

Capacity Development Program Report to the Governor



*DELAWARE HEALTH
AND SOCIAL SERVICES*

Division of Public Health

Office of Drinking Water

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Background

The 2008 Capacity Development Program Report to the Governor details the State of Delaware's strategy to meet the public health protection objectives of the Federal Safe Drinking Water Act (SDWA). The strategy assists public water systems in acquiring and maintaining technical, managerial and financial capacity. If a strategy is not in place, 20 percent of the Drinking Water State Revolving Fund (DWSRF) grant will be withheld from the state's allotment.

This Delaware Health and Social Services' (DHSS) Division of Public Health (DPH) report is the second report prepared for Governor Ruth Ann Minner by the Office of Drinking Water (ODW). The SDWA requires that not later than two years after the date on which a State adopts a Capacity Development Strategy and every three years thereafter, a report shall be made to the Governor on the efficacy of the strategy and the progress made toward improving the technical, managerial and financial capacity of public water systems in the State. DPH wrote an initial report in 2002. The reports are available to the public.

The Program

The Capacity Development Program primarily utilizes a non-regulatory proactive strategy. In developing the strategy, methods first were considered to identify and prioritize systems in need of improving technical, managerial, or financial capacity. ODW established a baseline in 2000 to measure improvements in capacity. To establish a baseline, ODW reviewed the compliance history and other criteria of all of Delaware's 521 public water systems (PWS). Each water system was ranked according to their compliance level:

Level 1: Significant Non-Compliers (SNC)

Water systems in significant non-compliance are chronic non-compliers. They are lacking in many technical, managerial and financial capacity areas. Delaware has a small number of significant non-compliers.

Level 2: Systems with Health Related Compliance Problems

Level 2 consists of systems currently in compliance with health-related regulations but with a history of a compliance problem in the last three years. ODW reviews for these types of violations: Systems exceeding lead/copper action level, Total Coliform Rule, and Phase II-V (chemical contaminants). If problems are not addressed, the systems' ranking could be reduced to Level 1.

Level 3: Systems with Compliance Problems Non-Health Related

These systems are typically lack a certified operator or the system has failed to submit a Consumer Confidence Report. Other issues include sanitary defects identified during inspections, a large number of complaints, aging infrastructure, poor

maintenance, financial problems, or a recently identified system that did not go through the Capacity Development program prior to opening.

Level 4: Systems Exhibiting Full Capacity

These water systems have no known compliance issues or other problems.

In 2001 and 2002, ODW sent self-assessment surveys to water systems. Upon reviewing the responses, ODW staff visited the systems and offered assistance. ODW still offers assistance to water systems having trouble maintaining compliance. ODW also contracts the Delaware Technical and Community College Environmental Training Center (DTCC) and with the Delaware Rural Water Association (DRWA) to provide assistance and training. In addition ODW refers some water systems to other sections within Delaware Health and Social Services, the Department of Natural Resources and Environmental Control (DNREC) and the Public Service Commission. This is to ensure that the system receives assistance tailored to the individual needs of each water system. Through feed back from systems and national trends, ODW determined areas in which systems commonly need assistance.

The proceeding table contains the types of assistance ODW and its contractors can provide to water systems.

AREAS OF POTENTIAL ASSISTANCE

1. Develop Emergency Plans Including Water System Security
2. Provide Information about Delaware Drinking Water Regulations
3. In Depth Water System Evaluation with Recommendations
4. Assist in Creating Operation and Maintenance Manuals
5. Water Treatment Technique Evaluations
6. How to Comply with Requirements of the Lead/Copper Rule
7. Evaluation of Operational Policies, Job Descriptions, and Organizational Charts
8. Calculating and Controlling Water Loss
9. Encouraging Customers to Practice Water Conservation
10. Asset Management
11. Utility Rates Setting and Cost Recovery
12. How to Develop a Long Term Capital Improvement Plan
13. Assistance in Completing a Drinking Water State Revolving Fund Loan Application
14. Developing a Source Water Assessment or Wellhead Protection Plan
15. Assist Operator in Obtaining or Maintaining Drinking Water Operators License
16. Promote and Encourage Consensus Building between Operators, Elected Officials and Customers of Municipal Water Systems

17. Assistance with compliance of operator certification requirements

All systems are ranked every three years to gauge the state of public water systems in Delaware. This ranking is also used as an evaluation tool to assess the effectiveness of the Capacity Development Program and to identify areas the program should focus in terms of compliance trends and assistance. Ranking provides the Capacity Development Program with a good general indicator of each individual system's assistance needs.

To date, all water systems have had the opportunity to participate in the Capacity Development Program, most accept ODW's offers for assistance and show improvement in compliance and thus in public health protection. The number of sanitary survey defects were reduced considerably and many more systems developed written emergency and maintenance plans. Much of this is due to contractors DTCC and DRWA offering regular trainings for water operators, thus greatly enhancing their knowledge. Another factor encouraging participation in training is that DPH requires licensed drinking water operators to take 12 or 20 hours of continuing education every two years depending upon the level of certification.

Changes in Lead/Copper Rule (LCR) regulations in 2003 as well as current short-term and upcoming long-term revisions on the federal level to the rule have caused some compliance difficulties and confusion with many water systems, thus causing an overall decline in compliance regarding this rule. Although many of these systems appeared to possess sufficient technical capacities and have no history of noncompliance, many struggle to comply with regulatory changes.

To address the problem with LCR compliance, ODW staff has been diligent in providing assistance and sending reminder letters. In 2007 and 2008 ODW provided technical assistance to 100 water systems regarding this rule, worked closely with 40 eligible systems to apply for LCR waivers and assigned accelerated reduced monitoring schedules, and sent over 313 reminder letters.

Typical Capacity Building Activities

The Capacity Development Program promotes safe drinking water in Delaware by serving as a liaison between the customer, the water system and ODW's enforcement section.

Problem-Solving Assistance:

In November of 2005 the town of Millsboro received a violation for trichloroethylene (TCE) which may cause liver problems and increase the risk of cancer. This was particularly concerning because not only did this violation affect the town of Millsboro with a population of 2,800 but also the town of Dagsboro who's population is 500. Millsboro sells water to Dagsboro. ODW's enforcement section sampled at Millsboro several times per week, Wells 1 and 2 were found to be contaminated. ODW also

worked with the town to find the appropriate treatment to install that would remove the TCE. To provide a safer, more permanent solution Millsboro applied for the 2006 Drinking Water State Revolving Fund Loan to drill 2 new wells and install associated treatment. Millsboro was approved for the DWSRF loan, and has just completed drilling the two new wells.

Security Projects:

Since the events of Sept. 11, 2001, public water system security is an issue at the forefront of the drinking water industry and ODW has taken initiative to address water system security.

ODW used a federal security grant to purchase a new gas chromatograph mass spectrometer for the Public Health Laboratory. This piece equipment will be used to test water that that may have been contaminated by terrorists.

ODW has funded several table-top security exercises which took place at DTCC's Environmental Training Center. Theses exercises simulated water related emergencies which brought together water system officials, ODW, and first responders to work alongside each other as they would in an actual incident. This is very valuable, it allowed participants to practice and familiarize themselves with emergency procedures and interact with each other, an opportunity which they would not normally get.

Drinking Water State Revolving Fund applicants:

The Drinking Water State Revolving Fund (DWSRF) is a loan fund established by the 1996 Amendments to the Federal Safe Drinking Water Act. The fund is administered in Delaware by the Division of Public Health Office of Drinking Water. The purpose of the loan fund is to assist public water systems to replace aging infrastructure, add needed treatment or to complete other projects.

All DWSRF applicants must have a Capacity Development Assessment. Water systems that do not comply with the National Primary Drinking Water Regulations are ineligible for DWSRF monies unless:

- a.) The system's owner or operator agrees to undertake feasible and appropriate operational changes, or
- b.) Financial assistance from the DWSRF will ensure long-term system compliance.

The Capacity Development Assessment covers compliance history, wellhead protection, emergency plans, maintenance plans, rates, capital improvement plans and organizational structure. If the system lacks capacity, operators are assisted by capacity development staff, DRWA or DTCC.

All municipalities applying for the State Revolving Fund are required to attend financial and managerial training provided by DTCC on asset management, capital improvement planning or rate setting. Although only two of the municipality's decision makers are

required to attend, two municipalities sent their entire town council, town manager and mayor to our training. Additional sessions are planned for the future.

Group Training Sessions

In addition to assisting individual water systems, the Capacity Development Program contractors have held several group-training sessions for system operators, supervisors and elected and appointed officials.

Drinking Water Operator Training for Daycares and Schools:

Delaware's community water systems and non-transient non-community water systems are required to have a licensed drinking water operator. This requirement includes daycare centers, senior centers and schools that provide drinking water from their private well for over 25 people daily. While all of these populations are generally considered the most vulnerable to contaminants, daycare providers are least likely to take daytime classes in water operations or have the funds to contract with a licensed water operator. To address this concern, ODW's Capacity Development Program, in conjunction with the Delaware Technical and Community College's Environmental Training Center in Georgetown provide training and testing to these facilities. Over the last three years, this training has been available to all operators of daycares, schools and senior centers through the Environmental Training Center. In the last three years, 19 operators have been trained through this program. Without this specialized training, many of these water systems would have either been out of compliance or would have been burdened by hiring a water operator.

Office of Drinking Water Capacity Building Tools

Operator Training:

Only since 1998 has Delaware required public water system operators to be trained and licensed. In 2000 DPH began issuing licenses. There is a significant need for training water operators about both the operation and maintenance of a public water system, as well as state and federal drinking water regulations.

Newsletter:

The Office of Drinking Water's quarterly newsletter "Tap Talk" contains information about new and existing regulations, training opportunities, and other developments in the water industry. The newsletter, sent to all public water systems in the state, is another way ODW can communicate with small systems that previously had limited means to obtain current information.

New System Authority:

DHSS has the authority to prevent the construction of new public water systems that do not have the ability to ensure safe drinking water now and into the future. This provision assures that every new water system has technical, managerial and financial capacity.

DWSRF:

The Drinking Water State Revolving Fund Program provides low interest loans for public water systems to replace aging infrastructure, add needed treatment or to complete other projects.

Existing Programs:

Several other programs within the Office of Drinking Water build the capacity of water systems. The Capacity Development Program works closely with and complements these activities.

SANITARY SURVEYS: Sanitary surveys are performed on all public water supplies. The survey evaluates the water system's source, treatment, and storage facilities. Sanitary surveys discover defects that could compromise the water quality and safety of its consumers, as well as help insure compliance with all regulations.

TECHNICAL ASSISTANCE: ODW staff investigates various water system components to determine the cause of problems and suggest solutions. ODW staff provides advice about operating and maintaining equipment.

PLAN REVIEW: An environmental engineer reviews plans for new water systems or proposed changes to existing systems. Plan review assures owners and users of public drinking water systems that systems are technically sound and can efficiently and safely deliver water to consumers.

MONITORING: Sampling and testing protect the water quality of public water systems. Delaware does most of the monitoring for small and medium-sized systems. This approach provides fast laboratory results and assures timely reporting and results.

Factors that Impair the Capability of Public Water Systems

Drinking Water as Ancillary Business:

Producing drinking water is not the principal business of many water suppliers, thus they may have little understanding of regulations or expertise needed to operate a water system. This is especially true of non-community water systems. The managers of such industries or businesses may have even less knowledge and therefore not provide adequate financial support for producing safe drinking water.

Asset management:

Officials of small municipalities are often subject to the political pressures of being re-elected and do not raise water rates accordingly or at all. This results in many small water systems not having the financial capacities to maintain their system.

DWSRF:

While the State Revolving Fund is an affective program for large projects, small water systems may be overwhelmed by the bureaucratic process, state wage rates, federal cross-cutter requirements and closing costs.

Political Rivalry:

Political rivalry between municipalities and between municipalities and private utilities may thwart interconnection or consolidation of any part of the operation. Resisting change also prevents the study or implementation of new ideas. Interconnections could minimize equipment duplication, create an economy of scale and share personnel. Interconnected parties would both profit by reducing costs. Moreover, the parties would assure their customers of greater continuity of water service during emergencies or mechanical failures.

Future Projects

The Capacity Development Program will identify water systems needing assistance through the following control points.

1. The Capacity Development Program will continue to rank systems based on their compliance at least every three years. Ranking systems will continue to be utilized as a tool by ODW to identify systems that require assistance as well as a means of identifying compliance trends throughout the state.
2. Capacity Development will continue to follow lead and copper compliance and provide individual assistance to systems that either fail to monitor for lead/copper, or which exceed the action level.
3. The program will continue to work vigorously with significant non-compliers, those with multiple violations within a three-year period.
4. The Capacity Development Program will develop and distribute a new self assessment survey to water systems to help identify systems individual needs.
5. ODW will continue to review the compliance history of water systems submitting engineering plans to alter or expand their existing systems. Systems not in compliance are counseled about necessary steps they need to take to achieve compliance before expanding to serve more customers.
6. ODW will continue to emphasize managerial and financial issues related to operating a water system. As water operators receive additional training, their level of expertise will reach a new level. However, even the most knowledgeable water operator can only

achieve limited success unless the municipal or company management understands the importance of proper funding and maintenance of a water system.

Conclusion

Capacity Development addresses public water system's technical, managerial, and financial capability to comply with current and future National Primary Drinking Water Regulations.

The program works in partnership with ODW's Public Water System Supervision Program, ODW's Office of Plan Review, and several outside agencies to form a network of support. The Capacity Development Program examines underlying issues that cause water systems to become non-compliant, thus compromising the quality of the public drinking water they provide and the public's health.

The program helps water systems achieve compliance by educating water system operators about the importance of providing safe drinking water, and advising them about equipment, trainings and processes needed to avoid non-compliance.

DPH attributes most of this non-regulatory program's success to the cooperative nature of its staff, the willingness of most water operators to improve operations, and to partnerships with Delaware Technical and Community College, the Southeast Rural Assistance Project, the Rural Utility Service branch of the U.S. Department of Agriculture, the Delaware Rural Water Association, and the Department of Natural Resources and Environmental Control.

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