



Capacity Development

Annual Implementation Report

New System Capacity Development Program

Existing System Capacity Development Strategy

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This report is prepared by the Rhode Island Department of Health, Office of Drinking Water Quality. It is required by Section 1420 of the 1996 Amendments to the Safe Drinking Water Act and to maintain compliance with requirements of the EPA Drinking Water Revolving Loan Fund Capitalization Grant. This report covers the period of July 2010 – June 2011 and is presented annually to the Environmental Protection Agency - Region I. Copies of this report are available online at: <http://health.ri.gov./programs/drinkingwaterquality/index.php>

Rhode Island Capacity Development Program Mission

To participate in the development of sustainable water systems

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Introduction

The Safe Drinking Water Act and Capacity Development

In 1996 Congress amended the federal Safe Drinking Water Act (SDWA) requiring that individual states develop a strategy for enhancing the capacity of public water system personnel to provide safe drinking water to the communities they serve. In Rhode Island the strategy creates a partnership between public water system personnel and HEALTH, the state regulatory agency responsible for oversight of public water systems and the individuals who own and operate them.

There are three capacity development provisions included in the 1996 Amendments to the SDWA.

1. New community water systems (CWS) and non-transient non-community (NTNC) water systems that begin operation after October 1, 1999 must first demonstrate adequate capacity.
2. Public water systems that lack adequate capacity are prohibited from receiving assistance from the Drinking Water State Revolving Loan Fund (DWSRF) unless the 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 acquire and maintain adequate capacity.

HEALTH's capacity development strategy is aimed at helping water system personnel acquire and/or maintain the technical, managerial, and financial capabilities needed to operate and manage public water system utilities effectively. As required, the strategy includes provisions for new public water systems, existing systems, and systems applying for financing through the Drinking Water State Revolving Loan Fund. Through these provisions, Rhode Island and all states are able to partner with the Environmental Protection Agency to meet the main objective of the SDWA – protection of public health.

This report details the two components of the State of Rhode Island Public Water System Capacity Development Program which consists of new public water system capacity assurance and existing water system capacity development objectives.

1. State Capacity Development Program Annual Reporting Criteria

The State of Rhode Island implemented the activities discussed in this report in accordance with §1420(c). Neither the State's legal authority to implement the New Systems Program or the program control points has been modified during the reporting period.

New Public Water System Capacity Determinations

New systems must have sufficient capacity to meet National Primary Drinking Water Regulations (NPDWR) in order to be licensed to operate as a water supplier in Rhode Island. The following table reflects new community and non-transient non-community water systems licensed to operate within the past three state fiscal periods (July 1, 2008 through June 30, 2011). Effective with this report RI utilizes the EPA Enforcement Targeting Tool (ETT) as one indicator for assessing a systems lack of the capacities required for sustainability. Based on the ETT method for calculation of enforcement priority points, none of systems licensed to operate within the past three state fiscal periods is determined to be in significant noncompliance with drinking water standards related to federally regulated contaminants. Program staff will continue to monitor new systems and offer assistance when appropriate or when requested by system personnel.

System	PWS ID	Type	Status
Hopkinton Industrial Park LLC/Bedrock Crystal	2980430	NTNC	Active - 08/01/2008
Town of Johnston, Capitol Street System	2980435	C	Active - 01/01/2009
Town of Johnston, Everbloom Street System	2980433	C	Active - 01/01/2009
Town of Johnston, Nardolillo Street System	2980434	C	Active - 01/01/2009
Town of Johnston, Taylor Road System	2980432	C	Active - 01/01/2009

2. Capacity Development and the Drinking Water State Revolving Loan Fund

Public water systems seeking assistance through the DWSRF must qualify based on Section 1452(a) (3) of the 1996 SDWA Amendments. Under these Amendments, public water systems that lack technical, managerial and financial capacity or that are in significant noncompliance with State and Federal drinking water regulations cannot qualify for DWSRF assistance. The exception is that assistance can be provided if it assures compliance, or, if it enables the system owner(s) to acquire and maintain these capacities.

The capacity development and operator certification program staff, together with the DWSRF program manager make individual determinations regarding the required capacities based on information available through new system applications, DWSRF applications, monitoring, reporting, and violation histories, consumer confidence reports, enforcement and compliance activity, and water system inspection reports. Determinations become part of the DWSRF and/or New System application. During the past three year fiscal reporting periods the RI DWSRF program reviewed and funded projects totaling \$90,134,000. Capacity Development assessments were a part of the review process as required.

3. Existing System Strategy

Under Section 1420(c)(2) of the 1996 SDWA Amendments, Rhode Island and all states are required to develop and maintain a capacity development strategy which assists existing public water systems in acquiring and maintaining the technical, managerial, and financial capacities required for achieving and maintaining compliance. This strategy was submitted for approval in August 2000 and subsequently implemented. The following describes the programs, tools, and activities developed under this strategy.

HEALTH maintains contracts with industry professionals and organizations to assist water systems through on-site training and one-on-one technical training. These contracts have been developed to aid the Office of Drinking Water Quality (DWQ) in proactively addressing small water system sustainability issues and include the following activities:

Outreach to encourage use of the DWSRF
Preparation of consumer confidence reports
Circuit Rider troubleshooting of water systems
Small water system operator training
Small water system contract operator guidance
Small water system engineering assistance
Small water system management guides
Municipal training and public outreach
Small water system facility improvement plans

The following describes the contracts through which these activities are provided.

Atlantic States Rural Water and Wastewater Association (ASRWVA)

This contract was awarded May 28, 2009 for a 12-month period with the option of renewal for four (4) additional twelve (12) month periods at the exclusive option of the state, based on vendor performance and the availability of funds. The contract includes provisions for deliverables related to providing information and technical assistance to small water system personnel. It includes production and distribution of small system financial newsletters, public information meetings targeted toward water systems and town officials on water system improvement financing, development and conducting of continuing education courses for water system operators, conducting training courses pertaining to the roles and responsibilities of board members and elected officials, on-site technical assistance and training for 25-35 small systems per month, on-site circuit rider assistance provided to approximately 120 eligible water systems per year, targeted technical, financial and managerial training and assistance for potential or existing DWSRF borrowers, operator exam preparation courses, and preparation of consumer confidence reports for eligible water systems.

The results of this contract are as follows:

Task	Assisted
Small system assistance with SDWA compliance	10 system per month
On-site visits to small community and non-transient, non-community systems	25-35 visits per month
Technical assistance to potential SRF borrowers	6 Systems
T, M, F training to potential SRF borrowers	4 Systems

253 system representatives and operators attended and received training credit for various courses and workshops, including:

Tank Maintenance, Repair and Cleaning
 Applied Math for Operators
 Water System Basics
 RI Operator Certification Exam Preparation
 New Directions in Water Utility Financing
 Operator Regulations, Responsibilities and SOPs
 Roles and Responsibilities of Water System Board Members

Backflow Prevention Essentials
 Infrastructure Replacement Planning
 Regionalism, Consolidation and Costs Sharing
 The Groundwater Rule
 RI Water Operator Training
 Preparing for Water Emergencies

The ASRWVA Circuit Rider has been collaborating with our internal staff to:

- Target specific systems with lead and copper problems
- Conduct follow-up on-site visits after inspections and/or violations
- Focus on very small water systems and systems that have a history of non-compliance

Circuit Rider program outcomes:

- Each month, the Circuit Rider visited approximately 30-35 water systems
- Site inspection deficiencies were resolved in a timely manner
- System personnel were assisted with a variety of lead and copper issues
- Water quality sampling plans were developed and submitted for approval
- System personnel were better prepared to assess and react to positive Bacti sample results
- Information, guidance and one-on-one training for public notification and the groundwater rule were provided when needed

The Circuit Rider plays a major role in our capacity development efforts by distributing training materials and handouts of rules and regulations; on-site tutoring to prepare operators for the VSS “very small system” exam; and providing training information for operator certification renewal credits. Thus far, the Circuit Riders’ on-site assistance to the water systems has proven to be a valuable approach in eliminating some of the barriers that small system operators face in obtaining training. As a result of this effort, 10 operators received tutoring on-site to prepare for the VSS exam and 36 small system operators renewed their certifications.

This year, ASRWVA, in collaboration with DWQ staff, successfully assisted 69 small community water systems with development and production of their consumer confidence reports. They conducted extensive follow-up via e-mail, phone, or fax to make sure that the consumer confidence reports were distributed properly.

Atlantic States Rural Water and Wastewater Association (ASRWVA)

A separate contract was awarded to ASRWVA on February 12, 2010 for a 12-month period with the option of renewal for four (4) additional twelve (12) month periods at the exclusive option of the state, based on vendor performance and the availability of funds. The contract includes provisions for deliverables related to development and production of Small Water System Management Guides and training.

ASRWVA staff is responsible for working with Capacity Development staff to complete ten Management Guides per contract year and ensuring that system representatives have a clear understanding of applicable regulations, obligations, and managerial and financial concepts covered in the guides. The Guides serve as the day-to-day business practices guide for use by the owners, officials and employees of the water system and provide:

- A location for water system records
- A process for evaluating deficiencies and improvements required for proper planning
- A list of operation and maintenance duties for easy review and use by current and future water system personnel
- A three-hole system for the ease of updating documents and records as required
- A central filing system for the information, forms, templates, policies and procedures that will become standard operating procedure
- A record of the systems technical, managerial and financial capacities required in the federal Safe Drinking Water Act
- A separately bound Resource Guide specific to each systems needs

The table below provides a list of systems that have participated in the Management Guide program to date.

System	PWS ID
Heritage Home Park Co-op	2051311
Maple Hill Mobile Home Park	2973130
Prudence Island Water District	1592023
Sunset Cove Recreational Area	2000053
Slatersville Public Library	1615614
Abbey Lane Community Assoc., Inc.	1000009
Hebert Nursing Home Inc.	2000083
Wrights Farm Corp	2973119
Paige Associates	1900020
Harrisville Fire District Water Dept.	1858411
Chimera Inc.	2519424
Touisset Point Water Trust	1615636
Johnston Water Control Facilities	2980183
Lawrence Sunset Cove Assoc.	2980003
Saugatucket Springs	2980423
Foster Town Hall	2980322
Cooper Hill Office Complex	2980134
Meadowbrook Waldorf	2980422
Hillsdale Housing	2942525
Richmond Water Department	1000040

New England Water Works Association (NEWWA)

This contract was awarded August 5, 2009 for a 12-month period with the option of renewal for four (4) additional twelve (12) month periods at the exclusive option of the state, based on vendor performance and the availability of funds. The contract includes provisions for deliverables related to classroom setting and on-site training of small water system operators to improve technical, managerial, and financial capacities and assist with exam preparation.

As a result of this contract sixty-three operators attended and received training credit for the following courses:

- Preventive maintenance for centrifugal pump operation
- Technical training and very small system drinking water operator exam preparation
- Developing a flushing program to meet SDWA requirements
- Understanding the importance of contact time (CT) in disinfection
- Where it all begins: Knowing & protecting your source water
- Pumps and pumping overview
- How to avoid violations by eliminating pathogens in your water system
- Understanding and complying with the Safe drinking Water Act
- Using computer technology as a tool to operate your water system

The Horsley Witten Group

Through our Emergency Preparedness and Security efforts the Horsley Witten Group was contracted to conduct Tabletop Exercises focused on local and regional calibration for water industry and emergency preparedness first responders. The exercise was attended by approximately 35 individuals and provided emergency specific capacity development assistance to representatives from four water systems.

Weston & Sampson Services, Inc.

This contract was awarded September 1, 2009 for one 12-month period. The contract includes provisions for deliverables related to development of a model cross-connection control plan template, cross-connection control circuit rider assistance, and public education materials. This contract was developed through the DWQ Public Water System Security and Emergency Preparedness program. As a result of this contract 55 systems attended an initial training enhancing the technical capacities of personnel in attendance. System implementation of the tools and templates varied.

Northeast Water Solutions Inc.

This contract was awarded May 1, 2011 for a 12-month period with the option of renewal for three (3) additional twelve (12) month periods at the exclusive option of the state, based on vendor performance and the availability of funds. The contract includes provisions for deliverables related to assessing and prioritizing public drinking water system infrastructure projects through the development and production of Small Water System Facility Improvement Plans. The contract is in the first year and the following systems are participating in the program:

Lawrence Sunset Cove Association - PWS ID # 298003	Pascoag Utility District - PWS ID# 1592020
Cooper Hill Office Park - PWS ID# 2980134	Paige Associates - PWS ID# 1900020
Foster Town Hall - PWS ID# 2980322	The Village on Chopmist Hill - PWS ID# 2943224
Shady Acres Nursing Facility - PWS ID# 2000165	First Student, Inc. - PWS ID# 2980384
West Glocester Elementary School - PWS ID# 1900041	Ponagansett High School - PWS ID# 1583829

Additional Contracts

In addition to the contracts already in place and discussed above the Capacity Development program has pending requests for additional contracts as discussed below.

Small Water System Contracted Services Guidance

Historically, the small water system owner and contract operator relationship has been ill defined. The system owner must rely on the operator to ensure proper operations and maintenance while the contract operator must adhere to a contractual definition of duties and responsibilities. A contract will be awarded approximately October 1, 2011 for a 12-month period with the option of renewal for one (1) additional twelve (12) month period. Through this effort a professional technical assistance provider will develop and publish guidance documents. These materials will help small water system owners enter into contracts that result in competent and appropriate water system operations and maintenance; and assist HEALTH and the Rhode Island Board of Certification of Operators of Water Supply Treatment and Distribution Facilities in protecting and promoting public health and safety through the effective application of this guidance.

Small Water System Engineering Assistance

The purpose of the Small Water System Engineering Assistance Program is to provide engineering services to assist small drinking water systems with the implementation of solutions to special situations occurring within their systems, particularly public health and safety concerns. A contract will be awarded approximately October 1, 2011 for the award of one 12-month contract with the option of renewal for two (2) additional twelve (12) month periods. The engineering contractor will complete final plans and specifications for water system improvement projects needed to comply with state and federal standards to protect public health. Eligible water system projects are varied and include but are not limited to new construction, renovation or replacement, or consolidation of systems. Eligibility priority will be given to those systems that have participated in the Small Water System Facility Improvement Plan program. The need for improvements will have been uncovered and documented in the Facility Improvement Plan and this program will provide the system with the qualified engineering services required to gain project approval.



4. Identification of systems in need of Capacity Development

As documented in the original strategy, the State of Rhode Island has in the past prioritized systems through a priority ranking method which assigns each system to one of four categories (Level 1, Level 2, Level 3, Level 4) based on a staff evaluation of the following criteria:

- Compliance data (HSNC, sanitary survey results, monitoring data, compliance officer input, and staff knowledge);
- DWSRF data (application materials, project priority list, disadvantage community status, intended use plan);
- Public Water System data (CCRs, source water assessments, operator certification status, consumer complaints); and
- Information provided through annual license renewal applications.

The water system ranking does not rate systems from best to worst. It identifies systems that would benefit from the capacity development tools we have to offer. Level 3 systems that can be brought into compliance are the highest priority. Level 2 systems that can be advanced to level 1 with technical or financial assistance are the next highest priority. In the past it was determined that Level 4 systems could not be brought into compliance through Capacity assistance. Consequently, enforcement action was required.

The Capacity Development program has developed an additional and very useful tool that enables DWQ staff to partner with system personnel, owners, and operators, to bring Level 4 systems back into compliance in conjunction with enforcement efforts. Once a Level 4 system is recognized, Capacity Development staff and DWQ management undertake an evaluation of the system's ability to provide safe drinking water to its consumers. Our assessment of the capacities required to effectively meet this obligation provides an analysis of their current and future sustainability. The evaluation involves a 5-step process managed by Capacity Development staff.

The 5-step program applies the Principles of Effective Utility Management and are:

Step- 1 Analyze & Engage –

Establishing the need for assistance by engaging DWQ staff in an evaluation process

Step- 2 Assess

Identifying capabilities & assessing current conditions

Applying attributes of sustainable water systems

Ranking of importance & graphing results

Capital improvement planning

Step- 3 Respond

Development of a corrective action plan

Step- 4 Implement

Carrying out the plan through capacity development facilitation

Step-5 Evaluate -

Assessing results

We have applied this process to three successful test cases and are developing a program report and success stories to submit with the FY12 Capacity Development Program report.

5. Additional methods utilized to identify and address system capacity concerns

The Capacity Development Program maintains contact with all community and non-transient non-community water systems and their operators. This is accomplished through a) the creation of a Capacity Development Brochure introducing staff and services, b) Providing a survey/assessment to systems visited by the circuit rider, c) providing follow-up surveys and phone calls to circuit rider visits, operator training courses, d) spring and fall Regional DWQ Roundtable meetings, and e) staff contact based on need.

6. Program Review

A formal review of implementation of the existing strategy was not conducted.

7. Strategy Modifications

There were no modifications to the existing system strategy during this period.

HEALTH understands that periodic review and modification of our Strategy for Existing Systems is a required element of our overall Capacity Development Program, and is therefore directly related to the sustainability of the State's 490 public water systems. Current assistance to public water systems is aligned to the implementation efforts defined in the State's original strategy.