

Wisconsin's
Capacity Development Program
for
Public Drinking Water Systems
2008 Report to the Governor



Department of Natural Resources
Bureau of Drinking Water & Groundwater
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EXECUTIVE SUMMARY

Wisconsin Department of Natural Resources (DNR) staff are currently implementing the Capacity Development Program for public water systems in Wisconsin. Capacity development is a requirement of the 1996 amendments to the Safe Drinking Water Act authorized by the U.S. Environmental Protection Agency (EPA). The goal of this program is to improve the ability of public water systems to consistently provide safe drinking water by helping water system owners and operators improve their technical, managerial, and financial capabilities.

DNR staff, along with other state agencies, partners, and interested non-governmental organizations, are developing a cohesive capacity development process. The goals of this effort are to identify the needs of public drinking water systems, develop comprehensive solutions, and incorporate these solutions into work plans that sustain program benefits. The program continues to unify and enhance existing assistance efforts as a means to provide a network of support for our public water system owners and operators. This network of people and their on-going activities become the tools in the process of improving the ability of public drinking water systems to provide safe drinking water. Some of these tools are in the form of guidance documents, engineering plan reviews, continuing education sessions or more immediate technical assistance as water system operators continue to bring safe drinking water to Wisconsin's citizens.

As is the case nationwide, Wisconsin's public drinking water systems face many complex challenges while consistently providing safe drinking water to the public. This is especially true of small water systems. Developing knowledge about considerable state and federal regulations, accessing financial resources, training and retaining quality managers, and finding affordable technical solutions are common issues public water systems face. Adequate solutions require a unified, sustained effort by many different agencies and organizations that work with public drinking water systems.

This document was compiled for the benefit of the Governor, all members of government, and the public, as required by section 1420(c)(3) of the Safe Drinking Water Act. It addresses how Wisconsin is meeting these challenges, by reporting on the efficacy of the Capacity Development strategy and progress made toward improving the technical, managerial, and financial capacity of public water systems in the state.

This report will be made available to the public on the WIDNR's website, in the Capacity Development section, and a press release will be issued to inform the public of the availability of the Governor's Report.

1.0 INTRODUCTION

The 1996 amendments to the Safe Drinking Water Act (SDWA) required states to have a “Capacity Development Program” approved by the U.S. Environmental Protection Agency (EPA). Capacity Development is a program, which helps public drinking water systems strengthen their ability to consistently supply safe drinking water to their customers. The program aims to assist public drinking water systems’ owners and operators, particularly small systems, improve their technical abilities, managerial skills, and financial viability to comply with the SDWA requirements.

The Capacity Development program is a proactive program that seeks to increase the ability of the states’ public drinking water systems to provide safe drinking water to their customers. Activities funded through the state program management set-aside to the states’ Drinking Water State Revolving Fund (DWSRF) seek to coordinate and unify technical assistance efforts of Wisconsin Department of Natural Resources (DNR), other state agencies, and non-government partner organizations. By working together the Capacity Development Program has been effective.

The following is the 2008 triennial status report on implementation of Wisconsin’s Capacity Development Program. The report will focus on the efficacy of the Capacity Development strategy and progress toward improving the technical capacity, managerial capacity, and financial capacity of the states’ public drinking water systems. Completing this report fulfills federal requirements and allows for the full set-aside dollars to be allotted through the States’ Drinking Water State Revolving Fund (DWSRF).

2.0 CAPACITY DEVELOPMENT PROGRAM OVERVIEW

The Capacity Development Program maintains a focus on small public drinking water systems. The 1996 SDWA amendments include initiatives, such as Capacity Development, to increase the resources available to small public drinking water systems, which often have the most difficult time complying with federal and state regulations. These "small systems," such as those serving schools, factories, and mobile home parks, often don’t have specialized staff to operate and maintain their infrastructure. Providing water is not typically their primary business. The most common barriers faced by small system owners and operators as they try to acquire and maintain capacity include:

- Lack of technical knowledge about state and federal requirements and how to meet them;
- Lack of access to money;
- Lack of financial planning and management; and
- Lack of affordable technologies to comply with existing and new technologies.

Below is a list of key areas where capacity development is used as a tool for encouragement and improvement of public drinking water systems in Wisconsin:

- To encourage drinking water system infrastructure evaluation and improvement
- To improve water resource (quality and quantity) evaluations

- To encourage cooperation between state agencies
- To expand operational and managerial expertise to non-municipal drinking water systems
- To improve and expand operator training
- To encourage appropriate financial management and planning

The Capacity Development Program is funded through funds set-aside from the Drinking Water State Revolving Fund (DWSRF) authorized under the Safe Drinking Water Act. A one-time request in the amount of \$400,000 was made in the FY) 1997/1998 *Safe Drinking Water Act Intended Use Plan*. At the end of State Fiscal Year (SFY) 2005 there was a \$38,286 balance of unexpected Capacity Development funds. Effective the start of SFY 2006, the balance was transferred to the state program management set-aside. The state program management set-aside has been used to cover capacity development set-aside needs incurred after SFY 2005.

The Capacity Development Program is organized into a strategy for *new* public drinking water systems and a strategy for *existing* public drinking water systems. The capacity development program is managed by a Capacity Development coordinator. Each year the coordinator provides an annual report to U.S. EPA Region V on the status of accomplishments of Wisconsin's Capacity Development program. To date Wisconsin has satisfied all of the requirements for the Capacity Development program. As part of their review, EPA recommended the coordinator position be made permanent to

retain consistency and program momentum. A permanent position was created and filled in 2008.

2.1 Capacity Development for New Public Drinking Water Systems

Before public drinking water systems of the state commence construction and operation, a comprehensive attempt is made to ensure ongoing technical, managerial, and financial capacity is achieved. Wisconsin Administrative Code Chapter NR 809 Subchapter IX requires capacity evaluations for all new community and nontransient noncommunity (NTNC) water systems prior to construction. This code became effective on September 1, 1999. Written guidance targeting technical, managerial, and financial aspects of operating a drinking water system is distributed to owners and operators of small drinking water systems during the capacity evaluation process. A capacity approval and certification is issued to the owner of a new public drinking water system when appropriate plans and the capacity evaluation have been reviewed.

Capacity Development for New Municipal Drinking Water Systems:

A capacity evaluation is required for all new municipal drinking water systems. This type of drinking water system is owned by a city, town, or sanitary district. The evaluation is completed by the DNR as part of the system plan review process. Once the plans and capacity evaluation are approved, DNR staff will send a plan approval letter and capacity certification to the owner.

Capacity Development for New Other-Than-Municipal (OTM) Drinking Water Systems:

A capacity evaluation is completed by DNR staff as part of the plan review process for

new OTM drinking water systems. This system type includes mobile home parks and condominium associations. Owners must fill out and sign DNR Form 3300-247 to provide DNR with system capacity information. The capacity evaluation uses much of the information furnished in the drinking water system plan. Written guidance is given to the administrators of the system to help understand the technical, managerial, and financial responsibilities of owning a drinking water system. Once the plan approval is granted and the capacity evaluation is reviewed, DNR staff will send an approval letter and capacity certification to the system owner.

Capacity Development for New Nontransient Noncommunity (NTNC) Drinking Water Systems:

Owners of new NTNC systems must complete DNR Form 3300-246. This type of system includes schools, day care centers, and factories. Written guidance is given to the administrators of the system to help understand the technical, managerial, and financial responsibilities of owning a drinking water system. The capacity evaluation process for new NTNC systems is divided into two groups, depending on plan review requirements and pumping capacity:

- Systems subject to DNR plan review (pumping capacity equal to or greater than 70 gallons per minute, as well as all schools): A capacity evaluation is completed as part of the plan review. Once the plan approval is granted and the capacity evaluation is reviewed, DNR sends an approval letter and capacity certification to the system owner.
- Systems NOT subject to DNR plan review (pumping capacity less than 70 gallons per minute): A capacity

evaluation is still performed prior to system construction. Owners send the completed capacity evaluation form (3300-246) to the Capacity Development Coordinator. Once the capacity evaluation is reviewed by the DNR, an approval letter with capacity certification is sent to the system owner.

2.2 Capacity Development for Existing Public Drinking Water Systems

The Wisconsin DNR is taking a holistic approach with its capacity development strategy for existing public water systems, emphasizing the importance of the entire public drinking water program in Wisconsin and the interdependence of its parts. The Capacity Development Program developed and submitted a strategy to EPA in August of 2000, to address technical, managerial, and financial capacity of existing public drinking water systems. The Capacity Development Strategy is a guide for the state to assist existing public drinking water systems. It also outlines proposed changes to the DNR's inspection and evaluation processes to include a capacity evaluation. In the last eight years the DNR has worked to modify its sanitary survey process to incorporate and integrate technical, managerial, and financial capacity development elements into the existing sanitary survey.

Sanitary surveys of water systems are essential to assuring safe drinking water on a continuing basis. Surveys are a mechanism to detect construction, maintenance, and operational deficiencies, before an unsafe water condition occurs. In cases where unsafe water occurs, the sanitary survey may be used to isolate the problem so that corrections can be made. By conducting surveys on a recurring cycle, new construction or system modifications can be checked for conformance with previous DNR approvals,

and deterioration of facilities can also be evaluated, particularly if deterioration is more rapid than expected.

The EPA and the Association of State Drinking Water Administrators (ASDWA) developed a list of eight minimum elements to be reviewed during a sanitary survey. These elements, as identified in the *EPA/State Joint Guidance on Sanitary Surveys* and later required in EPA's Groundwater Rule, were included in the revised sanitary survey. They include:

1. Source
2. Treatment
3. Distribution system
4. Finished water storage
5. Pumps/pump facilities and controls
6. Monitoring/reporting/data verification
7. Water system management/operations
8. Operator compliance with state requirements

Four DNR internal work groups of public drinking water staff have met in the last eight years to work on revising the sanitary survey process in Wisconsin. Our goal was to create a standardized sanitary survey/capacity evaluation format for each type of public water system.

The first work group consisted of central office and regional staff and met several times in 2001. The group focused on the content of a revised sanitary survey, creating a new digital format of the survey to facilitate electronic storage of data, and formulating a new process of managing sanitary survey data.

The second work group, consisting of DNR central office staff, met in the last quarter of 2001 and periodically in 2002. The group dedicated a significant amount of time to developing a working prototype of a sanitary survey "tool" in the public drinking water database system (DWS). A contractor was hired, using capacity development set-aside funds, for the programming of changes to the DWS. A prototype of the DWS based sanitary survey process was made available to staff in April 2003 and has been used in its operational format since 2004.

The third work group met throughout 2006 and further developed the questions set for municipal systems. The new checklist includes financial and managerial questions.

A fourth workgroup began meeting in the second quarter of 2008 to revise the electronic sanitary survey tool for transient noncommunity systems. This revised tool will focus on assuring that the eight elements of sanitary surveys are evaluated in a consistent manner by both county and DNR staff and deficiencies are tracked in the DWS.

The DNR uses a combination of document review and visual inspection to evaluate technical, managerial, and financial capacity. This process focuses less on data collection and more on the evaluation of a water system's ability to provide safe drinking water now and into the future. This approach is consistent with the capacity development philosophy. The format is structured to facilitate entry of the information electronically into the DNR's DWS database. The information can be used to prioritize which public water systems have capacity deficiencies and may be in need of further assistance. The database can also be used to track problems water systems face on a statewide basis. This information will be valuable in the creation of "blanket" guidance sent to all public water systems.

DNR's Capacity Development Coordinator, in conjunction with other Safe Drinking Water Program staff, prioritizes systems with capacity deficiencies on an annual basis. The prioritization process occurs in the fall of each year to coincide with other DNR drinking water activities. Prioritization focuses on systems that are out of compliance with the SDWA requirements or that are on the verge of being out of compliance.

Capacity Development Toolbox:

Public drinking water systems in Wisconsin face a variety of challenges in their quest to provide safe drinking water at an affordable cost. However, there are many Safe Drinking Water Act (SDWA) programs and activities that can be used to address the obstacles encountered by existing public systems. These "tools" help systems acquire and/or enhance their technical, managerial, and financial capacity.

A number of capacity building activities and programs already exist. These tools will continue to be used to help public drinking water systems comply with the SDWA requirements. Some capacity development tools can be targeted towards specific systems based on prioritization and capacity evaluation results. For instance, a system that does not have financial capacity may be offered additional, specific guidance on budgeting and long-term planning. Other tools will be used broadly to address common problems that occur with systems statewide, regardless of their capacity development status. One example of this type of tool is the annual mailing of monitoring letters and schedules to all community and nontransient noncommunity public systems to help these systems plan and budget for upcoming water quality monitoring.

Some of Wisconsin's existing Capacity Development tools include:

DNR Plan Review: Wisconsin Administrative Code Chapter NR 108 states that final plans and specifications must be reviewed and approved by the DNR prior to construction for all municipal and OTM systems. NR 812 requires plan approval for nontransient noncommunity systems with a pumping capacity equal to or greater than 70 gallons per minute. This applies to new water systems as well as improvements, extensions, and alterations to existing systems. DNR plan review provides the initial safeguard measure to strengthen a water system's ability to meet capacity and consistently supply safe drinking water.

Sanitary surveys (all public systems) and annual inspections (municipal): Sanitary surveys and inspections provide a comprehensive and accurate record of the components of water systems, assess the operating conditions and adequacy of the water system, and determine if past recommendations have been implemented effectively. DNR drinking water staff and county inspectors personally assist the owners and operators with issues related to their public water systems during sanitary surveys and inspections. DNR staff will continue to use the sanitary survey and municipal inspections to evaluate systems, point out deficiencies, and make recommendations to help public water systems meet capacity.

DNR/County Contracts for Transient Noncommunity Systems: The DNR oversees contracts with 36 counties for sanitary surveys and coliform bacteria and nitrate monitoring at approximately 5,200 transient noncommunity systems each year. The results of this partnership with the counties have been outstanding. The samples are taken by licensed sanitarians instead of inexperienced system owners. Monitoring and reporting

violations in these counties are almost nonexistent. MCL violations are greatly reduced mostly due to the elimination of false positives from poor sampling. State intervention on the system owner is lessened. Many of these transient facilities are licensed by the Wisconsin Department of Health Services (DHS) and the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) and also have DNR water testing requirements. The majority of counties that are part of the contract are also agents for DHS and DATCP so the system owner sees only one county inspector instead of three different state inspectors.

Safe Drinking Water Loan Program (SDWLP): Wisconsin is using part of its federal Drinking Water State Revolving Fund allotment to provide low-interest loans to eligible municipal water systems. These loans, provided by the state's Safe Drinking Water Loan Program, may be used for infrastructure improvements. Thirty one loans (Table 1) were awarded during the last three fiscal years (FFY 2005/SFY 2006 and FFY 2006/SFY 2007 and FFY 2007/SFY 2008): The total amount of SDWLP loans made since the beginning of the program in 1998 is approximately \$257 million.

Technical Assistance Contractors (OTM & NTNC): The Department uses the EPA SRF Technical Assistance Set-Aside Grant to fund technical assistance programs targeted to help small systems comply with drinking water regulations. This grant funds a Wisconsin Rural Water Association "Circuit Rider" program of on-site assistance visits to OTM and NTNC water systems, with over 900 site visits conducted annually. A priority system for selecting water systems to receive Wisconsin Rural Water Association Circuit Rider assistance visits is reviewed and revised annually based on regulatory cycles (e.g., vulnerability assessments, standard monitoring framework) and new regulations.

**Table 1. SDWLP Loans
SFY 2006 through 2008**

SFY	Local Governmental Unit	Loan Amount
2006	Algoma Sanitary District #1	\$2,561,354
2008	City of Arcadia	\$2,133,770
2008	City of Ashland	\$585,778
2007	City of Augusta	\$1,700,000
2008	City of Blair	\$2,565,792
2008	City of Clintonville	\$3,714,825
2008	City of Fond du Lac	\$21,753,247
2007	City of Gillet	\$1,420,000
2007	City of Greenwood	\$469,140
2006	City of Menasha	\$12,061,890
2007	City of Menasha	\$779,363
2006	City of Neenah	\$9,723,300
2008	City of Park Falls	\$639,638
2007	City of Peshtigo	\$5,387,773
2007	City of Portage	\$121,379
2006	City of Seymour	\$708,225
2008	City of South Milwaukee	\$7,757,831
2007	City of Tomah	\$1,818,760
2007	Forest Junction Sanitary District	\$1,254,915
2008	Town of Rome	\$4,481,197
2007	Village of Arena	\$141,195
2008	Village of Holmen	\$1,365,000
2008	Village of Necedah	\$974,360
2006	Village of New Auburn	\$832,266
2008	Village of Rockland	\$110,325
2008	Village of Rockland	\$232,923
2007	Village of Saint Cloud	\$934,679
2008	Village of Stratford	\$1,401,011
2006	Village of Suring	\$839,741
2006	Village of Union Grove	\$1,511,624
2007	Village of Union Grove	\$590,503
TOTAL		\$90,571,804

The Technical Assistance Set-Aside also funds the "Targeted Technical Assistance" project to provide targeted technical assistance sessions to small groups of MC, OTM and

NTNC public water system operators on new and existing drinking water regulations and topics, and on drinking water treatment optimization. This project essentially replaces the “Drinking Water System Coalitions” project, which was completed on February 28, 2007 after a six year run. The Department contracts with the Wisconsin Rural Water Association (WRWA) for the delivery of 100 Targeted Technical Assistance sessions annually for small groups of operators. This contract was awarded to WRWA through competitive bidding in 2007. The 70 MC sessions and 30 NTNC/OTM sessions cover new and existing drinking water regulations, water system operation and maintenance and drinking water treatment optimization.

One-on-one technical assistance from DNR staff (all public systems): DNR staff offer assistance to systems on a day-to-day basis to ensure that owners/operators understand the regulations. The DNR’s regional drinking water staff provides technical assistance to owners and operators and conduct sanitary surveys of public water systems to ensure compliance with the primary drinking water regulations. State and local government staff will continue to develop positive dialogues with owners and operators to help them understand the SDWA requirements and build capacity.

Based on feedback from DNR staff, one-on-one assistance appears to be a successful compliance mechanism in the state of Wisconsin, particularly in response to the small public water systems that are not in compliance.

Operator Certification (MC, OTM, NTNC): A municipal waterworks operator certification program was in place prior to the SDWA amendments of 1996 and a fully compliant program is currently in place. An other-than-municipal (OTM) community and non-transient, non-community (NTNC) water

system operator certification program was developed after the adoption of the 1996 amendments and became effective on January 1, 2001. The certified operator requirement for these water system types was promulgated in Wisconsin Administrative Code Chapter NR 114.

To be an operator-in-charge one must be certified by the state of Wisconsin. Water system operators must meet base educational or experience requirements and pass a written exam to qualify for operator certification. If qualified, the operator is required to submit an application and exam fee. Prior to the examinations, training courses are offered with the ultimate goal of a high pass rate. Each certified water system operator also needs to renew his or her certificate every 3 years by submitting a renewal fee and providing proof of continuing education credits/hours; 18 hours for municipal operators and 6 hours for OTM and NTNC operators. There are approximately 2,341 certified municipal waterworks operators serving 615 municipal waterworks, and 1,098 non-municipal water system operators serving 1,363 OC and NN water systems.

All OTM and NTNC systems had until March 2005 to designate a certified operator in charge of their water system. After that date the DNR began initiating a stepped enforcement process on any system without a certified operator. This stepped enforcement process occurs when the data tracking system, an on-site inspection or an investigation identifies a system without a certified operator. The Department’s database tracks whether each system has a certified operator-in-charge and if the operator maintains his or her certification. The tracking system automatically generates a “preliminary” violation record if a system does not have at least one certified operator. Department field staff follow-up with the water system on these preliminary violations and begin a stepped

enforcement process against the system owner if a violation is verified.

Forty systems were without certified operators at the time of the last triennial report to the governor (2005). As of June 30, 2008, only 11 systems (3 MC, 5 NTNC and 3 OTM) were without a certified operator. This is better than a 99% compliance rate with this requirement.

The continuing education requirement for OTM and NTNC water system operators is six hours per three year renewal cycle. The Department requires that these operators attend WRWA courses designed specifically for small systems. WRWA is under contract to deliver approximately 55 three-hour courses annually that cover regulatory topics that Department and WRWA field staff have identified as critical to maintaining compliance with drinking water regulations.

Certification is currently renewed for Municipal (MC) operators through the requirement of 18 hours of continuing education credits every 3 years. Municipal operators may take home-study courses, either correspondence or computer-based, to meet the continuing education requirement. California State University Sacramento (www.owp.csus.edu/courses.php), Technical Learning College (www.tlch20.com), CEU Plan (www.ceuplan.com), David H. Paul, Inc. (www.dhptraining.com), AWWA Online Institute (www.awwa.org), 360Water.com (www.360water.com), Montana Water Center (watercenter.montana.edu/training/default.htm) and Nicolet College/Kirkwood College (www.trainingmatrix.com/nicolet) all offer drinking water courses that are acceptable for Wisconsin CEC.

The Department has a contract with Moraine Park Technical College (MPTC) to deliver a Water Quality Degree program at technical colleges throughout Wisconsin. These courses provide municipal waterworks operators the

opportunity to earn continuing education credits while working towards an associate degree. The MPTC schedule also includes courses to help operators, and individuals seeking to become operators, prepare for certification subclass exams. In the 2007-08 school year, 23 courses were offered with 65 days of classes. There were 266 course enrollments with a total of 356 credits earned.

Additional training and education comes in the form of information available on the DNR website. The information includes municipal waterworks subclass study guides, a PDF version of the "Small Water System Operator Certification Manual," an interactive, on-line small water system operator training program, contract certified operator lists, certification exam information and application forms, and frequently asked questions.

The DNR believes that operator certification is very valuable in helping water systems improve their technical, managerial, and financial capabilities to meet the SDWA requirements.

Other assistance activities: State agencies other than the DNR and many non-profit organizations assist drinking water systems with various programs, education sessions, training, and activities.

Wisconsin is also pursuing some new activities to help public water systems build technical, managerial, and financial capacity:

Additional training & workshops: The Capacity Development Coordinator will be training county contract personnel on use of the newly developed electronic sanitary survey tool for transient noncommunity systems. This training will be scheduled in early 2009, shortly after the new tool becomes available. The use of this survey tool will

facilitate the electronic storage of survey data and will ultimately allow DNR to more easily prioritize systems with capacity deficiencies.

Additional guidance: The DNR is in the process of creating a binder for OTM and NTNC systems to help them organize and maintain their important documents. These binders will include, among other things, recently updated capacity development fact sheets, and tabs for system specific information like well construction reports, correspondence, source water assessments, monitoring schedules, and sample results. In 2008, they will be distributed to all OTM and NTNC systems (approximately 1,500) in the state.

The DNR is updating *An Operator's handbook for Safe Drinking Water*, which was originally created in 1999. This pamphlet is intended to help owners and operators of OTM and NTNC systems develop, assess, and maintain a quality water supply by providing some basic information about the safe drinking water program and the responsibilities of system operators.

The DNR is also developing an internal guidance manual, *Public Water Supply Operations Handbook*, to create consistent and understandable guidance for state staff working in the public water supply section. This handbook includes guidance for staff on program areas that constitute the foundation of the capacity development strategy like sanitary surveys, operator certification, and capacity evaluations. This handbook will be especially useful in the coming years as institutional knowledge is lost due to retirement and new employees are hired.

2.3 Measuring Success & Reporting

On a regular basis, Wisconsin evaluates the

success of its new systems capacity development efforts. The DNR tracks a number of drinking water programs to establish a baseline for measuring improvements in the capacity of Wisconsin's new public water systems. The DNR used the following methods to measure and evaluate its progress:

Microsoft Excel table/database: The DNR created a table to log and track the new public water systems that undergo capacity evaluations. The DNR is using the table as an interim method of tracking the new system capacity development information. The DNR is currently enhancing its Drinking Water System database, discussed in the next section, to include capacity development information for new and existing systems.

Drinking Water System (DWS) database: The DWS stores drinking water system compliance information, including sampling results and violation tracking, for all public water systems in the state. The DWS also includes the capacity status of existing public water systems that have undergone a recent sanitary survey or annual inspection. The Capacity Development Coordinator regularly tracks the capacity status of new systems that have been entered into the DWS. Modifications to the DWS to track new system capacity evaluations are planned.

Communication with DNR staff: During the capacity evaluation process, the DNR's Capacity Development Coordinator communicates regularly with DNR Water Supply Engineers, who review plans for new public water systems. The Capacity Development Coordinator and the plan reviewers work together to review and approve new public water systems.

DNR communication & education efforts: Wisconsin's Capacity Development Coordinator regularly distributes a fact sheet

to educate new system owners and operators about Capacity Development. The “Financial Matters” fact sheet contains information about the financial responsibilities associated with owning and operating a public drinking water system. This fact sheet, along with other fact sheets related to Capacity Development, is provided to system owners/operators prior to conducting capacity evaluations. All Capacity Development fact sheets and forms can be found on capacity development website.

<http://www.dnr.state.wi.us/org/water/dwg/CapDev/CapDevIndex.htm>

The Capacity Development Coordinator has revised on a regular basis the capacity development section of the Bureau of Drinking Water and Groundwater web site. The web site is an important education tool for sharing capacity development information in an efficient manner statewide. The capacity development section is accessible from the bureau’s home page:

<http://dnr.wi.gov/org/water/dwg/>

The web site includes the following capacity development information:

- General information/background
- Fact sheets & brochures
- New system strategy requirements
- Capacity evaluation forms for new OTM and NTNC water systems
- Capacity Development Strategy for Existing Public Water Systems

These communication efforts provide additional documentation of Wisconsin’s new systems capacity development implementation.

3.0 EFFICACY OF THE CAPACITY DEVELOPMENT STRATEGY

The Capacity Development Strategy document has been a good outline of the methods and resources available for assisting public drinking water systems to sustain technical, managerial, and financial capacity. The document has been a source of continuity in an environment that often has a variety of communication challenges due to policy changes, workload, and staff changes. Wisconsin's Capacity Development Program is developing a process to address these types of problems by offering public drinking water systems the tools and methods outlined in the strategy document through a variety of media vehicles. With a process in place, our Capacity Development Program will maintain momentum in addressing problem areas with public drinking water systems of Wisconsin.

Wisconsin's Capacity Development process has begun to identify issues that drinking water systems face, address them in an annual work plan, direct resources to the particular issue, coordinate solutions with stakeholder organizations, and finally report changes and outcomes to relevant parties. Issues are being identified in a number of ways, but DNR staff use information collected during the Sanitary Survey process as a primary resource for problem identification. Wisconsin's Capacity Development Coordinator will hold regular work group meetings with partner organizations to receive feedback on problems identified. Annual reports to U.S. EPA outline key issues the program intends to address and demonstrate how Wisconsin will continue to be part of the national capacity development effort. Safe Drinking Water set-aside funds for Capacity Development as well as resources available through our partners and mentors will be used to address the identified

problems. Wisconsin's Capacity Development Coordinator, using a wide variety of tools as outlined in section 2.1 and 2.2, will coordinate solutions. Reporting will reflect lessons learned and outcomes in the given Capacity Development process cycle.

4.0 PROGRESS TOWARD IMPROVING THE TECHNICAL, MANAGERIAL, AND FINANCIAL CAPACITY OF PUBLIC WATER SYSTEMS

The Capacity Development Program has identified areas where improvements in technical, managerial, and financial capacity have been achieved. Some of these areas include:

- Process challenges for Sanitary Surveys,
- Data consistency, storage and retrieval difficulties, and
- Ability of Public Water System owners and operators to develop long-term financial goals, including those affecting staffing and infrastructure needs, that anticipate changes to new regulations.
- Improvements in water system security

The new Sanitary Survey process, which includes storing data on the DNR drinking water database (drinking water system), will aid in measuring improvements to technical, managerial, and financial capacity. New regulatory challenges in the near future will soon test the drinking water system's flexibility more completely; however preliminary results indicate this database is adaptable enough to meet the changes and thus has the overall ability to aid in the

improvement of the capacity of drinking water systems.

The “Financial Matters” fact sheet developed by Wisconsin's Capacity Development Program staff informs drinking water system owners and operators of their financial responsibilities associated with operating a drinking water system. This document is distributed to other-than-municipal and nontransient noncommunity water systems. It includes information on typical drinking water system construction costs, water quality monitoring costs, operation and maintenance costs, tools to help meet financial responsibilities, and new and proposed regulations. The fact sheet has been particularly helpful in getting owners of new drinking water systems to understand the significant monitoring costs that will be incurred. This document is in the process of being updated to reflect current monitoring costs.

New system evaluations have extended our guidance and review of new drinking water systems to include smaller systems. This evaluation is intended to make owners of new systems aware of estimated monitoring costs, operations costs, emergency costs, and source water quality concerns in their area before the drinking water system is constructed. Most importantly, the evaluation gets the owner involved in the process of constructing a new drinking water system, which is often overlooked amid the business of developing a new organization, housing development, or other facility.

While not funded directly by Capacity Development set-aside funds, the technical assistance contracts, which are funded by another Drinking Water State Revolving Fund set-aside, have been key tools in implementation of the Capacity Development program. Technical assistance has been improved through these contracts.

Owners and operators have gotten involved in the process of continuing education by choosing the specific topic that would be useful to them. Technical assistance contractors have been an effective avenue for delivering appropriate guidance to drinking water systems around the state.

Security of the state's public water systems has been an increasing priority since 2001. The Department has assisted systems in completing federal requirements for vulnerability assessments and emergency response plan development. Sanitary surveys conducted by the Department every 5 years help to ensure emergency response plans are current. Materials were developed to assist city officials to organize "neighborhood watch" programs to enlist their citizens in helping to protect water supply facilities. Emergency Response Sampling Kits and Reservoir Samplers were developed by an interagency workgroup and placed around the state to assist in sampling and analysis in the case of contamination of a water supply. Financial assistance to public utilities for security upgrades is being pursued through the Infrastructure Technical Assistance Advisory Group organized by the Office of Justice Assistance. The Department continues to work with agencies and partners to coordinate emergency preparedness at public water supplies.

Revisions to the Sanitary Survey inspection process are key to identification of needs, creation of guidance, and assessing the impacts of technical assistance efforts. Electronic data storage of drinking water system inspection results will allow the Capacity Development coordinator to search a database for systems that need assistance or search for problem issues across the state. Guidance and solutions can be created to address the problems and then the database can be used as an assessment tool to determine the effectiveness of the assistance.

5.0 CONCLUSIONS

Capacity Development for public drinking water systems is a young program that is still developing. Despite the program's relatively new arrival in Wisconsin, positive improvements to technical, managerial, and financial capacity of systems have been demonstrated. There are an extensive number of programs and activities performed by Wisconsin DNR and partner organizations that are all connected, but still remain available as independent tools to the Capacity Development Program. We are on a pathway to an integrated system of identifying inadequacies, determining the best avenue to address problems, and creating solutions that will correct the problems. The newly established permanency of the Coordinator position should facilitate the continued growth and consistency of the Capacity Development program.

New challenges the Capacity Development Program will face in the near future include implementation of new rules and regulations such as the Groundwater Rule, decreasing groundwater quality and quantity, and Wisconsin DNR staff turnover due to retirements. The Capacity Development Program, with its proactive approach and wide variety of tools at its disposal, is in a good position to accept these challenges and present appropriate solutions.

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6.0 DEFINITIONS

Community drinking water system: A public drinking water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. Any public water system serving 7 or more homes, 10 or more mobile homes, apartment units, or condominiums.

Drinking Water State Revolving Fund (DWSRF): Funds used to carry out directives of the Safe Drinking Water Act.

Municipal drinking water system: A community drinking water system that is owned by a county, city, village, town, town sanitary district, utility district, public institution, or a privately owned water utility serving any of the above.

Noncommunity drinking water system: A public drinking water system that is not a community water system.

Nontransient noncommunity (NTNC) drinking water system: A drinking water system that regularly serves at least 25 of the same people over 6 months of the year. Examples include drinking water systems at schools, day care centers, and factories.

Other-Than-Municipal (OTM) drinking water system: A community drinking water system that is not owned by a municipality. Examples include drinking water systems at mobile home parks, apartment buildings, and condominium associations.

Public drinking water system: A system providing water to the public for human consumption through piping, which has at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents for at least 60 days per

year. There are four types of public water systems in Wisconsin.

Transient noncommunity (TNC) drinking water system: A drinking water system that serves at least 25 people at least 60 days of the year but does not serve the same 25 people over 6 months of the year. Examples include drinking water systems at restaurants, motels, taverns, parks, and campgrounds.

Safe Drinking Water Act (SDWA): An U.S. Environmental Protection Agency act that seeks to ensure drinking water systems in the U.S. provide safe drinking water.

Sanitary Survey: An in-depth investigation of a drinking water system performed by DNR staff aimed to evaluate the adequacy of the water source, facilities, equipment, reporting, operation and maintenance, and operator training.

Water system: All structures, conduits and appurtenances by means of which water is delivered to consumers except piping and fixtures inside buildings served, and service pipes from building to street main.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240.

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