

State of New Jersey
Department of Environmental Protection
Division of Water Supply & Geoscience
Bureau of Safe Drinking Water

Status Report
On the Implementation of
New Jersey's Capacity Development Program

2011 - 2013



September 2014

Chris Christie
Governor

Bob Martin
Commissioner

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Executive Summary

In accordance with Section 1420(c)(3) of the Federal Safe Drinking Water Act Amendments of 1996, States must submit a report to the Governor every three years on the efficacy of the State's Capacity Development Strategy and the progress made towards improving the technical, managerial and financial capacity of public water systems. This report provides an evaluation of the efficacy of the State's Capacity Development Strategy during the last three-year period 2011 through 2013.

The Capacity Development Program aims to reduce existing public water systems in "significant non-compliance" with the Federal and State Safe Drinking Water Act regulations, and to prevent the formation and operation of non-viable community and non-transient, non-community water systems.

New Jersey evaluates the progress of its Capacity Development Program by comparing compliance markers in public water systems in calendar year 2013 to the 1998 Baseline Report, as well as the 2001, 2004, 2007 and 2010 Assessment Reports. The status is determined using the indicators identified in the approved and revised 2010 Capacity Development Strategy. The indicators utilized were the United States Environmental Protection Agency (USEPA) Enforcement Targeting Tool, maximum contaminant level violations, monitoring and reporting violations, public notifications required, formal enforcement actions taken, Drinking Water State Revolving fund loan monies allocated, operator training attendance, and technical assistance available.

Overall, the number of New Jersey public water systems deemed noncompliant has decreased since 1998. The New Jersey Department of Environmental Protection has increased training opportunities for small water systems and licensed operators through websites and national webinars. In addition, technical assistance services contracts for small water system assistance are being executed so that small systems may participate in the Drinking Water State Revolving Fund loan program.

SECTION I

Introduction

In accordance with Section 1420(c)(3) of the Federal Safe Drinking Water Act Amendments of 1996, States must submit a report to the Governor every three years on the efficacy of the State's Capacity Development Strategy and progress made towards improving the technical, managerial and financial capacity of public water systems. Under the Act, the first report was due two years after the State first adopted its Capacity Development Strategy (September 2000) and every three years thereafter. The New Jersey Department of Environmental Protection (NJDEP) submitted its initial Capacity Development report to the Governor on September 27, 2002. This report of September 2014 provides an evaluation of the efficacy of the State's Capacity Development Strategy during the three-year period 2011 through 2013. The report is available to the public at www.nj.gov/dep/watersupply/dws_loans_capdev.html.

The Capacity Development Program is part of NJDEP's Safe Drinking Water Program, which is responsible for administering the Federal and State Safe Drinking Water Acts to ensure that adequate prime source, treatment, pumpage, storage, transmission and distribution facilities are provided to produce water of the highest quality and at sufficient volume and pressure to all consumers at all times; and to ensure that all water systems perform adequate sampling and provide potable water that is in compliance with the Federal and State drinking water standards or maximum contaminant levels (MCLs) for regulated contaminants.

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 Safe Drinking Water Act. This report also evaluates how the NJDEP is integrating the Capacity Development Program together with other Safe Drinking Water Act initiatives and drinking water programs. These initiatives include the participation of the County Environmental Health Act Agencies, the NJDEP's Enforcement Program's Zero Tolerance Policy and the Drinking Water State Revolving Fund – Small Water System Technical Assistance Program.

Federal Requirements for a Capacity Development Program

The 1996 Amendments to the Federal Safe Drinking Water Act 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 Federal Safe Drinking Water Act, each state was required to obtain the legal authority to ensure that all new community water

systems¹ and all new non-transient non-community water systems demonstrate adequate technical, managerial, and financial capacity. In New Jersey, Assembly Bill No. 2615, signed into law on August 2, 1999 (P.L.1999 Chapter 176), amended the New Jersey Safe Drinking Water Act (N.J.S.A. 58:12A) to give New Jersey explicit legal authority to require new community and new non-transient non-community water systems to demonstrate capacity. Subsequently, New Jersey adopted regulations on July 31, 2000, effective August 21, 2000, at N.J.A.C. 7:10-13 that established the requirement to assure that all new public community and all new non-transient non-community water systems have adequate capacity. The regulations of N.J.A.C. 7:10-13 can be viewed within http://www.nj.gov/dep/rules/rules/njac7_10.pdf.

In accordance with Section 1420(c) of the Federal Safe Drinking Water Act, 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 New Jersey's Capacity Development Strategy on September 28, 2000. Since its approval, New Jersey has been implementing its capacity development strategy. This strategy can be viewed at <http://www.nj.gov/dep/watersupply/pdf/capdev.pdf>. In August 2010, the New Jersey Capacity Development Strategy was updated; this revised document appears at <http://www.nj.gov/dep/watersupply/pdf/revision.cd.strategy.pdf>.

The Drinking Water State Revolving Fund (DWSRF) serves as the primary source of funding for implementing the NJDEP's Capacity Development Strategy. The NJDEP is allowed to set aside up to 10 percent of each DWSRF capitalization grant for State program management activities, which includes funding the capacity development program. In addition, the NJDEP is allowed to set aside two percent of each capitalization grant for small water system technical assistance and 15 percent of each capitalization grant for activities to assist development and/or implementation of source water protection, well head protection, and capacity development. The USEPA is required to withhold 20 percent of the annual DWSRF Capitalization Grant if the state has not adopted and implemented an approved Capacity Development Program in accordance with Section 1420(b)3.

To date, the USEPA has not withheld any DWSRF monies and has routinely approved NJDEP's annual workplans and budgets regarding the intended use of funding. Also, the USEPA has formally established, as part of the grant award process, that the NJDEP continues to implement a fully functional New Systems Capacity Program and Capacity Development Strategy as demonstrated and set forth in various reporting requirements, such as the Intended Use Plan and ongoing implementation reports.

Capacity Development Program Goals

The goals of the Capacity Development Program are as follows:

¹ See Appendix A for Glossary of Terms used in this report.

- reduce or eliminate the number of existing public water systems in “significant non-compliance” with the Federal and State Safe Drinking Water Act Regulations;
- ensure that public water systems have adequate technical, managerial, and financial capacity to achieve and maintain compliance with the Federal and State Safe Drinking Water Act Regulations;
- prevent the formation and operation of any new water system (community and non-transient non-community water systems) that may be non-viable; and
- provide public water systems with accurate, timely, and appropriate information in a straightforward manner to promote their compliance with the Federal and State Safe Drinking Water Act Regulations.

SECTION II

Overview of Federal Safe Drinking Water Act Requirements for Capacity Development

Regulation Section	Requirement	Initial Step	Additional Action
1420(a)	Obtain the legal authority to ensure that all new water systems demonstrate adequate capacity.	Amended N.J.S.A. 58:12A-4c(5)(b) on August 2, 1999 and submitted plan to ensure new system capacity on September 20, 1999	Promulgated rules that were adopted on July 31, 2000 and effective on August 21, 2000
1420 (b)(1)	Periodically submit a report to USEPA of systems that are in significant non-compliance (SNC)	First report done August 6, 1997	In 2010, EPA changed reporting frequency from annual to quarterly; replaced SNC process with USEPA Enforcement Targeting Tool (ETT)
1420 (b)(2)	Submit a report by August 6, 2001 on success of efforts	Report submitted August 2, 2001	

Regulation Section	Requirement	Initial Step	Additional Action
1420 (c)	Establish a Capacity Development Strategy for existing public water systems by October 2000	Strategy submitted August 3, 2000 and USEPA approved September 28, 2000	Revisions proposed in 2009 and finalized in 2010 Annual Report. New Strategy List every 3 years
1420 (c)(3)	Submit a report to the Governor every three years on efficacy and progress of Capacity Development Strategy (the Capacity Development Strategy was adopted in 2000))	First report submitted September 27, 2002	Report submitted every 3 years after 2002

Additional Capacity Development Strategy Commitments



What tools can we give water systems?

- a. **Monitoring Schedules.** In accordance with the approved Capacity Development Strategy, the NJDEP provides public water systems with accurate, timely, and appropriate information to promote their compliance with the Safe Drinking Water Act Regulations.

Monitoring schedules and other important water system information are accessible to the general public, water systems, and certified drinking water laboratories through a web-based application called "Drinking Water Watch."

Prior to the release of the web-based version, only a limited number of users were able to access the Safe Drinking Water Information System via the web.

This tool has increased water system compliance with SDWA regulations by allowing the water systems to view their monitoring schedules and determine if their results have been received, thereby avoiding monitoring and reporting violations. This tool has also provided certified drinking water laboratories with information to assist their water system clients in making monitoring and other decisions. It also eliminated the need for systems and laboratories to phone the Division of Water Supply & Geoscience to obtain water quality data. This tool is periodically enhanced and is available at <http://www.nj.gov/dep/watersupply/waterwatch> . The NJDEP views this activity of establishing system specific monitoring requirements as an essential task in promoting the compliance of public water systems.

- b. Outreach.** In accordance with the approved Capacity Development Strategy, the NJDEP conducts presentations on the goals and processes of the Capacity Development Program.

The goals and processes of the Capacity Development Program are covered as part of continuing education seminars offered through various drinking water professional organizations.

Since 2000, Rutgers University Continuing and Professional Education provides an annual two-day workshop each year to licensed operators and water system owners/managers, which includes presentations on Capacity Development. In addition, the New Jersey Water Association provides presentations periodically as part of their sponsored training.

The Capacity Development Program also provides continuing education seminars. Examples include "Enhanced Utility Management" (offered June 2010 at three sites) and "Financial Planning" (April 2011 and September 2013). NJDEP staff is USEPA-certified to teach the "Check Up Program for Small Systems (CUPSS)" and will be conducting two, half-day training sessions in September 2014. The USEPA certification has enhanced the technical, managerial, and financial capacity development assistance that the NJDEP can offer to systems, and includes the introduction and education to the concept of asset management software, including CUPSS and AM KAN WORK!. The Capacity Development Program has also sponsored several workshops with county health agencies to review the requirements of the Capacity Development Program as they apply to new non-transient water systems.

- c. **Baseline Capacity Development Reports.** In accordance with the approved Capacity Development Strategy, the NJDEP prepares baseline reports to be used for measuring improvements in public water system capacity over time.

The first report entitled "Report on Baseline Assessment of Public Water Systems for Calendar Year 1998" was prepared by the NJDEP in July 2001. Calendar year 1998 was selected to represent the baseline for water system compliance since this timeframe preceded capacity development efforts. Subsequent capacity development reports were prepared using the information gathered through the NJDEP Annual Report of Violations and other published reports, and were used as benchmarks for comparison and measuring improvements in public water system capacity. Reports were prepared in 2002, 2005, 2008, 2011 and 2013.

- d. **NJDEP's Zero Tolerance Policy.** This initiative supports the goals of the Capacity Development Program and has been effective in helping to reduce the number of public water systems in violation of the Safe Drinking Water Act Regulations.

In January 1999 an enforcement initiative referred to as the "Zero Tolerance Policy" was implemented for safe drinking water monitoring and reporting violations. Under this policy, community water systems with any confirmed violations are issued formal enforcement actions with administrative penalties. This initiative has been effective in establishing a commitment from community water systems in meeting the requirements of the Safe Drinking Water Act Regulations. On July 1, 2000 the Zero Tolerance Policy was expanded to include non-community water systems in an effort to improve their level of compliance. The County Environmental Health Act (CEHA) agencies implement this enforcement effort on the county level and take mandatory enforcement actions and penalty assessments against any non-community water system with confirmed monitoring and reporting violations occurring after July 1, 2000.

The Zero Tolerance Policy has affirmed to public water systems their responsibility to comply with the Federal and State Safe Drinking Water Act Regulations. In addition, it establishes that their failure to comply with the Regulations results in mandatory enforcement actions and penalties by CEHA agencies and the NJDEP. With the adoption of the Zero Tolerance Policy, public water systems recognize the benefit of entering into a cooperative relationship with the NJDEP to improve their capacity and avoid formal enforcement actions and/or penalties.

The Capacity Development Program, however, seeks to maintain a balance with our Enforcement policies, in order to assure that those public water systems that are struggling to maintain compliance are working with the Capacity

Development Program to 1) obtain assistance; 2) continue to maintain open communication; and 3) continue to strive to attain long term viability.

- e. **Violation Evaluation.** Since June 2004, the NJDEP has utilized the automated compliance determination system of the USEPA Safe Drinking Water Information System (SDWIS) software program. The SDWIS program tracks sample results and enables a timely response to water quality issues (such as exceeded maximum contaminant levels and/or elevated contaminant concentrations). The SDWIS program makes data available in real-time, has greatly improved the NJDEP's violation response time, and is expected to further reduce the number of systems with a history of significant non-compliance.

This computer system was upgraded to a newer version, SDWIS 2.3 that includes compliance determinations for more Safe Drinking Water Act Regulations and the upgrade to SDWIS 3.21 is expected in the upcoming year.

- f. **Small System Technical Assistance Program.** The NJDEP recognizes that small water systems (serving less than 3,300 people) make up a large portion of systems in non-compliance. This category of public water system is more likely to lack the resources and expertise of larger systems to comply with the Federal and State Safe Drinking Water Act Regulations. The 1996 Federal Safe Drinking Water Act Amendments provided the NJDEP with Drinking Water State Revolving Fund monies for small public water system technical assistance through a set-aside of up to two percent of the annual DWSRF Capitalization Grant.

These Small System Technical Assistance set-aside monies fund contracts with New Jersey Water Association which provides engineering services (free of charge) for small water systems (serving less than 3,300 persons). A newly executed contract with New Jersey Water Association obligated \$400,000 to assist small water systems to 1) perform an assessment of the system assets and then provide a list of recommended improvements and 2) for engineering services to assist them with applications for DWSRF loans to upgrade their systems or to connect with city water.

Funds are also used to provide group training sessions, assistance to daycare facilities using their own source of water, technical assistance site visits and sampling.

- g. **Operator Certification Program.** N.J.A.C. 7:10A, *Licensing of Water Supply and Wastewater Treatment System Operators*, establishes the rules governing the eligibility, examining, and licensing of persons as operators of Industrial Wastewater Treatment Systems, Public Wastewater Treatment Systems, Public Wastewater Collection Systems, Public Water Treatment Systems, and Public Water Distribution Systems.

The 1996 Federal Safe Drinking Water Act Amendments provided the NJDEP with Drinking Water State Revolving Fund monies for an Operator Certification Program through a set-aside from the annual Capitalization Grant for the Drinking Water State Revolving Fund. The USEPA is required to withhold 20 percent of the annual DWSRF Capitalization Grant if the state has not adopted and implemented an Operator Certification Program. Amendments to the State licensing regulations (October 2, 2000) required all licensees to obtain continuing education for license renewal, and all community water systems and non-transient, non-community water systems to be under the direct supervision of a licensed operator who is competent to ensure the operation and maintenance, and overall effectiveness of the water system.

N.J.A.C. 7:10A, *Licensing of Water Supply and Wastewater Treatment System Operators*, was last readopted with amendments on December 15, 2008. Amendments included 1) licensing fee increases, 2) granting of continuing education time extensions for military service and for illness or hardship, 3) a requirement for licensees to obtain NJDEP approval to operate more than 10 public water systems, 4) a requirement for individuals failing an exam three times to take a review course, and 5) clarification of continuing education requirements and operator duties and O&M procedures.



Classes given by NJ Water Association

In order to improve water system operation, the NJDEP identified drinking-water related training needs for small water system owners and operators and management staff. By contract with the New Jersey Water Association and other approved training vendors, numerous training sessions have been held during the past three years to provide assistance to small water systems. In addition, a contract with Rutgers University provided for a 50 percent tuition subsidy for drinking water-related training courses for licensed operators. The NJDEP has drafted a duties and responsibilities guidance document for each class of treatment and water distribution licensed operators, which was submitted for peer review and is anticipated to be released this year. Also, the NJDEP is

working with the water systems on succession planning needs and updating Operation and Maintenance (O&M) manuals.

In 2011, NJDEP initiated a licensed operator internship program. This one-year program allowed utilities to receive USEPA Expense Reimbursement Grant (ERG) funds to hire and train interns to serve as licensed operators. Upon completing the training course and obtaining the one year of operating experience, individuals that successfully completed the program by taking the required training course and obtaining the one year of operating experience qualified to take a Water Treatment or Water Distribution Class One State exam. Sixteen individuals completed the program and the required training course. Fourteen of these persons are still employed in their position at the utilities and 11 persons have obtained license(s). The NJDEP will explore the possibility of developing a more sustainable, ongoing version of this program using an alternate funding source.

SECTION III

Evaluation – Efficacy of the Capacity Development Program

This section will review the progress in meeting the objectives of the Capacity Development Program.

a. Progress in Reviewing the Capacity of New Water Systems

Community Water Systems

Between January 1, 2011 and December 31, 2013, the NJDEP added one (1) new community water system, Woodland Heights Homeowners Association in West Milford Township, Passaic County, to its inventory of public water systems. This system was discovered in 2011, but the system did not meet the definition of a "new system," meaning that the water system was not newly constructed or did not require an expansion of its infrastructure to become a community water system and consequently did not require a technical, managerial, and financial review.

Most new community water systems are the result of a reclassification of an existing water system or the identification of a previously unregulated water system in existence prior to the effective date of the Technical, Managerial and Financial Capacity Regulations (August 21, 2000). To date, no new community water system proposals have been denied approval based on technical, managerial, or financial capacity requirements and all new community water systems that were approved under the Capacity Development Program are in

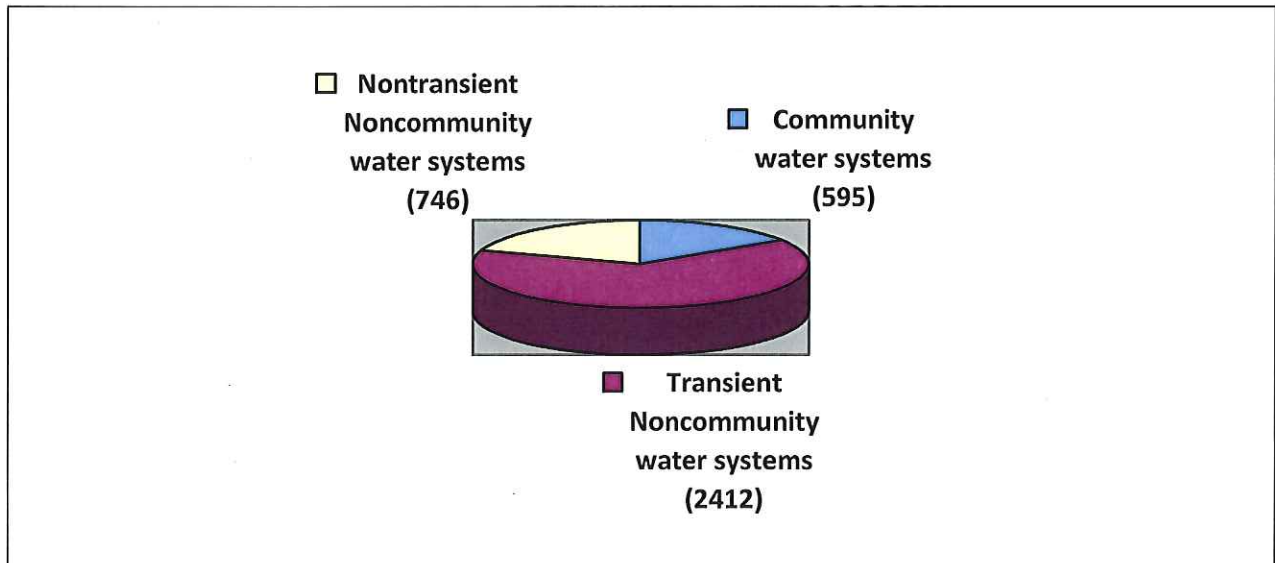
good standing and are not in significant non-compliance nor demonstrated any other pattern of non-compliance.

Non-Transient Non-Community Water Systems

Between January 1, 2011 and December 31, 2013, the NJDEP has added thirty-six (36) new non-transient, non-community water systems to its inventory of public water systems. Twelve (12) systems received an evaluation (completed or pending) under the Regulations. Twenty-four (24) systems did not meet the definition of a "new system," meaning that the water systems were not newly constructed or did not require an expansion of their infrastructure to become a non-transient, non-community water system and consequently did not require a technical, managerial, and financial review.

Most new non-transient, non-community water systems were reclassified from another type of public water system or were identified as a regulated water system, although built prior to the effective date of the regulations. To date, no new non-transient, non-community water system proposals have been denied approval based on technical, managerial, or financial capacity requirements. The types of public water systems and the number of active public water systems as of December 31, 2013 are presented in Figure 1.

Figure 1.
Categories of Public Water Systems



b. Progress in Improving Capacity of Existing Water Systems

To evaluate and measure improvements with the Technical, Managerial, and Financial Capacity of existing community and non-transient non-community water systems, the NJDEP compared the findings of the following three Capacity Development Program tasks as detailed in Section II of this Report:

1. History of Significant Non-Compliance/Enforcement Targeting Tool Reports (1997, 2000, 2003, 2006, 2009 and 2013),
2. Strategy Lists (2001, 2004, 2007, 2010 and 2013), and
3. Baseline Report (1998) and subsequent Assessment Reports (2001, 2004, 2007, 2010 and 2013).
4. Other Factors

Improvement in History of Significant Non-Compliance Reports

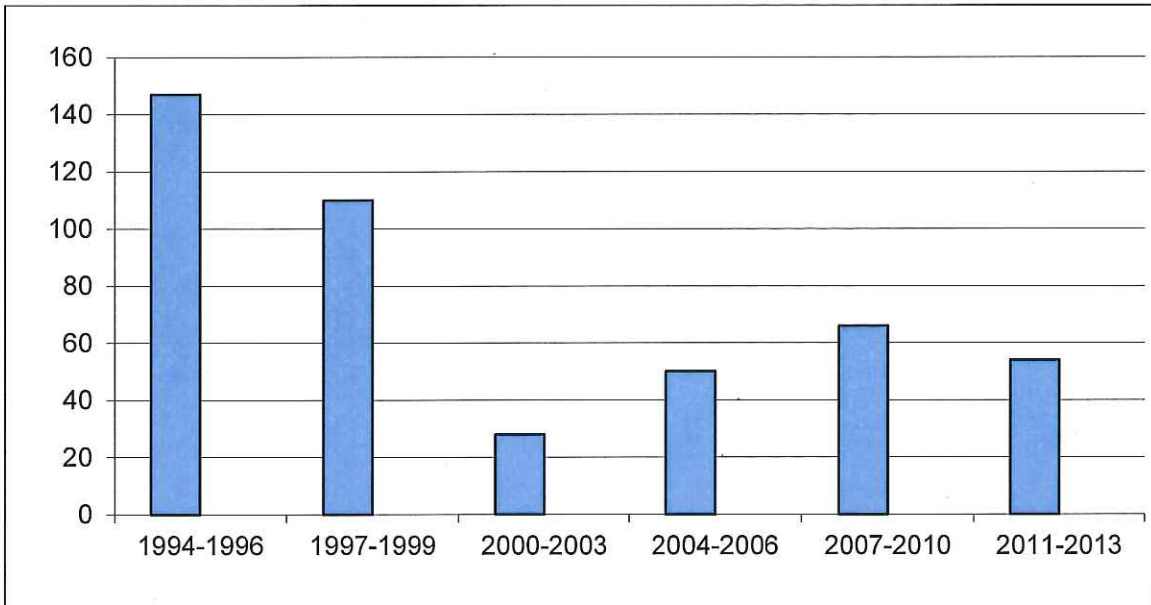
The federal Safe Drinking Water Act in Section 1414(c)(3)(A) requires states to prepare an annual report on violations of the national primary drinking water regulations by public water systems. These reports are available on the NJDEP Division of Water Supply and Geoscience website at http://www.nj.gov/dep/watersupply/dwc_systems.html. Many violations are quickly addressed by the water systems. Those water systems that have violated one or more National Primary Drinking Water Act Regulations over an extended period of more than one monitoring period (replaced by the Enforcement Targeting Tool) are considered to be in significant non-compliance. These systems are a high priority for the Safe Drinking Water Program. There has been a general reduction in the number of public water systems with a history of significant non-compliance between 1994 and 2010. The number of public water systems with significant non-compliance from 1994-1996 (1997 report) was 147; 110 in 2000; 28 in 2003; 50 in 2006; and 65 in 2010. This trend can be seen in Figure 2.

Some of the reasons for variations in the number of water systems with a history of non-compliance between 1994 and 2010 are the adoption and implementation of new State and Federal regulations, specifically the Radiological Rule in 2005 and the Arsenic Rule in 2006. In addition, the use of the SDWIS computer application has allowed the Drinking Water Program to more efficiently track drinking water violations which may have contributed to the appearance of an increase in violations.

In 2010 the USEPA began using the Enforcement Targeting Tool to prioritize water systems by assigning each violation a "weight" or number of points based on the assigned threat to public health. Points for each violation at a water

system are added together to provide a total score for that water system. This tool requires States to follow their water systems with scores greater than 11 closely so that they come into compliance immediately or enter into administrative consent orders with compliance schedules; there were 54 water systems that had a score greater than 11 using the Enforcement Targeting Tool in 2011 through 2013. This information can also be seen in Figure 2.

Figure 2: Number of Public Water Systems in Significant Noncompliance 1994-2010 and Scoring Greater than 11 Points using the Enforcement Targeting Tool 2011-2013



Comparison of Strategy Lists

Strategy Lists are developed to identify those public water systems most in need of capacity development and to prioritize the Program's resources for performing capacity evaluations and providing assistance. The status of the water systems on the Strategy List were assessed using the following criteria: population served, type of water system, significant non-compliance status, maximum contaminant level (MCL) violations, monitoring and reporting violations, formal enforcement actions, and infrastructure deficiencies.

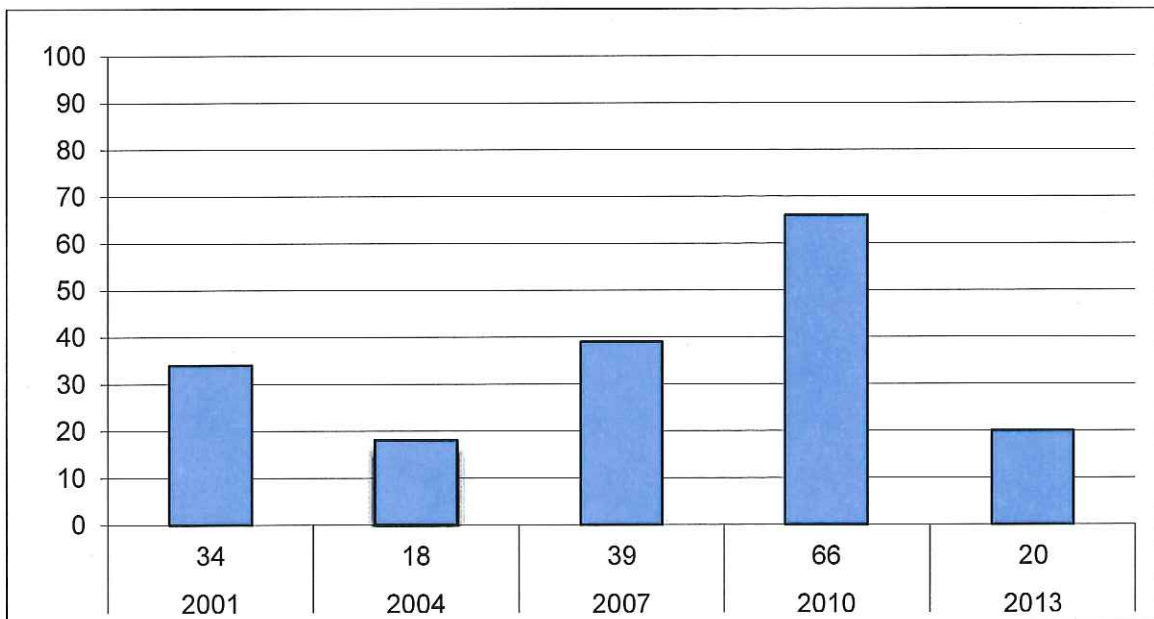
Several target lists were developed between 2000 and 2010. Systems ranked "high" were recognized as not having adequate Technical, Managerial, and Financial Capacity and consequently required Capacity Development assistance. There were 34 high priority systems on the 2001 List; 18 high priority systems on the 2004 List; and 39 high priority systems on the 2007 List. These high priority list water systems were the focus of the Capacity Development Program for each three year period.

As a result of refining the criteria for determining the high priority water systems, the 2010 Strategy List included 66 public water systems as high priorities for receiving assistance from the Program to develop their technical, managerial and financial capacity.

The 2013 list, with 20 systems, was compiled in July 2013 utilizing the ETT tool and also includes systems identified by referrals from the compliance, permitting, enforcement, and technical assistance bureaus within the Department and unresolved issues from the previous list.

Comparison of the 2010 Strategy List to the 2013 Strategy List shows a decrease in the number of systems, as the Department was able to use the ETT to better track systems with ongoing problems and assist them resolve their issues within this last three-year cycle. The number of water systems on each strategy list is presented in Figure 3.

Figure 3: Number of Systems on each Strategy List



Improvement in Violations since the 1998 Baseline Report

- Monitoring and Reporting (M&R) violations

The comparison of the 1998 Baseline Report with the subsequent assessment reports of 2001, 2004, 2007, 2010 and 2013 indicates an overall reduction in Monitoring and Reporting violations from 1998 to 2013. There is a general

declining trend in the number of public water systems with valid monitoring and reporting violations for volatile organic compounds and inorganic contaminants; for 1998 there were 711, 486 in 2001, 903 in 2004, 198 in 2007, 218 in 2010 and 110 in 2013. The number of public water systems with valid Monitoring and Reporting violations for total coliform and nitrates in 1998 was 1568, compared to 710 in 2001, 776 in 2004, 422 in 2007, 276 in 2010 and 295 in 2013.

In 2004 there was an increase in Monitoring and Reporting violations as the new USEPA SDWIS software was brought online and staff was learning its capabilities. More recently, the Drinking Water Watch application installed in 2007-2008 greatly assisted in improving Monitoring and Reporting compliance by allowing water systems to see their compliance status in real time and respond accordingly. The Division of Water Supply and Geoscience now is capturing more information electronically and notifying the systems of Monitoring and Reporting violations quickly due to the use of SDWIS software. Since it is now easier to send data in on time, and verify that data has been received by BSDW, the BSDW accepts late results but does not delete M&R violations from a water system's violations history.

- Maximum Contaminant Level (MCL) violations

The comparison of the 1998 Baseline Report with the subsequent assessment reports for 2001, 2004, 2007, 2010 and 2013 indicates a slight increase in MCL violations from 1998 to 2013. However, from 2007 to 2010 the number of systems with maximum contaminant levels violations decreased, reflecting systems adjusting to three new Safe Drinking Water Act rules that went into effect after 2004: Disinfection Byproducts, Arsenic, and Radiological. The number of public water systems with MCL violations of the Safe Drinking Water Act standards in 1998 was 260, 396 in 2001, 198 in 2004, 314 in 2007, 285 in 2010 and 317 in 2013. In 2013, the Division of Water Supply & Geoscience placed more emphasis on compliance with the Surface Water Treatment Rule and sanitary surveys which may have resulted in more violations.

A public water system which incurs a MCL violation can still return to compliance with the regulations as long as the violation is addressed within one year of the violation date, in accordance with New Jersey's Safe Drinking Water Act Regulations, N.J.A.C. 7:10-5.7. Typically a public water system addresses a MCL violation by providing treatment to remove the contaminant. Other approved corrective actions include: connecting to another public water system, replacing the existing source of water with a new source which meets all drinking water standards, or demonstrating with analytical results that their current source of water no longer exceeds the MCL.

Other Factors that Improve Capacity of Existing Systems:

- Training – Training opportunities have increased with more emphasis on webinars, asset management training, and small system technical assistance classes under the national SDWA grant contracts and various licensed operator training courses. These training opportunities help water system staff to manage their systems more effectively and ultimately helps improve water quality for New Jersey residents. An additional emphasis in the past three years has been on running the water systems more efficiently, long term and emergency planning and asset management training.
- Technical Assistance Contracts - The Department has executed several contracts with organizations to assist small water systems which helps manage the system more effectively and increase technical expertise in maintaining the water quality.

In March 2014, an engineering initiative contract was executed with NJ Water Association that assigns engineers for the design and permitting of improvements at those small systems serving fewer than 3,300 residents. This program was designed to assist very small water systems that intend to apply for Drinking Water State Revolving Fund loan funds. The scope of work includes: 1) the engineer and the system to work together on a preliminary asset management assessment of the water system, prepare a scope of work that reflects the information in the asset management assessment and provides the engineer's recommendations for needed improvements with the lowest cost alternatives; then 2) provide the necessary engineering services needed for small systems to apply to the DWSRF loan program, such as preparation of a planning document, design documents and loan applications. Several systems have already been assigned an engineer under this initiative.

In January 2014, a contract was executed with Resources for Communities and People Solutions (RCAP) to work with selected very small systems (i.e., homeowners associations) to complete a systems O&M plan and an asset management worksheet with information inputted into CUPSS. A training session was held in June 2014 and RCAP is starting to work one on one with systems.

- Other Opportunities for Small System Assistance - The USEPA awarded grants to several nonprofit groups for training seminars, webinars, asset management plan assistance and system O&M manual assistance. New Jersey requested customized assistance by the awardees; assistance that would result in deliverables such as revised O&M manuals and completion of asset management templates, not just training sessions. The USEPA grant with Texas A&M Engineering Extension Services (TEEX) allowed TEEX to help water systems in New Jersey update their system operations plan for two weeks in April 2013 and

two weeks in February 2014. TEEX helped 22 water systems to get upgraded manuals. These sessions were very well received by the operators and were provided at no cost to New Jersey.

The USEPA grant with the Environmental Finance Center (EFC) Network allowed New Mexico EFC to hold two one day training sessions in June 2013 to work with eight water systems for assistance to start an asset management plan (AMP). An AMP template, prepared for New Jersey, was given to the systems and a copy of a 2 disc DVD with the "A.M. Kan Work!" software for their use. New Jersey will again be working with the New Mexico EFC in 2014, under the current EPA grant, to continue this effort with those systems in drafting an AMP. This assistance was provided at no cost to New Jersey.

The USEPA grant with NJ Water Association allowed circuit riders to assist New Jersey water systems with water quality issues and technical assistant for small systems with compliance with the Safe Drinking Water Regulations. This effort will continue in 2014 under the current USEPA grant.

- Funding Program – The Drinking Water State Revolving (DWSRF) Loan Program is a leveraged low interest loan program that utilizes Federal grants as seed monies, to execute loans with water systems to help achieve or maintain compliance with the SDWA. The Program is jointly administered by NJDEP and the NJ Environmental Infrastructure Trust. There is also a portion of the monies that include principal forgiveness and a small system component of the program that provides more principal forgiveness and better loan terms to those small systems.

In 2013, DWSRF dollars were allocated for system improvements (13 loans/17 projects) for a total project cost of \$34 million. Also 3 loans/3 projects for a total project cost of \$17 million were funded through the Water Supply Bond Fund and administered by the Drinking Water State Revolving Fund Program. In 2014, DWSRF dollars were allocated for system improvements (23 loans/32 projects) for a total project cost of \$55 million. These monies allow the water systems to upgrade their facilities at a lower cost, where this savings is passed on the residents.



Desalination plant in Cape May City financed in part by the Drinking Water State Revolving Fund

SUMMARY

The NJDEP attributes the observed improvement in public water system compliance to the continued improvement in the implementation of the Safe Drinking Water Program, including the Capacity Development Program and the coordination of activities under the NJDEP's Enforcement and Compliance Programs, Small Water System Technical Assistance Program, Operator Certification Program and Drinking Water State Revolving Fund Program.

The NJDEP's Capacity Development Program is focused on addressing non-compliance and promoting the Technical, Managerial, and Financial Capacity of public water systems in the State by focusing on the 2013 Strategy List. In addition, the Capacity Development Program has provided training opportunities on technical, managerial and financial capacity and licensed operator issues through classes and webinars; and provided assistance to water systems through contracts with several non-profit agencies. The NJDEP anticipates that the collective efforts detailed in this Report will continue to promote compliance with the Federal and State Safe Drinking Water Act Regulations and reduce the number of public water systems with violations for all public water systems.

The significant activities that have improved compliance with the drinking water standards are:

- Small System Technical Assistance contracted services (NJWA, RCAP, TEEX, EFC) and NJDEP staff training sessions (in classrooms, online and webinars) on Capacity Development and Small Water System Assistance Programs;

- Licensed Operator contracted services and NJDEP program staff sessions on performance improvement and development of O&M manuals and asset management plans for use at the water treatment facilities;
- Improved data management, electronic data submittals, maintenance of an accurate inventory of systems, and the status of violations viewable through the "Drinking Water Watch" application available on Division of Water Supply & Geoscience website to all water systems and users to view monitoring data;
- Funding needed projects to address compliance with low interest loans, including some principal forgiveness, including a component for small systems

The NJDEP will continue to implement its Capacity Development Program to address systems with chronic violations. Some considerations for improving the managerial and financial aspects of the Capacity Development Program continue to be:

1. Provide additional training to system owners/operators on asset management, operating a water system, and other managerial and financial aspects;
2. Establish services with certified public accountants, or other state entities, to conduct financial evaluations and develop water system budgets and financial plans; and
3. Establish services with appropriate entities to perform asset evaluations at water systems and develop ongoing asset management plans.

Additional information can be found on NJDEP's drinking water programs at:
<http://www.nj.gov/dep/watersupply/>

APPENDIX A

Glossary of Terms

Capacity Development Terms

Capacity: is the ability to plan for, achieve, and maintain compliance with the Federal and State Safe Drinking Water Act Regulations and the ability to reliably produce and deliver water meeting all applicable drinking water standards. Capacity is measured by evaluating the technical, managerial, and financial capabilities of the water system.

Technical Capacity: refers to the adequacy, operation, and maintenance of a water system's infrastructure (infrastructure includes the source water, treatment, storage and distribution network of the water system). Technical Capacity also refers to the ability of qualified personnel to properly operate and maintain the system.

Managerial Capacity: refers to the expertise required of the personnel who administer the overall water system operations. This type of capacity also refers to the system's demonstration of clear ownership, proper organized staffing, and effective interaction with regulators and customers.

Financial Capacity: refers to the monetary resources available to a public water system to support the cost of operating, maintaining, and improving the water system. This type of capacity also refers to the demonstration of sufficient revenues, credit worthiness and fiscal management controls.

Capacity Development: is the process directed by the NJDEP through which water systems can improve their technical, managerial, and financial capacity to ensure compliance with current and future Safe Drinking Water Act Regulations.

New Water System: includes both community water and non-transient, non-community water systems being newly constructed, as well as systems which do not currently meet the definition of a public water system but expand their infrastructure (new sources of water, additional buildings) to become a community or a non-transient, non-community water system.

System Classification Terms

Public Water System: is a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. A public water system is either a community

water system or a non-community water system. Non-community water systems are classified as either a non-transient or transient water systems.

Community Water System: is 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.

Non-Transient Non-Community Water System: is a public water system that regularly serves at least 25 of the same persons per day more than six months in any given calendar year. Examples are schools, factories, offices, industrial parks, and major shopping centers.

Transient Non-Community Water System: is a public water system that serves at least 25 transient persons for at least 60 days in any given calendar year. Examples are restaurants, campgrounds, and hotels.

Nonpublic Water System: is a water system that regularly serves fewer than 15 service connections or 25 individuals.

Significant Non-Compliance: is a term used to define a water system that has violated one or more National Primary Drinking Water Act Regulations over an extended period of more than one monitoring period (replaced by the Enforcement Targeting Tool).

History of Significant Non-Compliance: is a term used to define a system that has been in significant non-compliance status for 3 or more quarters during a 3-year period.

APPENDIX B

Summary of 2013 Capacity Development Strategy List

2013 Strategy List

The 2013 Strategy List identified 19 community water systems and 1 non-community water systems for a total of 20 water systems requiring capacity development. The status of the Capacity Development efforts for the water systems through June 30, 2014 is presented below.

	PWSID#	PWS NAME	INITIAL REASON LISTED	CURRENT STATUS
	<i>Community</i>			
1	NJ0301001	Buttonwood Mobile Home Park	Deficiencies in all TMF areas: aging infrastructure, poor O&M, no licensed operator, not issuing CCRs, no storage (2 wells & auxiliary power, but no waiver requested/issued), no meter to measure flow, etc.	System has a licensed operator. Currently working with System and Enforcement on installing a new well. Test well was drilled 07/01/2014, awaiting test results.
2	NJ0339001	New Lisbon Developmental Center	Listed in 2007. Lead action level exceedances. Numerous monitoring and reporting violations (late & non-submittal).	Inspection of Upgraded Facilities and Close Out Report to file 06/05/14. NFA
3	NJ0612001	Bayshore Mobile Home Park	Listed in 2007. One well with nitrate MCL violations and second well with extremely high sodium levels exceeding the NJ secondary standards.	ACO closed. Improvements to wells and treatment completed. Site visit and TMF recommendations to be done.
4	NJ1013001	Hampton Borough	System lacks firm capacity, only has 1 operational well, and no approved contract for the interconnection with Glen Gardner.	Test well to be drilled, bids came in too high for project and the project is to be rebid.
5	NJ1414009	Mountain Shore Water Supply	Facility lacks auxiliary power, distribution system is antiquated, only 1 well. Financial problems.	Working with the water system to connect to the Jefferson Twp. water system.

	PWSID#	PWS NAME	INITIAL REASON LISTED	CURRENT STATUS
6	NJ1438001	Cliffside Park Water Assoc Inc	Listed in 2007. Exceedances of NJ secondary standards for iron and manganese. Recent lead and copper Action Level exceedances. Corrosion control treatment system in use not permitted. Undersized mains and inadequate storage.	Storage waiver issued. System installed two new wells. ACO extended to decommission well #1.
7	NJ1521001	Ocean Gate	Mains are 80+ years old, iron problems within the distribution system, and no financial capacity to maintain system.	Working with system on recommendations on technical, managerial and financial capacity. System has requested participation in the Engineering Initiative Contract and will also get an assessment of assets with recommendations for upgrades.
8	NJ1904004	North Shore Water Association	Facility lacks auxiliary power, distribution system is antiquated, only 1 well. Financial problems. Leaking oil tank contaminated well and treatment was installed by Spill Fund.	Working with system on drilling a test well. Septic systems near well cleaned out. Working with system on recommendations on technical, managerial and financial capacity.
9	NJ1922010	The Village of Lake Glenwood	Firm capacity being re-evaluated by Department. Portion of "Lower" distribution system is above ground. Undersized mains exist.	Test well to be drilled. System is participating in DEP's Engineering Initiative Contract and will also get an assessment of assets with recommendations for upgrades. Homeowners are engaged and financial management company hired.

	PWSID#	PWS NAME	INITIAL REASON LISTED	CURRENT STATUS
10	NJ1615001	West Milford MUA- Birch Hill Park	GWR Significant Deficiencies 06/07/2012 and significant sanitary survey deficiencies 06/24./2013.	RFP went out for a contract for management of system. The bids were received and are under review.
11	NJ1615002	West Milford MUA- Greenbrook Estate	GWR Significant Deficiencies 06/07/2012 and significant sanitary survey deficiencies 06/24/2013.	RFP went out for a contract for management of system. The bids were received and are under review.
12	NJ1615006	West Milford MUA- Parkway	GWR Significant Deficiencies 06/07/2012 and sanitary survey deficiencies 06/24/2013. Inadequate storage.	RFP went out for a contract for management of system. The bids were received and are under review.
13	NJ1615012	West Milford MUA- Awesting	GWR Significant Deficiencies 06/07/2012 and significant sanitary survey deficiencies 06/03/2013. Iron exceedances. Well #11 & 9 not operational.	RFP went out for a contract for management of system. The bids were received and are under review.
14	NJ1615014	West Milford MUA- Crescent Park	GWR Significant Deficiencies 06/27/2012 and significant sanitary survey deficiencies 06/27/2013.	RFP went out for a contract for management of system. The bids were received and are under review.
15	NJ1615016	West Milford MUA- Olde Milford Estate	GWR Significant Deficiencies 06/27/2012 and significant sanitary survey deficiencies 06/24/2013.	RFP went out for a contract for management of system. The bids were received and are under review.
16	NJ1615018	West Milford MUA- Bald Eagle Village	GWR Significant Deficiencies 06/07/2012 and significant sanitary survey deficiencies 06/03/2013.	RFP went out for a contract for management of system. The bids were received and are under review.
17	NJ1347001	Lake Como Borough	WQ complaints late 2013 to early 2013	Working with system to clean and line water mains, locate & exercise valves &

	PWSID#	PWS NAME	INITIAL REASON LISTED	CURRENT STATUS
				flush hydrants. System O&M manual updated.
18	NJ1306001	Belmar Borough	WQ complaints late 2013 to early 2013	System cleaning and lining & replacing mains in phases and flushing hydrants. Various improvements to wells, tanks and treatment plant have been completed. Working to engage management in planning for future improvements.
19	NJ1305001	Avon by the Sea Borough	WQ complaints late 2013 to early 2013	Working with system to clean and line water mains, locate & exercise valves & flush hydrants. System O&M manual updated.
	Non-Community			
20	1007308	Sarah Dilts Farm-Main Pavilion	Total Coliform MCL , NOV & ACO issued	New well #2 operational & old #1 well sealed 11/13/2013. Final Report to File dated 01/23/2014. NFA

NFA- no further action needed