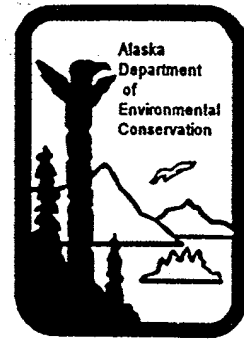


# ADEC ALASKA DRINKING WATER FUND

## CAPACITY ASSESSMENT PROCESS

### WORKSHEET FOR POTENTIAL PROJECTS



The 1996 amendments to the federal Safe Drinking Water Act require Alaska to assess the capacity of potential recipients of loans from the Alaska Drinking Water Fund (ADWF). By capacity, EPA means the technical, financial and managerial capabilities of a water system for proper long-term operations. If a loan applicant is found lacking in these areas, we may not be able to provide financial assistance from the ADWF unless the capacity of the system is guaranteed.

Consequently, we are asking for detailed information from potential loan applicants to help us in this assessment. Such things as financial records, enterprise fund budgets and audits, along with detailed planning and engineering information for your system will help ensure our ability to provide you this loan for your project.

The following is an outline of our assessment process. Please carefully review and complete these worksheets and make sure the information you provide us is current and accurate.

#### TECHNICAL CAPACITY ASSESSMENT

We intend to use the following questions and answers to help us evaluate your systems technical capacity. These questions address the physical components of your drinking water system and are related to water treatment facilities, water sources, storage and pumping capacity and water distribution capacity. Pertinent technical documentation such as engineering feasibility studies and reports should be provided as appropriate.

#### **1.) Are the existing water treatment facilities adequate and functional?**

Please provide a description of the system and the proposed project.

Will this system likely meet federal and state drinking water regulations expected to be enacted within the next four years? *This includes the ICR, Groundwater Disinfection Rule and Enhanced Surface Water Treatment -Rule.*

#### **2.) Is the existing water source developed and protected?**

Will this system likely meet future source protection requirements?

**3.) Is the current system able to meet peak demand flow and pressure in all points of the treatment and distribution system?**

What is the current peak demand and minimum pressure at peak demand?  
Does the system, experience seasonal or periodic difficulties?  
When was the last leak detection survey? Please describe any corrections made.

**4.) Does the system employ, or have access to, the correct level of certified or qualified operators?**

*Under State regulation, all water systems serving more than 500 people are classified as to complexity and require either a I, II, III or IV level operator or a qualified surface water system operator.*

Please provide the name and certification number of your lead certified operator or operators in charge of your water treatment and water distribution systems.

**5.) Has the water system been out of compliance with federal or state drinking water regulations within the past year?**

Please provide any compliance or enforcement actions taken recently such as Notices-of-Violation (NOVs), Compliance-Order-By-Consent (COBCs), boil water notices and the most recent sanitary survey.

**FINANCIAL CAPACITY ASSESSMENT**

Financial capacity is assessed by examining the fiscal condition and financial management aspects of the system. Financial aspects relate to the systems ability to raise the necessary funds to ensure proper operation and maintenance, including long-term depreciation and reserve accounts. Financial management refers to the management of those fiscal aspects.

If a system is regulated by the Alaska Public Utilities Commission (APUC), information contained in the application for the current Certificate Of Public Convenience And Necessity or the annual APUC Report may help demonstrate financial capacity. A copy of the annual report to the APUC may also contain the necessary information related to financial capacity. For example, if a system is applying for the APUC certificate, a copy of the application package should be submitted for review with the ADWF loan application. If a system already has a current APUC Certificate, a copy of the annual report to the APUC should be submitted for review with the ADWF loan application.

For those systems that are not regulated by the APUC, have not completed an application package for certification by APUC, or have not submitted an annual report to the APUC, the following questions will help us evaluate the financial aspects of the system. These questions relate to total user charge revenues and total system expenses, other revenue streams, fairness and affordability of user charges, cash budgeting, preparation and use of annual and capital budgets, and periodic financial audits

**1.) Does the water system have user ordinances and a rate structure?**

How often are the rates reviewed or updated? When was the last update?

**2.) Does the water system revenue from user charges meet or exceed system expenses?**

Please submit your water utility budget documents that clearly show revenue and expenses.

**3.) Are other funds contributed to water system operations to offset expenses?**

**4.) How affordable are water system rates?**

What are the estimated residential rates per household (after the project) compared with the median household income and other similar system rates?

**5.) Does this system use an annual budget?**

**6.) Does the system include a cash budget within the annual budget for operations and emergency purposes?**

**7.) Does the system use a capital budget?**

**8.) Does this system use a capital improvement plan?**

**9.) Does this system undertake regular financial audits?**

Please provide the most recent financial audit of the water utility accounts, including any appropriate state single audit documents along with the auditor management letters.

**10.) How will this loan be repaid?**

Please describe how this loan debt will be retired. If user fees are proposed as the repayment source, how much will rates need to be increased to retire this loan?

MANAGERIAL CAPACITY ASSESSMENT

Managerial capacity is assessed by evaluating managerial qualifications and experience, organizational structure, the compliance history of the system, training programs offered, preventive maintenance programs, and documentation of ownership and responsibility.

The following questions help us to assess the systems managerial capacity and address the following aspects of system management:

**1.) How is the water system managed?**

Who is the system owner(s) and manager?

Does the system utilize personnel and policy procedures or manuals?

Does the system require or encourage continuing education for personnel?

What type of organizational structure exists?

**2.) Does the system have written operation and maintenance manuals?**

**3.) Does the system employ, as needed, the services of a professional engineer?**

**4.) Does the system have up-to date record or as-built drawings?**

**5.) Does the system implement a preventative maintenance program?**

**6.) Does the system have an emergency operating plan and safety program?**

**7.) What types of public outreach education programs are implemented?**

**8.) What professional organizations do the operators and system managers belong to?**

SAFE DRINKING WATER ACT  
COMPLIANCE AGREEMENT  
PURSUANT TO 42 U.S.C. §300j-12(a)(3)

AND  
THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

1. \_\_\_\_\_ is responsible for the operation and maintenance of a Class A Public Water System, Public Water System Identification No. \_\_\_\_\_ ("the Public Water System"). The Public Water System is not in compliance with the Surface Water Treatment Rule, 18 AAC 80-500 - 18 AAC 80.500 ("SWTR").

2. \_\_\_\_\_ has applied for or will apply for assistance from the Safe Drinking Water Act State Revolving Loan Fund ("SRF") to bring the Public Water System into compliance with the SWTR. Pursuant to 42 U.S.C. §300j-12(a)(3) (also known as Safe Drinking Water Act § 1452(a)(3)), an owner or operator of a public water system may not receive assistance from an SRF unless "the use of the assistance will ensure compliance' and, if the owner or operator does not presently have the technical, managerial, and financial capability to ensure compliance, "the owner or operator agrees to undertake feasible and appropriate changes in operations . . . to comply . . . over the long term."

3. \_\_\_\_\_ enters this agreement to meet the prerequisites for assistance listed in 42 U.S.C. §300j-12(a)(3). In exchange for \_\_\_\_\_ agreement, the Alaska Department of Environmental Conservation agrees to review \_\_\_\_\_ application for SRF assistance and agrees that it will not reject the application on the basis of 42 U.S.C. §300j-12(a)(3). The Alaska Department of Environmental Conservation does not agree or express any opinion concerning other requirements or criteria for SRF assistance, and does not guarantee that SRF assistance will be available or that assistance will be granted to \_\_\_\_\_.

4. \_\_\_\_\_ understands that the Public Water System is currently not in compliance with the law and that \_\_\_\_\_ has an obligation independent of this agreement to comply with the law. \_\_\_\_\_ further understands that any failure or inability to receive SRF funds, or any delay in obtaining SRF funds, does not alter its obligation to comply in a timely manner with all applicable drinking water standards and requirements,

5. \_\_\_\_\_ agrees to meet the requirements of the SWTR by meeting the criteria for avoiding filtration contained in 18 AAC 80.520. \_\_\_\_\_ does not currently meet the criteria for avoiding filtration that pertain to

a. \_\_\_\_\_ adequate disinfection of the water prior to use for potable purposes,

b. implementation of a watershed control program to regulate activities in the watershed which may be detrimental to water quality, and

c. demonstrate through direct ownership, or written agreements with landowners within the watershed, that the system can control all human activities that may have an adverse impact on the microbiological quality for the source water, pursuant to 18 AAC 80.520(c)(3).

6. The decision to meet the requirements of the SWTR by upgrading the water system to a level consistent with the filtration avoidance criteria is the sole decision of . The State has accepted proposed compliance plan based on the past water quality test results and conceptual design plans presented to date. The Alaska Department of Environmental Conservation does not warrant that compliance under this agreement with the SWTR filtration avoidance criteria will result in future compliance if conditions in or its watershed should change, or if future, regulatory changes mandate that meet additional water quality or water treatment standards,

7. To comply with the water disinfection requirements of the SWTR by December 31, 1999, will install two disinfection contact (CT) tanks. One CT tank will be used to provided disinfection contact time for the unfiltered water sources. The other CT tank will be used to provide disinfection contact time for the unfiltered water source and the filtered water source. The water source will not be used to provide potable water after these two CT tanks are placed in service. may upgrade the disinfection facilities and operations to meet the SWTR requirements at a future date, but the source is not a subject to this agreement.

8. agrees to implement SWTR Compliance Plan Time Line ("Time Line" attached as Addendum #1), and to complete the water treatment system upgrades necessary to ensure that all surface water provided to the public for potable purposes meets the requirements of the SWTR by December 31, 1999. The Time Line and the deadlines contained in the Time Line are incorporated as enforceable provisions of this agreement.

9. shall submit to the Department's Division of Environmental Health, (MatSu Office, P.O. Box 871064, Wasilla, Alaska, 99687), quarterly progress reports, and other written confirmation as requested by the Department, documenting the status of following action items

a. ADEC Municipal Grant Questionnaire to the Department's Facilities Operations and Construction Division, for the State's fiscal year 1999 (July 1, 1998 June 30, 1999), requesting financial assistance, for the construction of the two CT tanks. The Grant Questionnaire must be submitted prior to the questionnaire's submittal deadline date.

b. Site selection, survey and design for the two CT tank sites.

c. Bid award for the construction of the two CT tank sites and access roads.  
d. Design of the two CT tanks and Water Treatment Plant upgrades and related piping.

e. ADEC Municipal Grant Questionnaire to the Department's Facilities Construction and Operations Division, for the State's fiscal year 2000 (July 1, 1999 - June 30, 2000), requesting financial assistance for the completion of the CT tank engineering and construction and related water system upgrades, as needed. Questionnaire to be submitted to the Department by the questionnaire submittal deadline date.

f. Bid award for construction of the two CT tanks and related water treatment system upgrades.

g. Construction of the two CT tanks and related water treatment system upgrades.

10. agrees to complete the following action items by the date stipulated:

a. Advertise and bid for the construction of the two CT tank sites and the access roads, by February 9, 1998.

b. Complete construction of the two CT tank sites and the access roads, by September 7, 1998,

c. Advertise and bid for the construction of the two CT tanks and related water treatment system upgrades, by August 12, 1998.

d. Submit a complete, set of professional engineering design plans and drawings for the two CT tanks and related water treatment system upgrades to the Department's Facilities Operation and Construction Division for plan review and approval, by April 30, 1998.

e. Construction of two CT tanks and related water treatment system upgrades substantially complete and the two CT tanks operational, by October 30, 1999.

f. Submit a complete set of professional engineering as built documentation for the two CT tanks and related water treatment system upgrades, to the Department's Facilities, Operations and Construction Division, by December 30, 1999.

11. has prepared a Watershed Control Program entitled , prepared for , Alaska, prepared by CH2MHill and Steph Engineers, May 1997. agrees to implement the Watershed Control Program to meet the standards of 18 AAC 80.520(c)(2) and

minimize the potential for contamination by Giardia lamblia cysts and viruses in the source water.  
will document the following actions to the Department, no later than the date indicated:

a. Adopt the Watershed Control Program, by City Council resolution, by December 15, 1997. Once adopted by the City Council, the Watershed Control Program and all provisions contained in the Watershed Control Program are incorporated as enforceable provisions of this agreement. If the City Council fails to adopt a Watershed Control Program that meets the standards of 18 AAC 80,520 by December 15, 1997, shall be deemed in breach of this agreement.

b. Demonstrate, through direct ownership, local ordinance or written agreements with landowners within the watershed, that can monitor and regulate land use activities that may have an adverse impact on the microbiological and physical qualities of the source water, by June 1, 1998, pursuant to 18 AAC 80.520(c)(3).

c. Complete an annual report on the status of the Watershed Control Program and on the condition and effectiveness of disinfection facilities as described in 18 AAC 80.520(c)(4)(5) and (d). Submit the report no later than July 16 of each calendar year.

12. When the written construction or other plans required by this agreement are approved by the Department, including any modifications approved by the Department, the plans will be automatically incorporated into this agreement and will be fully enforceable as if they were part of the original agreement. If no satisfactory plan is submitted and approved by the Department pursuant to this agreement, and the parties are unable to reach an informal accommodation, will be in breach of this agreement.

13. If for any reason is unable to comply with any term or condition in this agreement including a time deadline, or should anticipate a future cause for noncompliance, shall, prior to the non-compliance, notify the Department in writing with a detailed explanation of the condition or conditions that will result in the non-compliance and shall provide a proposal to remedy the violation and a timetable for returning to compliance. obligation to meet the applicable requirement shall be extended or altered as the Department in its sole discretion, deems warranted based on the information provided by .

14. In the event of breach of a provision of this agreement, consents to the entry of temporary and/or preliminary injunctive relief against it for the purpose of enjoining such violation. agrees that the Department may apply to and obtain such injunctive relief from the Superior Court for the State of Alaska without a demonstration of physical irreparable harm, but must only show the violation of this agreement.

15. The Department expressly reserves its right to initiate any administrative or legal proceeding related to any violation, including a proceeding for injunctive relief and civil penalties and/or damages under AS 46.03.760 or AS 46-03.765 or any combination thereof and



for criminal penalties under AS 46.03.790 and for any other appropriate remedy for any violation arising from the events alleged herein or for any future violation. In addition, the Department reserves the right to initiate appropriate legal, action as to any matter if subsequently discovered events or conditions constitute an immediate, threat to public health, public safety, or the environment, whether or not the Department may have been able to discover the event or condition prior to entering into this agreement.

16. This agreement is not and shall not be construed to be a waiver of any cause of action or regulatory authority which may be claimed or exercised by any other agency or Department of the State of Alaska. recognizes that it may be subject to additional requirements imposed by other local, state, or federal agencies..

17. Nothing in this agreement shall be construed as altering existing or future obligations to monitor, record, or report information required under any environmental or public health laws, regulations or permits, or as altering existing or future obligations to allow the Department access to such information.

18. hereby expressly grants the Department access to the Class A public water system for inspection at any time during any business day without any prior notice.

19. agrees to hold the State of Alaska and its representatives, agents, and employees harmless and to indemnify and defend the State of Alaska against all claims (including but not limited to legal, equitable, or administrative claims), liabilities, losses, and damages, and costs awarded or incurred, including attorney fees, and against all claims and actions (including but not limited to legal, equitable, or administrative claims and actions), whether wrongfully brought or not, for injury to or death of persons and loss of or damage to property arising out of or in any manner connected with the incidents which give rise to this agreement, except for any claims arising out of the sole negligence of the State.

20. agrees that this agreement shall apply to and bind their agents, heirs, assigns, and successors and all persons, contractors, and consultants acting on their behalf. If transfers, sells or leases the water system described in paragraph one to another party prior to fulfillment of the provisions of this order, shall incorporate a copy of this agreement into the documents of transfer or lease, and shall provide in those documents that the new owners or lessees shall take or lease subject to the terms and conditions of this agreement; however, failure to comply with this procedure shall not relieve any new owner or lessees from liability as successor.

21. This agreement may be modified by the written agreement of the parties. No amendment is valid unless approved in writing by the Director of the Division of Environmental Health or his/her written designee.

22. A failure to enforce any provision of this agreement in no way implies a waiver of the Department's right to insist upon strict performance of the same or other provisions in the future.

DEPARTMENT OF ENVIRONMENTAL  
CONSERVATION

Dated: \_\_\_\_\_, 1997 By: \_\_\_\_\_

Janice Adair, Director  
Environmental Health

ASSENT OF COUNSEL  
Approved as to legality and form

BRUCE M, BOTELHO  
ATTORNEY GENERAL

Dated: \_\_\_\_\_, 1997 By: \_\_\_\_\_

James Cantor  
Assistant Attorney General

CITY OF

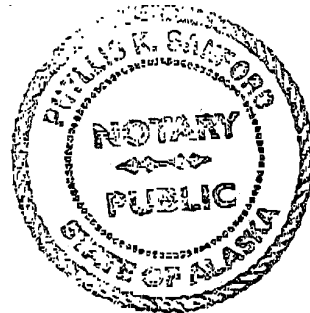
I, \_\_\_\_\_, certify that I am the \_\_\_\_\_  
of \_\_\_\_\_, and that I have the authority to enter in this agreement. I  
acknowledge that \_\_\_\_\_ has freely and voluntarily entered into this agreement with the  
State of Alaska.

By: \_\_\_\_\_

Position: City Manager

SUBSCRIBED AND SWORN TO before-me this \_\_\_\_ day of December 1997.

\_\_\_\_\_  
Notary Public in and for Alaska  
My commission expires: 4-7-98



**CAPITAL FINANCING PLAN WORKSHEETS**

\_\_\_\_\_  
Project Sponsoring Agency (DWSRF Project Sponsor)

\_\_\_\_\_  
Authorized Representative and Title

\_\_\_\_\_  
Capital Financing Plan Contact, Title, and Telephone Number

\_\_\_\_\_  
Street Address or Other Mailing Address

\_\_\_\_\_  
Street Address or Other Mailing Address

\_\_\_\_\_  
City, State, and Zip Code

\_\_\_\_\_  
City, State, and Zip Code

\_\_\_\_\_  
\_\_\_\_\_  
The Department needs to know about the financial capabilities of potential Drinking Water State Revolving Fund (DWSRF) loan applicants. Therefore, a financial capability demonstration (and certification) is required well before the evaluation of the actual loan application. Please see Rule 62-552(5) in Chapter 62-552, F.A.C. for further details.

It is expected that the revenues to be dedicated to repaying the loan will be generated either from water and sewer utility operations or from water utility operations alone. If the source of revenues will not be from such enterprises, this set of worksheets alone will not satisfy the Department's needs. (Please contact the Department for further guidance if dedicated revenues will be generated externally to such utilities.)

This form solicits information for the next five years. Ordinarily, the five-year time frame will cover the period of interest to the Department; but, it will be necessary to provide additional yearly information until the reported data includes at least one full year of DWSRF project operation and one annual DWSRF repayment to the Department. Accordingly, attachments may be made to these worksheets. Please use the format established herein when preparing attachments. The worksheets have been developed to identify the minimum information needed. The completed worksheets should be used in disclosing DWSRF project financing to the public during the required dedicated revenue hearing. The worksheets can serve to identify the impacts of the SRF project on residential users and how the project fits into the project sponsor's overall capital improvement program for the water and sewer utility (or water utility, as appropriate). Supplemental capital financing documentation may be submitted with these worksheets and may be presented at the required dedicated revenue hearing.

A. Household median annual income, average size, number in the utility service area, and population to be served. (Population to be served is determined by the number of households multiplied by the household size. This data is to be consistent with facilities planning projections.) If the data vary by district or zone, report the data according to district or zone on an attachment.

Note: Indicate the actual fiscal years for Year 1 - Year 5 wherever they appear in the worksheets.

	Year 1	Year 2	Year 3	Year 4	Year 5
1. Fiscal Year	_____	_____	_____	_____	_____
2. Household income (\$/year)	_____	_____	_____	_____	_____
3. Household size (people/household)	_____	_____	_____	_____	_____
4. Number of households	_____	_____	_____	_____	_____
5. Serviced population (people)	_____	_____	_____	_____	_____

B. The revenues being dedicated to repayment of the DWSRF loan are: \_\_\_\_\_

C. What projects (including the DWSRF project) will be financed from the operation of the utility generating the revenues to be dedicated to repaying the DWSRF loan? Total annual cost is the sum of annualized capital costs plus the annual operation, maintenance, and replacement (O/M & R) costs. Note that wastewater facilities information is to be identified only if the dedicated revenues will be generated from operations of a water and sewer utility.

Facilities Description	Construction Start Dates (Month/Year)	Capital Costs (\$)	Annualized Capital Costs (\$)	Annual Cost to Operate, Maintain, and Replace(\$)	Total Annual Costs (\$)
1. Water supply well	_____	_____	_____	_____	_____
2. Water treatment plant	_____	_____	_____	_____	_____
3. Sites and easements	_____	_____	_____	_____	_____
4. Water distribution/transmission systems	_____	_____	_____	_____	_____
5. Water storage facilities	_____	_____	_____	_____	_____
6. Other (explain)	_____	_____	_____	_____	_____
7. Wastewater facilities	_____	_____	_____	_____	_____
Total		_____	_____	_____	_____

Identify which of the above water facilities are to be financed with the DWSRF loan and combine (as appropriate) the associated costs:  
 Description \_\_\_\_\_; Total Capital Cost \_\_\_\_\_; Total Annualized Capital Costs \_\_\_\_\_; Total Annual Costs for O/M&R \_\_\_\_\_; Total Annual Cost \_\_\_\_\_; Total \_\_\_\_\_.

D. Identify the DWSRF loan amount scheduled, or to be scheduled, on the project priority list; the interest rate established for the quarter preceding the submittal of the CFP, annual debt service, and expected pledged revenue coverage. Note that DWSRF repayments begin six months after the estimated construction completion. (It is recognized that the information provided are best estimates only.)

DWSRF Loan Amount \$ \_\_\_\_\_; interest rate \_\_\_\_\_%; annual debt service \$ \_\_\_\_\_; loan repayment reserve \$ \_\_\_\_\_; pledged revenue coverage factor \_\_\_\_\_ and semi-annual repayments begin \_\_\_\_\_ (Date).

E. Identify other anticipated debt which will be repaid from operations of the utility providing the dedicated revenues.

Description	Debt Amount(\$)	Annual Interest Rate(%)	Revenue Coverage Rate(%)	Annual Debt Service(\$)				
				Year 1	Year 2	Year 3	Year 4	Year 5
Fiscal Year								
1.								
2.								
3.								
4.								

F. What is the existing debt for the utility providing the DWSRF dedicated revenues?

Description	Current Debt Amount (\$)	Annual Interest Rate (%)	Revenue Coverage Rate(%)	Annual Debt Service(\$)				
				Year 1	Year 2	Year 3	Year 4	Year 5
Fiscal Year								
1.								
2.								
3.								
4.								
5.								
6.								
Totals (\$)								

G. Identify the projected annual expenses for the utility providing DWSRF dedicated revenues.

1.	Existing facilities	FY( )	FY( )	FY( )	FY( )	FY( )
	Fiscal Year					
	O, M, & R (\$)					
	Debt Service (\$)					
	Other - describe _____ (\$)					
	Totals (\$)					
2.	DWSRF proposed project(s)	FY( )	FY( )	FY( )	FY( )	FY( )
	Fiscal Year					
	O, M, & R (\$)					
	Debt Service (\$)					
	Other - describe _____ (\$)					
	Totals (\$)					
3.	Non-DWSRF proposed project(s) (if any)	FY( )	FY( )	FY( )	FY( )	FY( )
	Fiscal Year					
	O, M & R (\$)					
	Debt Service (\$)					
	Other - describe _____ (\$)					
	Totals (\$)					
4.	All existing and planned facilities (sum of Items 1, 2, & 3, above)	FY( )	FY( )	FY( )	FY( )	FY( )
	Fiscal Year					
	O, M, & R(\$)					
	Debt Service (\$)					
	Other - describe _____ (\$)					
	Totals (\$)					

H. Identify the projected annual utility revenues assuming all the planned projects are constructed according to the schedule reported in Item C, above. Compare revenues to expenses identified in Sub-item G.4, above, and explain (on an attachment) how any net loss is covered to keep the utility financially self-sufficient in each deficit year.

Fiscal Year	FY( )	FY( )	FY( )	FY( )
Operating (\$)	_____	_____	_____	_____
Non-operating (\$)	_____	_____	_____	_____
Other - describe _____ (\$)	_____	_____	_____	_____
Totals (\$)	_____	_____	_____	_____

I. Identify the projected annual expenses for the water system, assuming all planned water facilities will be constructed. These entries may be skipped if a water utility alone is providing the DWSRF dedicated revenues since the information already will have been presented in Subitem G.4, above.

Fiscal Year	FY( )	FY( )	FY( )	FY( )
O, M, & R (\$)	_____	_____	_____	_____
Debt Service (\$)	_____	_____	_____	_____
Other - describe _____ (\$)	_____	_____	_____	_____
Totals (\$)	_____	_____	_____	_____

J. Identify the projected annual revenues for the water system, assuming all planned water facilities will be constructed. Compare revenues to expenses identified in Item I, above, and explain (on an attachment) how any net loss is covered to keep the water system financially self-sufficient in each deficit year. These entries may be skipped if a water utility alone is providing the DWSRF dedicated revenues since the information already will have been presented in Item H, above.

Fiscal Year	FY( )	FY( )	FY( )	FY( )
Operating (\$)	_____	_____	_____	_____
Non-operating (\$)	_____	_____	_____	_____
Other - describe _____ (\$)	_____	_____	_____	_____
Totals (\$)	_____	_____	_____	_____

K. Identify the average water system charge, fees, and assessments. If the utility service area encompasses districts or zones which will be subject to different service charges, fees, etc. attributable to the DWSRF project, it will be necessary to provide the relevant data below separately for the district(s) or zone(s). Difference in charges, fees, etc. should be explained on the attachment used to present the water system data.

<u>Fiscal Year</u> <u>Description</u>	<u>FY( )</u>	<u>FY( )</u>	<u>FY( )</u>	<u>FY( )</u>
1. Water System data				
a. Total estimated annual water system costs				
b. Non-residential share of total annual water system costs				
c. Residential share of total annual water system costs				
d. Number of households				
e. Average residential system charge /per month/customer				
2. Average connection fee per residential unit				
3. Average impact fee per residential unit				
4. Average special assessment per residential unit (identify basis below)				
5. Average capacity charge per residential unit (identify basis below)				
6. Other (describe)				
7. DWSRF project capital cost per household (from Item C divided by Item K.1.d)				

Describe basis for special assessments, such as cost per lot length \_\_\_\_\_  
 Describe basis for capacity charge, such as cost per volume per day \_\_\_\_\_

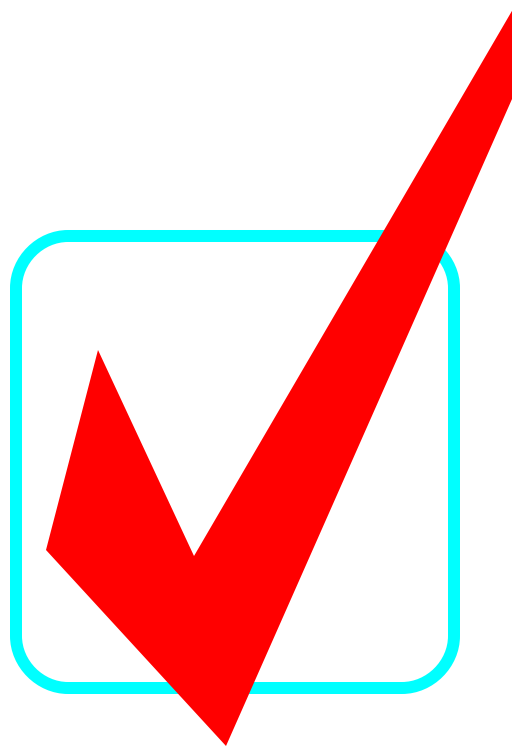
L. Which, if any, of the following activities must be undertaken to implement the DWSRF project?

1. Acquire privately held land?	YES _____	NO _____
2. Acquire land held by another public water system entity?	YES _____	NO _____
3. Enter into inter-local or inter-project sponsoring agency's agreements?	YES _____	NO _____
4. Hold an election or public referendum?	YES _____	NO _____
5. Comply with special assessment or similar procedural requirements?	YES _____	NO _____



- M. Attach a certification by the project sponsor's chief financial officer or by an official authorized to commit to the SRF funding that the project sponsor has the financial capability to ensure adequate construction, operation, and maintenance of the water system.

**Capacity Assessment Worksheets  
for  
Public Water Systems**



**Department of  
Environment and Natural Resources**

Revised July 1999

## 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 be studying 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 as *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 mark  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 write NA for not applicable.*

<b>Water Supply and Existing Demands</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Do you know how much water you pump on an average day? <i>Amount:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you know how much water you pump on a peak day? <i>Amount:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you know the maximum amount of water you can pump from your source? <i>Amount:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is your source capacity higher than your peak day demand? <i>Percentage higher or lower:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can you meet peak demand without pumping at peak capacity for extended periods? <i>Longest time pumping at peak demand:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you been able to provide adequate volumes of water during drought cycles?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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? <i>If yes, please attach.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Water Demand</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Do you know whether your system demands will be growing, declining, or remain stable over the next ten years? <i>Please circle: growing, declining, or stable.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does your source have additional water available for appropriation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Purchased Water</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
If you purchase water from another system or a wholesaler, do you know their long-term plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a contract to purchase water? <i>If yes, with who?</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are you currently staying within your contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you know the terms affecting your supply during drought conditions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Competing Uses of Water</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Are you knowledgeable about other demands being placed on the same water source that you are using?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you know who the other users are and do you understand their future plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you fully understand your legal rights to the water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a water right? <i>Water right permit number:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Alternative Sources</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Are alternative water sources possibly available to you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are you knowledgeable of the characteristics and costs of using alternative sources?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Water Source</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Do you know the depth of your well? <i>Depth:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you know the geologic name of the aquifer system from which your water is drawn? <i>If yes, geologic name:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**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)*

**Surface Water Systems**

<b>Filtration Plant Condition</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are repair parts available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have redundancy (back-ups/automatic switch-overs) for all major mechanical units? If no, list units you do NOT have redundancy for: _____ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can your plant achieve a filtered water turbidity of 0.5 NTU?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have on-line continuous turbidimeters on each filter?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you adopted a turbidity goal lower than the standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have the capability to add coagulant before the filter?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Ground Water Systems**

<b>Ground Water Under the Influence of Surface Water</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Is your water free from variations in turbidity and temperature after storm events?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Well Construction and Protection</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Do you know when your well was constructed? <i>List year:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is your well(s) constructed according to current South Dakota regulations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a source water protection plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is your wellhead finished with a pitless adapter that will prevent contamination from surface water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Disinfection

Do you disinfect?                       yes     no    (if you checked “no”, skip to the Infrastructure - Pumping section)

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

### Disinfection By-Products

Treatment for the Control of Disinfection By-Products	Yes	No	Unknown
If you treat surface water, are you already practicing or could you adopt “enhanced coagulation” in your current plant?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If you treat surface water, could you still meet current contact-time requirements if disinfection were not allowed before sedimentation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Infrastructure - Pumping

Condition of Pumping Equipment	Yes	No	Unknown
Do you routinely inspect for signs of pump or pump motor problems? <i>How often:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Standby/Emergency Power Equipment	Yes	No	Unknown
Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand of the system (excluding fire demand)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Infrastructure - Storage**

<b>Storage Capacity</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
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? <i>If no, how long:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there reserve capacity in the tank for fire protection support? <i>Amount:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Security Measures</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Are any openings such as vent pipes, screened to protect against the entrance of small animals, mosquitoes, flies and other small insects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there an entry hatch to allow access for cleaning and painting of the interior of the tank?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is your storage tank covered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the tank and the immediate surrounding area fenced?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Control Systems</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Is there a high and low water level signal system to control the pumps?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there an altitude valve, to preclude the tank from overflowing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a drain valve or hydrant to allow for draining of the tank?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Tank Maintenance</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, and structural weakness?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Infrastructure - Distribution**

<b>System Maintenance</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Does the operator routinely flush, test, and maintain the hydrants in the system? <i>How often:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the locations of valves in the mains and curb stops on the service lines precisely known?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the system keep a log of distribution system breaks to identify weak areas in the system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are all valves exercised and lubricated periodically?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



<b>System Maintenance (continued)</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Is the system free of severe “water hammer” problems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Unaccounted-for Water</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Is unaccounted-for water in the water system monitored and analyzed each month?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? <i>List percentage of unaccounted-for water: _____%</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the normal operating pressures in the distribution system between 25 psi and 125 psi? <i>Normal operating pressure: _____psi</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a routine leak detection and repair program?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are all sources of supply and customers metered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the meters calibrated and tested routinely to ensure their accuracy and reliability?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Water Quality in Distribution System</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Is an annual inspection for cross-connections performed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a program for installing and testing backflow prevention devices where potential contamination is present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a program to eliminate “dead-ends” in the mains, where feasible?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Construction Standards</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Is there a low percentage of mains less than 6 inches in diameter in the water system? <i>List percentage: _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a program to gradually replace sub-standard sized mains?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there sufficient earth cover (six feet) to protect the mains from frost damage or heavy loads, if driven over?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Distribution System Problems</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Do you receive few complaints regarding the taste and odor of chlorine? <i>List number of complaints in the past year: _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can you maintain adequate pressure in the distribution system under all conditions of flow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 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
Does the person operating your system have current water treatment plant and water distribution operator certification credentials from DENR? <i>If yes, list classification(s):</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Future Operational Demands	Yes	No	Unknown
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? <i>If yes, who:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **Management & Administration**

Who's in Charge?	Yes	No	Unknown
Is there a clear plan of organization and control among the people responsible for management and operation of the system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the limits of the operator's authority clearly known?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are all the specific functional areas of operations and management assigned?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does everyone involved in operations know who is responsible for each area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is someone responsible for scheduling work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rules and Standards	Yes	No	Unknown
Do you have explicit rules and standards for system modifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have rules governing new hook-ups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a water main extension policy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have standard construction specifications to be followed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have measures to assure cross-connection control and backflow prevention?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have policies or rules describing customer rights and responsibilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regulatory Compliance Program	Yes	No	Unknown
Do you fully understand monitoring requirements and have a scheduling mechanism to assure compliance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a mechanism to obtain the most recent information on regulatory requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you know how to obtain clarification or explanation of requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Regulatory Compliance Program (cont.)</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Do you maintain adequate records to document compliance? <i>If yes, for how long?</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you know what to do in the event of a violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Emergencies</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Do you have an Emergency Response Plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a clear chain-of-command protocol for emergency action?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations? <i>If yes, who (title):</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Safety</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Do you have a safety program defining measures to be taken if someone is injured?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does everyone understand the risks and safety measures involved in handling water treatment chemicals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have written operating procedures for both routine and emergency system operations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Maintenance</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have relationships with contractors and equipment vendors to assure prompt priority service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Management Capability</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 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
Do you have an annual budget?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have within the annual budget a separate reserve account for equipment replacement and/or capital improvement?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a process for scheduling and committing to capital projects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a capital improvement plan that covers at least the next ten years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rates/Billing - Are they Adequate?	Yes	No	Unknown
Do you regularly review your rates? <i>How often?</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a plan in place for periodic increases in rates?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the rate structure based on metered watered use? <i>List water rates per 1000 gallons:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do users pay the same or higher rate per 1000 gallons as they use more water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the rate structure assure proportionality among users?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have procedures for billing and collection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is your billing collection rate greater than 95%?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have collection procedures specifically for delinquent accounts?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial Planning Mechanisms - Are they Adequate?	Yes	No	Unknown
Do you have audited financial statements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does your water system presently operate on a break-even basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the water system keep all the water revenues (i.e., water revenue does not support other municipal departments or unrelated activities)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you employ standardized accounting and tracking systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you track budget performance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are financial management recordkeeping systems organized?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are controls exercised over expenditures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are controls exercised to keep from exceeding your budget?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there purchasing procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## ***Financial Spreadsheet***

Please complete the financial spreadsheet on the following page (Page 5-3) 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. Please include the most recent audit 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. Keeping in mind that, for purposes of this analysis, it is important to use **cash** receipts and disbursements. **Suggestion: Round the amounts at least 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 Reserves) plus Item #12 (Operating Cash) should equal Item #7 (Ending Cash Position).
- (7) Item #1 (Beginning Cash on Hand) should equal Item #7 (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 #12 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
<b>Enter Year:</b>					
<b>1. Beginning Cash on Hand</b>					
<b>2. Cash Receipts:</b>					
a. Unmetered Water Revenue					
b. Metered Water Revenue					
c. Other Water Revenue					
<b>d. Total Water Revenues (2a thru 2c)</b>					
e. Connection Fees					
f. Interest and Dividend Income					
g. Other Income					
<b>h. Total Cash Revenues (2d thru 2g)</b>					
i. Transfers in/Additional Rev Needed					
j. Loans, Grants or other Cash Injection please specify					
<b>3. Total Cash Receipts (2h thru 2j)</b>					
<b>4. Total Cash Available (1+3)</b>					
<b>5. Operating Expenses</b>					
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. Contractual Services - Engineering					
i. Contractual Services - Other					
j. Rental of Equipment/Real Property					
k. Transportation Expenses					
l. Laboratory					
m. Insurance					
n. Regulatory Commission Expenses					
o. Advertising					
p. Miscellaneous					
<b>q. Total Cash O&amp;M Expenses (5a thru 5p)</b>					
r. Replacement Expenditures					
<b>s. Total OM&amp;R Expenditures (5q+5r)</b>					
t. Loan Principal/Capital Lease Payments					
u. Loan Interest Payments					
v. Transfers Out					
w. Capital Purchases (specify):					
x. Other					
<b>6. Total Cash Paid Out (5s thru 5x)</b>					
<b>7. Ending Cash Position (4 - 6)</b>					
<b>8. Number of Customer Accounts</b>					
<b>9. Average Annual User Charge per account (2d/8)</b>					
<b>10. Coverage Ratio (2h-5s)/(5t+5u)</b>					
<b>11. Operating Ratio (2d/5s)</b>					
<b>12. End of Year Operating Cash (7 - 13)</b>					
<b>13. End of Year Reserves:</b>					
a. Debt Service Reserve					
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other					
<b>Total Reserves (13a thru 13e)</b>					

## Instructions

4 Year Projections	Last Year Actual	Current Year Budget	Year 2 Projected	Year 3 Projected	Year 4 Projected
<b>1. Beginning Cash on Hand</b>	For the prior period and the current year budget, use the actual cash balance. For all other years, cash on hand should equal item #12 from previous period.				
<b>2. Cash Receipts:</b>					
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.				
<b>d. Total Water Revenues (2a thru 2c)</b>	<b>Self-explanatory</b>				
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.).				
<b>h. Total Cash Revenues (2d thru 2g)</b>	<b>Self-explanatory</b>				
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.				
<b>3. Total Cash Receipts (2h thru 2j)</b>	<b>Self-explanatory</b>				
<b>4. Total Cash Available (1+3)</b>	<b>Self-explanatory</b>				
<b>5. Operating Expenses</b>	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.).				
<b>q. Total Cash O&amp;M Expenses (5a thru 5p)</b>	<b>Total of lines 5a thru 5p.</b>				
r. Replacement Expenditures	Amounts paid/estimated for replacement of equipment to maintain system integrity.				
<b>s. Total OM&amp;R Expenditures (5q+r)</b>					
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.				
<b>6. Total Cash Paid Out (5s thru 5x)</b>	<b>Self-explanatory</b>				
<b>7. Ending Cash Position (4 - 6)</b>	<b>Self-explanatory</b>				
<b>8. Number of Customer Accounts</b>	Use most recent system data or expected increases.				
<b>9. Ave User Charge per Customer (2d/8)</b>	Self-explanatory				
<b>10. Coverage Ratio (2h-5s)/(5t+5u)</b>	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)				
<b>11. Operating Ratio (2d/5s)</b>	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.				
<b>12. End of Year Operating Cash (7 - 13)</b>	All non-reserved cash.				
<b>13. End of Year Reserves:</b>	Do not include depreciation as a reserve unless there is actually a "depreciation" reserve that has cash set-aside for future expansion.				
a. Debt Service Reserve	Funds specifically set-aside to meet debt service requirements or requirements set forth in a loan covenant/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.				

**Putting it all Together: Do you have Technical, Managerial, and Financial Capacity?**

DENR will be reviewing these worksheets, and information we have in our files, in order to make a determination whether you have the technical, managerial, and financial capacity to qualify for a Drinking Water State Revolving Fund loan. Remember, even if you do not have the required capacity right now, you may still qualify if the loan is going to be used to obtain capacity. Keep in mind that certain other changes may also have to be made, such as managerial and financial changes, in order to qualify.

These worksheets can also be downloaded from DENR's website at <http://www.state.sd.us/denr/dw>. If you need more information or assistance in using and completing these worksheets, please contact:

*South Dakota Department of  
Environment and Natural Resources*

**Andrea Griese  
Drinking Water Program  
(605) 773-3754**



# Capacity Assessment Worksheets Part II for Public Water Systems



Department of  
Environment and Natural Resources

September 1997

*TO BE COMPLETED BY DENR*

## Introduction

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

- **Technical capacity** refers to 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 the treatment system work the way it is supposed to? Is it providing the safest and cleanest water possible and required by law to customers right now, and will it be able to in the future?
- **Managerial capacity** refers to the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, does the system have a capable and trained staff? Do it have an effective management structure?
- **Financial capacity** refers to the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does the system have a budget and enough revenue coming in to cover costs, repairs, and replacements?

If it is determined that the system does NOT have the required capacity, it may still qualify for a DWSRF loan if it is going to be used to ensure that the system will have the necessary capacity.

After DENR receives Part I of the Capacity Assessment Worksheets and completes the following worksheets, we will be making a determination whether or not the public water system has the technical, financial, and managerial capacity to be eligible to apply for a DWSRF loan.

**Applicant:** [\[Click here and type name\]](#)  
**Completed by:** [\[Click here and type name\]](#)  
[\[Click here and type title\]](#)  
**Date:** [\[Click here and type date\]](#)

## Glossary of Terms

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

**Corrosion:** The dissolving and wearing away of metal caused by a chemical reaction such as between water and the pipes that the water contacts, chemicals touching a metal surface, or contact between two metals;

**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;

**First Draw:** The water that immediately comes out when a tap is first opened. This water is likely to have the highest level of lead contamination from plumbing materials;

**Granular Activated Carbon Treatment:** A filtering system often used to remove organics. GAC can be highly effective in removing elevated levels of radon from water;

**Gross Alpha Particle Activity:** Total activity due to emission of alpha particles as inferred from measurements on a dry sample;

**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 as *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;

**Ion Exchange Treatment:** A common water softening method that removes some organics and radium by adding

calcium oxide or calcium hydroxide to increase the pH to a level where the metals will precipitate out;

**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;

**Picocurie (pCi):** That quantity of radioactive material producing 2.22 nuclear transformations a minute;

**Picocurie per Liter (pCi/L):** A unit of measure used for expressing levels of radioactivity in water;

**psi:** pounds per square inch

**Sanitary Survey:** An on-site review of the water source, facilities, equipment, operation, and maintenance of a public water system for the purpose of evaluating the adequacy of the source, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water;

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

**Trihalomethane (THM):** One of the family of organic compounds, which are formed by the reaction with chlorine used for disinfection;

**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.

## Assessing the Technical Portion of the System

### Treatment - Microbiological Contamination

Is the 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)*

### Surface Water Systems

Filtration Plant Condition	Yes	No	Unknown
Has the Department of Environment and Natural Resources performed a sanitary survey of the plant within the last three years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Ground Water Systems

Ground Water Under the Influence of Surface Water	Yes	No	Unknown
Has the Department of Environment and Natural Resources contacted the system about the possibility that the well may be under the influence of surface water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the well more than 100 feet deep? <i>Depth:</i> <a href="#">[Click here and type depth]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the well located outside the zone of influence of nearby streams or rivers? <i>Distance to nearest stream or river:</i> <a href="#">[Click here and type distance]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Well Construction and Protection	Yes	No	Unknown
Was the well constructed by a licensed driller?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At the completion of the well installation, did the well driller prepare and file well construction records?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the Department of Environment and Natural Resources performed a sanitary survey within the last three years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Disinfection

Does the system disinfect?       yes     no

*(if you checked no , skip to the Corrosion Control section)*

### Disinfection By-Products

Treatment for the Control of Disinfection By-Products	Yes	No	Unknown
Are the trihalomethane levels below 100 µg/L when averaged over the annual cycle? (This information can be found on the most recent VOC sample)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Corrosion Control

Corrosion By-Products	Yes	No	Unknown
Are the first draw monitoring results been below 15 µg/L for lead and 1.3 mg/L for copper?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>If no, list results: [Click here and type results]</i>			
Does the treated water have a pH greater than 8 and an alkalinity greater than 50 mg/L?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Radionuclides

Radon	Yes	No	Unknown
Has radon been monitored in your well?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the level of radon less than 1000 pCi/L?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>List results: [Click here and type results]</i>			
Radium	Yes	No	Unknown
Are levels of radium (226 and 228 combined) in the water below 5 pCi/L?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>If no, list results: [Click here and type results]</i>			
Are levels of Gross Alpha below 15 pCi/L?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>If no, list results: [Click here and type name]</i>			

### Inorganic Contaminants

Arsenic	> 50 µg/L	< 50 µg/L and > 20 µ g/L	< 20 µg/L
Please check the range of arsenic levels which applies to the system. (May be found on the IOC test)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fluoride	Yes	No	Unknown
Are the levels of fluoride below 4 mg/L? (May be found on the IOC test)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>If no, list results: [Click here and type results]</i>			
Nitrates	Yes	No	Unknown
Are the levels of Nitrate below 10 mg/L?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>If no, list results: [Click here and type results]</i>			

### Pesticides/Herbicides (SOC s)

Pesticides and Herbicides	Yes	No	Unknown
Are the monitoring results below the MCLs for regulated pesticides and herbicides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the system been granted a monitoring waiver for all pesticides and herbicides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

***Industrial/Commercial Chemicals***

<b>Industrial/Commercial Chemicals</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Are the monitoring results free of VOCs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the monitoring results below the MCLs for regulated organic and inorganic chemicals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

***Infrastructure - Distribution***

<b>Distribution System Problems</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
Is the system always in compliance with the monthly coliform standard? <i>If no, when:</i> <a href="#">[Click here and type dates]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

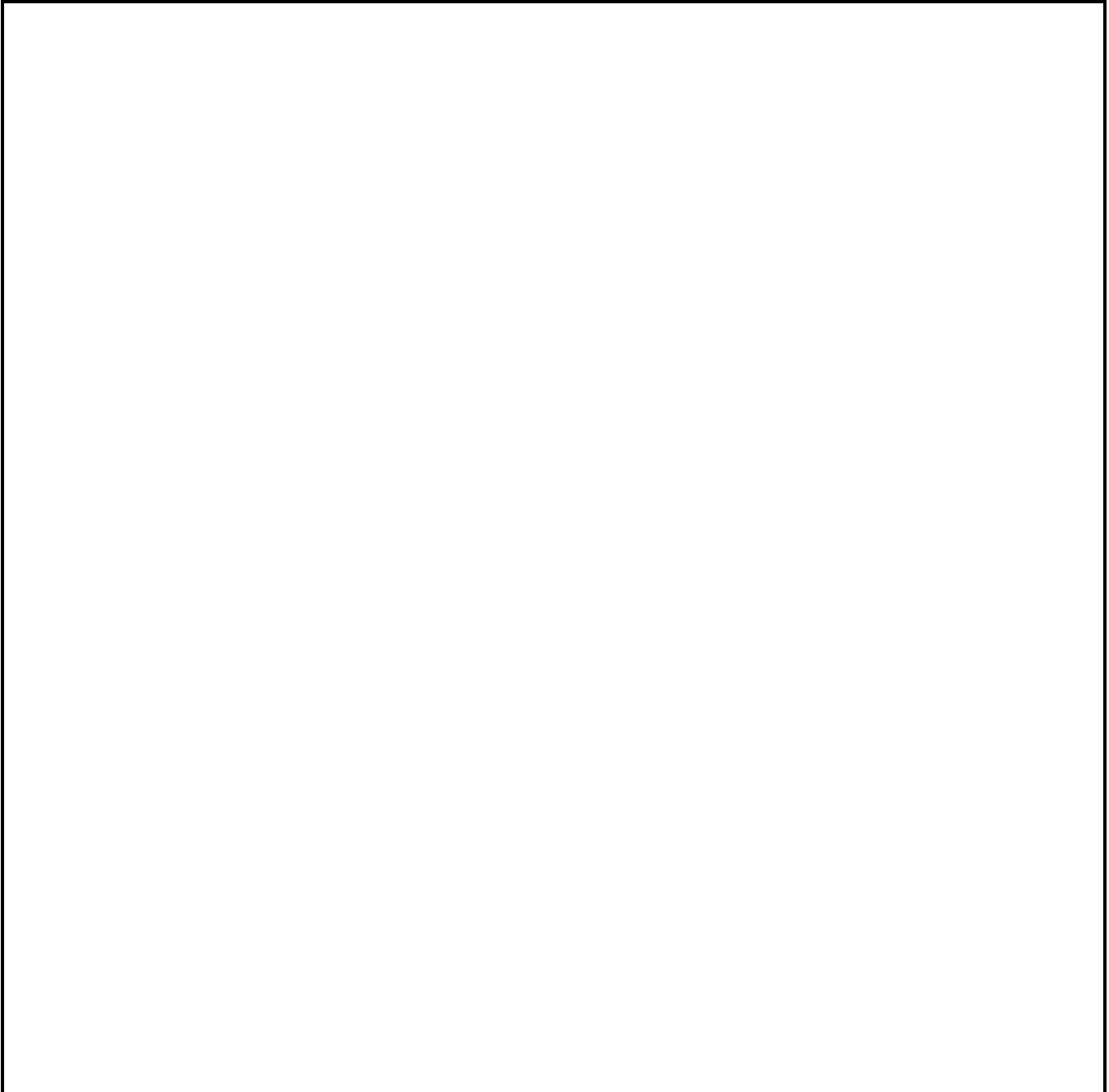
***Infrastructure***

***Figure 1. Public Water System Flow Diagram***

**Name of Public Water System:** [\[Click here and type name\]](#)

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Note: Include all water treatment plant processes. The diagram may be developed on more than one page.



## Assessing the Management Portion of the System

### *Operation & Maintenance*

Current Monitoring Requirements	Yes	No	Unknown
Is the compliance record free of repeated episodes of monitoring violations? <i>If no, please list monitoring violations in the past three years (type and date):</i> <a href="#">[Click here and list monitoring violations]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are they aware of and do they understand provisions for obtaining waivers from monitoring requirements and the role of vulnerability assessments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Assessing the Financial Portion of the System

All financial questions were provided by the applicant.



## Vermont's Priority List Application/Letter of Intent (Capacity Excerpt)

### Technical and Administrative Capacities

1. Does your system have a certified operator? *Yes or No*
2. How many employees/volunteers operate and maintain the facilities?
3. Estimate total hours per week employees work operating and maintaining facilities?
4. Does the system have a current approved operation and maintenance (O&M) manual? *Yes or No*
5. Is the preventive maintenance guidance in the O&M manual generally followed? *Yes or No*
- 6(a). Does the system have a current written long-range plan for necessary system improvements? *Yes or No*
- 6(b) If Yes, does the plan correct all major deficiencies identified in the most recent sanitary survey?  
*Yes or No*
7. Have all minor deficiencies identified in the most recent survey been corrected? *Yes or No*
8. Is water quality monitoring for your system current? *Yes or No*
9. Does your system have an approved source protection plan? *Yes or No*
10. Has a groundwater under the direct influence of surface water determination been made for each of your ground water sources? *Yes or No*

### Financial Capacity

1. Does your organization prepare an annual operating budget for the water system? *Yes or No*
2. For most recent budget year  
Estimated Expenditures:  
Estimated Revenues:
3. Is the Water Department account audited annually? *Yes or No*
4. Do current rates adequately fund current department expenses? *Yes or No*
5. Do annual delinquent water accounts average less than 5% of the total budget? *Yes or No*

6. Are grand list revenues used to finance water department expenses? *Yes or No*
7. Are water bills based on flat fee, metered rate, or both? (Circle one)
8. What is the water rate? (Attach rate schedule if available)
9. What is the total number of equivalent units served by the water system?
10. What percentage of projected revenues were collected from non-residential users during the most recent budget year?

## Technical, Financial and Managerial Capacity Review and Documentation

Water System Name \_\_\_\_\_ WSID \_\_\_\_\_

Project Number \_\_\_\_\_/PID # \_\_\_\_\_ Date \_\_\_\_\_

Loan Purpose \_\_\_\_\_ Loan Amount Est. \_\_\_\_\_

Considerations	Determination Yes or No	Basis for Determination
1. <u>Operation and Maintenance Manual</u> Does the system have an approved current operation and maintenance manual?		
2. <u>Operator Certification</u> Does the system have a certified operator?		
3. <u>Operator Certification</u> Will the current operator's certification be adequate after the water system improvements?		
4. Is all water quality monitoring current?		
5. Does the system have an approved Source Protection Plan?		
6. Has the system obtained the required groundwater under the direct influence of surface water determination?		
7. Did the most recent sanitary survey indicate adequate routine maintenance?		
8. Have all deficiencies identified in the most recent sanitary survey been corrected?		

<b>Considerations</b>	<b>Determination Yes or No</b>	<b>Basis for Determination</b>
9. At project completion, will the system facilities be in compliance with the Water Supply Rule?		
10. Is the estimated user rate after project completion below 2% of the median household income?*		
11. Does the system adopt/develop an Annual Budget?		
12. Have the estimated user rates been presented at a public meeting and made known to the system users?		
13. Are delinquent water accounts below 5% of the annual operating budget?		
14. Does the organization have a written long range plan (minimum 10 years) to address facility improvements?		
15. Does the responsible organization hold regularly scheduled meetings?		
16. Are all officer positions within the organization currently filled?		
17. Does the organization have a written procedure for addressing customer complaints?		

\* If the answer to #10 is no, a justification for project approval is required.

#10 Justification:

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“No” answers will normally require a loan condition.

Suggested Loan Conditions:

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Additional Loan Conditions are indicated on the attached sheet.

The Water Supply Division has determined that the \_\_\_\_\_  
water system meets the technical, financial, and managerial capacity requirements for a loan from  
the DWSRF, with any suggested loan conditions.

\_\_\_\_\_  
Date Water Supply Division Regional Manager

\_\_\_\_\_  
Date Water Systems Section Chief

\_\_\_\_\_  
Date DWSRF Program Manager

Examples of entries under Basis of Determination are: Preliminary Engineering Report, Sanitary Survey, WSD water quality records, personal knowledge, water system application, etc.

This completed form will be submitted to the Facilities Engineering Division with the WSD loan approval.

## Project Specific Loan Conditions

Water System Name \_\_\_\_\_ WSID# \_\_\_\_\_ Loan # \_\_\_\_\_

If the requirements are currently included in another enforceable document, or will be included in an enforceable document within the near future (TOPs, AODs, construction permits), they should not be included as loan conditions.

The provisions circled below should be included in the loan for this project.

1. Operation and Maintenance Manual

An operation and maintenance manual which meets the requirements of the Water Supply Rule shall be submitted to the Water Supply Division by (date).

2. Operating Permit

The water system must submit an application for a permit to operate in accordance with the Water Supply Rule by (date).

3. Operator Certification

The water system shall have a certified operator as required by the Water Supply Rule by (date).

4. Water Quality Monitoring

Water quality monitoring required by the Water Supply Rule shall be completed by (date).

5. Source Protection Plan

The water system shall complete a source protection plan that meets the requirements of the Water Supply Rule by (date) and submit it to the Water Supply Division by (date).

6. Ground Water Under the Direct Influence of Surface Water

The water system must obtain a determination by the Secretary of the Agency of Natural Resources as to whether the ..... water source is under the direct influence of surface water in accordance with the Water Supply Rule by (date).

7. Bacteriological Sampling Plan

A bacteriological sampling plan for the water supply system, as required by the Water Supply Rule, shall be developed and submitted to the Water Supply Division by (date).

9. Facility Deficiencies

Water system improvements necessary to bring the system into compliance with Water Supply Rule Appendix A requirements shall be completed by (date). These include .....

11. Annual Budget

An annual budget shall be developed and adopted by the water system. The budget for the current year shall be adopted by (date) and a copy submitted to the Water Supply Division by (date).

13. Delinquent Accounts

A written plan for reducing the amount of delinquent accounts shall be developed, adopted and implemented by (date) and a copy submitted to the Water Supply Division by (date).

14. Long Range Plan

A long range plan for facility improvements and operation and maintenance covering a minimum 10-year period which meets the established standards of the Water Supply Division shall be completed and submitted to the Water Supply Division by (date).

15. The water system must submit a meeting schedule for the next year to the Water Supply Division by (date).

16. Water System Management

The water system must fill all officer positions in the organization by (date) and submit a list of the officer positions and incumbents to the Water Supply Division by (date).

17. Customer Concerns

A written procedure for addressing customer concerns shall be developed, adopted and implemented by (date). A copy of the procedure shall be submitted to the Water Supply Division by (date).

Date \_\_\_\_\_  
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Completed by \_\_\_\_\_