

# 2020 Public Drinking Water in Maine

The Annual Report from the Maine CDC Drinking Water Program





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# Introduction

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Dear Reader:

This report provides an overview of the Maine CDC Drinking Water Program and the Public Water Systems in Maine. It is intended to provide the reader with an understanding of the importance of safe drinking water, as well as the efforts undertaken to ensure its availability and protection. It includes information about Maine's Public Water Systems and data concerning their compliance with the Safe Drinking Water Act.

The drinking water industry continues to weather unprecedented times due to the COVID-19 pandemic, taking on new challenges that were unimaginable two years ago. Through it all, the industry workforce has remained dedicated to the primary mission of providing safe and reliable drinking water to the citizens of Maine.



COVID-19 forced the modification or reinvention of many routine activities. Drinking Water Program staff worked closely with Public Water Systems on issues related to worker staffing and protection, chemical supply chain reliability, continued compliance monitoring, and ongoing operations. This cooperation resulted in the sustained delivery of safe drinking water throughout the state, despite the obstacles presented by the pandemic.

As the new Drinking Water Program Manager, I have been impressed with the dedication that all within the industry demonstrate daily toward our common mission. Please contact the Drinking Water Program with any questions or concerns you may have, so that we may assist you.

Appreciatively,

A handwritten signature in black ink that reads "Amy Lachance". The signature is fluid and cursive.

Amy Lachance  
Drinking Water Program Manager  
Maine Center for Disease Control & Prevention



# About the Drinking Water Program

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The Maine CDC Drinking Water Program works to ensure safe drinking water and protect public health in Maine by administering and enforcing drinking water and subsurface wastewater regulations and providing educational, technical, and financial assistance.

## Primacy

The Maine CDC Drinking Water Program (DWP) administers the National Primary Drinking Water Regulations under the Safe Drinking Water Act. Maine was granted primacy by the United States Environmental Protection Agency (EPA).

## Maine Legislative Authorization

The Maine Legislature enacted Maine's Water for Human Consumption Act to authorize Maine to administer both State rules and federal safe drinking water regulations. This law grants the DWP oversight over all operational aspects of public water systems in Maine that impact drinking water service and public health.

## Organization

The DWP is organized into three teams: Engineering and Water Resources, Data Management and Program Support, and Public Water System Inspection. Each team plays a crucial role in ensuring that Maine's public water systems continually provide safe, reliable drinking water to their customers.

## The Role of Drinking Water in Public Health Protection

The United States has some of the safest public drinking water supplies in the world. Over 286 million Americans consume tap water from public water systems. The EPA regulates drinking water quality for public water systems and sets maximum concentration levels for harmful compounds in water.

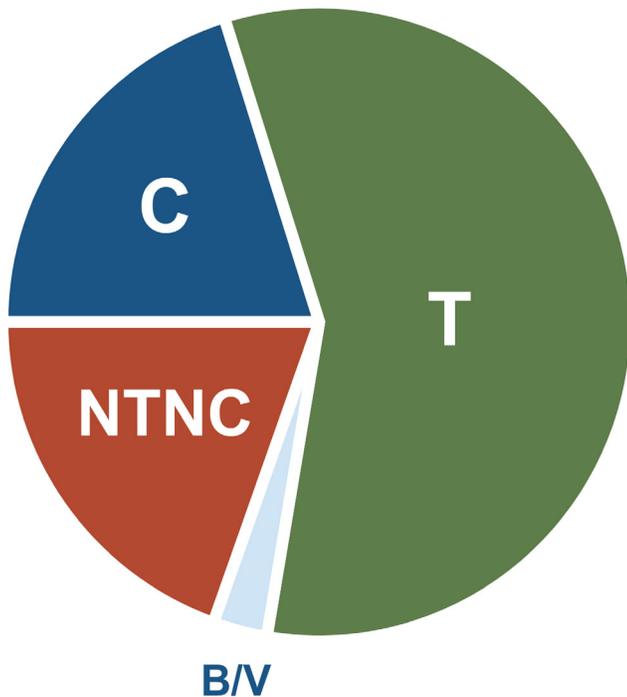
Drinking water sources are susceptible to pollution and sometimes require appropriate treatment to remove disease-causing contaminants. Contamination of drinking water supplies can occur in both the source water and the distribution system. Sources of water contamination include naturally occurring chemicals and minerals (e.g., arsenic, radon, uranium), local land use practices (e.g., fertilizers and pesticides), manufacturing processes, and sewer overflows or wastewater releases.

The presence of contaminants in water can lead to adverse health effects, including gastrointestinal illness, reproductive problems, neurological disorders, cancer, and other issues. Infants, young children, pregnant women, older populations, and those with compromised immune systems may be especially susceptible to illness from some contaminants.

# Public Water Systems in Maine

## What is a Public Water System?

Public water systems provide water for human consumption through pipes and other constructed conveyances (distribution system) to at least 15 service connections, or serve a minimum average of 25 people per day for at least 60 days per year. The water is usually drawn from exclusive sources: some systems own wells, while others utilize surface water (e.g., lakes and streams). Public water systems are divided into two categories: *Community* and *Non-Community*; Non-Community systems are further separated into *Transient* and *Non-Transient* groups.



### Transient, Non-Community

1,100 water systems  
serving about 184,000 consumers

#### Examples of TRANSIENT systems:

Gas Stations      Restaurants  
Parks              Golf Courses  
Resorts            Hotels/Motels  
Campgrounds

### Non-Transient, Non-Community

373 water systems  
serving about 62,000 consumers

#### Examples of NON-TRANSIENT systems:

Schools  
Factories  
Office Buildings  
Hospitals

### Community

384 water systems  
serving about 680,000 consumers

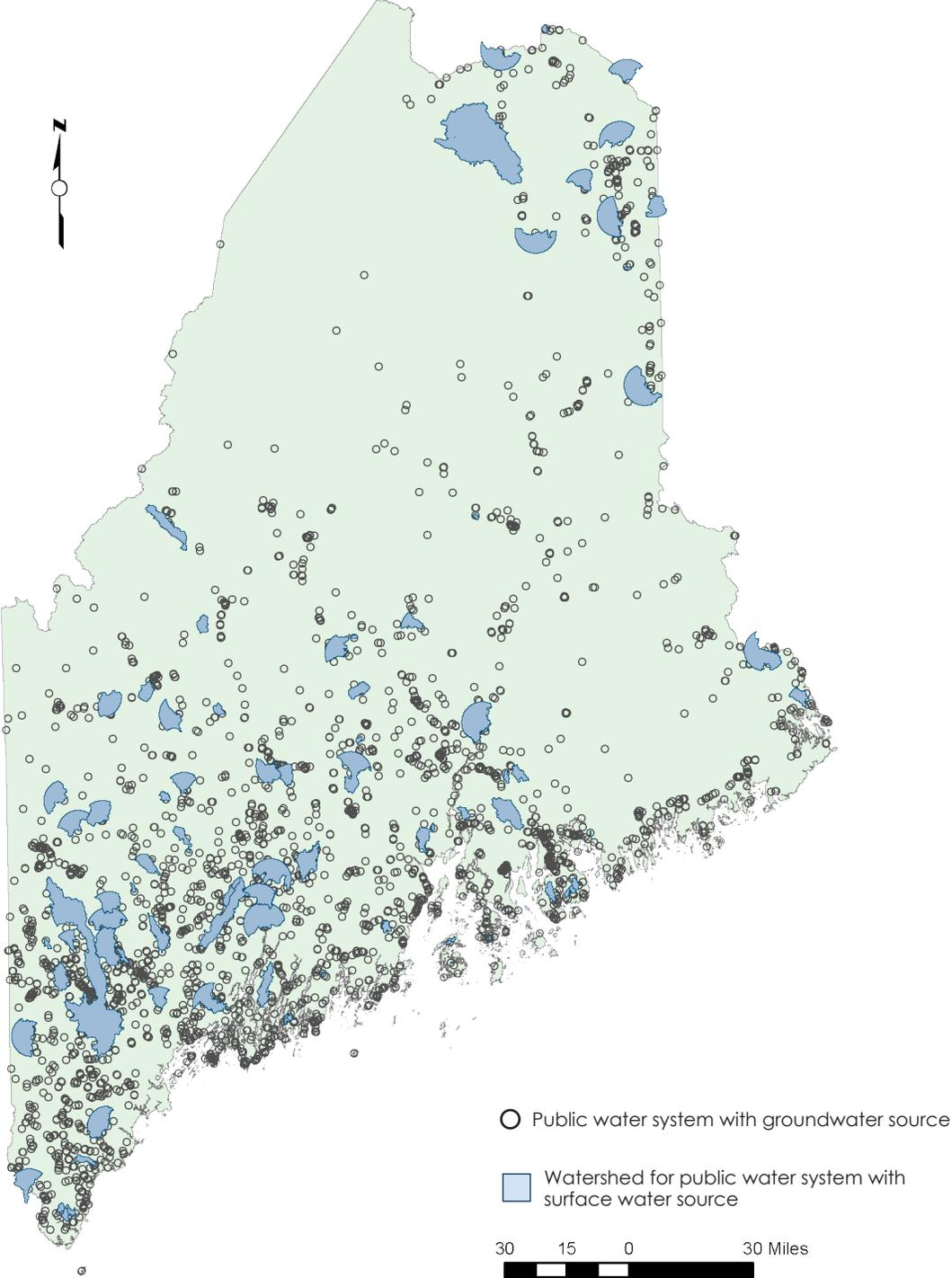
#### Examples of COMMUNITY systems:

Municipal Water Districts  
Apartment Buildings  
Nursing Homes  
Mobile Home Communities

### Bottled Water/Vending Machines

53 water systems  
serving thousands of consumers

# Maine Drinking Water Sources



Maine has nearly 2,000 Public Water Systems that rely on groundwater & surface water sources.

# Public Water System Responsibilities

While the Drinking Water Program serves as the regulatory body for public drinking water systems in Maine, the systems themselves are responsible for ensuring their ability to provide safe drinking water. These responsibilities include routine operations and maintenance, regular sampling of post-treatment drinking water, and reporting data to both the Drinking Water Program and the consumers they serve.

## Operations and Maintenance

Regardless of size and complexity, no public water system can be fully automated. All systems require human oversight and every piece of equipment requires some level of maintenance. Some water systems must employ licensed water operators with qualifications that match the complexity of the water system equipment. To ensure all public water systems serve safe drinking water to the public, sanitary surveys are performed every three to five years. Sanitary surveys are routine inspections conducted by the DWP’s public water system inspectors.

## Routine Sampling

Depending on the type of public water system and water source, water quality testing is required for a variety of contaminants on a routine basis. Specific sampling requirements for public water systems may differ based on site specific characteristics and water quality results. The table below details general sampling schedules by system type.

(See Appendix for a complete list of contaminants regulated in Maine.)

|                          | C<br>Community  |               | NTNC<br>Non-Transient, Non-Community    |               | T<br>Transient                     |
|--------------------------|---|---------------|---|---------------|------------------------------------|
|                          | Groundwater   | Surface Water | Groundwater                             | Surface Water | Ground- and Surface Water          |
| Total Coliform Bacteria  | All: Quarterly or Monthly   |               |   |               |                                    |
| Nitrates                 | All: Annually   |               |   |               |                                    |
| Nitrites                 | All: Every 9 Years  |               |   |               |                                    |
| Inorganics               | Every 3 Years   | Annually      | Every 3 Years                           | Annually      | State Monitoring Possibly Required |
| Volatile Organics*       | C/NTNC: Based on Risk and Results History (Quarterly - Every 3 Years)   |               |   |               |                                    |
| Synthetic Organics*      | C/NTNC: Based on Risk and Results History (Quarterly - Every 9 Years)   |               |   |               |                                    |
| Lead & Copper            | C/NTNC: Based on Risk and Results History (Bi-Annually – Every 3 Years) |               |   |               | Not Applicable                     |
| Radionuclides            | Determined by Results History (Quarterly - Every 9 Years)               |               | Not Applicable                          |               |                                    |
| Disinfection By-products | Quarterly/Annually Based on Population)                                 | Quarterly     | Quarterly/Annually Based on Population) | Quarterly     |                                    |
| Cyanide/Asbestos*        | C/NTNC: Every 3-9 Years   |               |   |               |                                    |

## Reporting to the DWP

### Sample Results

Public water systems send water samples to accredited laboratories for analysis, and these laboratories report the sample results to the DWP within the time-frame set by the system's specific requirement. Although the laboratory reports sample results to the DWP, the public water system is ultimately responsible for ensuring that water quality results are on time and correctly reported.

### Monthly Operating Reports

All public water systems that add chemical(s) to their water systems for treatment are required to send monthly operating reports to the DWP by the tenth day of the following month.

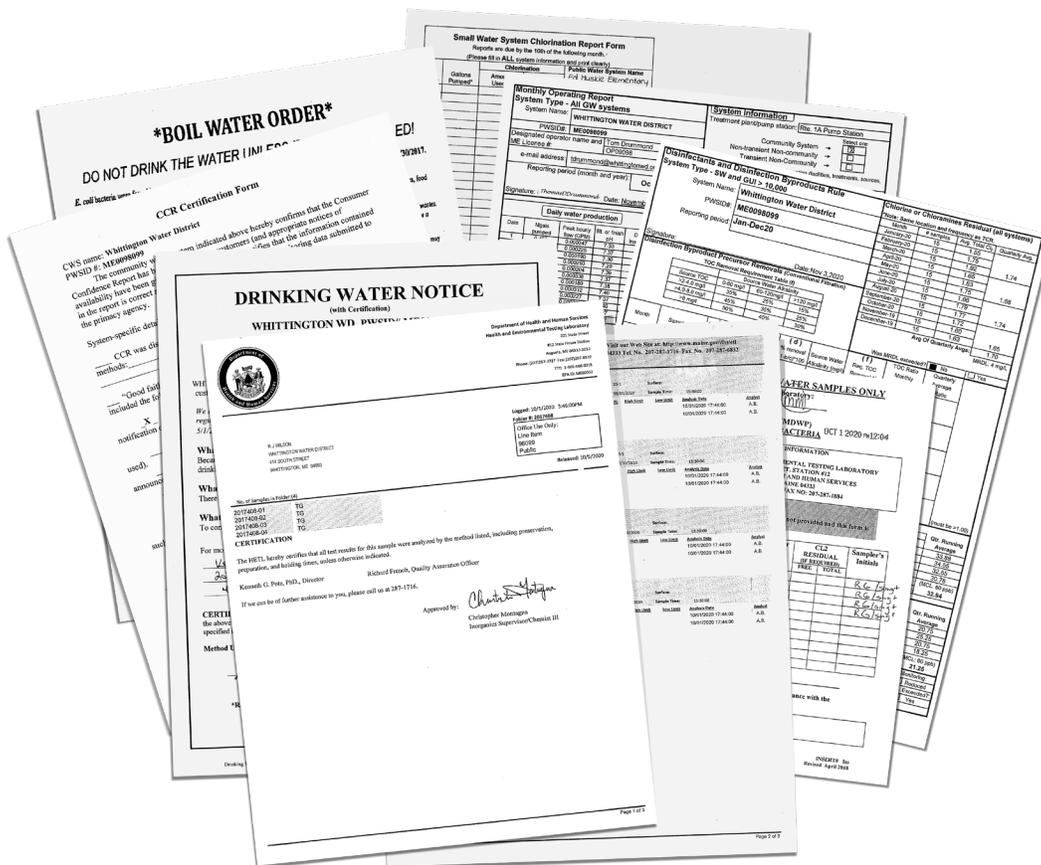
## Reporting to Consumers

### Consumer Confidence Reports

Every year, community water systems are required to develop and distribute a Consumer Confidence Report. These reports detail the previous year's water quality information and must be shared with consumers and the DWP by July 1 every year. Public water systems are also required to provide evidence to the DWP that Consumer Confidence Reports were delivered to consumers.

### Public Notification

The Public Notification Rule requires public water systems to notify consumers when a violation occurs. The scope and delivery method of public notices vary, depending on the type of violation.



## COVID-19

With the COVID-19 pandemic came many challenges, especially to our critical infrastructure workers. Public Water Systems (PWSs) across Maine and nationwide faced shortages of disinfection products and personal protective equipment (PPE), financial difficulties, access issues, and concerns regarding health and safety in the workplace.



Many PWSs were prepared with an Emergency Response Plan (ERP) and response networks in place. Although most ERPs did not include pandemic guidance, systems were able to use existing response protocols in their ERP to focus on maintaining critical operations and equipment. PWSs utilized mutual aid through multiple sources like the Maine Water/Wastewater Agency Response Network (MEWARN), the Maine Emergency Management Agency (MEMA), and the Maine CDC Drinking Water Program.

The far-reaching effects of COVID-19 added significantly to the workload of Maine PWSs, and the Drinking Water Program applauds their hard work in continuing to deliver safe drinking water 24/7.

The Drinking Water Program also faced hurdles due to COVID-19. Once a pandemic was declared, many DWP staff were dispatched to work from home full-time. As the DWP falls under the Maine Center of Disease Control and Prevention (Maine CDC), some DWP staff were deployed part- or full-time on COVID response work. Despite these hurdles, the DWP completed 97% of the required sanitary surveys for the compliance year of 2020. In addition, the DWP continued to address any outstanding sanitary surveys that were not completed in 2020 due to closures in response to the pandemic. The DWP is committed to ensuring that PWSs receive their sanitary surveys in a timely manner.

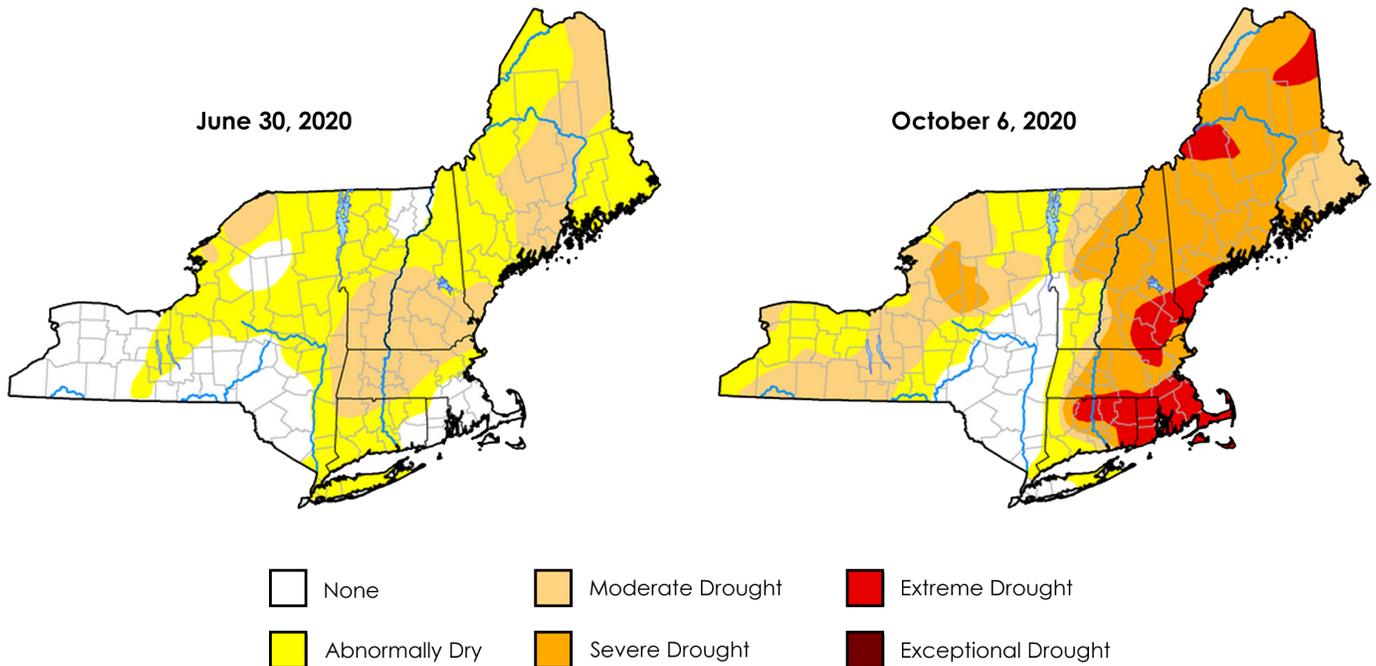
In an effort to provide information and assistance, the DWP utilized its GovDelivery email alert system to communicate with PWSs. Alerts ranged from COVID-19 guidance for systems, resources to respond to potential chemical or staffing shortages, and availability of personal protective equipment (PPE) resources. EPA and the Department of Homeland Security partnered to secure 30,000 cloth face coverings for Maine PWSs, which MEWARN distributed. To consolidate and keep these alerts available to all, DWP created a COVID resources webpage. This page contains all DWP emailed alerts relating to COVID, frequently asked questions, planning documents, and contact information for MEWARN, and can be found online at: <https://tinyurl.com/MeDWP-COVID19>.

## Drought in Maine

Drought conditions can significantly impact public water system operations. Sustained dry conditions may cause deterioration of water quality, reduction in the capacity of a groundwater or surface water source, increased pumping costs, or other related issues.

In late June 2020, roughly half of Maine was experiencing abnormally dry conditions, and the other half was in a moderate drought. DWP continued to monitor the drought situation throughout the summer and into the fall and

collaborated with other state agencies through Maine’s Drought Task Force, led by MEMA. The DWP provided PWSs with emailed updates and resources to aid in drought preparation, response, and recovery. This information, along with regional drought maps, was also posted on the DWP’s newly developed webpage dedicated to the drought in Maine. This webpage continues to be updated regularly as drought conditions persist. Visit the Maine CDC DWP drought webpage at: [www.medwp.com/pws/drought.shtml](http://www.medwp.com/pws/drought.shtml).



Source: U.S. Drought Monitor / National Drought Mitigation Center at the University of Nebraska-Lincoln, the U.S. Department of Agriculture (USDA), and the National Oceanic and Atmospheric Administration (NOAA)

## PFAS

Per- and polyfluoroalkyl substances (PFAS) are a large group of human-made fluorinated chemicals that are very persistent in the environment and in the human body. Exposure to these chemicals can lead to harmful human health effects. Since the 1940s, PFAS chemicals have been used in everyday consumer products and industrial applications. PFAS chemicals can be found in household products like stain- and water-resistant fabrics (clothing, towels, and sheets), carpeting, non-stick cookware, cleaning products and paints. The Class B firefighting foams (Aqueous Film Forming Foam, or AFFF) are made with PFAS chemicals due to their effectiveness at quickly extinguishing petroleum-based fires.

The DWP has partnered with the Maine Department of Environmental Protection (DEP) and others to perform three rounds of PFAS testing statewide in select high priority areas.

In March of 2019, Governor Janet Mills issued an executive order to create a PFAS Task Force, which completed its Final Report in January of 2020. The report included recommendations regarding statewide PFAS testing for some public water systems, determination of a Maximum Contaminant Level (MCL) for some PFAS compounds in public drinking water, private well testing, and continued testing for PFAS statewide in the environment.

Looking ahead, with the signing of LD 129 on June 21, 2021, all community (C) public water systems and non-transient, non-community (NTNC) schools and childcare facilities in Maine are required to sample finished drinking water for PFAS by December 31, 2022. An interim standard of 20 ppt for six PFAS (alone or in combination) is in effect. For more information, visit the DWP PFAS website at: [tinyurl.com/MeDWP-PFAS](http://tinyurl.com/MeDWP-PFAS).

## Lead & Copper Regulations

### Testing for Lead in Schools

On January 17, 2019, the Maine Legislature passed LD 153, An Act to Strengthen Testing for Lead in School Drinking Water. This legislation requires all schools to test their water used for drinking and culinary purposes for lead. For schools regulated as public water systems by the DWP, the lead sampling requirements set forth in LD 153 are in addition to routine lead/copper sampling requirements under the EPA's Safe Drinking Water Act.

The lead testing effort will begin during the 2021-22 school year. While instruction and testing materials are being provided to all schools, partnering with participating local water professionals to complete this requirement is encouraged. For updates and a more comprehensive look at the testing program for lead in schools, please visit the DWP website at [www.medwp.com/schools.html](http://www.medwp.com/schools.html).



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## **Proposed Revisions to the Lead and Copper Rule**

The EPA has proposed revisions to the Lead and Copper Rule that are intended to identify additional sources of lead in drinking water, drive more lead service line replacements, and require lead testing in schools and childcare facilities. The effective date of these new regulations will be December 16, 2021, and the compliance deadline will be October 16, 2024. Affected public water systems are advised to begin working on a lead service line inventory for both the public and private portion of all system service lines as soon as possible. More information can be found at: <https://tinyurl.com/PbCuRevised>.

## **Cybersecurity**

Computer security issues can seriously impact daily operations at a drinking water and/or wastewater utility through damage to system components, interruption of operations, theft of customers' personal information, or even loss of use of Supervisory Control and Data Acquisition (SCADA) systems. Cybersecurity has become increasingly concerning, especially in the past year when more people are working from home and on less-secure networks.

It is important to take practical steps to protect cyberspace and stay aware of cybersecurity threats across the country. The following tips have been provided by the Department of Homeland Security, Cybersecurity & Infrastructure Security Agency (CISA) to enhance cyber resilience:

1. Implement multifactor authentication, a verification method in which a user can only be granted access after successfully presenting two or more identification factors. These could include codes texted to your personal cell phone or biometric methods, such as fingerprint, voice, or iris recognition.
2. Keep software updated.
3. Include a cybersecurity section in all Emergency Response Plans.
4. Check in with [CISA.gov](https://www.cisa.gov) for alerts and updates.

It is anticipated that the EPA may include cybersecurity items in sanitary surveys in the future, although this has yet to be confirmed.

Note: Public Water Systems regulated by the DWP that have (or suspect they may have) experienced a cybersecurity incident should contact their Public Water System Inspector and local law enforcement immediately.

# Keeping Maine's Drinking Water Safe

The Drinking Water Program promotes a core message of four principles that ensure public water systems provide safe drinking water to their customers: source protection, sampling, treatment, and maintenance of tanks and pipes. The core message encourages water systems to continually work to identify, reduce, and eliminate risks and vulnerabilities to their water systems.

The four principles of the DWP's core message direct public water systems toward the overarching goal of ensuring safe drinking water for all their consumers. The DWP works to convey this message to all of Maine's public water systems on a daily basis through every interaction – whether it be a phone call, site visit, training session, or a DWP email alert.

## Source Protection

### The Importance of Source Protection

The ideal drinking water source is in a remote, forested natural area with no nearby sources of pollution. However, most water sources are located near more densely populated areas, increasing the vulnerability of the source to contamination. Contamination, whether from harmful chemicals or biological organisms, often comes from activities on the land close to a drinking water source. The Safe Drinking Water Act requires all public water systems to produce safe water through a multiple-barrier approach. Source protection is the first and most important component of these barriers. If pollutants never reach a drinking water source, the risk for human consumption is greatly diminished – even if other barriers fail. Additionally, treating a contaminated drinking water source is typically much more costly than protecting a drinking water source area.

### Keeping Contamination Away

Approval of a new public water system well requires contamination sources, particularly leach fields and underground fuel storage tanks, to be set back a minimum distance from the well. The Maine Rules Related to Drinking Water require all public water system wells to be 300 feet from potential sources of contamination and 1,000 feet from underground fuel storage tanks. When these setback distances cannot



*Wellhead with a sanitary seal,  
Poplar Stream Falls Hut*

be met for unavoidable reasons, such as limited property size or wetlands, the DWP administers setback waiver policies that help to mitigate the increased risk created by reduced setbacks. Mitigation may include increased sampling, well construction requirements, or, in some cases, a pre-treated septic process or the installation of drinking water treatment for the removal of any contaminants from the water supply. The DWP's public water system inspectors administer these setback waiver policies whenever a well with reduced setback is proposed for approval.

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## Source Protection Measures

### Synthetic Organic Compound Waivers

Per federal law, community and non-transient non-community public water systems are required to test for synthetic organic chemicals (SOCs) at least once every 9 years. Systems have the option to apply for a waiver from testing for SOCs during the first two 3-year cycles of a 9-year period, but are required to sample for SOCs in the last 3-year cycle. Any public water system seeking a waiver from SOC sampling must provide an approved wellhead or watershed protection plan and be able to demonstrate that land within a specified distance of each source is not under threat from SOC use based on land use type. For most land uses a radius of 1,000 feet is used, although a 2,500-foot radius is used for landfills, Superfund sites, and similar higher risk land uses. Systems with waivers can save up to \$1,000 per source for each 3-year monitoring/waiver period.



*Floods Pond, Bangor Water District*

### Filtration Avoidance

The Surface Water Treatment Rule requires all public water systems with sources from surface water or groundwater under the influence of surface water to disinfect and filter the drinking water they provide to their consumers.

Only those systems demonstrating compliance with the most stringent water quality criteria set forth in the Rule may qualify for filtration avoidance. Maine has nine community water systems that qualify for, and currently maintain, filtration avoidance:

#### **Auburn Water District**

- Lake Auburn

#### **Bangor Water District**

- Floods Pond

#### **Brewer Water Department**

- Hatcase Pond

#### **Great Salt Bay Sanitary District**

- Little Pond

#### **Lewiston Water and Sewer Division**

- Lake Auburn

#### **Mount Desert Water District**

- Lower Hadlock Pond
- Jordan Pond

#### **Portland Water District**

- Sebago Lake

#### **Presque Isle Utility District**

- Presque Isle Stream

#### **Town of Bar Harbor Water Division**

- Eagle Lake

## Sampling

### The Importance of Sampling

Sampling is considered the best way of determining the quality of drinking water and ensuring it is free of contaminants such as lead, arsenic, nitrates, and bacteria. In Maine, public water systems are required to regularly test the water they provide



to consumers and report the results to the DWP. The Safe Drinking Water Act lists 86 contaminants for which water systems must test. See the Appendix for a complete list of regulated contaminants. Any test results exceeding the standard (MCL) may require treatment, replacement of

source, or blending with other sources to reduce the contamination level. Testing schedules are based on a frequency that is reasonable for the protection of public health.

### Ensuring Safe Drinking Water

All public water systems must sample their drinking water periodically to ensure that the water is safe to drink. Sampling on a regular schedule will also indicate whether a water system is performing the way it is designed, and can help draw attention to potentially serious problems with the source, treatment, or distribution system.

## Treatment

### The Importance of Treatment

Although no two public water systems are exactly the same, they all share the same goal of providing safe, reliable drinking water to the communities they serve. To meet this goal, many water systems must treat their water to remove potentially harmful contaminants. The types of treatment provided by a public water system vary depending on the size of the system, the source (groundwater or surface water), and the quality of the source water. An important part of delivering safe drinking water, treatment is only successful when the proper chemicals are applied in the correct amounts and all equipment and materials are regularly maintained and monitored. Effective oversight of treatment systems helps to ensure that high-quality drinking water is delivered to the public.

### Monitoring Treatment Systems Through Monthly Operating Reports

All public water systems that add chemicals to their water must submit a monthly operating report to the DWP. These reports help track the amount of chemical used, daily production of the water system, and the amount of chemical residual present in the distribution system. The DWP reviews monthly operating reports to ensure that each public water system's treatment is operating efficiently and effectively, providing clean, safe drinking water.

*Opposite: Recent DWSRF funding supported Kennebunk Kennebunkport and Wells Water District in constructing a 2,500-square foot facility to house PFAS treatment for their Kennebunk River Well source. Treatment consists of three 12-foot diameter pressure filters: a pretreatment sand filter and two granular activated carbon filters. The foundation includes a 71,000-gallon holding tank used to capture and hold water generated from backwashing the pressure filters.*

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## Maintaining Pipes and Storage Tanks

### The Importance of Maintaining Pipes and Storage Tanks

A water system's distribution system, a network of piping and storage tanks, is an integral part of its ability to provide safe, clean water to consumers. It is important for water systems to regularly inspect their distribution systems as contaminants can enter drinking water through damaged pipes or tanks. Routine inspection and maintenance may also help water systems save money if they are able to find and repair leaks in a timely manner to abate water loss.

### The Drinking Water State Revolving Fund

The Drinking Water State Revolving Fund (DWSRF) is a State-operated program that 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 Water Systems may receive further assistance through principal forgiveness.

A portion of the DWSRF is used to fund non-construction projects that help improve and protect drinking water quality in Maine. These include grants for Wellhead and Source Water Protection, Water System Asset Security, Capacity Development, and System Consolidation, as well as loans for Very Small System Compliance and Land Acquisition.

The Safe Drinking Water Act requires that states match 20 percent of federal grant dollars to fund the DWSRF. This means that every dollar invested by the State of Maine secures five federal dollars. For 2020, Maine invested \$2,200,800, allowing the State to access \$11,004,000 in Federal funding. Combined with funds generated through repayment of prior year DWSRF loans, the Drinking Water Program offered approximately \$24 million in loans for drinking water improvement projects in Maine.

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

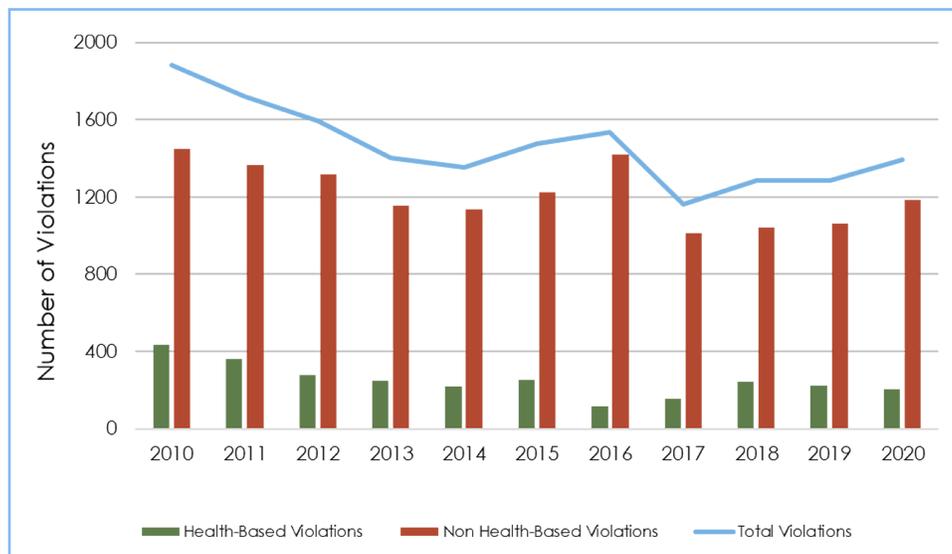
Since 1997, the Maine DWSRF has provided over \$325 million to public water systems through low interest loans and grants for Capital Improvement Projects to comply with the SDWA.

Comparing rates of compliance with the Safe Drinking Water Act from year to year is one method of measuring the success of public water systems in supplying safe drinking water to their consumers.

## Violations

Violations are only issued to public water systems when the water system does not meet all of the requirements mandated by the Safe Drinking Water Act or the Maine Rules Related to Drinking Water.

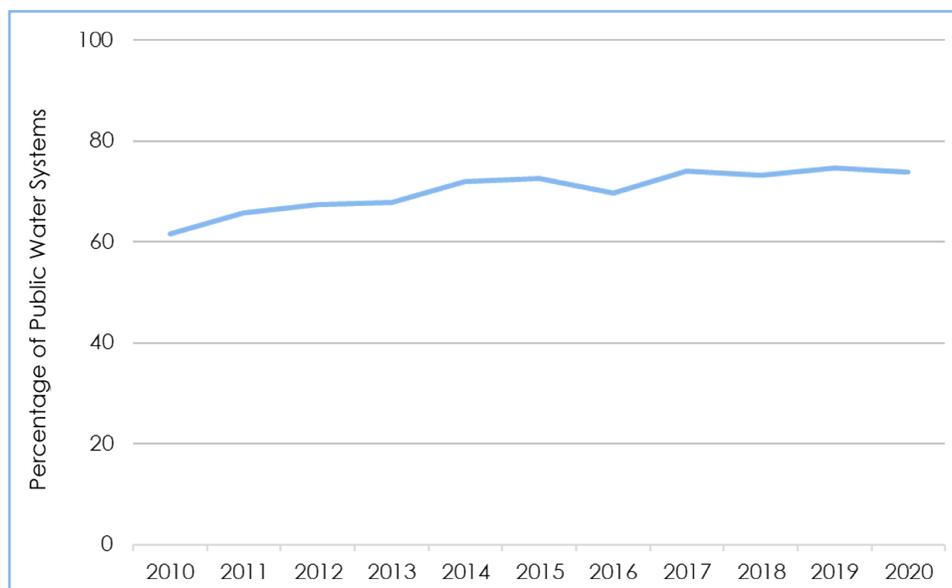
**Total Number of Violations Incurred by Year: 2010-2020**



**Figure 1. Total number of violations issued to public water systems over the past decade.**

A generally decreasing trend occurred over the past decade, with a high of 1,889 violations in 2010 and a low of 1,164 violations issued in 2017.

**Public Water Systems in Compliance: 2010-2020**



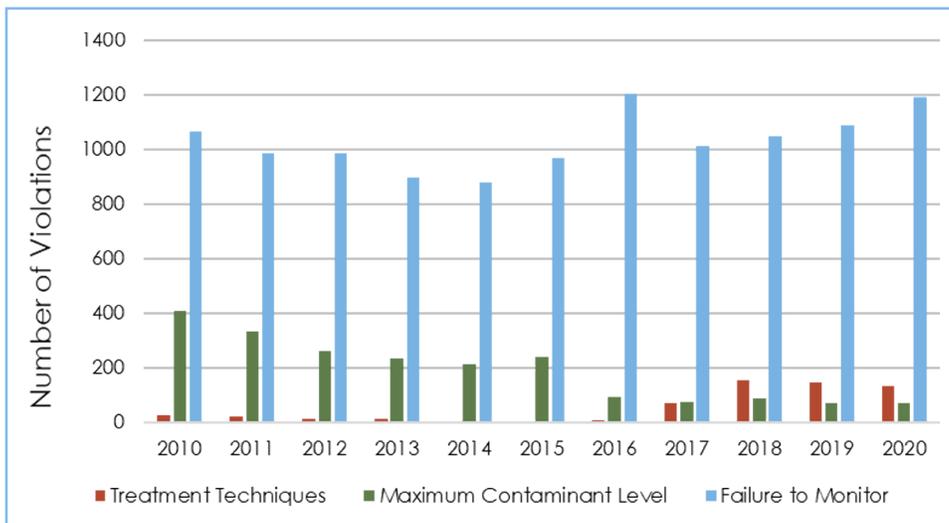
**Figure 2. Percentage of water systems receiving no violations over the past decade.**

Overall, the percentage of systems without any violations continues to steadily increase, an important gain for public health and safety.

## Health-Based and Non-Health-Based Violations

Health-based violations are issued when water sample results show the presence of contaminant(s) at concentrations above a *maximum contaminant level* (MCL) or when a *treatment technique* (TT) requirement is not met. The maximum contaminant level is set by the EPA and is based on human health and safety standards. 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 fail to test drinking water for a regulated contaminant (*failure to monitor*), neglect to report test results to the DWP, and/or fail to notify their customers of violations of the federal Safe Drinking Water Act.



**Figure 3. Total number of violations by violation type over the past decade.**

Public water systems may receive violations in three different forms: maximum contaminant level (MCL), treatment technique (TT), or failure to monitor/failure to report violations. Failure to monitor violations—and non-health-based violations in general—occur most frequently.

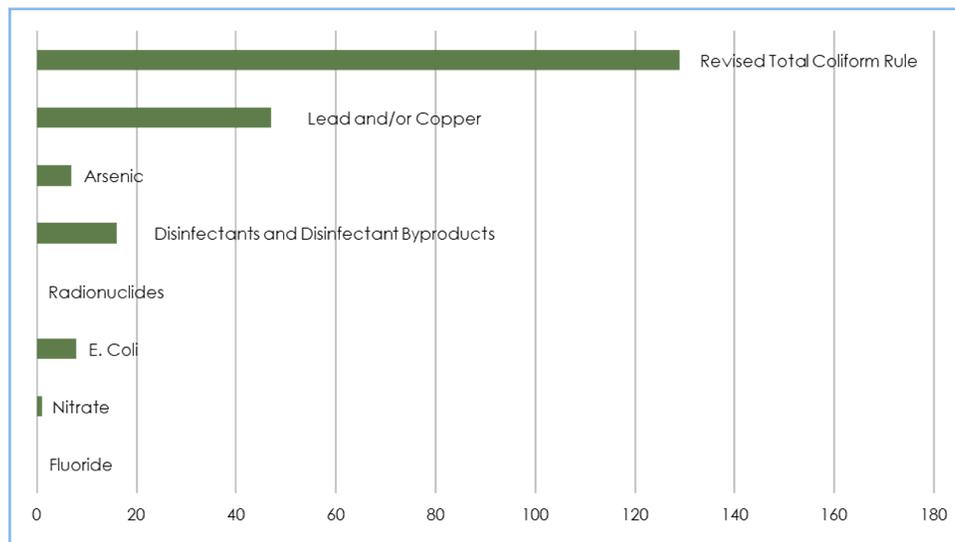
### Maximum Contaminant Level (MCL)

A maximum contaminant level is the highest level of a contaminant that is allowed in drinking water. These levels are set as close as feasible to the maximum contaminant level goal or MCLG. The MCLG is the level of a contaminant in drinking water below which there is no known or expected health risk. When the MCL level is set for a contaminant, public health, available technology, and cost are all taken into consideration.

### Treatment Technique (TT)

Treatment techniques are water treatment processes that reduce the level of contamination in drinking water. For certain contaminants, the EPA establishes treatment techniques instead of an MCL, such as those established for viruses, bacteria, and turbidity under the Surface Water Treatment Rule. Other rules have established treatment techniques as well, such as conducting lead education or creating corrosion control treatment plans per the Lead/Copper Rule, or failing to complete a level assessment or corrective actions under the Revised Total Coliform Rule (RTCR).

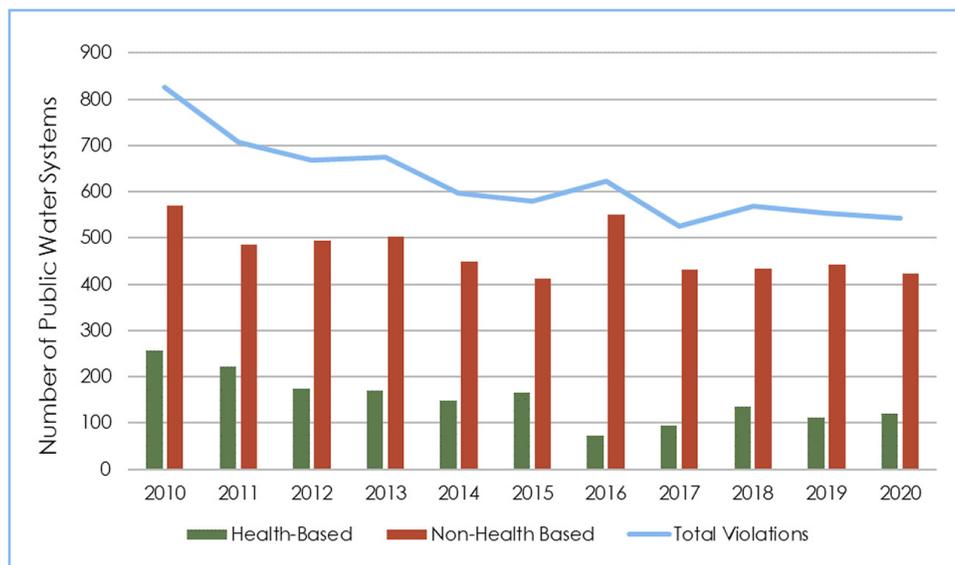
**Health-Based Violations Issued in 2020 for Regulated Contaminants**



**Figure 4. Health-based violations issued in 2020 by type of contaminant.**

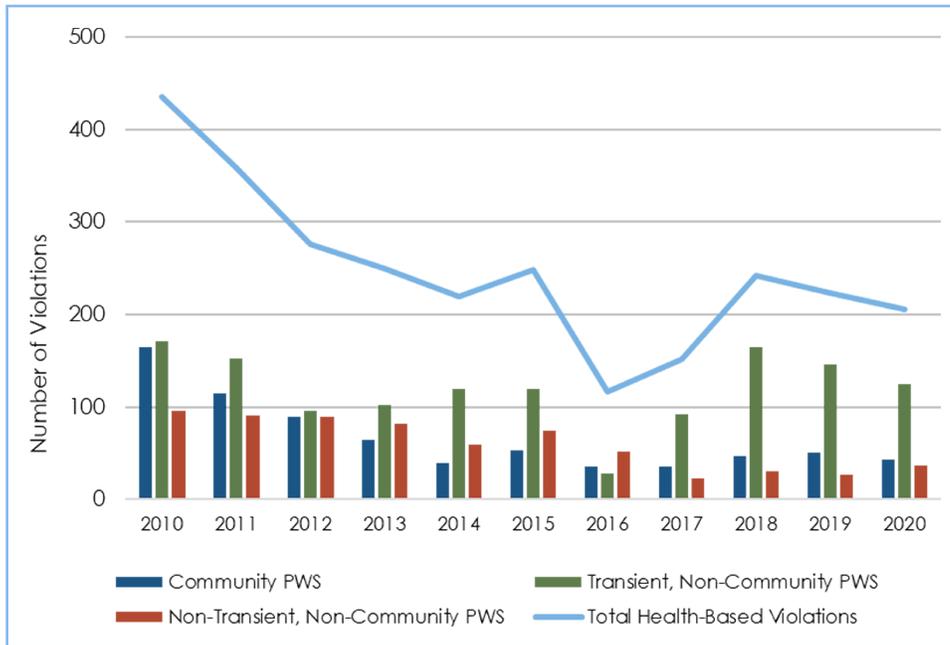
Violations are issued when a sample result from a public water system exceeds a drinking water standard for a regulated contaminant. In 2020, violations of the Revised Total Coliform Rule were by far the most common.

**Total Number of Public Water Systems Receiving Violations: 2010-2020**



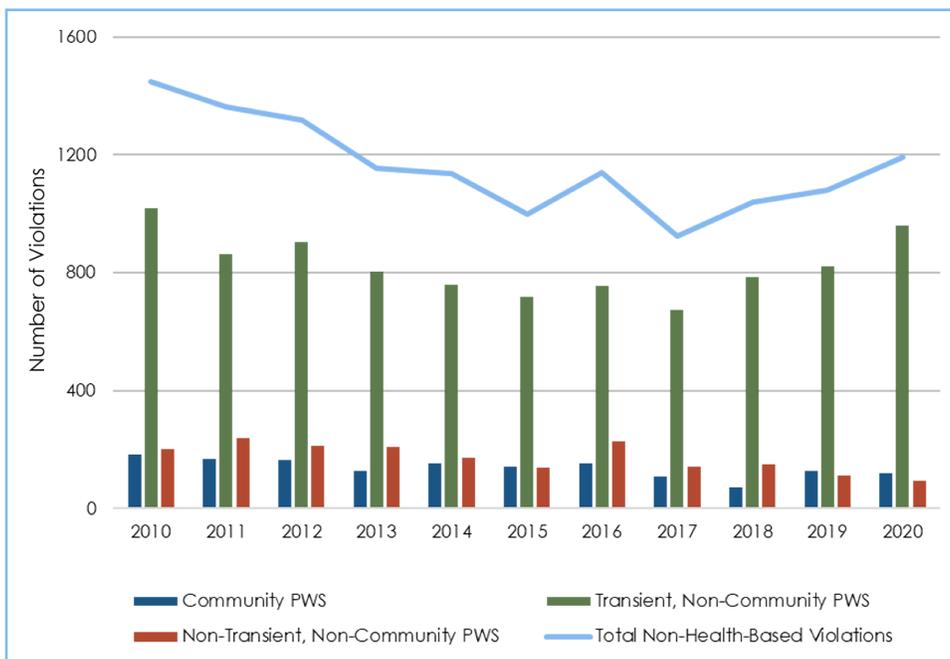
**Figure 5. Total number of public water systems receiving violations over the past decade.**

### Health-Based Violations Issued to Public Water Systems: 2010-2020



**Figure 6. Ten years of total health-based violations by public water system type.**

### Non-Health-Based Violations Issued to Public Water Systems: 2010-2020



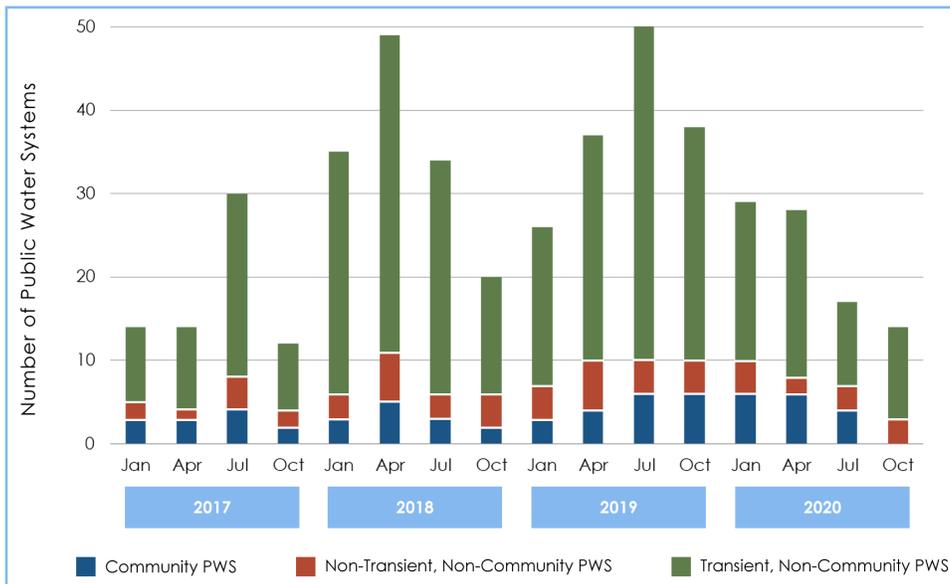
**Figure 7. Ten years of total non-health-based violations by public water system type.**

While non-transient, non-community and community water systems routinely keep violation numbers near or fewer than 200 per year, transient non-community systems tend to receive more non-health-based violations.

### Enforcement: Serious Violators

Enforcement action against a public water system occurs when a public water system violates federal or State drinking water regulations and does not address the non-compliance issue in a timely manner. The EPA’s Enforcement Targeting Tool is a method for determining which public water systems require enforcement actions. The tool extracts data from each primacy agency in the country, including the DWP, in order to identify public water systems with violations that do not appear to have been resolved or addressed. It uses a set formula based on violation type and on the length of time the violations have remained unresolved.

Using this formula, public water systems are prioritized for enforcement action in an effort to facilitate a return to compliance. Any public water system scoring 11 points or higher is considered “priority” status. The DWP must address or resolve priority status systems within 60 days of the EPA’s quarterly Enforcement Targeting Tool report. Each quarter, the DWP researches the accuracy of all of Maine’s priority-status public water systems on the Enforcement Targeting Tool list and reports progress or status of each system to the EPA.



**Figure 8. Number of public water systems in Maine by system type listed on the EPA’s Enforcement Targeting Tool.**

These systems have a “priority” status due to repeated compliance issues and so, as a general rule, must be addressed with an enforcement action.

## Site Visits and Sanitary Surveys

### Site Visits to Public Water Systems

The DWP’s public water system inspectors provide on-site advice and assistance to public water systems regarding operation, maintenance, treatment, quality control, testing waivers, and testing requirements. The DWP also partners with Maine Rural Water Association (MRWA) to provide water systems with free, on-site technical assistance.

Technical assistance is available to help systems with reviewing the operation of a treatment process, collecting samples, filling out reports, regulatory compliance, leak detection and line location, and development of emergency response plans and vulnerability assessments.

### Sanitary Surveys: 2010-2020

A sanitary survey is a regular review of a public water system to identify any deficiencies and make recommendations for improvements. The sanitary survey also offers a chance for public water system operators to ask questions and learn about their requirements and responsibilities.

Public water system inspectors conduct routine sanitary surveys for every public water system. Community water systems and Bottled Water facilities are inspected every three years, while Non-Transient, Non-Community and Transient water systems are inspected every five years.

|                                 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---------------------------------|------|------|------|------|------|------|------|
| Number of Site Visits Completed | 1502 | 1454 | 1324 | 1240 | 1055 | 952  | 743  |

|                                      | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--------------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Number of Sanitary Surveys Completed | 466  | 419  | 493  | 480  | 461  | 446  | 304  | 462  | 422  | 501  | 383  |

### 2020 Community Water Systems Performance Data

Under the Government Performance and Results Act for Drinking Water, the EPA collects data related to reported health-based violations of drinking water standards. In 2020, 98 percent of Maine residents

served by a Community Water System received water that continually met all health-based standards throughout the entire year.

## Contaminants in Drinking Water Regulated by the Maine Drinking Water Program

|  |                                 |                                    |
|--|---------------------------------|------------------------------------|
| <b>1. Microorganisms</b>                             | Chromium (Total)                | Di (2-ethylhexyl) phthalate        |
| Total Coliform                                       | Copper                          | Dinoseb                            |
| E. coli  | Cyanide                         | Dioxin (2,3,7,8-TCDD)              |
| Turbidity  | Fluoride                        | Diquat                             |
| Viruses  | Lead                            | Endothall                          |
| Giardia lamblia                                      | Mercury                         | Endrin                             |
| Cryptosporidium                                      | Nickel                          | Epichlorohydrin                    |
| Legionella   | Nitrates (Measured as Nitrogen) | Ethylbenzene                       |
| Heterotrophic Plate Count (HPC)                      | Nitrites (Measured as Nitrogen) | Heptachlor                         |
|  | Selenium                        | Heptachlor epoxide                 |
| <b>2. Radionuclides</b>                              | Thallium                        | Hexachlorobenzene                  |
| Gross Alpha  | Total Organic Carbon (TOC)      | Hexachlorocyclopentadiene          |
| Uranium  |                                 | Hexazanone (Velpar)                |
| Radium 226, 228 (combined)                           | <b>5. Organic Chemicals</b>     | Lindane                            |
| Radon  | Acrylamide                      | Methoxychlor                       |
|  | Alachlor                        | Methyl Tertiary Butyl Ether (MTBE) |
| <b>3. Disinfectants and Disinfection By-products</b> | Atrazine                        | Oxamyl (Vydate)                    |
| Bromate  | Benzene                         | Polychlorinated biphenyls (PCBs)   |
| Chloramines  | Benzo(a)pyrene (PAHs)           | Pentachlorophenol                  |
| Chlorine   | Carbofuran                      | Picloram                           |
| Chlorine Dioxide                                     | Carbon Tetrachloride            | Simazine                           |
| Ozone  | Chlordane                       | Styrene                            |
| Chlorite   | Chlorobenzene                   | Toluene                            |
| Haloacetic Acids (HAA5)                              | 2, 4-D                          | Toxaphene                          |
| Total Trihalomethanes (TTHM)                         | Dalapon                         | 2,4,5 – TP (Silvex)                |
|  | o-Dichlorobenzene               | 1,2,4- Trichlorobenzene            |
| <b>4. Inorganic Chemicals</b>                        | p-Dichlorobenzene               | 1,1,1-Trichloroethane              |
| Antimony   | 1,2-Dichloroethane              | 1,1,2-Trichloroethane              |
| Asbestos   | 1,1-Dichloroethylene            | Trichloroethylene                  |
| Arsenic  | Cis-1,2-Dichloroethylene        | Vinyl chloride                     |
| Barium   | Trans-1,2-Dichloroethylene      | Xylenes (total)                    |
| Beryllium  | Dichloromethane                 |                                    |
| Cadmium  | 1,2-Dichloropropane             |                                    |
|  | Di (2-ethylhexyl) adipate       |                                    |

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## Online Resources

- **Maine CDC Drinking Water Program**

[www.medwp.com](http://www.medwp.com)

- **US Environmental Protection Agency**

<https://www.epa.gov/ground-water-and-drinking-water>

- **Chapter 231 –  
State of Maine Rules Relating to Drinking Water**

<https://tinyurl.com/MEDWRules>

- **Safe Drinking Water Act**

<https://tinyurl.com/PL104-182SDWA>

- **Maine Rural Water Association**

<https://www.mainerwa.org>

- **Maine Drinking Water Commission**

<https://tinyurl.com/MEDWCommission>

- **US Centers for Disease Control and Prevention**

<https://www.cdc.gov/healthywater/drinking/index.html>

## Drinking Water Program Staff Directory

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**Stillings, Amilyn** - Rule Administrator

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**Trufant, Christina** - NEIWPCC Environmental Analyst

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**Tucker, Mark** - Public Water System Inspector

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**Tufts, Kate** - Public Water System Inspector

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**Welch, David** - Program Support Specialist

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**Whitcomb, Hillary** - Rule specialist

287-2070

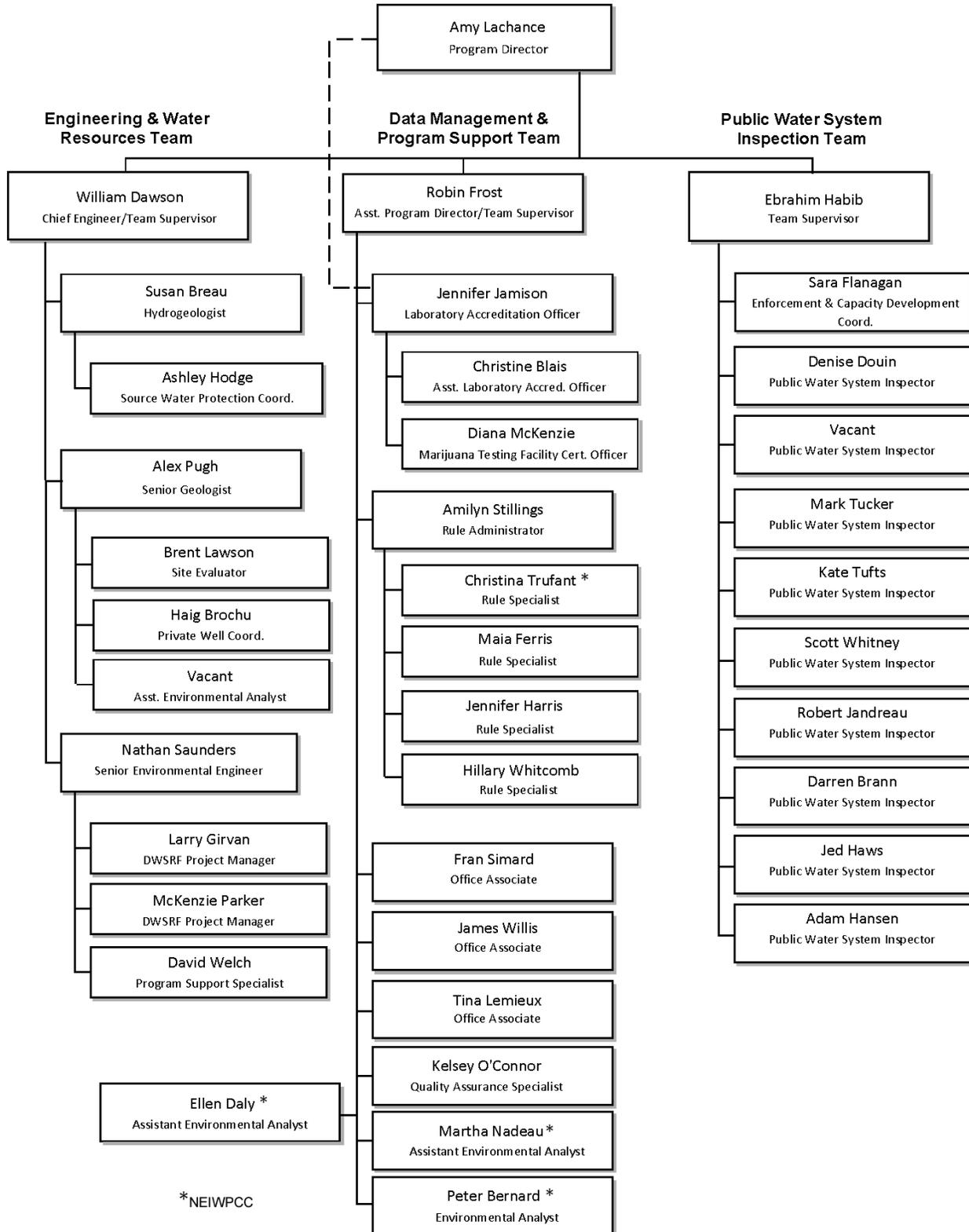
**Whitney, Scott** - Public Water System inspector

592-0578

**Willis, Jim** - Office Associate

287-5694

# Drinking Water Program Organizational Chart





## Maine CDC Drinking Water Program

Amy Lachance - Program Manager



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### Pictures:

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