



CAPACITY DEVELOPMENT PROGRAM IMPLEMENTATION REPORT AND ANNUAL REVIEW

October 1, 2005 – September 30, 2006
FFY 2006

In 1974 Congress adopted the Safe Drinking Water Act (SDWA). The United States Environmental Protection Agency (EPA) established the Public Water System Supervision (PWSS) Program under the authority of the SDWA to regulate the drinking water provided by public water systems. The SDWA allows a State to seek EPA approval to administer its own PWSS program. The authority to run a PWSS program is called primacy. The State of Delaware was granted primacy in April 1978. In order for Delaware to receive primacy, the state had to meet certain requirements laid out in the SDWA, including the adoption of drinking water regulations that are at least as stringent as the Federal Regulations and a demonstration that it could enforce the program requirements.

Under Section 1420(a) of the Safe Drinking Water Act (SDWA) Amendments of 1996, Delaware must implement both Capacity Development Authority and Capacity Development Strategy Programs. If Delaware does not implement these programs the U.S. Environmental Protection Agency (EPA) may award no more than 80 percent of Delaware's allotment for the Drinking Water State Revolving Fund (SRF) capitalization grant entitled under Section 1452 of this Act.

I. Capacity Development Authority (New Systems Program)

Per Section 1420(a) of SDWA, Delaware has obtained the legal authority or other means to ensure that all new community water systems (CWS) and new nontransient, noncommunity water systems (NTNCWS) commencing operation after October 1, 1999, demonstrate technical, managerial, and financial capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect, on the date of commencement of operations. This authority is contained in 16 Delaware Code 122(3) (C).

1. Legal Authority

Delaware's legal authority (statutes/regulations) has not changed relative to the 2005 reporting year, nor has the Capacity Development Program changed for new water systems. This authority allows the Delaware Office of Drinking Water (ODW) to set control points for new systems. Delaware uses several control points (listed below) to initiate contact with a potential public water system to ensure their capacity.

2. Control Points for New Systems

No changes to the control points have taken place in the past year.

- New well permits: Through an agreement with the Department of Natural Resources and Environmental Control (DNREC) new well permits for public wells are faxed to ODW.
- Day care plan review and licensing: The Division of Public Health, Health Systems Protection and Department of Services for Children, Youth and Their Families, Office of Childcare Licensing contact Capacity Development to apprise them of potential new public water systems.
- Planning and Land Use Service (PLUS) process: Each county sends information to the engineering section of ODW regarding new housing developments in their counties.
- ODW staff: ODW staff surveys for possible new water systems as they perform their field work.
- Water system plan review: Plans that arrive at ODW will not receive a Certificate of Approval to Construct until a new system application is received and reviewed by Capacity Development.
- Certificate of Public Convenience and Necessity (CPCN): CPCNs are issue by the Public Service Commission. Copies of applications for CPCNs are sent to Capacity Development. Based on the compliance history of the utilities, recommendations are made to approve or deny the CPCN.
- Direct inquiries from potential applicants: Water providers who have previously submitted applications for new water systems contact Capacity Development directly when considering construction of a new water system.
- Application and Planning Manual for New Water Systems: This explains the procedure for obtaining a Certificate of Approval to Construct (CAC) and Certificate of Approval to Operate (CAO). Using the information obtained in the application, and in the construction plans, a preliminary evaluation of the technical, managerial, and financial capability of the water system a CAC may be issued. When construction is complete, a site visit is done to verify proper construction of the water system and to collect water samples. Any physical defects must be corrected and verified, as well as all information demonstrating technical, managerial, and financial capacity, then a CAO will be issued.

**3. New Systems Compliance Status 1 October 2003 through 30 September 2006
(Listed Only Systems That Have Received a Permit to Operate)**

Name, PWSID #, Type of System	Approval to Operate Date	Compliance Status 10/1/03- 9/30/04 FY 2004	Compliance Status 10/1/04- 9/30/05 FY 2005	Compliance Status 10/1/05-9/30/06 FY 2006
St. Andrews II DE0002023 NTNC	10/08/03	In compliance	In compliance	In compliance
Paynter's Mill DE00A0777 CWS	12/03/03	Proposed PWS	Merged with Rehoboth District 6/05	---
DCUSA Hand & Hand DE00A0772 NTNC	01/14/04	Not open yet	Not open yet	Active 4/1/06 In compliance
Oyster Rocks/Covington Chase DE00A0784 CWS	02/18/04	Proposed PWS	Merged with Rehoboth District 12/04	---
Deer Meadows DE00A0787 CWS	03/24/04	Proposed PWS yet	Active 01/01/05 In Compliance	In compliance
Sussex Central High School DE00A0794 NTNC	09/08/04	In compliance	TCR violations 10/04 & 7/05	In compliance
Riverside DE00A0837 CWS	11/22/04	N/A	Proposed PWS	Merged with Church Creek 08/06
Bayside DE00A0837 CWS	02/28/05	N/A	Active 7/13/05 In compliance	In compliance
Dagsboro Water Department DE00A0846 CWS	05/02/05	N/A	In compliance	Public notice issued 10/21/05 for TCE violation. System currently in compliance
Stonewater Creek DE00A0830 CWS	06/05/05	N/A	Proposed PWS	Active In compliance
The Hamlet at Dirickson Pond DE00A0838	07/26/05	N/A	Proposed PWS	Active In compliance

CWS				
Good Beginnings Preschool DE00A0844 NTNC	09/06/05	N/A	In compliance	In compliance
Children at Work DE00A0808 NTNC	2/15/06	N/A	N/A	In compliance

Details of Assistance Provided to Those with Violations

Dagsboro Water Department received a Public Notice for a maximum contaminant level (MCL) violation for trichloroethylene (TCE) in October 2005. The violation was due to the town’s lack of technical capacity to provide drinking water below MCLs. The Public Notice was removed in December of 2005 as a result of assistance provided by Capacity Development to the Town of Dagsboro and the Town of Millsboro; this is because Dagsboro purchases 100% of its source water from Millsboro. As a result, Capacity Development worked with both of these towns to develop a flushing plan in conjunction with the installation of a carbon filtration system in November of that year.

4. Plans for the Coming Year

ODW will continue to work closely with the proposed NTNC system owners to ensure that they have full understanding of the responsibilities of public water systems.

All new systems ability to maintain technical, financial, and managerial capabilities will be closely monitored for the first three years of operation to ensure that they continue to operate in compliance, assistance will be provided accordingly.

5. New Community Water Systems and Non-Transient Non-Community Water Systems from October 1, 2005 to September 30, 2006

<i>Progress Report</i> <i>1 October 2005–30 September 2006</i>	
Number of approved new CWSs	4
Number of approved new NTNCWSs	0
Number of new CWSs (commenced operation after October 1, 2005)	0
Number of new NTNCWSs (commenced operation after October 1, 2005)	1
Number of new CWSs that are not in compliance	0
Number of new NTNCWSs that are not in compliance	0

Children at Work, the new system beginning operation after October 1, 2005 has operated in compliance for reporting year 2006 and has not had any violations in it's first reporting year.

II. Capacity Development Strategy (Existing Systems Program)

As per Section 1420(c) SDWA, Delaware is implementing a strategy to assist public water systems in acquiring and maintaining technical, managerial, and financial capacity. A state must document that it is implementing its Capacity Development Strategy (Existing Systems Program) by describing the activities conducted by the State during the past fiscal year, these activities are listed below.

The following chart lists the number of small (<3300), medium (3300-50,000), and large (>50, 000) water systems in Delaware, based on population served in FFY2006.

Type	Small	Medium	Large
Community	184	26	2
Nontransient, noncommunity	101	1	0
Transient, noncommunity	199	1	0
Subtotal Number of Systems:	484	28	2
Total Number of Systems: 514			

1. Changes to Capacity Development Strategy

Since the FFY 2005 report, Capacity Development has decided not to rank systems as done in FFY2004. This was found to be too time consuming, systems are now triaged on a case by case basis. Capacity Development does however; use the same measures to assess a systems need for technical, managerial, and financial capacity assistance (as listed below.)

2. Activities Implemented

Delaware's Capacity Development Program utilizes the following activities to assist existing systems by improving their capacity:

- Sanitary surveys: These are a review and evaluation of water source facilities, equipment, operation and maintenance to ensure a public water system's (PWS) adequacy for producing and distributing potable drinking water; and updating the inventory information.
- Operator certification status: ODW monitors the status of each system's operator to ensure that they maintain a properly licensed operator.
- Technical, financial, and managerial guidance/assistance providers: Assistance is available through ODW, Delaware Rural Water Association (DRWA), and Southeast Rural Community Assistance Project (RCAP) to all existing PWSs.
- Training: Training is offered through ODW, DRWA, and Delaware Technical and Community College's (DTCC) Environmental Training Center to all PWSs free of charge.

- Outreach and education: The DRWA purchased a mobile training trailer which is used to provide onsite training to PWS operators. Funds for the trailer were provided through the Expense Reimbursement Grant under the Drinking Water State Revolving Fund (DWSRF).
- Engineering review: When plans for modifications are submitted to ODW's engineering team, Capacity Development staff reviews the compliance history of that system. Expansion or alterations are not approved if lacking in technical, managerial or financial capacity or if they have outstanding compliance issues or sanitary survey defects.
- Public notices: When a system is placed on public notice ODW works with the system to improve its capacity and ensure that the system is removed and remains off of public notice.
- Overall compliance with Safe Drinking Water Act (SDWA) regulations: ODW monitors all PWSs and works with them to maintain compliance.
- DWSRF applications: ODW utilizes DWSRF applications as another outlet to meet with PWSs and examine their needs.
- Interagency communication: ODW works closely with DNREC and their Source Water Assessment Staff to assist PWSs in maintaining compliance.

3. Identifying and Prioritizing

Capacity Development continuously prioritizes existing systems most in need of improving capacity. The following criteria are used to identify and prioritize a systems need:

1. Historical Significant Non-Compliers (SNC) list
2. Systems on Public Notice
3. Water system consumer complaints
4. Systems beginning operation within the last Three (3) years
5. Systems applying for a DWSRF loan
6. Systems submitting plans for alterations
7. Referrals from the Public Water System Supervision Program (PWSS).

4. Capacity Concerns Identified

Throughout the FFY2006 reporting year, several capacity concerns have been identified and addressed. New transient noncommunity systems are not regulated under the capacity development authority. However, many times a system will open as a transient and later will be sold or leased to another tenant who will use it for a daycare or other use that will qualify it as a nontransient facility. Owners are surprised to learn of the increased regulation when changing from transient to nontransient systems. Therefore, capacity development has assumed responsibility for new transient systems. Site visits are done, samples are taken and owners are apprised of their responsibilities as operators of a public water system.

Federal and State regulations Arsenic levels changed in February of 2006, as a result two PWSs exceeded the maximum level. To address this issue ODW worked with systems exceeding the new maximum limits to implement treatment or find new source water to maintain compliance. ODW met with systems and attended several town meetings encouraging systems to either abandon their wells with high arsenic levels and find better source water by either drilling new wells or inter connect with other systems. The town of Felton who is participating in a federal demonstration project, installed an arsenic removal treatment system.

Federal regulations regarding disinfection byproduct levels changed recently as well, as a result several PWSs exceeded maximum levels. To address this trend ODW worked systems to explore treatment alternatives. As a result, some systems to install treatment such as total organic carbon (TOC) removal; other systems were advised to use alternative disinfectants, switching from chlorine to chloramine or chlorine dioxide; and others to follow a flushing plan.

Systems with a population of over 1,000 residents are now required to do their own monitoring; ODW was concerned with these PWSs compliance with following standard operating procedures for drinking water monitoring. The ODW ensured correct sampling techniques by implementing an approved sampler tester (AST) course required to be taken by all drinking water samplers. In FY2006 ODW trained 313 individuals in the AST course.

5. Measures of Improvements in Systems

All of Delaware's public water systems were given a baseline assessment and prioritized to determine technical, managerial, and financial capacity using the following measurements:

- Sanitary survey defects
- Operator certification status
- Compliance with the lead and copper rule
- Type and frequency of public notices
- Overall compliance with SDWA regulations
- Site visits

Success Story # 1: As previously mentioned, as of January 2006 ODW required for the Total Coliform Rule (TCR) PWSs with a population of over 1,000 do their own compliance sampling. To ensure that sampling is done correctly ODW made it mandatory for these public water systems to have an Approved Sampler Tester (AST) draw these samples. Water operators licensed prior to January of 2006 were also strongly recommended to take the course; as of January 2006 AST procedures are included in the licensed operator's course curriculum. Utilization ODW's trainer-educator has resulted on 313 individuals to be trained. The AST program ensures that the 1000+ population systems maintain the technical capacities to accomplish proper sampling which will facilitate:

- Better quality assurance/quality control (QA/QC) of samples
- More knowledgeable operators
- More water works reports submitted to ODW

- More allotted time for ODW staff to give capacity assistance, perform sanitary surveys
- Approved Sampler Testers are required to be recertified every three years.

Success Story # 2: ODW discovered a contamination due to bacteria at the Country Center for Girl Scouts. After several onsite assistance visits ODW deduced that in order to rectify Country Center's problem a new well is needed. This presented a problem because Country Center is a small non profit site with a very small budget. ODW referred Country Center to apply for a low interest DWSRF loan to fund the drilling of a new well. Through the help of ODW, Country Center applied and was approved for the DWSRF loan, and is currently in the planning stages in drilling.

Factors that encourage the Capacity Development Strategy

- The availability of DWSRF loans: This allows public water systems to replace aging infrastructure, add needed treatment or other projects to enhance capacity.
- Authority to restrict: The Department of Health and Social Services (DHSS) has the authority to restrict the construction of new public water systems that do not have the ability to provide safe drinking water over the long term. The benefits of this provision will accumulate in the coming years by assuring that every new CWS and NTNCWS has technical, managerial and financial capacity.
- The services that DRWA and DTCC: These services furnished to public water systems are a substantial enhancement to the capacity of water systems. The DRWA circuit rider program provides a valuable service in the field, while DTCC's many training seminars provide training in the classroom.
- AST: As of 2006, ODW has implemented a sampler/tester program. The program requires that all persons doing compliance monitoring must be trained and certified as a sampler/tester.
- ODW collaboration: The close working relationship between the Capacity Development program, the PWSS program and the engineering section fosters creative solutions for resolving water system's capacity problems.

Factors that discourage the Capacity Development Strategy

- Incidental systems: Frequently drinking water supply is not the principal purpose of business; some systems inadvertently qualify as a PWS. The management of such industries or businesses may have even less knowledge of water systems and therefore not provide adequate technical, financial, and managerial support to the production of safe drinking water.
- Water rights: Certificates of Public Convenience and Necessity do not foster interconnection or consolidation of systems. Wide area franchises are no longer issued, resulting in a patchwork of water systems owned by competing private utilities.

- Financial dependency: In an attempt to generate revenue, some small municipalities that do not have the capacities to maintain a water system struggle rather than interconnect with a private utility or enter into operation and management agreements with private utilities.
- DWSRF complications: The processing time, required paperwork and closing costs involved in applying and processing a DWSRF loan may discourage participation in the program by small systems that are in need.
- Improper land use: In the past land use decisions may have adversely affected the water quality in shallow aquifers in some areas of the State.

6. Historical Significant Non-Complier Status

There were 29 systems on the current SNC list. Presently, only four of the systems are non-compliant, all four have Notice of Violations (NOV) for Consumer Confidence Reports (CCR) violations. The Capacity Development program will continue to offer assistance to these systems.

7. Projected Activities

Special attention will continue to be paid to systems on public notice. Often, assistance is needed to identify potential sources of contamination, determine best treatment practices, and keep the system working in a manner that ensures future compliance. Capacity Development will be concentrating on ensuring that small water systems in particular have licensed operators.

Capacity Development will continue to facilitate training sessions for the Consumer Confidence Report, Sampler/Tester Program and daycare operators.

The State Drinking Water Information System will be implemented to utilize all of its capabilities. This will improve tracking and monitoring of PWSs.

Capacity development staff will also work to create and deliver specialized training. This aspect of the program has been successful in the past with the Managerial Tips for Small Water Systems, Day Care Operator Certification Training, and Managerial and Financial Training for Municipal Decision Makers. ODW will continue to confer with Delaware Technical & Community College's Environmental Training Center and the Delaware Rural Water Association to develop these courses.

Capacity development will also continue to use the educator/trainer and newsletter "Tap Talk" to inform systems projected training opportunities and upcoming regulations and compliance issues.

8. Program Progress

Capacity Development monitors the following order to assess its progress in ensuring PWSs maintain their technical financial and managerial capacities.

- In FFY 2005, 71 PWSs went on public notice and 53 were brought back into compliance, whereas in FFY 2006, 75 PWSs were placed on public notice and 78 systems were brought back into compliance.
- In 2006 ODW mandated that all PWSs that have treatment submit waterworks reports to ODW, as a result the number of those waterworks reports submitted doubled this reporting year.
- There were forty six (46) different systems that had lead/copper monitoring violations during the Oct. 1, 2005 - Sept. 30, 2006 monitoring period, compared to 55 in FFY 2005. Capacity Development provided all 46 systems with guidance on how to return to compliance as well as reminder letters for monitoring schedules.
- Ninety seven percent (97%) of Delaware's CWS have licensed operators. NTNC water systems have ninety three percent (93%) compliance with operator certification requirements.
- DTCC trained 576 Delaware water operators representing 70 water systems during the FY06 fiscal year through 123 events. DRWA held 67 classes for operators in FY2006, training 1781 Water operators and public works employees.
- Ninety four percent (94%) of CWS submitting CCRs, the remaining six percent (6%) will be addressed via NOVs.
- To date, all existing public water systems have participated in the Capacity Development Program.

Additional Information

Each year, documentation of ongoing implementation of the Capacity Development Authority and Strategy will be submitted as a separate report by November 30 of each year.

The Report to the Governor of the efficacy, strategy, and progress made toward improving the technical, managerial, and financial capacity of PWS's in Delaware was submitted to the Governor in October of 2005. This report is submitted every 3 years; the next report is due October 1, 2008.

A list of CWSs and NTNCWSs that have a history of significant noncompliance (SNC) and, to the extent practicable, the reasons for their noncompliance was submitted to Region III July 15, 2006. The list must be resubmitted every 3 years; the next list is due July 15, 2009.

Systems that are not in compliance with National Primary Drinking Water Regulations (NPDWR) or do not have technical, managerial and financial ability to remain in compliance will not receive a DWSRF loan unless the loan will be used to address the reason for non-compliance.

DWSRF applicants must answer capacity development questions as part of their loan application. A meeting is arranged with the applicant to review the capacity development portion of the application. Contracts are maintained with DRWA and DTCC to assist the system in boosting their capacity in any area needed. Examples of assistance are: water audits, emergency plans, maintenance plans, operator training, budgeting, and asset management.

Municipal applicants must send at least two of the town's decision makers to a financial training class. In four instances, the entire town council and mayor have attended the training. Financial training and asset management will be the focus of future events.