

# NORTH DAKOTA EXISTING WATER SYSTEM CAPACITY STRATEGY

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IMPROVING THE TECHNICAL, MANAGERIAL,  
AND FINANCIAL CAPABILITY OF  
NORTH DAKOTA'S PUBLIC WATER SYSTEMS

AUGUST 2000

Division of Municipal Facilities (DMF)  
Environmental Health Section  
North Dakota Department of Health (Department)

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## Introduction

The Safe Drinking Water Act (SDWA) Amendments of 1996 authorize a Drinking Water State Revolving Loan Fund (DWSRF) program to help public water systems (PWSs) finance the infrastructure needed to achieve or maintain compliance with SDWA requirements and to achieve the public health protection objectives of the SDWA. Section 1420(c) of the SDWA directs the Administrator of the U.S. Environmental Protection Agency (EPA) to withhold a portion of a states's allotment under §1452 unless the state develops and implements a capacity development program to assist existing PWS in acquiring and maintaining technical, managerial, and financial capability (capacity).

The SDWA amendments were purposely designed to be flexible so that States and local governments could develop appropriate solutions to their unique problems. The SDWA offers states flexibility and the opportunity to develop creative, state-specific solutions to achieve technical, managerial, and financial capability.

North Dakota must be developing and implementing a strategy to assist PWSs in acquiring and maintaining capacity to comply with the SDWA by August 6, 2000. In developing and implementing a capacity development strategy, the SDWA §1420(c)(2)(A-E) requires States to *“consider, solicit public comment on, and include as appropriate”* the following five elements:

- A. The methods or criteria that will used to identify and prioritize the PWSs most in need of improving technical, managerial, and financial capacity;
- B. The factors that encourage or impair capacity development;
- C. The way the state will use the authorities and resources of the SDWA or other means to assist PWSs in complying with the National Primary Drinking Water Regulations (NPDWRs), encourage the development of partnerships between PWSs to enhance capacity of the systems, and assist PWSs in the training and certification of operators;
- D. The way the state will establish a baseline and measure improvements in capacity with respect to the NPDWRs and State drinking water law; and
- E. An identification of the persons that have an interest in and are involved in the development and implementation of the capacity development strategy.

According to the EPA document, *Guidance on Implementing the Capacity Development Provisions of the Safe Drinking Water Act Amendments of 1996*, North Dakota must document the following elements to demonstrate that it has met the basic requirements of §1420(c):

- **Public Comment:** North Dakota must verify that public comments on the five elements listed above were solicited as part of the development of its capacity development strategy. North Dakota must also describe relevant public comments and its responses to them.
- **Consideration of §1420(c)(2)(A-E):** North Dakota must describe which of the listed elements were included or excluded from its strategy, and why each element was included or excluded.
- **Capacity Development Strategy:** North Dakota must describe how the selected elements together can rationally be considered to constitute a strategy to assist PWSs to acquire and maintain capacity.
- **Strategy Implementation:** North Dakota must describe how it will implement its strategy and evaluate its progress toward improving PWS capacity.
- **Ongoing Reporting Requirements:** Not later than two years after the date on which North Dakota adopts a capacity development strategy, and every three years thereafter, the Department as primacy agency must submit to the Governor a report on the efficacy of the strategy and the progress towards improving the capacity of PWSs.

Every three years, North Dakota must submit to the EPA Administrator a list of community water systems (CWS) and nontransient noncommunity water systems (NTNCWS) that have a history of significant noncompliance, and to the extent possible, the reasons for noncompliance.

By 2001, North Dakota must submit to the EPA Administrator a report on the success of enforcement mechanisms and initial capacity development efforts in helping systems in significant noncompliance acquire and maintain capacity.

This Existing Water System Capacity Development Strategy (strategy) describes how the DMF will assist existing PWSs in acquiring and maintaining technical, managerial, and financial capability to meet the requirements detailed in §1420(c) of the SDWA and thereby ensure that North Dakota receives its full fiscal year 2001 DWSRF allotment.

## **Public Comment**

It is the intent of the Department to involve parties at interest in a collaborative manner in finalizing this strategy. To this end, a public hearing will be held in Bismarck in late July to gather input on the draft strategy. A notice will be published in major State newspapers at least 30 days in advance of the hearing. The notice will clearly describe the purpose of the hearing, and include contact information for requesting a copy of the strategy. A comment period of one week beyond the hearing will be established to further enable input from parties attending or unable to attend the hearing. As a means to further encourage involvement, the Department will directly mail a copy of the hearing notice to identified stakeholders (see Appendix 2). The stakeholder contact list includes entities previously contacted for input on capacity issues. Any comments received will be described and included in the final strategy. This draft strategy will be available to all parties and stakeholders with an interest in commenting on or assisting with the finalization of the strategy.

## **Public Comment Responses**

Following the public hearing, a responsiveness summary will be prepared and included in the final strategy (Appendix 3). The responsiveness summary will detail comments received as well as how the comments were considered in finalizing the strategy. Public comments will be solicited on all five elements listed in §1420(c)(2).

## **Elements of §1420(c)(2)(A-E)**

The SWDA requires that States consider each of five programmatic elements for inclusion in the capacity development strategy. It does not require States to use specific tools in implementing the selected elements. North Dakota did consider and will include all five elements in the capacity strategy. North Dakota feels that all the elements when taken as a whole, constitute a strategy to assist PWSs in acquiring and maintaining technical, managerial, and financial capability.

### **Element A: Methods or Criteria Used to Prioritize Systems in Need of Technical, Managerial, and Financial (TMF) Assistance**

The SDWA requires that each state *“In preparing the capacity development strategy, the State shall consider, solicit public comment on, and include as appropriate - - the methods or criteria that the State will use to identify and prioritize the public water systems most in need of improving technical, managerial, and financial capacity.”*

North Dakota considered several methods and criteria that could be used to implement this element and benefit PWSs. It was determined that the greatest assistance to PWSs would be to utilize existing data from State agencies to prioritize those systems in greatest need of acquiring and maintaining technical, managerial, and financial capability. Existing data to be used in prioritizing systems are included in Appendix 1.

## **Section B: The Factors That Encourage or Impair Capacity Development.**

The SDWA requires each state to identify the factors that either encourage or impair the TMF capability of PWSs. North Dakota must consider developing a description of the “*institutional, regulatory, financial, tax, and legal factors at the federal, State, or local level that encourage or impair capacity development*”.

The factors operating at the federal, State, and local level that impair or enhance water system capacity are presented in this section of the document. By definition they are:

- *Institutional - Intergovernmental, cultural, procedural or relationship issues that either enhance or impair the ability of water systems to acquire or maintain TMF capability.*
- *Regulatory - Federal, State, or local rules and regulations that affect TMF capability.*
- *Financial - Financial practices, policies, or conditions that affect TMF capability.*
- *Tax - Federal, State, or local taxation practices, policies, or attitudes that affect TMF capability.*
- *Legal - Federal, State, or local statutes and interpretations of laws that affect TMF capability.*

The following factors were drawn from national studies, experience of DWSRF Program staff, and from knowledge gained by the DMF in administering the Drinking Water program over the years.

### **Factors that Encourage Capacity Development**

There are a number of factors that currently enhance the capacity of PWSs in North Dakota. This section is not meant to address all possible factors that enhance the capacity of water systems, but rather to identify those providing the greatest enhancement to capacity. An important factor is that the Environmental Health Section houses all programs that deal directly with drinking water related programs.

### **Enhancements at the Federal Level**

- US Congress - allots DWSRF funding monies;
- EPA - requires enforcement of NPDWR;
- EPA - provides primacy to States; and
- EPA - performs drinking water infrastructure Needs Survey every four years.

## Enhancements at the State Level

- DWSRF Program - administers the Drinking Water State Revolving Loan Fund;
- Drinking Water Program - implements the SDWA;
- CWSRF Program - administers the Clean Water State Revolving Loan Fund in North Dakota;
- Groundwater Program - administers groundwater protection programs, including the Wellhead Protection and Source Water Assessment Programs;
- ND Permits Program - administers discharge control of contaminants to surface water;
- Clean Water Program - administers the surface water protection program in North Dakota;
- Operator Certification and Inspections Program - administers the operator certification program to assure certified operators for PWSs, provides training of water system operators, awards continuing education units (CEU)s, and performs sanitary surveys;
- Municipal Bond Bank - provides financial assistance to the DWSRF Program under contract and provides short term financing to PWSs;
- ND Plumbing Board - licenses plumbing contractors and assures compliance with The Uniform Plumbing Code;
- State Water Commission - issues allocation permits to control water useage in North Dakota;
- Midwest Assistance Program - provides on-site and regional financial training for PWSs utilizing DWSRF set-aside funds through contract;
- ND Rural Water Association - provides on-site technical assistance, including source water protection assistance to PWSs utilizing DWSRF set-aside funds through contract;
- ND Chapter of the American Public Works Association - promotes professional excellence and public awareness;
- ND Chapter American Water Works Association - provides research, education, and training for water related issues;
- ND Consulting Engineers Council - provide engineering expertise;
- ND Water Pollution Control Conference - sponsors an annual joint meeting of professional organizations in North Dakota which provides networking and training opportunities with CEUs for water professionals;
- Annual *Drinking Water Week* - provides public awareness of the need to protect drinking water sources; and
- Rural Water Systems - rural water systems located throughout North Dakota provide water to many PWSs through consolidation or regionalized service.

### **Enhancements at the Local Level**

- Local and District Health Units - conduct sanitary surveys of transient noncommunity PWSs; and
- Public Water Systems - networking among local area PWSs sharing equipment and expertise.

### **Factors that Impair Capacity Development**

There are also factors that impair capacity of PWS in North Dakota. This section is not meant to address all possible factors that impair the capacity of water systems; but rather, to identify those causing the greatest impairment to capacity.

### **Impairments at the Federal Level**

- Not all federal agencies that provide funding are involved in capacity development;
- Rule interpretations may differ between programs;
- Federal regulations are complex;
- Federal regulations are ever-increasing;
- Unfunded mandates; and
- Insufficient funding to address needs.

### **Impairments at the State Level**

- Resource limitations;
- Lack of education to the consumer;
- Funding limited to nonprofit noncommunity and community PWSs; and
- Water rate structures established at the discretion of the water system (except when funding applications are made).

### **Impairments at the Local Level**

- Lack of planning;
- Lack of financial management;
- Unmetered water;
- Lack of training/education for council or board members;
- Lack of public awareness;
- Failure or inability to understand regulations;
- High turnover both for operators and governing officials;
- Difficulty in finding a certified operator;
- Difficulty in obtaining financing;
- Small and/or declining population;
- Insufficient rates/funds;
- Low incomes;
- Resistance to rate or tax increases; and
- Resistance to lose autonomy.

## **Element C: Description of How North Dakota Will Use the Authority and Resources of the SDWA**

The SDWA requires each state to consider developing “a description of how the State will use the authorities and resources of this title or other means to - - assist public water systems in complying with national primary drinking water regulations; encourage the development of partnerships between public water systems to enhance technical, managerial, and financial capacity of the systems; and assist public water systems in the training and certification of operators.”

North Dakota intends to use the following tools to assist and improve public water system capacity.

### **Existing Tools**

- Sanitary surveys;
- Operator Certification Program;
- Working relationship with other agencies and organizations;
- Training sessions at the annual operator training school;
- Publication of articles in the Official Bulletin (official publication of the ND Water and Pollution Control Conference);
- Technical assistance organizations; and
- Enforcement.

### **New Tools for Capacity Assessment and Development**

- Self-Evaluation (Appendix 4).

## **Element D: Establishing a Baseline and Measuring Improvements**

The SDWA requires that North Dakota “*must consider, solicit public comment on, and include as appropriate - - a description of how the State will establish a baseline and measure improvements in capacity with respect to national primary drinking water regulations and State drinking water law.*”

North Dakota currently conducts several activities that can be used to establish a baseline for existing PWS capacity.

### **Drinking Water Program**

North Dakota’s Drinking Water Program currently monitors PWS statistics and compliance status under the SDWA. This information will be used to establish a baseline for all PWSs and to provide the method of measuring improvements over time relative to capacity.

- Types of PWSs;
- Number of PWSs;
- Population served by the PWSs;
- Public water systems out of compliance with SDWA;
- Public water systems with monitoring and reporting violations;
- Public water systems in compliance with the SDWA; and
- Public Water Systems that are significant noncompliers (SNCs) under the SDWA.

### **Operator Certification and Inspections Program**

The Operator Certification and Inspections Program monitors PWS compliance with State operator certification requirements. They also maintain a list of PWSs that currently are lacking an appropriately certified operator for their class of water system. In addition, they award and monitor CEUs earned and needed by operators to maintain certification.

### **Sanitary Surveys**

The Operator Certification and Inspections Program also performs sanitary surveys of community and nontransient noncommunity water systems. The program evaluates conditions that must be corrected and monitors corrections of deficiencies.

Transient noncommunity water systems (TNCWS) are surveyed on-site by local and District Health Units through contract with the Department. Copies of the sanitary surveys are provided to the Department for use in establishing a baseline.

### **Licensing and Permit Data for TNCWS**

The Division of Food and Lodging maintains information regarding licensing and permit violations related to TNCWS.

In addition to the above activities, the volume of capacity activity will be tracked. This includes:

- The number of requests for capacity assistance;
- The number of site visits conducted by DMF staff to provide technical assistance;
- The number of contracted technical assistance site visits; and
- The number of contracted technical assistance training sessions provided.

### **Element E: Identifying Interested Persons**

The SDWA requires that North Dakota must consider *“an identification of the persons that have an interest in and are involved in the development and implementation of the capacity development strategy.”*

The Department has previously identified stakeholders and persons interested in capacity issues. To identify other potentially interested parties and encourage additional involvement, a 30-day advertised public hearing will be held to solicit input and comments of the draft strategy. Based on past experience with public participation in previous rule development and changes, North Dakota feels that it is more productive and effective to develop a draft strategy prior to soliciting input from stakeholders and the general public. The draft strategy will be available to any and all interested persons. The stakeholders and interested persons will be informed of the date of the public hearing to solicit comments regarding the draft strategy.

All entities previously identified and invited to provide input on capacity issues will be contacted by mail informing them of the hearing and the opportunity to provide comments on the draft strategy. Stakeholders and interested parties are listed in Appendix 2. All comments received will be considered in finalizing the strategy.

## **The Strategy**

North Dakota believes that the program elements it has chosen, when taken as a whole, constitute a strategy that will assist PWSs in the acquisition and maintenance of technical, managerial, and financial capability. North Dakota further believes that by requiring an accounting of each element selected to be included in the draft strategy, it can be demonstrated that adequate capacity exists.

Public water systems found to have weak areas or deficiencies in any of the three areas of capacity ( technical, managerial, or financial ) will be prioritized and scheduled for follow-up activities. The type and degree of assistance provided will depend on the weaknesses or deficiencies identified, and the system's ability to acquire and maintain capacity.

## **The Process for Prioritizing Systems**

By establishing a process for prioritizing water systems (Appendix 1), North Dakota will be able to identify and help those systems most in need of capacity assistance. The prioritization system will rank systems using technical, managerial, and financial indicators.

Following the prioritization process, PWSs ranked ten or higher will be contacted and requested to complete a self-evaluation (see Appendix 4). On a system-by-system basis, a determination will be made as to what type of assistance would most benefit the system based on the self-evaluation, a review of existing agency information, and a telephone interview. If deemed necessary and appropriate, North Dakota will contract with technical assistance organizations to provide capacity assistance, particularly for systems determined to lack financial capability.

The following tools are available, and may be used singly or in combination, to help water systems acquire and maintain capacity.

- On-site visits by DMF staff
- Operator certification
- Training
- Use of technical assistance providers
- Use of DWSRF set-asides
- Public education
- Dissemination of educational materials

Once the assistance is completed, the DMF will follow-up with the system to determine if the assistance has achieved the desired results of acquiring and maintaining capacity. The DMF will also measure improvements to capacity for all remaining PWSs by evaluating compliance with the NPDWRs under the SDWA, SNC lists, operator certification lists, and by tracking the volume of capacity activity.

The process is intended to follow the below steps in order:

1. Data collection
2. Prioritize systems to acquire and maintain capacity
3. Establish baseline
4. Determine assistance needed to acquire and maintain capacity
5. Assist systems with appropriate tools
6. Follow-up
7. Track success

### Strategy Implementation Schedule

After stakeholders and interested persons have reviewed the draft strategy and provided any comments, all comments will be appropriately addressed and a final strategy will be sent to EPA Region VIII for review and approval.

The Strategy Implementation timetable is as follows:

- ◆ Submit draft strategy to EPA Region VIII for review and comment.  
June 2000
- ◆ Advertise to the public and specifically inform identified stakeholders of upcoming public hearing regarding draft strategy.  
June 2000
- ◆ Hold public hearing on draft strategy, solicit comments, and address all issues.  
July 2000
- ◆ Begin process of system prioritization.  
August 2000
- ◆ Identify systems lacking adequate capacity and begin the capacity development process.  
September 2000
- ◆ Re-prioritize systems for acquiring and maintaining capacity.  
July 2001  
(thereafter annually) and as capacity issues occur.
- ◆ Evaluate the progress of the program.  
July 2001  
(thereafter annually)
- ◆ Evaluate the success of program tools in acquiring and maintaining capacity.  
July 2001  
(thereafter annually)

North Dakota considers this strategy a dynamic strategy. It is intended to remain subject to change during the comment and evaluation process, and as issues arise.

## **Future Reporting Requirements**

EPA's *Guidance on Implementing the Capacity Development Provisions of the Safe Drinking Water Act Amendments of 1996* requires that North Dakota perform the following activities:

### **Ongoing implementation**

- Each year, as a stand-alone submittal or as part of the capitalization grant application, North Dakota must provide documentation showing ongoing implementation of the capacity development strategy.

### **Listing of systems with a history of significant noncompliance (§1420(b)(1))**

- States must prepare, periodically update, and submit to the EPA Administrator a list of CWSs and NTNCWSs that have a history of significant noncompliance. States must also, to the extent practicable, provide reasons for the noncompliance of these systems.

Note: History of significant noncompliance is defined as being an SNC during any three or more quarters within the last three years.

### **Report to the EPA Administrator (§1420(b)(2))**

- States must submit a report to the EPA Administrator by August 6, 2001, that details the success of enforcement mechanisms and initial capacity development efforts in helping those PWSs listed as having a history of significant noncompliance to improve their technical, managerial and financial capability.

### **Report to the State Governor (§1420(c)(3))**

- No later than two years after a State develops a capacity development strategy, and every three years thereafter, each State's primacy agency must submit a report to the State's Governor and to the public that details the efficacy of the State's capacity development strategy and that outlines the progress made towards improving the technical, managerial, and financial capability of PWSs in the State.

Failure to produce any of the above reports will constitute a basis for DWSRF withholding since these reports, required under §1420(b)(3) and §1420(c)(1), are considered a part of the capacity development strategy. However, EPA will not base withholding determinations on any type of judgements or inferences drawn from the reports regarding the relative merits or efficacy of North Dakota's capacity development strategy. Further, the statute in §1420(c)(4) explicitly prohibits EPA from reviewing decisions on North Dakota regarding any particular PWS as part of a capacity development strategy. Such decisions regarding individual PWSs may not serve as a basis for withholding funds. North Dakota intends to fulfill the above reporting requirements.

## Appendix 1 PRIORITIZATION PROCESS

### **Prioritized Systems**

A point system will be used by North Dakota to determine a priority ranking of drinking water systems. Points will be awarded to existing water systems to prioritize those systems in need of immediate or future assistance to acquire or maintain capacity. Existing systems accumulating ten or more points will be determined to lack capacity. They will be targeted to receive immediate assistance to acquire capacity. Systems accumulating less than ten points will receive assistance to maintain capacity. Assistance will be provided to systems beginning with the highest ranking.

**Facility Name:** \_\_\_\_\_ **Prepared by:** \_\_\_\_\_ **Date:** \_\_\_\_\_

### **Point System**

A point system will be used to determine those systems requiring immediate action to acquire capacity (10 or more points).

	<u>Points</u>
SNC under the SDWA .....	10
Without a plan of action to regain compliance .....	5
Out of compliance with SDWA (non-SNC, excludes monitoring/reporting violations) .....	8
Without a plan of action to regain compliance .....	4
Monitoring/reporting violations .....	6
Major .....	3
Minor .....	1
Without a corrective action plan .....	1
Lack of certified operator .....	4
Without a plan to gain certification .....	3
Sanitary survey indicated water system deficiency (each) .....	2
Without a corrective action plan .....	3
Laboratory account past due .....	2
Without a corrective action plan .....	1
<b>Total Points</b> .....	_____

## **Appendix 2**

### **STAKEHOLDER CONTACT LIST**

The below parties have been identified as having an interest in capacity issues. As a means to further encourage involvement, the Department will directly mail a copy of the hearing notice to these parties.

- PWSs
- Consulting Engineers
- North Dakota Consulting Engineers Council
- Local and District Health Units
- North Dakota League of Cities
- North Dakota Association of Counties
- Regional Planning Councils
- North Dakota Rural Water Systems Association
- Midwest Assistance Program
- North Dakota State Water Commission
- U.S. Department of Agriculture, Rural Development
- North Dakota State Plumbing Board
- North Dakota Municipal Bond Bank
- North Dakota Parks and Recreation Department
- North Dakota Association of Builders
- North Dakota Association of Realtors
- North Dakota Bankers Association
- North Dakota Manufactured Housing Association
- North Dakota Department of Public Instruction
- North Dakota Water Coalition
- North Dakota Water Users Association
- Associated General Contractors of North Dakota

### **Appendix 3 RESPONSIVENESS SUMMARY**

#### **Summary of Public Comments and Responses on the Draft North Dakota Existing Water System Capacity Development Strategy (June 2000)**

The public was invited to comment on the draft North Dakota Existing Water System Capacity Development Strategy (strategy) dated June 2000 at a public hearing held on Thursday, July 27, 2000 at 1:30 p.m. CDT at the Environmental Training Center, 2639 East Main, Bismarck, ND. Notice of the hearing was published in the Bismarck Tribune, Grand Forks Herald, The Forum (Fargo), and the Minot Daily News 30 days prior to the hearing date (with the exception of The Forum which was 24 days). The notice clearly described the purpose of the hearing, included contact information for requesting a copy of the strategy, and defined a comment period extending one week beyond the hearing date.

As a means to further encourage involvement, the Department directly mailed a copy of the hearing notice to identified stakeholders (see Appendix 2). The stakeholder contact list includes entities previously contacted for input on capacity issues. The draft strategy was made available to any interested party. Included in the notice was a statement indicating that the Department would fully consider all written or oral data, views, or arguments on the draft strategy received by August 4, 2000. Below is a summary detailing comments received as well as how the comments were considered in finalizing the strategy.

The public hearing was attended by one individual representing public water systems, one individual representing state agencies, and one technical assistance provider. One attendee presented an oral comment related to the Sample Financial Spreadsheet (Appendix 6). The attendee suggested asking for historical financial data previous to the current year. The Department determined that although a financial history may prove interesting concerning a system, it is more appropriate to encourage a system to project future needs to better acquire and maintain capacity.

Written comments were received from the Midwest Assistance Program, Inc. and the ND Municipal Bond Bank. A summary of the comments and how they were addressed follows.

1. One commentor pointed out typographical errors.

Typographical errors have been corrected.

2. One commentor suggested that it might be helpful to restate to the time frame in which systems will be re-prioritized.

The commentor acknowledged that, restating the time frame for re-prioritizing systems for acquiring and maintaining capacity would be redundant. It would also be misleading since re-prioritizing occurs as capacity issues occur.

3. One commentor felt that the “Existing Water System Self-Evaluation Questionnaire” (Appendix 5) is somewhat subjective for the person completing the questionnaire.

Systems targeted for assistance through the prioritization process will be contacted and requested to complete a self-evaluation questionnaire. By completing the questionnaire, each system will be able to identify and understand areas of strength and weakness related to their system. Each system is best able to evaluate their own system without comparison to other water systems. The information provided in the self-evaluation questionnaire, along with a review of existing agency information, and a telephone interview will be used to determine what type of assistance would most benefit the system to acquire and maintain capacity. The questionnaire is also intended to be a tool to educate systems of appropriate attributes of a system with capacity. The Department feels the questionnaire is appropriate for the intended purpose.

4. One commentor noted that not all communities are required to complete full financial audits, just submit an audit report.

The questionnaire uses probing questions to determine if the system can demonstrate financial capability regardless if there is a law requiring actions. A system can perform a financial audit independently of “audit” requirements.

5. One commentor suggested a clarification to the determination of coverage for debt service on the “Sample Financial Spreadsheet” (Appendix 6).

A new line item titled “Net Operating Water Revenues (2d-5p)” has been incorporated.

## **Appendix 4 SELF-EVALUATION**

Systems targeted for assistance through the prioritization process ( those PWSs ranked ten or higher) will be contacted and requested to complete a self-evaluation questionnaire (see Appendix 5). Such systems will also be requested to complete a financial spreadsheet (see Appendix 6) to assist them in addressing the financial questions and better understand their financial capability. Systems will be allowed to use a different format for presenting the financial information as long as the same information is provided for both the current year and the following four years.

The questionnaire is designed to enable a comparison of the capacity characteristics of a system to the evaluation criteria shown below. The completed questionnaires will be reviewed by the DMF. Based on the responses, a determination will be made as to what type of assistance would most benefit the system.

By completing the questionnaire, each system will be able to identify and understand areas of strength and weakness related to their system. The questionnaire is not intended to be mandatory. It is intended to be a tool to educate systems of appropriate attributes of a system with capacity. Systems can then utilize appropriate tools to acquire and maintain capacity. Assistance to acquire and maintain capacity will be available from many sources including, but not limited to, engineering firms, technical assistance providers, the Department, other State agencies, and other water system operators. Assistance tools to be used by the Department include on-site visits by DMF staff or technical assistance providers. The questionnaire and spreadsheet will also be made available to PWSs not targeted for immediate assistance to use as an additional tool to maintain capacity.

### **CAPACITY EVALUATION CRITERIA**

Specific criteria have been identified to evaluate the technical, managerial, and financial capability of existing PWSs. By performing a self-evaluation using the following criteria, a PWS can demonstrate capacity, weak areas of capacity, or inadequate capacity. A system can then take appropriate corrective action using available tools to acquire and maintain capacity either on their own initiative or with outside assistance.

#### **Technical Capability Criteria:**

- 1) Finished water meets all required drinking water standards.
- 2) The water facilities are operated and maintained by appropriately certified operators, or the system has a plan acceptable to the Department to do so.
- 3) A valid water use permit is issued.
- 4) Applicable local planning/zoning approvals are met.
- 5) The water facilities are constructed in accordance with plans and specifications approved by the Department.

#### **Managerial Capability Criteria:**

- 1) The system's owner(s), manager(s), and operator(s) are clearly identified.
- 2) The system complies with the State's operator certification requirements, or has a plan acceptable to the Department to do so.

- 3) The system maintains records concerning the design, construction, operation, and maintenance of the water utility, including all records required to document compliance under the SDWA.
- 4) The system maintains an operation and maintenance (O&M) manual for the water treatment and distribution facilities.

**Financial Capability Criteria (CWS and NTNCWS):**

- 1) The system maintains a separate set of accounts for the water utility.
- 2) The system produces and utilizes an annual budget.
- 3) Revenues are greater than costs.
- 4) The operating ratio is greater than 1.0\*.
- 5) The coverage ratio is greater than 1.0\*\*.
- 6) The system conducts a financial audit of the water utility at a frequency of no less than once every five years.
- 7) The PWS maintains a reserve account to be used strictly for emergency replacement of water system components or other unanticipated expenses related to the water system.
- 8) All service connections are metered.

\* Operating ratio = 
$$\frac{\text{Total annual water revenues}}{\text{Total annual O\&M and replacement expenditures}}$$

\*\* Coverage ratio = 
$$\frac{\text{Total annual cash revenues} - \text{total annual O\&M and replacement expenditures}}{\text{Total annual loan/capital lease payments} + \text{total annual loan interest payments}}$$

**Financial Capability Criteria (TNCWS):**

- 1) The system produces and utilizes an annual budget.
- 2) Revenues are greater than costs.
- 3) Total annual revenues are greater than total annual O&M and replacement expenditures.
- 4) The system conducts a financial audit at a frequency of no less than once every five years.
- 5) The system maintains a reserve account to be used strictly for emergency replacement of water system components or other unanticipated expenses related to the water system.

By performing a self-evaluation, water systems can determine their own areas of strengths and weaknesses in capacity. Each system will gain an understanding of the attributes of a system that is capable of maintaining capacity and thus be able to help themselves in acquiring and maintaining capacity.

Note: All existing PWSs will be evaluated and prioritized to determine those systems most in need of assistance to acquire and maintain capacity. The DMF will utilize internal and data from existing agencies to perform the prioritization.

**Appendix 5:  
Self-Evaluation Questionnaire  
for  
Community and Nontransient Noncommunity Water Systems (1)**

System Name: \_\_\_\_\_ Person Interviewed: \_\_\_\_\_  
Prepared By: \_\_\_\_\_ Date: \_\_\_\_\_

<b>Technical Capability</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>
1. Does your system have a reliable source of drinking water?			
2. Does your source provide an adequate quantity of drinking water?			
3. Is your source water adequately protected from contamination?			
4. Can your system provide water that meets SDWA standards?			
5. Is your system constructed in accordance with NDDH approved plans and specifications?			
6. Is any of the system's infrastructure in need of immediate repair? If yes, identify repair needs on separate sheet.			
7. Has the life expectancy of any of the system's infrastructure components been exceeded? If yes, identify components on separate sheet.			
8. Does your system have appropriately certified operators or a plan to obtain such operators?			
9. Do your operators have sufficient technical knowledge of applicable standards?			
10. Can your operator effectively implement appropriate technical knowledge?			
11. Do your operators understand the system's technical and operational characteristics?			
12. Does your system have a valid water use permit?			
13. Are applicable local planning/zoning approvals met?			
14. Does your system have an operation and maintenance program?			
<b>Managerial Capability</b>			
1. Is your system's owner clearly identified?			
2. Can the owner be held legally responsible for the system?			
3. Are your system's operator and manager clearly identified?			
4. Is your system properly staffed and organized?			
5. Do the owner/manager understand the regulatory requirements and system operations?			
6. Do the owner/manager have adequate expertise to manage water system operations?			
7. Do your system's personnel have the necessary training and qualifications?			

8. Does your system maintain records regarding the design, construction, operation, and maintenance of the water facilities, including all records to document SDWA compliance?			
9. Does your system maintain an O&M manual? Note: Applies if treatment is provided.			
10. Does your system interact well with customers, regulators, and other entities?			
11. Is your system aware of external resources for assistance (i.e., technical, managerial, & financial assistance)?			
<b>Financial Capability</b>			
1. Do your system's revenues cover costs?			
2. Are water rates/charges adequate to cover the cost of providing water and maintaining the system?			
3. Does your system maintain a reserve account strictly for water system emergencies?			
4. Is your system financially stable?			
5. Does your water system have access to financial capital through public or private sources?			
6. Does your system produce an annual budget?			
7. Does your system keep and maintain separate books and records for your water system?			
8. Does your system utilize a financial spreadsheet such as the attached?			
9. Are appropriate budgeting, accounting, and financial planning methods and controls used?			
10. Does your system conduct a financial audit at a frequency of no less than once every five years?			
11. Does your system manage its revenues effectively?			
12. Are all service connections metered?			

(1) Public water systems have core responsibilities under the SDWA (see below). These responsibilities were discussed with the system as part of the self evaluation. The system was also advised to contact the Municipal Facilities Division (328-5211) on all matters pertaining to drinking water.

- **Monitoring** - collect required drinking water samples within allowable time frames and submit the samples to a certified laboratory for analysis
- **Reporting** - submit laboratory results, reports (such as the Consumer Confidence Report), and public notices (due to violations) to the NDDH
- **Compliance** - meet applicable drinking water standards, install treatment if necessary and approved by the NDDH to meet standards, operate and maintain the water system to ensure the reliable delivery of safe drinking water that meets standards, employ appropriately certified operators as required by the NDDH
- **Public Notification (PN)** - conduct PN for violations as instructed by the NDDH
- **Plans & Specifications (P&S)** - obtain NDDH approval of P&S before making water system changes
- **Records** - maintain records to document SDWA compliance (test results, reports, public notices, P&S, O&M, and all NDDH correspondence)-

**Self-Evaluation Questionnaire  
for  
Transient Noncommunity Water Systems (1)**

System Name: \_\_\_\_\_ Person Interviewed:

Prepared By: \_\_\_\_\_ Date:

<b>Technical Capability</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>
1. Do you have a reliable source of drinking water?			
2. Does your source provide an adequate quantity of drinking water?			
3. Is your source water adequately protected from contamination?			
4. Is your well equipped with a proper sanitary seal and protected against surface flooding?			
5. Can your well be properly disinfected without major changes?			
6. Do you know the depth of your well? Depth			
7. Do you know the distance of the closest other well to yours? Distance			
8. Do you know whether other demands are being placed on your water source?			
9. Can your system provide water that meets SDWA standards?			
10. Have you ever tested your water for contaminants other than bacteriological contaminants (such as, but not limited to, hardness, iron, manganese, sulfate, chloride, TDS, fluoride, arsenic, radon)?			
11. Is your system constructed in accordance with plans and specifications approved by the NDDH?			
12. Is any of the system's infrastructure in need of immediate repair? If yes, identify repair needs on a separate sheet.			
13. Has the life expectancy of any of the system's infrastructure components been exceeded? If yes, identify components on a separate sheet.			
14. Do you or your operator understand the system's technical and operational characteristics? Name of operator			
15. Have you and/or your operator had any training on operation and maintenance of a water system?			
16. If training were available, would you and/or your operator be willing to attend?			
17. Do you or your operator perform any routine maintenance on the water system? Frequency			
18. Do you have a run-time meter on your well pump and/or pressure pump?			

19. Do you routinely flush your pressure tank and water lines?			
20. Does your system have a valid water use permit?			
21. Are applicable local planning/zoning approvals met?			
<b>Managerial Capability</b>			
1. Do you make all decisions regarding the water system? If not, who?			
2. Do you feel that you have the necessary training and qualifications to operate the water system?			
3. Do you understand your SDWA regulatory requirements and system operations?			
4. Do you know who to contact at the NDDH regarding drinking water problems and regulatory matters (i.e., violations)?			
5. Do you know what to do if a violation occurs (i.e., call NDDH, perform public notification as instructed, work with the NDDH to correct violation)?			
6. Do you have a routine schedule for sample collection (i.e., bacti samples)?			
7. Do you have an emergency plan for your water system (i.e., if well fails, etc.)?			
8. Do you maintain records regarding the water system (water test results, plans and specifications, O&M, all NDDH correspondence)?			
9. Are O&M manuals available for water equipment (i.e., softeners, iron filters, pumps)?			
10. Do you have a particular person or contractor that you contact if you have problems with your water system? Name of person or business =			
11. Have you had to contact this person/contractor for assistance in the past 3 years?			
12. Are you aware of other resources for assistance in operating a water system?			
<b>Financial Capability</b>			
1. Do your business revenues cover your business costs?			
2. Do you have a savings or reserve account for major expenditures?			
3. Does you maintain a reserve account strictly for water system emergencies?			
4. Do you know what it would cost to replace your water system?			
4. Is your business financially stable?			
5. Do you have a line of credit with a local bank to borrow money or access to other financial capital for your business?			
6. Do you have an accounting system? Manual bookkeeping ___ Computerized system Data entered: daily ___ weekly ___ monthly ___ ; Person handling money			
7. Do you feel that you have adequate expertise to use a computerized accounting system?			

8. Do you prepare an annual budget for your business?			
9. Can you identify your water system expenses from your other business expenses?			
10. Do you utilize a financial spreadsheet such as the attached?			
11. Do you have a business plan?			
12. Do you foresee any major changes in your business over the next 5 years? If yes, describe changes on a separate sheet.			
13. Do you use an accountant or professional financial advisor to do your taxes? Sales tax only ____ Income tax only ____ Sales and income tax			
14. Do you seek financial advice from your accountant or professional financial advisor?			
15. Are you aware of economic development assistance programs (i.e., Small Business Administration, Regional Planning Councils, etc.)?			

(1) Public water systems have core responsibilities under the SDWA (see below). These responsibilities were discussed with the system as part of the self evaluation. The system was also advised to contact the Municipal Facilities Division (328-5211) on all matters pertaining to drinking water.

- **Monitoring** - collect required drinking water samples within allowable time frames and submit the samples to a certified laboratory for analysis
- **Reporting** - submit laboratory results, reports (if requested by the NDDH), and public notices (due to violations) to the NDDH
- **Compliance** - meet applicable drinking water standards, install treatment if necessary and approved by the NDDH to meet standards, operate and maintain the water system to ensure the reliable delivery of safe drinking water that meets standards, employ an appropriately certified if required by the NDDH
- **Public Notification (PN)** - conduct PN for violations as instructed by the NDDH
- **Plans & Specifications (P&S)** - obtain NDDH approval of P&S before making water system changes
- **Records** - maintain records to document SDWA compliance (test results, reports, public notices, P&S, O&M, and all NDDH correspondence)

## Appendix 6: Sample Financial Spreadsheet

Facility Name: \_\_\_\_\_

Prepared by: \_\_\_\_\_

Date: \_\_\_\_\_

Current Year and 4 Year Projections	Current Year Actual	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/Additional Revenue Needed					
j. Loans, Grants, or other Cash Added					
<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 Expenses					
f. Chemical Expenses					
g. Materials and Supplies					
h. Contracted Services					
i. Rental of Equipment/Real Property					
j. Transportation Expenses					
k. Laboratory Expenses					
l. Insurance					
m. Regulatory Expenses					
n. Advertising					
o. Miscellaneous					
<b>p. Total Cash O&amp;M Expenses (5a thru 5o)</b>					
<b>q. Net Operating Water Revenues (2d-5p)</b>					
r. Replacement Expenditures (R)					
<b>s. Total O&amp;M plus R Expenditures (5p + 5r)</b>					
t. Loan Principal/Capital Lease Payments					
u. Loan Interest Payments					
v. Cash Transfers					
w. Capital Purchases					
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. Ave. Annual User Charge/Account (2d / 8)</b>					
<b>10. Coverage Ratio (2h - 5r) / (5s + 5t)</b>					
<b>11. Operating Ratio (2d / 5r)</b>					
<b>12. Year End Reserves:</b>					
a. Debt Service Reserve					
b. Bond Retirement Reserve					
c. Capital Improvement Reserve					
d. Replacement Reserve					
e. Other					
<b>13. Total Reserves (12a thru 12e)</b>					
<b>14. Year End Operating Cash (7 - 13)</b>					

Note: Attach additional sheets if necessary for clarification