

State of Delaware Capacity Development Program Implementation Report and Annual Review 2019



Pictured above: small public drinking water system infrastructure



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Executive Summary

The *State of Delaware Annual Capacity Development Program Implementation Report and Annual Review, 2019* details the State of Delaware's implementation of its Capacity Development Program and how it meets the public health protection objectives of the 1996 Amendments of the federal Safe Drinking Water Act (SDWA). Under Section 1420(a) of the SDWA, Delaware must implement both Capacity Development Authority and Capacity Development Strategy Programs to maintain full funding of the Drinking Water State Revolving Fund (DWSRF) capitalization grant. If Delaware does not implement these programs, the United States Environmental Protection Agency (EPA) has the ability to withhold up to 20% of Delaware's allotment for the DWSRF capitalization grant entitled under Section 1452 of the SDWA.

Since implementing the 1996 Amendments to the SDWA, Delaware's Capacity Development Program has consistently improved and evolved into the program it is today. Due to population growth and an increase in the number of residential communities, new public water systems are continually being reviewed and added to Delaware's inventory of public water systems that operate with regulatory oversight. Technical, managerial and financial capacities of public water systems are regularly evaluated and monitored. Currently, the Delaware Department of Health and Social Services, Division of Public Health (DPH), Office of Drinking Water (ODW) monitors 483 public water systems.

The SDWA requires that a report be delivered to the EPA on the ongoing implementation of the Capacity Development Program in Delaware and the progress made toward improving the technical, managerial, and financial capacity of public water systems in the state every federal fiscal year. The reports are available to the public on ODW's page of the DPH website:

<http://www.dhss.delaware.gov/dhss/dph/hsp/annrepdw.html>.

Table of Contents

Section	Page Number
I. Capacity Development Authority (New Systems Program)	5
1. Legal Authority	5
2. Control Points for New Public Water Systems	5
3. New Compliance Status: October 1, 2016 through September 30, 2019	7
4. Details of Assistance Provided to New Public Water Systems with Violations	8
5. Plans for Federal Fiscal Year 2019	8
6. New Public Water System Progress	9
II. Capacity Development Strategy (Existing Systems Program)	9
1. Changes to the Existing Systems Program	10
2. Activities Implemented	10
3. Identifying and Prioritizing	12
4. Capacity Concerns Identified	12
5. Measures of Improvements in Public Water Systems	14
6. Factors That Encourage the Capacity Development Strategy	16
7. Factors That Discourage the Capacity Development Strategy	17
8. Electronic Tracking Tool	18
9. Projected Activities	18
10. Program Progress	20
III. Additional Information	20
1. Report to the Governor	20
2. Procedures for Public Water Systems With 11 or Greater Enforcement Targeting Score	21
3. Procedures for Evaluating Capacity for Drinking Water State Revolving Fund Loan Applicants	21
4. Changes in Staffing	21

STATE OF DELAWARE

CAPACITY DEVELOPMENT PROGRAM IMPLEMENTATION REPORT AND ANNUAL REVIEW

**October 1, 2018 – September 30, 2019
Federal Fiscal Year 2019**

I. Capacity Development Authority (New Systems Program)

Per Section 1420(a) of the Safe Drinking Water Act (SDWA), Delaware is empowered with the legal authority to ensure that all new community water systems (CWSs) and new non-transient non-community water systems (NTNCWSs) 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 and regulations) to ensure that all new CWSs and new NTNCWSs 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 for new public water systems (PWSs) has not changed from previous reporting years.

2. Control Points for New PWSs

Delaware uses several control points to initiate contact with a potential PWS to ensure their capacity. These control points have not changed from previous reporting years. They are:

- New well permits: Through an agreement with the Delaware Department of Natural Resources and Environmental Control (DNREC), new well permits for public wells are sent to the Office of Drinking Water (ODW) via an electronic alert system.
- Child Care Facility plan review and licensing: The Delaware Department of Health and Social Services (DHSS), Division of Public Health (DPH), Health Systems Protection; and the Department of Services for Children, Youth and their Families, Office of Child Care Licensing (OCCL) notifies the Capacity Development Program of new child care facilities that may become PWSs.
- Planning and Land Use Service process: Each county sends information to the Office of Engineering (OE) regarding new housing developments in their counties or other projects that may result in a new PWS. In turn, OE informs the Capacity Development Program of any pending new PWSs.

- ODW staff: ODW staff identify potential new PWSs as they perform their field work. These are referred to the Capacity Development Program for follow-up action as necessary.
- PWS plan review: Plans submitted to the OE will not receive a Certificate of Approval to Construct (CAC) until a New Public Water System Application is received, reviewed, and approved by the Capacity Development Program.
- Food establishment plan review: Plans submitted to DPH's Office of Food Protection include a PWS information form to be completed by the applicant, so that ODW staff can determine if the facility will be a PWS, and the likely PWS classification, within which it will fall.
- Certificate of Public Convenience and Necessity (CPCN): CPCNs are issued by the Delaware Public Service Commission. Copies of applications for CPCNs are sent to the Capacity Development Program. 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 PWSs contact the Capacity Development Program directly when considering construction of a new PWS.
- Application and Planning Manual for New Water Systems: This manual explains the procedure for obtaining a CAC and Certificate of Approval to Operate (CAO). A CAC may be issued based on the information obtained in the application and construction plans and a preliminary evaluation of the technical, managerial, and financial capability of the candidate PWS. When construction is complete, a site visit is done to conduct an initial sanitary survey, verify proper construction of the PWS, and collect water samples. The facility must demonstrate adequate technical, managerial, and financial capacity and any significant deficiencies from the initial sanitary survey must be corrected before a CAO is issued.
- New Public Water System Capacity Development Screening Meeting: After a prospective new PWS completes the New Public Water System Application, ODW conducts an in-person meeting with the prospective PWS owner. The purpose of the meeting is to assess whether prospective new PWSs will have the technical, managerial, and financial capacity to provide safe drinking water. Discussion topics in this meeting include details of the responses in the application; the expectations of the specific classification of PWS proposed; and the relationship between ODW, the prospective PWS, and DPH. Assistance is also provided for any issues related to PWS start-up.

3. New PWS Compliance Status: October 1, 2016 through September 30, 2019

New PWSs are monitored by the Capacity Development Program for compliance for a period of three years after they are activated (Table 1).

Table 1. Compliance Status of new Public Water Systems by Federal Fiscal Year, Delaware, October 1, 2016 – September 30, 2019.

Public Water System (Identification Number, Type)	Date Activated	Compliance Status		
		FFY 2017	FFY 2018	FFY 2019
FY2017				
Ingram Village (AWC), DE0020052, CWS	12/20/2016	In Compliance	In Compliance	In Compliance
Ponds of Odessa (AWC), DE0020088, CWS	12/20/2016	In Compliance	In Compliance	In Compliance
Lullaby Learning Center, DE0020092, NTNCWS	09/28/2017	In Compliance	In Compliance	In Compliance
FY2018				
Mountaire Farms Corporate Office, DE0020098, NTNCWS	01/10/2018	NA	In Compliance	In Compliance
Smyrna Head Start, DE0020095, NTNCWS	01/11/2018	NA	In Compliance	In Compliance
Centreville Layton School, DE0020094, NTNCWS	02/15/2018	NA	In Compliance	In Compliance
Coolspring Headstart, DE0020044, NTNCWS	03/29/2018	NA	In Compliance	In Compliance
Fieldstone Golf Course, DE0020045, NTNCWS	04/01/2018	NA	In Compliance	In Compliance
Allen Harim – Pinnacle Processing Facility, DE0000304,* NTNCWS	09/21/2018	NA	In Compliance	In Compliance
Kent County Regional Sports Complex, DE0020090, NTNCWS	09/25/2018	NA	In Compliance	In Compliance
FY2019				
First United Pentecostal Church, DE0020101**, NTNCWS	01/09/2019	NA	NA	In Compliance
The Vines of Sandhill DE0020099, CWS	09/06/2019	NA	NA	In Compliance
Little Einstein's Preschool & School Age Center DE0020109, NTNCWS	09/23/2019	NA	NA	In Compliance

*Previously existing new PWSs. **System was inactivated in SDWIS due to a reduction in population served as of March 2019.

Sources: Delaware Department of Health and Social Services, Division of Public Health, Safe Drinking Water Information System database and DPH, 2019.

4. Details of Assistance Provided to New PWSs with Violations

ODW was notified that Kent County Regional Sports Complex (the Complex) had unexpectedly lost their licensed water operator who managed their PWS. The Capacity Development Team assisted managerial staff at the Complex to find a contract water operator to manage their PWS. Additionally, the PWS management were provided with the option of their staff attending a Limited License Course and then gaining a Limited License to be able to manage their PWS. Four staff attended the course and the PWS successfully achieved full operator compliance as of January 2019.

5. Plans for FFY 2019

The Capacity Development Program will continue to work closely with the owners and operators of proposed new CWSs and NTNCWSs to ensure that they have a full understanding of their responsibilities as PWSs. Training programs are being developed to ensure that licensed water operators and PWS owners are aware of all aspects of the [State of Delaware Regulations Governing Public Drinking Water Systems](#). The program will continue to use all available tools to ensure that all water systems are compliant with SDWA requirements.

All new PWSs' ability to maintain technical, managerial, and financial capabilities will be closely monitored for the first three years of operation to ensure that they continue to operate in compliance with all regulations; assistance will be provided accordingly. The Capacity Development Program will continue to maintain a New Public Water Systems Tracking Spreadsheet, which tracks the progress of new PWSs in relation to their technical, managerial, and financial capacity.

ODW continues to maintain the Safe Drinking Water Information System (SDWIS) to ensure proper monitoring of PWSs and timely and accurate compliance determination. In FFY 2019, ODW had prepared for SDWIS Prime implementation. However, due to the U.S. Environmental Protection Agency's (EPA) decision to re-focus their efforts on modernizing SDWIS State, ODW will now prepare for SDWIS State Modernization.

The Advisory Council for Certification of Public Water System Operators is currently developing proposed changes to the regulations governing the [Licensing and Registration of Operators of Public Water Supply Systems](#). ODW will solicit EPA review of the draft regulations prior to finalization and publishing for public comment. ODW expects to make the final changes during FFY 2020.

In 2019/20, ODW plans to revise the sanitary survey process to improve information gathering for financial and managerial aspects of Capacity Development. The ranking criteria currently in use for the baseline assessment will be changed if revisions to the sanitary survey process warrant it. This is currently an ongoing project and is estimated to be completed after the proposed EPA Sanitary Survey Training (scheduled in FFY 2020) in Delaware.

The Capacity Development Program revised the Public Water System Capacity Assessment Questionnaire (Appendix B), a mandatory document that must be submitted as part of the application package by all PWSs that apply for a Drinking Water State Revolving Fund (DWSRF) loan. The updated, user-friendly questionnaire will provide a better picture of the technical, managerial, and financial (TMF) capacity of PWS loan applicants. The Capacity Development Program Manager use the document to review the PWSs' TMF capacity and to either recommend loan approval or denial to the Delaware Water Infrastructure Advisory Council. This revised document will be implemented during FFY 2020.

6. New PWS Progress

PWSs that do not possess the needed capacities are not permitted to operate. In FFY 2019, the OE, which conducts new PWS plan review, received and reviewed 238 plans. This includes the following proposed new PWSs:

- Banks Plaza, Frankford
- Dunkin Donuts, North Dover
- Dollar General, Route 8, Dover
- Connection Community Church, Middletown
- Allen Harim Hatchery, Dagsboro

ODW and OE requested additional documentation for the Capacity Development and Engineering reviews to facilitate the completion of the review process for the proposed new PWSs. In FFY 2019, the OE approved 219 of the 238 plans reviewed.

ODW can prevent the creation of non-viable PWSs that would have difficulty ensuring the safety of their water. Some PWSs may opt to consolidate into a larger district rather than become a stand-alone PWS before commencing operation, thus forgoing the application process. In most cases, this is preferred because larger PWSs usually have better facilities, larger budgets, and well-trained staff.

II. Capacity Development Strategy (Existing Systems Program)

Per Section 1420(c) of the SDWA, Delaware implemented a strategy to assist existing PWSs in acquiring and maintaining technical, managerial, and financial capacity. States must document that they are implementing the Capacity Development Strategy (Existing Systems Program) by describing the activities conducted in FFY 2019.

Table 2 lists the number of small (<3,300 people), medium (3,300-50,000 people), and large (>50,000 people) PWSs in Delaware, based on the population served during FFY 2019.

Table 2. Number of Public Water Systems based on population served, Delaware, Federal Fiscal Year 2019.

Type	Small	Medium	Large	Total
Community	172	34	3	209
Nontransient-Noncommunity	91	0	0	91
Transient-Noncommunity	183	0	0	183
Total Number of Public Water Systems:				483

Source: Delaware Department of Health and Social Services, Division of Public Health, Safe Drinking Water Information System database, 2019.

The data in Table 2 indicates that the majority of Delaware’s PWSs are small, serving 3,300 people or less. Trends since 2013 indicate that the number of PWSs are remaining relatively steady, with a slight decrease in PWSs in this reporting period. This trend is likely to continue due to PWS consolidations.

ODW anticipates that more PWSs will consolidate by interconnecting with other PWSs. In many cases, the smaller PWSs are owned and/or operated by a utility and interconnected as part of their growth strategy. These new, larger PWSs usually have more modern facilities; a larger budget; and often a larger number of trained staff. Significant infrastructure investment is a trend that is likely to continue in Delaware to avoid the health and regulatory implications of completely abandoning a PWS.

1. Changes to the Existing Systems Program

During the reporting period, there were no changes made to the Existing Systems Program.

2. Activities Implemented

Delaware’s Capacity Development Program conducts the following activities to assist existing PWSs to improve their capacity:

- Sanitary surveys: ODW performed 123 sanitary surveys in FFY 2019, similar in number to those performed in FFY 2018 (122).
- Operator certification status: The Capacity Development Program monitors PWSs to ensure that they each employ a properly licensed water operator. The program is currently assisting seven PWSs to obtain licensed water operators. This is a 50% reduction in the number of PWSs without licensed water operators than in FFY 2018.
- Technical, financial, and managerial guidance/assistance providers: Assistance is available to all existing PWSs through the Capacity Development Program, Delaware Rural Water Association (DRWA),

Delaware Technical Community College (DTCC), and the Southeast Rural Community Assistance Project (SERCAP).

- Training: Training is offered to all PWSs through ODW, DRWA, DTCC, and the Environmental Finance Center Network. Much of this training is free of charge. Approximately 1,990 persons received training during FFY 2019. Training conducted by ODW included Consumer Confidence Rule (CCR), Lead Copper Rule (LCR), SDWA Public Water System Compliance, and Approved Sampler/Tester (AST). ODW provided training at the SERCAP/American Water Works Association (AWWA) training which included LCR training that was held in March 2019. Nine PWS participants attended this training session. ODW also provided training at the Chesapeake Section of AWWA's spring meeting to provide training on Per- and Polyfluoroalkyl substances (PFAS).
- Outreach and education: ODW distributed information about drinking water to 545 individuals through its participation in the Rural Water Expo (Milford, Delaware, October 2018), the Rural Water Conference (Harrington, Delaware, February 2019) and the National Guard Health Fair (New Castle, Delaware, October 2018). ODW's Trainer/Educator continued an outreach program at Delaware elementary schools, teaching 1,353 children about safe drinking water.
- Engineering review: When modification plans are submitted to the OE, the Capacity Development Team reviews the compliance history of that PWS. The team reviewed 219 plans that were granted "Approvals to Construct/Operate".
- Violations: The Capacity Development Program and the PWSS Program assist PWSs that receive violations by addressing the cause and ensuring that the deficiencies are corrected for a return to compliance. ODW issued violations to 48 PWSs; 26 returned to compliance. The Capacity Development and PWSS Programs are guiding the other 22 PWSs toward compliance. The majority of the outstanding violations were for the Disinfection Byproducts Rule, the LCR, nitrate exceedances, and the Revised Total Coliform Rule (RTCR).
- DWSRF applications: ODW utilizes DWSRF applications to evaluate and improve the technical, managerial, and financial capacity of PWSs. The Capacity Development Program reviewed seven DWSRF applications.
- Interagency communication: ODW works closely with DNREC Source Water Assessment staff to assist PWSs with maintain their capacity to produce safe drinking water. ODW also works with DNREC

Environmental Finance in evaluating financial capacity of PWSs that apply for DWSRF loans. The Capacity Development Program team uses the loan application review as an opportunity to identify and assist PWSs with poor financial capacity.

ODW works closely with OCCL staff to actively regulate public water systems that are Child Care/Day Care facilities in Delaware. Staff from both offices collaborate to resolve compliance issues at these facilities.

3. Identifying and Prioritizing

The Capacity Development Program continuously prioritizes existing PWSs with the greatest needs to improve capacity using the following criteria:

1. Enforcement Targeting Tool (ETT)
2. Violations and Public Notices issued
3. Consumer complaints
4. PWSs beginning operation within the last three years
5. PWSs applying for a DWSRF loan
6. PWSs submitting plans for alterations
7. Referrals from PWSs staff.

4. Capacity Concerns Identified

- Funds for Training: The ability to recruit and retain quality water operators continues to be an area of concern. This may be due to the costs involved in the process of becoming a licensed water operator in Delaware. To help alleviate these costs and to attract potential water operators, ODW worked with the DWSRF Program to provide funding via the 2% and 15% set-asides.

The 2% set-aside funding is used toward tuition assistance for continuing education for approximately 155 Operators-In-Training and licensed water operators of small, non-profit PWSs. It also provides tuition assistance to approximately 30 new operators for the base-level water operator's course; and provides 11 of the 30 new operators with a basic math course. This set-aside provides funding to recruit students to enter a drinking water training program. Funding to the DRWA from this set-aside provides two formal technical assistance training classes and/or on-site facility surveys. DRWA is also funded to deploy upon request, the mobile on-site training unit to demonstrate system specific needs to DWSRF systems. Funding from this set-aside also ensures that DTCC provides approximately 100 training events a year that are approved for water operators.

Assistance from the 15% set-aside includes funding for the DRWA to provide four utility management scholarships to cover technical, financial, and managerial aspects of running a water utility; to conduct four specialized ARC Flash, NFPA 70E, and Electrical Safe Work Practices Awareness training

classes, and to provide two Occupational Safety and Health Administration Confined Space Entry Level training classes for water operators. DRWA is also funded to conduct two training classes for local officials so attendees gain a better understanding of what the municipal staff, city managers, and water operators experience daily; and the opportunity to review the types of applications available under the DWSRF funding.

- **New Regulations:** In recent years, ODW adopted several new federal regulations including the Long-Term 2 Enhanced Surface Water Treatment Rule, Stage 2 Disinfectants and Disinfection Byproduct Rule, the Ground Water Rule, and the LCR Short-Term Revisions. ODW also adopted new Operator Certification regulations and revised the *State of Delaware Regulations Governing Public Drinking Water Systems* to include the RTCR. In FFY 2016, it published proposed technical corrections to those regulations.

In FFY 2020, ODW will continue the process of revising the regulations governing the *Licensing and Registration of Operators of Public Water Supply Systems*. Additionally, ODW is preparing for the promulgation of the LCR Long-Term Revisions and will continue to implement existing regulations. ODW is also in the process of revising the *State of Delaware Regulations Governing Public Drinking Water Systems* to facilitate obtaining primacy for rules – for which Delaware previously did not have primacy – and to clarify definitions in other areas of the regulations to assist in compliance and enforcement. ODW will submit all proposed regulations revisions to EPA for review prior to publishing and public comment.

To assist PWSs in understanding and transitioning to new changes in the regulations and to implement these new rules, ODW is developing appropriate training programs.

- **PWS Classification Changes:** New transient non-community water systems (TNCWS) are not regulated under the Capacity Development authority. However, they are sometimes later sold or leased to another tenant who may use the facility for a daycare or other use that will qualify it as a NTNCWS facility. Owners are surprised to learn of the increased regulation when changing from TNCWS to NTNCWS. Therefore, new TNCWSs undergo the same Capacity Development review process as NTNCWSs and CWSs.
- **PWS Training:** Municipal CWSs and CWSs with a population of over 1,000 residents are required to monitor their own water quality. Special attention must be paid to sampling conducted by these PWSs to ensure proper sampling techniques and compliance with monitoring schedules. ODW ensures proper sampling techniques by requiring all drinking water samplers who conduct compliance monitoring, and who are not licensed water operators, to complete the AST course.

5. Measures of Improvements in PWSs

All of Delaware's PWSs received a baseline assessment in 2002 to determine technical, managerial, and financial capacity. The rating system ranked PWSs on a numeric scale from one (those with the greatest need to improve) and four (those with the best capacity). The Capacity Development Program reassesses one third of PWSs annually to measure the program's effectiveness.

During FFY 2019, ODW continued to reduce the capacity issues in Delaware's PWSs. The number of PWSs with major capacity issues remains very low. In preparation for this report, the ODW Capacity Development Program compared 2016 data to 2019 data. In FFY 2019, two PWSs with ETT scores of 11 or greater were considered as having poor capacity, a nominal increase compared to one PWS with poor capacity in an equivalent group of systems previously reviewed in FFY 2016 (Table 3).

The comparison illustrated in Figure 1 indicates that capacity performance trends in Delaware's PWSs (as a percentage) have consistently remained the same since the ranking criteria was refined for FFY 2014. The Capacity Development Team will continue to work with PWSs that were classified as having poor capacity.

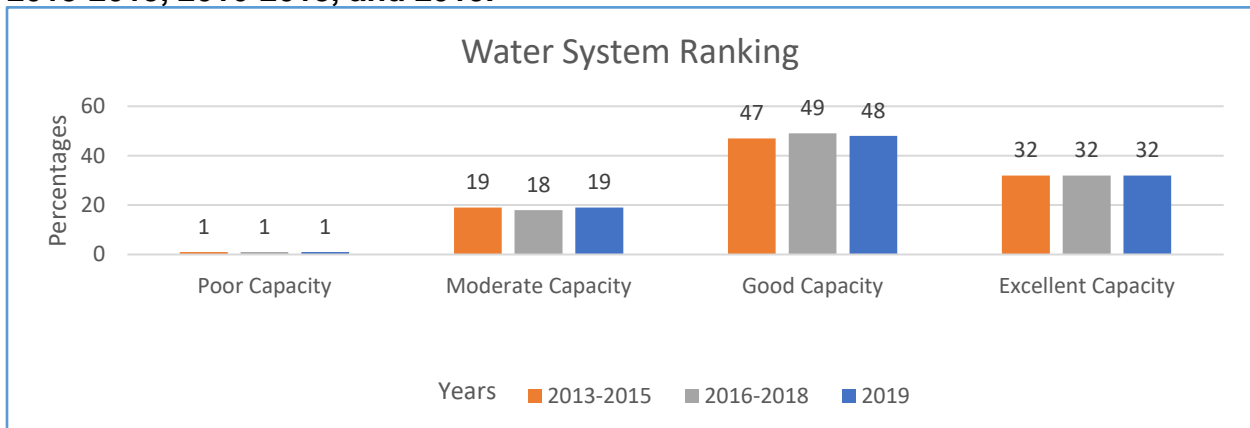
Table 3. Ranking based on Capacity of Public Water Systems, Delaware, Federal Fiscal Year 2002-2019.

Ranking	Poor Capacity (1)	Moderate Capacity (2)	Good Capacity (3)	Excellent Capacity (4)	Total
Initial	8	69	177	282	536
2003-2005	4	84	145	290	523
2006-2008	4	35	144	321	504
2009	6	30	121	328	485
2010-2012	13	47	201	231	492
2013*	5	14	105	40	165
2014*	1	52	66	58	177
2015*	1	32	67	63	163
2016*	1	29	75	48	153
2017*	1	35	85	53	174
2018*	3	25	77	52	157
2019*	2	30	74	49	155

*1/3 of PWSs reviewed. A revised method of system ranking was employed in an effort to improve ranking precision and to help ensure such a method can more easily and consistently be employed in future years.

Source: Delaware Department of Health and Social Services, Division of Public Health, Safe Drinking Water Information System database, 2019.

Figure 1. Capacity Ranking of Public Water Systems, Delaware, 2013-2015, 2016-2018, and 2019.



Source: Delaware Department of Health and Social Services, Division of Public Health, Safe Drinking Water Information System database, 2019.

Success Story 1:

Bethany Crest, LLC is a CWS that was out of compliance with the LCR since the PWS had not performed any monitoring for lead and copper since 2014. During this reporting period, the Capacity Development team provided focused technical assistance via increased education, written, and verbal communications with the owner of this PWS to return the system to compliance with the LCR.

Success Story 2:

The Capacity Development Program identified PWSs with recurring violations for not distributing a CCR. Some of the violations dated back to 2012. In partnership with DRWA, the Capacity Development Program achieved a 50 percent reduction in PWSs with CCR violations during the reporting period.

Success Story 3:

The Capacity Development Program identified Dover Air Park as a CWS in need of assistance due to repeated water main breaks. Program staff met with the system's water operator to discuss this issue and identified that the water main was constructed using 2" thin-walled polyethylene pipe that is commonly used for farming irrigation purposes. The PWS provided the State of Delaware with a proposal to replace the entire distribution system using 4" and 6" main lines, to install new service lines to each home, and to install fire hydrants. It is estimated to be placed to bid in December 2019.

Success Story 4:

Lotus Blossom Learning Center is a NTNCWS (child care facility) that was out of compliance with the LCR for not performing any monitoring for lead and copper since 2016, and for operating without a licensed water operator since 2014. During this reporting period, the Capacity Development team provided focused technical assistance with increased education and written and verbal communications to the PWS owner to return the system to compliance. The Capacity Development team also coordinated with DTCC, enabling the owner of this PWS to attend a Limited License Course at DTCC and to be granted a Limited License to manage the PWS in December 2018.

6. Factors that Encourage the Capacity Development Strategy

- **DWSRF loans:** This allows PWSs to replace aging infrastructure and add needed treatment or other projects to enhance capacity.
- **Certificate of Public Convenience and Necessity (CPCN):** CPCNs allow large PWSs to be formed with ample capacity to provide safe drinking water to its consumers. A PWS must demonstrate its technical, managerial, and financial capabilities prior to receiving a CPCN.
- **Authority to Prevent:** DHSS has the authority to prevent 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 accumulate in the coming years by assuring that every new CWS and NTNCWS has technical, managerial, and financial capacity.

- The services of DRWA and DTCC: These services provided to PWSs are a substantial enhancement to their capacity to provide safe drinking water. The DRWA circuit rider program provides a valuable service in the field, while the DTCC's operator certification program and training seminars provide training in the classroom.
- Approved Sampler/Tester: This program requires that individuals who conduct compliance monitoring or daily testing, yet are not licensed water operators, to be trained and certified as sampler/testers. This requirement ensures that samples will be taken correctly and improves the reliability of sample results.
- ODW collaboration: The close working relationship between the Capacity Development Program, the PWSS Program, and the OE fosters creative solutions for resolving PWS capacity problems. ODW is currently working with other departments to ensure public health and safety. ODW continues to work with the Delaware Attorney General's Environmental Justice Office (EJO) to address complaints at small manufactured/mobile home communities. ODW continues to participate in EJO outreach to these communities. In FFY 2019 the EJO office held three public meetings, one in each county, to discuss tenant rights. ODW participated in the meetings by informing the public about drinking water regulations and how to access sample results via Drinking Water Watch (<https://drinkingwater.dhss.delaware.gov/>), Delaware's website for public access to drinking water monitoring results.

7. Factors that Discourage the Capacity Development Strategy

- Incidental PWSs: Frequently, supplying drinking water is not the principal purpose of a business. The management personnel of such businesses may have even less knowledge of water systems and, therefore, may not provide adequate technical, financial, and managerial support to produce safe drinking water.
- Asset management: Officials of small municipalities are often subject to the political pressures of being reelected and may not raise water rates as needed. This results in some small CWSs without funds to maintain their water system.
- Consolidation: Consolidation of PWSs often improves overall capacities. However, many PWSs do not consolidate due to the cost of interconnecting or fear of losing control of revenue.

- **Staff turnover:** Over the last several years, ODW's Capacity Development Program had a high turnover of employees, which can cause delays in the normal workload. During the reporting period, the program was partially staffed. ODW continues to develop strategies to reduce staff turnover.

8. Electronic Tracking Tool

In 2011, EPA generated a formula for calculating PWSs that are repeat violators. EPA used the new ETT to track significant non-compliers (PWSs that have a score of 11 or greater). At the end of FFY 2019, eight PWSs (seven CWS and one TNCWS) scored 11 or greater. ODW contacted each PWS to provide assistance to resolve their issues. Three of the eight PWSs have returned to compliance. Two of the eight PWSs are on the path to compliance. The Capacity Development Program and the PWSS program will continue to offer the owners of the remaining three PWSs assistance until their issues are resolved.

9. Projected Activities

- **Public Notice Assistance:** The Capacity Development Program will continue to pay special attention to PWSs that issued public notices. Assistance is often needed to identify potential sources of contamination, determine the best treatment practices, and keep the PWSs in compliance.
- **Monitoring and Reporting Violation Assistance:** The Capacity Development Program will continue its increased focus to assist small PWSs that have monitoring and reporting violations by increasing their understanding of the regulations and their responsibilities. Monitoring and reporting violations are typically avoidable since they often result from inaction on the PWS's part, rather than due to contamination. As such, they are an indicator of managerial capacity. With this assistance, PWSs will better understand what is required of them and how to avoid violations and/or return to compliance. ODW will notify PWSs when they are required to sample, and what and how they are required to report to their consumers and to ODW. The Capacity Development Program will also utilize its partnership with DRWA and SERCAP to provide assistance.
- **Cross-Connection Control:** As part of the upcoming revisions to the *State of Delaware Regulations Governing Public Drinking Water Systems*, provisions to address a cross-connection control will be included.
- **Data Management:** Capacity Development implemented electronic LCR monitoring schedules to aid in managing and tracking the complex Data Management rule. ODW entered all contaminant schedules and will continue to improve the SDWIS data quality assurance program.

The Capacity Development Program reviews DWSRF loan applications submitted by PWSs, including PWS information in SDWIS. The program utilizes this as an opportunity to update important data in SDWIS to improve PWS tracking and monitoring and SDWIS data quality.

ODW plans to create a SDWIS data quality clean-up project with DPH's SDWIS Information Technology support team. This will be an ongoing project set to begin in mid FFY 2020. This effort will improve the quality of data stored in SDWIS.

- Training: The Capacity Development Program continues its work in creating and delivering specialized trainings. This aspect of the program was successful in the past with trainings that include: Managerial Tips for Small Water Systems and Managerial and Financial Training for Municipal Decision Makers. Additionally, the program worked with SERCAP to provide regulatory training. ODW and other technical assistance providers will continue to provide training on topics including CCR, AST, RTCR, LCR, PFAS, and other regulatory issues.

As required by the America's Water Infrastructure Act of 2018, ODW is working with DRWA and SERCAP to ensure that training and assistance is provided to water systems for conducting risk assessments and updating emergency response plans.

Currently, the Capacity Development Program has developed two new training courses. One training course will educate staff from the Child Care Licensing team about the basics of the SDWA. The second training course will educate licensed water operators about parts of the regulations that are often overlooked or misunderstood.

- ODW Email Blast: To improve ODW's communication with PWSs, the Capacity Development Program started an email blast in FFY 2018. This replaces ODW's tri-annual newsletter. The email blasts inform PWSs about training opportunities, free webinars and educational sessions, and important regulatory and compliance issues. Currently, our Trainer/Educator produces and distributes monthly emails to certified water operators and administrative contacts. ODW has received positive feedback from water operators on this email publication. In FFY 2020, the Capacity Development team plans to expand the target audience to include additional drinking water stakeholders.

10. Program Progress

The Capacity Development Program monitors several measures to assess its progress in ensuring that PWSs maintain their TMF capacities. Program services were available to all PWSs in 2019. In FFY 2019, compliance with operator certification remained the same in CWSs but increased significantly in NTNCWSs. While the number of PWS violations fluctuate, many PWSs return to compliance after receiving outreach and technical assistance (Table 4).

Table 4. Public Water Systems and their Technical, Managerial, and Financial Capacities, Delaware, Federal Fiscal Year 2014-2019.

Measure	FFY14	FFY15	FFY16	FFY17	FFY18	FFY 19
Percentage of CWSs with Licensed Operators	96	94	95	95	98	98
Percentage of NTNCWSs with Licensed Operators	86	75	82	81	89	97
Number of Lead and Copper Rule violations	8	33	10	12	12	6
Total Number of PWSs that were issued a violation	110	102	58	52	62	38
Number of PWSs that returned to compliance	62	78	37	26	29	29
Number of people who attended training (operators and public works employees)	1,158	1,787	1,166	1,499	1,909	1,990
Percentage of PWSs that participated in the Capacity Development Program*	46	44	40	41	41	42

*This number was calculated using the following formula: The number of PWSs reviewed by the Capacity Development Program (1/3 of all PWSs) plus half of the PWSs trained by ODW, divided by the total number of PWSs.

Source: Delaware Department of Health and Social Services, Division of Public Health, Safe Drinking Water Information System database and DPH, 2019.

III. Additional Information

1. Report to the Governor

The State of Delaware Capacity Development Program Report to the Governor shares efficacy, strategy, and progress made toward improving the technical, managerial, and financial capacity of PWSs. The report is submitted every three years. The next report is due October 1, 2020.

2. Procedures for PWSs with an ETT score of 11 or Greater

PWSs that are not in compliance with National Primary Drinking Water Regulations and have an ETT score of 11 or greater are targeted for capacity improvement. PWSs having difficulty returning to compliance are referred to technical assistance providers (e.g., DRWA), are issued administrative orders, are subject to administrative penalties, and are referred the EPA for federal enforcement actions.

3. Procedures for Evaluating Capacity for DWSRF Loan Applicants

DWSRF loan applicants must provide information that addresses capacity as part of their loan application. A thorough review of the PWS is conducted to identify the technical, managerial, and financial capabilities and needs. Meetings and other communications are conducted with the applicant as necessary to clarify application information. Additionally, the DWSRF Program contracted with a third party consultant to provide a supplemental Capacity Development review and tracking for DWSRF loan applicants. Loan applicant PWSs who do not have adequate technical, managerial, or financial capacity will not receive a loan approval recommendation from the Capacity Development Program. Applicants are informed of the results of their Capacity Development review and are offered assistance in areas of deficiency, including referral to DRWA, which offers capacity assistance with services including, but not limited to: water audits; updating or creating emergency plans; updating or creating operation and maintenance manuals; operator training; budgeting; and asset management.

4. Changes in Staffing at ODW

In May 2018, an Environmental Health Specialist II position that managed the Southeast territory in the PWSS program was vacated. Holly Vigilante was recruited into this position in April 2019.

In December 2018, an Environmental Health Specialist II position that was part of the Capacity Development Program was vacated. Sally Gordy was recruited into this position in April 2019.

In December 2018, an Administrative Assistant position that was part of the Capacity Development Program was vacated. Heather Harvey was recruited into this position in March 2019.