

DELAWARE CAPACITY DEVELOPMENT STRATEGY



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DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health
Office of Drinking Water

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CAPACITY DEVELOPMENT STRATEGY

I. Introduction

The Capacity Development Program was created under the Safe Drinking Water Act (SDWA) Amendments of 1996.

Capacity is the ability to plan for, achieve, and maintain compliance with drinking water standards. Capacity has three components: technical, managerial, and financial (TMF). Capacity development is the process by which public water systems (PWSs) acquire, maintain, and build adequate TMF capacity needed to meet the SDWA public health protection objectives.

Delaware's Capacity Development Program enhances PWS capacity through three components. The first component is the authority which was granted in 1999 to assure all new Community Water Systems (CWS) and Non-Transient Non-Community Water Systems (NTNCWS) have TMF capacity by preventing the formation of new PWSs that do not have capability to maintain compliance with drinking water standards. The second component requires all PWSs receiving a Drinking Water State Revolving Fund (DWSRF) loan to prove TMF capability before a loan is awarded unless the loan is for a project that will assure capacity. The third component is the Capacity Development Strategy for existing PWSs.

SDWA Amendments require States to develop a strategy to address the TMF capacity of all existing PWSs. If the State does not develop and implement a strategy, the State shall receive only 80 percent of the allotment that it is otherwise entitled to receive under section 1452 (DWSRF). In creating a capacity development strategy, the SDWA Amendments of 1996 require the following:

SDWA §1420(c)

(2) Content—In preparing the capacity development strategy, the State shall consider, solicit public comment on, and include as appropriate —

- (A) the methods or criteria that the State will use to identify and prioritize the public water systems most in need of improving technical, managerial, and financial capacity;*
- (B) a description of the institutional, regulatory, financial, tax, or legal factors at the Federal, State, or local level that encourage or impair capacity development;*
- (C) a description of how the State will use the authorities and resources of this title or other means to—*
 - (i) assist public water systems in complying with national primary drinking water regulations;*
 - (ii) encourage the development of partnerships between public water systems to enhance the technical, managerial, and financial capacity of the systems; and*
 - (iii) assist public water systems in the training and certification of operators;*

(D) a description of how the State will establish a baseline and measure improvements in capacity with respect to national primary drinking water regulations and State drinking water law; and

(E) an identification of the persons that have an interest in and are involved in the development and implementation of the capacity development strategy (including all appropriate agencies of Federal, State, and local governments, private and nonprofit public water systems, and public water system customers).

(F) a description of how the State will, as appropriate—

(i) encourage development by public water systems of asset management plans that include best practices for asset management; and (ii) assist, including through the provision of technical assistance, public water systems in training operators or other relevant and appropriate persons in implementing such asset management plans.

II. Capacity Development Strategy for Existing Systems

The Strategy will be used to coalesce several aspects of the Public Water System Supervision (PWSS) program that previously had been unconnected. In considering ways to identify and prioritize PWSs in need of improving TMF capacity, it is necessary to decide what elements are indicators of capacity. The first and most important indicator of TMF capacity is compliance with National Primary Drinking Water Regulations (NPDWR). When a PWS is in compliance with NPDWR, the presumption can be made that capacity exists at that point in time. However, there may be other underlying factors that may cause it to fall into non-compliance in the future.

Delaware will review all PWS's compliance history to determine their need of assistance. Additionally, sanitary survey reports, complaint history, and operators' status will be analyzed. This method will provide an objective review of every water system in the State including Transient Non-Community Water Systems (TNCWS). Delaware includes TNCWSs in the identification and prioritization process because they do not have the technical assistance resources available compared to CWSs and NTNCWSs. Finally, since TNCWSs have fewer rules and regulations to comply with, the review of these PWSs will be less time consuming but has greater potential for benefit.

III. Prioritization of Systems [SDWA §1420(c)(2)(A)]

A method of prioritizing is applied to indicate the extent of assistance required for each PWS. A capacity ranking of 1 to 4 will be assigned to each PWS with PWSs ranked 1 requiring the most assistance and PWSs ranked 4 requiring the least assistance. The method of ranking these PWSs will account for the TMF capacities by querying and analyzing a set of standardized quantitative and qualitative data that provide an overview of each PWS's condition. The appendix "Ranking Public Water Systems through Capacity Development" document describes the criteria for ranking PWSs. One-third of Delaware's CWSs,

NTNCWSs, and TNCWSs will be evaluated each year, resulting in all of Delaware's PWSs being evaluated every three years.

IV. Factors That Encourage Capacity [SDWA §1420(c)(2)(B)]

- The availability of DWSRF loans allows PWSs to replace aging infrastructure, add needed treatment, or complete other projects that enhance capacity. Delaware Health and Social Services (DHSS) has the authority to restrict the construction of new PWSs that do not have the ability to provide safe drinking water over the long term. The benefits of this provision will be cumulative in the future years by assuring that every new CWS and NTNCWS has adequate TMF capacity (16 Del Code 122(3)(c)(3)).
- The Delaware Office of Drinking Water (ODW) works with Delaware Technical and Community College (DTCC) for teaching operator certification courses, including developing and proctoring the exams. A well-trained water operator is crucial to achieving and maintaining the capacity of a PWS. Delaware's regulatory requirement for continuing education of water operators will assure the operator stays current in his/her knowledge.
- Technical service providers such as Delaware Rural Water Association (DRWA) and Southeast Rural Community Assistance Project, Inc. (SERCAP) provide valuable assistance to PWSs via operator assistance or education/training programs (classroom &/or web-based) which in turn results in substantial enhancement to the capacity of PWSs. The DRWA circuit rider program provides valuable field assistance to PWSs.
- Delaware has a State Planning Office that has developed a Land Use Strategy which designates areas for low growth. Each county also has a Land Use Plan which must be updated every 5 years. These policies help protect Delaware's groundwater from overuse. Land zoning helps to keep potential industrial contaminants away from residential areas.
- Delaware has well established county sewer districts to help prevent groundwater contamination from failing septic systems, minimizing the need for additional treatment.
- Certificates of Public Convenience and Necessity (CPCN) allow large PWSs to be formed with ample capacity to provide safe drinking water to its consumers. A PWS must demonstrate its TMF capabilities prior to receiving a CPCN.

V. FACTORS That Impair Capacity [SDWA §1420(c)(2)(B)]

- Supplying drinking water is often not the principal business of a small CWS or NTNCWS. The management personnel of such businesses may have even less knowledge of water systems and, therefore, may not provide adequate TMF support to produce safe drinking water.
- Political rivalry between private water utilities and municipalities may prevent interconnection or consolidation of any part of the operation. Officials of small municipalities may be reluctant to raise water rates as needed. This results in some small CWSs without adequate financial capacity to maintain their water system.
- Existing PWSs changing owners without notifying ODW impairs capacity by reducing the likelihood that new owners will understand and comply with the requirements of the State of Delaware *Regulations Governing Public Drinking Water Systems*. This same concept applies to newly found PWSs.

VI. Use of Authorities and Resources

1. Assist Public Water Systems in NPDWR Compliance [SDWA §1420(c)(2)(C)(i)]

SANITARY SURVEYS: Sanitary surveys are performed on all PWSs. The purpose of a sanitary survey is to evaluate the adequacy of a PWSs facilities, equipment, operation, maintenance, and monitoring compliance to produce and supply safe drinking water.

TECHNICAL ASSISTANCE: ODW staff provide technical assistance further to surveys or investigation of various components of a PWS. ODW currently works with DRWA to assist DWSRF applicants (CWSs) in areas where they are deficient in TMF capacity. ODW works with SERCAP and DRWA to assist PWSs that are not eligible for DWSRF funding (NTNCWSs & TNCWSs).

PLAN REVIEW: Plans for new PWSs or changes to existing PWSs are reviewed by the Office of Engineering. This process assures owners and users of PWSs that the PWS has adequate TMF capacity and can deliver safe drinking water to its consumers that meets all state and federal requirements.

MONITORING: The water quality of PWSs throughout the State is monitored by sampling and laboratory analysis by a Delaware certified laboratory. The State performs most of the sampling for small and medium-sized PWSs. This approach provides fast laboratory results and ensures the integrity of the samples and resulting data. The monitoring schedules are in accordance with State and Federal regulations governing drinking water.

COMMUNICATION: To improve ODW's communication with PWSs, the Capacity Development Program started the ODW email Blast in FFY 2018. The Blast contains information about new and existing regulations and other topics related to drinking water. The Blast also provides a way of reaching small PWS owners and operators that previously had limited means of obtaining current information.

2. Partnership Development [SDWA §1420(c)(2)(C)(ii)]

Many CWSs participate in the Delaware Water/Wastewater Agency Response Network (DEWARN), which prepares, organizes response, and shares personnel in the event of natural or human-caused emergencies. ODW provides support in the development of intrastate mutual aid programs and an integrated response for DEWARN.

3. Operator Training and Certification Assistance [SDWA §1420(c)(2)(C)(iii)]

The well-trained water operator is a primary factor in maintaining a water system's capacity. ODW currently works with DTCC to provide operator training classes to prepare operators for certification. DRWA, DTCC, and SERCAP offer many opportunities for web-based and classroom training that provide Continuing Education Units (CEUs) for operators to maintain certification. Additionally, ODW's Trainer/Educator offers classroom training that provides CEUs for operators.

Revisions to operator certification regulations established two new specialty class licenses: a Limited License and a Distribution License. An operator who works for a school, day care facility, or small NTNCWS that is required to have a licensed operator may obtain a Limited License. A Distribution System Operator may obtain a Distribution License when they are responsible for oversight of a distribution system and have no responsibilities for operations at the treatment plant. These specialty class licenses will reduce costs for PWSs and make compliance with operator certification requirements more likely.

VII. Establishing a Baseline Assessment and Measuring Improvement [SDWA §1420(c)(2)(D)]

1. Baseline Assessment

The establishment of a baseline is done by researching existing PWS information and assigning a capacity ranking of 1 to 4, which prioritizes systems most in need of assistance. This will be done annually on one-third of the CWS, NTNCWS, and TNCWS in Delaware, with all PWSs being assessed every three years. The presumption is made that the PWSs with a capacity ranking of 4 are maintaining TMF capacity, while PWSs with a capacity ranking of 3 and 2 are in increasing need of assistance, and PWSs with a capacity ranking of 1 need the most assistance, having an ETT score

greater than 10. Assistance is provided to receptive PWSs that reaches beyond the scope of routine technical assistance. Assistance provided is determined for each PWS based upon their specific need(s). ODW staff delivers much of the assistance, but other technical providers (e.g., DRWA, SERCAP) are called upon when necessary, particularly for managerial or financial capacity assistance.

2. Measuring Improvement

Improvement is measured by comparing a given year's assessed PWSs with the assessment of the same set of PWSs three years previously. This analysis measures improvement in capacity by identifying the number of PWSs that have moved to the next lower priority ranking.

ODW will also measure movement between priority rankings in each PWS by comparing each PWSs ranking with the same PWSs ranking from three years earlier. PWSs with ranking trending lower (higher priority) will be reviewed for intervention by the Capacity Development Program and assisted as applicable. Improvement of such PWSs will be measured by their ranking trending higher (lower priority) after intervention by the Capacity Development Program.

VIII. Identification of Stakeholders [SDWA §1420(c)(2)(E)]

Stakeholder involvement is important for several reasons. Participation in the strategy development process, by groups and individuals who have a vested interest in using, owning, managing, operating, or financing water systems can improve the quality of the strategy and the decision-making by providing additional information and diverse perspectives, as well as sensitivities to key issues. As a group, the stakeholders can assist in identifying common goals and developing strategies and actions to meet those goals. It is important in the implementation process for all the stakeholders to accept the strategy in order to improve its longevity. A strategy that is developed with a consensual approach can also help to avoid or mitigate problems.

A stakeholder group can also help to improve communication and networks between different groups and within the constituencies of the various groups. Much of the work of the Capacity Development Strategy will focus on the education of PWS owners, managers, operators, and consumers. A stakeholder group that has access to Delaware's drinking water community through their membership newsletters and other ways can enhance the success of the strategy by providing information and education for their constituents. It is also important to have continuing dialogues between the stakeholders and the regulator and funding agencies as the capacity development strategy is implemented to understand what elements are working and what elements are not working. A stakeholder group can work collaboratively to meet the

common goal of increasing the capacity of PWSs to provide safe drinking water for all Delaware residents.

Initial Strategy: Several meetings were held with stakeholders during the creation of the initial strategy. An internal committee was formed to put forth ideas for creating a Capacity Development Program to assist public water systems in gaining or maintaining TMF capacity. A program was drafted that strengthens some existing programs and offers new avenues of assistance for water systems.

When the draft of the Capacity Development Program was formed, the plan was introduced to a representative group of water system owner/operators. In the group were: two mobile home park owners, one town manager, two operators of municipal water systems, one non-transient non-community manager, and two representatives of investor-owned utilities. Combined, the two investor-owned utilities owned or operated approximately one hundred water systems in Delaware. Comments were considered and incorporated into the strategy as appropriate. ODW presented the Capacity Development Strategy at the Delaware Rural Water Association annual conference and solicited comments. The conference was open to water systems and the public.

An informational meeting was held to present the program to additional water owner/operators, other agencies, and the public. Representatives of the Public Service Commission, DRWA, the Department of Natural Resources and Environmental Control, DHSS, six PWSs, and a member of the public attended. Comments were solicited and incorporated into the strategy as appropriate.

Revised Strategy: The 2018 America's Water Infrastructure Act (AWIA), Section 2012, required state drinking water programs to consider and include as appropriate asset management into their capacity development strategies. To meet this requirement to revise its strategy, the Capacity Development program engaged both internal (within DHSS) and external stakeholders in Delaware. Stakeholders included in discussions relating to asset management and capacity development were staff from the DWSRF, PWSS, DRWA, and SERCAP.

IX. Encourage development of Asset Management Plans by public water systems [SDWA §1420(c)(2)(F)]

Delaware's Capacity Development Program will encourage development by PWSs of asset management plans using the following five approaches:

1. Education: ODW's trainer educator will hold training courses on Asset Management for all PWS staff. Delaware's technical assistance providers DRWA, SERCAP, and DTCC also have training courses on Asset Management. PWS staff will be encouraged to attend these training courses to better assist them with understanding the concept of Asset

Management Plan creation, implementation, and the benefits of a well-maintained plan.

2. Sanitary Survey: ODW's PWSS staff conduct sanitary surveys on all PWSs on a triennial basis. Asset Management Plan reviews will be conducted as part of these surveys. PWSs that do not have an Asset Management Plan will be encouraged via a recommendation on their sanitary survey report to develop and implement such plans. PWSS staff will provide PWSs with contact details for our technical assistance providers and/or the Capacity Development Program at ODW for further assistance with the process.
3. Revised Capacity Development Appendix B – DWSRF Loan application: PWSs that apply for a DWSRF loan must complete this document. This document has been revised to include questions on asset management. The document is reviewed by Delaware's Capacity Development Program to establish TMF capacity. Based on the responses to the questions relating to Asset Management, the Capacity Development program will encourage PWSs to create and implement an asset management plan if it is determined that they do not have an existing plan.
4. DWSRF Asset Management Planning Grant: PWSs that are identified as not having an Asset Management Plan (via sanitary surveys or DWSRF loan application information) will be encouraged to apply for an Asset Management Planning Grant to help offset some of the costs involved with the creation of these plans.
5. Technical Assistance Providers: All PWSs will be encouraged to contact our technical assistance providers (DRWA and SERCAP) for assistance to create and implement Asset Management Plans with a view to help improve their TMF capacities.

X. Capacity Development Strategy Implementation Reporting

Each year, ODW provides an Annual Capacity Development Program Implementation Report and Annual Review to the EPA.

Every 3 years, ODW submits a report to the Governor on the efficacy of the strategy and progress made toward improving the TMF capacity of PWSs in Delaware.

XI. Capacity Development Strategy Implementation

Implementation of Delaware's Capacity Development Program will be facilitated by revising the existing system of prioritization, establishing a baseline, and measuring improvement. Results from the revised system will be analyzed for validity with systems of known TMF capacity. If the data is validated, the revised system will be used to rank 1/3 of Delaware's PWSs each year.