24	Min	30	Min	17	Min
Inch 4	27	Min	27	Min	24	Min	30	Min	18	Min
Inch 5	27	Min	30	Min	24	Min	27	Min	18	Min
Inch 6	28	Min		Min	22	Min		Min	18	Min
Inch 7		Min		Min		Min		Min	20	Min
Inch 8		Min		Min		Min		Min	20	Min
Inch 9		Min		Min		Min		Min		Min
Averages	25	Min/Inch	26	Min/Inch	23	Min/Inch	29	Min/Inch	18	Min/Inch

Average of all three holes: **24 minutes/Inch**

Person completing the percolation testing Brent Thomas Brent Thomas
Printed Name Signature

8-foot Soil Profile Information:

	Soil Type	Remarks:
1 foot	GM	0 – .3 feet - Silty Gravel with sand, brown
2 foot	GM	.3 – 8.0 feet – Sandy Gravel with silt, reddish brown
3 foot		
4 foot		
5 foot		
6 foot		
7 foot		
8 foot		

Person completing the soil profile information Robert Temme P.E. Robert Temme
Printed Name Signature

RC FORM 990 3/05

Appendix B

South Dakota Water Permit
No. 2607A-2

Colonial Pine Hills Sanitary District

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

GREAT FACES. GREAT PLACES.

RECEIVED
JUL 28 2008
CETEC Engineering

NOTE: TO BE SURE OF PUBLICATION ON THE CORRECT DATES, CONTACT THE NEWSPAPER RIGHT AWAY.

July 25, 2008

Colonial Pine Hills Sanitary District
Jim Martin
8251 Dunsmore Road
Rapid City SD 57702

Dear Mr. Martin

Water Permit Application No. 2607A-2 for suburban housing use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Publisher of the Rapid City Journal printed at Raid City SD (Ph # 605-394-8300). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publisher has been instructed to publish your notice once each week for two consecutive weeks. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352
cc: Ted Schultz, CETEC Engineering, 1560 Concourse Dr, Rapid City SD 57703

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

Instruction to Newspaper - Publish first Notice on July 31, 2008 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 2607A-2 to Amend Water Permit No. 2607-2

Notice is given that Colonial Pine Hills Sanitary District, c/o Jim Martin, 8251 Dunsmore Rd, Rapid City SD 57702 has filed an application to change the location of a well authorized by Water Permit No. 2607-2. Water Permit No. 2607-2 appropriates 150 acre-feet of water annually at a diversion rate of 0.66 cubic feet of water per second from one well completed into the Madison Aquifer located in NW ¼ NW ¼ Section 33-T1N-R7E for suburban housing development use. This application proposes to move the well location to the N ½ NE ¼ Section 32-T1N-R7E. No increase in the diversion rate is authorized by this application.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2607A-2 for a 20-year term because 1) the proposed diversion can be developed with out unlawful impairment of existing rights, 2) the proposed use is a beneficial use and 3) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by August 18, 2008.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT APPLICATION NO. 2607A-2, Colonial Pine Hills Sanitary District

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 2607A-2, Colonial Pine Hills Sanitary District, c/o Jim Martin, 8251 Dunsmore Road, Rapid City SD 57702.

The Chief Engineer is recommending APPROVAL of Application No. 2607A-2 for a 20-year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) although evidence is not available to justify issuing this permit without a 20 year term limitation, there is reasonable probability that there is unappropriated water available, 2) the proposed diversion can be developed with out unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 2607A-2 is issued for a 20-year term. Pursuant to SDCL 46-2A-21, the 20-year term may be deleted at any time during the 20-year period or following its expiration. If the 20–year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 2607A-2 may also be cancelled for nonconstruction, forfeiture, abandonment, or three permit violations pursuant to SDCL 46-1-12, 46-5-37, 46-5-37.1 and ARSD 74:02:01:37.

2. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

3. The well authorized by Permit Nos. 2607-2 and 2607A-2 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.

4. Colonial Pine Hills Sanitary District shall report to the Chief Engineer annually the amount of water withdrawn from the Madison Aquifer.

See report on application for additional information.

Garland Erbele, Chief Engineer
July 24, 2008

See additional note on next page

NOTE: Supplemental information submitted with the application states that if a new Madison well is successful, the old existing Croyle and Naylor wells will be abandonment. If abandonment does occur the water rights associated with these wells will be subject to cancellation and the wells must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.

REPORT FOR
WATER PERMIT APPLICATION NO. 2607A-2
COLONIAL PINE HILLS SANITARY DISTRICT
JULY 15, 2008

Water Permit Application No. 2607A-2 proposes to change the location of the well authorized by Water Permit No. 2607-2. Water Permit No. 2607-2 appropriates 150 acre-feet of water annually at a diversion rate of 0.66 cubic feet of water per second from one well completed into the Madison aquifer located in the NW¼ NW¼ Section 33, T1N-R7E. This application proposes to develop a well into the same source (i.e. Madison aquifer); at the same diversion rate as authorized by Water Permit No. 2607-2 (i.e. 0.66 cfs); at a new location. This application proposes to change the well location to the N½ NE¼ Section 32, T1N-R7E, Pennington County.

Water Source: Madison aquifer (MDSN)

Geology and Aquifer Characteristics:
The Madison aquifer is a major regional aquifer that underlies parts of Montana, North Dakota, South Dakota, Wyoming and Canada. The aquifer contains an estimated 644,827,200 acre-feet of recoverable water in storage in South Dakota alone (Allen and others, 1985). The Madison aquifer is contained within the Madison Limestone which in general is a massive limestone and dolomite. The upper portion of the Madison Limestone is karstic with caves, solution collapse and enlarged conduits resulting in extensive secondary permeability; and the lower portion and the underlying Englewood Formation form a lower confining zone (Strobel and others, 1999). The Madison is generally considered an excellent aquifer in terms of its potential to supply good quality water to relatively productive wells, especially near the outcrop (recharge area). The site proposed by this application is approximately one mile from the Madison outcrop. The top of the Madison is expected to be about 700 feet below ground surface at this proposed well site (Carter and Redden, 1999a). Estimates of the thickness of the Madison in this area range from approximately 350 feet thick (Allen and others, 1985) to approximately 400 feet thick (Carter and Redden, 1999a) (Carter and Redden, 1999b). The Madison is under confined conditions at this proposed well site. The static water level of a well at the proposed site is predicted to be around 500 feet below grade (Strobel and others, 2000).

Water Availability:
This application does not propose to increase the amount of water that is appropriated from the Madison aquifer so the availability of unappropriated water from the aquifer is not an issue in this application review.

Observation Well Data:
The Water Rights Program monitors 26 observation wells completed into the Madison aquifer in the Black Hills Area (Water Rights, 2008a). Long-term water level declines are not apparent from any of these observation wells. Observation well data suggest that at the existing level of development, natural influences dominate the water levels of the aquifer and the effects of pumping as yet are not obvious. The nearest Water Rights' observation well completed into the Madison aquifer (PE-86A) is approximately two miles southeast this proposed well site.

Effect on Existing Water Rights:
Wells, including domestic wells, completed into aquifers shallower than the Madison aquifer (i.e. Alluvium, Terrace deposits, Inyan Kara aquifer, Sundance aquifer, Minnekahta aquifer and Minnelusa aquifer) are not expected to be affected by this proposed appropriation since the lower Minnelusa aquifer is a confining bed that isolates the Madison hydraulically from shallower aquifers.

There are 21 Water Permits/Rights appropriating groundwater within approximately two miles (Water Rights, 2008b) of the well site proposed by this application, they are shown below in table one.

PERMIT NO	NAME	STATUS	AQUIFER	USE	CFS
1628-2	COPPER OAKS WATER ASSN	LC	MDSN	SHD	0.05
1726-2	COLONIAL PINE HILLS SANITARY DISTRICT	LC	MDSN	SHD	0.38
1883-2	REPTILE GARDENS	LC	MNLS	COM	0.07
1925-2	PONDEROSA PARK DEV ASSOC	LC	MDSN	SHD	0.03
1965-2	HIGHLAND HILLS WATER ASS.	LC	MDSN	SHD	0.06
2045-2	WHISPERING PINES WATER	LC	DDWD	SHD	0.08
2053-2	SPRING CANYON WATER CO	LC	MDSN	SHD	0.05
2056-2	COUNTRYSIDE HOMEOWNERS	LC	DDWD	SHD	0.30
2108-2	COLONIAL PINE HILLS SANITARY DISTRICT	LC	MDSN	SHD	0.04
2295-2	COLONIAL PINE HILLS SANITARY DISTRICT	LC	DDWD	SHD	0.29
2305-2	SPRING CANYON WATER CO	LC	DDWD	SHD	0.04
2473-2	CREGUT INC	LC	MDSN	COM	0.04
2476-2	REPTILE GARDENS	LC	ALQ	COM	0.08
2461-2	COLONIAL PINE HILLS SANITARY DISTRICT	PE	MDSN	SHD	0.33
2475-2	CITY OF RAPID CITY	PE	MDSN	MUN	2.67
2496-2	SPRING CANYON WATER CO	PE	MDSN	SHD	0.17
2498-2	COUNTRYSIDE HOMEOWNERS	PE	MNLS	SHD	0.33
2507-2	HANI SHAFAI	PE	DDWD	SHD	0.07
2519-2	CITY OF RAPID CITY	PE	MDSN	MUN	1.78
2600-2	GARY KLUTHE	PE	DDWD	SHD	0.04
2623-2	COLONIAL PINE HILLS SANITARY DISTRICT	PE	MDSN	SHD	0.07

LC= Water Right, PE= Water Permit, MDSN= Madison, MNLS= Minnelusa, DDWD= Deadwood, ALQ= Alluvium, SHD= Suburban Housing Development, COM=Commercial, MUN= Municipal,

Table 1. Groundwater appropriations within approximately two miles of the well site proposed by Water Permit Application No. 2607A-2

There are only three Water Rights/Permits supplied from the Madison aquifer belonging to others within approximately one mile of the well site proposed by this application. They are shown in table two.

WATER RIGHT/PERMIT NO	NAME	APPROXIMATE DISTANCE FROM 2607A-2
2473-2	CREGUT INC	1000 feet
1965-2	HIGHLAND HILLS WATER ASSOC.	3000 feet
1925-2	PONDEROSA PARK DEV . ASSOC	1 mile

Table 2. Madison Water Rights/Permits not belonging to Colonial Pine Hills Sanitary District located within approximately one mile of the well proposed by Application No. 2607A-2

The potential impact of the well proposed by Water Permit Application No. 2607A-2 on the wells supplying Water Right Nos. 1965-2 and 1925-2, if measurable, is expected to be insignificant due to the distance between wells. In addition, the site proposed by this application is actually further from the Highland Hills well than the site original approved by Water Permit No. 2607-2.

The well site proposed by Water Permit Application No. 2607-2 was to be located approximately 2,500 feet east-southeast of the well that supplies Water Right No. 2473-2 (Cregut well). The well location proposed by Water Permit Application No. 2607A-2 will be approximately 1,000 feet from the Cregut well.

On December 27, 2007, the Water Rights Program received a telephone call from Robbie Cregut the holder of Water Right No. 2473-2, Cregut Inc. The Cregut well experienced problems because of low water levels and Mr. Cregut was concerned about the effects competing users were having on the well.

When considering the Cregut complaint, the data from Water Rights' Observation Well PE-86A was extrapolated for the area. The data (see figure 1) suggests that between August 2001 and December 2007, the potentiometric surface declined around 110 feet in this area due to natural conditions. The Well Completion Report submitted for the Cregut well indicates that when the well was constructed in August, 2001, there was approximately 140 feet between the static water level and the total depth of the well. The **natural water level fluctuations** in the area would have significantly affected the storage in the Cregut well, may have dramatically impacted the "total pumping head" requirement on the well pump, and may have even caused the water level of the well to drop below the pump.

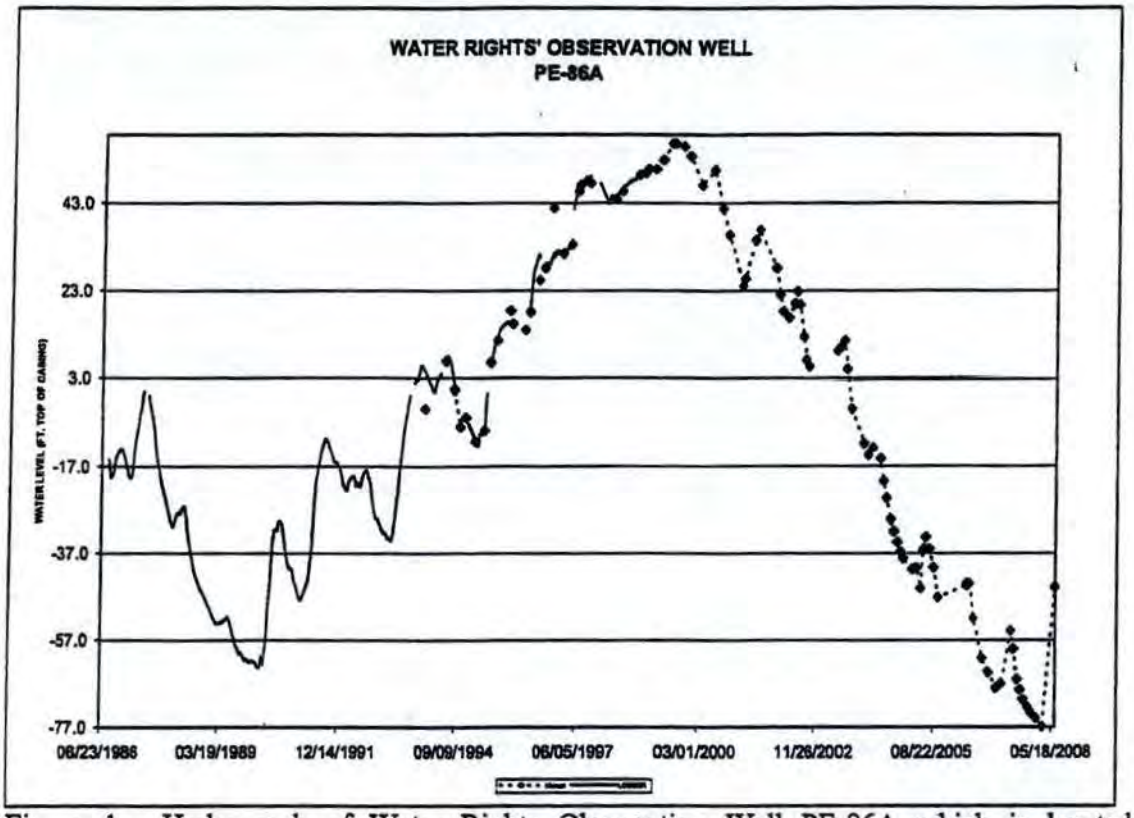


Figure 1. Hydrograph of Water Rights Observation Well PE-86A which is located approximately two miles southeast this proposed well site.

Approval of this water permit application will relocate the well 1,500 feet closer to the Cregut well than the original well site. The potential impact of this well site relocation can be estimated with the application of the Modified Nonequilibrium (Jacob) Equation. The Jacob method provides a way of graphically representing the affect the change on location may have on the Cregut well using aquifer transmissivity estimates for the area (e.g. 5,000-7,500 square feet per day, (37,400-56,100 gallons per day per foot)) (Long and Putnam, 2002). See figure two.

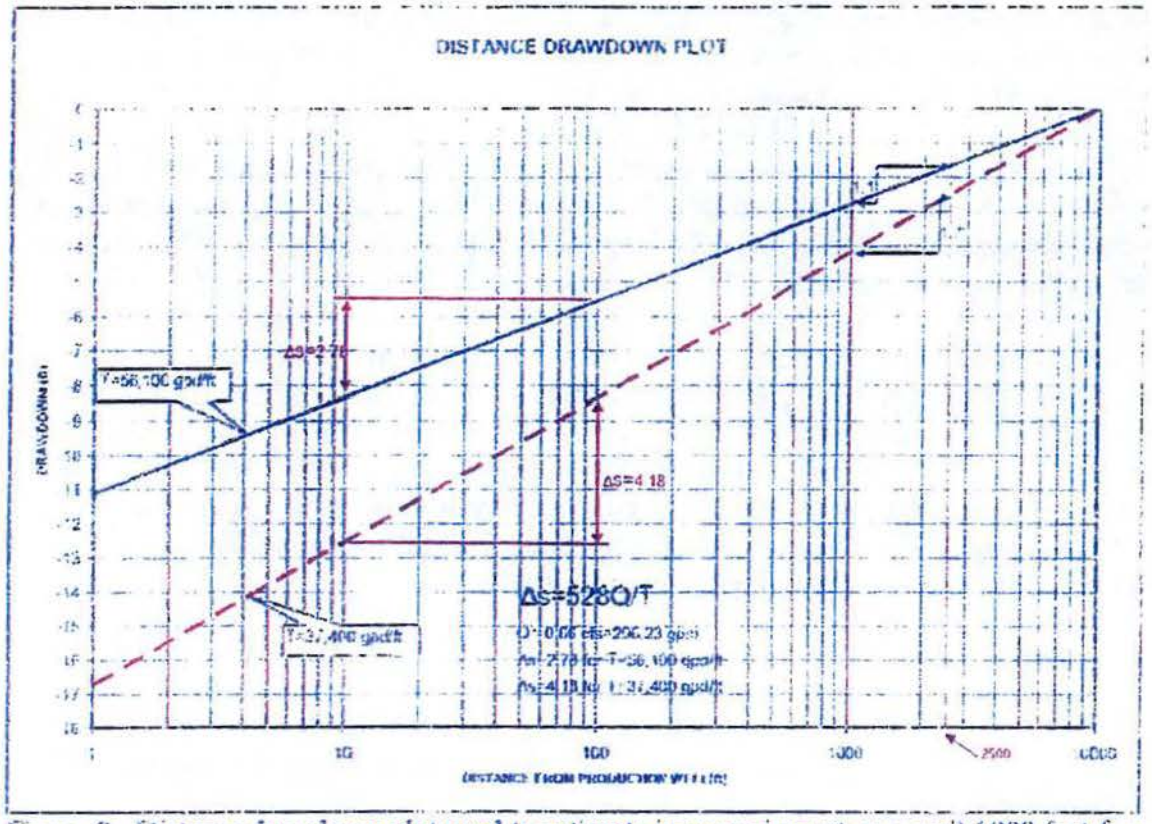


Figure 2. Distance drawdown plot used to estimate increase impact on a well 1000 feet from a production well versus 2,500 feet from a production well.

The significance of figure 2 is the slopes of the lines depicting the cone of depression (Δs) which are determined using the transmissivity estimates. Δs equals 4.18 when assuming a transmissivity of 37,400 gpd/ft.; meaning the drawdown resulting from this pumping would decrease 4.18 feet per log cycle as the distance increases from the production well. Δs equates to 2.78 for a transmissivity of 56,100 gpd/ft. The y-intercepts of the lines are arbitrary in this particular application of the Jacob method and are not intended to suggest that drawdown at the production well will be less than 20 feet. Since the actual drawdown in the production well is unknown, figure 2 can only be used to estimate that the drawdown 1,000 feet from the production well will be around 8.5 feet less than the drawdown at the production well if T = 56,100 gpd/ft; and with T= 37,400 gpd/ft the drawdown 1,000 feet from the production well is estimated to be approximately 12.5 feet less than the drawdown at the production well. Figure 2 is noteworthy because it shows that a decrease in the distance between a Colonial Pine Hills Sanitary District well and the Cregut well from 2,500 feet to 1,000 feet would have an estimated impact of between 1.1 feet and 1.7 feet on the Cregut well. The worst case scenario represented by figure 2 assumes full time pumping at the maximum authorized diversion rate (0.66 cfs). Water Permit Application No. 26077A-2 proposes to only pump 150 acre-feet per year, or the equivalent to full time pumping of about 0.21 cfs. The resultant impact on the Cregut well would obviously be reduced at the lower average diversion rate proposed by this application. A decline of the water level in the Cregut well of an additional 1.1-1.7 feet will not significantly impact the Cregut well's ability to supply the permit. This is particularly true when considering the natural water level fluctuations discussed above.

Water Management Board rules [illegible] and [illegible] which were promulgated pursuant to SDCL [illegible] provide for the regulation of large capacity wells to the extent necessary to

maintain an adequate depth of water for a prior appropriator in wells that have the ability to produce water **independent of artesian head pressure.** Simply put, the pump placement in a prior appropriator's well is not necessarily protected.

If the water levels in the Madison aquifer were to decline, owners of existing wells bear the responsibility of lowering the pump inlet in the well to the top of the aquifer, if necessary. Increased lift would decrease the pump discharge; or require a larger pump or a different type of a pump to maintain the same output.

An increase in operating expenses that may result from interference between wells is not necessarily an adverse impact. The Water Management Board considered this situation in the matter of Water Permit Application 2313-2, Coca-Cola Bottling Company of the Black Hills (Water Rights, 1995). The Board adopted findings of fact and conclusions of law that basically state that if the increased cost or decreased production is considered an adverse impact, it could be in conflict with SDCL 46-1-4, which requires South Dakota's water resources to be put to beneficial use to the fullest extent of which they are capable.

TERM LIMITATION:

SDCL 46-2A-20 requires that "... no water permit for construction of works to withdraw water from the Madison formation in Butte, Fall River, Custer, Lawrence, Meade and Pennington counties may be issued for a term of more than twenty years, unless the water management board determines, based upon the evidence presented at the hearing that:

(1) Sufficient information is available to determine whether any significant adverse hydrologic effects on the supply of water in the Madison formation would result if the proposed withdrawal were approved; and

(2) The information, whether provided by the applicant or by other means, show that there is a reasonable probability that issuance of the proposed permit would not have a significant adverse effect on nearby Madison formation wells and springs."

Evidence is not available to justify issuing these permits without a term limitation of 20 years.

Conclusions:

1. The Madison aquifer is a viable aquifer in this area.
2. This diversions proposed by these application will not adversely impair existing water rights.
3. Information is not available to justify issuing these permits without a term limitation of 20 years.

Ken Buhler
Natural Resources Engineering Specialist

Approved by:

[illegible]
[illegible]

References:

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Water Rights, 2008b, "Water Right/Permit files", SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD

Water Rights, 2008c, "Water Well Completion Report files", SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD

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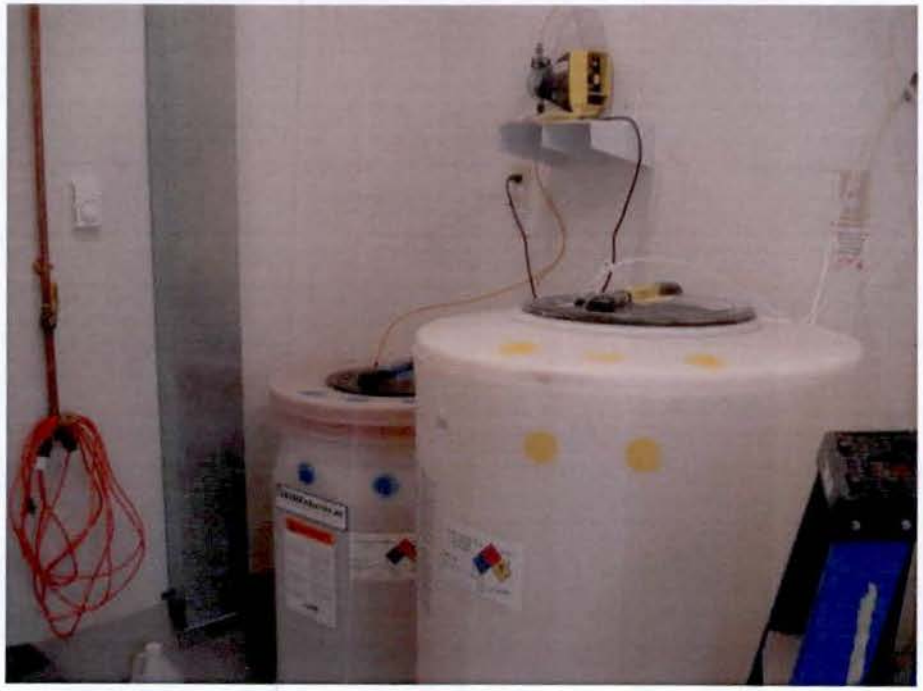
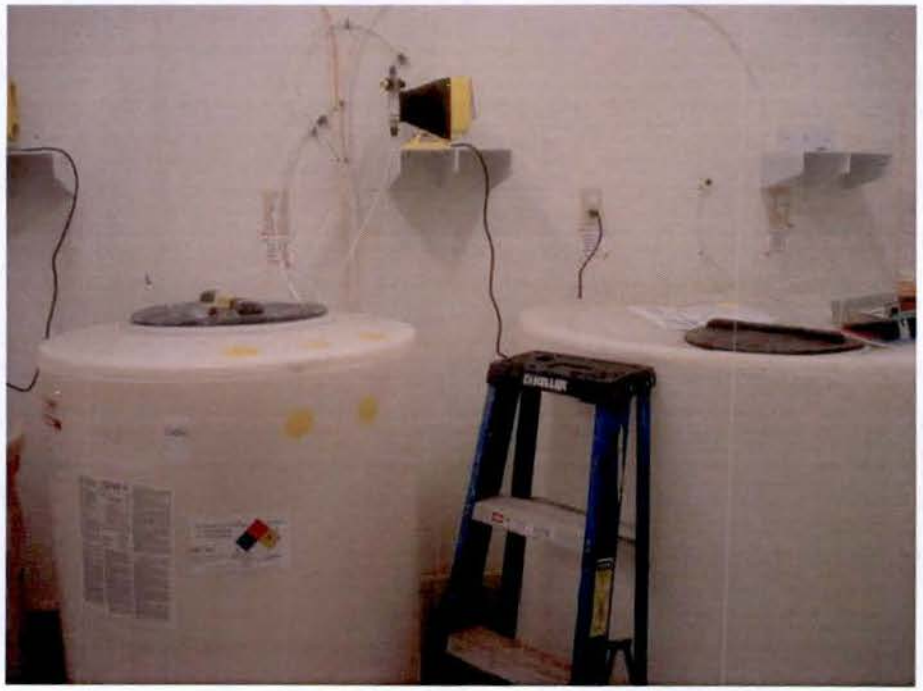
Appendix C

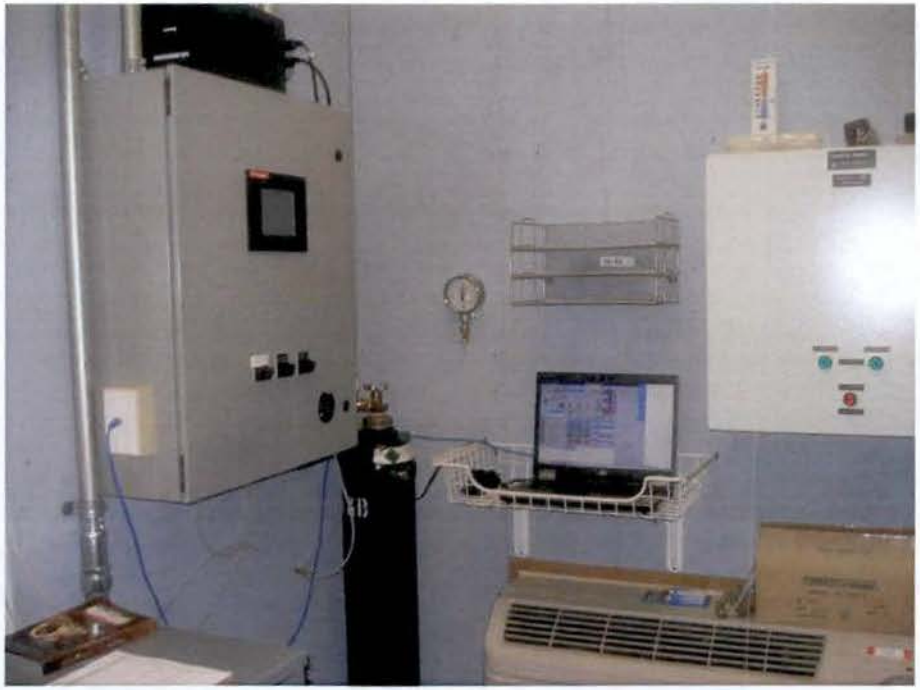
Existing Project Photographs

Croyle Chemical Room



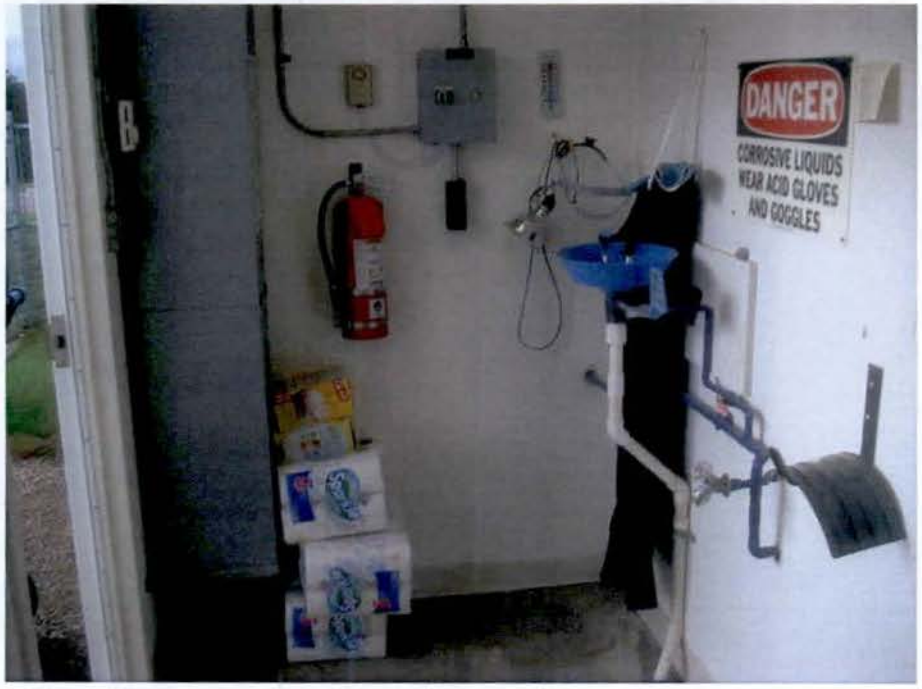


Croyle Chemical Room



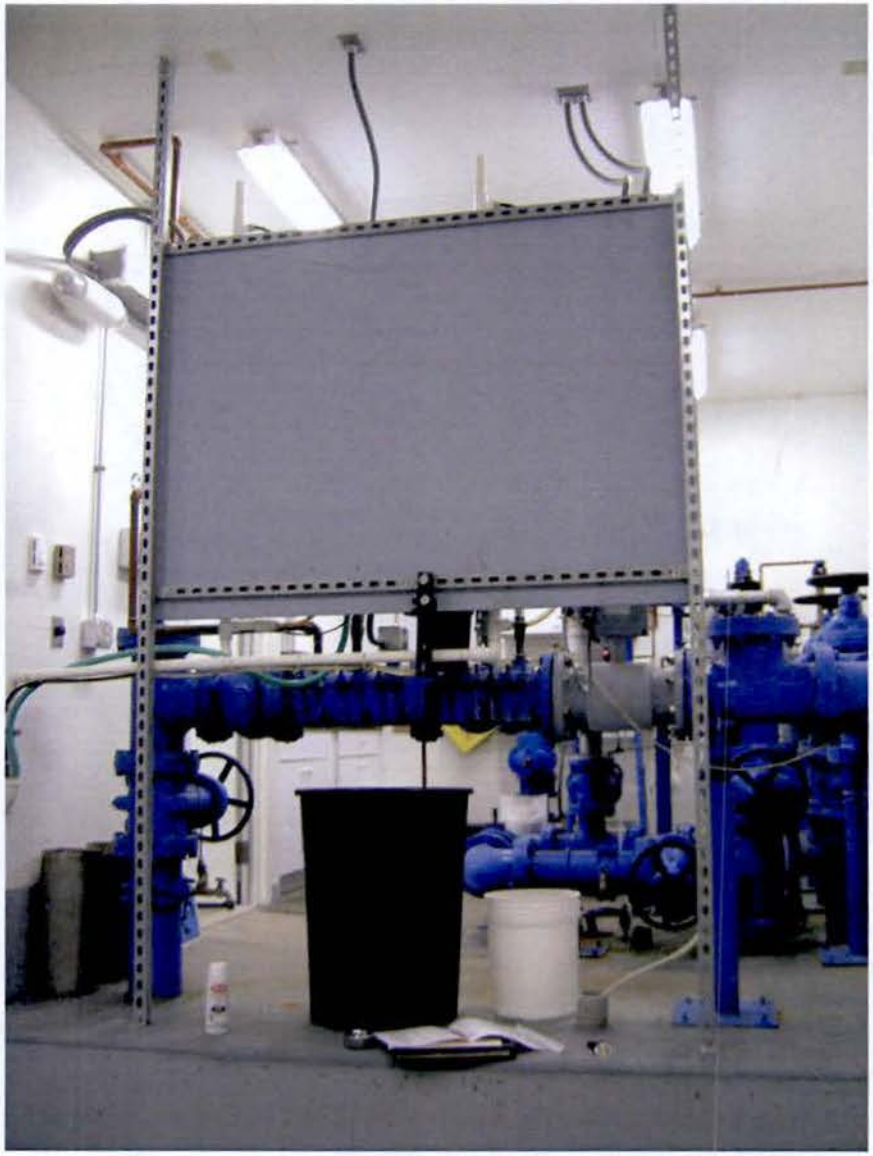
Nonanna Electrical

Nonanna Chemical Room



Croyle Treatment Room

Croyle Treatment Room



Croyle Exterior

WRAP Review Sheet
Drinking Water Facilities Funding Application
Applicant: City of Hoven

Project Title:	Waterline Replacement Project Under SD HWY 47
Funding Requested:	$353,000
Total Project Cost:	$353,000
Green Reserve Amount:	N/A
Project Description:	This project will replace the water mains that run under South Dakota Highway 47. The construction will be done in conjunction with a SD DOT roadway reconstruction planned for 2015. This project will replace old cast iron water lines that are deteriorating and experiencing excessive breaks and leakage.
Alternatives Evaluated:	"Do Nothing" Alternative was evaluated but not recommended since it did not address the deterioration issues of the distribution system. The facilities plan evaluated two options that addressed deficiencies in the entire collection system. "Replace the CIP" Alternative would replace the cast iron watermain with PVC pipe of the same size as existing pipe. This alternative was not recommended because, although the system pressure issue would be satisfied, it was not the most cost effective alternative. "Up Size PVC and Looping" Alternative was evaluated and recommended. The replacement of cast iron pipe with new 6-inch and 8-inch PVC pipe and looping of the distribution system will provide the most cost effective project alternative. The water mains being replaced under Highway 47 are lines that were identified to be replaced as part of this alternative.
Implementation Schedule:	The City of Hoven anticipates bidding the project in March 2015 with project completion in November 2015
Service Population:	406
Current Domestic Rate:	$35.00 per 5,000 gallons

Proposed Domestic Rate at Project Completion:	$45.00 per 5,000 gallons

Interest Rate: 3.00% Term: 30 years Security: Water Surcharge

DEBT SERVICE CAPACITY

Coverage at Maximum Loan Amount:	If all funding is provided as loan the City of Hoven would have to enact a surcharge of approximately $7.06. When added to current rate of $35/5,000 gallons residents would be paying $42.06/5,000 gallons. In addition Hoven recently received a RD loan which will require a monthly surcharge of $13.60. This would bring the total monthly charge to $55.66/5,000 gallons.

25% Funding Subsidy:	$88,250 subsidy with a loan of $264,750
Coverage at 25% Subsidy:	Based on a 25% subsidy and a loan of $264,750 the City of Hoven would have to enact a surcharge of approximately $5.30 thereby paying a rate $53.90/5,000 gallons.

50% Funding Subsidy:	$176,500 subsidy with a loan of $176,500
Coverage at 50% Subsidy:	Based on a 50% subsidy and a loan of $176,500 the City of Hoven would have to enact a surcharge of approximately $3.54 thereby paying a rate $52.14/5,000 gallons.

75% Funding Subsidy:	$264,750 subsidy with a loan of $88,250
Coverage at 75% Subsidy:	Based on a 75% subsidy and a loan of $88,250 the City of Hoven would have to enact a surcharge of approximately $1.76 thereby paying a rate $50.36/5,000 gallons.

ENGINEERING REVIEW COMPLETED BY: NICK NELSON

FINANCIAL REVIEW COMPLETED BY: DAVID RUHNKE

RECEIVED
OCT - 1 2014
Division of Financial & Technical Assistance

SD EForm - 2126LD V2

Drinking Water Facilities Funding Application

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

Applicant	Proposed Funding Package	
City of Hoven		
Address	CWFCP / DWSRF	$353,000
	Local Cash	
PO Box 157 Hoven, SD 57450	Other	
	Other	
Subapplicant	Other	
DUNS Number 020787651	**TOTAL**	$353,000

Project Title: Waterline replacement project under SD Highway 47

Description:

The City of Hoven proposes to replace the portions of the water mains that run under South Dakota Highway 47 in conjunction with the South Dakota Department of Transportation reconstructing the highway in 2015.

Current water rates are a base of $20 and $3.00 per 1,000 gallons of water for a total of $35.00 per 5,000 gallons of water.

The City of Hoven will be implementing a water surcharge in the next month to covers the costs of their $822,000 loan that was just closed for the waterline and water meter project utilizing USDA-RD funds. Once the surcharge is in place copies of the new water rates will be forwarded on to DENR.

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.

Jack Feldmeier, Mayor		09/29/2014
Name & Title of Authorized Signatory (Typed)	Signature	Date

Professional Consultants

Application Prepared By: Northeast Council of Governments

Contact Person: Ted Dickey

Mailing Address: PO Box 1985

City, State, and Zip: Aberdeen, SD 57402

Telephone Number: 605-626-2595 Fax: 605-626-2975

Email address: ted@necog.org

Consulting Engineering Firm: Helms and Associates

Contact Person: Jay Koch

Mailing Address: PO Box 111

City, State, and Zip: Aberdeen, SD 57402

Telephone Number: 605-225-1212 Fax:

Email address: jayk@helmsengineering.com

Legal Counsel's Firm: Von Wold Law Office

Legal Counsel: David Von Wold

Mailing Address: 251 Main Street

City, State, and Zip: Hoven, SD 57450

Telephone Number: 605-948-2550 Fax:

Email address: dvonwold@venturecomm.net

This section applies only to political subdivisions

Bond Counsel's Firm: Meierhenry Sargent

Bond Counsel: Todd Meierhenry

Mailing Address: 315 S. Phillips

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 CWFCP / DWSRF	B	C	D	E	Total Funds
1. Administrative Expenses						
A. Personal Services						
B. Travel						
C. Legal including Bond Counsel	$3,530.00					$3,530.00
D. Other	$2,670.00					$2,670.00
2. Land, Structure, Right-of-Way						
3. Engineering						
A. Bidding and Design Fees	$18,100.00					$18,100.00
B. Project Inspection Fees	$17,200.00					$17,200.00
C. Other						
4. Construction and Project Improvement	$283,194.00					$283,194.00
5. Equipment						
6. Contractual Services						
7. Other						
8. Other						
9. Subtotal (Lines 1-8)	$324,694.00					$324,694.00
10. Contingencies	$28,306.00					$28,306.00
11. Total (Lines 9 and 10)	$353,000.00					$353,000.00
12. Total %	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Columns A - E: Identify each funding source and enter the amounts budgeted by cost category.

Comments:

Method of Financing

Source Header	Secured Funds	Unsecured Funds (Date Anticipated)
Local Cash (Identify Source)		
Other (Explain) DENR DWSRF		$353,000.00 Jan 23, 2015
Other (Explain)		
Other (Explain)		
Other (Explain)		
Other (Explain)		
TOTAL		$353,000.00

Comments:

7.3.1 Repayment Information

Interest rate and term you are applying for: 3 %, 20 years.

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

- ☐ 1. General Obligation bond (requires bond election)
- ☐ 2. Water Revenue bond
- ☒ 3. Project Surcharge Revenue bond
- ☐ 4. Sales Tax Revenue bond

7.3.2 Documents That Must Be Submitted With The Application

Financial Documents

1. Most recent audit or unaudited financial statement to include specific accounting of pledged funds.
2. Current year's budget.

Planning and Legal Documents

1. Governing user charge ordinance or resolution and its effective date.
2. Resolution of authorized signatory for submission of the Drinking Water SRF application and signing of payment requests. This resolution must also include the maximum loan amount requested, interest rate and term being applied for, description of proposed project, and security pledged towards repayment of the loan.
3. Facilities Plan (8.3.18).
4. Capacity Assessment Worksheets (section 8.3.16).

Items 5-7 apply to Nonprofit Entities only

5. By-laws
6. Articles of Incorporation
7. Certificate of Good Standing from Secretary of State

7.3.3 General Information

The month and day your fiscal year begins: January 1

Population Served

Current 406 2000 511 1990 522

Top Five Employers Within 30 Miles	Number of Employees	Type of Business
Gettysburg Medical Center	96	Hospital
Gettysburg School District	49	School
Potter County	41	Government
AMPI	33	Cheese Plant
Northern Plains/Harvest States	33	Elevator

Please indicate employers within boundary of issuing entity with an asterisk (*).

7.3.4 Drinking Water Utility Information

Current Water Utility Debt

Year	2014						
Purpose	Lines and Meters						
Security Pledged	Water Surcharge						
Amount	$822,000.00						
Maturity Date (mo/yr)	8/53						
Debt Holder	USDA-RD						
Debt Coverage Requirement	110%						
Avg. Annual Required Payment	$13,368.00						
Outstanding Balance	$822,000.00						

Use additional sheets if more room is required to list all current water utility debt.

Drinking Water Utility Cash Flow

	Prior Year	Prior Year	Current Year	Future Year #
Fiscal Year	2012	2013	2015	2017
OPERATING CASH FLOW				
Water Sales	$99,116	$111,896.00	$110,000.00	$110,000.00
Surcharge Fee			$39,000.00	$66,000.00
Other (Explain)	$550			
OPERATING PAYMENTS				
Personal Services	($34,481)	($101,184.00)	($35,000.00)	($36,000.00)
Chemical, Material & Supplies	($54,226)	($54,049.00)	($55,000.00)	($56,000.00)
Electric & Other Utilities				
Other (Explain) Miscellaneous	($23,504)	($10,520.00)		
NET CASH FROM OPERATIONS	($12,545)	($53,857.00)	$59,000.00	$84,000.00
NONOPERATING CASH FLOW				
Interest Income	$508.00	$513.00	$500.00	$500.00
Other Revenue (Explain)				
Rental Revenue		$101,480.00		
Transfers In (Explain)				
Transfer from General Fund		$12,610.00		
Fixed Asset Sale (Explain)				
Transfers Out (Explain)				
Fixed Asset Purchases (Explain)				
Debt Payment (Principal Only)			($25,428.00)	($38,920.00)
Debt Payment (Interest Only)			($9,000.00)	($19,000.00)
Other Expenses (Explain)	($26.00)			
NET CASH FROM NONOPERATING	$482	$114,603.00	($33,928.00)	($57,420.00)
Net Increase (Decrease) in Cash	($12,063)	$60,746.00	$25,072.00	$26,580.00
Beginning Cash Balance	$142,839	$130,776.00	$191,522.00	$216,594.00
Ending Cash Balance	$130,776	$191,522.00	$216,594.00	$243,174.00
RESTRICTED BALANCE	$4,000	$4,000.00	$4,000.00	$4,000.00
UNRESTRICTED BALANCE	$126,776	$187,522.00	$212,594.00	$239,174.00

Future Year: First full year after project completion.

7.3.4 Drinking Water Utility Information

Current Water Utility Debt

Year	2014						
Purpose	Lines and Meters						
Security Pledged	Water Surcharge						
Amount	$822,000.00						
Maturity Date (mo/yr)	8/53						
Debt Holder	USDA-RD						
Debt Coverage Requirement	110%						
Avg. Annual Required Payment	$34,428.00						
Outstanding Balance	$822,000.00						

Use additional sheets if more room is required to list all current water utility debt.

Restricted Funds Breakdown:

Amount	Anticipated Expense	Method Used to Encumber

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

Check one: ✓ Incorporated Municipality or Sanitary District

or

___ Other Community Water System

Monthly:	Current Rate	Proposed Rate	# of Accounts	Average use gallons/cubic feet
Domestic	$35.00	$45.00	212	4000
Business	$35.00	$45.00	20	6000
Other: AMPI	$35.00	$45.00	1	700000

Are fees based on usage or flat rate? Usage

When is proposed fee scheduled to take effect? February 2015

When did the current fee take effect? Oct 1, 2012

What was the fee prior to the current rate? $30.00 per 5,000

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

Five Largest Customers	Type of Business	% of System Revenues
AMPI	Cheese Plant	66%
Hoven School District	Education	2%
Countryside	Motel	1%
Prairie Stop	Gas Station	1%
Hoven Enterprises	Apartment Complex	1%

7.3.5 Property Tax Information

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

Three year valuation trend:

Year	_____	_____	_____
Assessed Valuation	_____	_____	_____
Full & True Valuation	_____	_____	_____

Three year levies and collection trend:

Year	_____	_____	_____
Amount Levied	_____	_____	_____
Collected	_____	_____	_____
Penalties/Interest	_____	_____	_____
Late Payments	_____	_____	_____

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

Comments:

List all current debt secured by General Obligation bond:

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

Use additional sheets if more room is required to list all current G.O. debt.

Comments:

7.3.6 Sales Tax Information

(Complete 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:

List all current debt secured by sales tax:

Year Issued					
Purpose					
Amount					
Maturity Date (mo/yr)					
Debt Holder					
Debt Coverage Requirement					
Avg. Annual Required Payment					
Outstanding Balance					

Use additional sheets if more room is required to list all current sales tax debt.

Comments:

7.3.7 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

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 section 8.3.18.	×
♦ A public hearing held discussing the project and the use of an SRF loan to finance the project. (See section 8.3.15)	×
♦ Minutes of the public hearing prepared and submitted to the department for inclusion into the final Facilities Plan.	×
♦ The affidavit of publication of the public hearing received and submitted to the department for inclusion into the final Facilities Plan. (See section 8.3.15)	×
♦ The four review agencies contacted and responses received for inclusion into the final Facilities Plan. (See section 8.3.18)	
♦ The Cultural Resources Effects Assessment Summary and supporting documentation, such as an archaeological survey or Historic Register database search. (See section 8.3.20)	

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	$353,000.00
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	$353,000.00

City of Hoven

Name of Applicant

Signature of Authorized Representative

09/29/2014

Date

7.3.9 Preaward Compliance Review

FORM Approved By OMB: No. 2030-0020 Expires 12-31-2011

United States Environmental Protection Agency
Washington, DC 20460

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note : Read instructions on other side before completing form.

I. Applicant/Recipient (Name, Address, State, Zip Code).	DUNS No.
City of Hoven, PO Box 157; Hoven, SD 57450	020787651

II. Is the applicant currently receiving EPA assistance? No

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7. See instructions on reverse side.) None

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective action taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7. See instructions on reverse side.) None

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3)). None

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below. Yes

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable bypersons with disabilities, explain how a regulatory exception (40 C.F.R. § 7.70) applies. Yes

VII.* Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex,age, or disability in its programs or activities? (40 C.F.R. § 5.140 and § 7.95) Yes

a. Do the methods of notice accommodate those with impaired vision or hearing? Yes b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communication? Yes c. Does the notice identify a designated civil rights coordinator? Yes

VIII.* Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. § 7.85(a)) Yes

IX.* Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166) Yes

X.* If the applicant/recipient is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator. Does not have 15 employees

XI* If the applicant/recipient is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet address for, or a copy of, the procedures. Does not have 15 employees

For the Applicant/Recipient I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official	B. Title of Authorized Official	C. Date
[illegible]	Mayor	9-29-1[illegible]

For the U.S. Environmental Protection Agency I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preawardcompliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisionsof 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized EPA Official See ** note on reverse side.	B. Title of Authorized EPA Official	C. 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.

Jack Feldmeier, Mayor

Name & Title of Authorized Representative

Sep 29, 2014

Signature of Authorized Representative 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 Hoven

Prepared by: Wendy Rausch
Eric Stuwe

Phone #: 605-948-2257

Date: 9/29/14

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:*** $77,000	☑	☐	☐	☐
Do you know how much water you pump on a peak day? ***Amount:*** $120,000	☑	☐	☐	☐
Do you know the maximum amount of water you can pump from your source? ***Amount:*** 350/Well 540/minute	☑	☐	☐	☐
Is your source capacity higher than your peak day demand? ***Percentage higher or lower:*** 648%	☑	☐	☐	☐
Can you meet peak demand without pumping at peak capacity for extended periods? ***Longest time pumping at peak demand:*** 12 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:*** Well Water system and nearby sloughs.	☑	☐	☐	☐
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 RWS	☑	☐	☐	☐
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*** 40 Feet	☑	☐	☐	☐
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:*** 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

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 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:*** _____ %	☐	☐	☑	☐
	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:*** 40	☐	☑	☐	☐
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*** SD Rural Water, DENR	☑	☐	☐	☐

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?*** One year	☑	☐	☐	☐
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):*** Eric Stuwe, Police 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:*** $20 minimum plus $3.00 per 1000 Gallo (i.e. $22 minimum plus $2.50/1000 gallons)	☑	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: The cheese plant has a seperate fee for water usage with the city	☐	☑	☐	☐
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 Hoven
Completed by: Wendy Rausch
Date: 9/29/14

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:	2013	2017	2018	2019	2020
1. Beginning Cash on Hand	$130,776	$216,594	$243,174	$257,754	$274,334
2. Cash Receipts:					
a. Unmetered Water Revenue					
b. Metered Water Revenue	$111,896	$110,000	$100,000	$104,000	$108,000
c. Other Water Revenue		$66,000	$66,000	$66,000	$66,000
d. Total Water Revenues (2a through 2c)	$111,896	$176,000	$166,000	$170,000	$174,000
e. Connection Fees					
f. Interest and Dividend Income	$513	$500	$500	$500	$500
g. Other Income					
h. Total Cash Revenues (2d through 2g)	$112,409	$176,500	$166,500	$170,500	$174,500
i. Transfers in/Additional Rev Needed	$12,610				
j. Loans, Grants or other Cash	$101,480				
Please specify					
3. Total Cash Receipts (2h through 2j)	$226,499	$176,500	$166,500	$170,500	$174,500
4. Total Cash Available (1+3)	$357,275	$393,094	$409,674	$428,254	$448,834
5. Operating Expenses					
a. Salaries and wages	$101,184	$36,000	$37,000	$38,000	$39,000
b. Employee Pensions and Benefits					
c. Purchased Water	$54,049	$56,000	$57,000	$58,000	$59,000
d. Purchased Power					
e. Fuel for Power Production					
f. Chemicals					
g. Materials and Supplies	$10,520				
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)	$165,753	$92,000	$94,000	$96,000	$98,000
r. Replacement Expenditures					
s. Total OM&R Expenditures (5q+5r)	$165,753	$92,000	$94,000	$96,000	$98,000
t. Loan Principal/Capital Lease Payments		$38,920	$38,920	$38,920	$38,920
u. Loan Interest Payments		$19,000	$19,000	$19,000	$19,000
v. Transfers Out					
w. Capital Purchases (specify):					
x. Other					
6. Total Cash Paid Out (5s through 5x)	$165,753	$149,920	$151,920	$153,920	$155,920
7. Ending Cash Position (4 - 6)	$191,522	$243,174	$257,754	$274,334	$292,914

Financial Spreadsheet

Applicant: City of Hoven
Completed by: Wendy Rausch
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	92,914	233	233	233	233
9. Avg Annual User Charge Account (2d/8)	$1	$755	$712	$730	$747
10. Coverage Ratio (2h-5s)/(5t+5u)	0.0	1.5	1.3	1.3	1.3
11. Operating Ratio (2d/5s)	0.7	1.9	1.8	1.8	1.8
12. Additions to Reserve Funds for the Year:					
a. Debt Service Reserve			$1,200	$1,200	$1,200
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other	$4,000	$4,000	$4,000	$4,000	$4,000
13. Total Reserves (12a through 12e)	$4,000	$4,000	$5,200	$5,200	$5,200
14. Year End Operating Cash (7 – 13)	$187,522	$239,174	$252,554	$269,134	$287,714

PREVIOUS AUDIT'S

MUNICIPALITY OF HOVEN
STATEMENT OF NET POSITION - MODIFIED CASH BASIS
December 31, 2012

	Primary Government			
	Governmental Activities	Business-Type Activities	Total	Component Units
ASSETS:				
Cash and Cash Equivalents	429,755.03	275,250.62	705,005.65	
Investments			0.00	
Restricted Assets:				
Cash and cash equivalents			0.00	
Investments			0.00	
TOTAL ASSETS	429,755.03	275,250.62	705,005.65	0.00
NET POSITION:				
Restricted for: (See Note ___)				
Capital Projects Purposes			0.00	
Debt Service Purposes			0.00	
Permanently Restricted Purposes				
Expendable			0.00	
Non-Expendable			0.00	
Other Purposes			0.00	
Unrestricted (Deficit)	429,755.03	275,250.62	705,005.65	
TOTAL NET POSITION	429,755.03	275,250.62	705,005.65	0.00

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF HOVEN
STATEMENT OF ACTIVITIES - MODIFIED CASH BASIS
For the Year Ended December 31, 2012

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 Units
Primary Government:								
Governmental Activities:								
General Government	65,261.44				(65,261.44)		(65,261.44)	
Public Safety	32,289.19				(32,289.19)		(32,289.19)	
Public Works	59,014.16	3,696.80			(55,317.36)		(55,317.36)	
Health and Welfare	59,255.98	12,406.84			(46,849.14)		(46,849.14)	
Culture and Recreation	38,181.08	6,708.43			(31,472.65)		(31,472.65)	
Conservation and Development	1,109.84				(1,109.84)		(1,109.84)	
Intergovernmental Expenditures					0.00		0.00	
Miscellaneous Expenditures					0.00		0.00	
Sewer Project	119,537.64				(119,537.64)		(119,537.64)	
Hospital Bond Payment	35,976.44				(35,976.44)		(35,976.44)	
Total Governmental Activities	410,625.77	22,812.07	0.00	0.00	(387,813.70)		(387,813.70)	
Business-type Activities:								
Water	112,211.27	99,665.89				(12,545.38)	(12,545.38)	
Sewer	473,363.43	66,037.96				(407,325.47)	(407,325.47)	
Liquor	244,265.57	285,863.80				41,598.23	41,598.23	
Airport	729,424.55	18,579.67				(710,844.88)	(710,844.88)	
Total Business-Type Activities	1,559,264.82	470,147.32	0.00	0.00		(1,089,117.50)	(1,089,117.50)	
Total Primary Government	1,969,890.59	492,959.39	0.00	0.00	(387,813.70)	(1,089,117.50)	(1,476,931.20)	
Component Units:								
Housing and Redevelopment Commission								0.00
General Revenues:								
Taxes:								
Property Taxes					130,880.45		130,880.45	
Sales Taxes					160,721.68		160,721.68	
State Shared Revenues					28,179.43		28,179.43	
Grants and Contributions not Restricted to Specific Programs					117,177.79		117,177.79	
Unrestricted Investment Earnings							0.00	
County Shared Receipts					6,790.27		6,790.27	
Miscellaneous Revenue					23,683.78	292.48	23,976.26	
Special Items					(20.00)	1,009,637.51	1,009,617.51	
E Licenses and Permits					545.00		545.00	
Transfers					5,913.89	(59,830.35)	(53,916.46)	
Total General Revenues, Special Items, Extraordinary Items and Transfers					473,872.29		1,423,971.93	0.00
Change in Net Position					86,058.59	139,602.82	(53,544.23)	0.00
Net Position-Beginning					343,696.44	414,853.44	758,549.88	
Adjustments:								
_____							0.00	
Adjusted Net Position-Beginning					343,696.44	414,853.44	758,549.88	
NET POSITION-ENDING					429,755.03	275,250.62	705,005.65	0.00

* 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 ____.

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF HOVEN
BALANCE SHEET - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
December 31, 2012

	General Fund	1st penny Fund	2nd penny Fund	Fund	Other Governmental Funds	Total Governmental Funds
ASSETS:						
Cash and Cash Equivalents	18,302.14					18,302.14
106 Cash with Fiscal Agent						0.00
151 Investments						0.00
107.1 Restricted Cash and Cash Equivalents		278,061.42	133,391.47			411,452.89
107.2 Restricted Investments						0.00
TOTAL ASSETS	18,302.14	278,061.42	133,391.47	0.00	0.00	429,755.03
FUND BALANCES:						
263 Nonspendable						0.00
264 Restricted						0.00
265 Committed						0.00
266 Assigned		278,061.42	133,391.47			411,452.89
267 Unassigned	18,302.14					18,302.14
TOTAL FUND BALANCES	18,302.14	278,061.42	133,391.47	0.00	0.00	429,755.03

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2012

	General Fund	1st Penny Fund	2nd Penny Fund	Fund	Other Governmental Funds	Total Governmental Funds
Revenues:						
310 Taxes:						
311 General Property Taxes	130,225.54					130,225.54
312 Airflight Property Tax						0.00
313 General Sales and Use Taxes		84,145.03	76,576.65			160,721.68
314 Gross Receipts Business Taxes						0.00
315 Amusement Taxes	72.00					72.00
316 911 Telephone Surcharge						0.00
317 Excise Tax						0.00
318 Tax Deed Revenue						0.00
319 Penalties and Interest on						0.00
Delinquent Taxes	582.91					582.91
Total Taxes	130,880.45	84,145.03	76,576.65	0.00	0.00	291,602.13
320 Licenses and Permits	545.00					545.00
330 Intergovernmental Revenue:						
331 Federal Grants						0.00
332 Federal Shared Revenue						0.00
333 Federal Payments in Lieu of Taxes						0.00
334 State Grants		117,177.79				117,177.79
335 State Shared Revenue:						
335.01 Bank Franchise Tax	1,669.44					1,669.44
335.02 Motor Vehicle Commercial Prorate	1,170.65					1,170.65
335.03 Liquor Tax Reversion	2,604.70					2,604.70
335.04 Motor Vehicle Licenses (5%)	5,283.76					5,283.76
335.06 Fire Insurance Premiums Reversion						0.00
335.07 Liquor License Reversion						0.00
335.08 Local Government Highway and Bridge Fund	17,450.88					17,450.88
335.09 911 Remittances						0.00

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2012

	General Fund	1st Penny Fund	2nd Penny Fund	Fund	Other Governmental Funds	Total Governmental Funds
335.20 Other						0.00
336 State Payments in Lieu of Taxes						0.00
338 County Shared Revenue:						
338.01 County Road Tax (25%)	790.27					790.27
338.02 County Highway and Bridge Reserve Tax (25%)						0.00
338.03 County Wheel Tax						0.00
338.99 Other	6,000.00					6,000.00
339 Other Intergovernmental Revenues						0.00
Total Intergovernmental Revenue	34,969.70	117,177.79	0.00	0.00	0.00	152,147.49
340 Charges for Goods and Services:						
341 General Government						0.00
342 Public Safety						0.00
343 Highways and Streets						0.00
344 Sanitation	3,696.80					3,696.80
345 Health						0.00
346 Culture and Recreation	6,708.43					6,708.43
347 Ambulance	12,406.84					12,406.84
348 Cemetery						0.00
349 Other						0.00
Total Charges for Goods and Services	22,812.07	0.00	0.00	0.00	0.00	22,812.07
350 Fines and Forfeits:						
351 Court Fines and Costs						0.00
352 Animal Control Fines						0.00
353 Parking Meter Fines						0.00
354 Library						0.00
359 Other						0.00

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2012

	General Fund	1st Penny Fund	2nd Penny Fund	Fund	Other Governmental Funds	Total Governmental Funds
Total Fines and Forfeits	0.00	0.00	0.00	0.00	0.00	0.00
360 Miscellaneous Revenue:						
361 Investment Earnings	8,101.84					8,101.84
362 Rentals						0.00
363 Special Assessments						0.00
364 Maintenance Assessments						0.00
367 Contributions and Donations from Private Sources	10,500.00					10,500.00
368 Liquor Operating Agreement Income						0.00
369 Other	5,081.94					5,081.94
Total Miscellaneous Revenue	23,683.78	0.00	0.00	0.00	0.00	23,683.78
Total Revenue	212,891.00	201,322.82	76,576.65	0.00	0.00	490,790.47
Expenditures:						
410 General Government:						
411 Legislative						0.00
412 Executive	13,111.11					13,111.11
413 Elections	71.58					71.58
414 Financial Administration	52,078.75					52,078.75
419 Other						0.00
Total General Government	65,261.44	0.00	0.00	0.00	0.00	65,261.44
420 Public Safety:						
421 Police	18,234.41					18,234.41
422 Fire	11,735.38					11,735.38
423 Protective Inspection						0.00
429 Other Protection	2,319.40					2,319.40
Total Public Safety	32,289.19	0.00	0.00	0.00	0.00	32,289.19

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2012

	General Fund	1st Penny Fund	2nd Penny Fund	Fund	Other Governmental Funds	Total Governmental Funds
430 Public Works:						
431 Highways and Streets	56,019.32					56,019.32
432 Sanitation	2,994.84	119,537.64				122,532.48
433 Water						0.00
434 Electricity						0.00
435 Airport						0.00
436 Parking Facilities						0.00
437 Cemeteries						0.00
438 Natural Gas						0.00
439 Transit						0.00
Total Public Works	59,014.16	119,537.64	0.00	0.00	0.00	178,551.80
440 Health and Welfare:						
441 Health			35,976.44			35,976.44
442 Home Health						0.00
443 Mental Health Centers						0.00
444 Humane Society						0.00
445 Drug Education						0.00
446 Ambulance	59,255.98					59,255.98
447 Hospitals, Nursing Homes and Rest Homes						0.00
449 Other						0.00
Total Health and Welfare	59,255.98	0.00	35,976.44	0.00	0.00	95,232.42
450 Culture and Recreation:						
451 Recreation	38,181.08					38,181.08
452 Parks						0.00
455 Libraries						0.00
456 Auditorium						0.00
457 Historical Preservation						0.00
458 Museums						0.00
Total Culture and Recreation	38,181.08	0.00	0.00	0.00	0.00	38,181.08

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2012

	General Fund	1st Penny Fund	2nd Penny Fund	Fund	Other Governmental Funds	Total Governmental Funds
460 Conservation and Development:						
463 Urban Redevelopment and Housing						0.00
465 Economic Development and Assistance (Industrial Development)						0.00
466 Economic Opportunity	1,109.84					1,109.84
Total Conservation and Development	1,109.84	0.00	0.00	0.00	0.00	1,109.84
470 Debt Service						0.00
480 Intergovernmental Expenditures						0.00
485 Capital Outlay						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	0.00	0.00
Total Expenditures	255,111.69	119,537.64	35,976.44	0.00	0.00	410,625.77
Excess of Revenues Over (Under) Expenditures				0.00	0.00	

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2012

	General Fund	1st Penny Fund	2nd Penny Fund	Fund	Other Governmental Funds	Total Governmental Funds
Other Financing Sources (Uses):						
391.01 Transfers In	51,163.82					51,163.82
511 Transfers Out		(40,336.11)	(4,913.82)			(45,249.93)
513 Payments to Refunded Debt Escrow Agent						0.00
391.03 Sale of Municipal Property						0.00
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)	51,163.82	(40,336.11)	(4,913.82)	0.00	0.00	(5,913.89)
391.06 (514) Special Items						0.00
391.05 (515) Extraordinary Items						0.00
Net Change in Fund Balance				0.00	0.00	
Fund Balance - Beginning	9,379.01	236,612.35	97,705.08			343,696.44
Adjustments:						
Savings Books	(20.00)					(20.00)
						0.00
Adjusted Fund Balance - Beginning	9,379.01	236,612.35	97,705.08	0.00	0.00	429,755.03
FUND BALANCE- ENDING	9,379.01	236,612.35	97,705.08	0.00	0.00	429,755.03

MUNICIPALITY OF HOVEN
STATEMENT OF NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
December 31, 2012

	Enterprise Funds					
	Water Fund	Sewer Fund	Liguor Fund	Airport Fund	Totals	Internal Service Funds
ASSETS:						
Current Assets:						
Cash and Cash Equivalents	126,775.01	136,810.25	73,164.96	(65,499.60)	271,250.62	
106 Cash with Fiscal Agent					0.00	
151 Investments					0.00	
Total Current Assets	126,775.01	136,810.25	73,164.96	(65,499.60)	271,250.62	0.00
Noncurrent Assets:						
107.1 Restricted Cash and Cash Equivalents	4,000.00				4,000.00	
107.2 Restricted Investments					0.00	
Total Noncurrent Assets	4,000.00	0.00	0.00	0.00	4,000.00	0.00
TOTAL ASSETS	130,775.01	136,810.25	73,164.96	(65,499.60)	275,250.62	0.00
NET POSITION:						
253.20 Restricted for:						
253.21 Revenue Bond Debt Service					0.00	
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	126,775.01	136,810.25	73,164.96	(65,499.60)	271,250.62	
TOTAL NET POSITION	126,775.01	136,810.25	73,164.96	(65,499.60)	271,250.62	0.00

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
For the Year Ended December 31, 2012

	Enterprise Funds					
	Water Fund	Sewer Fund	Liquor Fund	Airport Fund	Totals	Internal Service Funds
Operating Revenue:						
370/380 Charges for Goods and Services	99,115.89	64,108.80	272,422.65	18,171.08	453,818.42	
Revenue Dedicated to Servicing Debt					0.00	
380.05 Lottery Sales			13,441.15		13,441.15	
369 Miscellaneous	550.00	1,929.16		408.59	2,887.75	
Total Operating Revenue	99,665.89	66,037.96	285,863.80	18,579.67	470,147.32	0.00
Operating Expenses:						
410 Personal Services	34,481.28	50,577.30	84,270.19	64,577.24	233,906.01	
420 Other Current Expense	23,503.85	422,786.13	32,223.96	664,847.31	1,143,361.25	
426.2 Materials	54,226.14		127,771.42		181,997.56	
430 Capital Assets					0.00	
Total Operating Expenses	112,211.27	473,363.43	244,265.57	729,424.55	1,559,264.82	0.00
Operating Income (Loss)	(12,545.38)	(407,325.47)	41,598.23	(710,844.88)	(1,089,117.50)	0.00
Nonoperating Revenue (Expense):						
330 Operating Grants					0.00	
361 Investment Earnings					0.00	
362 Rental Revenue		398,097.54		610,522.62	1,008,620.16	
441 Debt Service (Principal)					0.00	
442 Interest Expense (Enter as Negative)	507.50	507.50	2.35		1,017.35	
391.03 Sale of Municipal Property					0.00	
391.20 Long-Term Debt Issued					0.00	
(429)369.01 Other					0.00	
Total Nonoperating Revenue (Expense)	507.50	398,605.04	2.35	610,522.62	1,009,637.51	0.00

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
For the Year Ended December 31, 2012

	Enterprise Funds					
	Water Fund	Sewer Fund	Liquor Fund	Airport Fund	Totals	Internal Service Funds
Income (Loss) Before Contributions, Special Items, Extraordinary Items and Transfers	(12,037.88)	(8,720.43)	41,600.58	(100,322.26)	(79,479.99)	0.00
391.07 Capital Contributions					0.00	
391.1 Transfers In		15,336.11		35,000.00	50,336.11	
511 Transfers Out (Enter as Negative)		(53,916.46)	(56,250.00)		(110,166.46)	
391.06 (514) Special Items	(26.00)		(266.48)		(292.48)	
391.05 (515) Extraordinary Items					0.00	
Change in Net Position	(12,063.88)	(47,300.78)	(14,915.90)	(65,322.26)	(139,602.82)	0.00
Net Position - Beginning					0.00	
Adjustments:						
					0.00	
					0.00	
Adjusted Net Position - Beginning	142,838.89	184,111.03	88,080.86	(177.34)	414,853.44	0.00
NET POSITION - ENDING	130,775.01	136,810.25	73,164.96	(65,499.60)	275,250.62	0.00

MUNICIPALITY OF HOVEN
STATEMENT OF NET POSITION - MODIFIED CASH BASIS
December 31, 2013

	Primary Government			
	Governmental Activities	Business-Type Activities	Total	Component Units
ASSETS:				
Cash and Cash Equivalents	509,845.14	482,909.00	992,754.14	
Investments			0.00	
Restricted Assets:				
Cash and cash equivalents			0.00	
Investments			0.00	
TOTAL ASSETS	509,845.14	482,909.00	992,754.14	0.00
NET POSITION:				
Restricted for: (See Note ___)				
Capital Projects Purposes			0.00	
Debt Service Purposes			0.00	
Permanently Restricted Purposes				
Expendable			0.00	
Non-Expendable			0.00	
Other Purposes			0.00	
Unrestricted (Deficit)			0.00	
TOTAL NET POSITION	509,845.14	482,909.00	0.00	0.00

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF HOVEN
STATEMENT OF ACTIVITIES - MODIFIED CASH BASIS
For the 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	Primary Government: Business-Type Activities	Primary Government: Total	Component Units
Primary Government:								
Governmental Activities:								
General Government	62,273.77				(62,273.77)		(62,273.77)	
Public Safety	33,337.64				(33,337.64)		(33,337.64)	
Public Works	68,895.51	1,360.00			(67,535.51)		(67,535.51)	
Health and Welfare	54,151.59	13,171.78			(40,979.81)		(40,979.81)	
Culture and Recreation	33,331.25	12,223.89			(21,107.36)		(21,107.36)	
Conservation and Development	1,422.75				(1,422.75)		(1,422.75)	
Intergovernmental Expenditures					0.00		0.00	
Miscellaneous Expenditures					0.00		0.00	
**Capital Outlay - Unallocated					0.00		0.00	
*Interest on Long-Term Debt	35,976.44				(35,976.44)		(35,976.44)	
Total Governmental Activities	289,388.95	26,755.67	0.00	0.00	(262,633.28)		(262,633.28)	
Business-type Activities:								
Water	165,752.90	111,896.23				(53,856.67)	(53,856.67)	
Sewer	82,791.35	70,781.00				(12,010.35)	(12,010.35)	
Liquor	253,558.16	264,136.86				10,578.70	10,578.70	
Airport	59,025.31	15,472.45				(43,552.86)	(43,552.86)	
Total Business-Type Activities	561,127.72	462,286.54	0.00	0.00		(98,841.18)	(98,841.18)	
Total Primary Government	850,516.67	489,042.21	0.00	0.00	(262,633.28)	(98,841.18)	(361,474.46)	
Component Units:								
Housing and Redevelopment Commission								0.00
General Revenues:								
Taxes:								
Property Taxes					127,019.46		127,019.46	
Sales Taxes					153,351.60		153,351.60	
State Shared Revenues					29,509.05		29,509.05	
Grants and Contributions not Restricted to Specific Programs							0.00	
Unrestricted Investment Earnings							0.00	
County Shared Receipts					6,790.27		6,790.27	
Miscellaneous Revenue					34,188.00		34,188.00	
Special Items					271.49		271.49	
Licenses and Permits					350.00		350.00	
Transfers					8,213.50		8,213.50	
Total General Revenues, Special Items, Extraordinary Items and Transfers					359,693.37	0.00	359,693.37	0.00
Change in Net Position					97,060.09	(98,841.18)	(1,781.09)	0.00
Net Position-Beginning					429,755.03		429,755.03	
Adjustments:								
							0.00	
Adjusted Net Position-Beginning					429,755.03			
NET POSITION-ENDING					526,815.12	(98,841.18)	(1,781.09)	0.00

* 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 ____.

The notes to the financial statements are an integral part of this statement.

MUNICIPALITY OF HOVEN
BALANCE SHEET - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
December 31, 2013

	General Fund	1ST PENNY Fund	2ND PENNY Fund	Fund	Other Governmental Funds	Total Governmental Funds
ASSETS:						
Cash and Cash Equivalents	19,089.32					19,089.32
106 Cash with Fiscal Agent						0.00
151 Investments						0.00
107.1 Restricted Cash and Cash Equivalents		322,770.90	167,984.92			490,755.82
107.2 Restricted Investments						0.00
TOTAL ASSETS	19,089.32	322,770.90	167,984.92	0.00	0.00	509,845.14
FUND BALANCES:						
263 Nonspendable						0.00
264 Restricted						0.00
265 Committed						0.00
266 Assigned		322,770.90	167,984.92			490,755.82
267 Unassigned	19,089.32					19,089.32
TOTAL FUND BALANCES	19,089.32	322,770.90	167,984.92	0.00	0.00	509,845.14

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2013

	General Fund	1st Penny Tax Fund	2nd Penny Tax Fund	Fund	Other Governmental Funds	Total Governmental Funds
Revenues:						
310 Taxes:						
311 General Property Taxes	126,796.26					126,796.26
312 Airflight Property Tax						76,737.98
313 General Sales and Use Taxes		76,737.98	76,613.62			
314 Gross Receipts Business Taxes						0.00
315 Amusement Taxes	72.00					72.00
316 911 Telephone Surcharge						0.00
317 Excise Tax						0.00
318 Tax Deed Revenue						0.00
319 Penalties and Interest on						0.00
Delinquent Taxes	151.20					151.20
Total Taxes	127,019.46	76,737.98	76,613.62	0.00	0.00	203,757.44
320 Licenses and Permits	350.00					350.00
330 Intergovernmental Revenue:						
331 Federal Grants						0.00
332 Federal Shared Revenue						0.00
333 Federal Payments in Lieu of Taxes						0.00
334 State Grants						0.00
335 State Shared Revenue:						
335.01 Bank Franchise Tax	2,431.92					2,431.92
335.02 Motor Vehicle Commercial Prorate	1,208.16					1,208.16
335.03 Liquor Tax Reversion	3,290.98					3,290.98
335.04 Motor Vehicle Licenses (5%)	4,782.87					4,782.87
335.06 Fire Insurance Premiums Reversion						0.00
335.07 Liquor License Reversion						0.00
335.08 Local Government Highway and Bridge Fund	17,795.12					17,795.12
335.09 911 Remittances						0.00

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2013

	General Fund	1st Penny Tax Fund	2nd Penny Tax Fund	Fund	Other Governmental Funds	Total Governmental Funds
335.20 Other						0.00
336 State Payments in Lieu of Taxes						0.00
338 County Shared Revenue:						
338.01 County Road Tax (25%)	790.27					790.27
338.02 County Highway and Bridge Reserve Tax (25%)						0.00
338.03 County Wheel Tax						0.00
338.99 Other	6,000.00					6,000.00
339 Other Intergovernmental Revenues						0.00
Total Intergovernmental Revenue	36,299.32	0.00	0.00	0.00	0.00	36,299.32
340 Charges for Goods and Services:						
341 General Government						0.00
342 Public Safety						0.00
343 Highways and Streets						0.00
344 Sanitation	1,360.00					1,360.00
345 Health						0.00
346 Culture and Recreation	12,223.89					12,223.89
347 Ambulance	13,171.78					13,171.78
348 Cemetery						0.00
349 Other						0.00
Total Charges for Goods and Services	26,755.67	0.00	0.00	0.00	0.00	26,755.67
350 Fines and Forfeits:						
351 Court Fines and Costs						0.00
352 Animal Control Fines						0.00
353 Parking Meter Fines						0.00
354 Library						0.00
359 Other						0.00

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2013

	General Fund	1st Penny Tax Fund	2nd Penny Tax Fund	Fund	Other Governmental Funds	Total Governmental Funds
Total Fines and Forfeits	0.00	0.00	0.00	0.00	0.00	0.00
360 Miscellaneous Revenue:						
361 Investment Earnings	6,911.46					6,911.46
362 Rentals						0.00
363 Special Assessments						0.00
364 Maintenance Assessments						0.00
367 Contributions and Donations from Private Sources	12,197.00					12,197.00
368 Liquor Operating Agreement Income						0.00
369 Other	15,079.54					15,079.54
Total Miscellaneous Revenue	34,188.00	0.00	0.00	0.00	0.00	34,188.00
Total Revenue	224,612.45	76,737.98	76,613.62	0.00	0.00	301,350.43
Expenditures:						
410 General Government:						
411 Legislative						0.00
412 Executive	12,596.61					12,596.61
413 Elections	54.00					54.00
414 Financial Administration	49,623.16					49,623.16
419 Other						0.00
Total General Government	62,273.77	0.00	0.00	0.00	0.00	62,273.77
420 Public Safety:						
421 Police	18,847.35					18,847.35
422 Fire	12,689.56					12,689.56
423 Protective Inspection						0.00
429 Other Protection	1,800.73					1,800.73
Total Public Safety	33,337.64	0.00	0.00	0.00	0.00	33,337.64

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2013

	General Fund	1st Penny Tax Fund	2nd Penny Tax Fund	Fund	Other Governmental Funds	Total Governmental Funds
430 Public Works:						
431 Highways and Streets	65,583.01					65,583.01
432 Sanitation	3,312.50					3,312.50
433 Water						0.00
434 Electricity						0.00
435 Airport						0.00
436 Parking Facilities						0.00
437 Cemeteries						0.00
438 Natural Gas						0.00
439 Transit						0.00
Total Public Works	68,895.51	0.00	0.00	0.00	0.00	68,895.51
440 Health and Welfare:						
441 Health			35,976.44			35,976.44
442 Home Health						0.00
443 Mental Health Centers						0.00
444 Humane Society						0.00
445 Drug Education						0.00
446 Ambulance	54,151.59					54,151.59
447 Hospitals, Nursing Homes and Rest Homes						0.00
449 Other						0.00
Total Health and Welfare	54,151.59	0.00	35,976.44	0.00	0.00	90,128.03
450 Culture and Recreation:						
451 Recreation	33,331.25					33,331.25
452 Parks						0.00
455 Libraries						0.00
456 Auditorium						0.00
457 Historical Preservation						0.00
458 Museums						0.00
Total Culture and Recreation	33,331.25	0.00	0.00	0.00	0.00	33,331.25

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2013

	General Fund	1st Penny Tax Fund	2nd Penny Tax Fund	Fund	Other Governmental Funds	Total Governmental Funds
460 Conservation and Development:						
463 Urban Redevelopment and Housing						0.00
465 Economic Development and Assistance (Industrial Development)						0.00
466 Economic Opportunity	1,422.75					1,422.75
Total Conservation and Development	1,422.75	0.00	0.00	0.00	0.00	1,422.75
470 Debt Service						0.00
480 Intergovernmental Expenditures						0.00
485 Capital Outlay						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	0.00	0.00
Total Expenditures	253,412.51	0.00	35,976.44	0.00	0.00	289,388.95
Excess of Revenues Over (Under) Expenditures	(28,800.06)	76,737.98	40,637.18	0.00	0.00	11,961.48

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS
GOVERNMENTAL FUNDS
For the Year Ended December 31, 2013

	General Fund	1st Penny Tax Fund	2nd Penny Tax Fund	Fund	Other Governmental Funds	Total Governmental Funds
Other Financing Sources (Uses):						
391.01 Transfers In	29,858.73					29,858.73
511 Transfers Out		(32,028.50)	6,043.73			(25,984.77)
513 Payments to Refunded Debt Escrow Agent						0.00
391.03 Sale of Municipal Property						0.00
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)	29,858.73	(32,028.50)	(6,043.73)	0.00	0.00	3,873.96
391.06 (514) Special Items						0.00
391.05 (515) Extraordinary Items						0.00
Net Change in Fund Balance	1,058.67	44,709.48	34,593.45	0.00	0.00	15,835.44
Fund Balance - Beginning		278,061.42				278,061.42
Adjustments:						
Savings books	(271.49)					(271.49)
						0.00
Adjusted Fund Balance - Beginning	18,302.14	278,061.42	133,391.47	0.00	0.00	429,755.03
FUND BALANCE- ENDING	19,089.32	322,770.90	167,984.92	0.00	0.00	509,845.14

MUNICIPALITY OF Hoven
STATEMENT OF NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
December 31, 2013

	Enterprise Funds					
	Water Fund	Sewer Fund	Liquor Fund	Airport Fund	Totals	Internal Service Funds
ASSETS:						
Current Assets:						
Cash and Cash Equivalents	187,520.84	207,861.79	62,401.91	21,124.46	478,909.00	
106 Cash with Fiscal Agent					0.00	
151 Investments					0.00	
Total Current Assets	187,520.84	207,861.79	62,401.91	21,124.46	478,909.00	0.00
Noncurrent Assets:						
107.1 Restricted Cash and Cash Equivalents	4,000.00				4,000.00	
107.2 Restricted Investments					0.00	
Total Noncurrent Assets	4,000.00	0.00	0.00	0.00	4,000.00	0.00
TOTAL ASSETS	191,520.84	207,861.79	62,401.91	21,124.46	482,909.00	0.00
NET POSITION:						
253.20 Restricted for:						
253.21 Revenue Bond Debt Service					0.00	
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	187,520.84	207,861.79	62,401.91	21,124.46	478,909.00	
TOTAL NET POSITION	187,520.84	207,861.79	62,401.91	21,124.46	478,909.00	0.00

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
For the Year Ended December 31, 2013

	Enterprise Funds					
	Water Fund	Sewer Fund	Liquor Fund	Airport Fund	Totals	Internal Service Funds
Operating Revenue:						
370/380 Charges for Goods and Services	111,896.23	70,407.35	253,143.96	15,432.94	450,880.48	
Revenue Dedicated to Servicing Debt					0.00	
380.05 Lottery Sales			10,929.48		10,929.48	
369 Miscellaneous		373.65	63.42	39.51	476.58	
Total Operating Revenue	111,896.23	70,781.00	264,136.86	15,472.45	462,286.54	0.00
Operating Expenses:						
410 Personal Services	101,183.96	48,025.50	86,075.12	43,977.61	279,262.19	
420 Other Current Expense	10,519.55	34,765.85	40,769.61	15,047.70	101,102.71	
426.2 Materials	54,049.39		126,713.43		180,762.82	
430 Capital Assets					0.00	
Total Operating Expenses	165,752.90	82,791.35	253,558.16	59,025.31	561,127.72	0.00
Operating Income (Loss)	(53,856.67)	(12,010.35)	10,578.70	(43,552.86)	(98,841.18)	0.00
Nonoperating Revenue (Expense):						
330 Operating Grants					0.00	
361 Investment Earnings					0.00	
362 Rental Revenue	101,480.00	65,695.89		130,176.92	297,352.81	
441 Debt Service (Principal)					0.00	
442 Interest Expense (Enter as Negative)	512.50	512.50	2.26		1,027.26	
391.03 Sale of Municipal Property					0.00	
391.20 Long-Term Debt Issued					0.00	
(429)369.01 Other					0.00	
Total Nonoperating Revenue (Expense)	101,992.50	66,208.39	2.26	130,176.92	298,380.07	0.00

MUNICIPALITY OF HOVEN
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
For the Year Ended December 31, 2013

	Enterprise Funds					
	Water Fund	Sewer Fund	Liquor Fund	Airport Fund	Totals	Internal Service Funds
Income (Loss) Before Contributions, Special Items, Extraordinary Items and Transfers	48,135.83	54,198.04	10,580.96	86,624.06	199,538.89	0.00
391.07 Capital Contributions					0.00	
391.1 Transfers In	12,610.00	16,853.50			29,463.50	
511 Transfers Out (Enter as Negative)			(21,250.00)		(21,250.00)	
391.06 (514) Special Items			(94.01)		(94.01)	
391.05 (515) Extraordinary Items					0.00	
Change in Net Position	60,745.83	71,051.54	(10,763.05)	86,624.06	207,658.38	0.00
Net Position - Beginning	130,775.01	136,810.25	73,164.96	(65,499.60)	275,250.62	
Adjustments:						
					0.00	
					0.00	
Adjusted Net Position - Beginning	130,775.01	136,810.25	73,164.96	(65,499.60)	275,250.62	0.00
NET POSITION - ENDING	191,520.84	207,861.79	62,401.91	21,124.46	482,909.00	0.00

CURRENT YEAR'S BUDGET

ORDINANCE NO.
APPROPRIATION ORDINANCE

SECTION 1, BE IT ORDAINED BY THE CITY COUNCIL OF HOVEN, SOUTH DAKOTA THAT THE FOLLOWING SUMS ARE HEREBY APPROPRIATED TO MEET THE OBLIGATIONS OF THE MUNICIPALITY'S:

		2015	TOTAL
GENERAL GOVERNMENT			
	MAYOR AND COUNCIL	15,000.00	
	ELECTION	5,000.00	
	LEGAL	2,400.00	
	FINANCE OFFICE	65,000.00	
			87,400.00
PUBLIC SAFETY			
	AMBULANCE	56,000.00	
	FIRE DEPARTMENT	11,000.00	
	POLICE DEPARTMENT	23,000.00	
			90,000.00
STREET DEPARTMENT			
	STREETS DEPARTMENT	53,000.00	
	LIGHTS	18,000.00	
			71,000.00
CULTURE AND RECREATION			
	SUMMER RECREATION	3,500.00	
	MOSQUITO CONTROL	4,000.00	7,500.00
URBAN AMD DEVELOPMENT			
	ADVERTISING	1,400.00	
			1,400.00
CONTINGENCY FUND			
	CONTINGENCY	6,000.00	
			6,000.00

SANITATION			
	SANITARY LAND FILL	4,000.00	
			4,000.00
TOTAL TAX SUPPORTED FUNDS			267,300.00
SELF SUPPORTING FUNDS			

PUBLIC SERVICE ENTERPRISES	Water	Sewer	Total
WATER AND SEWER	1,300,000.00	1,200,000.00	2,500,000.00
PARK AND POOL			30,000.00
LIQUOR FUND			257,000.00
AIRPORT			50,000.00
TOTAL SELF SUPPORTED FUNDS			2,837,000.00

SECTION II: THE FOLLOWING IS A SUMMARY BY FUNDS OF THE APPROPRIATED AMOUNTS AND THE MEANS OF FINANCING THEM

TAX SUPPORTED FUNDS
MEANS OF FINANCE

ESTIAMTED REVENUE AND BALANCE	84,974.26
(TRANSFERS)	40,000.00
TAX LEVY	91,211.00
TOTAL MEANS OF FINANCE	267,300.00

SELF SUPPORTED FUNDS

ENTERPRISES	EST REVENUE AND BALANCE	APPROP
LIQUOR FUND	255,000	257,000
WATER AND SEWER	2,200,000	2,500,000
PARK AND POOL	30,000	30,000
AIRPORT	47,000	50,000
TOTAL	2,532,000.00	2,837,000

SECTION III: THAT THE CITY OFFICER IS HEREBY DIRECTED TO CERTIFY THE FOREGOING TAX LEVY TO THE RESPECTIVE COUNTY AUDITOR

USER CHARGE ORDINANCE

The regular meeting of the City Council of the City Of Hoven was held the 6th day of August 2012, at 7:30 P.M. Present were Mayor Jack Feldmeier and Councilmen Bob Rausch, Darin Hageman , Francis Karst, Roger Kraft, and Norman Stethem. Not present was Jerry Hartung. Also present was Sam Muntane from Helms and Associates.

The next meeting of the City council will be on September 10th, 2012 at 7:30 P. M.

Mayor Feldmeier called the meeting to order at 7:30 P.M. A motion was made by Hageman and seconded by Stethem to approve the minutes from the July meeting. All voted aye, the motion carried.

Cindy McCloud gave the Liquor store report. She stated that she had a good month. She also stated that the women's bathroom leak was fixed.

Sam Muntane spoke to the Council on the progress at the Airport. The Final inspection has been done and there are a few minor repairs that need to be done before the project in finalized.

The 2nd reading of Ordinance #203 was read. A motion by Karst and a second by Kraft to adopt the Ordinance. Roll call vote was Hageman aye, Stethem aye, Rausch aye, Karst aye, and Kraft aye.

The first reading of Ordinance #204 was read.

A motion was made by Hageman and seconded by Rausch to change the rate for water use from $2.00 a thousand gallons to $3.00 a thousand gallons. This will go into affect on October 1st. The water base rate is $20.00. All voted aye and the motion carried.

Building permits were presented from Jesse Frost and Mike Coyne.

Here is a list of the volunteer firemen: Craig Arbach, Ron Baker, Wade Baus, John Brenner, Mike Duenwald, Allen Frost, Dave Griese, Darin Hageman, Brady Hartung, Jerry Hartung, Jesse Hartung, Joe Hartung, Dennis Hawkinson, Jerry Hericks, Dave Hunnel, Kevin Johnson, Jason Kaup, Mark Kraft, Bob Rausch, Brent Rausch, Gary Reuer, Sam Ruckman, Rick Schaefer, Tim Seurer, Jerad Simon, Rob Spindler, Eric Stuwe, and Jesse Zweber.

A motion was made by Rausch and seconded by Hageman to approve the bills. All voted aye, motion carried.

CINDY MCCLOUD	INSURANCE	450.00
ERIC STUWE	INSURANCE	580.00
WENDY RAUSCH	INSURANCE	580.00
LIQUOR STORE	WAGES	3966.52
GENERAL	WAGES	1841.24
AMBULANCE	WAGES	2126.63
STREETS	WAGES	1427.89
WATER	WAGES	2598.79
POOL	WAGES	4667.86
LANDFILL	WAGES	237.77
FIRE	WAGES	495.34
VENTURE COMMUNICATIONS	PHONE	378.84
AFLAC	INS	98.20
AMERIPRIDE	SUPPLIES	156.58
BUDWEISER	MERCHANDISE	1936.30
CAM WAL	ELECTRICITY	1861.34
CASH-WA	SUPPLIES	513.75
COCA COLA	MERCHANDISE	361.96
COLONIAL RESEARCH	CHEMICAL	704.00
DAKOTA TOMS	MERCHANDISE	115.97
DAKBEV	MERCHANDISE	103.95
DEPT OF REVENUE	SALES TAX	941.49
DEPT OF REVENUE	WATER SAMPLES	13.00
FRITO LAY	MERCHANDISE	50.06
HAGEMANS	MERCHANDISE	422.51
HAWKINS	CHEMICAL	4316.88
HOVEN CO-OP	MAINTENANCE	209.91
MOBRIDGE CANDY	MERCHANDISE	707.46
HOVEN MEDIA	ADVERTISING	288.36
HOVEN LIQUOR STORE	PETTY CASH	92.31

JEROME BEVERAGE	MERCHANDISE	910.20
JOHNSON BROTHERS	MERCHANDISE	1517.70
MID-DAKOTA	WATER	5042.25
REUER SANITATION	GARBAGE	90.00
PRAIRIE STOP	FUEL	420.43
REPUBLIC BEVERAGE	SUPPLIES	1475.63
SHARE CORP	SUPPLIES	1380.00
SDRS	RETIREMENT	1261.42
SS & WH	TAXES	4437.29
VERIZON WIRELESS	PHONES	149.75
HOVEN TRUSTWORTHY HARDWARE	SUPPLIES	148.63
VISA	TRAVEL	153.74
MDU	ELECTRICITY	2228.85
EMERGENCY MEDICAL PRODUCTS	SUPPLIES	1241.30
TOM FROST	GRAVEL	170.00
WEB WATER	WATER	33.00
USDA	LOAN PAYMENT	1114.00
FAULKTON AREA MEDICAL CENTER	SUPPLIES	6.30
DAKOTA SUPPLY GROUP	SUPPLIES	360.91
MARTIN'S DOOR REPAIR	MAINTENANCE	247.45
POTTER CO IMPLEMENT	PARTS	57.95
SOUTH DAKOTA LOTTERY	FEE	100.00
WATERTOWN WHOLESALE	MERCHANDISE	92.39
MYRON	SUPPLIES	175.89
GARY DIETTERLE	FURS	100.00
SLATER OIL	AV GAS	3893.85
HANSEN PLUMBING	MAINTENANCE	179.80
RICHARD SELDAL	ENTERTAINMENT	200.00

Motion by Hageman and seconded by Karst to adjourn. All voted aye, motion carried.

Jack Feldmeier (Mayor) Wendy Rausch (Finance Officer)
Published once at the approximate cost_____

RESOLUTION

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, the City of Hoven (the "City") has determined it is necessary to proceed with improvements to its Water System, including but not limited to the replacement of water lines under South Dakota Highway 47 (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 $353,000 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 Hoven, South Dakota, this 29 day of Sept. 2014.

APPROVED:

_____
Mayor
City of Hoven

(Seal)
Attest: _____
City Finance Officer

FACILITIES PLAN

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

HOVEN HIGHWAY 47 WATERMAIN IMPROVEMENTS
ESTIMATE OF PROBABLE COSTS
JULY 2014

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	L.S.	$21,000.00	$21,000.00
2	8" C900 Watermain Piping	3,077	Ft	$32.00	$98,464.00
3	1" Water Service Pipe	840	Ft	$24.00	$20,160.00
4	1" Water Service Pipe - Bored	912	Ft	$40.00	$36,480.00
5	2" Water Service Pipe	100	Ft	$30.00	$3,000.00
6	2" Water Service Pipe - Bored	100	Ft	$45.00	$4,500.00
7	6" x 1" Saddle w/ Corp Stop	54	Each	$300.00	$16,200.00
8	6" x 2" Saddle w/ Corp Stop	2	Each	$350.00	$700.00
9	1" Curb Stop w/ Riser	54	Each	$275.00	$14,850.00
10	2" Curb Stop w/ Riser	2	Each	$400.00	$800.00
11	Connect To Existing Water Service	56	Each	$300.00	$16,800.00
12	Connect to Existing Watermain	12	Each	$800.00	$9,600.00
13	D.I. Tee	5	Each	$900.00	$4,500.00
14	6" Gate Valve	5	Each	$2,500.00	$12,500.00
15	6" C900 Watermain (Fire Hydrant Lead)	158	Ft	$30.00	$4,740.00
16	Fire Hydrant	5	Each	$3,600.00	$18,000.00
17	Seeding and Fertilizing	0.20	Acre	$4,500.00	$900.00
	Construction Subtotal				$283,194.00
	Construction Contingencies (10%)				$28,300.00
	Construction Total				**$311,494.00**
	Design Engineering				$15,600.00
	Bidding & Negotiation				$2,500.00
	Construction Engineering				$17,200.00
	Legal and Administrative				$6,200.00
	Estimated Project Total				**$352,994.00**

NOTICE OF PUBLIC HEARING

NOTICE OF PUBLIC HEARING
for the
Hoven Waterline under SD Highway 47 Project

The City of Hoven is seeking $353,000 of funding from the Board of Water and Natural Resources for the replacement of water mains under South Dakota Highway 47. 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 Hoven City Hall on September 29 at 7:00pm.

RECEIVED
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Division of Financial
& Technical Assistance

FACILITY PLAN

FOR THE

WATER SYSTEM

IN

HOVEN, SOUTH DAKOTA

HELMS PROJECT # A3846

MARCH 2009

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

FACILITY PLAN
FOR THE
WATER SYSTEM
IN
HOVEN, SOUTH DAKOTA

PROJECT NUMBER A-3846
MARCH 2009

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 _____
Jay C. Koch, P.E.

Registration Number 6127

Date March 20, 2009

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
6127
JAY C.
KOCH
SOUTH DAKOTA

Helms & ASSOCIATES
CIVIL ENGINEERS & LAND SURVEYORS
P.O. Box 111
Aberdeen, South Dakota 57402

APPROVED
South Dakota
Department of
Environment and
Natural Resources
DATE 1/14/11
Andrew Bruels

HOVEN WATER SYSTEM STUDY

A-3846

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Appendix A Environmental Comment Letters

1 INTRODUCTION

1.1 PURPOSE

The City of Hoven has contracted with the engineering firm of Helms and Associates 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 complete study are presented in this Facility Plan. The Facility Plan contains the information on which the City Council of Hoven can make cost-effective decisions. The City Council will, after appropriate public input, determine what its best options are to make any needed improvements that are identified in the Facility Plan.

1.2 SCOPE

The scope of the study authorized by the City Council includes the following work to be performed by Helms and Associates:

1) Complete an analysis of 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 evaluate current and future needs.
3) Complete a general economic analysis and comparison of various alternatives.
4) Prepare a written report, with maps and sketches, setting forth the findings and recommendations of the Preliminary Study, provide Hoven with ten (10) copies of said report and meet with Hoven to review said report.
5) Assist in the presentation of the findings and recommendations of the Preliminary Study at not more than one (1) public hearing.

2 COMMUNITY DESCRIPTION

2.1 GENERAL INFORMATION

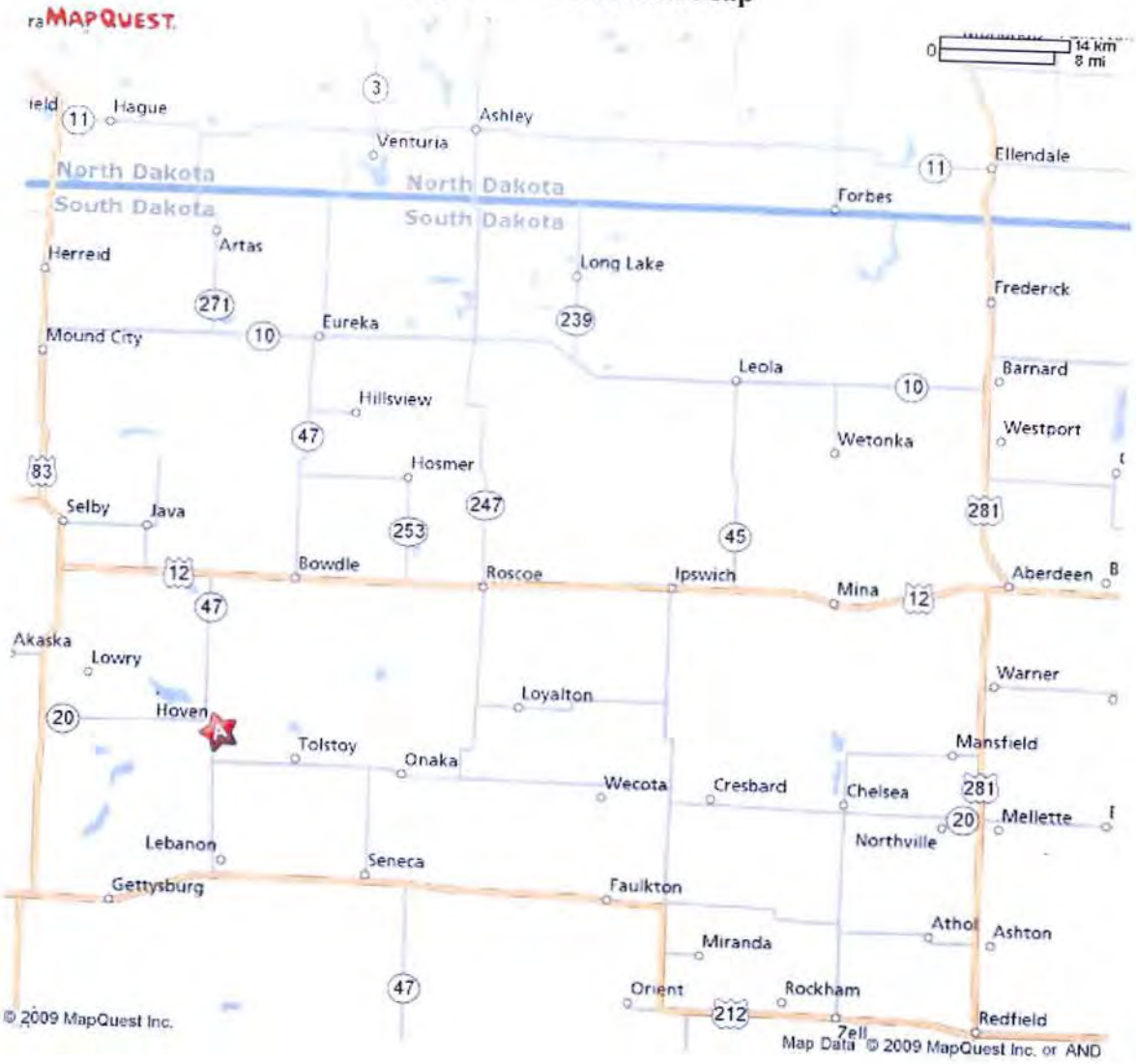
The City of Hoven is located in the northeast corner of Potter County, situated in the north-central portion of South Dakota. Hoven is located 63 miles west and 15 miles south of Aberdeen, South Dakota along SD Highways 20 and 47 as indicated on Figure 2.1-1. The City has an aldermanic type of government, consisting of a Mayor and six council members. These elected representatives hire and oversee staff that manages the day to day activities and municipal enterprises undertaken by the City.

Potter County is in the north central part of South Dakota. It has a total surface area of approximately 574,720 acres of which 20,480 acres are water. Other communities located within the county include Gettysburg, Tolstoy and Lebanon. General livestock and farming are the major sources of income within the county. Corn, soybeans, hay and wheat are the main crops. Hoven 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

Hoven's population is 511 according to the 2000 census. The most recent Census Bureau data available at the time of this report indicates that Hoven's median age was 43.6 years as compared to the state's median age of 35.6. At the time that the census data was gathered, 27% 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%.

Figure 2.2-1 Location Map



Data from the 2000 census indicates that the community's median household income of $28,942 was about $1,184 lower than Potter County's median household income of $30,086. At the time the census data was gathered, about 8.8% of the families living in the community had incomes at or below the poverty level while 8.9% of the families living in Potter County fell into this category.

2.3 POPULATION PROJECTIONS

The 2000 Census Bureau data shows the population for Hoven to be 511. Table 2.3-1 and Figure 2.3-1 indicate Census Bureau population data from 1910 to 2030. As shown by the historical data, the population has had a steady decline since 1960. The decline in recent years is typical for rural communities such as Hoven. 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 should stabilize with a slight decline. The Hoven School District has an approximate school enrollment of 156 students in grades Kindergarten through 12th grade.

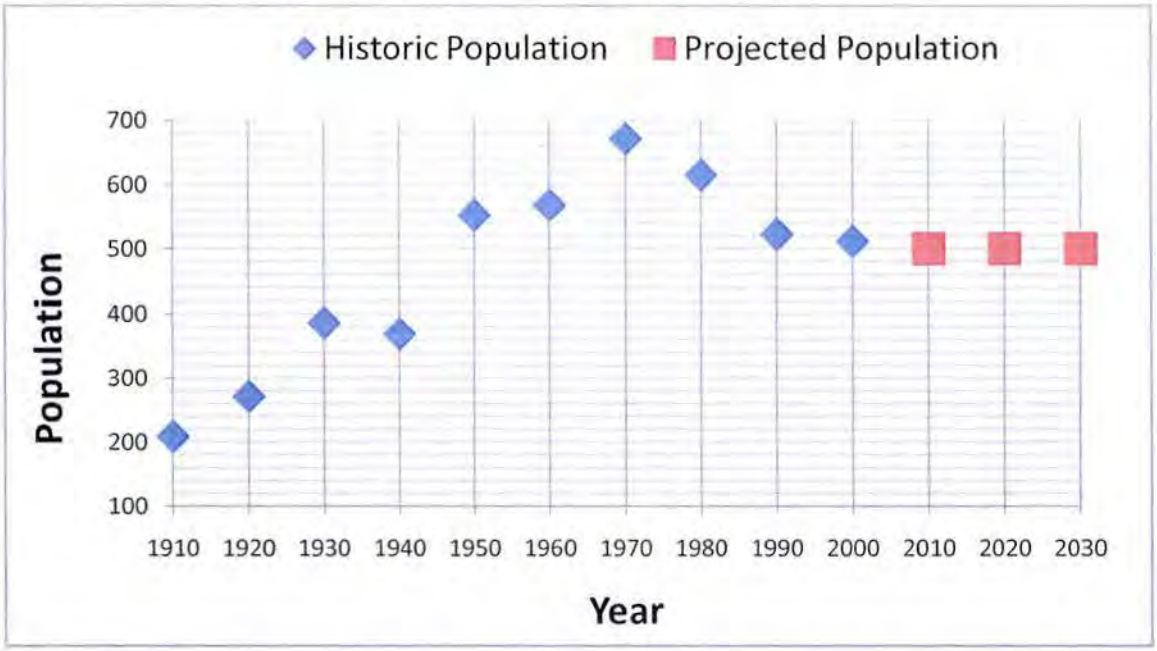
As with all communities of similar size, there are always efforts to entice new industrial and commercial enterprises into locating in Hoven. Even though this possibility exists, it is not anticipated that these would have a significant impact on the projected water usage.

Table 2.3-1 Historic and Projected Population

Year	Population	Year	Population
1910	209	1980	615
1920	271	1990	522
1930	386	2000	511
1940	369	2010 (Est)	500
1950	552	2020 (Est)	500
1960	568	2030 (Est)	500
1970	671		

The data shown in Table 2.3-1 is shown graphically in Figure 2.3-1 on the following page.

Figure 2.3-1 Historic and Projected Population



2.4 CLIMATE

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 months of April through September. Approximately 80% of the total annual precipitation falls during these months. Normal precipitation for the area is 17.0 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. 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

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 related to this contact is placed in Appendix A.

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 related to this contact is placed in Appendix A.

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 related to this contact is placed in Appendix A.

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. Correspondence related to this contact is placed in Appendix A.

2.5.3 Wild and Scenic Rivers

Comments were requested in regards to "Wild and Scenic Rivers" in the area. Correspondence related to this contact is placed 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 related to this contact is placed in Appendix A.

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 related to this contact is placed in Appendix A.

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 related to this contact is placed in Appendix A.

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 Hoven and Potter County.

2.7 MITIGATION ADVERSE IMPACTS

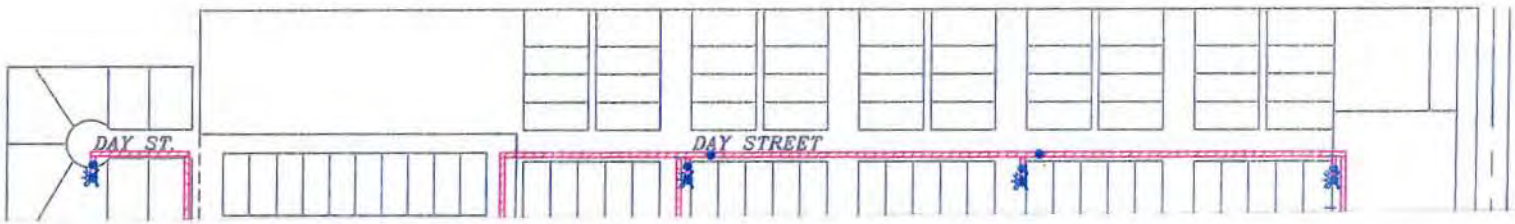
Adverse impacts will be minimized to the greatest extent possible by the implementation of accepted cautionary measures. Temporary and permanent erosion control will be included in construction contracts. Appropriate permits will be secured prior to the discharge of any trench dewatering or storm waters, and protection of public health, safety and welfare will be incorporated into the specifications and contract documents.

3 EVALUATION OF EXISTING WATER SYSTEM

3.1 GENERAL INFORMATION

The City of Hoven currently provides water service to approximately 239 connections of which 39 are businesses. The City currently purchases 92% of its domestic demand from Mid-Dakota Rural Water. They also blend water from their wells with the Mid-Dakota Rural water. Figure 3.1-1 shows the existing water distribution system.

The existing water distribution facilities were installed in the 1940's and/or 1950's and consist mainly of 8", 6" and 4" cast iron piping. The piping from the local wells is 3½" and 2" PVC piping and the feed from Mid-Dakota Rural Water is a 6" PVC line. With the exception of the PVC piping from the wells and the Mid-Dakota line, the general condition of the distribution lines is poor. The design life for the cast-iron lines is well past its expected 30-year lifespan. The sizing of the waterlines also greatly reduces the available water quantities and pressures. The City also has problems with valves and fire hydrants not working properly. A complaint from the maintenance personnel, and homeowners, is they have to shut down large portions of the community to make repairs. Once the water is turned back on, the entire community then suffers from temporary poor water quality until the system is thoroughly flushed. This is an added burden to the maintenance personnel, the community, and the City. The proposed project will look into the replacement of the water distribution system in the community.



1 OF 2	EXISTING WATER DISTRIBUTION SYSTEM CITY OF HOVEN HOVEN, SOUTH DAKOTA	Drawn By: JWR Chk' by: PROJ. #: A-3846 DWG: A-3846 WS DATE: 12/2006	HELMS and ASSOCIATES CONSULTING ENGINEERS AND LAND SURVEYORS P.O. BOX 111 - 221 BROWN COUNTY HIGHWAY #19 ABERDEEN, SOUTH DAKOTA 57401 - PHONE: (605)225-1212 - FAX: (605)225-3189

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.

Registration No.

No.	Revisions	By	App.	Date

3.2 WATER DEMAND

To evaluate the City of Hoven's potential to meet the needs of the future, a review of past water usage records was completed. Records of water usage from 2004 through 2006 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 Hoven.
- Water usage billed per month is based on data provided by the City of Hoven.
- Water pumped per month includes the amount of water purchased from Mid-Dakota Rural Water and water provided by the City's wells.

Table 3.2-1 Water Use Records

Mid-Dakota Rural Water Usage

	2004	2005	2006		2004	2005	2006
Jan	1,952,000	1,880,000	1,846,000	Aug	3,896,000	3,547,000	3,215,000
Feb	1,006,000	1,754,000	1,747,000	Sep	2,958,000	2,172,000	2,900,000
Mar	2,316,000	1,575,000	1,587,000	Oct	1,897,000	2,138,000	2,467,000
Apr	1,894,000	1,946,000	1,981,000	Nov	1,921,000	1,852,000	1,972,000
May	2,414,000	2,099,000	2,790,000	Dec	1,730,000	1,664,000	2,329,000
Jun	2,338,000	2,182,000	3,082,000	**Total**	**27,634,000**	**25,867,000**	**29,790,000**
Jul	3,312,000	3,058,000	3,874,000				

City Well Water Usage

2004	2005	2006
3,661,600	1,280,500	2,977,600

Average daily usage for this report will be determined using water records from 2006. The City purchased 29,790,000 gallons of water from Mid-Dakota Rural Water. The City pumped an additional 2,977,600 gallons from the North Well. This is a total of 32,767,600 gallons. Water sales in 2006 were for approximately 24,761,400 gallons. The difference of just over 8,000,000 gallons is losses in the system and accounts for over 24% of the City's water usage. The typical reasons for losses in the system are leaks, slow or malfunctioning meters, fire fighting and water used at non-metered locations. There are some non-metered locations in the system that includes the City Hall and the City pool. Based on a recent conversation with City officials, the water meters need to be replaced. The City should try to keep the water loss below the generally accepted standard of 15%.

The Cass Clay Dairy Plant utilized 14,293,785 gallons of water in 2006. Using the total water purchased and pumped, the average daily usage would be 89,774 gallons, which is more than the available 60,000-gallon storage.

The maximum monthly community water usage in 2006 was 4,866,533 gallons, which results in a maximum daily usage of 156,985 gpd or 109.0 gpm or 307 gpd per capita.

A significant increase in water usage is noticeable during the growing months of May through September. It should be noted that above-average precipitation during these months typically lessens the increase in water usage just as the below-normal precipitation typically magnifies the increase in water usage.

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. The future population of Hoven is expected to stabilize or show a slight decline. For this reason the present population is used for determining the future water demands and as discussed in

Section 3.2. An average day per capita demand of 307 gpd will be utilized for the remainder of the report.

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.

3.4 WATER SOURCES

3.4.1 Mid-Dakota Rural Water

The City of Hoven is under contract with the Mid-Dakota Rural Water to supply water at 74 gpm over a 24-hour period or 106,560 gpd which is substantially less than the calculated peak day of 156,985 gpd.

The purchase of the current demand rate of water from Mid-Dakota, the City is billed a demand charge, debt retirement, and a costs per 1,000 gallons used. The annual cost of the water is approximately $43,000 per year.

3.4.2 City Well Water

The City of Hoven also utilizes well water to supplement their water demands. The City well can pump up to 350 gpm and is most often used in the hot summer months of June, July and August.

3.5 STORAGE

The City currently has only one water reservoir. The 60,000-gallon elevated water tower was constructed in 1940'/50's. Some minor improvements have been made to the tower the past years but there is need for major improvements and the City wants a more in-depth rehabilitation or replacement of the water tower. The rehabilitation would include interior and exterior coatings along with OSHA upgrades. The OSHA upgrades would include changes to the tank vent to add another access point, adding a step-off platform to the tank railing/ladder, adding railings around the roof access hatches, and changing the tank riser hatch to a 24 inch manway. The work would also include the addition of a recirculating pump to prevent tank freeze-up and removal and replacement of electrical fixtures. The elevated storage tank is approximately 75 feet to the bottom of the tank.

Section 3.2. An average day per capita demand of 307 gpd will be utilized for the remainder of the report.

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.

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The purchase of the current demand rate of water from Mid-Dakota, the City is billed a demand charge, debt retirement, and a costs per 1,000 gallons used. The annual cost of the water is approximately $43,000 per year.

3.4.2 City Well Water

The City of Hoven also utilizes well water to supplement their water demands. The City well can pump up to 350 gpm and is most often used in the hot summer months of June, July and August.

3.5 STORAGE

The City currently has only one water reservoir. The 60,000-gallon elevated water tower was constructed in 1940'/50's. Some minor improvements have been made to the tower the past years but there is need for major improvements and the City wants a more in-depth rehabilitation or replacement of the water tower. The elevated storage tank is approximately 75 feet to the bottom of the tank.

Figure 3.5-1 60,000-Gallon Elevated Storage Reservoir

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. The Insurance Service Office Fire Suppression Rating schedule requires a minimum rated flow of 250 gpm for a minimum of 2 hours for fire fighting capabilities. The water system should be capable of providing the maximum flow rate (109 gpm) and the fire flow rate (250 gpm) for the 2-hour period. Therefore, storage or pumping capabilities of, (109 gpm + 250 gpm) x 120 minutes, 43,080 gallons is required. Assuming the 60,000 gallon elevated tank is only ½ full at peak demand, the storage available is less than the required flow by approximately 13,080 gallons (43,080 gallons – 30,000 gallons). The City has wells with over 350 gpm capabilities and the flow rate from Mid-Dakota is 74 gpm. Therefore, the City does have available pumping capacity to make up for the shortage of storage for fire fighting capabilities. However, the storage

capacity for the community should be sufficient to carry the community through a fire crisis.

The contracted flow rate of 74 gpm from Mid-Dakota Rural Water equates to a daily total of 106,560 gpd. The maximum daily usage is 156,985 gpd. The analysis used will assume that 90% of the maximum consumption is utilized during the hours from 6:00 am to 8:00 pm or a 14 hour period. Mid-Dakota Rural Water can provide 106,560 gallons per day; however, the analysis above indicates 90% or 141,286 gallons will be utilized in the 14-hour period. The analysis shows that the entire allotment from Mid-Dakota Rural water would be utilized during this time period. The balance would be a combination of City wells and on-site storage.

The above-mentioned analysis shows that the City does have enough storage to get them through a typical day. However, storage is also required for interruptions in service from the wells and/or Mid-Dakota Rural Water. This emergency storage is required due to power outages, failure of pumping equipment, or need to take a supply line out of service for repair. The event that all sources of water would be cut-off simultaneously would be rare. However, it would be prudent to consider temporary interruptions in water deliveries from the well. Storage capabilities for the City should include a minimum of three days of storage at maximum daily flow rates. If interruptions occur during peak water usages, the City would require water restrictions. To determine the amount of storage required, Mid-Dakota Rural Water sources will be included in the analysis. Mid-Dakota Rural Water can provide approximately 106,560 gallons per day for three days or approximately 319,680 gallons. The maximum summer average daily usage is 146,096 gallons per day or a total of 438,288 gallons for three days. The fire flow rates for a two-hour period would be 43,080 gallons. The minimum storage for interruptions is the difference between supply, fire flows, and usage and would be approximately 161,688 gallons. Therefore; 100,000 to 150,000 gallons of additional storage is needed.

The Cass Clay Dairy uses has peak flows well over 100,000 gallons per day, additional storage should be considered over and above the analysis above to insure no interruptions

in service. Since the average of 39,000 gallons is included in the analysis, additional storage for the peak flows should be included in the storage requirements. The storage for these peaks flows would be 25,000 gallons for 3 days, or 75,000 gallons of additional storage. With the added peak flows of the dairy, the recommended storage would be approximately 236,000 gallons. Therefore, the community should consider adding ground storage for approximately 170,000 to 200,000 gallons.

3.6 DISTRIBUTION SYSTEM

Hoven's water distribution system consists of two-inch to eight-inch pipe. Most of the system is composed of CIP. The CIP is old and brittle. Typically, the inside of CIP will corrode over time reducing the inside diameter and capacity of the pipe. The distribution system is shown in Figure 3.1-1.

Currently, the existing system has 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.

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 City's distribution system.

3.6.2 Hydraulic Evaluation

A hydraulic evaluation of the water system was conducted by the KYPIPE 2000 Version 3.011 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. Three types of hydraulic analyses were performed with the KY Pipe 2000 hydraulic program to evaluate the City of Hoven's distribution system. The three types of hydraulic analyses are a general system analysis which provides a snapshot of the system at the set parameters, fire flow analysis and an extended period simulation (EPS). 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 2 feet per second, the corresponding friction loss begins to climb rapidly with a velocity of 5 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

- Peak Hour Demand

Mays (Water Distribution Systems Handbook) states that the peak hour to average day flow ratio typically ranges from 2.0:1 to 7.0:1. It is our opinion that the peak hour to average day ratio should be modeled as 5.0. For the modeling we decided to model the system without the water usage from the Cass Clay cheese plant. Based on the an average daily usage of 130,000 gallons minus cheese plant water usage of 39,000 galls equals 91,000 gallons. Using the peak hour to average day ratio of 5.0 the modeled peak hour flow rate is estimated to be 316 gpm (91,000 * 5.0 / 24 / 60). This flow will be utilized in the general analysis with the 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 163 gpm (156,985 / 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 3.7.3.
- The operating elevation of the water tower is set to the mid-tank 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."*

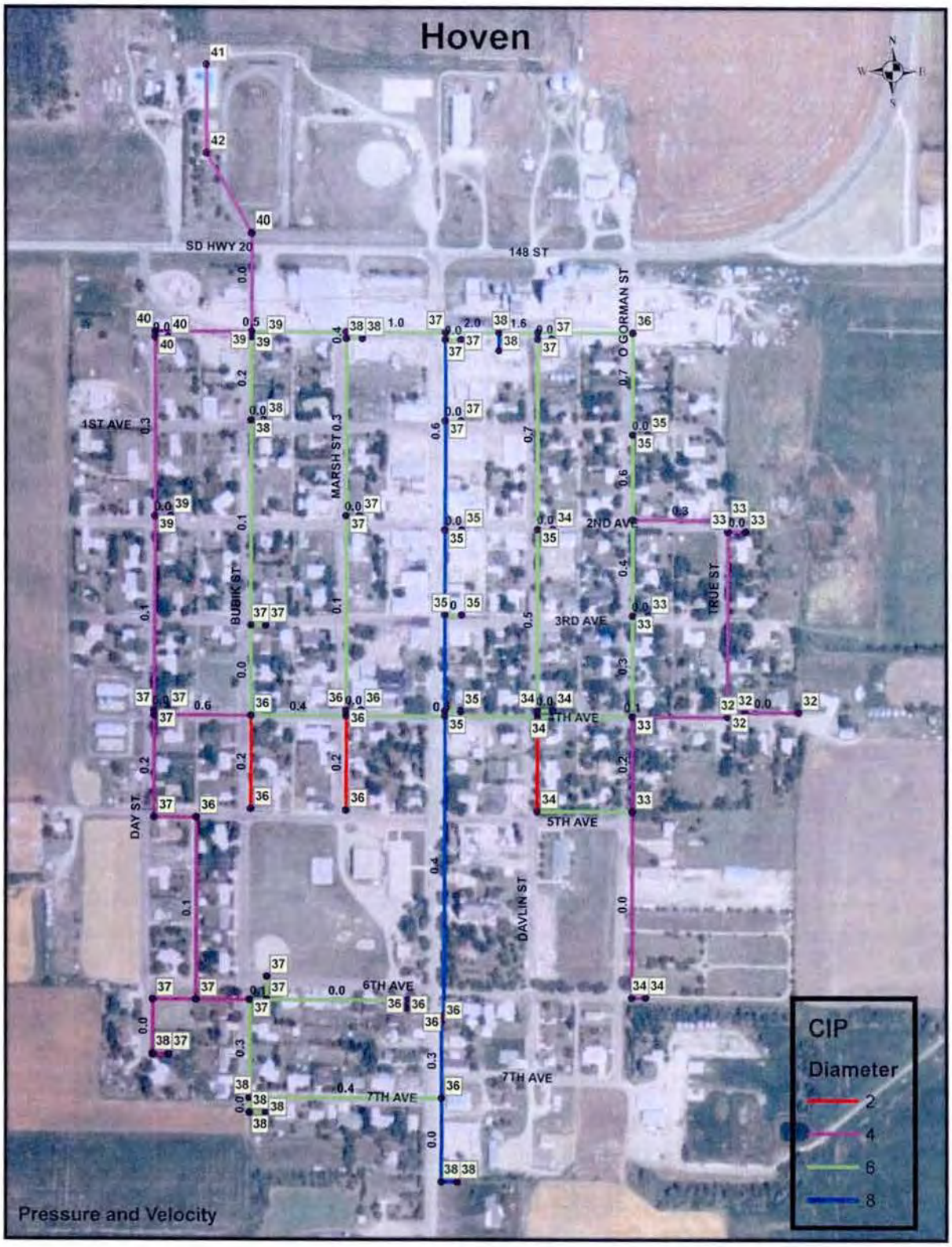
Section 7.3.1 of the Recommended Standards for Water Works by the Committee of the Great Lakes further recommends a minimum working pressure of 35 psi with a normal working pressure of 60 to 80 psi. The AWWA Distribution System Handbook by Mays states on page 3.8 that low operating pressures of less 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 3.7.4-1.

Table 3.6.4-1 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

To check the water system for low-pressure problems, a high demand is simulated. Figure 3.6.4-1 indicates that the operating pressures for the majority of the town are below the minimum recommended pressure of 40 psi. This coincides with reports from the City about low pressure complaints.

Figure 3.6.4-1 Existing Pressure Analysis 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 according to Section 3.7.3.
- The operating level of the tower is set to the mid-tank level.
- The minimum residual pressure is set at 20 psi.

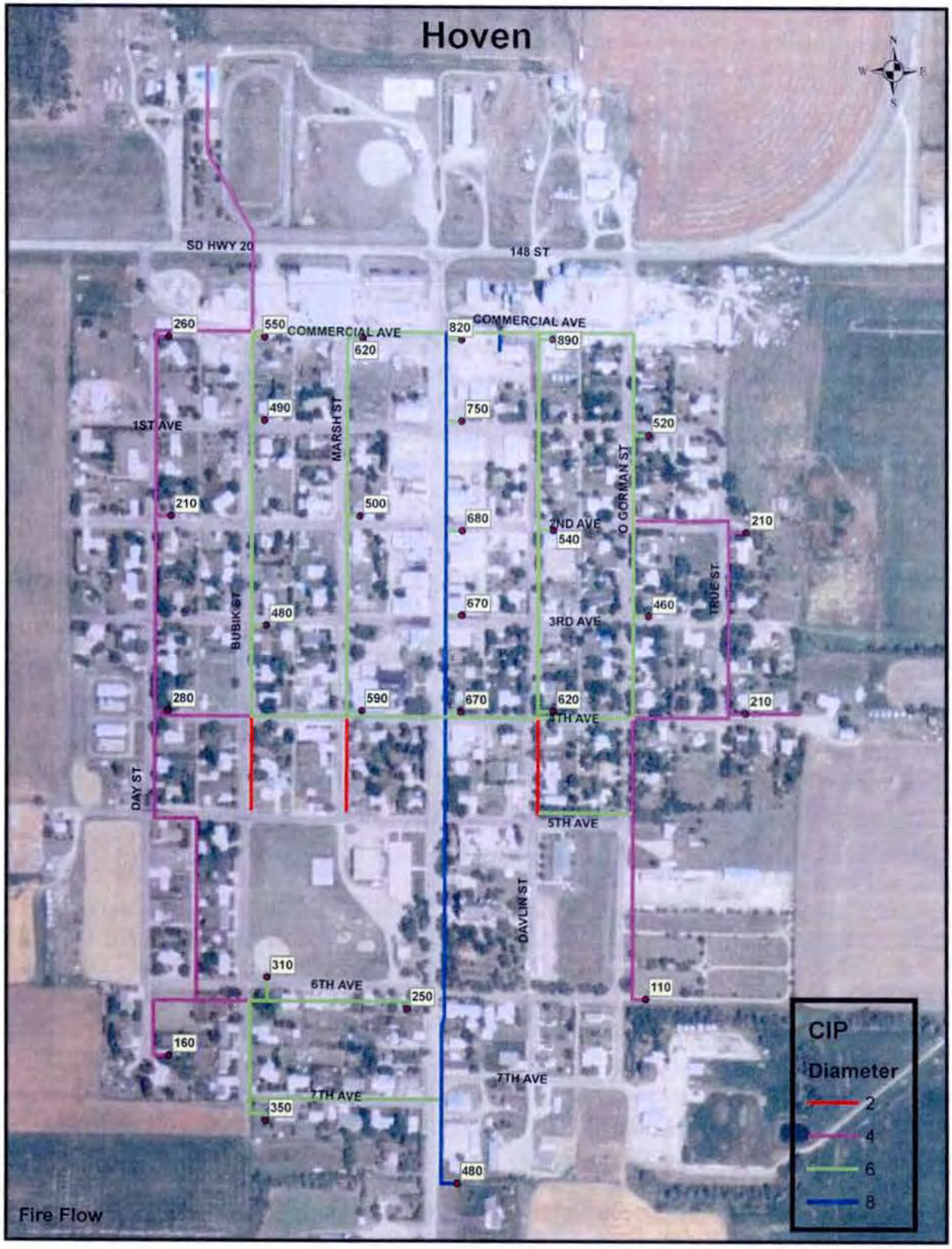
Main pipelines are to deliver the needed fire flow to each hydrant in accordance with the ISO guidelines. The ISO guidelines are based on a number of variables including size of structure, construction material, occupancy, exposure and connections to other structures. For one- and two-family dwellings 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, the flows are below 500 gpm (the minimum by ISO) in much of the community. However, the flows are around 700 gpm in the business district. The low flow can be expected with the large amount of cast iron and 4-inch pipe still in use throughout the system. Over time, the inside of the cast iron will corrode and the inside diameter will decrease significantly.

Figure 3.6.5-1 Existing Fire Flow Analysis under Peak Day Demand



3.6.6 Future Conditions

Information related to project need and the planning area can be 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 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.

4 DEVELOPMENT AND EVALUATION OF ALTERNATIVES

4.1 GENERAL

The alternatives developed for the City of Hoven 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, 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

The alternatives relating to Hoven'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. 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 4.3-1.

Table 4.3-1 Equivalent Uniform Annual Cost Terminology and Values Used

Term	Definition	Value Used
Interest = I	Annual interest rate	4.125%
Salvage Value = SV	Value of component at end of 20-year design life	0% or 60%
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	44.6%
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	1300%
Equivalent Uniform Annual Costs = EUAC	Annual cost of total present worth of capital and annual costs	7.44%
Design Life	Length of time facilities are projected to operate and/or meet design parameters	20 years

4.4 WATER SOURCE

Hoven purchases 92% of its domestic demand from Mid-Dakota Rural Water with a contract flow rate of 74 gpm. The combination of the water from Mid-Dakota Rural Water and the city wells provides enough flow to meet the peak day demand. There are no negative characteristics of Hoven's water source.

4.5 WATER STORAGE

The negative characteristics of Hoven's water storage are summarized below:

- The City does not have adequate water storage; interruptions such as power outage, pump failure, or the need to take a supply line out of service for repair will severely limit the amount the water available to the community.
- The City should complete some maintenance improvements to the elevated water tower. The improvements would include interior and exterior coatings along with OSHA upgrades to the tank.

4.6 Water Storage Alternative 1: Do Nothing

The first alternative for the water storage is to do nothing. This alternative will not help provide the necessary storage for fire protection of the community. Therefore, this alternative will not be discussed any further.

4.7 Water Storage Alternative 2: New 180,000-Gallon Ground Storage Tank

Water Storage Alternative 2 recommends that the City should consider adding a new 180,000-gallon bolted steel ground storage tank. Bolted steel tanks have a long life expectancy and the maintenance is very limited compared to welded tanks. Along with the proposed ground storage tank, the elevated water tank will be rehabilitated. The rehabilitation will include interior and exterior coatings along with the required OSHA upgrades. The cost for this alternative is shown below in Table 4.5-1.

4.4 WATER SOURCE

Hoven purchases 92% of its domestic demand from Mid-Dakota Rural Water with a contract flow rate of 74 gpm. The combination of the water from Mid-Dakota Rural Water and the city wells provides enough flow to meet the peak day demand. There are no negative characteristics of Hoven's water source.

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- The City does not have adequate water storage; interruptions such as power outage, pump failure, or the need to take a supply line out of service for repair will severely limit the amount the water available to the community.
- The City should complete some maintenance improvements to the elevated water tower.

4.5.1 Water Storage Alternative 1: Do Nothing

The first alternative for the water storage is to do nothing. This alternative will not help provide the necessary storage for fire protection of the community. Therefore, this alternative will not be discussed any further.

4.5.2 Water Storage Alternative 2: New 180,000-Gallon Ground Storage Tank

Water Storage Alternative 2 recommends that the City should consider adding a new 180,000-gallon bolted steel ground storage tank. Bolted steel tanks have a long life expectancy and the maintenance is very limited compared to welded tanks. The cost for this alternative is shown below in Table 4.5-1.

Table 4.5-1 Cost Estimate for Storage Alternative 2

Item Number	Item Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	L.S.	$28,300.00	$28,300.00
2	180,000 Gallon Tank w/Foundation	1	L.S.	$225,000.00	$225,000.00
3	Pump House Building w/Foundation	1	L.S.	$80,000.00	$80,000.00
4	Booster Pump w/Piping	1	L.S.	$25,000.00	$25,000.00
5	Electrical Service and Connections	1	L.S.	$5,500.00	$5,500.00
6	8" PVC Watermain	150	Ft.	$25.00	$3,750.00
7	Misc. Fittings	1	L.S.	$15,000.00	$15,000.00
8	Water Tower Rehabilitation	1	L.S.	$100,000.00	$100,000.00
	Subtotal				$482,550.00
	Contingencies @ 10%				$48,300.00
	Construction Total				**$530,850.00**
	Design Engineering				$40,000.00
	Construction Engineering				$40,000.00
	Legal & Administration				$5,000.00
	Bonding				$5,000.00
	Total Probable Construction Costs				**$620,850.00**

Table 4.5-2 EUAC for Storage Alternative 2

A. Construction Cost

Item Description	Cost	SV	PW SV	NPW
Mobilization	$28,300.00	$0.00	$0.00	$28,300.00
180,000 Gallon Tank w/Foundation	$225,000.00	$135,000.00	$60,149.70	$164,850.30
Pump House Building w/Foundation	$80,000.00	$48,000.00	$21,386.56	$58,613.44
Booster Pump w/Piping	$25,000.00	$15,000.00	$6,683.30	$18,316.70
Electrical Service and Connections	$5,500.00	$3,300.00	$1,470.33	$4,029.67
8" PVC Watermain	$3,750.00	$2,250.00	$1,002.50	$2,747.50
Misc. Fittings	$15,000.00	$9,000.00	$4,009.98	$10,990.02
Water Tower Rehabilitation	$100,000.00	$0.00	$0.00	$100,000.00
Capital Costs	$138,300.00	$0.00	$0.00	$138,300.00
Total Construction Cost	$620,850.00	$212,550.00	$94,702.36	$526,147.64

B. Operation and Maintenance Costs for Proposed Construction

Description	Annual Costs	NPW
Labor	$2,000.00	$26,882.26
Utilities	$7,500.00	$100,808.48
Materials	$1,500.00	$20,161.70
Miscellaneous	$1,500.00	$20,161.70
Equipment Replacement	$1,500.00	$20,161.70
Subtotal	$14,000.00	$188,175.83

C. Equivalent Uniform Annual Cost

NPW Construction Cost	$526,147.64
NPW of O&M Costs	$188,175.83
Total Net Present Worth	$714,323.47
Equivalent Uniform Annual Cost	**$53,144.60**

4.5.3 Water Storage Alternative 3: New 250,000-Gallon Standpipe Water Tower

Water Storage Alternative 3 recommends replacing the existing 60,000 gallon elevated water with a new 250,000-gallon stand pipe water tower. The reservoir is sized adequately for the current and future water demand and would eliminate the need for the ground storage tank and the necessary piping and pumps. The cost for this alternative is shown below in Table 4.5.3.

Table 4.5-3 Cost Estimate for Storage Alternative 3

Item Number	Item Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	L.S.	$57,900.00	$57,900.00
2	250,000 Gallon Stand Pipe Tank	1	L.S.	$700,000.00	$700,000.00
3	Connections and Misc. Fittings	1	L.S.	$20,000.00	$20,000.00
4	8" PVC Watermain	150	Ft.	$25.00	$3,750.00
	Subtotal				$781,650.00
	Contingencies @ 10%				$78,200.00
	Construction Total				**$859,850.00**
	Design Engineering				$60.00
	Construction Engineering				$88,000.00
	Legal & Administration				$8,000.00
	Bonding				$8,000.00
	Total Probable Construction Costs				**$963,910.00**

Table 4.5-4 EUAC for Storage Alternative 3

A. Construction Cost

Item Description	Cost	SV	PW SV	NPW
Mobilization	$57,900.00	$0.00	$0.00	$57,900.00
250,000 Gallon Tank w/ Foundation	$700,000.00	$420,000.00	$187,132.41	$512,867.59
Connections and Misc. Fittings	$20,000.00	$12,000.00	$5,346.64	$14,653.36
8" PVC Watermain	$3,750.00	$2,250.00	$1,002.50	$2,747.50
Capital Costs	$182,260.00	$0.00	$0.00	$182,260.00
Total Construction Cost	$963,910.00	$434,250.00	$193,481.54	$770,428.46

B. Operation and Maintenance Costs for Proposed Construction

Description	Annual Costs	NPW
Labor	$2,000.00	$26,882.26
Utilities	$0.00	$0.00
Materials	$500.00	$6,720.57
Miscellaneous	$500.00	$6,720.57
Equipment Replacement	$0.00	$0.00
Subtotal	$3,000.00	$40,323.39

C. Equivalent Uniform Annual Cost

NPW Construction Cost	$770,428.46
NPW of O&M Costs	$40,323.39
Total Net Present Worth	$810,751.85
Equivalent Uniform Annual Cost	**$60,318.72**

4.6 WATER DISTRIBUTION

The negative characteristics of Hoven's water distribution system are summarized below:

- Water customers in the city are experiencing low pressure problems.
- The existing lines mainly the CIP have outlived its useful life expectancy.
- The amount of CIP creates a large amount of losses in the system. This reduces the pressure and fire flow to the system.
- The water losses are higher than the acceptable limit of 15%.
- Dead-end lines significantly increase the potential for health concerns.

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: New PVC Lines

Water Distribution Alternative 2 recommends that all of the CIP be replaced with PVC pipe of similar size. As discussed previously when CIP is old, it becomes brittle and has a tendency to corrode on the inside. This corrosion greatly decreases the capacity of the pipe. The City has been experiencing a couple breaks a year with the CIP. The frequency of the breaks is only expected to increase in the future. The proposed PVC pipe will increase the pressures throughout the entire system and show a drastic improvement to the fire flow. It is also assumed that the replacement of the CIP will help reduce the amount of water losses in the system. The cost estimate for Distribution Alternative 2 is shown is the following table.

Table 4.6.2-1 Cost Estimate for Distribution Alternative 2

Item Number	Item Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	L.S.	$80,300.00	$80,300.00
2	2" PVC Class 200 Watermain	1,000	Ft.	$14.00	$14,000.00
3	4" PVC Class 200 Watermain	7,000	Ft.	$15.00	$105,000.00
4	6" PVC Class 200 Watermain	9,000	Ft.	$16.50	$148,500.00
5	8" PVC Class 200 Watermain	2,300	Ft.	$19.00	$43,700.00
6	4" Valve w/ Box	15	Each	$800.00	$12,000.00
7	6" Valve w/Box	30	Each	$875.00	$26,250.00
8	8" Valve w/Box	5	Each	$1,000.00	$5,000.00
9	Fire Hydrant	32	Each	$2,200.00	$70,400.00
10	Asphalt Street Repair	4,000	SqYd	$32.00	$128,000.00
11	Chip Seal Street Repair	30,000	SqYd	$4.00	$120,000.00
12	1" Copper Service	9,750	Ft.	$16.00	$156,000.00
13	2" Copper Service	250	Ft.	$20.00	$5,000.00
14	1" Saddle and Corp Stop	255	Each	$300.00	$76,500.00
15	2" Saddle and Corp Stop	10	Each	$365.00	$3,650.00
16	1" Curb Stop and Box	255	Each	$150.00	$38,250.00
17	2" Curb Stop and Box	10	Each	$250.00	$2,500.00
18	Concrete Sidewalk Repair	10,000	SqFt	$6.50	$65,000.00
19	Curb & Gutter Repair	2,700	Ft.	$25.00	$67,500.00
20	Misc. Fittings	1	L.S.	$35,000.00	$35,000.00
	Subtotal				$1,202,550.00
	Contingencies @ 10%				$120,300.00
	Construction Total				**$1,322,850.00**
	Design Engineering				$75,000.00
	Construction Engineering				$90,000.00
	Legal & Administration				$10,000.00
	Bonding				$10,000.00
	Total Probable Construction Costs				**$1,507,850.00**

Table 4.6.2-2 EUAC for Distribution Alternative 2

A. Construction Cost

Item Description	Cost	SV	PW SV	NPW
Mobilization	$80,300.00	$0.00	$0.00	$80,300.00
2" PVC Class 200 Watermain	$14,000.00	$8,400.00	$3,742.65	$10,257.35
4" PVC Class 200 Watermain	$105,000.00	$63,000.00	$28,069.86	$76,930.14
6" PVC Class 200 Watermain	$148,500.00	$89,100.00	$39,698.80	$108,801.20
8" PVC Class 200 Watermain	$43,700.00	$26,220.00	$11,682.41	$32,017.59
4" Valve w/ Box	$12,000.00	$7,200.00	$3,207.98	$8,792.02
6" Valve w/Box	$26,250.00	$15,750.00	$7,017.47	$19,232.53
8" Valve w/Box	$5,000.00	$3,000.00	$1,336.66	$3,663.34
Fire Hydrant	$70,400.00	$42,240.00	$18,820.17	$51,579.83
Asphalt Street Repair	$128,000.00	$0.00	$0.00	$128,000.00
Chip Seal Street Repair	$120,000.00	$0.00	$0.00	$120,000.00
1" Copper Service	$156,000.00	$93,600.00	$41,703.79	$114,296.21
2" Copper Service	$5,000.00	$3,000.00	$1,336.66	$3,663.34
1" Saddle and Corp Stop	$76,500.00	$45,900.00	$20,450.90	$56,049.10
2" Saddle and Corp Stop	$3,650.00	$2,190.00	$975.76	$2,674.24
1" Curb Stop and Box	$38,250.00	$22,950.00	$10,225.45	$28,024.55
2" Curb Stop and Box	$2,500.00	$1,500.00	$668.33	$1,831.67
Concrete Sidewalk Repair	$65,000.00	$0.00	$0.00	$65,000.00
Curb & Gutter Repair	$67,500.00	$0.00	$0.00	$67,500.00
Misc. Fittings	$35,000.00	$21,000.00	$9,356.62	$25,643.38
Capital Costs	$305,300.00	$0.00	$0.00	$305,300.00
Total Construction Cost	$1,507,850.00	$445,050.00	$198,293.52	$1,309,556.48

B. Operation and Maintenance Costs for Proposed Construction

Description	Annual Costs	NPW
Labor	$500.00	$6,720.57
Materials	$500.00	$6,720.57
Miscellaneous	$500.00	$6,720.57
Subtotal	$1,500.00	$20,161.70

C. Equivalent Uniform Annual Cost

NPW Construction Cost	$1,309,556.48
NPW of O&M Costs	$20,161.70
Total Net Present Worth	$1,329,718.18
Equivalent Uniform Annual Cost	**$98,929.04**

Figure 4.6.2-2 Pressure Analysis for Distribution Alternative 2

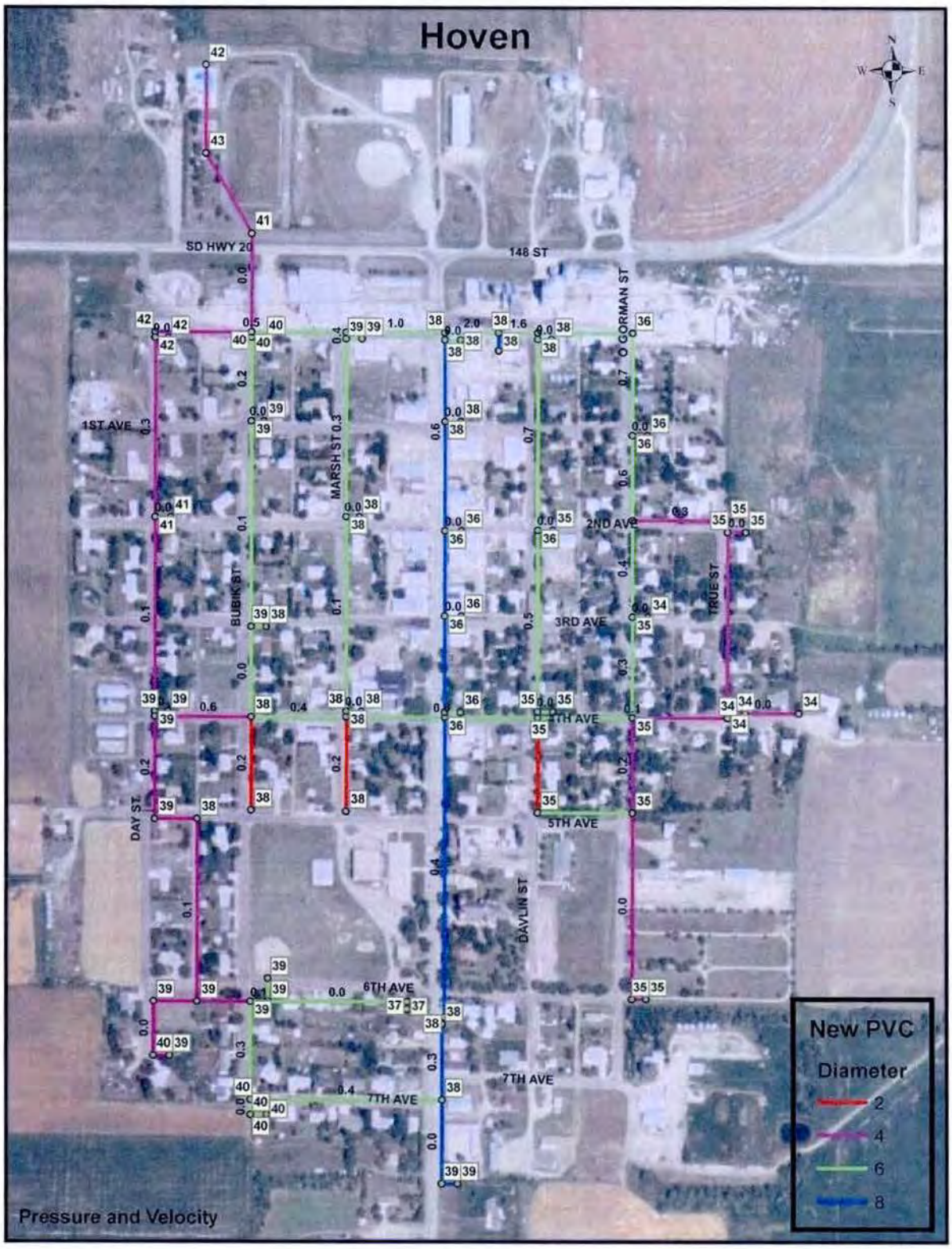
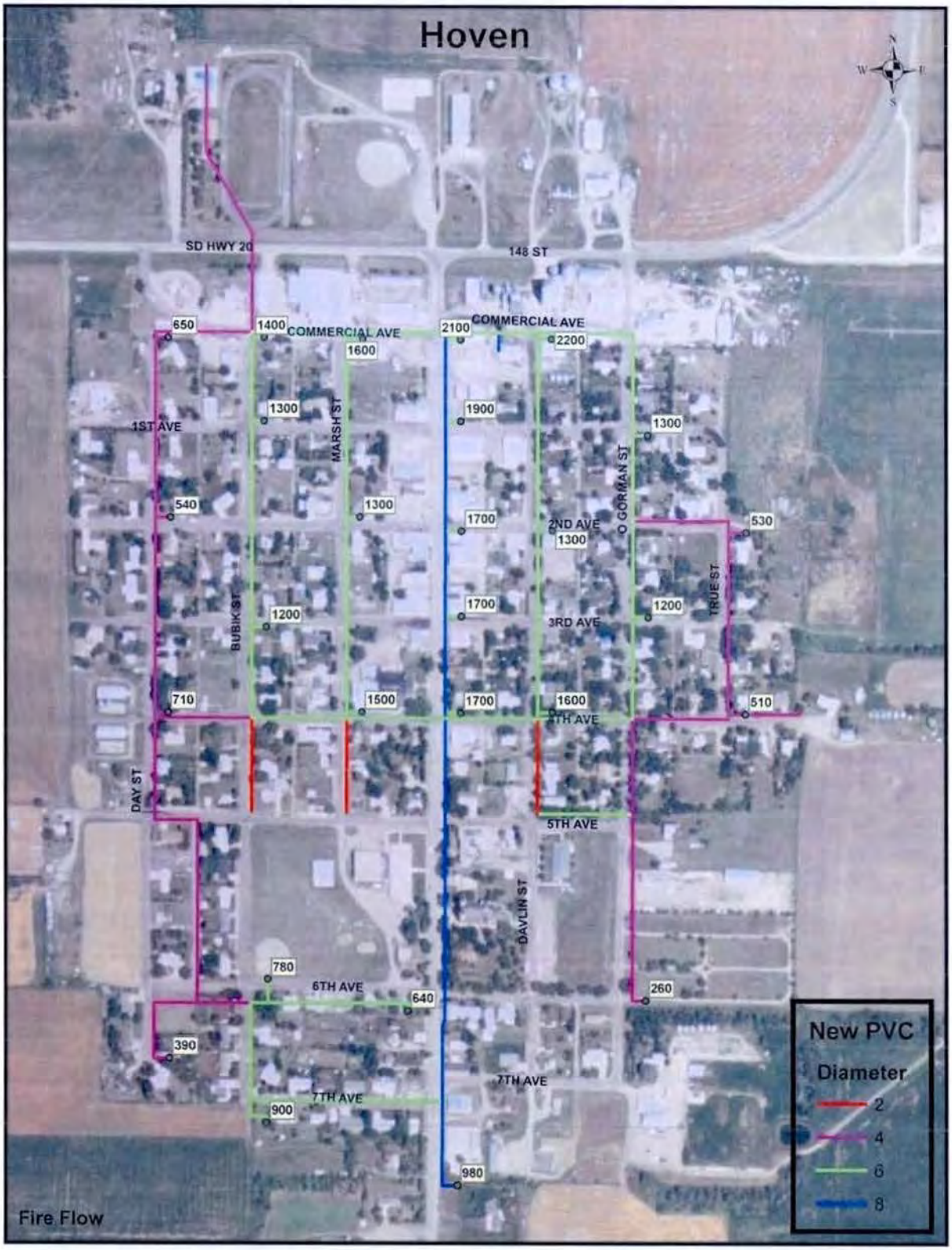


Figure 4.6.2-3 Fire Flow Analysis for Distribution Alternative 2



4.6.3 Water Distribution Alternative 3: New Up-Sized PVC Lines

Water Distribution Alternative 3 recommends that all of the CIP be replaced with 6" and 8" PVC and that looping of all of the dead-end lines 4 inches and larger be completed. These PVC lines would increase the water pressures throughout City especially where it is currently experiencing problems. It would also significantly increase the fire flows for the community. The cost estimate for Distribution Alternative 3 is shown in the following table. A hydraulic and fire flow analysis was completed with the same conditions as discussed in Section 3.7.3.

Table 4.6.3-1 Cost Estimate for Distribution Alternative 3

Item Number	Item Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	L.S.	$90,500.00	$90,500.00
2	8" PVC Class 200 Watermain	2,300	Ft.	$19.00	$43,700.00
3	6" PVC Class 200 Watermain	17,000	Ft.	$16.50	$280,500.00
4	8" Valve w/Box	5	Each	$1,000.00	$5,000.00
5	6" Valve w/Box	45	Each	$875.00	$39,375.00
6	Fire Hydrant	32	Each	$2,200.00	$70,400.00
7	Asphalt Street Repair	4,000	SqYd	$32.00	$128,000.00
8	Chip Seal Street Repair	30,000	SqYd	$4.00	$120,000.00
9	1" Copper Service	9,750	Ft.	$16.00	$156,000.00
10	2" Copper Service	250	Ft.	$20.00	$5,000.00
11	1" Saddle and Corp Stop	255	Each	$300.00	$76,500.00
12	2" Saddle and Corp Stop	10	Each	$365.00	$3,650.00
13	1" Curb Stop and Box	255	Each	$150.00	$38,250.00
14	2" Curb Stop and Box	10	Each	$250.00	$2,500.00
15	Concrete Sidewalk Repair	10,000	SqFt	$6.50	$65,000.00
16	Curb & Gutter Repair	2,700	Ft.	$25.00	$67,500.00
17	Misc. Fittings	1	L.S.	$30,000.00	$30,000.00
	Subtotal				$1,221,875.00
	Contingencies @ 10%				$122,200.00
	Construction Total				$1,344,075.00
	Design Engineering				$75,000.00
	Construction Engineering				$90,000.00
	Legal & Administration				$10,000.00
	Bonding				$10,000.00
	Total Probable Construction Costs				**$1,529,075.00**

Table 4.6.3-2 EUAC for Distribution Alternative 3

A. Construction Cost

Description	Cost	SV	PW SV	NPW
Mobilization	$90,500.00	$0.00	$0.00	$90,500.00
8" PVC Class 200 Watermain	$43,700.00	$26,220.00	$11,682.41	$32,017.59
6" PVC Class 200 Watermain	$280,500.00	$168,300.00	$74,986.63	$205,513.37
8" Valve w/Box	$5,000.00	$3,000.00	$1,336.66	$3,663.34
6" Valve w/Box	$39,375.00	$23,625.00	$10,526.20	$28,848.80
Fire Hydrant	$70,400.00	$42,240.00	$18,820.17	$51,579.83
Asphalt Street Repair	$128,000.00	$0.00	$0.00	$128,000.00
Chip Seal Street Repair	$120,000.00	$0.00	$0.00	$120,000.00
1" Copper Service	$156,000.00	$93,600.00	$41,703.79	$114,296.21
2" Copper Service	$5,000.00	$3,000.00	$1,336.66	$3,663.34
1" Saddle and Corp Stop	$76,500.00	$45,900.00	$20,450.90	$56,049.10
2" Saddle and Corp Stop	$3,650.00	$2,190.00	$975.76	$2,674.24
1" Curb Stop and Box	$38,250.00	$22,950.00	$10,225.45	$28,024.55
2" Curb Stop and Box	$2,500.00	$1,500.00	$668.33	$1,831.67
Concrete Sidewalk Repair	$65,000.00	$0.00	$0.00	$65,000.00
Curb & Gutter Repair	$67,500.00	$0.00	$0.00	$67,500.00
Misc. Fittings	$30,000.00	$18,000.00	$8,019.96	$21,980.04
Capital Costs	$307,200.00	$0.00	$0.00	$307,200.00
Total Construction Cost	$1,529,075.00	$450,525.00	$200,732.92	$1,328,342.08

B. Operation and Maintenance Costs for Proposed Construction

Description	Annual Costs	NPW
Labor	$500.00	$6,720.57
Materials	$500.00	$6,720.57
Miscellaneous	$500.00	$6,720.57
Subtotal	$1,500.00	$20,161.70

C. Equivalent Uniform Annual Cost

NPW Construction Cost	$1,328,342.08
NPW of O&M Costs	$20,161.70
Total Net Present Worth	$1,348,503.77
Equivalent Uniform Annual Cost	**$100,326.66**

Figure 4.6.3-2 Pressure Analysis for Distribution Alternative 3

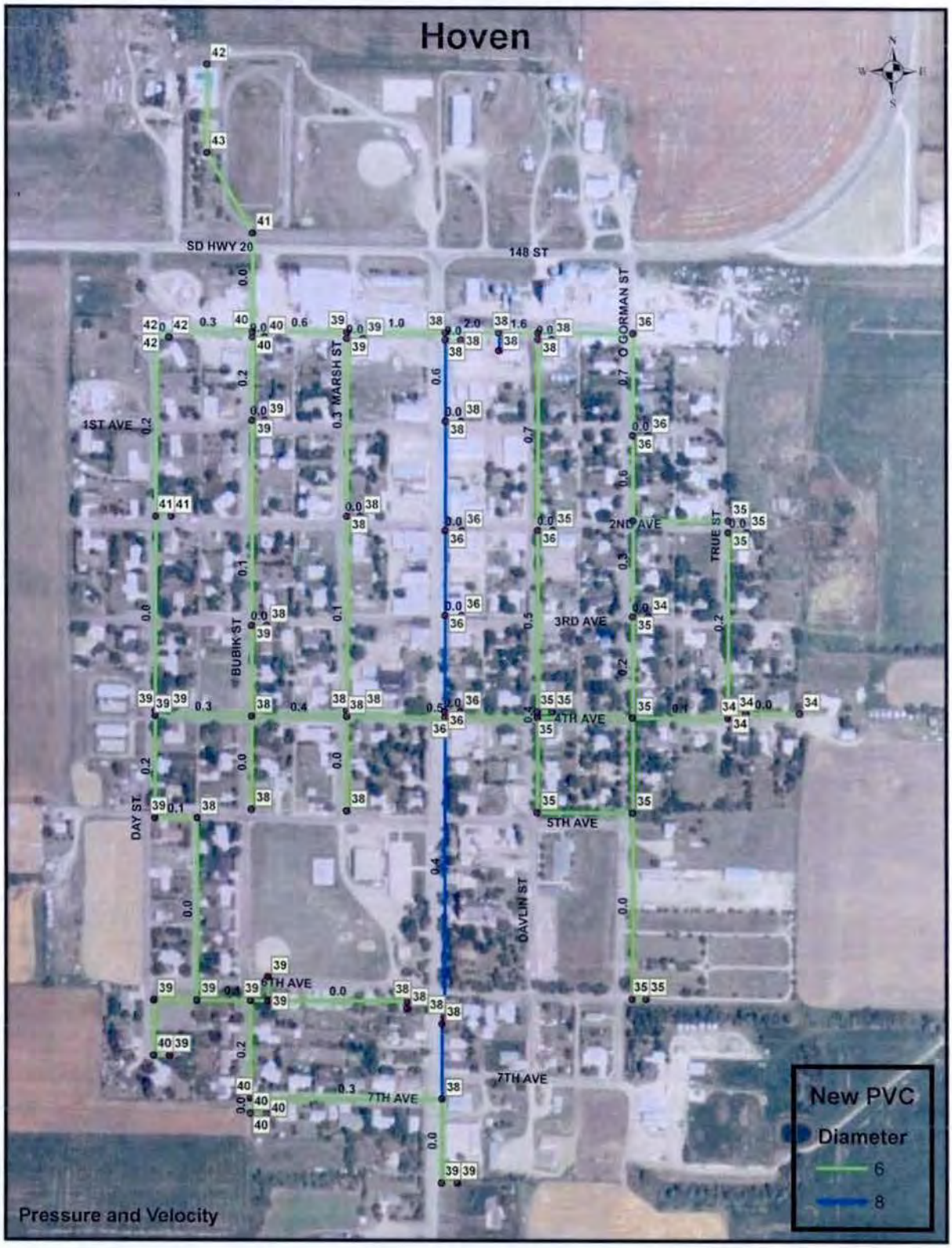
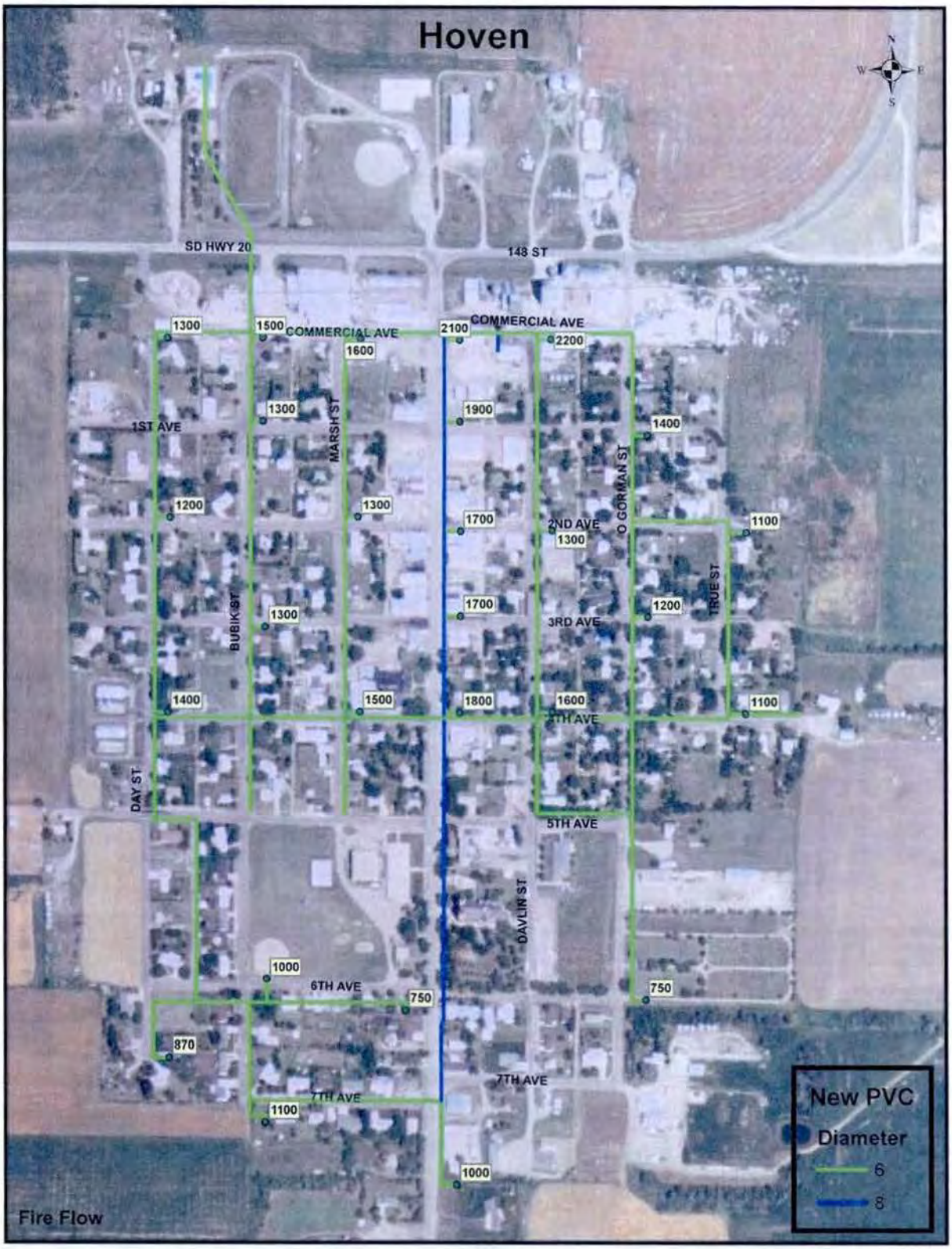


Figure 4.6.3-3 Fire Flow Analysis for Distribution Alternative 3



4.7 WATER METERING

Recent conversations with the City officials indicated that their water meters need to be upgraded. Some of the current meters are read in the basement while others are read outside. In addition, the outside readers are not all the same. There are some meters that are mounted vertically instead of horizontally. The City has indicated that they would like to upgrade all of the water meters and use a drive-by radio read system for meter reading. New water meters will help the City to reduce the water loss even further. In addition, the new reading system will make meter reading and billing easier.

4.7.1 Water Metering Alternative 1: Do Nothing

The first alternative for the water meters is to do nothing. This alternative will not help with the water loss of the system and will only further add to the deficiencies of their water system. Therefore, this alternative will not be discussed any further.

4.7.2 Water Metering Alternative 2: New Remote Read Water Meters

Water Meters Alternative 2 recommends that the City should consider adding a new remote read water meters. The remote read meters will allow for more accurate recording, lower personnel costs, and lower billing costs. The system will incorporate a radio read collection system that records the water usage for each home by simply driving by the home with a radio data collection system carried in a vehicle. The data will be collected in a laptop that can then automatically print out water billings for each home.

The labor costs associated with reading individual meters, recording the information, having the finance office record the information into their billing program, and printing out statements is significantly reduced. This recommendation is strongly encouraged as the community has limited resources for personnel to physically read meters on a monthly or quarterly basis. The cost for this alternative is shown below in Table 4.7.2-1.

Table 4.7.2-1 Cost Estimate for Water Meter Alternative 23

Item Number	Item Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	L.S.	$10,180.00	$10,180.00
2	Remote Read Water System (complete)	1	L.S.	$30,000.00	$30,000.00
3	1" Water Meter (furnish and install)	255	Each	$350.00	$89,250.00
4	2" Water Meter (furnish and install)	10	Each	$800.00	$8,000.00
	Total Water Meters				$137,430.00
	Contingencies @ 10%				$13,700.00
	Construction Total				$151,130.00
	Design Engineering				$10,000.00
	Construction Engineering				$11,000.00
	Legal & Administration				$5,000.00
	Bonding				$5,000.00
	Total Probable Construction Costs				**$182,130.00**

Table 4.7.2-2 EUAC for Water Meter Alternative 2

A. Construction Cost

Item Description	Cost	SV	PW SV	NPW
Mobilization	$10,180.00	$0.00	$0.00	$10,180.00
Remote Read Water System (complete)	$30,000.00	$18,000.00	$8,019.96	$21,980.04
1" Water Meter (furnish and install)	$89,250.00	$53,550.00	$23,859.38	$65,390.62
2" Water Meter (furnish and install)	$8,000.00	$4,800.00	$2,138.66	$5,861.34
Capital Costs	$44,700.00	$0.00	$0.00	$44,700.00
Total Construction Cost	$182,130.00	$76,350.00	$34,018.00	$148,112.00

B. Operation and Maintenance Costs for Proposed Construction

Description	Annual Costs	NPW
Labor	$1,800.00	$24,194.04
Material	$500.00	$6,720.57
Miscellaneous	$500.00	$6,720.57
Subtotal	$2,800.00	$37,635.17

C. Equivalent Uniform Annual Cost

NPW Construction Cost	$148,112.00
NPW of O&M Costs	$37,635.17
Total Net Present Worth	$185,747.17
Equivalent Uniform Annual Cost	**$13,819.31**

4.7.3 Water Metering Alternative 3: Manual Read Water Meters

Water Meter Alternative 3 is for the replacement of existing water meters with newer manual read meter systems. This would be the same type of system they currently operate, but the meters will be upgraded to provide uniform meters throughout the City and provide meters with better recording accuracy.

Option 3 will have meters that are manually read and recorded by City personnel. The labor costs for this type of system are significant and the overall system is not as accurate as a radio read system. The existing system leads to some errors due to recording numbers incorrectly or even recording the wrong home. The radio read system does eliminate these human errors. However, the system selected will depend somewhat on the EUAC analysis and preference of the City. The cost for this alternative is shown below in Table 4.7.3-1.

Table 4.7.3-1 Cost Estimate for Water Meter Alternative 3

Item Number	Item Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	L.S.	$5,580.00	$5,580.00
2	1" Water Meter (furnish and install)	255	Each	$250.00	$63,750.00
3	2" Water Meter (furnish and install)	10	Each	$600.00	$6,000.00
	Total Water Meters				$75,330.00
	Contingencies @ 10%				$7,500.00
	Construction Total				$82,830.00
	Design Engineering				$8,000.00
	Construction Engineering				$7,500.00
	Legal & Administration				$2,500.00
	Bonding				$2,500.00
	Total Probable Construction Costs				**$103,330.00**

Table 4.7.3-2 EUAC for Water Meter Alternative 3

A. Construction Cost

Item Description	Cost	SV	PW SV	NPW
Mobilization	$5,580.00	$0.00	$0.00	$5,580.00
1" Water Meter (furnish and install)	$63,750.00	$38,250.00	$17,042.42	$46,707.58
2" Water Meter (furnish and install)	$6,000.00	$3,600.00	$1,603.99	$4,396.01
Capital Costs	$28,000.00	$0.00	$0.00	$28,000.00
Total Construction Cost	$103,330.00	$41,850.00	$18,646.41	$84,683.59

B. Operation and Maintenance Costs for Proposed Construction

Description	Annual Costs	NPW
Labor	$7,200.00	$96,776.14
Material	$500.00	$6,720.57
Miscellaneous	$500.00	$6,720.57
Subtotal	$8,200.00	$110,217.27

C. Equivalent Uniform Annual Cost

NPW Construction Cost	$84,683.59
NPW of O&M Costs	$110,217.27
Total Net Present Worth	$194,900.87
Equivalent Uniform Annual Cost	**$14,500.33**

5 SELECTION OF ALTERNATIVES

5.1 WATER SOURCE

There are no improvements that are necessary to the water source.

5.2 WATER STORAGE

Water Storage Alternative 1 (Do Nothing) is not recommended because it will not provide back-up power or increase the water pressure.

Water Storage Alternative 2 (140,000-Gallon Ground Storage Tank), with an estimated cost of $620,850.00 is recommended. This alternative provides adequate storage and pressure.

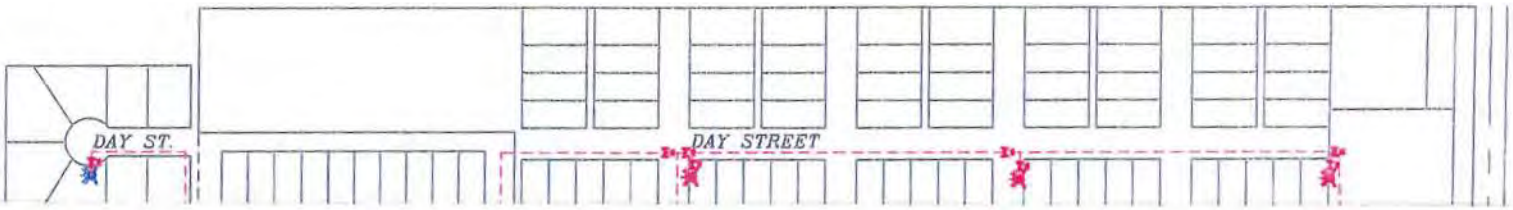
Water Storage Alternative 3 (New 250,000-Gallon Standpipe Water Tower), with an estimated cost $1,145,250.00 is not recommended at this time. Water Storage Alternative 3 gives the City an idea of the cost for replacing the elevated water tower, when that time comes. This alternative does provide adequate storage and pressure.

5.3 WATER DISTRIBUTION

Water Distribution Alternative 1 (Do Nothing) is not recommended because it will not address negative characteristics of the system.

Water Distribution Alternative 2 (Replace the CIP) with a total project cost of $1,507,850 is not recommended. Although this alternative will increase the pressure and fire flows throughout the system, however, it does not does not meet certain design criteria and it is impracticable to replace the CIP with 2 inch and 4 inch lines PVC pipe.

Water Distribution Alternative 3 (Up-Sizing PVC & Looping) with a total project cost of $1,529,075.00 is recommended. This alternative will increase the pressure and fire flow throughout the system, especially in the areas that are experiencing problems. This alternative will loop some of the existing lines and will replace all of the CIP.



2 OF 2

PROPOSED WATER DISTRIBUTION SYSTEM IMPROVEMENTS

CITY OF HOVEN
HOVEN, SOUTH DAKOTA

Drawn By:	JWR
Chk' by:	
PROJ. #:	A-3846
DWG:	A-3846 WS
DATE:	6/2007

HELMS and ASSOCIATES
CONSULTING ENGINEERS AND LAND SURVEYORS
P.O. BOX 111 - 221 BROWN COUNTY HIGHWAY #19
ABERDEEN, SOUTH DAKOTA 57401 - PHONE: (605)225-1212 - FAX: (605)225-3189

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 law of the State of South Dakota.

Registration No.

No.	Revisions	By	App.	Date

5.4 WATER METERS

Water Distribution Alternative 1 (Do Nothing) is not recommended because it will not address negative characteristics of the system.

Water Meters Alternative 2 (Remote Water Meters) with a total project cost of $182,130.00 is also recommended. This alternative will replace all of the meters and gives the City a drive-by radio read system.

Water Meters Alternative 3 with a total project cost of $103,330.00 is not recommended. This alternative will replace all of the water meters with standard meters. Although this does help with some of the problems of the current water meters, it still requires the meters to be manually recorded. When comparing the EUAC of Alt. 2 and Alt. 3 the overall costs will be lower for the City with Alternative 2.

5.5 IMPACT ON USER FEES

A summary of the costs associated with all of the alternatives that were chosen is given in Table 5.4-1.

Table 5.4-1 Summary of Costs

Water Source	$0.00
Water Storage	
Alt. 2 - Ground Storage Tank	$620,850.00
Water Distribution	
Alt. 3 - Up-Sized PVC and Looping	$1,529,075.00
Water Meters	
Alt. 2 – Remote Read Water Meters	$182,130.00
TOTAL PROJECT COST	**$2,332,055.00**

As part of the cost analysis of the recommended improvements, the estimated impact on the monthly user fees has been calculated. Financial data supplied by the City of Hoven

was used to determine the current operational status of the funds. The current residential water rate is a base fee of $15.00 plus an additional fee of $1.50 for every 1,000 gallons. The fee for a 5,000-gallon user is $22.50. The current business water rate is a base fee of $22.50 plus an additional fee of $1.50 for every 1,000 gallons. The fee for a 5,000-gallon user is $30.00. Table 5.4.2 shows the amount of revenue generated from water sales for 2006.

Table 5.4-2 Revenue Generated from Water Fees (2006)

Minimum Monthly Rate Residential	$15.00
Minimum Monthly Rate Commercial	$22.50
Rate per 1000 gallons	$1.50
Number of Residential Users	200
Number of Commercial Users	39
Annual Water Sales	24,761,400
Revenue from Minimum	$46,530.00
Revenue from Overage	$37,142.10
Total Revenue	**$83,672.10**

The operation and maintenance cost is expected to remain constant. Table 5.4-3 summarizes the financial data that is used to determine the current and proposed operational status of the water fund with the recommended improvements

Table 5.4-3 Operation and Maintenance Budget

Item	Budget Description	2007 Expenses	2008 Expenses	2009 Budgetary Expense
411	Salaries	$8,997.12	$6,865.89	$6,000.00
412	OASI	$1,812.62	$1,405.38	$1,500.00
413	Retirement & Pension	$1,895.52	$1,469.64	$500.00
414	Workers Compensation, Insurance, and With Holding	$1,319.82	$1,216.21	$500.00
427	Travel Expenses	$160.10	$0.00	$250.00
	Total Personnel Services	**$14,185.18**	**$10,957.12**	**$8,750.00**
421	General Building Insurance	$3,247.80	$3,248.60	$4,000.00
422	Professional Fees	$302.00	$1,031.00	$1,500.00
423	Printing	$538.55	$180.45	$200.00
426	Supplies	$13,194.55	$2,427.03	$9,550.00
426.3	Mid-Dakota Water Purchases	$44,541.68	$45,656.57	$50,000.00
428	Utilities	$2,225.44	$3,272.44	$5,000.00
429	Miscellaneous Expenses	$480.00	$165.00	$500.00
425	Material & Repairs	$5,734.00	$21,384.76	$500.00
	Total Other Current Expenses	**$70,264.02**	**$77,365.85**	**$71,250.00**
	Total Operation & Maintenance Budget	**$84,449.20**	**$88,322.97**	**$80,000.00**

The short lived asset replacement value is shown in Table 5.4-4. This table indicates how much the City needs to budget annually in order to replace the needed items.

Table 5.4-4 Short Lived Asset Replacement Schedule

	YEAR										
EXPENSES	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Booster Station Pumps	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500
Water Tower Painting	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Annual Total to be Budgeted	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000

Table 5.4-5 Water Rate Analysis

Funding Percentages grant/loan	25/75 grant/loan	30/70 grant/loan	35/65 grant/loan	40/60 grant/loan	45/55 grant/loan	50/50 grant/loan	55/45 grant/loan	60/40 grant/loan	65/35 grant/loan	70/30 grant/loan	75/25 grant/loan
Annual O & M	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000
Grant Amount	$583,014	$699,617	$816,219	$932,822	$1,049,425	$1,166,028	$1,282,630	$1,399,233	$1,515,836	$1,632,439	$1,749,041
Loan Amount	$1,749,041	$1,632,439	$1,515,836	$1,399,233	$1,282,630	$1,166,028	$1,049,425	$932,822	$816,219	$699,617	$583,014
Annual Loan Payment	$90,018.16	$84,016.95	$78,015.74	$72,014.53	$66,013.31	$60,012.10	$54,010.89	$48,009.68	$42,008.47	$36,007.26	$30,006.05
Debt Reserves	$9,001.82	$8,401.69	$7,801.57	$7,201.45	$6,601.33	$6,001.21	$5,401.09	$4,800.97	$4,200.85	$3,600.73	$3,000.61
Total Annual Costs	$179,020	$172,419	$165,817	$159,216	$152,615	$146,013	$139,412	$132,811	$126,209	$119,608	$113,007
Annual Revenue	$76,860	$76,860	$76,860	$76,860	$76,860	$76,860	$76,860	$76,860	$76,860	$76,860	$76,860
Surplus/Deficit After Project	-$102,160	-$95,559	-$88,957	-$82,356	-$75,755	-$69,153	-$62,552	-$55,951	-$49,349	-$42,748	-$36,147
Minimum Water Rate Increase	$35.62	$33.32	$31.02	$28.72	$26.41	$24.11	$21.81	$19.51	$17.21	$14.91	$12.60

For example, the City would need to raise their rates $24.11 per month if they received a grant for 50% of the total project. Table 5.4-5 breaks down different grant/loan combinations and shows how the water rates will be affected.

The actual rates will be dependent upon the actual grant and loan funding that would be obtained as well as the final bid price of the project.

5.6 CAPITAL FINANCING PLAN

The City of Hoven will make applications to state and federal resources for loan and grant assistance to complete the project during the upcoming construction season.

5.7 ENVIRONMENTAL EVALUATION

The City of Hoven has requested comments from concerned federal agencies. The correspondence related to these inquiries have been placed in Appendix A.

5.8 VIEWS OF THE PUBLIC AND CONCERNED INTEREST GROUPS

The City of Hoven 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 alternatives chosen for the rehabilitation of the water system were chosen because they will remedy the current problems of the system.

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 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.

6.4 ARRANGEMENT 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 City of Hoven'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 6.4-1 shows the anticipated schedule.

Table 6.4-1 Schedule

1	2/23/2009	Formal Approval by City and Submittal of Facility Plan to SD-DENR.
2	3/23/2009	Submit State Water Plan Application
3	4/1/2009	Submit Applications for Funding.
4	4/15/2009	Hold Public Hearings for Facility Plan and Funding Requirements.
5	8/1/2009	Secure Funding for Project
6	9/1/2009	Commence Preparation of Plans And Specifications.
7	11/1/2009	Plans and Specifications Completed and Submit Plans To SD-DENR.
8	12/20/2009	Advertise For Bids
9	1/15/2010	Open Bids
10	1/29/2010	Award Bids For Project
11	4/1/2010	Start Construction of Project
12	11/15/2010	Complete Construction, Begin One-Year Warranty Service
13	11/15/2011	Complete 1-Year Construction Warranty Evaluation

6.5 LAND ACQUISITION

No land acquisition will 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.

6.6 INTERAGENCY AGREEMENTS

No operating agreements with other agencies are needed as the City of Hoven owns, operates and maintains its municipal water system. Loan documents will have to be executed with the appropriate lender but as Hoven is a municipal corporation, it has the legal authority to enter into such agreements. Hoven's attorney will advise the Council on any legal matters related to this issue.

Table 6.4-1 Schedule

1	2/23/2009	Formal Approval by City and Submittal of Facility Plan to SD-DENR.
2	3/23/2009	Submit State Water Plan Application
3	5/15/2010	Hold Public Hearings for Facility Plan and Funding Requirements.
4	8/1/2010	Submit Applications for Funding.
5	12/15/2010	Secure Funding for Project
6	1/15/2011	Commence Preparation of Plans And Specifications.
7	3/15/2011	Plans and Specifications Completed and Submit Plans To SD-DENR.
8	4/15/2011	Advertise For Bids
9	5/9/2011	Open Bids
10	5/23/2011	Award Bids For Project
11	6/15/2011	Start Construction of Project
12	11/15/2011	Complete Construction, Begin One-Year Warranty Service
13	11/15/2012	Complete 1-Year Construction Warranty Evaluation

LAND ACQUISITION

No land acquisition will 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.

INTERAGENCY AGREEMENTS

No operating agreements with other agencies are needed as the City of Hoven owns, operates and maintains its municipal water system. Loan documents will have to be executed with the appropriate lender but as Hoven is a municipal corporation, it has the legal authority to enter into such agreements. Hoven's attorney will advise the Council on any legal matters related to this issue.

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 water system 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 rates 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 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 Council 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 wastewater is $17.00 and water is $20.00 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.

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.

8 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.

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< http://nndc.noaa.gov/?http://ols.ncdc.noaa.gov/cgi-bin/nndc/gensub.cgi>

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University of Kentucky Civil Engineering Department, (2000). Pipe 2000 Manual (Lexington, KY: University of Kentucky, Civil Engineering Software Center), pp.

Helms & Associates
Civil Engineers & Land Surveyors

221 Brown Co. Hwy 19
P.O. Box 111
Aberdeen, S.D. 57402
Telephone (605)225-1212

RECEIVED
MAR 1 5 2006
SURFACE WATER PROGRAM

February 13, 2005

Mr. John Miller
SD DENR
523 East Capitol
Pierre, SD 57501-3181

Re: City of Hoven Water and Sewer Main Improvements
A-3845/3846

Dear Mr. Miller,

The City of Hoven is in the process of studying their sewer and water systems for improvements.

Please find enclosed maps showing the areas for being looked at for replacement and/o rehabilitation of Water and Sewer Mains for the City of Hoven.

We are requesting your comments concerning environmental impacts for the replacement and rehabilitation of water and sewer mains within the City ROW. All work will be completed in the ROW for existing roads and streets in areas where excavation for utilities has previously taken place.

A prompt response would be greatly appreciated concerning this matter. Thank you.

Sincerely,
Helms and Associates

Corey T. Helms, Project Administrator

W/Encl.

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 Schultz
Date: 3/29/2006
(605) 773-6038 Fax: (605) 773-5286
South Dakota Department of Environment And Natural Resources

RECEIVED
MAR 3 1 2006

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: 3-22-2006
(605) 773-3351 FAX - (605) 773-5286
SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

United States Department of Agricult

NRCS

Natural Resources Conservation Service
Federal Building, 200 Fourth St. SW
Huron, South Dakota 57350

Phone: (605) 352-1200
Fax: (605) 352-1261

RECEIVED
MAR 24 2006

March 23, 2006

Mr. Corey T. Helms
Helms and Associates
221 Brown Co. Hwy 19
PO Box 111
Aberdeen, South Dakota 57402

RE: City of Hoven Water and Sewer Main Improvements – A-3845/3846

Dear Mr. Helms:

We have reviewed the proposed improvements for the water and sewer main in Hoven, South Dakota. Since the areas have been previously disturbed, there will be no impact on prime or important farmland.

Sincerely,

Jerome Schaar

JEROME M. SCHAAR
State Soil Scientist

cc: Denis Bachman, DC, NRCS, Selby FO

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

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Helms & Associates
Civil Engineers & Land Surveyors

221 Brown Co. Hwy 19
P.O. Box 111
Aberdeen, S.D. 57402
Telephone (605)225-1212

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MAR 2 3 2006

February 13, 2006

Mr. John Kirk, Interagency Coordinator
South Dakota Dept. of Game, Fish and Parks
Division of Wildlife
523 E. Capitol Avenue
Pierre, SD 57501-3181

Re: City of Hoven Water and Sewer Main Improvements
A-3845/3846

Dear Mr. Kirk,

The City of Hoven is in the process of studying there sewer and water systems for improvements.

Please find enclosed maps showing the areas for being looked at for replacement and/o rehabilitation of Water and Sewer Mains for the City of Hoven.

We are requesting your comments concerning environmental impacts for the replacement and rehabilitation of water and sewer mains within the City ROW. All work will be completed in the ROW for existing roads and streets in areas where excavation for utilities has previously taken place.

A prompt response would be greatly appreciated concerning this matter. Thank you.

Sincerely,
Helms and Associates

Corey T. Helms, Project Administrator

W/Encl.

S.D. DEPARTMENT OF
GAME, FISH AND PARKS
Project as described will have no significant impact on fish and wildlife resources. If project design changes, please submit plans for review.
3-20-06
Date
Approval

64713-2006-FA-0168
4413-2006-I-0189

Helms & Associates

Civil Engineers & Land Surveyors

221 Brown Co. Hwy 19
P.O. Box 111

Aberdeen, S.D. 57402
Telephone (605)225-1212

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MAR 15 2006

U.S. FISH & WILDLIFE SERVICE

February 13, 2006

This consfitutes 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 [illegible] OBJECTION to this proposed project.

3-16-06 [illegible]
Date Supervisor

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

Re: City of Hoven Water and Sewer Main Improvements
A-3845/3846

Dear Mr. Gober,

The City of Hoven is in the process of studying there sewer and water systems for improvements.

Please find enclosed maps showing the areas for being looked at for replacement and/o rehabilitation of Water and Sewer Mains for the City of Hoven.

We are requesting your comments concerning environmental impacts for the replacement and rehabilitation of water and sewer mains within the City ROW. All work will be completed in the ROW for existing roads and streets in areas where excavation for utilities has previously taken place.

A prompt response would be greatly appreciated concerning this matter. Thank you.

Sincerely,
Helms and Associates

Corey T. Helms, Project Administrator

W/Encl.

A-3845

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
106 SOUTH 15TH STREET
OMAHA NE 68102-1618

REPLY TO
ATTENTION OF

March 30, 2006

Planning, Programs, and Project Management Division

Mr. Corey T. Helms
Helms and Associates
P.O. Box 111
Aberdeen, South Dakota 57402

Dear Mr. Helms:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated February 13, 2006 regarding water and sewer main improvements in Hoven, South Dakota. The Corps offers the following comments:

If the proposed waterline construction crosses the flood plains 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.

Your plans should be coordinated with the U.S. Environmental Protection Agency, which is currently involved in a program to protect groundwater resources. If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the South Dakota Game, Fish and Parks Department 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 construction activities involve any work in waters of the United States, a Section 404 permit may be required. 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: CENWO-OD-R-SD/Naylor
28563 Powerhouse Road, Room 120
Pierre, South Dakota 57501

In addition, please update your records with our current mailing address:

U.S. Army Corps of Engineers, Omaha District
Planning Division
Attention: CENWO-PM-AE
106 South 15th Street
Omaha, Nebraska 68102-1618

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APR - 5 2006

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