

NEBRASKA

DEPT. OF ENVIRONMENT AND ENERGY

Drinking Water and Groundwater Division

Capacity Development Strategy for Public Water Systems

2022 Revision

Capacity Development Strategy for Public Water Systems

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1. History

The Safe Drinking Water Act (SDWA) amendments of 1996 authorized a Drinking Water State Revolving Fund (DWSRF) loan program to help public water systems (PWS) finance the infrastructure needed to achieve or maintain compliance with SDWA requirements and to achieve the public health objectives of the Safe Drinking Water Act. Section 1420(c) of SDWA directed the Administrator of the United States Environmental Protection Agency (EPA) to withhold a 10% portion of a state's 2001 DWSRF, 15% in federal fiscal year 2002, and 20% in each fiscal year thereafter, if the state did not develop, implement, and continue a capacity development program to assist existing PWS in acquiring and maintaining technical, managerial, and financial (TMF) capacity.

Technical capacity is a water system's ability to operate and maintain its infrastructure.

Managerial capacity refers to the expertise of the water system's management to administer the system's entire operations.

Financial capacity involves the financial resources and fiscal management that support the cost of operating the water system.

The Nebraska Department of Environment and Energy's Drinking Water and Groundwater Division (Department), when part of the Department of Health and Human Services Division of Public Health, solicited extensive public involvement in the development of this strategy. The primary purpose of this public involvement was to bring together individuals and organizations to form a stakeholder group that would represent the broadest possible spectrum of interested parties, while at the same time respecting the need to keep the committee small enough to function efficiently. Based on the findings of the stakeholders, and from information gathered at public meetings, the outline for the strategy was developed.

2. Overview

The purpose of the strategy is to assist public water systems in acquiring and maintaining technical, managerial, and financial (TMF) capacity. The goal of the strategy is for Nebraska's public water supply systems to become sustainable and to achieve long-term TMF capacity.

This strategy was adopted and implemented in August 2000 with subsequent revisions. Members of the strategy partnership (2% Team) are: Nebraska Rural Water Association (NeRWA), Midwest Assistance Program (MAP), Nebraska Central Community College (CCC), League of Nebraska Municipalities (LoNM), and the Nebraska Section of the American Water Works Association (NSAWWA). To ensure strategy implementation,

review progress, and discuss improvements, the 2% Team meets annually, along with other stakeholders.

The current revision addresses implementation of asset management as required by the 2018 America's Water Infrastructure Act (AWIA) Section 2012, as well as a refinement of measurement strategies. Analysis of asset management activities conducted historically reveals need for a more quantitative approach to asset management implementation in public water systems, as well as a unified approach that involves internal Department and contractor training for asset management and other TMF areas. Internal training will ensure TMF assessments and information regarding asset management provided during routine sanitary surveys share the same baseline.

3. Strategy

The Department's initial strategy was developed based on input from the capacity development strategy stakeholders and public input that was solicited via a series of three public meetings held throughout the state. Nebraska's Report of Findings (Included as separate document – will add link within document once posted to website) documented in the year 2000 continues to guide the strategy today. Although much has changed over the past twenty years, the underlying factors for a public water system achieving sustainability remain constant. Still relevant today are the barriers that encumber very small community water systems to achieve and maintain technical, managerial, and financial capacity. These barriers range from water operators being responsible for the daily operation and maintenance of more than just the community water system, to a lack of engaged board members, to the loss of population that not only affects the amount of income for supporting the system, but also the strategies used to maintain a water system initially designed for more users. This last point, loss of population in rural communities, is an impairment not recognized in the Report of Findings yet demands attention to ensure TMF capacity is appropriately addressed. While regionalization may be an option, many barriers exist for implementation of such a solution. Holistically, this is a complex issue which will require significant consideration, collaboration, and research. The use of pilot projects may be useful in obtaining information needed to address this impairment.

Another change over the past twenty years has been the growth of technology. While some very small systems struggle to adapt to this change, it has made available opportunities for better service, management, and operational efficiency within a water system. Because of the opportunities new technology presents, adopting a more proactive approach to assisting water systems will serve the Department well. A proactive approach will provide more knowledge, skills, and resources to water systems, so they are able to make necessary operational, financial, and managerial decisions to ensure compliance with SDWA regulations. As with any endeavor, the appropriate tools and resources are a precursor to success.

To ensure the strategy addresses the specific needs of public water systems, stakeholder strategy meetings are held annually to assess and update the focus of the capacity

development program. Stakeholder strategy meetings held July 1, 2020, which was facilitated by Wichita State University Environmental Finance Center, and September 13, 2021, focused on inclusion of asset management as well as changes to how TMF assessments are completed. This updated strategy involves seven areas designed to further enhance the TMF capacity of Nebraska's public water systems. These seven strategy areas, including a new area specific to asset management, are listed below.

1. Information Collection
2. Intergovernmental and Regulatory Functions
 - a. 2% Team Technical Partnership
 - b. Public Education Programs
3. Local Land Use Planning
4. Water Meter Requirements
5. Training and Technical Assistance
6. Security
7. Asset Management

3.1 Information Collection

The Department routinely collects information about the operation of public water systems through sanitary surveys. Surveys are conducted every three years for all community and non-transient, non-community systems, and every five years for transient non-community systems. The survey collects the technical, and to some extent, the financial and managerial capacity of each system. To enhance the collection of information, additional questions on technical, managerial, and financial capacity have been added to the sanitary survey process through the Nebraska Public Water System (PWS) Capacity Survey. This self-assessment survey provides the Department insight into the TMF capacity of a system. The PWS Capacity Survey provides flexibility for differences in water systems yet allows for consistent evaluation.

The PWS Capacity Survey is designed to be distributed to community and non-transient non-community water systems ahead of the planned sanitary survey to allow time for complete and accurate completion of the assessment. The survey is designed to receive a signature by the designated operator in charge, as well as by a governing body member/owner to ensure management provides input and is aware of the system's capacity status and areas that could use improvement. This approach should provide more accurate data for evaluation, provide a broader understanding for water personnel regarding technical, managerial, and financial elements, and give enhanced opportunity for Department staff to gain a deeper understanding of TMF capacity while educating system personnel on elements of the capacity survey while performing their sanitary survey.

After completion of a routine sanitary survey, the Department staff who performed the survey sends the inspection report to the governing body of the public water system. The

governing body may request that a Department inspector attend a meeting and present the results of the survey. Because routine sanitary surveys, along with the PWS Capacity Survey (Appendix A), provide data for evaluation of the current TMF capacity of the system, and provides measurements of areas for improvement, a sanitary survey, with its components, is the cornerstone of the capacity development strategy.

The PWS Capacity Survey is also used to assess communities that apply for funding from the Drinking Water State Revolving Fund (DWSRF). Since this survey is completed in tandem with routine sanitary surveys, progress can be tracked regarding a system's capacity over time, including any changes after completion of a project that utilized DWSRF. With a standardized survey used for both DWSRF applications and general capacity development tracking, the survey can be completed prior to DWSRF review if a current one isn't already on file.

Additional data for collection is available from reports returned to the Department from contracts for capacity development assistance partner organizations through the 2% set-aside fund.

3.2 Intergovernmental and Regulatory Functions

2% Team Technical Partnership

The 2% Team technical partnership program is funded by the DWSRF. A 2% set-aside fund is designated to financially support the Department in providing capacity development services through contracted organizations. The 2% Team meets on a regular basis with the Department for planning and discussion of water systems needing assistance and to review the status of current projects. Targeted water systems are compiled into what is known as the 2% Priority List. The 2% Priority List directs the activities of contracted organizations to ensure those systems most in need of assistance are prioritized. The 2% list is updated on a regular basis to allow contracted organizations to plan their assistance and to ensure ongoing review of systems in need.

Nebraska Rural Water Association (NeRWA) and Midwest Assistance Program (MAP) have historical partnerships with the Department to fulfil 2% technical assistance contracts and aid systems with a population of 10,000 or less. The contracts, which change as PWS assistance needs evolve, cover activities which seek to build PWS technical, managerial, and financial capacity and may include, support of operator skill and knowledge development; assistance in meeting regulatory requirements; aid with ensuring a complete and competent water system workforce; board/owner training; development and implementation of asset management plans; and proactive assistance activities. Each of these activities enables the inclusion of educating systems about the importance of asset management implementation and each of its five core elements, with the possibility of including specific activities such as asset inventory, financial planning, and operation and maintenance strategies. With such a diverse set of activities, it is

important to support not only the technical aspects of running a water system, but the managerial and financial aspects, as well, with an understanding of how each element works together to ensure a sustainable public water system.

In addition to the asset management elements that may be provided for in the 2% assistance contracts, the 2% Team is encouraged to provide referrals for more in-depth asset management assistance through other organizational contracts. This will ensure those systems with the desire to develop a complete asset management program have the required resources and assistance to meet their needs.

The Nebraska Department of Environment and Energy State Revolving Fund (SRF) Section participates in the Water Wastewater Advisory Committee (WWAC) loan and grant pre-application screening process with the U.S. Department of Agriculture-Rural Development (USDA – RD) and the Nebraska Department of Economic Development (NDED). This partnership is essential to the SRF water and wastewater grant and loan programs. Department coordination with the SRF Section ensures appropriate infrastructure funding to those systems wishing to use these funding sources.

Public Education Programs

The stakeholders recognize a need for continued public education regarding the importance of drinking water and infrastructure in the State. Elements that have been developed to improve public education include:

1. The development and implementation of programs for education and/or workforce development.
2. Education of boards to ensure appropriate oversight of water systems through in-person and digital delivery formats.
 - a. Asset management emphasis is encouraged, with the five core elements as outlined in Section 3.7 Asset Management.
3. Booths/displays at relevant water-related or statewide events. These booths/displays could include:
 - a. Asset management visual and/or hands on activities that are age-appropriate at events geared toward youth, for example, the Nebraska Children’s Groundwater Festival.
 - b. Asset management displays that educate the public about how water rates are necessary for the delivery of quality drinking water, and in turn, how a system’s asset management program has a direct effect on rates paid by consumers and the continual supply of quality water.
4. The development, dissemination, and/or procurement of educational items, resources, and tools that support public water system success.

- a. Available on the [Department's website](#).
- b. Available at public information events.

Currently, public education campaigns related to the protection of groundwater consist of local television advertisements, social media, and brochures sponsored by individual Natural Resource Districts. The Nebraska Association of Resource Districts also has brochures available.

3.3 Local Land Use Planning

Lack of planning and zoning in rural areas adversely affects the economics of providing safe drinking water. Typically, this is associated with failures of local and/or county governments to incorporate drinking water issues into land use planning. This is especially relevant for developments in unincorporated areas adjacent to existing community and non-community public water supplies. In addition to helping communities with [groundwater and drinking water protection area](#) planning, the Department encourages consolidation of existing systems in some circumstances and requires new community and non-transient non-community public water systems to demonstrate TMF capacity prior to issuing operating permits. To further support the encouragement of purchasing water from an existing system, when appropriate, a [New Systems](#) section on the Department's [Capacity Development webpages](#) encourages those wishing to construct a new community or non-transient, non-community system to consider alternatives to becoming a new system. Additional information, such as the required forms and the regulatory requirements for new systems are also available to assist prospective water systems in making an informed decision. To ensure regulatory requirements are followed when permitting new systems, an internal Standard Operating Procedure (Appendix B) has been developed.

The process of regionalizing Nebraska's public water systems may play a large role in the future of Nebraska's public water systems. Future efforts will require the Department to act as a technical resource, fostering an understanding by local governments regarding drinking water capacity issues and how to incorporate water system needs into future planning efforts. Consideration for the encouragement of asset management plans for local and regional land use planning can help provide insight for:

1. The need for regionalization.
2. Analysis and decision making to demonstrate regionalization is reasonable.

3.4 Water Meter Requirements

The Department and 2% Team believe that water meters should be required in most situations for a public water system to provide adequate managerial and financial capabilities. To aid unmetered systems, funding provided through DWSRF and USDA-RD requires the installation of water meters. Water meters are a proven conservation tool, further enhancing the capacity of a system. The absence of accurate meter readings

makes water loss determination and long-term planning difficult. In conjunction with water meters, a comprehensive leak detection program and an enforceable conservation plan (defined below) should be implemented by each water system. Implementation of asset management programs, specifically capital improvement and operation and maintenance strategies, can emphasize how meters guide not only conservation but the financial viability of the system.

Comprehensive leak detection program is interpreted by the Department as a program that evaluates the entire system by individuals proficient in leak detection (commercially available or through the assistance of the 2% Team) a minimum of once every five years and provides written documentation as to the number of occurrences of leaks, the size of the leaks, and how those leaks were corrected. Leak detection can be part of an asset management program, specifically a detailed asset inventory, to guide decisions for repair or replacement of distribution lines.

Enforceable conservation plan is interpreted by the Department as a local ordinance that clearly defines the following:

1. Person(s) authorized to place restrictions on the PWS.
2. The triggers used to initiate water use restrictions.
3. Specific restrictions to be utilized.
4. Person(s) authorized to rescind restrictions.
5. Enforcement mechanisms for not following restrictions.

3.5 Training and Technical Assistance

Small systems face the challenge of obtaining capital resources for improving or replacing system infrastructure. Fiscal responsibilities are essential components in achieving financial capacity. It is essential that small systems in Nebraska routinely review and adjust water service charges to keep pace with the full cost of operating and maintaining their water systems. To aid systems in achieving financial capacity, the following strategies could be implemented by the Department:

1. Include asset management training in water operator training classes using the five core elements outlined in Section 3.7 Asset Management.
2. Ensure Department staff understand the importance and gain knowledge of asset management through internal training. Internal training should include the importance of capacity development and how activities are used to encourage and help public water systems develop sustainability.
3. Seek out partnership organizations that can offer training, resources, and support to public water systems seeking to implement an asset management program.

The stakeholders believe a significant gap exists in training to improve operation and managerial knowledge of drinking water regulations. The Department believes that meeting the training needs of system management personnel and operators is a necessary element for a system to achieve and maintain TMF capacity. In addition, rules and regulations are often written using legal terms that are difficult to understand. To aid in comprehension of regulations, the Department could implement the following strategies, among others:

1. Emphasis is placed on the importance of board and council training. This training includes regulatory responsibility of system management; asset management, long-term planning, capital improvement planning, financial management, full-cost financing; succession planning; and regulatory, environmental, and financial controls. Training is offered for individual boards and at relevant conferences and workshops. As digital methods of communication are mainstream, digitally recorded board training will close gaps in training availability and accommodate busy schedules through on-demand delivery.
2. Encourage partnerships between various agencies working to address water quality and quantity issues with and between public water systems. These entities include, among others, the Nebraska Department of Environment and Energy, Nebraska Department of Natural Resources, Nebraska Natural Resource Districts, Nebraska Water/Wastewater Emergency Response Network, and other non-governmental organizations. This will be accomplished mainly through training sessions and networking opportunities for operators, boards, and other water system representatives. Topics addressed include consolidation (regionalization), mutual aid agreements, and shared equipment and/or operators.
3. Offer more training/learning opportunities with the promotion of additional resources and online training tools through presentations, conferences, Department website, and Department publications.
4. Monitor technical assistance to flag systems receiving multiple contacts. This would show a potential weakness in capacity which could be addressed with other strategies to build capacity and prevent chronic non-compliance. Quantifying the number of past due compliance issues would be a trigger for issuing Administrative Orders.
5. Workforce development initiatives that may include apprenticeships, presentations/booths at school activities that highlight the water industry, and partnerships with community colleges to develop water industry proficiency. Leveraging partnerships with organizations that already have established workforce development programs for the water industry may be the best way to support these initiatives.

3.6 Security

Encourage water systems to improve technical capacity through security infrastructure and enhanced emergency response capability. The Department started funding water system security projects in 2005, providing direct assistance grants through the 15% set-aside. These grants are used to help PWS identify vulnerabilities to security threats and vandalism to take steps to ensure the protection of public health. PWS security improvements and upgrades that require engineering plan review and approval are not fundable through the Department's 15% Set-aside Security Grant program.

To support implementation of asset management programs, Security Grants provide GIS mapping as an option of eligible activities. GIS mapping provides systems with comprehensive documentation of water system assets and locations, an integral piece of a robust asset management program.

3.7 Asset Management

Asset management is a tool to assist public water systems develop capacity and can be an integral part of a sustainable public water system. Departmental and water industry support is needed to foster the development and implementation of asset management plans to improve water system capacity. Ensuring Department staff are trained and understand the basics of asset management will be key to encouraging water systems to develop and implement asset management plans. Department staff involved on a day to day basis with water systems are essential for emphasizing the correlation between a robust asset management plan and system sustainability, which includes the ability to maintain regulatory compliance. This correlation involves more efficient time management and financial viability, which many small systems find difficult to achieve. With an in-depth understanding of asset management, staff members that communicate daily with water systems can offer asset management resources and assistance for system operations and management based on individual system needs. When a system expresses interest in additional information or assistance, staff can follow up with the capacity development coordinator. It is through this system of rapport and trust between the Department and individual water systems, that the basis for encouraging the development and implementation of asset management plans will be achieved. To break down the complexity of asset management into easily understandable pieces, a recorded slide presentation could be developed by the capacity development coordinator to be used by Department staff in addition to EPA's [best practices guidance](#) document ensuring a unified approach when communicating with public water systems.

The following, some of which are included in other sections of this strategy, are options to provide support and assist water systems in developing and implementing asset management:

1. Promote asset management by the development and/or dissemination of various resources, activities, presentations, and materials using various delivery methods, including in person and digital media options.
 - b. Department's Capacity Development webpages; and
 - c. Training for Department staff; and
 - d. Training via in-person and virtual workshops/webinars for water operators and other water system personnel to include:
 - i. New operator training
 - ii. Nebraska Municipal Clerks Institute and Academy
 - iii. Board training
 - iv. Water operator continuing education workshops
 - e. Booths at activities that include drinking water and groundwater; and
 - f. Inclusion of the five core elements of asset management in public water system assessments.
2. Use DWSRF set-asides to develop a grant program and/or contract for asset management training and assistance for asset management plan development and implementation. These activities may include, but aren't limited to:
 - a. Use of the 15% set-aside Security Grant to support GIS mapping of utility assets; and
 - b. Board training workshops; and
 - c. Capacity development assistance for individual systems based on needs identified in the PWS Capacity Survey, which includes asset management with its five core elements; and
 - d. Newly licensed operator training/mentoring for those employed at very small water systems. This training may help them understand the importance of asset management, how to begin implementing an asset management plan, how to talk with system management, and what tools and resources are available to them.
3. Provide a link to the Department's Capacity Development webpage, which includes other links, resources, and tools for asset management, in written communication to water systems. These links could be provided in the footer, or similar area, with the following correspondence, among others:
 - a. Letters/emails regarding applications for permit to operate for prospective new community and non-transient, non-community systems; and
 - b. Routine sanitary survey letters; and
 - c. PWS Capacity Survey letters; and
 - d. Link to Capacity Development webpage in signature area of NDEE Drinking Water and Groundwater Division staff emails.
4. Use the [five core elements](#) that guide development of a complete asset management program for all activities and assistance to water systems. These five core elements are:

- a. Documentation of utility assets and condition; and
- b. Understanding of the sustainable required level of service; and
- c. Documentation of critical assets for sustained performance; and
- d. Identification of best life-cycle cost capital improvement plan and operation and maintenance strategies; and
- e. A plan for the best long-term financial strategy.

4. Assessment Procedure for Systems Most in Need of Assistance

The Department uses the following variables to evaluate and prioritize systems most in need of TMF assistance.

- Administrative orders.
- Health-based violations before a system is placed on the Enforcement Targeting Tool (ETT) list with a score of 11 or more. Health-based violations are often a symptom that a system lacks capacity.
- Nebraska Public Water System Capacity Survey score below 70% for community and non-transient, non-community systems. Even though these systems may be in compliance, a lower score on the survey is an indication that there is room for capacity building.
- Significant and minor deficiencies found during a routine sanitary survey and compliance activities nearing deadlines. Multiple significant and minor deficiencies are another indication that a system lacks capacity and tracking significant deficiencies through time should indicate a need for a proactive approach.
- Requests for assistance from water systems.

5. Measurement Tools for Strategy Success

To measure the success of the Department's TMF strategy, the following measurements and actions can be utilized:

- Number of level 2 assessments performed annually.
- Systems that required assistance multiple times.
- Nature of assistance rendered to systems as it relates to TMF capacity.
- Number of violations for past due compliance issues for both Routine Sanitary Survey (RSS) and RTCR level 1 assessments.

- Number of PWSs that have received assistance and has resulted in a lower number of RSS deficiencies in subsequent years.
- Percentage of CWSs that have been determined to have adequate capacity.
- Resiliency regarding deficiencies.
- Number of systems adopting an asset management program based on PWS Capacity Surveys. The surveys look at all five core elements of asset management programs and progression of full asset management implementation can be quantified in the number of core elements adopted over time. This will also provide a better indication of what core elements need attention to guide training and assistance.

The overall goal of the strategy is to protect public health through the reduction of PWSs in violation and provide the information necessary for Nebraska PWSs to become self-sufficient and achieve continued TMF capacity.

16	-	Do you have an annually reviewed and approved water budget?
17	-	Are water rates reviewed annually and adjusted, if needed?
18	-	Has the system developed both a short and long-term capital improvement plan?
19	-	Do established rates and fees cover the entire cost of operating the water system, including debt and improvements?
Governing Body/Owner Accountability		
20	-	Do members of the governing body/owner tour the water facilities and understand PWS regulations?
21	-	Have members of the governing body/owner received board training?
22	-	Does the governing body/owner require and review monthly system reports which include capacity, usage, complaints, regulatory compliance, test results, concerns, and system status?
23	-	Have you planned, or considered planning, for governing body/owner succession to ensure management of system isn't interrupted?
24	-	Does the governing body hold regularly scheduled meetings that are open to the public?
25	-	Are public records maintained and made available to the public?
Asset Management		
26	-	Does the system have a documented full inventory of assets, including computer & automated systems, with condition, location, and age for each asset listed?
27	-	Does the system understand its required sustained level of service?
28	-	Has the system identified all assets that are critical to its required sustained performance?
29	-	Does the system have a capital improvement plan and operation and maintenance strategies to maintain a minimum life-cycle cost of the water utility?
30	-	Does the system have a long-term financial strategy?
Purchased Water		
31	-	Do you have a contract to purchase water as your main supply?
32	-	Are policies in place to address loss of supply of purchased water?

Type name or insert signature and date

Governing Body Member/Owner Signature and Date

Type name or insert signature and date

Designated Operator Signature and Date

Notes: Notes, including clarification on questions, goals for improvement, and requests for more information.

Non-Transient Non-Community Public Water System Capacity Survey

System Name: System Name **PWS ID:** PWS ID
System Mailing Address: System Address
System Phone Number: System Phone **System Email Address:** System Email
Board Chair/Owner: Chair/Owner Name **Designated Operator:** Operator Name
Financial Contact: Financial Contact Name **Population:** Population **Service Connections:** No. Connections

Instructions: This survey is a self-assessment, which is a valuable tool to understand areas of strength and areas for improvement. This survey provides insight into elements that bolster a water system’s ability to be sustainable, maintain compliance with drinking water regulations, and provide quality drinking water on a continuous basis. Complete this survey using the drop-down box in the second column to indicate your answer. If a Yes/No question isn’t applicable, notate the question number at the bottom of the form in the Notes section with an explanation why the specified goal doesn’t apply. Type or insert signature of governing body member/owner and designated operator in the signature area with date completed. Email (preferred), mail, or fax the completed survey using the information at the top of the form.

Water Supply Management		
1	-	Is all source water metered?
2	-	Are you able to identify and repair leaks within the system?
3	-	Do you have a plan for an alternate water source, if needed? (i.e. emergency connection, regionalization, purchasing, etc.)
Personnel Management		
4	-	Does the designated operator hold the required operator license for the system?
5	-	Do you have written personnel policies & procedures?
6	-	Do all personnel receive the required, on-going training for their position?
Policies and Procedures		
7	-	Does the system have an active cross-connection control and backflow prevention program?
8	-	Do you have procedures for mitigation and response to online/digital security breach or hazards?
Operation and Maintenance		
9	-	Does the system have a current operation and maintenance manual?
10	-	Do you have a system for scheduling routine preventive maintenance?
11	-	Are outside services and support available to the system, if needed?
12	-	Are all system records easily accessible and maintained per regulatory requirements?
Financial		
13	-	Do you have an annually reviewed and approved water budget?
14	-	Has the system developed both a short and long-term capital improvement plan?
Governing Body/Owner Accountability		

15	-	Do members of the governing body/owner tour the water facilities and understand PWS regulations?
16	-	Have you planned, or considered planning, for governing body/owner succession to ensure management of system isn't interrupted?
17	-	Are public records maintained and made available to the public?
Asset Management		
18	-	Do you have a documented full inventory of assets directly related to the water system, including computer & automated systems, with condition, location, and age for each asset listed?
19	-	Does the water system management understand its required sustained level of service?
20	-	Have you identified all water system assets that are critical to its required sustained performance?
21	-	Do you have a capital improvement plan and operation and maintenance strategies to maintain a minimum life-cycle cost of the water system?
22	-	Do you have a long-term financial strategy for the water system?
Purchased Water		
23	-	Do you have a contract to purchase water as your main supply?
24	-	Are policies in place to address loss of supply of purchased water?

Type name or insert signature and date

Governing Body Member/Owner Signature and Date

Type name or insert signature and date

Designated Operator Signature and Date

Notes: Notes, including clarification on questions, goals for improvement, and requests for more information.

Appendix B

Standard Operating Procedure: #PWS-059

Title: Capacity Requirements for New Systems Approval

Prepared by: Shelley Rekte

Purpose: To ensure all new community and new non-transient non-community public water systems have adequate capacity before an operating permit is issued.

Procedures: All requirements are based upon criteria set forth in DHHS Regulations Governing Public Water Supply Systems Title 179 NAC 2 Section 015, Capacity Development for New Systems. Title 179 NAC2 Section 015 exists to meet the requirements of the Safe Drinking Water Act Section 1420(a). These procedures are in addition to all other requirements for obtaining a permit to operate as outlined in Title 179 Section 009.

Control Points: To meet the requirements of Title 179 NAC 2-015, two control points will be used to prevent a new water system from obtaining an operating permit if it lacks capacity. Each control point will verify set elements of the regulatory capacity requirements. This procedure sets forth the control points, required documentation, and tracking used for each regulatory element.

1. Documentation Required with Submission of Plans and Specifications to Construct a New Public Water System: All submissions for review and approval of a construction permit shall include the following elements of Section 015. All documentation in this section will be reviewed and approved by the review engineer, except where noted, before a construction permit is issued.

- a. 015.02A1, conformance to the requirements stated in Section 007, Siting, Design and Construction of Public Water Systems;
- b. 015.02A3, current water system map;
- c. 015.02A4, installation of a service meter on each service connection;
- d. 015.03A, estimated construction, operation, and maintenance costs;
 - i. Estimated construction cost to be reviewed by engineer;
 - ii. Estimated operation and maintenance costs to be reviewed by Capacity Development Coordinator.
- e. 015.03B, presentation of proposed water rate or revenue structure sufficient to cover operating, maintenance, and capital costs. A preliminary operating budget and capital budget to be provided;
 - i. Proposed community systems must provide a proposed rate/revenue structure and a preliminary five year community system operating budget (see Attachment A1).
 - ii. Proposed non-community non-transient systems must provide a preliminary five year non-transient non-community operating budget (see Attachments A2 & A3).
 - iii. Review to be completed by Capacity Development Coordinator.
- f. 015.04A, provision of a clear statement of legal ownership and any plans that may exist for transfer of ownership on completion of construction or after a period of operation (see Attachments A1, A2, & A3);
 - i. Review to be completed by Capacity Development Coordinator.

2. Documentation Required with Submission of Application for Permit to Operate a New Public Water System: All submissions for review and approval of a permit to operate shall include the following elements of Section 015. All documentation in this section will be provided in the

application packet, and upon being returned, will be reviewed by staff before a permit to operate is issued.

- a. 015.02A2, certified water operator(s) as required in section 010, Operator Certification;
 - i. Review to be completed by staff that process operating permits.
- b. 015.04B, the name, address, and telephone number of the person(s), other than the water operator(s), designated and authorized to respond to issues of the water system's compliance with Section 015;
 - i. Information may be obtained from the Critical Information and Emergency Contact List submitted by the proposed system.
 - ii. Review to be completed by staff that process operating permits.
- c. 015.04C, the name, address, and telephone number of the system operator(s); and
 - i. Information may be obtained from the Critical Information and Emergency Contact List submitted by the proposed system.
 - ii. Review to be completed by staff that process operating permits.
- d. 015.04D, a description of the staffing and chain of command to include the name, address, and telephone number of the person(s) responsible for the system's interaction with customers, regulators, and other entities, such as technical assistance providers and financial assistance providers.
 - i. Information may be obtained from the Emergency Response Plan submitted by the proposed system.
 - ii. Review to be completed by Capacity Development Coordinator.

3. Approval Procedure

- a. New System Checklists will be digitally generated for each new community or non-transient non-community public water system via the corresponding template (see Attachments B1 & B2). The file templates for Attachments A1, A2, A3 & B1, B2 are located at: P:\pwss\New Systems.
 - i. Dates of approval and staff initials will verify compliance with elements listed in Section 1, along with the construction permit number.
 - ii. Dates of approval and staff initials will verify compliance with elements listed in Section 2, along with the water operator license number(s).
 - iii. The following digital documents will be kept for each new water system:
 - (1) Copy of construction permit;
 - (2) Copy of New System Checklist (see Attachments B1 & B2);
 - (3) Copy of Capacity Development Intent & Budget document (see Attachments A1, A2, A3); and
 - (4) Copy of Permit to Operate.
 - iv. Digital folders will be kept using the following server location and nomenclature: P:\pwss\New Systems\20XX\System name).
- b. Permit to Operate will not be released until all requirements of Title 179 NAC2-015 have been met and signed off, in addition to all other requirements for obtaining a permit to operate as outlined in Title 179 Section 009.

Attachment A1

Community Public Water Supply System Capacity Development Statement of Intent (Title 179)

[System Name], a new community public water supply system, has been constructed in accordance with Nebraska Title 179 regulations to serve approximately [Population] individuals for the next five years without expansion to infrastructure. It was not developed to be sold to another entity, but will remain a facility under the current ownership/owner, [Owner Name], for the foreseeable future. Any change in this ownership will need to be reported to the Department of Health and Human Services Drinking Water Division.

This facility plans to meet the minimum technical, managerial, and financial capacity requirements of a new community public water system with the following five-year operating budget.

Simple Five-Year Proposed Operating Budget for the Community Water Supply System

	Year 1	Year 2	Year 3	Year 4	Year 5
I. Income					
A. Operating Revenues (e.g., water charges, service connection fees, other revenues)					
B. Reserve Accounts					
1. Emergency Reserve					
2. Capacity Replacement					
C. Budget Surplus					
D. Financing Source					
Grants					
Reserves					
Loans					
User Surcharge					
<i>Total Income</i>					
II. Expenses					
A. System Operating Expenses (e.g., salaries & other benefits, contract labor, power costs, insurance, professional services)					
B. Taxes					
C. Debt Payments					
D. Miscellaneous (e.g., training, travel)					
E. Capital Improvement Costs					
<i>Total Expense</i>					
<i>Income Less Expense</i>					

Attachment A2

NTNC Public Water Supply System Capacity Development Statement of Intent (Title 179)

[System Name], a new non-transient non-community public water supply system, has been constructed in accordance with Nebraska Title 179 regulations to serve approximately [Population] individuals for the next five years without expansion to infrastructure. It was not developed to be sold to another entity, but will remain a facility under the current ownership/owner, [Owner Name], for the foreseeable future. Any change in this ownership will need to be reported to the Department of Health and Human Services Drinking Water Division.

This facility plans to meet the minimum technical, managerial, and financial capacity requirements of a new non-transient non-community public water system with the following five-year operating budget.

Simple Five-Year Proposed Operating Budget for the Non-Transient Non-Community Water Supply System

	Year 1	Year 2	Year 3	Year 4	Year 5
I. Income					
Revenues					
A. Reserve Accounts					
B. Budget Surplus					
C. Financing Sources					
<i>Total Income</i>					
II. Expenses					
A. Water System Operating Expenses, including Capital Improvements					
B. All Other Operating Expenses					
<i>Total Expense</i>					
Income Less Expense					

Attachment A3

NTNC Public Water Supply System Capacity Development Statement of Intent (Title 178)

[System Name], a new non-transient non-community public water supply system, has been constructed in accordance with Nebraska Title 178 regulations to serve approximately [Population] individuals for the next five years without expansion to infrastructure. It was not developed to be sold to another entity, but will remain a facility under the current ownership/owner, [Owner Name], for the foreseeable future. Any change in this ownership will need to be reported to the Department of Health and Human Services Drinking Water Division.

This facility plans to meet the minimum technical, managerial, and financial capacity requirements of a new non-transient non-community public water system with the following five-year operating budget.

Simple Five-Year Proposed Operating Budget for the Non-Transient Non-Community Water Supply System

	Year 1	Year 2	Year 3	Year 4	Year 5
I. Income					
Revenues					
D. Reserve Accounts					
E. Budget Surplus					
F. Financing Sources					
<i>Total Income</i>					
II. Expenses					
C. Water System Operating Expenses, including Capital Improvements					
D. All Other Operating Expenses					
<i>Total Expense</i>					
Income Less Expense					

Attachment B1

[System Name]

New Community System Capacity Development Requirements (Title 179 NAC 2-015) Checklist

System INFORMATION

Owner name:	[Owner Name]
Address:	[System Address]
Phone number:	[Phone Number]
Email address:	[Email]
Date of submittal:	[Date]
Construction permit #:	[Constr. Permit]
Capacity final approval date:	[Date]
Capacity approval by:	[CapDev coordinator]

Requirements and date of compliance

[Date]	015.02A1 Conformance to requirements in section 007, Siting, Design, and Construction of Public Water Supply Systems.	[engineer's initials]
[Date]	015.02A2 Certified Water Operator(s) as required in section 010, Operator Certification.	[PTO initials]
[Date]	015.02A3 A current water system map.	[engineer's initials]
[Date]	015.02A4 Installation of service meter on each service connection.	[engineer's initials]
[Date]	015.03A Estimated construction cost.	[engineer's initials]
[Date]	015.03A Estimated operation and maintenance costs.	[CapDev initials]
[Date]	015.03B Proposed water rate or revenue structure, and preliminary operating budget and capital budget.	[CapDev initials]
[Date]	015.04A Clear statement of legal ownership and any plans that may exist for transfer of ownership upon completion of construction or after a period of operation.	[CapDev initials]
[Date]	015.04B Name, address, and telephone number of person(s), other than operators, designated and authorized to respond to capacity compliance issues. (ECL)	[PTO initials]
[Date]	015.04C Name, address, and telephone number of the system operator(s). (ECL) [Operator(s) license #]	[PTO initials]
[Date]	015.04D Staffing and chain of command to include name, address, and telephone number of person(s) responsible for interaction with customers, regulators, and other entities. (ERP)	[CapDev initials]

Attachment B2

[System Name]

New NTNC System Capacity Development Requirements (Title 179 NAC 2-015) Checklist

System INFORMATION	
Owner name:	[Owner Name]
Address:	[System Address]
Phone number:	[Phone Number]
Email address:	[Email]
Date of submittal:	[Date]
Construction permit #:	[Construction Permit]
Capacity final approval date:	[Date]
Capacity approval by:	[CapDev coordinator]

Requirements and date of compliance		
[Date]	015.02A1 Conformance to requirements in section 007, Siting, Design, and Construction of Public Water Supply Systems.	[engineer's initials]
[Date]	015.02A2 Certified Water Operator(s) as required in section 010, Operator Certification.	[PTO initials]
[Date]	015.02A3 A current water system map.	[engineer's initials]
[Date]	015.02A4 Installation of service meter on each service connection, if applicable.	[engineer's initials]
[Date]	015.03A Estimated construction cost.	[engineer's initials]
[Date]	015.03A Estimated operation and maintenance costs.	[CapDev initials]
[Date]	015.03B Preliminary operating budget and capital budget.	[CapDev initials]
[Date]	015.04A Clear statement of legal ownership and any plans that may exist for transfer of ownership upon completion of construction or after a period of operation.	[CapDev initials]
[Date]	015.04B Name, address, and telephone number of person(s), other than operators, designated and authorized to respond to capacity compliance issues. (ECL)	[PTO initials]
[Date]	015.04C Name, address, and telephone number of the system operator(s). (ECL) [Operator(s) license #]	[PTO initials]
[Date]	015.04D Staffing and chain of command to include name, address, and telephone number of person(s) responsible for interaction with customers, regulators, and other entities. (ERP)	[CapDev initials]