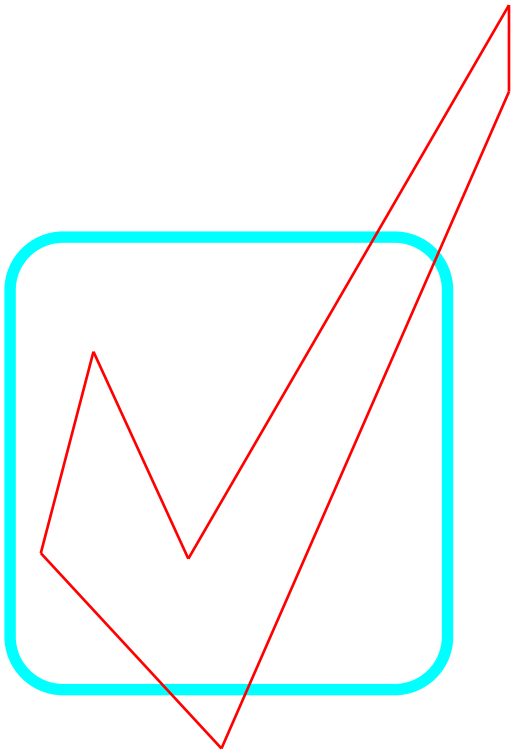
Capacity Assessment Worksheets for Public Water Systems



Department of Environment and Natural Resources

Revised January 2015

Introduction

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

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

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

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

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

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

Applicant: _____

Prepared by: _____

_____

_____

Phone #: _____

Date: _____

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

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

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

Treatment - Microbiological Contamination

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

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

Surface Water Systems

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

Ground Water Systems

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

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

Disinfection

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

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

Disinfection By-Products

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

Treatment - Security

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

increase in usage may signal potential contamination or tampering.				

Infrastructure - Pumping

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

Infrastructure - Storage

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

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

Infrastructure - Distribution

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

Are any inspections for cross-connections performed?	☐	☐	☐	☐
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	☐	☐	☐	☐
Is there a program to eliminate "dead-ends" in the mains, where feasible?	☐	☐	☐	☐
Construction Standards	**Yes**	**No**	**Unknown**	**NA**
Are the majority of your mains 6 inches in diameter or larger? ***List percentage:*** _____	☐	☐	☐	☐
Is there a program to gradually replace sub-standard sized mains?	☐	☐	☐	☐
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	☐	☐	☐	☐
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	☐	☐	☐	☐
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	☐	☐	☐	☐
Distribution System Problems	**Yes**	**No**	**Unknown**	**NA**
Do you receive any complaints regarding water quality (taste, odor, color, etc.)? ***List number of complaints/year:*** _____ ***Most common complaint:*** _____	☐	☐	☐	☐
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: Y*es*, *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):*** _____ _____	☐	☐	☐	☐
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?*** _____	☐	☐	☐	☐
Did your system have any violations of the primary drinking water standards in the last year?	☐	☐	☐	☐
Did your system have any monitoring or reporting violations in the last year?	☐	☐	☐	☐
Do you know what to do in the event of a violation?	☐	☐	☐	☐
Emergencies	**Yes**	**No**	**Unknown**	**NA**
Do you have an Emergency Response Plan?	☐	☐	☐	☐
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	☐	☐	☐	☐
Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?	☐	☐	☐	☐
Do you have a clear chain-of-command protocol for emergency action?	☐	☐	☐	☐
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? ***If yes, who (title):*** _____	☐	☐	☐	☐
Safety	**Yes**	**No**	**Unknown**	**NA**
Do you have a safety program defining measures to be taken if someone is injured?	☐	☐	☐	☐
Has the entire staff been properly trained in the location and use of safety equipment?	☐	☐	☐	☐
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	☐	☐	☐	☐
Do you have written operating procedures for both routine and emergency system operations?	☐	☐	☐	☐
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	☐	☐	☐	☐
Does the system work with customers to promote their awareness of security?	☐	☐	☐	☐
Does the system have a communication plan to alert customers of a natural or intentional threat to public health?	☐	☐	☐	☐

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

The Financial Portion of your System

Please mark the appropriate box: Y*es*, *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?*** _____	☐	☐	☐	☐
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:*** _____ (i.e. $22 minimum plus $2.50/1000 gallons)	☐	☐	☐	☐
Does the rate per 1000 gallons change as consumption increases? ***If so, please describe***: _____	☐	☐	☐	☐
Does the rate structure assure proportionality among users?	☐	☐	☐	☐
Do you have procedures for billing and collection?	☐	☐	☐	☐
Is your billing collection rate greater than 95%?	☐	☐	☐	☐
Do you have collection procedures specifically for delinquent accounts?	☐	☐	☐	☐

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

Financial Spreadsheet

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

GUIDELINES:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Financial Spreadsheet

Applicant: _____

Completed by: _____

Date: _____

4 Year Projections	Last Year Actual	Current Year Budget Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected
Enter Year:					
1. Beginning Cash on Hand					
2. Cash Receipts:					
a. Unmetered Water Revenue					
b. Metered Water Revenue					
c. Other Water Revenue					
d. Total Water Revenues (2a through 2c)					
e. Connection Fees					
f. Interest and Dividend Income					
g. Other Income					
h. Total Cash Revenues (2d through 2g)					
i. Transfers in/Additional Rev Needed					
j. Loans, Grants or other Cash					
Please specify					
3. Total Cash Receipts (2h through 2j)					
4. Total Cash Available (1+3)					
5. Operating Expenses					
a. Salaries and wages					
b. Employee Pensions and Benefits					
c. Purchased Water					
d. Purchased Power					
e. Fuel for Power Production					
f. Chemicals					
g. Materials and Supplies					
h. Engineering Services					
i. Contractual Services – Other					
j. Equip. Rent/Real Property					
k. Transportation Expenses					
l. Laboratory					
m. Insurance					
n. Regulatory Commission Expenses					
o. Advertising					
p. Miscellaneous					
q. Total Cash O&M Expenses (5a through 5p)					
r. Replacement Expenditures					
s. Total OM&R Expenditures (5q+5r)					
t. Loan Principal/Capital Lease Payments					
u. Loan Interest Payments					
v. Transfers Out					
w. Capital Purchases (specify):					
x. Other					
6. Total Cash Paid Out (5s through 5x)					
7. Ending Cash Position (4 - 6)					

Financial Spreadsheet

Applicant: _____

Completed by: _____

Date: _____

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

4 Year Projections	Last Year Actual	Current Year Budget	Year 2 Projected	Year 3 Projected	Year 4 Projected
1. Beginning Cash on Hand	For the prior period and the current year budget, use the actual cash balance. For all other years, cash on hand should equal item #14 from previous period.				
2. Cash Receipts:					
a. Unmetered Water Revenue	All cash received/estimated for water supplied to residential, commercial, industrial and public customers where the customer charge is not based on quantity, i.e., its based on diameter of service pipe, room, foot of frontage or other type units.				
b. Metered Water Revenue	all cash received/estimated for water supplied to residential, commercial, industrial and public customers where the charge is based on quantity of water delivered.				
c. Other Water Revenue	Other cash received/estimated from sale of water, e.g., sales for irrigation, sales for resale, inter- municipal sales, advalorem taxes (OM&R portion) etc.				
d. Total Water Revenues (2a through 2c)	**Self-explanatory**				
e. Connection Fees	All cash received/estimated for connection of customer service during the year.				
f. Interest and Dividend Income	All cash received/estimated on interest income from securities, loans, notes, etc., whether the securities are carried as investments or included in sinking or reserve accounts.				
g. Other Income	Other revenues collected/estimated during the period (e.g., disconnection or change in service fees, Profit on materials billed to customers, servicing of customer lines, late payment fees, rents, sales of assets, advalorem taxes (infrastructure portion) etc.).				
h. Total Cash Revenues (2d through 2g)	**Self-explanatory**				
i. Transfers in/Additional Rev Needed	Includes transfers from other funds w/i the municipality or can be used as a "plug" figure when determining the additional cash needed to cover cash needs.				
j. Loans, Grants or other Cash Injection	Includes loans or grants from financial institutions, inter-municipal loans, state or federal sources.				
3. Total Cash Receipts (2h through 2j)	**Self-explanatory**				
4. Total Cash Available (1+3)	**Self-explanatory**				
5. Operating Expenses	Use actual amounts paid when completing the prior year. Estimate the amounts for projected years based on prior year amounts, trends and other known variables (including those related to needs identified in the self-assessment.				
a. Salaries and wages	Cash expenditures made/estimated for salaries, bonuses and other consideration for work related to the O&M of the facility, including administration, and compensation for officers, directors, etc.				
b. Employee Pensions and Benefits	Paid vacations, paid sick leave, health insurance, unemployment insurance, pension plan, etc.				
c. Purchased Water	Amounts paid/estimated for cost of water purchased for resale.				
d. Purchased Power	Amounts paid/estimated for all electrical power for the utility.				
e. Fuel for Power Production	Amounts paid/estimated for fuel purchased for the production of power to operate pumps, etc.				
f. Chemicals	Amounts paid/estimated for chemicals used in the treatment and distribution.				
g. Materials and Supplies	Amounts paid/estimated for materials and supplies used for O&M of the PWS other than those under contractual services.				
h. Contractual Services – Engineering	Amounts paid/estimated to outside engineers to perform ongoing engineering work for the facility.				
i. Contractual Services - Other	Amounts paid/estimated for costs of outside accounting, legal, managerial, and other services.				
j. Rental of Equipment/Real Property	Amounts paid/estimated for costs associated w/the rental of equipment, buildings and real property.				
k. Transportation Expenses	Amounts paid/estimated for automobile, truck, equipment, and other vehicle use and maintenance.				
l. Laboratory	Self-explanatory				
m. Insurance	Amounts paid/estimated for vehicle, liability, workers' compensation and other insurance.				
n. Regulatory Commission Expenses	Amounts paid/estimated for rate cases and other activities with a regulatory commission				
o. Advertising	Amounts paid/estimated for informational, instructional and other advertising.				
p. Miscellaneous	Amounts paid/estimated for all expenses not included elsewhere (e.g. permit fees, training, etc.).				
q. Total Cash O&M Expenses (5a through 5p)	**Total of lines 5a through 5p.**				
r. Replacement Expenditures	Amounts paid/estimated for replacement of equipment to maintain system integrity.				
s. Total OM&R Expenditures (5q+r)					
t. Loan Principal/Capital Lease Payments	Include cash payments made/estimated for principal on all loans, including vehicle and equipment purchases on time payments and capital lease payments.				
u. Loan Interest Payments	Self-explanatory				

v. Transfers Out	Include cash transfers made/estimated to funds or entities outside the PWS.
w. Capital Purchases (specify):	Amount of cash outlays/estimates for items such as equipment, building, vehicle purchases, and leasehold improvements that were not a part of the initial design of the PWS infrastructure.
6. Total Cash Paid Out (5s through 5x)	Self-explanatory
7. Ending Cash Position (4 – 6)	Self-explanatory
8. Number of Customer Accounts	Use most recent system data or expected increases.
9. Ave User Charge per Customer (2d/8)	Self-explanatory
10. Coverage Ratio (2h-5s)/(5t+5u)	Measure of the sufficiency of net operating profit to cover the debt service requirements of the system. A bond covenant might require this to meet or exceed certain limits (e.g. 1.25)
11. Operating Ratio (2d/5s)	Measure of whether operating revenues are sufficient to cover OM&R expenses. An operating ratio of 1.0 is the bare Minimum for a self-supporting facility. With debt service requirements, the operating ratio would have to be higher.
12. Additions to Reserve Funds for the Year:	Do not include depreciation as a reserve unless there is actually a "depreciation' reserve that has cash set-aside for future expansion. **Include only amounts that are added to the reserve funds for the year (i.e., do not include accrued interest on CDs).**
a. Debt Service Reserve	Funds specifically set-aside to meet debt service requirements or requirements set forth in a loan Convenant/bond indenture.
b. Bond Retirement Reserve	Funds specifically set aside to retire debt as it is scheduled.
c. Capital Improvement Reserve	Funds specifically set aside to meet long-term objectives for major facility expansion, improvement and/or the construction of a new facility.
d. Replacement Reserve	Funds specifically set aside for the future replacement of equipment needed to maintain the integrity of the facility over its useful life.
e. Other	Other cash set-aside for reserve.
13. Total Added to Reserves (12a through 12e)	**Total of lines 12a through 12e.**
14. Year End Operating Cash (7-13)	**All non-reserved cash.**

Capacity Requirements for New Drinking Water System

Certificate of Approval: Obtaining a certificate of approval for a new drinking water system is required by law. More importantly, a certificate of approval shows that the drinking water system has gone through the planning process. Planning is critical for all new, as well as existing, water systems. A system that lacks technical, managerial, or financial capacity will have problems complying with all of the requirements of the 1996 Safe Drinking Water Act amendments. Since new water systems are required to complete the planning process, this will help ensure that these systems have adequate capacity and that the public will be provided with safe drinking water.

Who needs a certificate of approval?

All new community and nontransient noncommunity water systems that begin operation after October 1, 1999, are required to obtain a certificate of approval from the Department of Environment and Natural Resources (DENR) before beginning operation.

This includes water systems that do not meet the definition of community or nontransient noncommunity water system (NTNC) at start-up, but are designed to one day meet that definition. For example, a developer plats out 30 lots for homes in the development, but when the water system begins operation, there are only four homes connected to the system. Obviously, the intent is for this water system to one day be large enough to qualify as a public water system; therefore, the developer must meet all the new water system requirements.

Any system that has infrastructure in place before October 1, 1999, and then becomes a new community or NTNC water system only by the addition of new users is not required to obtain a certificate of approval.

What is the process for obtaining a certificate of approval?

DENR recommends that you apply as soon as possible to receive approval of the required documents in a timely manner. Approval may be delayed if more information is needed by the department during the review process. The following are minimum guidelines for certificate approval.

- Submit the New Water System Application and business plan no later than *90 days* before you anticipate beginning operation.
- Submit plans and specifications no later than *30 days* before the anticipated bid-letting and contract award date.
- Submit the operations and maintenance manual as soon as practicable before system start-up

Where do I get more information on obtaining a certificate of approval?

A website has been developed for new water systems. Guidance and applications can be downloaded at: http://denr.sd.gov/des/dw/newsys.aspx

For more information please contact the Drinking Water Program at (605) 773- 3754.

Print Form Save As Clear Form