

# Report to the Governor: Public Water System Capacity Development Program



## Dear Governor McKee and Members of the General Assembly

The Rhode Island Department of Health (RIDOH) Center for Drinking Water Quality is pleased to submit its 2020-2023 Triennial Public Water System Capacity Development Report.

The *Safe Drinking Water Act* (SDWA) is the main federal law that ensures the quality of Americans' drinking water. Under SDWA, the US Environmental Protection Agency (EPA) sets standards for drinking water quality and delegates primary enforcement responsibility (also called primacy) to states and Indian Tribes for public water systems who implement those standards. For Rhode Island, the EPA has granted primacy to the RIDOH Center for Drinking Water Quality.

SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. (SDWA does not regulate private wells which serve fewer than 25 individuals.)

The 1996 Amendments include a requirement for development of a triennial report to the Governor of each state. This report is intended to inform the Governor about the efficacy of the Public Water System Capacity Development Program.

States use capacity development to efficiently target the technical, financial, and managerial needs of many small public water systems and then directly address those needs through specific activities that help systems enter and remain in compliance.

This report is prepared by the RIDOH Center for Drinking Water Quality. It is required by Section 1420(c)(3) of the 1996 Amendments to the SDWA and to maintain compliance with requirements of the EPA Drinking Water Revolving Loan Fund Capitalization Grant. This report covers the period of July 2020 through June 2023 and is presented triennially to the Governor and the EPA - Region I. Copies of the report are available online at: [http://health.ri.gov/programs/detail.php?pgm\\_id=158](http://health.ri.gov/programs/detail.php?pgm_id=158)

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## Introduction

The mission of the public drinking water program is to protect and promote the health and safety of the people of Rhode Island by ensuring the quality of the State's public drinking water supplies for use by Rhode Island residences, businesses, hospitals, nursing homes, schools, restaurants, industry, and fire and emergency response. The Center for Drinking Water Quality works hard to maintain an excellent record of meeting this high-priority public health responsibility. Capacity development is an integral part of ensuring that small public water systems can achieve and maintain compliance.

In Rhode Island, RIDOH is the agency responsible for carrying out the Public Water System Supervision (PWSS) program. Since 1996, when the SDWA was amended to create the State Drinking Water Revolving Fund (DWSRF), RIDOH has received additional federal funding in the form of set-asides from the loan fund capitalization grant to assure safe drinking water. This grant allows RIDOH to develop and implement the PWSS program to adequately enforce the requirements of the SDWA and ensure that water systems comply with national primary drinking water regulations. In 2022, the Bipartisan Infrastructure Law/Infrastructure Investment and Jobs Act funding was incorporated into the DWSRF and is expected for five years.

In 2022, RIDOH invested \$3,983,537.95 in state and federal funds in Rhode Island's public water systems, aquatic venues, and bottled water vendors.

<b>Federal Funds</b>	<b>\$3,528,304.95</b>
<b>State Funds</b>	<b>\$312,633.00</b>
<b>Restricted Receipts</b>	<b>\$142,600.00</b>
<b>Total Budget:</b>	<b>\$3,983,537.95</b>

Key activities include:

- Develop and maintain State drinking water regulations;
- Develop and maintain an inventory of public water systems throughout the State;
- Develop and maintain a database to keep compliance information on public water systems;
- Conduct sanitary surveys, conformance, and compliance inspections;
- Support technical, managerial, and financial capacity of public water systems;
- Review public water system plans and specifications;
- Provide technical assistance to managers and operators of public water systems;
- Ensure that public water systems regularly inform consumers about the quality of the water that they are providing;
- Certify laboratories that can perform the analysis of drinking water used to determine compliance with the regulations; and
- Carry out an enforcement program to ensure that the public water systems comply with all the State's requirements.

## Capacity Development Strategies and Goals

The mission of the capacity development program is to identify methods for assisting water utilities to achieve sustainable operations over time. RIDOH maintains a capacity development strategy to develop the financial, managerial, and technical capacities of qualifying water system personnel.

The State's capacity development strategy addresses the components outlined in 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 capacity;
2. Public water systems that lack adequate capacity are prohibited from receiving assistance from the Drinking Water State Revolving Fund (DWSRF) unless assistance is directly related to improving the system's technical, managerial, or financial capacity;
3. States must develop and implement a strategy to assist public water systems in acquiring and maintaining adequate capacity; and
4. States must incorporate and promote asset management in their capacity development strategy.

The State of Rhode Island implemented the activities discussed in this report in accordance with Section 1420(c) of the SDWA. Neither the State's legal authority to implement the new systems program or the control points have been modified during the reporting period.

## Capacity Development Strategies Modification and Asset Management

During this reporting period, RIDOH made updates to the Capacity Development Strategy to satisfy the requirements of the 2018 *America's Water Infrastructure Act* (AWIA). AWIA requires state capacity development strategies to include a description of how the state will encourage the development of asset management. As a result of the update, RIDOH's Capacity Development Strategy describes asset management and its benefits. There was also a significant focus on how to enrich asset management promotion to PWS.

RIDOH's Capacity Development program aims to ensure that public water systems (PWS) can achieve the maximum technical, managerial, and financial (TMF) capacity. RIDOH recognizes that asset management is one of the best ways to achieve maximum TMF capacity for Rhode Island PWS. Asset management is a process used by PWS to help guide planned and unplanned maintenance to ensure that capital assets, such as pumps, motors, pipes, etc., can be repaired, replaced, or upgraded on time. Asset management includes a financial element to make certain that the water system has enough money to pay for the improvements. RIDOH encourages the development of asset management capacity in the following ways.

RIDOH allocates DWSRF set-asides to asset maintenance programs such as Facilities Improvement Plans (FIPs) for small community and non-transient, non-community water systems (NTNCs). FIPs are developed through collaboration with a third-party contractor, typically a private engineering firm. Contractors work with the PWS to develop an engineering evaluation and a complete financial evaluation. These evaluations inform a long-term plan that includes capital projects, upgrades, and preventive maintenance. Once PWS become aware of their assets, they can create procedures and policies to maintain them. FIPs have been proven to be an effective way to encourage asset management.

Asset management is encouraged through technical assistance on financial and managerial capacity. RIDOH has established a contract with a third-party organization to provide training on financial and managerial capacity, including asset management to PWS receiving principal forgiveness or below-market interest rates. This is a crucial part of the DWSRF loan process that helps PWS strengthen their financial and managerial knowledge before closing on a DWSRF loan.

PWS that produce over 50 million gallons of water per year prepare a Water Supply System Management Plan (WSSMP) for the Rhode Island Water Resources Board. WSSMPs are required to include detailed system information, current and projected demands, water quality protection, financial and emergency management, system goals, and implementation schedules—the accounting of which supports asset management. Elements of the WSSMP that address asset management principles are system management (including system safety and reliability), infrastructure maintenance, repair, and reduction of leakage. The Water Resources Board uses the *Water Use and Efficiency Act* annually reported data to observe trends and to plan for statewide strategic water supply.

Lastly, RIDOH collaborates with New England Water Works Association to offer a semiannual asset management training course to drinking water operators. This course assists operators with starting an asset management planning process that can stabilize or reduce operational costs while increasing compliance, dealing with aging infrastructure, and boosting the reliability and efficiency of a utility's assets.

## System Identification and Prioritization

Of the State's 476 public water systems, there are 89 community water systems (CWS), 80 non-transient, non-community water systems (NTNC), and 307 transient non-community water systems (TNC). RIDOH's PWS capacity development strategy includes a prioritization framework designed to identify systems in need of capacity assistance and provide proactive intervention.

<b><i>CWS</i></b>	Serve 25 or more year-round residents or have 15 or more year-round residential connections
<b><i>NTNC</i></b>	Serve 25 or more of the same people at least six months of the year. Examples include child care facilities, schools, and office buildings.
<b><i>TNC</i></b>	Serve 25 people or more people per day at least 60 days of the year. Those served need not be the same people. Examples include hotels, restaurants, and campgrounds.

Staff evaluates data from multiple sources to determine leading indicators that a PWS can benefit from technical, managerial, and financial capacity-building. They review compliance data, sanitary survey reports, DWSRF-related documentation, quarterly enforcement targeting tool reports, and annual licensing applications.



## New Public Water System Capacity Assurance

New systems must have sufficient capacity to meet National Primary Drinking Water Regulations (NPDWR) as a requisite to becoming licensed as a water supplier in Rhode Island. During the reporting period, RIDOH issued licenses to eight new PWS, four of which are CWS, and four of which are TNC.

Number	Name	Active Date	Federal Type	Population
RI2980480	Richmond Ridge Development	8/6/2020	CWS	172
RI2980481	Liberty Hill	10/26/2020	CWS	48
RI2980485	Seasons Corner Market #21	5/6/2021	TNC	170
RI1000020	Rockland Oaks	8/1/2021	CWS	26
RI2980486	Quonnie Farms	11/18/2021	TNC	265
RI2980048	Chapmans Food and Drink	1/11/2022	TNC	100
RI2980487	South Trail Commerce	12/28/2022	CWS	175
RI2980484	Tilted Barn Brewery	5/5/2021	TNC	25

Rhode Island uses the EPA Enforcement Targeting Tool (ETT) as one indicator for assessing a system's ability to achieve sustainable operations. The ETT calculates enforcement priority points. Based on the ETT calculation, one of these newly activated were determined to be out of compliance with drinking water standards for federally regulated contaminants. This community system has been referred to the capacity development and DWSRF programs within our center for further assistance.

Program staff continuously monitor new systems and offer assistance when appropriate or when requested by system personnel. Four of the eight new systems received violations during this three-year period. Of the six total violations, five were for failure to monitor (two for disinfection by-products and three for total coliform). The sixth violation was for failure to submit a consumer confidence report to the Center for Drinking Water Quality and/or consumers by the due date.

RIDOH implements a regulatory requirement that new system representatives must attend an onboarding meeting prior to final approval and initial operations. This provides the opportunity to meet with rule managers and subject matter experts to ensure that they understand the obligations of owning a PWS.

Onboarding meetings were held, and capacity development program staff continues to work closely with all RIDOH staff to develop and complete supporting documentation and resources to assist systems in achieving and maintaining compliance.

RIDOH also offers these meetings to PWS that have changed ownership, experienced board or leadership transitions, or changed to a more stringent classification level (such as from TNC to NTNC). In 2023, RIDOH staff offered these meeting as a reoccurring monthly series. During the reporting period, ten PWS attended these meetings for both new system onboarding and as a result of changed ownership.

## Capacity Development and Outreach to Existing Systems

Changing perceptions and creating an understanding of water quality and quantity issues requires progressive and proactive rethinking of our partnerships and responsibilities. The Capacity Development program brings RIDOH's drinking water program functions together to partner with suppliers and consumers who all must play a role in assuring the capacity of new PWS and strengthening existing water system capabilities.

RIDOH's Capacity Development program meets this challenge by implementing a set of documents and resources to assist systems with common challenges and obstacles.

RIDOH is staffed with an outreach specialist who is charged with creating documentation, guidance, and instructional materials that address system needs and support system personnel in increasing their knowledge of water system operations and management. The outreach specialist can evaluate and prioritize these needs through integrated work with both operator certification staff and drinking water compliance staff. Direct interaction with the operator community as well as participation in internal and external compliance meetings, where routine water system issues and challenges are discussed, allows the outreach specialist to tailor outreach efforts to common issues faced by PWS personnel.

Documentation developed during this reporting period includes:

- Drinking Water Sampling Reporting Codes Guidance (fact sheet),
- Change Active Status of a PWS (fact sheet),
- Engineering Review and Application Status of Drinking Water Projects (web content),
- Understanding and Complying with the Revised Total Coliform Rule (web content),
- Cybersecurity for PWS Resources Section (web content),
- Operations and Maintenance Manual Development Checklist (fact sheet),
- PFAS Sampling Guidance (fact sheet),
- PFAS FAQ updates (web content), and
- Updates to Seasonal Start-up Process (web content, updated form, and accompanying guidance).

Documentation in development during this reporting period includes:

- Guidance for New PWS or PWS with Significant Updates (fact sheet series),
- Information about Revised Lead and Copper Rule (web content),
- Guide to Drinking Water Viewer (fact sheet),
- Aquatic Venues Self-Assessment (form with guidance).

### **Evaluating for Effectiveness**

RIDOH sends mass emails via the Mailchimp platform to provide direct outreach, to introduce new documents and webpages, and to pass along capacity development opportunities. Mailchimp generates a report for each email "campaign" sent that shows the open rate for the email and the click rate for the hyperlinks to documents and webpages within the email, including a performance comparison against the average RIDOH campaign as well as against other government agencies using Mailchimp.

Direct and constant collaboration with drinking water program staff during outreach development ensures critical information is accurately conveyed to PWS.

### **2022 Capacity Development Strategy Survey**

While developing the updated capacity development strategy, RIDOH created the 2022 Capacity Development Strategy Survey and distributed it to all active Rhode Island public water systems. The primary purpose of this survey was to identify what water systems needed in order to improve their technical, managerial, and financial capacity. RIDOH has used the answers to this survey to update the capacity development strategy and to develop a more comprehensive understanding of the asset management needs in the state.

## Capacity Development and Compliance

The Capacity Development program brings RIDOH's drinking water program functions together to assure the capacity of new public water utilities and strengthen existing water system capabilities.

By partnering with compliance and enforcement staff, we have been successful in assisting not only smaller utilities such as schools, factories, restaurants, and child care facilities that maintain their own water supply, but also, major municipal water systems.

The Center for Drinking Water Quality regulates 476 public water suppliers. The assistance provided through our capacity development and compliance partnership includes:

- Identification and prioritization of need based upon compliance history;
- On-site technical assistance and one-on-one trouble shooting to aid in the return-to-compliance;
- Assistance developing water system best practices and standard operating procedures; and
- Guidance documents and fact sheets designed to reinforce regulatory requirements and educate new system owner and staff.

Capacity Development staff attend RIDOH's weekly compliance meeting in which all open enforcement actions and sanitary survey findings are reviewed by a cross-functional team. This team is comprised of representation from compliance, inspections, operator certification, capacity development, outreach and engineering and has proven to be an invaluable mechanism to identify potential areas for capacity development intervention and support.

An environmental scientist is assigned to be the primary circuit rider for RIDOH, although several staff provide various methods of technical assistance. This circuit rider provides one-on-one technical assistance to small water systems with distribution system issues, Level 1 Assessments, seasonal start-up processes and challenges with maintaining compliance. For Level 1 Assessments triggered by coliform bacteria, the circuit rider provides in the field and desktop technical assistance. From July 1, 2022 to June 30, 2023, 24 water systems triggered 24 Level 1 Assessments, and were at the least provided desktop technical assistance by the circuit rider. The circuit rider also works on special projects to impact policy and regulations on distribution system issues to benefit multiple water systems, such as researching chlorine residual effectiveness in distribution systems and flushing guidance.

RIDOH created a performance measure process for compliance, in which a quarterly calculation of a five-year "compliance score" for each water system enables RIDOH to prioritize additional compliance effort to water systems that are repeat violators, either after a violation has occurred or to preempt additional violations. This additional compliance effort includes actions such as individualized technical assistance, penalties, informal enforcement meetings, deadline reminders, and compliance agreements.

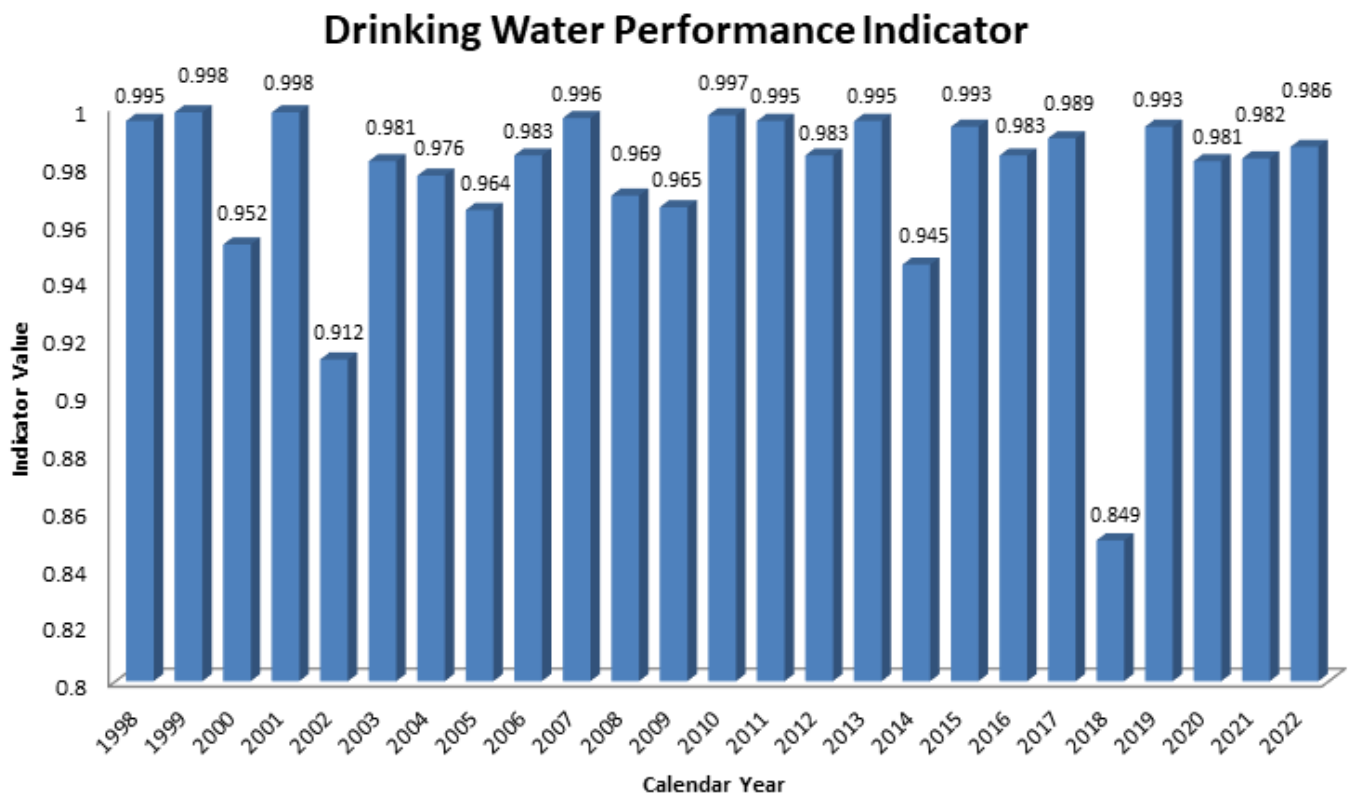
From July 1, 2020, to June 30, 2023, more than 85 water systems that are repeat violators were provided additional compliance effort, most more than once. The compliance and technical assistance team identify repeat violators during the notice of violation process and determine and implement appropriate technical assistance. This includes coordination with the enforcement manager and outreach specialist. The goal for the performance measures is a reduction in the total and average 5-year compliance score for all water systems. RIDOH tracks statistics showing that water systems that choose to accept on-site technical assistance from our circuit rider are less likely to trigger another Assessment in the subsequent 12 months. During the COVID-19 pandemic some technical assistance was given virtually. As social distancing provisions eased, RIDOH has increased technical assistance on-site at water systems.

## Impact and Performance

The performance of the State's PWS during the reporting period is based on compliance with multiple water quality requirements specified in the SDWA and is evaluated and compared to data from previous years. The outcome of the analysis is an overall performance indicator based on a composite of three metrics:

- Number of days each water system is in compliance with all maximum contaminant levels (MCLs) and treatment technique requirements;
- Number of customers each water system serves; and
- Number of days the water system operates.

A performance indicator value of 1.0 indicates that all PWS were in compliance with MCL and treatment technique requirements for the entire calendar year (note that the performance indicator value can be significantly influenced by water systems with large populations). Much of the decrease in the 2018 indicator value was due to the impact of one MCL violation at a water system with a very large population for a contaminant that is monitored approximately every 90 days. Without this violation, the performance indicator value was 0.948. The 2020 indicator value was 0.981, the 2021 indicator value was 0.982, and the 2022 indicator value was 0.986.



$$\text{Indicator Value} = \frac{\sum (\text{PWS Population Served}) \times (\text{Days in Compliance with MCLs and Treatment Technique Requirements})}{\sum (\text{PWS Population Served}) \times (\text{Total Days in Operation})}$$

## Capacity Development and Operator Certification

Ensuring a competent workforce is a key element in the protection of public health and the provision of safe drinking water. Individuals who operate public water supply treatment and distribution systems must be certified and licensed by RIDOH. Once licensed, operators adhere to continuing education and experience requirements prior to license renewal or upgrade. There are 690 licenses for treatment and distribution operators in the State, with some individuals holding multiple licenses and certifications.

Training initiatives are included in RIDOH's work plan and are funded through Drinking Water State Revolving Fund. RIDOH facilitates opportunities for training and exam preparation through contractors and referrals.

There are 89 community and 80 NTNC public water systems that are required to comply with the State's operator certification rules and regulations. The State has classified these systems for distribution and/or treatment. Presently, one of the 169 PWS is not under the supervision of a certified operator. The community PWS has been referred to multiple technical assistance providers with the aim of hiring a new certified operator. Despite efforts by RIDOH and the technical assistance providers, the limited number of contract operators working in Rhode Island has proven to be a barrier to returning the PWS to compliance. The PWS has gone to monthly monitoring under the Revised Total Coliform Rule for expanded oversight by RIDOH.

### Drinking Water Operators by License Type, 2022

Distribution License Type	License Count
DO (Distribution Operator) Class 1-Full	112
DO Class 1-Grandfathered	14
DO Class 1-Operator in Training	26
DO Class 2-Full	65
DO Class 2-Grandfathered	1
DO Class 2-Operator in Training	1
DO Class 3-Full	97
DO Class 3-Grandfathered	0
DO Class 3-Operator in Training	4
DO Class 4-Full	44
DO Class 4-Grandfathered	0
DO Class VSS-Full	22
DO Class VSS-Grandfathered	9
DO Class VSS-Operator in Training	1
DO Provisional	1
Total	397

Treatment License Type	License Count
TO (Treatment Operator) Class 1-Full	88
TO Class 1-Grandfathered	5
TO Class 1-Operator in Training	10
TO Class 2-Full	70
TO Class 2-Grandfathered	3
TO Class 2-Operator in Training	6
TO Class 3-Full	63
TO Class 3-Grandfathered	0
TO Class 3-Operator in Training	9
TO Class 4-Full	27
TO Class 4-Grandfathered	0
TO Class VSS-Full	8
TO Class VSS-Grandfathered	3
TO Class VSS-Operator in Training	1
TO Provisional	0
Total	293

## Capacity Development and the DWSRF

The SDWA amendments of 1996 authorized the creation of a DWSRF program. This fund helps public water systems finance the costs of infrastructure needed to achieve or maintain compliance with the requirements and public health objectives of the SDWA.

Capacity development staff partner with DWSRF program staff and the Rhode Island Infrastructure Bank to promote the use of the loan program. Assistance navigating the application process is also offered on a one-on-one basis. Through our partnership with the Rhode Island Infrastructure Bank, RIDOH is currently developing additional guidance and procedures to streamline the borrowing process to encourage small systems to consider the DWSRF when undertaking infrastructure projects in the future.

In conjunction with the Rhode Island Infrastructure Bank, RIDOH's Center for Drinking Water Quality operates the DWSRF program with funds supplied by an annual EPA grant. RIDOH is responsible for compilation of a priority list for current, ongoing, and proposed projects; engineering and environmental review of proposed projects; oversight of construction; assuring all grantees and sub-grantees are in compliance with DWSRF requirements; oversight of compliance with all laws and regulations; and review and approval of contractor payment requests. Completion of capacity development and maintenance of operator certification are key eligibility requirements for the DWSRF and are reviewed during the application process.

Beginning in 2018, the SRF Intended Use Plan (IUP) incorporated allowances for \$100,000 in principal forgiveness for small systems receiving SRF funding. Additional subsidy may be granted based on the median household income of the community served by the PWS. To ensure long-term water system sustainability, RIDOH has included additional capacity development requirements to the funding process. These include a requirement for the PWS to complete a FIP and up to ten hours of financial and managerial training.

RIDOH also offers engineering services to small systems through SRF set-asides.

### Rhode Island Infrastructure Bank Loans and Amounts Granted

State Fiscal Year	Number of Loans Made	Dollars Loaned
2020	8	\$36,316,477
2021	6	\$23,529,704
2022	6	\$23,223,087
<b>Total during reporting period</b>	<b>20</b>	<b>\$83,069,268</b>

## Capacity Development and Engineering Review

The engineering approval process is designed to help ensure the sustainability of the system and the safety of water sources. Once an applicant has demonstrated that a project has adequately met the requirements for public water facilities on paper, projects may proceed and inspections are conducted during and after construction. New CWS and NTNC systems must demonstrate technical, managerial, and financial readiness as part of the PWS application process.

### **Key Areas in which Capacity Development and Engineering Intersect:**

#### **Drinking Water Facilities Plan Review and Approval**

This unit conducts the technical and engineering reviews of infrastructure projects under the Public Water System Supervision program in accordance with the SDWA. Infrastructure includes all drinking water projects such as new wells; water distribution, pumping, and storage; and on-site drinking water treatment, whether new or rehabilitative in nature.

#### **Drinking Water State Revolving Loan Fund Plan Approval**

Projects submitted for funding through the DWSRF program must comply with specific requirements of the funding program and federal statutes and executive orders. Engineering staff assigned to the review of these infrastructure projects assist applicants with the various approvals required for this specialized process.

#### **Facilities Improvement Plan and Engineering Services Contracts**

Through the set-asides, RIDOH manages and funds two contracts to support small water systems in planning for and executing infrastructure improvements. The capacity development and engineering programs work closely together to identify small PWS that could benefit from these services and connect PWS decision makers with Northeast Water Solutions, Inc., the third-party vendor providing the contracted services.

## Capacity Development, Inspections, and Site Visits

All aspects of a PWS (water source, treatment facility, storage, pump stations, operations, and maintenance) require periodic inspection to help ensure that the water system continuously supplies safe drinking water to the public.

During the reporting period, RIDOH staff conducted sanitary survey inspections (95 in 2020, 121 in 2021, and 91 in 2022). The inspection team coordinated with the Center for Drinking Water Quality compliance program and engineering team to ensure that all identified deficiencies were corrected or are under a corrective action plan. RIDOH staff also performed inspections at the request of PWS as part of the State's capacity development program. For more information about the population served and PWS types, see the table below.

In addition, RIDOH staff performed conformance inspections of new construction and significant improvements to water system infrastructure (3 in 2020, 1 in 2021, and 4 in 2022), and Level 2 Assessments (9 in 2020, 19 in 2021, and 20 in 2022) in response to violations of the Revised Total Coliform Rule. Level 2 Assessments must be conducted by certified level 2 assessors or by a RIDOH inspector when previous water system assessments (called Level 1 Assessments) do not identify the pathway of microbial contamination into the water system or when a water system receives an *E. coli* maximum contaminant level violation.

PWS Type	2022		2021		2020	
	Population served	Inspections	Population served	Inspections	Population served	Inspections
CWS	471,983	27	188,761	31	379,694	33
TNC	11,043	54	14,545	84	5,450	41
NTNC	2,510	10	834	6	25,343	21
<b>Total</b>	<b>485,536</b>	<b>91</b>	<b>204,140</b>	<b>121</b>	<b>410,487</b>	<b>95</b>



## Capacity Development, Emergency Planning, and Security

Water systems can face emergency situations caused by a variety of events, including impacts due to significant weather and supply chain interruptions. Emergency planning for water systems includes evolving fields like cybersecurity preparedness and climate change resiliency. Developing proactive policies can improve the conservation of resources, reduce repair expenses, minimize interruption of service, and enhance consumer confidence in drinking water utilities.

In 2021 the Center for Drinking Water Quality began providing public water systems with guidance in response to cybersecurity incidents and on navigating supply chain impacts. Information was promptly compiled and forwarded to our public water systems as it became available to our office.

In 2023 the Center for Drinking Water Quality used the *Bipartisan Infrastructure Law* funding to create a new position dedicated to working on proactive approaches to help public water systems prepare for cybersecurity, climate resiliency, and emergencies. This position was filled as of May 2023. Guidance documents are also posted to the Emergency Information for Public Water Systems webpage ([health.ri.gov/water/for/publicwatersystemsduringemergency/](https://health.ri.gov/water/for/publicwatersystemsduringemergency/)).



Program activities included:

- Dissemination of EPA planning tools to PWS, including the Vulnerability Self-Assessment Tool, Water Health and Economic Analysis Tool, and Incident Action Checklists to assist drinking water and wastewater facilities of all sizes in enhancing their security and resiliency;
- Development of Emergency Drinking Water Source Plan;
- Participation in the Statewide Water Resources Board's Drought Steering Committee;
- Use of the mass email service MailChimp to keep PWS informed of imminent or ongoing emergencies;
- Development and implementation of an emergency generator program;
- Training for Center for Drinking Water Quality staff in EPA, Federal Emergency Management Agency, and Occupational Safety and Health Administration practices for emergency preparedness and response;
- Development of emergency response planning templates, guidance, and certification forms;
- Requiring the completion and certification of Emergency Response Plans for all PWS; and
- Maintenance and curation of information for the Emergency Information for Public Water Systems website.

## Capacity Development Contracts

RIDOH maintains contracts with industry professionals and organizations to assist water systems with training, planning, and resources. These contracts provide the necessary assistance for system owners and operators to maintain and improve overall system sustainability.

Recent, current, and upcoming contracts include:

### **Consumer Confidence Reports (CCR):**

RIDOH continued working with Global Environmental Consulting (GEC), the vendor that provides system support and enhancement for the Center's Safe Drinking Water Information System database. Leveraging a module within that database enabled RIDOH to streamline the production of CCRs. RIDOH now hosts draft CCRs for all small PWS and created several communication and outreach emails to assist PWS representatives in completing and submitting their CCRs.

In the table below, the CCRs completed in 2021 for the preceding calendar year were done so under the now discontinued contract with Atlantic States Rural Water and Wastewater Association and those completed in 2022 and 2023 were done so through GEC.

CCR year	# Completed
2023 (for 2022)	89
2022 (for 2021)	89
2021 (for 2020)	91

### **Small Water System Operator Training:**

RIDOH continues its partnership with New England Water Works (NEWWA) to provide free training to the State's certified drinking water operators. Using set-asides, RIDOH has funded up to ten free classes each state fiscal year since reinitiating the contract with NEWWA in 2016.

RIDOH does not directly reimburse operators for expenses related to training and exams. These learning opportunities are free of charge and open to all operators while targeting those from small PWS.

During the reporting period, NEWWA delivered training on a variety of topics, with a focus on addressing compliance issues, violation trends, and small PWS compliance including:

- Understanding and Using the Public Notification Rule
- Asset Management to Ensure Stable and Sustainable Water Utility Operations
- Solving Drinking Water Operator Exam Word Problems
- Where it all Begins: Knowing and Protecting Your Source Water
- How to Successfully Operate and Maintain Your Distribution System
- Energy Management for Water Utilities

### **Small Water System FIPs:**

RIDOH partners with Northeast Water Solutions, Inc. to assist small community and non-profit NTNC systems with FIPs. These comprehensive assessments serve as roadmaps for small systems to plan and evaluate their infrastructure and asset management needs. Since the contract's inception, Northeast Water Solutions, Inc. has produced reports for 52 systems, 11 of which were completed during this reporting period. Beginning in 2019, RIDOH expanded the scope of the contract with Northeast Water to include nonprofit transient systems

to better align services with DWSRF eligibility criteria. RIDOH also incorporated the ability to work with PWS that had plans completed in prior years, revisiting and either affirming or adding to the original recommendations.

With the launch of the contract detailed in the following section, RIDOH will be able to more seamlessly move systems from the planning to the implementation phase.

**Small Water System Engineering Services:**

RIDOH reinitiated the Request for Proposal with the Department of Administration's purchasing department in January 2023. A contract will be awarded prior to the end of calendar year 2023. The purpose of the Small Water System Engineering Assistance Program is to provide engineering services to assist small drinking water systems with the design and implementation of solutions to technical issues.

Eligible water system projects are varied and include but are not limited to new construction, renovation or replacement of existing systems, and system consolidations. Priority will be given to systems that participated in the FIP program.

The applicant will develop all documentation required to receive final approval from RIDOH for water system improvement projects needed to comply with state and federal regulations. This documentation may include, but is not limited to: plans, specifications, and supporting documentation for proposed engineering projects; environmental review documentation; any and all documentation and/or support required during the bidding procurement process; and any and all documentation required for submission of projects to the DWSRF.

During the reporting period, 11 PWS received services under this contract.

## Conclusion

More than 20 years have elapsed since Rhode Island instituted its Capacity Development Strategy. In 2022 RIDOH completed updates to its strategy to include asset management and received approval of the strategy in March 2023. The strategy provides the framework for RIDOH's Center for Drinking Water Quality to identify unique approaches for sharing knowledge and developing tools. These activities are critically important to the provision of safe drinking water and ensuring the sustainability of water systems in our state.

This report has described the activities of each component of the Capacity Development program. Realizing that circumstances are different for each type of PWS, RIDOH, our industry peers, and our partners at EPA have taken steps to identify these challenges. Together, we aim to ensure that the programs we currently have in place continue to successfully address the needs of our systems and that the assistance we provide in the future is:

- enhancing water system capacity proactively;
- focusing on education and outreach; and
- strengthening collaborations between the Capacity Development program and other drinking water programs.

Together, the Capacity Development program and all of RIDOH's drinking water programs have had a substantial and positive impact on the health and safety of the people of Rhode Island.



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