NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Shawn M. LaTourette, Commissioner

Patricia Gardner
Assistant Commissioner

Water Resource Management
Division of Water Supply and Geoscience
Bureau of Water System Engineering

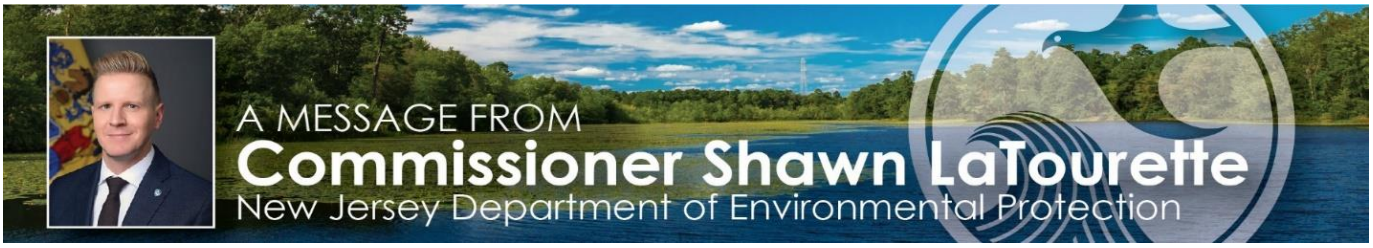
Status Report on the Implementation of New Jersey's Capacity Development Program under the Safe Drinking Water Act

for the period of

SFY2021 – SFY2023

July 1, 2020 – June 30, 2023

September 29, 2023



September 29, 2023

Dear Reader:

The New Jersey Department of Environmental Protection (NJDEP), through its Division of Water Supply and Geoscience, is charged with executing the Federal and State Safe Drinking Water Acts in order to protect tap water and ensure that all owners and operators of public water systems comply with standards to protect public health and safety. In doing this work, NJDEP must evaluate, report on, and support improvements in the technical, managerial, and financial capacity of public water systems to provide reliable and consistently safe drinking water to their residents and customers. This *Status Report on the Implementation of New Jersey's Capacity Development Program* provides an overview of the efficacy and progress of this important work and charts a course for expanding NJDEP assistance to public water systems.

Since its first Capacity Development Strategy took effect in 2000, the NJDEP Division of Water Supply and Geoscience has consistently improved public water system compliance with Federal and State safe drinking water standards through the provision of compliance assistance, technical and financial support, as well as appropriate enforcement action. The overall state of drinking water quality in New Jersey has improved as a result.

Despite this laudable progress, public water systems throughout New Jersey face continuing and growing challenges. Aging and end-of-life infrastructure, high-cost treatment demands due to new and emerging contaminants, a vast network of lead-laden pipes, and compounding risks from extreme weather and climate change are chief among those challenges, which exist amidst a backdrop of inadequate water infrastructure funding. While the great need for capital investment in New Jersey's drinking water infrastructure has been well-demonstrated, these and other challenges facing our public water systems cannot be fully addressed through capital investment alone.

Our safe drinking water compliance experience makes clear that many public water systems throughout New Jersey require added supports to build their technical, managerial, and financial capacity to ensure the long-term maintenance of mission-critical operations. The capacity constraints that affect routine operations only further highlight the need for programs that better position systems to confront the multiple threat landscape affecting the water sector.

As the capacity development needs of New Jersey public water systems are much greater than what can be accomplished with current efforts, it is critical that NJDEP expand its Capacity Development Program. Therefore, the updated Strategy described in this Report expands the criteria used to prioritize water systems for additional assistance while promoting improved asset management, system redundancy and resilience, long-term operational support, and enhanced tracking, with an increasing focus on small and vulnerable systems, including those in disadvantaged or underserved communities.

It is our hope that this Report promotes public understanding of New Jersey's progress in securing a plentiful and safe supply of drinking water and the concerted effort necessary to meet the considerable challenges facing our water sector. Together, we can ensure that drinking water remains safe, available, and affordable to every New Jersey resident.

Sincerely,

Shawn M. LaTourette
Commissioner

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SECTION I

Introduction

The New Jersey Department of Environmental Protection (NJDEP) has prepared this report to provide the Governor and the public with an evaluation and update on the NJDEP's Capacity Development Program. This triennial report is required by Section 1420(c)(3) of the Federal Safe Drinking Water Act (SDWA).

This report evaluates the extent to which the Capacity Development Program has been formulated and implemented consistent with the specific requirements and overall objectives of the SDWA. This report also evaluates how the NJDEP is integrating the Capacity Development Program together with other SDWA initiatives and drinking water programs such as the Drinking Water State Revolving Fund – Small Water System Technical Assistance Program.

Federal Requirements for Capacity Development Program

The 1996 Amendments to the Federal SDWA created a focus on enhancing and ensuring the technical, managerial, and financial capacity of public water systems to comply with the National Primary Drinking Water Regulations.

In accordance with Section 1420(a) of the SDWA, which requires each state to have the legal authority to assure that all new community and nontransient noncommunity water systems demonstrate adequate technical, managerial, and financial capacity, the New Jersey Safe Drinking Water Act (N.J.S.A. 58:12A) was amended on August 2, 1999 (P.L. 1999 Chapter 176). The NJDEP subsequently adopted regulations at N.J.A.C. 7:10-13 which established the requirements to assure that all new public community and nontransient noncommunity water systems have adequate capacity. In addition, each state is required to develop and implement a strategy to assist existing systems in acquiring and maintaining capacity. The United States Environmental Protection Agency (USEPA) approved the NJDEP's first Capacity Development Strategy on September 28, 2000. Subsequent updates to the Capacity Development Strategy were made in August 2009 and December 2022. The Strategy can be viewed at: https://www.state.nj.us/dep/watersupply/dws_loans_capdev.html

The most recent Capacity Development Strategy expands the criteria used to prioritize water systems for addition assistance to include disadvantaged communities which have been historically marginalized, underserved, and overburdened by pollution. Section 1452(d)(3) of the SDWA defines a "disadvantaged community" as the service area of a public water system that meets the affordability criteria established by the State after public review and comment. New Jersey's affordability criteria is established in its Drinking Water Revolving Fund (DWSRF) Intended Use Plan (IUP).

In the 1996 amendments to the SDWA, the United States Congress ensured that each state would establish a Capacity Development Program by tying capacity development to the Drinking Water State Revolving Funds (DWSRFs). If New Jersey had not obtained legal authority to ensure that all new community and new nontransient noncommunity water systems demonstrate technical, managerial, and financial capacity (Section 1420(a)), or had not developed and implemented a Capacity Development Strategy (Section 1420(c)), New Jersey would receive only 80% of its Annual Capitalization Grant Allotment from the USEPA (Section 1452(a)(1)(G)).

The DWSRF serves as the primary source of funding for implementing the NJDEP's Capacity Development Strategy. The NJDEP can set aside up to 10% of each capitalization grant for State program management activities, which includes establishing and funding the Capacity Development Program. The NJDEP can set aside up to 2% of each capitalization grant for Small Water System Technical Assistance and 15% for activities to assist development and/or implementation of source water protection, well head protection, and capacity development, including financial and technical assistance. The NJDEP's most recent Set-Aside Work Plan for FFY2023 (SFY2024), submitted to USEPA in June 2023, proposed budgeting 16% ($2,243,715) of its FFY2023 Capitalization Grant allotment of $8,939,000 for all set-aside activities. Although the DWSRF provides the NJDEP with financial support to establish and implement Capacity Development Programs, the USEPA can withhold funds for not meeting required deadlines.

States failing to comply with any provision of Section 1420 of the Federal SDWA are subject to lose up to 20% of the State Revolving Fund monies in each fiscal year. The failure to issue the states' Capacity Development Program Report to the Governor, as required by Section 1420(c)(3) of the SDWA, by September 30 of each year is also ground for a 20% withholding from a states' DWSRF allotment.

Capacity Development Goals

- To reduce or eliminate the number of existing public water systems in significant non-compliance with the Federal and New Jersey State Safe Drinking Water Act Regulations by ensuring adequate capacity.
- To prevent the formation and operation of any water system (community and nontransient noncommunity water systems) that may be non-viable by ensuring adequate capacity.
- To provide public water systems with accurate, timely, and appropriate information in a straightforward manner to promote or maintain their technical, managerial, and financial capacity as necessary to ensure compliance with the Federal and State Safe Drinking Water Act Regulations.

Profile of New Jersey Public Water Systems

The Federal regulations define a public water system as a system that provides water for human consumption through pipes or other constructed conveyances if such system has at least 15 service connections or regularly serves at least 25 individuals for at least 60 days out of the year. There are three types of public water systems:

- **Community water system** – A public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents (e.g., homes, apartments, and condominiums that are occupied year-round as primary residents).
- **Nontransient noncommunity water system** – A noncommunity public water system that regularly serves at least 25 of the same persons over six months per year. A typical example of a nontransient noncommunity water system is a school or an office building that has its own water source, such as a drinking water well.
- **Transient noncommunity water system** – A noncommunity public water system that does not regularly serve at least 25 of the same persons over six months per year. A typical example of this is a campground or a highway rest stop that has its own water source, such as a drinking water well.

As of September 12, 2023, New Jersey listed 3,522 active public water systems in its inventory, including 2,281 transient, 647 nontransient noncommunity, and 565 community water systems. Approximately 80% of the State's residential population are served by public water systems, with the remainder of the population served by private domestic wells. Most of the residents supplied by public community water systems are served by medium to very large water systems.

The number of systems can vary due to mergers, opening and closing of businesses, connections of the nontransient noncommunity or transient noncommunity systems to community water system, or changes in the population served that results in the classification or declassification of a public water system. Figure 1 below depicts changes in the number of public water systems for the past three years. Figure 2 shows a summary of population served by the various public water system types.

Figure 1: Active Public Water Systems in New Jersey for Calendar Years 2020 – 2022

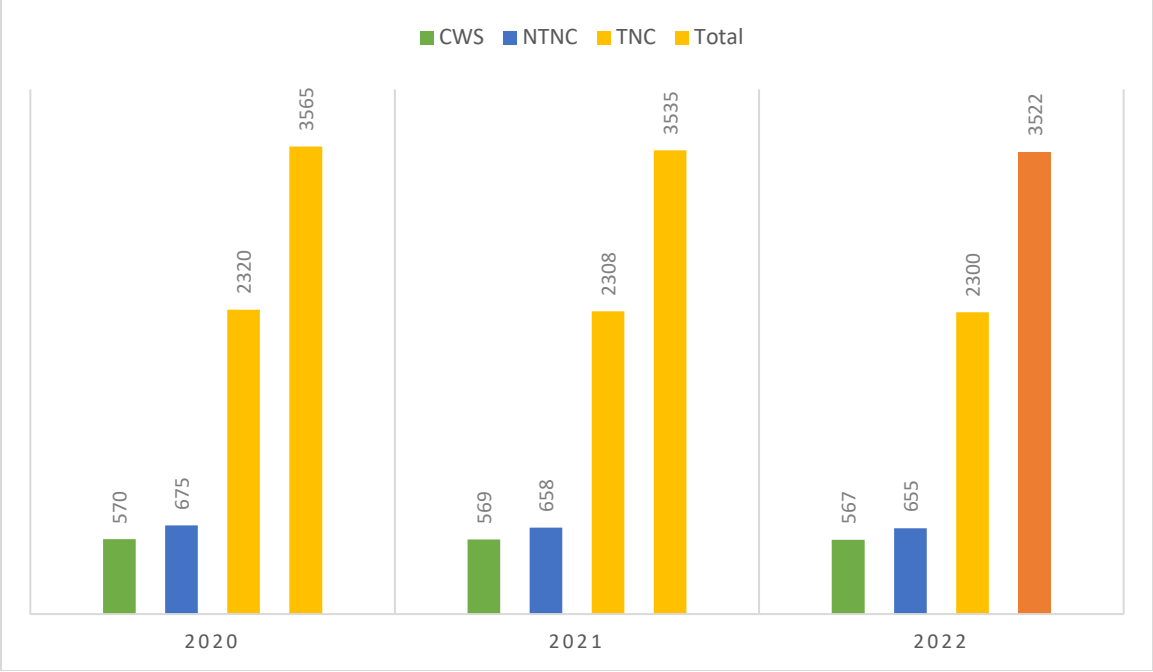
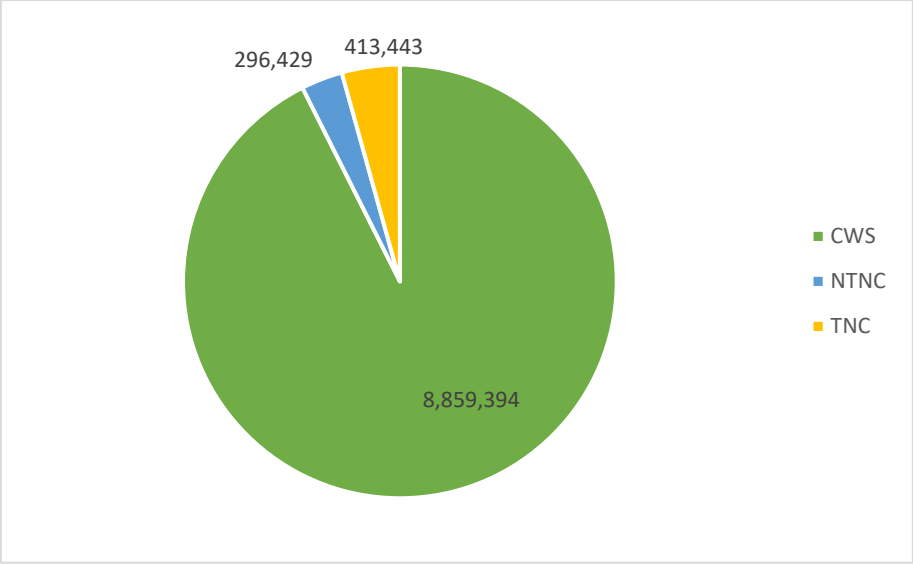


Figure 2: Summary of Population Served by Public Water Systems as of August 2023



SECTION II

Implementation – Description of Activities

This section outlines the activities conducted during the three-year period of July 1, 2020, through June 30, 2023, to implement the Capacity Development Program.

- New Jersey Water Association (NJWA) & Rutgers University Training Sessions
- NJWA Small Systems Engineering Contract
- Small System Technical Assistance
- USEPA Accelerator Program
- IBank Technical Assistance
- Water Quality Accountability Act (WQAA)
- Drinking Water State Revolving Fund (DWSRF) Program
- Federal Grant Program

New Jersey Water Association & Rutgers University Training Sessions

To improve the water system operation, the NJDEP identified drinking water related training needs for water system owners, operators, and management staff. By contract with the NJWA, numerous training sessions have been held during the past three years with the goal of assisting public water systems in New Jersey. In addition, a contract with Rutgers University Office of Continuing Professional Education provided for a 50% tuition subsidy for drinking water related training courses for licensed operators. Table 1 below is a summary of the training sessions held by NJWA and their attendance and Table 2 is a summary of Rutgers Training Sessions and their attendance.

Table 1: New Jersey Water Association Training Sessions SFY2021 – SFY2023

Year	# of Training Sessions Held	# of Individuals Attended
SFY2021	23	553
SFY2022	15	290
SFY2023	21	857
Total	59	1,700

Table 2: Rutgers University Continuing Education Courses SFY2021 – SFY2023

Year	# of Courses Held	# of Operators Attending
SFY2021	34	0*
SFY2022	36	354
SFY2023	23	151
Total	93	505

*Due to the lack of in-person training courses offered in SFY2021 (following the COVID-19 pandemic), NJDEP did not receive requests for reimbursement for the introductory or advanced courses under this program.

NJWA Small Systems Engineering Contract

The Federal SDWA's goal is that at least 15% of DWSRF loan funds go to small water systems. Therefore since 2004, to encourage small water system participation in the loan program, the NJDEP has utilized the DWSRF Small Water System Technical Assistance set-aside funds to contract with the New Jersey Water Association (NJWA) to provide for engineering services for small water systems serving less than 3,300 persons applying for a DWSRF loan. The contract provides for NJWA to subcontract with a list of approved New Jersey licensed professional engineers to work with the system, develop engineering plans and specifications for the project, and to complete the loan application and other planning and funding documents needed for the system to secure a DWSRF loan. Payments are made to NJWA for completion of contract milestones and NJWA then makes payments to the contracted engineers. Between SFY2021 and SFY2023, NJWA has assisted three systems through this contract.

In SFY2022, NJDEP submitted a request for a spending plan approval to initiate a new $500,000 contract to provide planning and design services in advance of a DWSRF loan application. NJDEP has increased the available amount to address the increasing costs for engineering assistance. With the additional funds available through the Bipartisan Infrastructure Law (BIL) it is anticipated that small and disadvantaged communities will continue to require this assistance to capitalize on the available funding.

Under the terms of this contract, NJWA partners small water systems with engineering firms to complete project milestones, including permitting, submittal of an Environmental Decision Document (EDD), and loan closing to fund projects including installation of treatment for contaminants such as PFNA, PFOA, and PFOS.

When these projects are ready for financing, they will be ranked, and financed to the extent that the New Jersey Water Bank (Water Bank), a partnership between NJDEP and the New Jersey Infrastructure Bank (I-Bank), can accommodate their loan requests. In SFY2023, a total of $5 million is being made available for programs directed at small systems serving a population of 1,000 or less. This includes $3 million in appropriations set aside for water systems that are participating in technical assistance programs, including Community Engineering Corp and the Engineering Contract with New Jersey Water Association (NJWA). Project applicants are capped at $750,000 per project. Loans will be offered as 100% principal forgiveness. Through the $3M in appropriations, small water systems that do not meet credit eligibility requirements of the New Jersey Water Bank Financing Program credit policy to qualify for a loan may be provided with direct grants. This is necessary to protect public health in these small systems where financial constraints limit the ability of these water systems to move forward with critical repairs or treatment projects.

NJDEP intends to continue with the Engineering Services contract in SFY2024. While the engineering contract has been a successful tool for providing small systems with planning and engineering services leading up to a project that could be funded through the Water Bank, the contract will be revised based on significant changes to the DWSRF program. The engineering contract and contract milestones may include changes to target high ranking, high priority drinking water projects, and to address recent changes to the Safe Drinking Water Act emphasizing disadvantaged communities. Further, these modifications will include offering engineering assistance, even without a loan commitment, to County

Environmental Health Act certified agencies (CEHA) in reviewing permit applications for treatment of contaminants such as PFNA, PFOA, and PFOS.

Small Systems Technical Assistance

The Small Water System Technical Assistance program currently provides assistance to water systems serving less than 10,000 persons by using three approaches: 1) by contract with the NJWA to provide free training seminars held throughout the State to owners and operators of small water systems, as described above, 2) by contract with the NJWA to provide engineering assistance to small water systems to obtain a DWSRF loan for infrastructure improvements, as described above, and 3) through direct technical assistance via site visits conducted by NJDEP staff at water systems.

Routine sanitary surveys and inspections are conducted by CEHA Agencies and NJDEP staff for water systems serving less than 10,000. In addition to these required inspections, NJDEP staff will perform additional site-visits to small water systems with routine and ongoing or serious compliance issues to gather additional information on the cause of ongoing issues and provide technical expertise. Some common reasons for a site visit to be conducted at a system include groundwater rule/coliform bacteria issues, lead or copper issues, sanitary surveys, nitrates, or other contaminants MCL issues, and consumer complaints.

In addition, the potential exists for a system to be in compliance with Federal and State drinking water standards based on water quality monitoring data but otherwise be in real need of assistance to develop TMF capacity and long-term viability. Such systems might not be identified and/or rank high enough to be targeted for direct assistance. Therefore, through sanitary surveys and staff referrals, NJDEP will continue identifying public water systems which exhibit signs of deteriorating infrastructure, inadequate staffing, licensed operator problems, poor organization, lack of written policies/procedures, poor Operations and Maintenance (O&M) practices, and/or signs of financial trouble.

New Jersey Technical Assistance Program (NJ-TAP)

Through its implementation of the SDWA and the Water Infrastructure Improvement Plan (WIIP), NJDEP has identified ways to use available funds to advance programs to better support water systems in improving their capacity. As part of this plan, a portion of BIL funds is being used by the NJDEP, in collaboration with the New Jersey Water Bank, to establish the New Jersey – Technical Assistance Program (NJ-TAP). This program expands on NJDEP's technical assistance offerings and provides technical assistance to communities identified as disadvantaged or overburdened to help them: identify lead service line replacement projects; develop asset management and capital improvement plans; evaluate technical, managerial, and financial capacity; and identify sources of state and federal funding to assist with critical water-infrastructure improvement projects. NJDEP is working with third-party service providers to provide the following direct technical assistance:

1. Lead Service Line Inventory – provide technical assistance to communities with a large number of unknown lines or those with deficient lead service line inventory submissions to develop their service line inventories and lead service line replacement plans and identify lead service line replacement projects that may be eligible for DWSRF funding.
2. Engineering Assistance – assist water systems with assessing their Technical, Managerial and Financial (TMF) capacity, developing Asset Management Plans (AMPs), identifying critical

infrastructure improvement projects, and developing Capital Improvement Plans (CIPs) for these projects.

3. Community Engagement and Outreach – assist in the development of materials outlining how to apply and obtain a DWSRF loan and coordinate with the NJDEP on distribution, solicitation, and outreach to generate interest in the DWSRF program for capital improvement projects in disadvantaged communities.

USEPA Accelerator Program

New Jersey has been a leader in addressing lead in drinking water through enhanced implementation of the Federal Lead and Copper rule, establishment of state specific requirements and the development of a NJ Lead and Copper Rule. In July of 2021 New Jersey enacted a law which requires community water systems in NJ to identify all lead service lines, provide public notification regarding the presence of all lead service lines, and replace all lead service lines by 2031. Starting in 2023, New Jersey was selected as one of four states to collaborate with , USEPA in a new drinking water technical assistance initiative called the Lead Service Line Replacement Accelerators. USEPA and four state partners (including New Jersey), plan to work with communities to address existing barriers and accelerate progress towards lead service line identification and replacement. This accelerator program will provide targeted technical assistance services to help underserved communities access funds from the BIL and replace lead pipes. This program will work to accelerate lead service line projects by supporting the development of:

- Community engagement plans
- Lead service line inventories
- Lead service line replacement plans
- SRF funding applications

Asset Management Requirements of the AWIA

The 2018 amendments to the Federal Safe Drinking Water Act made under America's Water Infrastructure Act of 2018 (AWIA, Section 2012) instruct state capacity development programs to update their existing system strategies to encourage water systems to implement asset management planning and to provide training for water systems on this implementation. The AWIA contains the following requirements:

a) Encourage public water systems to create AMPs that include best practices for asset management;
b) Assist public water systems in training appropriate water system persons in implementing the AMPs; and
c) Include a summary of these efforts in the Triennial Capacity Development Report to the governor.

In December 2022, NJDEP updated its Capacity Development Strategy to incorporate New Jersey's current efforts to implement asset management planning at public water systems through the statutory requirements of the WQAA, as discussed below, as well as expand on existing asset management components in the previous strategy. The new strategy includes providing additional technical assistance to assess water systems' asset management planning activities, identify deficiencies, and recommend improvements, as needed. To promote the responsible maintenance, investment, and rehabilitation of drinking water systems, the NJDEP has created resources help assist water systems to

understand and utilize the five-core-questions framework in assessing their asset management and developing AMPs, including technical guidance documents and planning guides. In addition, NJDEP is prioritizing training and outreach to drinking water systems on asset management and the requirements of the WQAA. NJDEP has conducted numerous trainings for operators and systems on asset management planning at regional and State-wide conferences. This will continue to be a part of NJDEP's strategy to promote asset management planning and best practices.

Water Quality Accountability Act (WQAA)

The WQAA, P.L. 2017, c. 133, a New Jersey state law enacted on July 21, 2017, established new requirements for purveyors of public water to improve the safety, reliability, and administrative oversight of water infrastructure. The WQAA became effective on October 19, 2017. Subsequent amendments to the WQAA were signed into law as P.L. 2021, c. 262 on November 8, 2021.

The WQAA requires public community water systems with more than 500 service connections to routinely perform certain best management practices, including developing AMPs, testing valves and fire hydrants, developing cybersecurity programs, and creating a mitigation plan if the system exceeds a certain number of violations within a 12-month period. Purveyors must create and implement an AMP designed to inspect, maintain, repair, and renew its infrastructure, consistent with standards established by the American Water Works Association (AWWA). Additionally, the WQAA requires annual certification from the highest-ranking official at the water system that an AMP has been developed and is being followed and requires many public water systems to submit Capital Improvement Reports to NJDEP. This report includes asset management data that may be utilized to identify systems with critical needs and inadequate TMF capacity, including critical infrastructure projects, insufficient staffing, lack of investment in infrastructure upgrades or routine maintenance, and lack of funding sources.

The 2021 Amendments to the WQAA required NJDEP to develop a Report Card outlining various aspects of compliance and system characteristics. This report card was developed as a Tableau dashboard, which is available at https://www.state.nj.us/dep/watersupply/dwc_systems.html.

Though asset management and capital improvements reports are currently being completed for water purveyors with greater than 500 service connections, systems that do not meet this criteria should also be performing asset management, to be better prepared for maintaining and upgrading their infrastructure, especially considering climate change. The Capacity Development Strategy explores additional ways in which this may be done. NJDEP has worked to build dedicated webpages for WQAA and asset management to provide a central hub for drinking water systems to access information asset management and related topics. In addition to these resources, NJDEP is prioritizing training and outreach to drinking water systems on asset management and the requirements of the WQAA.

In addition, the NJDEP will analyze data provided by water systems to meet the requirements of WQAA to evaluate asset management activities, infrastructure age, and infrastructure spending on a State-wide level. This report includes asset management data that may be utilized to identify systems with critical needs and inadequate TMF capacity, including critical infrastructure projects, insufficient staffing, lack of investment in infrastructure upgrades or routine maintenance, and lack of funding sources. The NJDEP can use this data to identify gaps and focus resources where they are most needed. Additional information on the WQAA can be found at: https://www.state.nj.us/dep/watersupply/g_reg-wqaa.html.

Drinking Water State Revolving Fund (DWSRF) Program

The DWSRF Loan Program is a leveraged low interest loan program that uses Federal grants as seed monies to execute loans with water systems to help achieve or maintain compliance with the SDWA. Community water systems and nonprofit noncommunity water systems are eligible for DWSRF loans. The program is jointly administered by the NJDEP and the I-Bank under the New Jersey Water Bank.

Because of the success of the DWSRF program over the last three years, the New Jersey Water Bank has received and funded many more projects than in previous years. Therefore, to ensure the highest priority projects (those impacting public health) would be funded with available funds, and comply with the Federal requirements, the DEP and the I-Bank made several changes to the DWSRF program between SFY2021 and SFY2023. Modification include:

- $45 million in American Rescue Plan Act (ARPA) funds will be allocated to provide principal forgiveness loans to applicants sponsoring DWSRF projects that address climate change concerns and to ensure long-term drinking water resilience in New Jersey or projects for the installation of treatment to address multiple MCL violations at one system.
- New Jerey's $4 million FFY2022 BIL Clean Water SRF Emerging Contaminants Capitalization Grant allocation will be transferred to the DWSRF to finance drinking water projects that address emerging contaminants.
- The annual applicant funding cap for DWSRF projects will be increased from $25 million to $40 million.
- The project sponsor Median Household Income (MHI) factor will be rounded down to the nearest integer in the DWSRF Affordability Criteria Calculation.

Table 4 shows a summary of the DWSRF financed projects from SFY2021 – SFY2022

Table 4: Summary of DWSRF Financed Projects from SFY2021 – SFY2022

Year	Total DWSRF projects funded	Net Total DWSRF project funds
SFY2021	50	$198,653,064
SFY2022	35	$129,642,219

*SFY2023 numbers will be reported in January 2024 after the close of the fiscal year.

Under DWSRF, all borrowers are required to develop an AMP which categorizes and prioritizes system assets and lays out a financial plan describing the methods, scheduling, and financing of the strategic upkeep and replacement of such assets. Certain borrowers that receive funding must have in place, or commit to develop, a Fiscal Sustainability (Asset Management) Plan (FSP) for each project component and provide the program with a technical (engineering) and financial certification outlining the long-term maintenance and replacement plan for the project's components. Lastly, projects to develop and implement AMP are eligible for financing for all public community water systems regardless of if they are subject to the requirements of the WQAA.

Federal Grant Programs

The SDWA, as amended by the 2016 Water Infrastructure Improvements for the Nations Act and the 2018 America's Water Infrastructure Act, authorizes the USEPA to award grants to assist underserved, disadvantaged communities, and small communities with meeting SDWA requirements. For the past three years, NJDEP has applied for and been granted funds through the *Water Infrastructure Improvements for the Nation* (WIIN) Grant. This funding provides assistance to address, support and improve the state of New Jersey's drinking water infrastructure for small, underserved, and disadvantaged communities. In addition to taking place in a qualifying community, grant funding must be used on projects that will help the community meet and comply with SDWA regulations through infrastructure work, technical, managerial, and financial capacity building activities, or activities necessary for a state to respond to a contaminant.

North Shore Water Association (NSWA) is the recipient of the Federal Fiscal Year 2018-2019 (FFY18-19) and Federal Fiscal Year 2021 (FFY21) WIIN Grants. The funds from FFY18-19 are being used to address high nitrate levels, water demand issues, power outages, and inadequate TMF. The funds from FFY21 are being used to address MCL exceedances for PFOS. The completion of both grant projects will result in a properly functioning distribution system, a new treatment building with chemical feed system, well upgrades, and upgrades to the electrical system. Planning and design elements of the projects are also covered by both the FFY18-19 and FFY21 grants.

NJDEP is also in the beginning stages of applying for the new *Emerging Contaminants in Small or Disadvantaged Communities* (EC-SDC) Grant, which focuses on addressing emerging contaminants – including perfluoroalkyl and polyfluoroalkyl substances (PFAS) – in small or disadvantaged communities' drinking or source water. This effort is a part of the $2 billion Bipartisan Infrastructure Law (BIL), which promotes access to safe and clean water in small, rural, and disadvantaged communities. With grant programs and efforts such as these, NJDEP is able to provide more funding to systems who might not qualify for funding under the DWSRF program or who are unable to pay back the costs of their project on their own. These funds are crucial with climate change affecting the aging infrastructure at water systems, and more systems are finding themselves in a situation where they are not able to comply with the SDWA and provide clean water to their communities.

New Initiatives

Northeast Resilience

The NJDEP recognizes that the northeast region is critical to New Jersey and the New York area not only because they are heavily populated but also contain vital transportation (e.g., an international airport, train stations, bus hubs, etc.), trade, and energy assets of national importance. Therefore, a public water system failure could cause a significant disruption to the region and compromise public health protection for a large population of New Jersey residents, resulting in a catastrophic emergency incident. Many of the public water systems in the northeast region share critical drinking water infrastructure, including drinking water sources, finished water storage, transmission mains, and emergency interconnections. There is an urgent need to gain understanding of the intertwining of the existing drinking water infrastructure and water diversion capabilities within the northeast region. To avoid catastrophic emergency situations and improve capacity development, resilience within this region must be prioritized and optimized. The NJDEP is devoting assets to the Northeast Resilience Project, which include

researching, reviewing, investigating, mapping, and documenting infrastructure gaps and the interconnectedness of the large water systems in the state's northeast region. A team consisting of staff with a wide range of knowledge and expertise has been developed to implement the initiatives of this high priority project.

The first step to develop a project workplan and build a team of staff to move this project forward was completed in August 2023. In order to gain a better understanding of the existing infrastructure and operation of the northeast region's water systems, the next initiative will be to: 1) gather and document existing information on the northeast water systems' sources, storage capacities, inventory, and operation; 2) create a map illustrating where northeast water systems' sources, interconnections, infrastructure, etc. are located; and 3) collaborate with northeast water systems to gather information and build a working relationship. Through this, NJDEP hopes to develop a thorough understanding of the infrastructure and operation of this complex network, identify gaps in infrastructure, resources, and communication, and help build tools and capacity to resolve these vulnerabilities.

The Northeast Resilience Project will have at least four deliverables:

- A document that includes all existing updated Northeast Infrastructure information in one location;
- A map of all interconnected infrastructure available in GIS;
- A Northeast Emergency Response Plan to respond to the increasing emergencies in the Northeast region; and
- A master report that will include all of the above deliverables.

Evaluation of Water System Storage Requirements

Water storage requirements for public community water supplies are specified under the Safe Drinking Water rules, N.J.A.C. 7:10-11 and the Water Supply Management Act Rules, N.J.A.C. 7:19-6. Per these regulations, the volume of storage required to be provided is based on factors such as whether a water system has multiple water supply sources/treatment facilities, auxiliary power, and interconnections with other public water systems in relation to the water system's average daily demand. Adequate finished water storage is key to a water system's resilience. Finished water storage allows the water systems to meet peak demands during emergencies; reduce costs by eliminating the need for continuous pumping; and increase ability to provide fire protection. Therefore, all the water systems should have finished water storage.

NJDEP acknowledges that there are public community water systems that experience significant challenges in complying with these requirements. The regulations allow some flexibility for water systems to meet these requirements. In response, NJDEP has historically issued a Storage Waiver under a variety of circumstances, including to very small water systems whereby storage requirements may impose an unnecessary hardship and to large water systems that are relying on another water system to provide storage. Water systems can only be granted finished water storage waivers if they do not provide any fire protection (i.e. they do not have fire hydrants or fire suppression sprinklers as part of their distribution system).

However, considering emergent events that have occurred where resilience has been compromised, NJDEP is looking at the re-evaluation of the approval criteria in its Storage Waiver Policy that has been used for the issuance of Storage Waivers in the past. Historically, these Storage Waivers were issued

without an expiration date. More recently, the NJDEP has issued Storage Waivers with a validity of five years. It is anticipated that some of these existing waivers may be rescinded or nullified to help ensure that water systems have adequate storage capacity to provide service during an emergent event. In some cases, additional storage and/or alternate interconnections with other systems may need to be constructed or undertaken. Project costs could be economically significant for some water systems.

NJDEP is advancing a rule proposal to change some of the existing storage requirements and will likely be moving forward with a stakeholder initiative to solicit input on other proposed changes to the existing policy. The Bureau of Water System Engineering will work to align these changes to capitalize on available funding under the BIL and to coordinate with the goals of other key initiatives including the Northeast Resilience Project.

System Specific Support:

Newark Water Department:

As one of the largest publicly owned and operated drinking water systems, Newark Water Department (Newark) provides water to over 300,000 customers within the City of Newark and its surrounding communities. Newark is a complex water system with critical infrastructure that includes reservoirs, dams, intake structures, treatment facilities, transmission facilities, distribution facilities, and operational facilities.

Newark has historically struggled to maintain compliance with the requirements of the Safe Drinking Water Act (SDWA) rules. In April 2014, after a data review and site visit, the Department required Newark to conduct a Comprehensive Performance Evaluation (CPE) at their Pequannock Water Treatment Plant. The CPE was triggered in response to findings of significant noncompliance for failure to monitor turbidity as required under the SDWA rules. NJDEP also required Newark to conduct a Comprehensive Technical Assistance (CTA) to implement solutions to the problems identified in the CPE as well as a Technical, Managerial, and Financial Evaluation (TMF) to achieve and maintain long term compliance with the regulations. In 2017, NJDEP required all large community water systems, including Newark, to conduct semiannual testing for lead and copper in accordance with an NJDEP approved sampling plan. Over the course of the next three years, Newark exceeded the lead action level of 15 parts per billion and was required to take steps including lead service line placement (LSLR) and a corrosion control study. As a result of these ongoing challenges, NJDEP added Newark to the Capacity Development Strategy List as noted in the September 2017 Annual Capacity Development Report.

Since that time, Newark has worked successfully in collaboration with the NJDEP and other federal and State partners to take action to bring the water system in compliance with the federal rules. The NJDEP met with Newark and their consultants on numerous occasions to implement the recommendations of the CTA and TMF, which included projects to optimize the water treatment plant and implement changes in the management structure of the water department. Newark went beyond the requirements of the federal Lead and Copper Rule to achieve more stringent deadlines based on rigorous plan to replace all lead service lines (more than 23,000) within its distribution system. A number of these projects were funded through low interest loan packages, including principal forgiveness, that was offered under the Drinking Water State Revolving Fund (DWSRF) loans program. Newark continues to pursue additional projects through DWSRF including upgrades to the water distribution system and the treatment plant.

Trenton Water Works:

Trenton Water Works (TWW) is a large public community surface water system located in Mercer County, New Jersey that provides water to over 200,000 people residing in the City of Trenton and in portions of the surrounding municipalities of Ewing Township, Hamilton Township, Lawrence Township and Hopewell Township. TWW's Treatment Plant treats surface water from the Delaware River and conveys the water through its approximately 683 miles of water mains and several above ground water storage tanks to maintain pressure, provide additional storage, and deliver adequate water supply for the needs of the communities it serves.

Historically, TWW has displayed a pattern of ongoing struggles to maintain compliance with the Federal and State Safe Drinking Water Acts and effectively operate a water utility of that size. The NJDEP continuously saw evidence that the utility failed to properly maintain critical treatment processes, monitor water quality, employ adequately trained operating personnel, and invest in required preventative maintenance and capital needs. In response to these concerns, on October 12, 2022, the NJDEP issued a Unilateral Administrative Order (UAO) to initiate direct operational oversight of TWW. The objective of the UAO is to stabilize and improve the operations and maintenance of TWW to ensure that the system reliably produces safe drinking water that meets all federal and state requirements. The UAO memorializes the Department's long-term effort to provide TWW with technical assistance and assure SDWA compliance. To facilitate on-the-ground oversight of TWW's operations and enhance TWW's technical and managerial capacity, the NJDEP appointed a third-party oversight contractor (TPO) that works routinely with TWW staff and reports directly to the Department. In the initial phase of direct operational oversight (Phase 1), the focus was to conduct a ground level review of system operations, provide regular technical assistance to TWW staff in the performance of their operation and maintenance duties, that long-overdue capital improvements were identified, and to support TWW in establishing needed implementation plans.

Phase 2, by comparison, will focus on capacity development analyses and measures that support TWW's ability to sustain short-, medium-, and long-term Safe Drinking Water Act compliance. The NJDEP began facilitating Phase 2 through the issuance of Request for Proposals for three independent system-wide assessments that will analyze TWW's fiscal condition, evaluate existing organizational structure, adequacy of staffing, and managerial capacities, and will also include a comprehensive evaluation of the Treatment Plant performance-based capabilities and associated administrative, operation and maintenance practices. One of the assessments, the 360-degree assessment of TWW's financial capacity, has been funded by New Jersey I-Bank's technical assistance program. The objective of the requested work is to provide a comprehensive assessment of TWW's fiscal condition (including the rate structure), inventory of asset optimization opportunities for the purpose of asset valuation and monetization strategies. The 360-degree review will produce a capital plan that takes into account operational improvements and identify the most advantageous financing strategies and funding sources to implement the plan.

In addition to the 360 financial assessment under Phase 2, the TWW system will also undergo a Technical, Managerial, and Financial (TMF) Capacity Evaluation and a Comprehensive Performance Evaluation (CPE). Capacity is the ability of a water system to plan for, achieve and maintain compliance with all applicable drinking water standards. TWW's Capacity will be evaluated from the technical piece, which includes the source, infrastructure, operation, and maintenance of a water system, as well as be evaluated from the managerial piece which includes the evaluation of the expertise of TWW employees and ensuring they are in line with the requirements needed to operate a water system. The Financial evaluation under the TMF will complement the findings of the 360 financial assessment. The CPE evaluation will assess overall

treatment plant performance, evaluate major treatment units, and identify the limiting performance factors within the plant. Both evaluations will lead to the creation of a report detailing findings as well as providing recommendations for improving TMF capacity and plant performance.

These independent system-wide assessments will provide the information and analysis critical to identifying critical needs and operational changes for the TWW system. The assessments are anticipated to be ongoing through the early months of 2024 all with a shared goal of ensuring the current and future viability of the water system.

SECTION III

Evaluation of Capacity Development Program

This section outlines the progress in meeting the objectives of the Capacity Development Program through the following two (2) activities:

- New System Approval, and
- Statistical Representation of Violations and Enforcement Actions.

New System Approval

During SFY2021 – SFY2023, the NJDEP added 1 new community water system and 18 nontransient noncommunity systems to its inventory of public water systems. These systems were a combination of new systems and reclassified systems. Five Technical, Managerial, and Financial (TMF) plans are currently under review. Note that under the new system requirements of N.J.A.C. 7:10-13, TMF reviews are only required for new systems and those who have been reclassified to a nontransient noncommunity or community water system and were constructed on or after August 21, 2000, which was the effective date of the TMF regulations at N.J.A.C. 7:10-13.

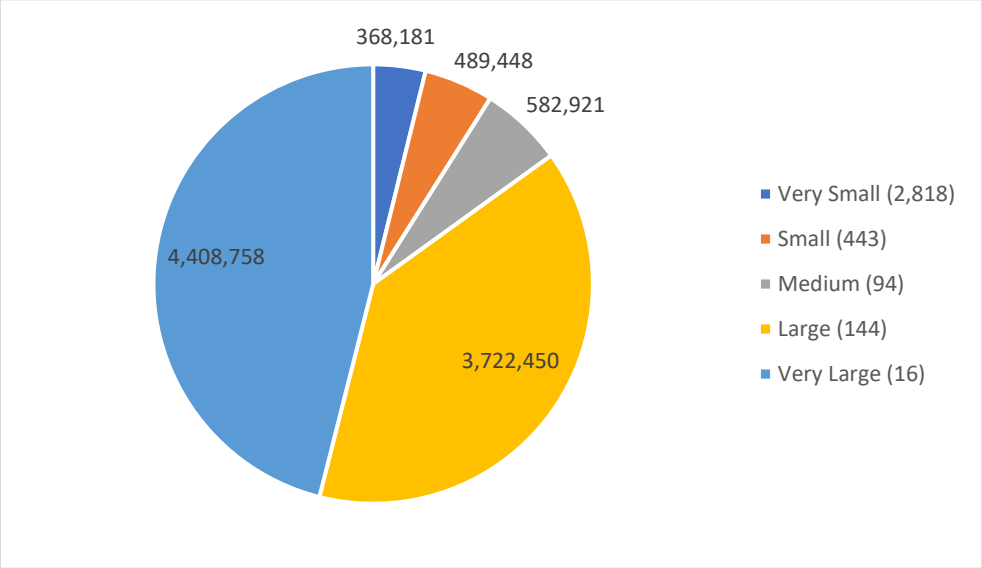
Statistical Representation of Violations

New Jersey's public water systems can be categorized by the size of the population they serve as shown below:

Public Water System Size	Population Served
Very Small	500 or less
Small	501 – 3,300
Medium	3,301 – 10,000
Large	10,001 – 100,000
Very Large	>100,000

An analysis of New Jersey's inventory shows that public water systems (all types included: community, nontransient noncommunity, and transient noncommunity water systems) serving a population of less than 3,301 comprise 93% of all public water systems and serve 3% of the total residential population. A review of violations generated between SFY2021 to SFY2023 reveals that these smaller public water systems also have the highest rate of noncompliance. This confirms the need to target capacity assistance efforts at these smaller public water systems. Figure 3 shows the current (August 2023) number of water systems in New Jersey by size classification and the total population served by those systems.

Figure 3: Population Served by Number of Systems by Size Classification



The Capacity Development Program has continued to assist in lowering the overall number of systems with violations and number of serious violators in New Jersey. A priority system is a public water system with unresolved, serious, multiple, and/or continuing violations, as defined by USEPA's Drinking Water Enforcement Response Policy. These systems must either return to compliance or be addressed by a formal enforcement action within six months of being designated by the USEPA as a priority system. When a system has returned to compliance or has been addressed by a formal action, it is no longer designated a priority system. NJDEP tracks these systems quarterly with USEPA through the Enforcement Targeting Tool (ETT) to ensure priority systems are on track to return to compliance.

The percentage of New Jersey systems with violations and the percentage of New Jersey systems that are priority systems can be seen in Figures 4 and 5 below. There has been an overall decrease in the percentage of violations but an increase in the number of priority systems over the three-year period. This can be attributed to the Monitoring and Reporting Violations (M&R's) incurred at the end of triennial monitoring periods and State SDWA Rule amendments that require additional monitoring. NJDEP has also enhanced implementation of the Lead and Copper Rule. In previous years the percentage of serious violators and number of public water systems with any violations in New Jersey has largely remained below the national average.

Figure 4:
Percentage of New Jersey Public Water Systems with Violations from FFY2014 – FFY2023

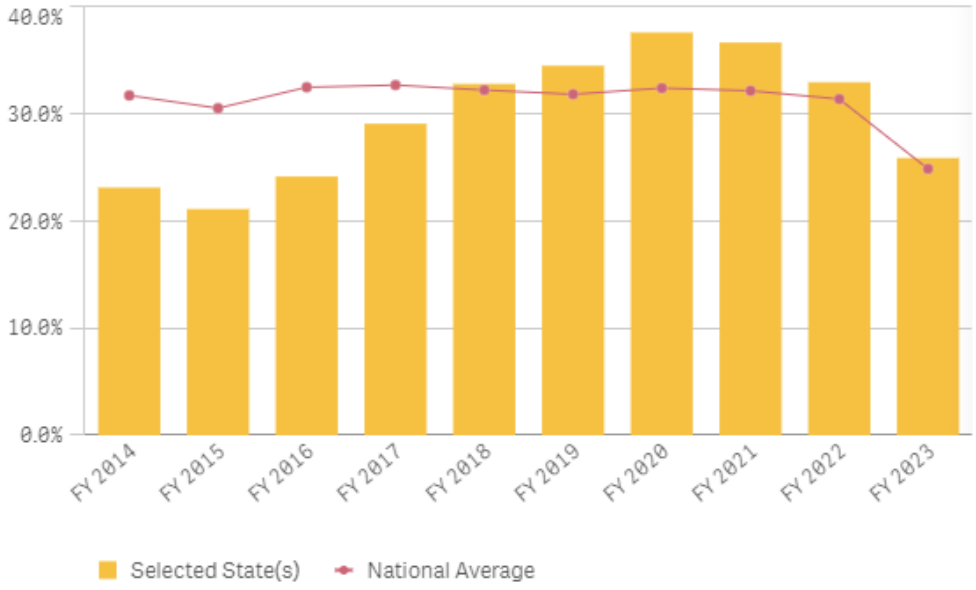
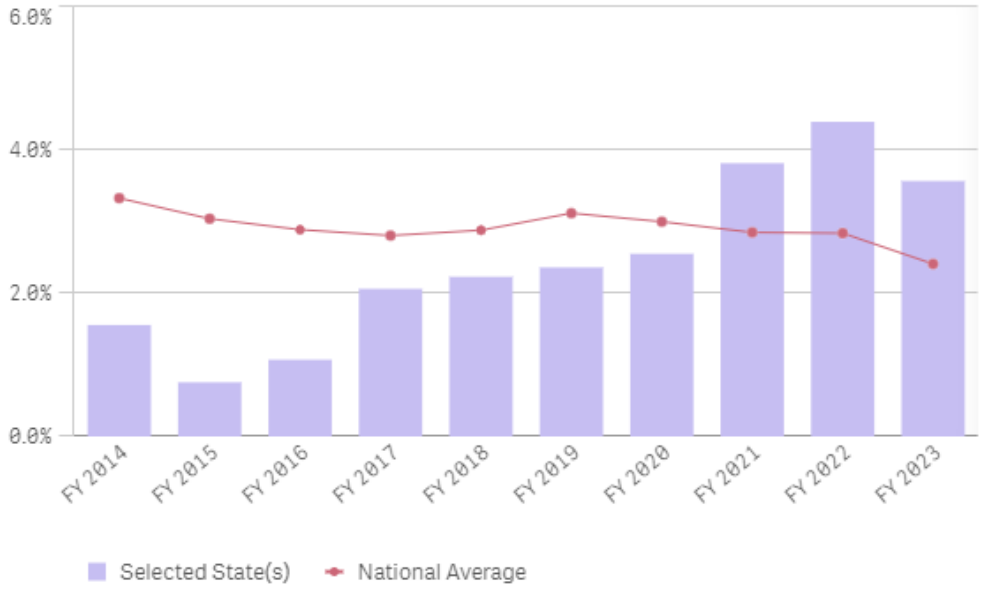


Figure 5: Percentage of New Jersey Public Water Systems that are Priority Systems from FFY2014 – FFY2023



Source: USEPA Enforcement Compliance History Online (ECHO)

Additionally, in 2021 the number of MCL violations was three times what has been incurred in previous years. This was due to the newly implemented State SDWA requirements for three (3) Per- and polyfluoroalkyl substances (PFAS). In 2022, the number of MCL violations continued to increase due to PFAS substances, as shown in Table 5. Of the 494 MCL violations incurred in 2022, 393 of them were for one of the PFAS chemicals.

Table 5: Number of PFAS MCL violations from SFY2019 through SFY2022

SFY2019	21
SFY2020	11
SFY2021	235
SFY2022	393

Return to Compliance

The NJDEP's Capacity Development Program is focused on assisting public water systems with achieving and maintaining compliance with the Federal and State Regulations. Figure 6 shows the number of violations that returned to compliance; this graph includes health-based violations, treatment technique, and monitoring and reporting violations. Figure 7 shows the percentage of violations that returned to compliance compared to the National average. New Jersey has remained above the National average in the percentage of systems returned to compliance for FFY2014 – FFY2023.

The overall decrease in the number of public water systems that have returned to compliance in New Jersey over the past three years could be attributed to the overall increase violations from the in PFAS MCLs. There has been an increase in the number of systems seeking funds by applying for DWSRF loans in order to return to compliance for with PFAS violations. This is why additional State and Federal funds are crucial to help bring these systems back to compliance and to deliver safe drinking water to their consumers.

Figure 6:
Number of Violations Returned to Compliance FFY2014 – FFY2023

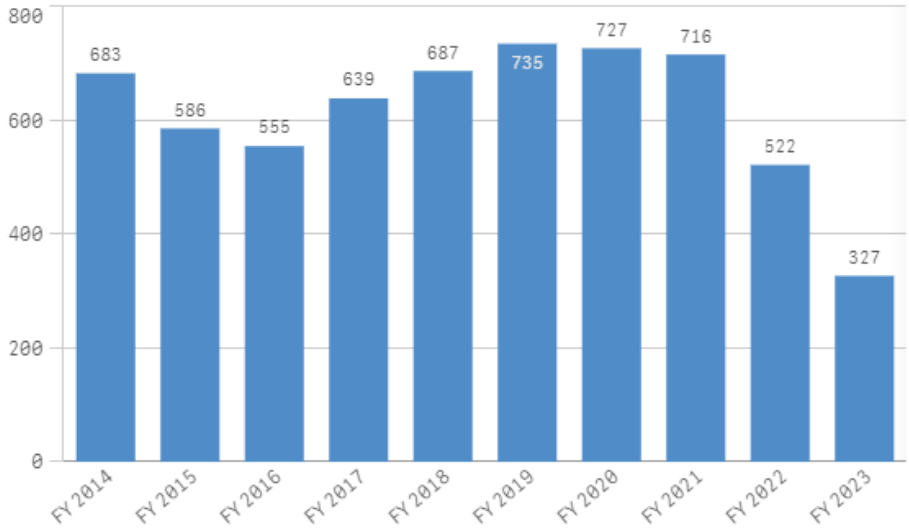
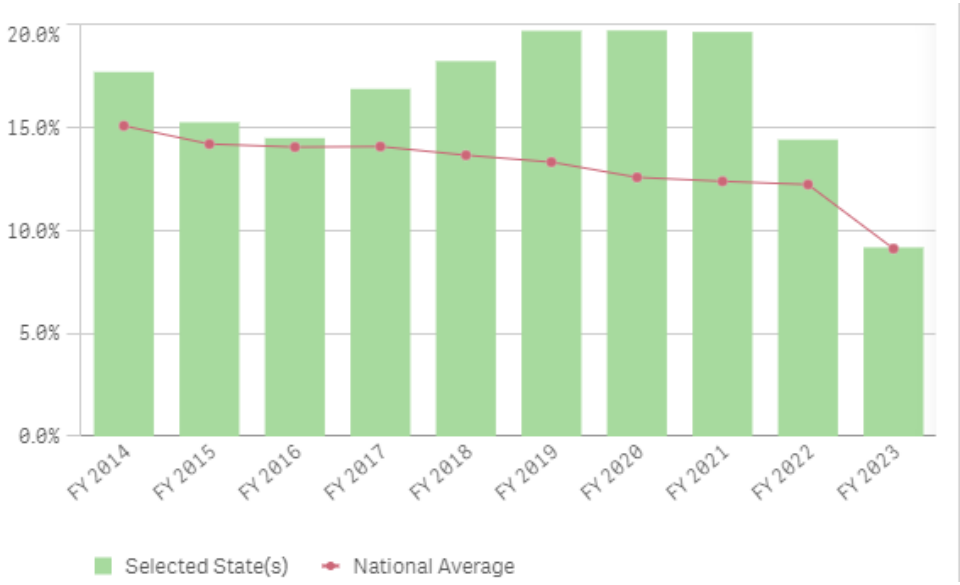


Figure 7:
Percentage of Violations Returned to Compliance Compared to the National Average
FFY2014 – FFY2023



Source: USEPA Enforcement Compliance History Online (ECHO)

Areas of Improvement to the Capacity Development Program

Issue: Small System Viability

Smaller community water systems are of particular concern for Capacity Development. Systems with populations under 5,000 make up over half of the systems most in need of lead service line inventory assistance and general technical assistance for SDWA compliance and PFAS issues.

In order for small systems to move forward with necessary capital improvements and asset management many systems need assistance completing planning and design work. This work may include producing Preliminary Engineering Reports and design plans, as well as new source exploration, assessing options for water system consolidation, assessing energy efficiency, and other pre-project activities necessary to determine which treatment technology or other solution is best suited for the system's needs. Planning work may also include activities such as source water protection planning, environmental reviews, and climate and cybersecurity risk assessments to address gaps that may increase levels of contaminant exposure due to extreme weather events or service interruptions that may cause unintended threats to water treatment systems.

Mobile/Manufactured Housing Parks:

Mobile and manufactured housing parks are also of particular concern. Many manufactured housing parks have lead service line inventory deficiencies, and several are repeat violators with health-based violations. Additional resources need to be developed specifically for these housing parks and other at-risk small

water systems to promote better understanding of regulatory obligations and the risks that not meeting these obligations poses to their residents.

NonCommunity Water Systems:

Noncommunity water systems may be especially vulnerable. These systems are typically businesses that may be dealing with issues such as PFAS contamination and other health-based violations and may lack the resources and expertise necessary to address these issues. Of the 98 public water systems which have exceeded any of New Jersey's PFAS MCLs, 49 are nontransient noncommunity water systems. This represents half of all public water systems which have exceeded any NJ PFAS MCL. These systems include schools, small businesses, and houses of worship.

Action Items and Next Steps:

Increase Direct and Indirect Technical Assistance:

The technical assistance program is focused on helping public community water systems that are good candidates for DWSRF loans and is focused on providing technical assistance to those communities that meet NJDEP's affordability criteria. NJDEP is reassessing the disadvantaged and overburdened community criteria and how smaller water systems may be better assisted, this is a key area in which additional support is needed.

Direct technical assistance is also needed for noncommunity water systems, that may be dealing with issues such as PFAS contamination and other health-based violations and may lack the TMF capacity necessary to address these issues. NJDEP plans to use a portion of funds under the EC-SDC grant to provide training to the small water systems receiving grants to address emerging contaminants. This training will ensure that operators and systems are able to properly operate all newly installed treatments and maintain compliance. Future grant programs should include similar provisions to ensure that small systems have additional support to build and maintain technical capacity.

In addition to direct technical assistance, there is a need to develop better resources for water systems and communities to utilize, especially small systems. Systems need resources and guidance to effectively engage with their rate payers, municipal officials, and public and communicate the importance of investing in critical water infrastructure. Additional training needs to be developed for water system decision makers on water utility operations and regulatory requirements. Systems also need guidance on initiating and overseeing contracts and projects.

Evaluate and Support Shared Services:

An option for small systems with limited capacity is to consider and evaluate collaborating with other water systems to establish shared services agreements. NJDEP, in coordination with DCA encourage the implementation of shared services among small water systems. DCA has grant money available through its LEAP program for regional/shared services. There is $150,000 available for feasibility studies and implementation grants up to $400,000. DEP and DCA have had early discussions about boosting DCA's program.

Issue: System Redundancy and Resilience

NE Resilience:

As discussed above, the NJDEP recognizes that the northeast region is critical to New Jersey and the New York area not only because they are heavily populated but also contain vital transportation (e.g., an international airport, train stations, bus hubs, etc.), trade, and energy assets of national importance. Therefore, disruption to the area due to public water system failures and associated compromised public health protection could result in a catastrophic incident. In FY22, there were over 120 drinking water related emergencies that required prompt follow-up from NJDEP staff. Additionally, two of those water main break events were so severe, that combined, impacted over 700,000 residents.

Climate Vulnerable Systems:

Climate change has already and will continue to impact the state. Since 2017 significant progress has been made to forecast the magnitude and timing of these climate changes and to define how these changes will impact the state. The upcoming 2023-2028 Water Supply Plan will begin to define impacts to NJ Water Systems and to plan and adapt to this challenge. As we continue to experience the real time impacts of climate change such Harmful Algal Blooms in our drinking water source areas and inundation of critical infrastructure during more frequent severe storms, the Capacity Development Program will need to continue to evolve and expand to consider the needs of those systems that are most vulnerable to Climate Change impacts.

Cybersecurity:

The Water Quality Accountability Act (WQAA), first signed into law in 2017, and amended in 2021, requires regulated community water systems to develop cybersecurity programs, develop an incident reporting structure, purchase cybersecurity insurance, and certify annually of its compliance with these requirements. The Security Scorecard program provides a baseline analysis of an organization's cyber vulnerability and makes recommendations for how that organization can enhance its security posture. Community water systems which have provided certifications which are in line with the Security Scorecard program may be deemed acceptable, however those which significantly overstate their program's capacity in comparison to the Security Scorecard analysis, may require additional follow-up. Compliance actions which may be necessary that NJCCIC is unable to conduct will be referred to NJDEP.

Action Items and Next Steps:

The NJDEP is devoting assets to the Northeast Resilience Project, which include researching, reviewing, investigating, mapping, and documenting infrastructure gaps and the interconnectedness of the large water systems in the state's northeast region. A team consisting of a wide range of knowledge and expertise has been developed to implement the initiatives of this high priority project.

With the commitment towards resilience in New Jersey, the Water Bank has developed the Building Resilient Water Infrastructure Climate Change Resilience Guidance. This guidance serves as a robust framework to help applicants develop and justify selection of climate resilient projects for the State Revolving Fund (SRF) program. This guidance provides users with the best available New Jersey-specific climate science, details use of climate impact projections with a focus on those anticipated to be the most disruptive to New Jersey's water infrastructure and enables users to prepare the Resilience Assessment required by the Water Bank.

Much of the day-to-day oversight of Cybersecurity requirements, and the subject matter expertise is held by NJCCIC. However, general communication and training for community water systems to better understand the importance, and how to incorporate cybersecurity practices into their routine operations continues to be a challenge. Additional resources for NJCCIC to either provide compliance assistance, or better evaluate adequacy of cybersecurity programs would be beneficial as this set of requirements becomes more mature. Particularly, community water systems which primarily purchase their water supplies in bulk have limited insight into how to incorporate cybersecurity programs, particularly when they do not have SCADA systems.

Issue: Long Term Operational Support

Comprehensive, whole system permits do not exist for water systems. Although the most integral parts of these operations are permitted through construction permits, these reviews rely on the system to come in for treatment upgrades or expansion of their distribution system. There is no system-wide permit that captures the entire system inventory and operations and is comprehensively reviewed on a regular and ongoing basis. For example, this holistic and continuous review would assist with the earlier detections of TMF capacity problems with systems that may be generally in compliance but have underlying operational and maintenance issues that have the potential to pose a public health risk.

Compliance Companies:

Compliance companies are agencies that provide water systems with licensed individuals and other services related to water system operation and maintenance. Currently, the Licensed Operator Regulations are silent on compliance companies and there is no easy way to handle some of the challenges that arise, such as assigning multiple operators to a single system, single operators responsible for a large number of small systems, lack of time spent at the system, and the hand off of operational tasks (e.g. compliance sampling and treatment system operation) to the water system owner or non-water facility staff. Additionally, NJDEP is further analyzing violation and compliance data to see if there are any trends connected to licensed operators or compliance companies.

Action Items and Next Steps:

Operating Permits and Enhanced Inspections

NJDEP has been evaluating the potential to develop an operating permit for Water Systems. Operating permits would be issued to public community water systems and staff would be responsible for reviewing and issuing permits to operate the system as a whole. By implementing drinking water operating permit programs, systems will be examined more regularly and on a more holistic basis.

NJDEP is participating in the Area Wide Optimization Program (AWOP), a partnership among the USEPA, state agencies, and supporting organizations, which promotes technical capacity development in water systems through optimization of treatment processes and provides technical training to NJDEP staff.

License Operator Program- Rule Updates and Enhanced Training

An update to the Licensed Operator regulations is needed. Regulatory changes could allow NJDEP to require increased monitoring of these compliance companies, determine the efficacy of the licensed operators during sanitary surveys, and limiting the number of systems an operator is signed on as the operator of record.

Licensed operator training has always been a priority for the Capacity Development Program. Continued education is key to ensure that operators are able to help systems maintain the compliance with statutory and regulatory requirements. Operators need additional training on priority and emergent issues in drinking water such as providing treatment for emerging contaminants such as PFAS, 1,4-dioxane, legionella, and harmful algal blooms, inventorying and replacing lead service lines, asset management planning, and engaging with their community and decision makers. There is a lack of tools available to assist licensed operators with fulfilling their O&M duties once treatment upgrades have been put into place, especially for small and very small water system operators.

Although capital improvements are often prioritized for technical assistance, there are few avenues for water systems to seek additional support after treatment has been installed. Additional support for ongoing system operations once an infrastructure improvement project has been completed. This may include administrative support, operator training, community outreach, conducting reports/studies, asset management planning, and other activities. Systems may need to hire new operators or train existing operators to effectively operate new treatment. Systems also need to develop appropriate procedures for process control, including setting target performance goals, evaluating monitoring needs, outlining operator roles and responsibilities, and a plan to respond to emergency events. NJDEP could broaden the scope of its Capacity Development Program to better support systems in these endeavors.

Licensed operators have access to an online bill pay portal and an updated website with access to news and announcements from the program. NJDEP has identified several IT enhancements to support the License Operator Program. These enhancements include the development of an electronic application submittal and a portal for better management of training contact hours by approved course providers.

Funding Needs

Capitalization Grant Funding:

Each year, USEPA awards capitalization grants to each state for their DWSRF based upon the results of the most recent Drinking Water Infrastructure Needs Survey and Assessment. States have the option of taking a variety of set-aside funds. These set-asides help fund state programs and activities to ensure safe drinking water. After taking their set-asides, states place the balance of their capitalization grant, together with the state match, into a dedicated revolving loan fund. This revolving fund provides loans and authorized assistance to water systems for eligible infrastructure projects.

Between SFY2022 and SFY2023 New Jersey's Capitalization Grant allotment decreased from $18,843,100 to $8,939,000, resulting in a decrease in funds for capacity development set-asides as well as funds that go to the DWSRF loan program. Additional funding is crucial through the capitalization grant. Outlined above are some gaps currently in the capacity development Program, that would benefit from additional funding through the capitalization grant.

Small System Funding:

As stated above, small systems are of particular concern due to lack of technical, managerial, and financial capacity available to them. Small community water systems that do not meet credit eligibility requirements of the Water Bank Financing Program credit policy face challenges to financing the capital

improvement projects necessary to come back into compliance with the State and Federal Safe Drinking Water Acts. Currently, these community systems may be provided with direct grants, but additional funding is necessary to expand the number of systems that can be helped.

In addition, there are no dedicated funding sources available for noncommunity water systems to utilize. Noncommunity water systems are especially vulnerable to TMF capacity issues due to their small size and may serve sensitive populations, such as schools, daycares, and long-term care facilities. Lastly, financing options are not available for continued and long-term operational support of these vulnerable systems. These additional funds are necessary to protect public health in these small systems where financial constraints limit the ability of these water systems to move forward with critical repairs or treatment projects.

Enhanced Tracking: Capacity Development Improvements and Sustaining Compliance

With the expansion of the Capacity Development Program's technical assistance offerings through NJ-TAP, it is important that NJDEP is tracking progress of the program as a whole. Systems are tracked through the program based on pre-set milestones, which are determined based on the type of technical assistance provided. NJDEP will utilize these milestones to determine where systems generally have difficulty achieving and sustaining compliance. Additional avenues for technical assistance and capacity development will be identified based on common obstacles encountered.

Systems will need continued support after they have gone through the technical assistance program in order to sustain compliance achieved technical assistance and capital improvements. Therefore, ongoing assistance will be provided to public water systems by NJDEP staff after participation in the technical assistance program is completed. Additional follow-up activities may be needed, including site visits and follow-up TMF capacity evaluations, to ensure systems maintain adequate capacity to reliably meet drinking water standards.

An important factor in ensuring the successful implementation of the updated Capacity Development Strategy will be through program self-assessments. It is critical to identify the metrics that can be used to measure program success early on. Examples of metrics for self-assessment may include the increase in number of systems successfully completing the technical assistance program, the improvement in percentage of target systems who successfully complete the DWSRF application process and receive funding, or other TMF capacity indicators, such as ETT score improvements. Routine collection and evaluation of these metrics will be incorporated as an essential activity. These self-assessment metrics will be trended over time to help measure program success. Additionally, the NJDEP will solicit feedback from participating systems and technical assistance providers to identify challenges and areas that need improvement. Continued analysis and tracking of data and stakeholder feedback will allow NJDEP to recognize trends, reprioritize categories for assistance, and make program adjustments as needed.

Conclusion

The Capacity Development Program has been established to help NJDEP in its goal of building water system capacity to ensure safe drinking water and system sustainability. Since its first Capacity Development Strategy took effect in 2000, the NJDEP Division of Water Supply and Geoscience has consistently improved public water system compliance with Federal and State safe drinking water standards through the provision of compliance assistance, technical and financial support, as well as appropriate enforcement action. The overall state of drinking water quality in New Jersey has improved as a result. However, to properly ensure New Jersey and its providers of drinking water are adequately prepared for the challenges of today and the future, the Capacity Development Program must expand its efforts.

A major aspect of the NJDEP's core mission is to ensure that water systems can operate in a sustainable and resilient manner to ensure the delivery of safe drinking water to the citizens of New Jersey. However, threats to meeting this goal including things like infrastructure age, system resilience, resilience to climate change, treatment of emerging contaminants, emergency planning and response, and inadequate funding, continue to grow. These challenges require a coordinated effort to avoid financially infeasible or irreparable impacts to New Jersey water systems. By building capacity in water systems collectively, NJDEP can ensure that water remains affordable and available to the citizens of New Jersey.