TRIENNIAL REPORT TO THE GOVERNOR

Technical, Managerial, and Financial Capacity
of
Maine's Public Water Systems

Department of Health and Human Services
Maine Center for Disease Control and Prevention
Division of Environmental and Community Health
Drinking Water Program

State Fiscal Years 2018-2020

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Executive Summary

The Maine CDC Drinking Water Program (DWP) works to ensure safe drinking water and protect public health in Maine by administering and enforcing drinking water and subsurface wastewater regulations through the provision of - educational, technical, and financial assistance to public water systems.

Improving the technical, managerial, and financial capacity of a public water system increases the water system's ability to consistently and reliably supply safe drinking water to consumers. Over the past three years, the DWP has made great progress toward improving the capacity of public water systems in Maine.

A principal measure of the success of the capacity development effort is the rate of compliance with the State and Federal regulations related to safe drinking water. DWP records indicate that public water systems are more consistent in the collection of water samples, which has resulted in improved water quality. A summary of public water system violations for the reporting period can be found in Figure ES-1.

The DWP provides financial assistance to public water systems throughout Maine to replace aging water mains, and increase the efficiency and reliability of water treatment plants. In addition, DWP worked with systems to find new sources of drinking water, make improvements to drinking water quality, and build new water storage tanks to ensure safe drinking water, and provide essential public health protection. The DWP also provides financial assistance through grant programs to assist public water systems with developing plans and studies, protecting their water source, consolidating with another public water system, and installing treatment to resolve ongoing violations. Over the past three years, the DWP awarded public water systems with over 55 million dollars in loans and grants to assist with these critical infrastructure improvements.

Ongoing training is essential to ensure that water operators, owners, and other personnel are up-to-date with current regulations and technologies. Water operators receive training through on-site technical assistance visits and classroom training sessions. The DWP staff and contractors provide direct, on-site technical assistance and education to help water operators maintain and improve their water system operations and management. During the reporting period, over 2,700 on-site visits were made to public water systems by DWP staff and contractors. Classroom training helps build an operator's knowledge on the operation and maintenance of a public water system through various training topics. With the assistance of DWP funding, over 360 training classes were attended by over 4,000 public water system personnel during the reporting period.

A summary of the funding used to support capacity development can be found in Table ES-1.

Additional information about capacity development activities can be found in our annual *Drinking Water Construction Project Report*.

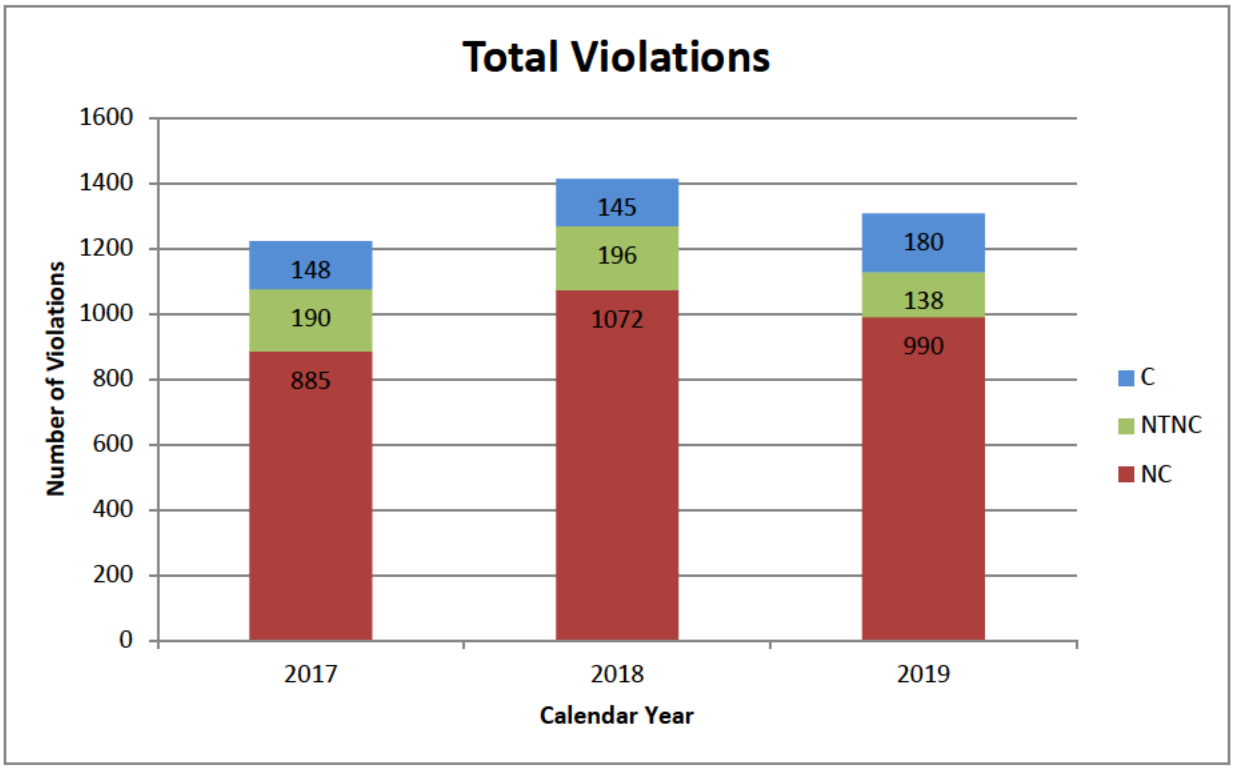

Figure ES-1. Total Public Water System Violations

Community (C): A public water system that supplies water to the same population year-round (residential population).

Non-Transient, Non-Community (NTNC): A public water system that regularly supplies water to at least 25 of the same people at least six months per year, but not year-round. Some examples are schools, factories, office buildings, and hospitals, which have their own public water systems.

Transient, Non-Community (NC): A public water system that provides water in a place such as a restaurant or campground where people do not remain for long periods of time.

Table ES-1. Funding Capacity Development Summary

	SFY2018	SFY2019	SFY2020	Totals
Loans*				
Infrastructure Construction	$15,091,870	$20,922,601	$18,166,712	$54,181,183
Land Acquisition	$65,000	$0	$470,261	$535,261
Very Small Water System Compliance Loans	$75,000	$156,527	$110,000	$341,527
Grants*				
Capacity Development	$62,713	$166,033	$169,087	$397,833
Source Water Protection	$49,500	$75,530	$49,959	$174,989
Wellhead Protection	$77,634	$52,532	$73,239	$203,405
Sanitary Seal Well Cap	$2,290	$2,179	$2,174	$6,643
System Consolidation	$11,262	$0	$100,000	$111,262
Contracted Services*				
Training Reimbursement	$72,660	$152,269	$133,898	$353,827
Maine Rural Water Association	$329,663	$426,906	$484,828	$1,241,397
Rural Community Action Program	$7,027	$9,127	$21,753	$37,907
DWP Employees				
Federal Funding	$2,632,632	$2,617,177	$2,878,420	$8,128,229
Other Special Revenue	$1,524,946	$1,393,559	$1,457,205	$4,375,710
General Fund	$201,861	$126,602	$212,371	$540,834
Total Number of Employees	39	39	39	39

* Grants and Contracted Service are 100 percent funded with federal funds. Construction loans are a combination of federal funds, repayment funds, and "State Match." Access to the annual federal grant requires a 20 percent State Match. The State Match is funded through revenue generated by the State Liquor Contract.

Introduction

The 1996 Amendments to the Federal Safe Drinking Water Act (SDWA) mandate the preparation of a triennial report to the Governor of each state to apprise the Governor of the efficacy of the Public Water System Capacity Development Program, and to report generally on the progress of improving the technical, managerial, and financial capacity operations of public water systems. This report is issued in fulfillment of that requirement. The reporting period for this report is for State fiscal years 2018-2020 (July 1, 2017-June 30, 2020).

The SDWA was established in 1974 to protect public health by regulating drinking water contaminants. The SDWA was structured to enable each state to become a primacy agency, the administrative and enforcement arm of the United States Environmental Protection Agency (EPA) at the state level. The Drinking Water Program (DWP) is the primacy agency for the State of Maine. The DWP is located within the Department of Health and Human Services, Maine Center for Disease Control and Prevention, in the Division of Environmental and Community Health.

The 1996 Amendments to the SDWA added a requirement for each state to establish a Capacity Development Program. Capacity development's broad goal is to assist public water systems in both maintaining and improving their technical, managerial, and financial operations, referred to as the capacity to meet federally mandated drinking water requirements. Capacity development encompasses many activities performed by the DWP and third party organizations involved in drinking water operations. The effectiveness of a public water system's capacity depends upon the interaction of these three criteria:

- **Technical Capacity** refers to the ability of a public water system to meet standards and to provide safe and reliable drinking water. Key to technical capacity is operator expertise and infrastructure adequacy (source water adequacy and collection, storage, treatment and distribution facilities).

- **Managerial Capacity** refers to the ability of personnel to manage and administer or to otherwise operate the public water system. Key items for managerial capacity include ownership, organization, accountability, and planning.

- **Financial Capacity** refers generally to the monetary resources of the public water system and includes cost effectiveness, creditworthiness, fiscal control, cash flow, and cash reserves.

To support each state's capacity development activities and to provide direction for those activities, each state was mandated to develop a Capacity Development Strategy (Strategy) with the input and assistance of a committee of stakeholders, known as an Advisory Committee. Based upon the recommendations of the Advisory Committee, the DWP developed 11 specific goals for Maine's Strategy. The Strategy was completed and accepted in 2000 and revised in 2010. The Strategy is designed to prevent the creation of non-viable public water systems, to identify public water systems at risk and to assist public water systems to acquire, enhance and maintain public water system capacity. Given that each capacity element overlaps and

consequently supports the others, any weakness or failure of an individual element can lead to the collapse of the others.

The DWP assists over 1,800 public water systems with maintaining and enhancing technical, managerial, and financial capacity. The types and sizes of public water systems regulated by the DWP is shown below in Table 1.

Table 1 Number of Public Water Systems*

	Population Served				
	25-500	**501-3,300**	**3,301-10,000**	**10,001-100,000**	**100,001+**
Community	259	89	22	12	1
Non-Transient, Non-Community	359	19	0	0	0
Transient, Non-Community	1,012	41	0	0	0
Total	1,630	149	22	12	1

Community: A public water system that supplies water to the same population year-round (residential population).

Non-Transient, Non-Community: A public water system that regularly supplies water to at least 25 of the same people at least six months per year, but not year-round. Some examples are schools, factories, office buildings, and hospitals, which have their own public water systems.

Transient, Non-Community: A public water system that provides water in a place such as a restaurant or campground where people do not remain for long periods of time.

*The information above and throughout this report does not include bottled water facilities. Under Maine statute water bottlers are considered Transient Public Water Systems. However, federal law does not recognize water bottlers as public water systems, so they are not included in this federally mandated report.

I. Grant and Loan Programs

During the three year period of this report, over 55 million dollars was invested into public water system improvements through loans and grants. A detailed summary is provided below.

A. Loans

1. Drinking Water State Revolving Fund Program

The 1996 Amendments to the SDWA included allocations for the Drinking Water State Revolving Fund (DWSRF). The DWSRF program is a State operated program to provide loans and other financial assistance for public drinking water improvement projects. The SDWA requires that states provide 20 percent matching funds to federal dollars, in order to capitalize the

DWSRF program. Therefore, every dollar invested by the State of Maine secures five federal dollars. The State Match is funded through revenue generated by the State Liquor Contract. The DWSRF provides funding to public water systems throughout Maine to improve or replace water system pipes, treatment plants, storage tanks, and sources of water to ensure safe drinking water and provide essential public health protection. Funding for drinking water infrastructure improvement projects is available as low interest loans. Disadvantaged Community Public Water Systems may receive further assistance through principal forgiveness. A disadvantaged public water system serves a community and can demonstrate that its year-round residential water consumers have a median household income of $53,024 per year or less.

The DWP and the Maine Municipal Bond Bank (MMBB) administer the DWSRF together. The DWP is the lead administrator and is responsible for project management and technical support, as well as overseeing activities. The MMBB is the financial administrator and oversees the loan application process and tracks money to and from the fund.

A portion of the federal grant is set aside each year from the revolving project loan fund and used for non-project activities. Those activities include source water and wellhead protection programs, technical assistance to small public water systems, a revolving loan fund for land acquisitions, and public water system planning grants.

46 public water systems were approved for DWSRF loans during the reporting period.

$54,181,183 was loaned to public water systems during the reporting period.

2. Land Acquisition Loan Program

Public water system ownership or legal control of the land around its source(s) is the most effective means of protecting the source(s) from contamination. Under the Land Acquisition Loan Program, Community Public Water Systems and non-profit Non-Community Public Water Systems may apply for low-interest loans with 50 percent principal forgiveness of up to $50,000 for the purchase of land and/or conservation easement for drinking water source protection. Projects that demonstrate a commitment to the ongoing protection of a public water system's drinking water source through land acquisition and/or easement are eligible for these loans. Loans may be issued for an amount greater than $100,000. However, principal forgiveness will not be applied to the portion of the loan exceeding $100,000. The public water system must demonstrate technical, managerial, and financial capability. The land and/or conservation easement must be located within the watershed or wellhead protection area.

3 public water systems were approved for a loan during the reporting period.

$535,261 was loaned to public water systems during the reporting period.

3. Very Small System Compliance Loan Program

The Very Small System Compliance Loan Program allows Community Public Water Systems with a population of 100 or less, and all non-profit, Non-Transient, Non-Community Public Water Systems to receive up to $50,000 loans for infrastructure projects. Projects must be needed

to achieve compliance with a current or future standard of the SDWA, excluding the Revised Total Coliform Rule. This loan program assists public water systems with repeat monitoring violations return to compliance with drinking water regulations.

8 public water systems were approved for Very Small System Compliance Loans during the reporting period.

$341,527 was granted to public water systems during the reporting period.

B. Grants

1. Capacity Development Grant Program

Capacity Development Grant funding is available to Community Public Water Systems and non-profit, Non-Community Public Water Systems for the preparation of engineering or planning studies or reports to help public water systems maintain or improve technical, managerial, and financial capacity. The grant funding is provided on a reimbursement basis to public water systems that have completed approved plans or studies. Grants cover 50 percent of the plan or study costs, up to a maximum reimbursement amount of $20,000. The types of plans or studies that are allowed include:

- Comprehensive System Facilities Plans;
- Capital Improvement Plans;
- Water System Hydraulic Modeling Studies/Reports;
- Hydrogeological Investigation Reports for new or supplemental source water;
- Comprehensive Operations and Maintenance Manuals;
- Water System Vulnerability Assessments;
- Emergency Response Plans;
- Management Review Studies/Reports;
- Water System Consolidation Studies;
- Asset Management Plans;
- GIS Infrastructure Mapping;
- Comprehensive Community Planning Studies which include a public water infrastructure component. Consideration will be given for funding the "drinking water" portion of such studies; and
- Other professionally prepared documents that enhance water system capacity, as determined by the DWP.

56 public water systems were approved for Capacity Development Grants during the reporting period.

$427,833 was reimbursed to public water systems during the reporting period.

2. Source Water Protection Grant Program

The Source Water Protection Grant Program awards grants to Community Public Water Systems and non-profit, Non-Community Public Water Systems for projects that will help protect their

surface water source. Grants are awarded up to $10,000, depending on the scope of the project. Examples of projects are:

- Developing or updating Watershed Management Plans;
- Developing or implementing drinking water education and public outreach programs;
- Establishing local protective ordinances or legal agreements in the source protection area;
- Road and storm water management and reconstruction activities; and
- Buffer establishment and upkeep activities.

22 public water systems were approved for Source Water Protection Grants during the reporting period.

$174,989 was reimbursed to public water systems during the reporting period.

3. Wellhead Protection Grant Program

The Wellhead Protection Grant Program awards grants to Community Public Water Systems and non-profit, Non-Community Public Water Systems for projects that will help protect their groundwater source. Specifically, grants are awarded to projects that clearly reduce the likelihood of contamination occurring in the source water protection area by existing or future activities. Grants are awarded up to $10,000 depending on the scope of the project. Examples of projects are:

- Assisting in the replacement of oil storage tanks in the source protection area;
- Establishing or enabling a source monitoring program;
- Removing hazardous chemicals from the source protection area;
- Developing or implementing drinking water education programs;
- Establishing local protective ordinances or legal agreements in the source protection area;
- Preparing or updating a Wellhead Management Plan; and
- Implementing storm water best management practices in the source protection area.

32 public water systems were approved for Wellhead Protection Grants during the reporting period.

$203,405 was reimbursed to public water systems during the reporting period.

4. Sanitary Seal Well Cap Program

The Sanitary Seal Well Cap Program awards grants to public water systems that install sanitary seal well caps on their wells. Groundwater well contamination often results from loose fitting or poorly sealed well caps and poorly sealed electrical conduits that allow insects, small animals, or surface water to directly enter wells. A sanitary seal well cap, when installed correctly, prevents insects, small animals, and other surface contaminants from entering the top of the well and contaminating the well. All public water systems are eligible for reimbursement for up to 75 percent of the cost of the installation of a sanitary seal well cap, up to a maximum $250.

66 public water systems were approved for Sanitary Seal Well Cap Grants during the reporting period.

$6,643 was reimbursed to public water systems during the reporting period.

5. System Consolidation Grant Program

The System Consolidation Grant Program assists public water systems that have a technical, managerial, or financial capacity issue to consolidate with a more viable public water system. The grant will fund no more than 50 percent of the cost of the public water system consolidation for for-profit facilities and no more than 75 percent of the cost of the public water system consolidation for non-profit facilities. Grant awards may not exceed $100,000.

3 public water systems were approved for System Consolidation Grants during the reporting period.

$111,262 was granted to public water systems during the reporting period.

II. On-Site Technical Assistance to Public Water Systems by DWP Staff

A. Capacity Development Reviews

Before capital loans are approved by the DWP for drinking water construction projects or the purchase of land to safeguard water sources, applicants must undergo a Capacity Development Review to assure that the public water systems possess adequate technical, managerial, and financial capacity. A Capacity Development Review assesses a public water system's source water and infrastructure adequacy, implementation of technical knowledge, ownership accountability, staffing and organization, effective external linkages, short-term and long-term planning, revenue sufficiency, credit worthiness, and fiscal management and controls.

42 public water systems underwent a Capacity Development Review during the reporting period.

B. Sanitary Surveys

A Sanitary Survey is an on-site review of a public water system's water source(s), treatment, distribution system, finished water storage, pumps, pump facilities and controls, monitoring, reporting and data verification, water system management and operations, and operator compliance with state requirements. Sanitary Surveys are designed to identify conditions that may present a sanitary or public health risk. They help to identify public water systems that require technical or managerial capacity development assistance.

Community Public Water Systems are required to undergo a Sanitary Survey every 3 years; these public water systems serve the same population year-round. Non-Community Public Water Systems are required to undergo a Sanitary Survey every 5 years; these public water systems serve the public but do not serve the same population year-round.

1,360 Sanitary Surveys were conducted at public water systems during the reporting period.

C. Source Water Assessment Program

The 1996 Amendments to the Safe Drinking Water Act required each state to develop a program for assessing the susceptibility to contamination of each public drinking water source in the State. The DWP wants to ensure that when a water supply is identified as being at risk of contamination, Maine's public water systems are made aware so that the appropriate steps can be taken to minimize or eliminate the risk. Source Water Assessments include:

- A delineation of the recharge area of a well or watershed of a surface water body;
- An inventory of land uses and potential contamination sources which exist, or could within the delineated source water protection area; and
- An evaluation of the susceptibility to contamination of the water source by the potential hazards that are identified in the inventory

In 2016, the DWP completed a project to create inventory maps identifying potential sources of contamination, such as significant above ground storage tank (AST) facilities, located upstream from public water supply (PWS) well(s) near a river and/or surface water intake(s) in rivers or streams in Maine. This project was initiated in response to the January 2014 chemical spill at an AST facility above the Charleston, West Virginia PWS intake on the Elk River. The DWP is determined, with the help of our public water systems and other State and federal agencies, to do everything it can to protect Maine's public drinking water supplies, by helping to identify potential threats and preparing for efficient response should a spill event occur. For each PWS with a river intake or well in close proximity to a river, a DWP contractor prepared a report that included a set of maps showing the results of the potential source of contamination. To enhance the usefulness of the maps, the DWP in conjunction with the Maine Emergency Management Agency, the Maine Department of Environmental Protection, and the Maine Rural Water Association (MRWA), has held a series of chemical spill workshops with tabletop exercises to:

- Identify the best efficient methods of communication and notification during a spill event;
- Discuss typical countermeasures that can be employed by the PWS affected by a spill;
- Identify emergency resources available to the PWS; and
- Describe how the PWS can internally identify spill risks and develop countermeasures.

10 Workshops with tabletop exercises held during the reporting period.

$109,908 provided to MRWA to facilitate tabletop exercises during the reporting period.

D. Emergency Preparedness Planning

The Public Health Security and Bioterrorism Act of 2002 included amendments to the Safe Drinking Water Act that required all public water systems serving more than 3,300 to develop an Emergency Response Plan. In 2005, the DWP developed an Emergency Response Plan (ERP) for public water systems serving less than 3,300 to assure that all public water systems have an ERP. The DWP distributed the ERP to all public water systems. In 2011, the DWP developed an Emergency Response Plan of Action for public water systems serving fewer than 3,300 people. The DWP also developed a simplified version of the Emergency Response Plan of Action for public water systems serving less than 500 people. When requested by public water systems, the DWP assists with the completion of an Emergency Response Plan of Action.

III. Capacity Development Services Funded All or in Part by the DWP

A. Public Water System Operator Licensing and Training

1. Operator Licensing

Operators of Maine's public water systems are the first and foremost protectors of the safety of drinking water. Maine's public water systems span a wide spectrum of complexities and sizes with each and every operator responsible for the same end results: safe drinking water and adequate water supply for sanitary uses and fire protection. The Board of Licensure of Water System Operators assures that operators meet certain standards. This is accomplished by evaluating experience and education in application review and performance and successful completion of a nationally verified examination. Operator Licensing serves to assist operators in achieving and maintaining this professionalism by offering and finding appropriate training and assuring appropriate operator coverage at public water systems.

Public water systems are defined through a process of grading points, Class I to IV in both treatment and distribution categories according to complexity and population served. Operators of these public water systems must show competency by successfully completing examinations in both treatment and distribution categories. Very Small Water Systems operators are another classification that covers both treatment and distribution characteristics of public water systems with less than a population of 500.

2017 Operator Licensing **1,779** water operators licensed **27** water operators with Operator-In-Training license
2018 Operator Licensing **1,677** water operators licensed **17** water operators with Operator-In-Training license
2019 Operator Licensing **1,326** water operators licensed **11** water operators with Operator-In-Training license

Over the past several years, the number of licensed water operators has been decreasing due to water operators reaching retirement age. This trend is being seen nationally, and there is a concern that there will be a shortage of licensed water operators in the future.

License holders must earn continuing education credits for license renewal. The number of training contact hours required for license renewal depends on the classification of the license. Table 2 illustrates the two-year requirements.

Table 2. Training Contact Hour Renewal Requirements

Operator Class	Contact Hours Required
Very Small Water System	6 Training Contact Hours
Class I	12 Training Contact Hours
Class II	18 Training Contact Hours
Class III	24 Training Contact Hours
Class IV	24 Training Contact Hours

2. Operator Training

The DWP Capacity Development Training Reimbursement Fund allows training providers to receive reimbursement for training public water system employees, operators, owners, trustees or volunteers, and all licensed water operators. The purpose of the Training Reimbursement Fund is to subsidize the costs associated with training public water system personnel and operators on topics approved by the Board of Licensure of Water System Operators.

367 training classes were attended by **4,036** public water system personnel during the reporting period.

$358,827 was reimbursed to technical assistance providers during the reporting period.

B. Maine Rural Water Association Technical Assistance

1. Public Water System Water Quality Specialists

The DWP funds Water Quality Specialists at the Maine Rural Water Association (MRWA). The Water Quality Specialists provide direct, on-site technical assistance and water operation advice to small public water systems that serve a population of less than 10,000 customers. They also serve as a liaison between public water systems and the DWP. The DWP also works closely with the MRWA to provide education to public water system personnel. These activities directly support technical, financial, and managerial capacity.

1,362 MRWA Water Quality Specialist on-site visits during the reporting period.

$683,795 was provided to MRWA for technical assistance to public water systems in the reporting period.

2. Public Water System Financial Circuit Riders

The DWP funds Financial Circuit Riders from Maine Rural Water Association to provide technical assistance and training to build financial capacity in Community Public Water Systems serving a population of less than 10,000 customers. The Financial Circuit Riders conduct personalized one-on-one, on-site training, remote assistance via phone or web, and respond to training requests for up to three regional utility meetings. The Financial Circuit Riders make pre-

emptive visits, respond to public water system requests for assistance, or respond to state agency compliance directives.

$183,451 was provided to MRWA for Financial Circuit Rider assistance to public water systems in the reporting period.

3. Public Water System Benchmarking Database

The DWP is funding MRWA for the development of a benchmarking database for public water systems. The drinking water industry faces significant financial and operational challenges due to aging infrastructure. Industry leaders, policy makers, and regulators must communicate and understand the current financial and asset conditions of individual utilities and the overall drinking water industry in Maine. Standardized metrics that assess financial health, operational parameters, and asset information are needed to provide valuable insight when comparing utilities. The long-term goal is the development of a sustainable electronic rational benchmarking database containing key financial, operational, and asset metrics for Public Utilities Commission regulated public water systems. The database will collect and analyze public drinking water financial and operational data for access to all public water systems and the DWP to help develop, track, and prioritize long-term public drinking water infrastructure needs.

$166,702 was provided to MRWA for development of a benchmarking database during the reporting period.

4. Public Water System Cybersecurity Assessment Tool and Training

The DWP funded MRWA to develop a cybersecurity assessment tool to educate public water system personnel on cybersecurity, help public water systems identify cybersecurity vulnerabilities and gaps, and provide a recommended course of action to mitigate vulnerabilities and gaps. Following the development of the cybersecurity assessment tool, MRWA conducted trainings in three locations. MRWA also conducted a cybersecurity tabletop exercise at one water public water system to test the public water system, local and state agencies on their response to a cybersecurity event.

$47,741 was provided to MRWA for development of a cybersecurity tool, training, and a tabletop exercise during the reporting period.

5. Public Water System Emergency Preparedness Technical Assistance

The DWP funds MRWA to provide emergency preparedness technical assistance to public water systems. MRWA assists public water systems to complete Vulnerability Assessments and Emergency Response Plans. MRWA also provides administrative support for the Maine Water/Wastewater Agency Response Network (MEWARN).

$49,800 was provided to MRWA for emergency preparedness technical assistance and MEWARN administrative support during the reporting period.

C. Rural Community Assistance Program Solutions Training

Rural Community Assistance Program (RCAP) Solutions has an agreement with DWP to provide asset management training to public water systems that receive principal forgiveness for at least 20 percent of their Drinking Water State Revolving Loan, based on qualifying as a disadvantaged Community Public Water System. RCAP delivers one-on-one asset management training with each public water system.

22 disadvantaged public water systems received asset management training during the reporting period.

$37,907 was provided to RCAP for training of public water system personnel during the reporting period.

IV. Capacity Development Collaboration with Other Organizations

The DWP directly collaborates with several professional organizations and governmental agencies on drinking water issues. Some of the closest and most active collaborations are with the Maine Municipal Bond Bank, the Maine Rural Water Association, the Maine Water Utilities Association, and Rural Community Assistance Program Solutions.

A. Maine Municipal Bond Bank

The Maine Municipal Bond Bank (MMBB) is the financial administrator for the Drinking Water State Revolving Fund. The State Match and the matching federal monies are processed by the MMBB. Grant funds, construction loan monies, administrative finances, and other operating funds are administered by the MMBB for the DWP. All of the activities jointly pursued by the DWP and the MMBB are ones that foster capacity development in any number of ways.

B. Maine Rural Water Association

Maine Rural Water Association (MRWA) provides capacity building services such as assisting public water systems with developing their annual Consumer Confidence Report, vulnerability assessments and emergency response planning, income surveys, rate cases, grant writing and loan assistance, water leak detection and line location, compliance with drinking water regulations, and source protection. The DWP and MWRA collaborate on assisting public water systems with significant capacity issues by determining the issues and bringing them back into compliance. The DWP and MWRA work together to assist public water systems during emergency events.

C. Maine Water Utilities Association

The Maine Water Utilities Association (MWUA) represents the water supply profession through education, legislation, policy, and networking. The Association holds bi-monthly meetings, shares knowledge, and provides mutual support. Some DWP employees serve on MWUA committees in advisory and participatory roles, such as the Public Awareness, Water Resources, and Technology committees. DWP employee participation in these committees helps the DWP

understand the current and emerging needs of Maine's public water systems, and allows the DWP opportunities to provide valuable capacity development guidance to the water utilities.

D. Rural Community Assistance Program Solutions

Rural Community Assistance Program (RCAP) Solutions provides direct assistance to communities and public water systems. The DWP refers a number of public water systems to RCAP for help in capacity building. RCAP specialists assist public water systems by providing advice, education, and direction on public water system operations, budgeting and financial analysis, asset management, strategic planning, administrative operations, and improving overseer board operations.

E. Maine Water/Wastewater Agency Response Network

The Maine Water/Wastewater Agency Response Network (MEWARN) allows public water and wastewater systems to receive rapid mutual aid and assistance from other public water and wastewater systems to restore services damaged by natural or man-made incidents. MEWARN was formed in 2008 through partnerships among public and private water and wastewater utilities, key representatives from Maine's water and wastewater professional associations, DWP, Maine Department of Environmental Protection, Maine Emergency Management Agency, and the United States Environmental Protection Agency Region 1. This collaboration facilitates pre-disaster planning and training, encourages sharing information, and lessons learned from other disasters.

The heart of MEWARN is the mutual aid and assistance agreement, which addresses members' responsibilities, procedures and protocols for providing mutual aid, legal and liability concerns, and issues related to crossing jurisdictional boundaries to provide emergency aid. MEWARN offers a practical and affordable approach with multiple benefits for utility members and Maine's communities. The MEWARN is available to all public water and wastewater systems in Maine. Participation is voluntary, is not mandated by any local, state, or federal regulation, and there is no fee to participate.

128 public water and wastewater systems have joined MEWARN.

V. Compliance and Enforcement

Through enforcement activities, public water systems that have long-term violations are returned to compliance. The DWP Enforcement staff assists public water systems by negotiating settlements and guiding public water systems with required actions, in order to return them to compliance. Required actions may include the installation of proper water treatment or adherence to sampling schedules. DWP staff works with partnering State agencies to assure that public access to safe drinking water is available. Most notably, DWP staff works with the Maine CDC's Health Inspection Program, to coordinate efforts in confirming that lodging establishments, restaurants, and other eating establishments comply with the Safe Drinking Water Act. The Maine Rural Water Association works with DWP staff to provide education to public water systems, to assist in public notification, and to bring recalcitrant public water systems back into compliance.

48 public water systems were issued Administrative Consent Orders during the reporting period.

17 public water systems were issued Administrative Consent Orders & Conditional Penalty Assessments during the reporting period.

A. Drinking Water Violations

Violations are issued to public water systems when the public water system does not meet all the regulations mandated by the Safe Drinking Water Act.

Health-based violations are issued when water sample results show the presence of contaminant(s) at numbers above a Maximum Contaminant Level (MCL) or when a treatment technique requirement is not met. The MCL is set by the U.S. EPA and is based on human health and safety standards. The treatment techniques are specified processes intended to reduce the level of a contaminant.

Non-health-based violations are violations that are not directly related to human health and safety. These types of violations typically arise when public water systems neglect to report water sample test results to the DWP, fail to test drinking water for a regulated contaminant, and/or fail to notify their customers of violations of the federal Safe Drinking Water Act.

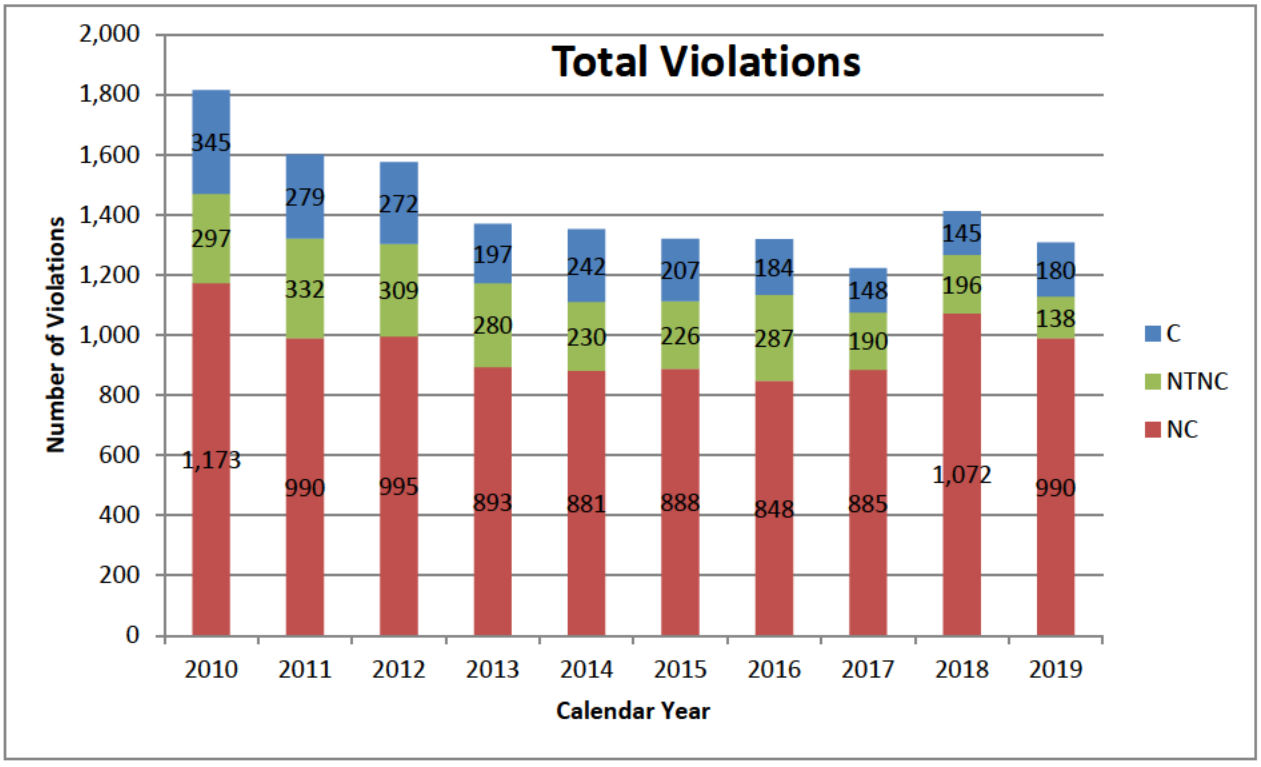

Figure 1. Total violations issued to public water systems since 2010.

Community (C): A public water system that supplies water to the same population year-round (residential population).

Non-Transient, Non-Community (NTNC): A public water system that regularly supplies water to at least 25 of the same people at least six months per year, but not year-round. Some examples are schools, factories, office buildings, and hospitals, which have their own public water systems.

Transient, Non-Community (NC): A public water system that provides water in a place such as a restaurant or campground where people do not remain for long periods of time.

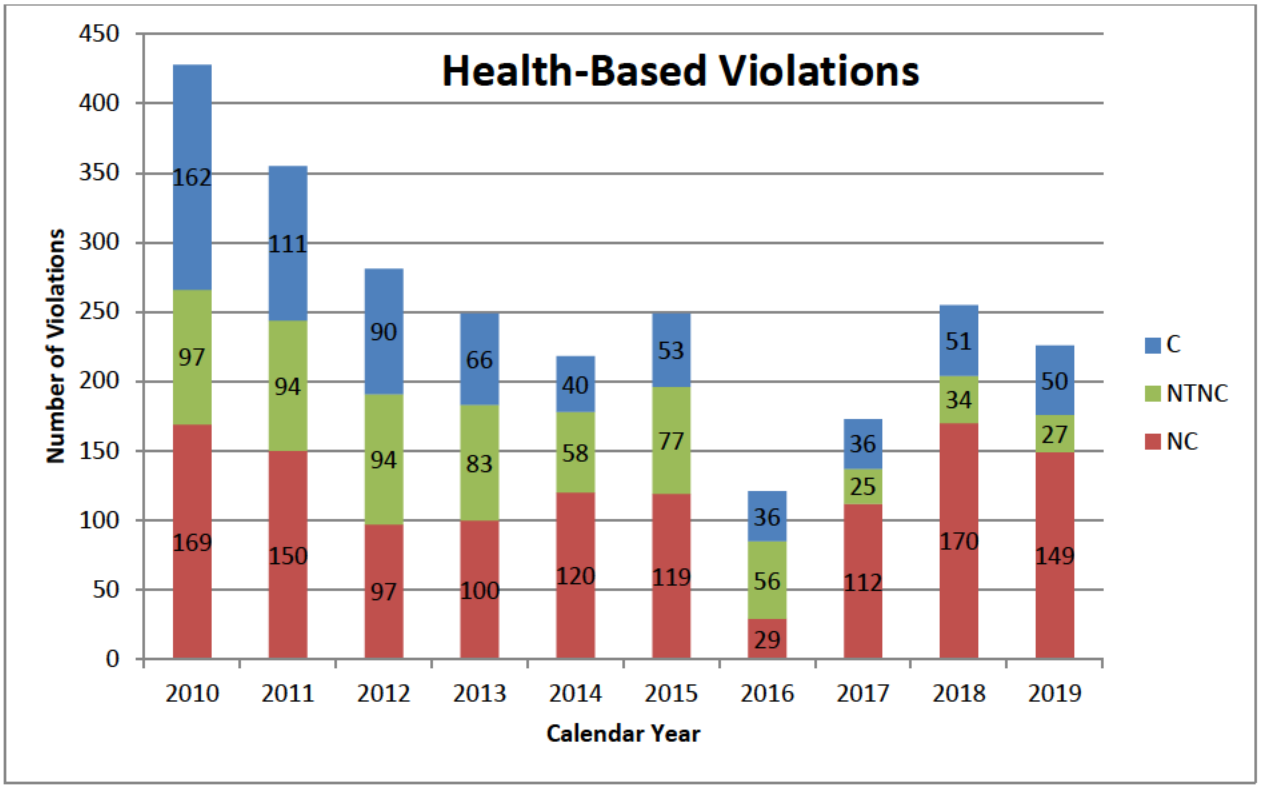

Figure 2. Health-Based violations issued to public water systems since 2010.

Community (C): A public water system that supplies water to the same population year-round (residential population).

Non-Transient, Non-Community (NTNC): A public water system that regularly supplies water to at least 25 of the same people at least six months per year, but not year-round. Some examples are schools, factories, office buildings, and hospitals, which have their own public water systems.

Transient, Non-Community (NC): A public water system that provides water in a place such as a restaurant or campground where people do not remain for long periods of time.

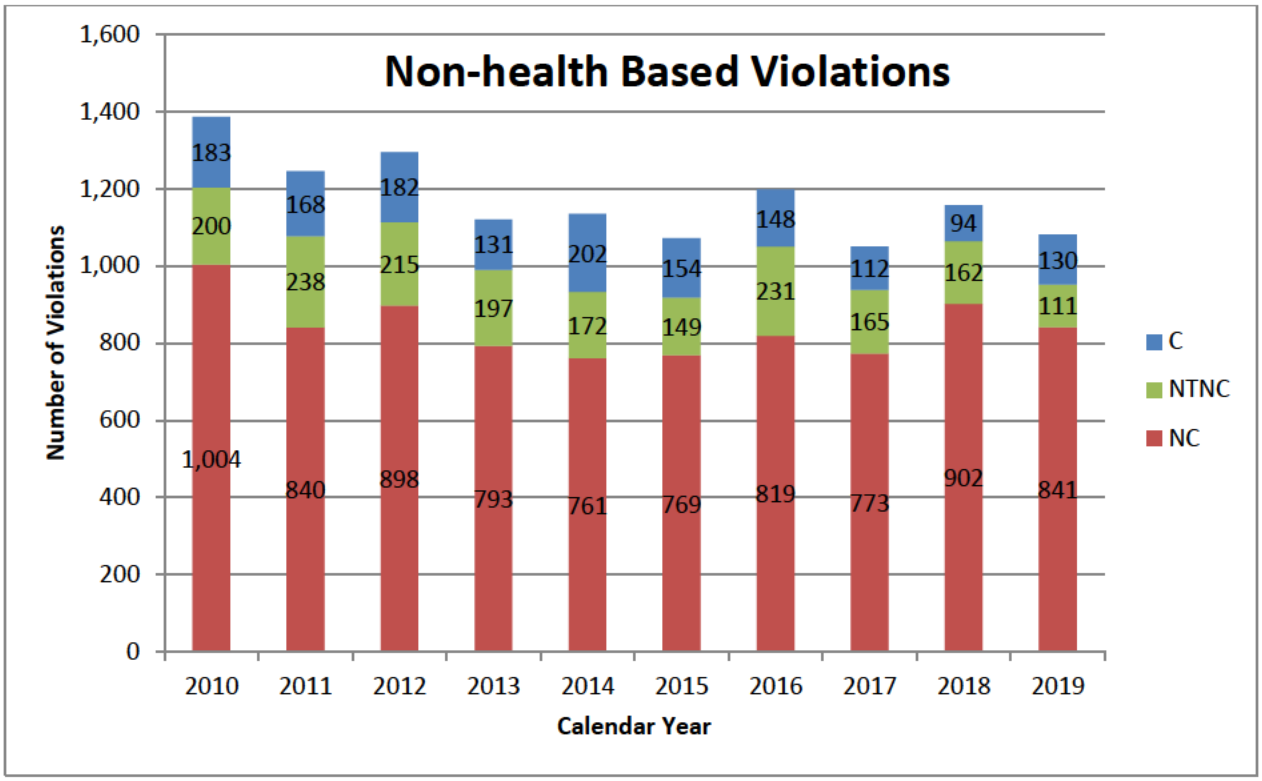

Figure 3. Non-Health-Based violations issued to public water systems since 2010.

Community (C): A public water system that supplies water to the same population year-round (residential population).

Non-Transient, Non-Community (NTNC): A public water system that regularly supplies water to at least 25 of the same people at least six months per year, but not year-round. Some examples are schools, factories, office buildings, and hospitals, which have their own public water systems.

Transient, Non-Community (NC): A public water system that provides water in a place such as a restaurant or campground where people do not remain for long periods of time.

Conclusion

The DWP continues to assist public water systems with improving technical, managerial, and financial capacity. The DWP works to ensure the provision of safe drinking water in Maine by administering and enforcing drinking water and subsurface wastewater regulations, providing education, as well as technical and financial assistance.

The existing structures and activities detailed in this report that enable progress toward capacity development will remain in effect. These approaches are proven and lend themselves well to enhancing capacity development.

The DWP loan and grant programs proved successful and will continue for as long as State and federal funding sources are available. Public water systems are appreciative of the funding

assistance that they receive from the DWP, as this assistance allows them to undertake projects that they would not have been able to complete without these funding opportunities. During the reporting period, the DWP provided public water systems with over 55 million dollars in loan and grant funding.

On-site technical assistance is important in helping public water systems maintain and improve their technical, managerial, and financial capacity. Over 2,700 on-site visits were made to public water systems across Maine by DWP staff and Maine Rural Water Association Water Quality Specialists during the reporting period. On-site visits ensure that infrastructure is adequate to provide clean and safe drinking water to consumers, operators and trustees understand their roles and responsibilities, and a public water system has adequate financial oversight to be a viable business. The vast majority of Maine's public water systems serve less than 500 people and the majority of violations are issued to these small public water systems. Given that small public water systems have very limited resources, the efforts of DWP staff and the Maine Rural Water Association Water Quality Specialists are critical in helping these public water systems understand the current regulations and how to properly operate and maintain their public water system. The successful decreases in numbers of violations issued, as shown in Figures 1 - 3 are, in part due, to the focused efforts to provide on-site training and assistance.

Training is also important to ensure that water operators are staying up-to-date with current regulations and technologies. Water operators are required to take training to renew their water operator licenses every two years. The DWP and other industry organizations strive to provide training that will build an operator's knowledge on the operation and maintenance of a public water system. All training must have a direct link to water quality, water supply, or protection of public health.

The progress over the past three years in improving public water system capacity has increased public health protection through helping public water systems reliably serve safe drinking water. Safe, reliable, and affordable drinking water is fundamental to the wellbeing and the economic prosperity of communities across the State. The efforts of men and women who work every day to keep safe drinking water flowing to our homes and businesses extends lives, protects our communities, and makes life more enjoyable.