State of New York

Department of Health

REPORT TO THE GOVERNOR:

AN ASSESSMENT OF THE PUBLIC WATER SYSTEM CAPACITY DEVELOPMENT PROGRAM

September 2014

TABLE OF CONTENTS

EXECUTIVE SUMMARY

In the 1996 Amendments to the Federal Safe Drinking Water Act (SDWA), Congress mandated that states develop capacity development strategies to enhance the ability of public water systems to provide safe drinking water. These strategies are aimed at helping water systems acquire and/or maintain the technical, managerial, and financial abilities needed to properly operate, manage, and finance their systems. With the assistance of a stakeholder group of State agencies, public water system owners, technical assistance providers, local government representatives, and environmental groups, the New York State Department of Health (the Department) issued their Capacity Development Strategy Report on August 6, 2000.

Each state's strategy had to include provisions for new water systems, for water systems applying for funding within the Drinking Water State Revolving Fund (DWSRF) program, and for existing water systems. Under this program, new and existing water systems are to be evaluated for their technical, managerial, and financial capabilities. The ultimate goal of New York's Capacity Development Program is to improve the capabilities of the approximately 9,000 public water systems throughout the state. Some of the key achievements made toward meeting this goal during this reporting period (FFY 2011 through 2013) include:

- Providing over $1 billion of financing (including short-term loans, long-term loans, grants and refinancing) to public water systems under the DWSRF program;

- Providing, through the DWSRF Market Rate Program , access to preferred market rate financing for public water system projects that are not eligible for grants or interest subsidies;

- Implementing the Storm Mitigation Loan Program (SMLP), which offers interest-free financing and grants to eligible public water systems affected by Hurricane Sandy to enhance resilience to flood damage or natural disasters. The total financing assistance available through the SMLP is $67.9 million;

- Implementing the Hurricane Emergency Loan Program, which offers interest-free financing of up to $1 million for repairs to municipal drinking water, storm water and/or wastewater treatment infrastructure damaged by Hurricane Irene or Tropical Storm Lee;

- Conducting over 650 on-site visits to provide direct assistance to approximately 324 public water system;

- Conducting over 18,000 sanitary survey inspections of public water systems;

- Reviewing emergency response plans and vulnerability assessments, and conducting security inspections of public water systems as an effort to increase the system's level of security and emergency preparedness;

- Providing or sponsoring direct training to over 1,600 water system operators at no cost to the operator; and

- Providing approximately $15 million to assist local health departments to enhance their drinking water programs.

As a result of these achievements, during FFY 2013, 820 public water systems demonstrated improvements in system capacity relative to the previous year; and 106 public water systems were no longer considered to be in "critical" need of capacity development.

The Capacity Development Program, along with other state resources, has helped public water systems in New York acquire and maintain the technical, managerial and financial capabilities necessary to properly operate, manage, and finance their systems. Although the goals of the Capacity Development Program are being achieved, the Department and its partners, including public water systems, must be vigilant in maintaining the capacity of public water systems. Sufficient technical assistance, owner and operator training, and financial assistance, particularly for economically distressed communities, must continue to be made available. This support will help to ensure public water system capacity which furthers public health protection.

The 1996 SDWA Amendments require that each state submit a report to the Governor assessing the efficacy of its Capacity Development Strategy and documenting the progress made towards improving the technical, managerial, and financial capabilities of its public water systems. This report satisfies the statutory requirements of the SDWA and assures that New York will not be penalized (i.e., withholding twenty percent of the DWSRF capitalization grant) for failure to comply.

GLOSSARY OF TERMS

Community water system (CWS) is a public water system with at least five service connections used by year-round residents or that regularly serves at least 25 year-round residents.

Drinking Water State Revolving Loan Fund (DWSRF) was created in 1996 as a result of New York State's enactment of Chapter 413 of the Laws of 1996 (Clean Water/Clean Air Bond Act) and passage of the 1996 Amendments to the Safe Drinking Water Act by the U.S. Congress.

New York State Department of Health (Department) is the agency responsible for administering the drinking water program in the state.

Noncommunity water system (NCWS) is a public water system that provides water to people in places other than their residences, such as restaurants, hotels/motels, campgrounds, and parks.

Nontransient noncommunity water system (NTNCWS) is a public water system that does not serve a resident population but serves at least 25 of the same persons, four hours or more per day, for four or more days per week, for 26 or more weeks, such as schools, offices and day care facilities.

Public water system (PWS) is a community, noncommunity, or nontransient noncommunity water system that provides piped water to the public for human consumption. The system must have at least five service connections or regularly serve an average of at least 25 individuals daily for at least 60 days out of the year.

Recommended Standards for Water Works (or "Ten State Standards") is a compilation of policies for the review and approval of plans and specifications for public water supplies put together by the Water Supply Committee of the Great Lakes--Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers.

Safe Drinking Water Act (SDWA) is the federal law passed by the U.S. Congress in 1974 and amended in 1986 and 1996, which authorizes the United States Environmental Protection Agency (USEPA) and the states to oversee public water systems and set standards for drinking water to protect public health.

Significant noncomplier is a public water system that persistently violates drinking water standards specifically defined in USEPA policy.

Technical Assistance (TA) Provider is a person, organization or group who assists small public water systems with activities such as troubleshooting operational issues, conducting leak detection, developing emergency response plans, conducting security and vulnerability assessments, collecting water samples for analysis, and other tasks to help improve operations and achieve compliance with drinking water regulations.

United States Environmental Protection Agency (USEPA) is the federal agency responsible for overseeing the state drinking water programs.

1.0 INTRODUCTION

The objective of the 1996 Safe Drinking Water Act Amendments (Amendments) is to ensure that public water systems provide safe drinking water to the public. The Amendments seek to prevent compliance problems and associated health risks by ensuring that public water systems have the capability to produce safe drinking water now and in the future. To achieve these goals, the Amendments include provisions for several prevention programs – one of which is the Capacity Development Program.

Water system capacity is the ability to plan for, achieve, and maintain compliance with all applicable drinking water standards. There are three components to capacity: technical, managerial, and financial. Technical capacity refers to a water system's ability to operate and maintain its infrastructure. Managerial capacity refers to the expertise of the water system's personnel to administer the system's overall operations. Financial capacity refers to the financial resources and fiscal management that support the cost of operating the water system. Adequate capability in all three areas is necessary for the successful operation of a public water system.

Capacity development is the process by which water systems acquire, maintain, and build upon their technical, managerial, and financial capabilities to enable them to consistently provide safe drinking water to their customers in a reliable and cost-effective manner. The capacity development program provides a framework for state agencies, local governments, stakeholder groups or organizations, water systems, and the public to ensure that drinking water systems acquire and maintain the technical, managerial and financial capacity needed to achieve compliance with applicable state and federal drinking water regulations.

The 1996 SDWA Amendments also require that each state submit a report to the Governor assessing the efficacy of its Capacity Development Strategy and documenting the progress made towards improving the technical, managerial, and financial capabilities of its public water systems. The purpose of this report is to provide an assessment of the capacity development program in New York and the statewide strategy for assisting public water systems in need. The report highlights the progress made toward improving the technical, managerial, and financial capabilities of public water systems in New York as a result of the Department's Capacity Development Program. This report satisfies the statutory requirements of the SDWA and assures that New York will not be penalized (i.e., withholding twenty percent of the DWSRF capitalization grant) for failure to comply.

2.0 CAPACITY DEVELOPMENT PROVISIONS IN THE SAFE DRINKING WATER ACT

The Amendments included three capacity development provisions:

1. All new community water systems and all new nontransient noncommunity water systems that begin operation after October 1, 1999, must first demonstrate that they possess adequate capacity.

2. States are prohibited from providing Drinking Water State Revolving Fund (DWSRF) assistance to public water systems that lack adequate capacity, unless that assistance is directly related to improving the system's technical, managerial, or financial capacity.

3. States must develop and implement a strategy to assist existing public water systems in acquiring and maintaining the necessary capacity to remain a viable system over the long term.

2.1 NEW SYSTEMS PROVISION

Section 1420(a) of the Amendments, the new systems provision, applies to all new community water systems (CWSs) and all new nontransient noncommunity water systems (NTNCWSs) that begin operations after October 1, 1999. New York State was required to demonstrate to the United States Environmental Protection Agency (USEPA) that it had the legal authority to ensure that all new CWSs and all new NTNCWSs had the technical, managerial, and financial capacity to comply with all applicable state and federal drinking water regulations. On February 26, 1999 the USEPA determined that New York State met the guidance and statutory requirements under Section 1420(a). On October 1, 1999, New York State began implementing the new systems provision of the Amendments.

To date, the Department has submitted fourteen annual new systems progress reports to the USEPA. In those reports, the Department documented that the evaluation of new systems is ongoing and addresses the required capacity determinations for new water systems. Since 2004, the new systems progress report has been included in the overall program implementation report submittal entitled, "*Capacity Development Program Implementation Report.*" The Implementation Report must be submitted to the USEPA annually.

2.2 DWSRF APPLICANTS

Section 1452(a)(3) of the Amendments applies to those public water systems that seek assistance from the DWSRF. Under this provision, states are prohibited from providing DWSRF assistance to a public water system that lacks the technical, managerial, and financial capability to ensure compliance with the Amendments or that is in significant noncompliance with applicable state and federal drinking water

regulations. However, states are allowed to provide DWSRF assistance to such a public water system if the use of the assistance will assure compliance, or if the owner or operator of the system agrees to undertake feasible and appropriate changes to acquire and maintain the system's technical, managerial, and financial capabilities over the long term.

To comply with the DWSRF provision of the SDWA Amendments, the Department and the New York State Environmental Facilities Corporation (EFC) conduct capacity assessments of all DWSRF applicants. New York State's capacity development review criteria for DWSRF applicants are described in each year's Intended Use Plan. An annual summary of the results of capacity assessments conducted on those systems seeking funding under the DWSRF is included in the Intended Use Plan, available on-line at http://www.nyhealth.gov/environmental/water/drinking/water.htm.

2.2.1 Technical Capacity Assessment

To assure adequate technical capacity, the applicant must demonstrate adequacy of source water, adequacy of infrastructure and technical knowledge. The Department reviews central office and local office records to assure that the system is being properly operated and maintained. The water system must not have outstanding drinking water compliance problems unless the project is aimed at correcting those problems. The engineering report and plans and specifications for the proposed project are evaluated to insure that the system has a reliable source for its drinking water and that it is adequately protected; that the project will maintain system compliance; and that the education, experience, and technical skills and capabilities of the system operator are appropriate for that system.

2.2.2 Managerial Capacity Assessment

To assure adequate managerial capacity, the water system must have clear ownership identity and be appropriately staffed by personnel with expertise to administer overall water system policies and operations. The Department reviews the applicant's managerial capacity to assure that management is involved in the day to day supervision of the water system, is aware and responsive to all required regulations, is available to respond to emergencies, is capable of identifying and addressing all necessary capital improvements, is responsive to their customers and is capable of keeping accurate records and assures financial viability. The water system must have a qualified water operator in accordance with the State's existing Operator Certification Program.

2.2.3 Financial Capacity Assessment

To assure adequate financial capacity, the applicant must have sufficient rates, charges and revenues to cover necessary costs, demonstrate credit worthiness and fiscal condition in accordance with EFC criteria. The EFC reviews the applicant's financial capacity during the application process to determine financial viability before awarding financial assistance. The EFC's review includes, but is not limited to, the project budget, municipal bond resolution(s), annual financial reports to the Office of the State Comptroller, and other financial information to assure adequate financial capacity of the applicant.

2.2.4 Systems with Inadequate Capacity

For all systems that seek funding under the DWSRF, the Department reviews any history of violations, outstanding compliance problems, reported source contamination or inadequacies, treatment failures, needs survey data, operations and maintenance issues, and operator and owner coverage to determine whether a system lacks adequate capacity. A system that requires improvements to obtain adequate capacity can apply to the DWSRF provided the improvements will ensure compliance and render the water system viable. Using the procedures outlined in Sections 2.2.1, 2.2.2, and 2.2.3 to evaluate the system's technical, managerial, and financial capacity, the Department assesses whether DWSRF assistance will help to ensure compliance. In addition, the Department consults with the local health department, which provides the daily oversight and regulation of the water system, to make this assessment.

2.3 EXISTING SYSTEMS PROVISION

Section 1420(c)(2) of the Amendments requires that New York State develop and implement a capacity development strategy to assist public water systems in acquiring and maintaining technical, managerial, and financial capacity. With the assistance of a stakeholders group of state agencies, public water suppliers, technical assistance providers, local government representatives, and environmental groups, in 1999 and 2000, the Department developed a comprehensive Capacity Development Strategy to assist public water systems. The Strategy considered:

- identifying and prioritizing public water systems most in need of improving their technical, managerial, and financial capabilities;

- identifying the institutional, regulatory, financial, tax, or legal factors that encourage or impair capacity development at the federal, state, or local level;

- describing how the State will use the authority and resources of the Amendments to assist public water systems in need;

- establishing a baseline measure of public water system capacity and a means to measure improvements in capacity of public water systems; and

- identifying those persons with an interest in capacity development.

The Department submitted a Capacity Development Program Strategy Report: Improving the Technical, Managerial and Financial Capabilities of Public Water Systems in New York in August 2000. On September 29, 2000, the USEPA determined that the New York State capacity development strategy met the guidance and statutory requirements under Section 1420(c) of the Amendments. On October 1, 2000, the Department began implementing the existing systems provisions of the Capacity Development Strategy.

To date, the Department has submitted thirteen annual "Capacity Development Program Implementation Report"(s) to the USEPA. The Implementation Reports documents that the Department is implementing a fully functioning existing water system plan according to its capacity development strategy.

3.0 ASSESSMENT OF CAPACITY DEVELOPMENT STRATEGY

3.1 OBJECTIVES

In the Capacity Development Program Strategy Report, the Department identified and indicated that it would undertake the following activities:

- identify and prioritize those public water systems that need assistance with their technical, managerial, and/or financial capacity;

- establish a baseline measure of capacity for public water systems;

- establish a method of measuring improvements in system capacity;

- provide direct assistance to public water systems in need;

- identify and attempt to overcome a prioritized number of barriers to capacity development;

- utilize other available resources in New York State to assist public water systems with their technical, managerial, and/or financial capacity; and

- continue to involve the public in the capacity development of public water systems.

3.2 ACCOMPLISHMENTS

The Department has conducted a number of activities to fulfill the objectives specified in the Capacity Development Strategy Report. Below is a summary of these activities.

- Initially, to identify and prioritize public water systems that need assistance with technical, managerial, and/or financial capacity, local health department staff were requested to identify public water systems in need and to provide a list of those public water systems to the Department's capacity development coordinator. Examples of systems in need of capacity include those with deteriorating infrastructure, inadequate source water quality and quantity, or lack of adequate rates to finance capital improvements or system operation. Local health department staff provided the list of systems in need and the capacity development coordinator prioritized the list and coordinated follow-up action such as coordinating technical assistance or training efforts, or providing information to the water system.

  Currently, the Department identifies systems in need of capacity development utilizing a data management system, along with direct input from local health department staff. The data management system is able to prioritize systems in need of capacity development by evaluating the system against specific criteria established in the Capacity Development Strategy Report. Local health department staff review the prioritized list and provide additional information regarding the specific type of assistance needed. In addition, the local health department staff may request that particular systems be classified at a higher or lower priority based on their intimate knowledge of the systems within their jurisdictions.

- To establish the initial baseline measure of capacity for public water systems, local health department staff reviewed public water systems identified to be in need against the capacity development evaluation criteria and provided this data to the Department's capacity development coordinator. The evaluation criteria along with compliance information, sanitary survey information, and/or comprehensive performance evaluation information were used to establish the initial baseline measure of capacity for public water systems.

  Enhancements to the initial baseline were made as a result of improved methods of collecting and storing data related to public water system operations and new data reported by the local health departments. As discussed previously, a data management system was created to prioritize systems in need of capacity development by evaluating each system against the capacity development criteria.

- To measure improvements in the capacity of public water systems, the data management system determines a score for each individual public water system based on the capacity development evaluation criteria. The capacity score for each system can be compared from year to year to determine the improvements in system capacity (see Section 4 for specific details). In addition, local health department staff provide feedback on particular systems in need of assistance as another way to track progress in system capacity development.
- Department staff, in conjunction with the local health department staff, provide direct technical assistance to systems in need through ongoing sanitary surveys/inspections, comprehensive performance evaluations, security inspections, and direct technical advice. In addition, prior to taking enforcement action on a public water system that persistently fails to comply with drinking water regulations, the Department engage in activities designed to assist the troubled system to come into compliance. These activities include engineering support, training, and establishing compliance schedules. Also, the Department has contracted with the New York Rural Water Association to provide technical assistance to small public water systems (see Section 4 for specific details).

- There were 165 factors identified in the Capacity Development Program Strategy Report that impair capacity development in New York State. Since it was not feasible to address each barrier, a prioritized number of barriers were selected to be addressed.

- Since implementing the capacity development strategy, the Department has addressed the following barriers that impair capacity development:

  - lack of formal coordination among funding organizations;
  - lack of knowledge at the community level regarding capacity development issues, community water systems, and how the capacity development of a water system ties into a community's overall well-being;
  - lack of up-front money for water project engineering and planning purposes;
  - lack of emergency preparedness plans;
  - lack of a statewide well registration program and a certification program for well drillers;
  - cost of training and certification of operators;
  - lack of knowledge of source and land use around the source;
  - public water system's lack of awareness of applicable drinking water regulations;
  - public water system's lack of ability to keep up with regulatory changes;
  - lack of adequate training for operators;
  - lack of knowledge of the availability of loan and grant opportunities;
  - numerous rules and regulations becoming burdensome to small governments;

- difficulty for staff at public water systems in keeping up with continuing regulatory changes mandated at the federal level. Numerous regulatory changes can be financially and technically burdensome to public water systems, particularly small water systems;
- lack of knowledge of local boards;
- local board failure to understand importance of training and proper staffing;
- lack of communication between government officials;
- lack of adequate staffing in local health departments to maintain oversight of public water systems in their jurisdiction; and
- lack of thorough sanitary inspections;

Addressing many of the barriers listed above involves ongoing efforts by the Department and its partners. For example, to ease the burden of numerous drinking water rules and regulations on small local municipalities and small private water systems, the Department sponsors and provides training throughout the state to water system operators at no cost to the operators. Since the last triennial Report to the Governor, training was provided to over 1,600 operators. In all, 29 training sessions were conducted on the following topics:

- Water Systems From Source to Tap;
- Ethics and Water System Sustainability; and
- Small Water System Energy Efficiency and Management.

Note: Many of the above listed training opportunities were funded by an USEPA federal grant to the Department. This grant expired in 2012 and no further resources have been allocated to support this training.

Another ongoing effort to address barriers to capacity development is training of Department and local health department staff. The difficulty of staff keeping up with regulatory changes was identified as a barrier to capacity development at the state and local levels. To address the training needs of the Department and local health department staff, the Department implemented a professional staff development program in which staff members are able to attend various training courses or workshops that provide continuing education credits for professional licenses. Through 2013, approximately 1,746 professional engineers received continuing education credits. In addition, the Department and/or local health departments provided or sponsored training for staff. Some of the topics for which training has been conducted include the following:

- Total Coliform Rule
- Stage 2 Disinfectant/Disinfection Byproducts Rule

- Violations of Stage 2 Disinfection Byproducts Rule
- Long Term 2 Enhanced Surface Water Treatment Rule
- Filter Backwash Recycling Rule
- Groundwater Rule
- Arsenic Rule
- Water Treatment Technologies
- Operator Safety/National Institute Management System
- Water System Security
- Sampling Issues and Laboratory Certification
- Water Valves
- Water Pumps
- Source Water Protection
- Disinfection By-Products
- Sanitary Surveys of Ground Water and Surface Water Systems
- Concepts of Public Water Supply
- Realty Subdivision Laws, Regulations, and Design Plan Submittals
- Plan Review for Water Improvement Projects
- UV Disinfection
- Cross Connections
- Community Water Fluoridation
- Identification of Ground Water Sources Under the Direct Influence of Surface Water (GWUDI)
- Engineering Ethics
- Blue-Green Algae Bloom Response
- Climate Change and Health
- Water System Sustainability
- Small Water System Design
- Renewable Energy Systems
- On-Site Wastewater Design Regulations

The lack of knowledge of the availability of loan and grant opportunities was identified as a financial barrier to capacity development. The New York State Water & Sewer Infrastructure Co-funding Initiative was created to address this barrier. In the past the New York State Water & Sewer Infrastructure Co-funding Initiative provided free workshops throughout the state that provided detailed information on available government funding and application processes and procedures. A co-funding committee continues to meet on a monthly basis to discuss issues related to sources of funding for water projects. In addition, the New York State Water & Sewer Infrastructure Co-funding Initiative maintains a website that provides detailed information on various funding opportunities for water and sewer projects. The free

co-funding workshops may be continued in the future depending on the availability of funds.

The Department's Drinking Water Enhancement (DWE) Program is another example of an ongoing effort to address several other barriers to capacity development. These barriers include lack of staffing, difficulty enforcing regulations, and lack of thorough sanitary inspections. The DWE Program provides grants to local health departments. The 2010-11, 2011-12 and 2012-13 state budgets included over $5.3 million for DWE grants. Although the DWE funding has decreased over this reporting period, this funding has allowed local health departments to add new staff or to maintain existing staff that assist in enforcing regulations, conducting sanitary surveys/inspections, and improving the technical, managerial, and financial capabilities of New York's public water systems.

- The Department utilizes other available resources in New York State to assist public water systems with their capacity needs. Various other government agencies within the State, as well as other organizations that partner with the Department on water supply issues, have programs, services, tools, and other available resources that can be used to assist public water systems to acquire, maintain, and build upon their technical, managerial, and financial capabilities. In addition to the Department of Health, the New York State Department of State, New York State Environmental Facilities Corporation, New York State Public Service Commission, New York State Department of Environmental Conservation, New York Homes and Community Renewal and the Office of Community Renewal, New York Water Environment Association, New York Association of Towns, New York Conference of Mayors, New York State Association of Regional Councils, New York Rural Water Association, New York Section of the American Water Works Association, Resources for Communities and People (RCAP) Solutions, Tug Hill Commission, and United States Department of Agriculture Rural Development provide education and training to water system owners, operators, and managers; direct technical, managerial, and/or financial assistance to public water systems; direct community assistance, training, and education to elected officials; and provide funding in the form of grants and loans to eligible systems in need.

- To involve the public in the capacity development of public water systems, the statewide capacity development strategy is promoted through the education and training of water system owners, managers and operators, government officials, other water system professionals, and consumers about the principles and goals of the program. This public outreach includes attending and participating in formal and informal meetings, making speaking engagements, and offering training or presentations to groups and individuals with an interest in the capacity development of public water systems. In addition, the Department posts relevant capacity development information on the Department's web site.

4.0 IMPROVING THE CAPABILITIES OF PUBLIC WATER SYSTEMS IN NEW YORK

The Department's Capacity Development Program is improving the operations of public water systems throughout the state, thus protecting the public health of all New Yorkers. Below is a summary of a number of specific achievements made towards implementing a successful capacity development program.

- The Department is a partner in the New York Water and Sewer Infrastructure Co-funding Initiative. The Co-funding Initiative was recommended in the Capacity Development Program Strategy Report and addresses key recommendations of the January 2001 report by New York State's Quality Communities Interagency Task Force entitled, "State and Local Governments Partnering for a Better New York." This initiative brings together those state and federal agencies that provide funding for drinking water and sewer projects to ensure optimum funding potential and assistance to New York's communities.

- The Department continues to provide a short-term financing program within its successful DWSRF program. The short-term financing program provides short-term interest free financing of up to three years in duration to recipients that are developing projects eligible for long-term DWSRF financing. In the three years since submitting the previous Report to the Governor (FFY 2011, FFY 2012, and FFY 2013) 43 short-term loans totaling $393,504,530 were provided to public water systems under the short-term financing program. During the same period, the Department also provided 140 long-term loans totaling $651,336,951 and 29 grants totaling $35,137,346. Overall, total financing and assistance of $1,079,978,827 was provided to public water systems under the DWSRF program.

- The Department, and the EFC, continues to offer the DWSRF Market Rate Program. The program offers eligible DWSRF recipients with project scores below the funding line on the Project Annual List in the Intended Use Plan access to a low cost financing alternative that does not include the traditional interest subsidy of other types of DWSRF financing. During FFY 2013, there were approximately 614 projects listed below the funding line on the Project Annual List in the Intended Use Plan.

- The Department continues to administer the financing of water system improvement projects using funds from the American Recovery and Reinvestment Act of 2009 (ARRA). This act was passed by Congress and signed by the President as a means of stimulating the American economy. New York State received approximately $86.8 million in ARRA funds for the DWSRF program. The DWSRF program is administered jointly by the Department and the New York State Environmental Facilities Corporation. Thirty projects were selected to receive ARRA funds to finance water system improvement projects or to finance projects that incorporate green infrastructure, energy efficiency, water efficiency, or other environmentally innovative

activity. Approximately $58.6 million was committed as ARRA principal forgiveness (i.e., a loan for which repayment of the principal is not required), $12.9 million was committed as ARRA grants, approximately $10 million was provided as ARRA financing (i.e., loan), which was leveraged to $30 million, and approximately $5.2 million was committed for set-asides for program administration and small system technical assistance. The total exceeds $86.8 million due to the leveraging capabilities of the DWSRF program. Combined with direct financing and additional subsidies, the total financing capacity from ARRA funds was approximately $141.4 million.

- The Department discourages the formation of new public water systems that lack technical, managerial, and/or financial capacity through a process of criteria and regulations. During FFY 2011 through FFY 2013, the Department approved 71 new community and nontransient, noncommunity public water systems to proceed with system development.

- During FFY 2011, FFY 2012, and FFY 2013, the Department determined that, 62 DWSRF applicants possessed adequate technical, managerial, and financial capacity and were thus eligible to receive DWSRF assistance. None of the DWSRF applicants during this period were determined to have lacked capacity and thus were ineligible to receive DWSRF assistance. Two of the 62 applicants that received DWSRF assistance were in significant noncompliance with applicable state and federal drinking water regulations. Providing financing to these applicants helped them achieve compliance by improving their water systems.

- The Department provided technical, managerial, and financial assistance directly to public water systems in need to help them achieve and maintain compliance with applicable state and federal drinking water regulations. As a result of this initiative, during FFY 2013, 820 public water systems demonstrated improvements in system capacity relative to the previous year. Also, during FFY 2013, 106 public water systems were no longer considered to be in "critical need" of capacity development when compared to the previous year.

- Since March, 2005 the Department has contracted the New York Rural Water Association (NYRWA) for a "circuit rider" assistance program to provide technical assistance to small community water systems and non-community water systems throughout the state. The current contract expires on July 31, 2018. The circuit riders are assigned tasks that include improving the capacity of the public water systems identified as being in need of capacity development. Through FFY 2013, the circuit riders conducted approximately 2,000 on-site visits to provide direct assistance to approximately 900 public water systems. The assistance provided included, but was not limited to:

  – Assisting small public water systems (PWSs) with compliance;

- Identifying, evaluating, and troubleshooting PWS problems and violations;
- Educating water operators, municipal officers, elected officials, and system owners;
- Providing necessary training (on-site or in class rooms);
- Assisting with the development of Emergency Response Plans;
- Assisting small PWSs with security and vulnerability assessments;
- Assisting small PWSs in developing rate structures;
- Assisting PWSs with leak detection programs;
- Collecting water samples for analysis;
- Evaluating PWSs current operating procedures;
- Locating funding and assisting with funding applications; and
- Coordinating activities with other technical assistance providers.

- The Department continues to work on increasing the level of security and emergency preparedness at public water systems. These efforts have included training of water system personnel; reviewing water system Vulnerability Assessments and Emergency Response Plans; notifying systems of potential and real threats; developing response protocols; providing financial assistance to systems; and conducting on-site security inspections of public water systems. Through FFY 2013, over 50 security inspections have been conducted.

- In 2001, the Department amended the Operator Certification regulations to ensure that all water system operators are properly certified and have sufficient technical and managerial training and experience to operate their public water systems. Since submitting the previous Report to the Governor in 2011, the Department has certified over 850 new operators and has renewed the certification of over 4,800 operators.

- The Department continues to sponsor and/or provide training to water system operators at no cost to the operators. As discussed in Section 3.0, the Department conducted 29 training sessions throughout the state to over 1,600 operators.

- The Department's Comprehensive Performance Evaluation Program reviews and evaluates the capabilities of existing drinking water treatment facilities to determine if the facilities meet current standards and performance goals. During the FFY 2010 through FFY 2013, the Department completed one comprehensive performance evaluation that included a detailed evaluation report, recommendations, and follow-up meetings with the community. Efforts are underway to revitalize this program and increase the number of Comprehensive Performance Evaluations conducted each year.

- The Department's Sanitary Survey Program provides for complete and detailed assessments of public water system physical plants, maintenance and operations, and

administrative abilities. One of the goals of this ongoing program is to review and evaluate the capabilities of existing facilities to determine if they can assure compliance with current and future drinking water standards and regulations. During FFY 2011 through FFY 2013, approximately 17,300 sanitary surveys/inspections were completed.

- The Department takes enforcement actions against public water systems that persistently fail to comply with state and federal drinking water regulations and demonstrate a lack of capacity. Prior to taking enforcement action against a public water system that persistently fails to comply with state and federal drinking water regulations, the Department engages in activities designed to assist the troubled system to come into compliance. These activities include engineering support, training, and establishing compliance schedules.

- The 2010-11, 2011-12 and 2012-2013 state budgets each included $5,313,200 million to assist local health departments to maintain and enhance their drinking water programs. This funding is used by local health departments to maintain/enhance their capacity to enforce state sanitary code regulations, conduct sanitary surveys/inspections, and assist in helping to improve the technical, managerial, and financial capabilities of New York's public water systems.

- As part of the DWSRF program, the Department promotes the regionalization and interconnections for public water systems in an effort to enhance the water system's managerial, technical, and financial capacity. Therefore, for projects seeking financial assistance, potential interconnections to other water systems must be a carefully considered alternative when the possibility to interconnect to another public water system exists. If the system applying for DWSRF assistance decides not to pursue a possible interconnection alternative when the possibility exists, a detailed justification satisfactory to the Department must be provided demonstrating that the interconnection is a technically, financially, or managerially disadvantageous option.

- Through the DWSRF program, the Department encourages communities that apply for financing to prepare and submit an asset management plan for their project. Asset management plans support communities by encouraging the building of sustainable infrastructure. The Department may require an asset management plan for any project that has shown deficiencies with respect to technical, financial, and managerial capacity.

- In an effort to build and enhance the capacity and sustainability of small public water systems the Department collaborated with the USEPA in promoting the awareness and use of EPA's CUPSS (Checkup for Small Systems) asset management tool. As part of this initiative, the Department partnered with New York Rural Water Association (NYRWA) to provide two training sessions to operators and circuit riders on the topic

of water system sustainability, which included CUPSS training. A total of 86 operators attended the training sessions.

- In response to Hurricanes Irene and Sandy, the Department, in conjunction with local health departments and other state and federal agencies, provided disaster response and recovery assistance to affected communities. In addition, the Department implemented the Hurricane Emergency Loan Program (HELP), which offers short term (up to 5 years) interest-free financing of up to $1 million for critical assessment and repairs to municipal drinking water, storm water and/or wastewater treatment infrastructure damaged by Hurricane Irene or Tropical Storm Lee. The Department also implemented the Storm Mitigation Loan Program (SMLP), which offers financing (75% interest-free / 25% grant) for municipally-owned treatment works and community water systems to reduce flood-damage risk and vulnerability or to enhance resilience to rapid hydraulic change or a natural disaster. These funds are available to public and non-profit entities in the 14 counties declared disaster areas from Hurricane Sandy. The SMLP is funded through the federal Disaster Relief Appropriations Act (DRAA), and a state match of 20%. The total financial assistance available through the DWSRF for the SMLP is $67.9 million ($56.6M from DRAA and $11.3M state match).

- The Department worked with the Great Lakes - Upper Mississippi River Board (GLUMRB) of State and Provincial Public Health and Environmental Managers to incorporate capacity development language into *Recommended Standards for Water Works*. As a result, the 2012 edition of *Recommended Standards for Water Works* now includes a recommendation that the engineering report for proposed water system projects include a discussion of technical, managerial and financial capacity. These standards have been adopted into the State Sanitary Code and are used as design standards for public water system infrastructure improvements in New York State.

5.0 CHALLENGES REMAIN FOR NEW YORK'S PUBLIC WATER SYSTEMS

There are many factors that impair the capacity development of public water systems. Since implementing the statewide capacity development strategy, some of these barriers have been overcome (see section 3.2). In subsequent years, the Department will continue to meet the challenges faced by New York's public water systems and assure the safety of the State's public drinking water. The Department and its partners, including public water systems, will need to be ever-vigilant in maintaining the necessary technical, managerial, and financial capabilities of public water systems, especially smaller system sufficient technical assistance, owner and operator training, and financial assistance, particularly for economically distressed communities, must continue to be made available.

5.1 LONG-TERM CHALLENGES

Public water systems continually install, upgrade, and replace the infrastructure on which the public depends for safe drinking water. The cost of infrastructure investment is borne primarily by water system customers in the form of water rates. However, general revenues from federal, state, and local governments may supplement revenues from users. For major capital improvements, long-term financing is often critical; it allows communities to spread out the cost of improvements over the expected life of a project, thereby allocating the costs to those customers who benefit from the improvements. Despite the importance of these projects for protecting public health, many public water systems may encounter difficulties in obtaining affordable financing for such improvements. The DWSRF Program, along with other federal, state, and local programs can provide financing for improvements necessary to protect public health and comply with drinking water regulations.

To help meet this challenge, the Department and the NYS Environmental Facilities Corporation are currently in the process of enhancing the DWSRF Program such that a larger pool of water system infrastructure projects will be eligible to receive subsidized interest rate financing. This change will make interest rate subsidy available for more projects with chronic health risks while continuing to assist those systems with projects that address acute public health risks. This change will also provide a more affordable funding alternative to many compliant public water systems that require drinking water infrastructure improvements to remain compliant and thereby continue to protect public health.

Despite this enhancement to the DWSRF Program, a significant gap still remains between the necessary capital improvements and the amount of available financing. It is estimated that, over the next 20 year, New York State will need over $39 billion to address aging drinking water infrastructure. This challenge is amplified by the decrease in federal funding for the DWSRF and public water supply program. In addition to funding, public water systems are challenged by an aging workforce. According to national statistics, it is estimated that 30% of the drinking water professionals are expected to retire in the next five years. Recruiting and maintaining a skilled workforce is a key element in maintaining a water system's capacity.

For most public water systems in New York, there is no mandated review of the rates that systems charge customers and no means to enforce appropriate rate structures. A public water system that is unable to raise the necessary revenues to support its operating expenses, risks its ability to produce safe drinking water. Legislation, regulations, and/or incentives that will encourage public water systems to review their water rates periodically and adjust them as necessary need to be considered.

Many public water systems, particularly small systems, have difficulty in understanding and complying with ever more comprehensive federal and state drinking water regulations.

For many years, the Department has taken the lead in developing and implementing training programs to assist small public water system owners and operators to understand current and future drinking water rules and regulations. Unfortunately, the federal grant that supported the majority of the Department offered training programs expired in 2012 and no additional funds have been allocated to support that training. In addition, the Department continues to use the DWSRF to ease the economic impact on public water systems that must comply with new drinking water rules and regulations.

The events of September 11, 2001, Tropical Storms Irene & Lee and Superstorm Sandy have resulted in greater awareness of the vulnerabilities of drinking water systems to intentional acts of terrorism as well as natural disasters. As drinking water infrastructure ages, it becomes more susceptible to failure, particularly during such extreme circumstances. The enhancement of security and emergency preparedness are essential to maintaining reliable supply and delivery of drinking water. The Department's Office of Health Emergency Preparedness is responsible for the coordination and management of all activities for public health and healthcare facility preparedness. This includes preparedness planning, and ensuring emergency plans work in drills, exercises and real life. The Department must continue to work closely with local health departments and other key partners to ensure every county will be prepared for the unexpected.

6.0 CONCLUSION

This report provides an assessment of the capacity development program in New York and the statewide strategy for assisting public water systems in need. In addition, this report summarizes the progress made toward improving the technical, managerial, and financial capabilities of public water systems in New York as a result of the Department's Capacity Development Program. Overall, New York State is achieving its goals through the effective implementation of capacity development strategy, however, challenges remain over long term funding, aging infrastructure, and an aging workforce. The state's Capacity Development Program, along with other state resources, has helped public water systems in New York acquire and/or maintain the technical, managerial, and financial abilities needed to properly operate, manage, and finance their systems. The Department will continue to strive to achieve the fundamental goals of the Capacity Development Program, and increase the awareness of stakeholders of public water systems as well as the general public about new challenges and issues related to water system capacity as they arise.