

# Annual Drinking Water Quality Report

Reporting Year 2025



New Castle  
Water System

PWS ID: 1661010



Prepared by the  
Portsmouth Water Division



# OUR COMMITMENT: SAFE DRINKING WATER

On behalf of the Town of New Castle, the City of Portsmouth Water Division is pleased to present the Annual Water Quality Report. This report summarizes results of drinking water testing performed from January 1, 2025 to December 31, 2025, and is provided to keep you informed about the quality of the water you rely on every day. This report pertains to customers that receive water from the New Castle Water System (PWSID# 1661010), which is served by the Portsmouth Water System (PWSID# 1951010).

**Through 2025, the water provided to New Castle customers has continued to meet all water quality standards as regulated by the US Environmental Protection Agency and the NH Department of Environmental Services.**

## Drinking Water Sources

The mission of the Portsmouth Water Division is to provide the community with drinking water that meets all current federal and state drinking water standards. The Division is constantly monitoring and routinely testing the drinking water to ensure that water delivered to local customers consistently meets these standards. Potential contaminants and impacts from changing weather cause new challenges. The Division remains vigilant in meeting the goals of water treatment, source water protection, water efficiency, system improvements, fire service capability and community education, while continuing to serve the needs of all water users. Water supply updates are prepared and provided on the Water webpage at least quarterly, and more often when warranted. Water customers can access these reports at: [portsnh.co/watersupply](https://portsnh.co/watersupply).

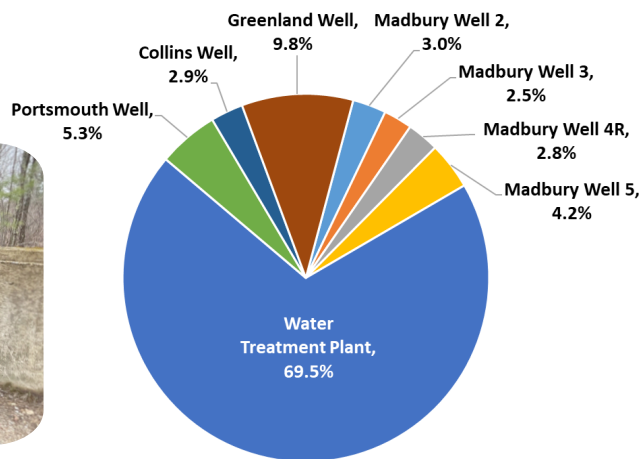
Water supplied to New Castle comes from a combination of surface water and groundwater sources. The surface water supply is the Bellamy Reservoir, which is located in Madbury and Dover. Water flows from a 22 square mile watershed area into the reservoir to the Water Treatment Facility (WTF) in Madbury, where it is treated using a coagulation, dissolved air flotation and dual media filtration process. The treated water is chlorinated with sodium hypochlorite before distribution into the system. Sodium hydroxide (used to adjust the final pH and alkalinity), fluoride as hydrofluorosilicic acid (used to prevent tooth decay) and poly/ortho-phosphate (a sequestering chemical to reduce precipitation of iron and manganese, and inhibit corrosion is used to protect distribution system pipes) are also added before distribution to Portsmouth water customers.

There are currently four groundwater wells in Madbury (Madbury Wells #2, #3, #4R and #5) that are pumped with the treated surface water through a transmission main to the Newington Booster Pumping Station. Customers in Madbury, Durham, and some along Fox Point Road in Newington receive water from the transmission main. Water is then pumped from the Newington Booster Station to customers throughout the Portsmouth distribution system.

Two additional wells, Portsmouth Well #1 and Collins Well, both located off Route 33 (Greenland Road) along with the Greenland Well located off Post Road in Greenland serve customers in Greenland and a southern portion of Portsmouth. Sodium hypochlorite and poly/ortho-phosphate are added to the water supplied at Portsmouth Well #1, Collins Well and Greenland Well. Fluoride as hydrofluorosilicic acid is also added at the Greenland Well.

The City also manages the Pease International Tradeport Water System, which is independent from the Portsmouth Water System. Detailed information about the Pease Water System can be found in a separate annual water quality report which is also posted on the City's website.

**Portsmouth Water Sources  
Source Percentages in 2025**



**Bellamy Reservoir Dam**



**Earth Day 2025 – Portsmouth Water Division cleans up Route 9 to protect the Bellamy Reservoir.**



# PUBLIC ENGAGEMENT

## Safe Water Advisory Group (SWAG)



The Safe Water Advisory Group (SWAG) was created with the approval of City Council on October 5, 2020. Its starting mission was to review and communicate the latest science on the health and environmental effects of PFAS, to monitor federal and state level legislative changes, and to anticipate policy changes that could impact the City of Portsmouth. Since 2020, the group has evolved to review topics beyond PFAS, such as the City's drinking water quantity, quality, preservation and conservation efforts, water infrastructure projects, and public health aspects of water quality. The SWAG met four times in 2025 and continues to support and provide public education about these drinking water topics. Video recordings and minutes from SWAG meetings are posted on the City's YouTube channel and website: <https://bit.ly/3PxnLd>.

The 2026 Portsmouth City Council voted to renew the SWAG for another 2 years. The public is invited to attend meetings and encouraged to be involved with the community and informed of all aspects of the City's water supply.

## Portsmouth High School Career Fair

To strengthen their connection with the next generation of local talent, Portsmouth Water Division staff - and members of the New Hampshire Water Works Association Student Outreach Committee - actively participate in high school and college career fairs throughout the region. By engaging directly with students, staff share insights into the vital role water professionals play in protecting public health, supporting community growth, and maintaining essential infrastructure. These events provide an opportunity to highlight diverse career paths - from engineering and environmental science to operations and customer service - while encouraging young people to consider meaningful, long-term careers in the water sector. Through this outreach, the Portsmouth Water System reinforces its commitment not only to reliable service, but also to investing in the future workforce that will sustain it.



# RESILIENCY

With support from the New Hampshire Department of Environmental Services (NHDES), the Town of New Castle recently completed a comprehensive leak detection survey aimed at reducing water loss and improving the long-term reliability of the community's distribution system. The assessment examined key components of the distribution network, including water mains, service lines, and hydrants. As a result of this effort, the Public Works Department identified several minor leaks and initiated pipe replacement projects on Davidson Street, Portsmouth Avenue, and Main Mast Circle, strengthening the system's overall performance.

In addition to this work, New Castle has secured funding through the Drinking Water State Revolving Loan Fund (DWSRF) to continue their town-wide service line material inventory and replacement efforts. This initiative is part of a national effort to help communities identify the presence of lead or galvanized service lines, which require replacement under updated federal regulations. The DWSRF enables the town to conduct detailed records reviews, field verifications, and data collection to build an accurate, publicly accessible inventory of service line materials.



Service line identification efforts using a vacuum excavator.

By proactively pursuing this work, New Castle is positioning itself to meet federal deadlines, protect public health, and ensure residents have clear information about the infrastructure that delivers their drinking water. The town's participation in the DWSRF program reflects its commitment to maintaining a safe, modern, and resilient water system for the community. More information regarding capital improvement projects is available from the Water & Sewer Commission Meeting Minutes at <https://www.newcastle.nh.gov/water-sewer-commission>.



New Castle water main replacement.

# 2025 WATER QUALITY RESULTS

CONTAMINANT (UNIT OF MEASUREMENT)		IN COMPLIANCE	VIOLATION (Y/N)	LEVEL MEASURED	RANGE	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
MICROBIOLOGICAL CONTAMINANTS	Total Organic Carbon (% removal)	✓	N	Average % Removal: 63	50 - 76	N/A	TT: minimum removal 45% - 50%	Naturally present in the environment
	Total Coliform Bacteria	✓	N	No total coliform was detected out of the 12 distribution system samples that were collected and analyzed in 2025.				Naturally present in the environment
	Turbidity (NTU)	✓	N	Highest Level Measured: 0.2	0.03 - 0.2	N/A	1	Soil runoff
	Turbidity (Lowest monthly percent of samples meeting limit)	✓	N	100%	N/A	N/A	TT = 95% of samples < or = 0.3 NTU	
DISINFECTION BYPRODUCTS	Haloacetic Acids (ppb)	✓	N	Highest LRAA: 58	38 - 66	N/A	60	Byproduct of drinking water disinfection
	Total Trihalomethanes (ppb)	✓	N	Highest LRAA: 54	27 - 84	N/A	80	Byproduct of drinking water chlorination
LEAD AND COPPER	Lead (ppb)	✓	N	90th Percentile = 0 0 sites above AL (10 sites sampled)	<1 - 5	15	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
	Copper (ppm)	✓	N	90th Percentile = 0.07 0 sites above AL (10 sites sampled)	0.008 - 0.09	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
INORGANIC CONTAMINANTS	Arsenic (ppb) 2024-2025 data	✓	N	Highest Level Measured: 1.8 Avg Source Level: <1	<1 - 1.8	0	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
	Barium (ppb) 2024-2025 data	✓	N	Highest Level Measured: 27 Avg Source Level: 15	9 - 27	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
	Chlorine (ppm)	✓	N	Highest Level Measured: 0.9 Avg System Level: 0.6	0.08 - 0.9	MRDL = 4	MRDL = 4	Water additive used to control microbes
	Chromium (ppb) 2024-2025 data	✓	N	Highest Level Measured: 1.4 Avg Source Level: <1	<1 - 1.4	100	100	Discharge from steel and pulp mills; erosion of natural deposits
	Fluoride (ppm)	✓	N	Highest Level Measured: 0.75 Avg Level: 0.63	0.56 - 0.75	4.0	4.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
	Nitrate (as Nitrogen) (ppm)	✓	N	Highest Level Measured: 4 Avg Source Level: 0.7	<0.2 - 4	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
SYNTHETIC ORGANICS	Hexachlorocyclopentadiene (ppb)	✓	N	Highest Level Measured: 0.1 Avg Source Level: <0.1	<0.1 - 0.1	50	50	Discharge from chemical factories
RADIOACTIVE CONTAMINANTS	Uranium (ppb) 2023-2025 data	✓	N	Highest Level Measured: 1.6	<1 - 1.6	0	30	Erosion of natural deposits
UNREGULATED SUBSTANCES	Lithium (ppt)	✓	N	Average Source Level: <9	<9 - 10	Naturally occurring element that has numerous commercial uses including as a pharmaceutical drug, an industrial chemical catalyst, a sanitizing agent for swimming pools and hot tubs, and increasingly as a component of batteries		
PFAS	Per- and Polyfluoroalkyl Substances (PFAS)	✓	N	See PFAS section (includes regulated and unregulated testing data)	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff / leachate from landfills and septic systems			

**DEFINITIONS OF TERMS**


- AL (Action Level) - Concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- MCL (Maximum Contaminant Level) - Highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- MCLG (Maximum Contaminant Level Goal) - Level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- MRDL (Maximum Residual Disinfectant Level) - Highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- MRDLG (Maximum Residual Disinfectant Level Goal) - Level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

- N/A (not applicable) - Sampling was not completed by regulation or was not required.
- ND (none detected) - Indicates that the substance was not found by laboratory analysis.
- ppm (parts per million) - One part substance per million parts water (or milligrams per liter).
- ppb (parts per billion) - One part substance per billion parts water (or micro-grams per liter).
- ppt (parts per trillion) - One part substance per trillion parts water (or nanograms per liter).
- NTU (Nephelometric Turbidity Units) - Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- TT (Treatment Technique) - Required process intended to reduce the level of a contaminant in drinking water.
- LRAA (Locational Running Annual Average) - Average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for THMs and HAAs are reported as LRAAs.

# 2025 WATER QUALITY RESULTS

## Per- and Polyfluoroalkyl Substances (PFAS)

On September 30, 2019 the NHDES established limits on the concentrations of four per- and polyfluoroalkyl substances (PFAS) in drinking water. The NHDES maximum contaminant level (MCL) for drinking water and groundwater is 15 parts per trillion (ppt) for perfluorooctane-sulfonic acid (PFOS), 12 ppt for perfluorooctanoic acid (PFOA), 11 ppt for Perfluorononanoic Acid (PFNA), and 18 ppt for Perfluorohexane sulfonic acid (PFHxS). These limits are based on an annual rolling average of the sample results. On May 14, 2025, the US EPA announced that the agency will maintain the MCL's for PFOA and PFOS established in 2024 and remove the limits for the other four PFAS compounds (PFHxS, PFNA, HFPO-DA and PFBS). The announcement also proposed a change in the compliance date 2029 to 2031. The proposed rule with these changes was intended to be issued in the fall of 2025, however, there has been no additional information published since May.

 **The City of Portsmouth remains in compliance with the NHDES PFAS limits and is actively taking steps to assure compliance with new EPA standards.** The City samples all the Portsmouth water supply sources quarterly in accordance with NHDES rules and uses accredited laboratories and EPA approved testing methods. Sample results from 2025 are summarized in the PFAS table below. The complete record of PFAS sample results is available at <https://portsnh.co/PFASTesting>. For more information about PFAS health effects: <https://www.atsdr.cdc.gov/pfas/about/health-effects.html>.

PER- AND POLYFLUOROALKYL SUBSTANCE (concentrations* reported in ng/L or ppt)	NHDES MAXIMUM CONTAMINANT LEVEL (MCL)	PORTSMOUTH WELL #1	COLLINS WELL	GREENLAND WELL	MADBURY WELL #2	MADBURY WELL #3	MADBURY WELL #4R	MADBURY WELL #5	BELLAMY RESERVOIR	WATER TREATMENT PLANT	*UCMR5 AVERAGES ACROSS SOURCES (2023-2024 DATA)	TABLE ABBREVIATIONS & NOTES:		
												ND (none detected): Indicates that the substance was not found by laboratory analysis.		
# of samples in 2025		4	4	4	4	4	4	4	4	4	4	Due to laboratory analytical method limitations, low concentrations reported for these chemicals are considered estimates unless the amount measured is above 2 ng/L (ppt).		
% of water supplied in 2025		5.3%	2.9%	9.8%	3.0%	2.5%	2.8%	4.2%	69.5%			*UCMR5 - Fifth Unregulated Contaminant Monitoring Rule: The Safe Drinking Water Act (SDWA) requires that once every five years the EPA issue a list of unregulated contaminants to be monitored by public water systems (PWSs).		
Perfluorohexane-sulfonic acid (PFHxS)	18	Average	8	2	ND	ND	ND	ND	ND	ND	<3	This sampling program will improve the understanding of the frequency that 29 per- and polyfluoroalkyl substances (PFAS) and lithium are found in the nation's drinking water systems, and at what levels.		
		Range	6 - 9	ND - 3	ND	ND	ND	ND	ND	ND	ND		ND - 5	
Perfluorononanoic acid (PFNA)	11	Average	ND	ND	ND	ND	ND	ND	ND	ND	ND		Two analytical methods were used to determine PFAS compound concentrations in Portsmouth's drinking water sources. The far-right column of the results table provides the average and range of <b>detected</b> compounds found in some of the sources that supply water to the Portsmouth Water System. These samples were collected on 7/18 and 10/12 of 2023, as well as 1/19, 2/7, and 5/10 of 2024.	
		Range	ND	ND	ND	ND	ND	ND	ND	ND	ND			ND
Perfluorooctane-sulfonic acid (PFOS)	15	Average	6	4	3	ND	ND	ND	ND	ND	<4			
		Range	5 - 6	4 - 5	2 - 4	ND	ND	ND	ND	ND	ND			ND - 5
Perfluorooctanoic acid (PFOA)	12	Average	7	4	4	2	2	2	3	2	2			<4
		Range	6 - 7	3 - 5	3 - 5	2 - 3	2 - 3	ND - 3	2 - 4	2 - 3	ND - 3			ND - 7
Perfluorobutane-sulfonic acid (PFBS)	not regulated	Average	4	11	2	ND	ND	ND	2	ND	ND			<3
		Range	4 - 5	7 - 15	2 - 3	ND	ND	ND	ND - 3	ND	ND			ND - 9
Perfluorobutanoic acid (PFBA)	not regulated	Average	3	5	ND	ND	ND	ND	ND	2	4	<5		
		Range	3 - 4	3 - 8	ND	ND	ND	ND	ND	ND - 3	2 - 7	ND - 5		
Perfluoroheptanoic acid (PFHpA)	not regulated	Average	4	ND	ND	ND	ND	ND	ND	ND	ND	<3		
		Range	3 - 4	ND	ND	ND	ND	ND	ND	ND	ND	ND - 3		
Perfluorohexanoic acid (PFHxA)	not regulated	Average	6	ND	3	ND	ND	ND	ND	ND	ND	<3		
		Range	5 - 7	ND - 2	3 - 4	ND	ND	ND	ND	ND	ND	ND - 6		
Perfluoropentanoic acid (PFPeA)	not regulated	Average	6	2	3	ND	ND	ND	ND	ND	ND	<3		
		Range	5 - 7	ND - 2	3 - 4	ND	ND	ND	ND	ND	ND	ND - 7		

## Source Water Assessment

The Portsmouth Water Division routinely updates inventories of potential contaminant threats and is actively pursuing opportunities to increase the protection of the City's groundwater supplies and the Bellamy Reservoir through property and easement acquisitions. NHDES prepared drinking water source assessment reports for all public water systems between 2000 and 2003 in an effort to assess the vulnerability of each of the State's public water supply sources. Included in the report is a map of each source water protection area, a list of potential and known contamination sources and a summary of available protection options. The complete Assessment Report is available for review at <https://portsnh.co/3Eylwb5>.

The results of the assessment, prepared in 2002, are provided in the table. Risk factors, such as proximity of highways or known contamination, are ranked and summarized in the table. For more information, call Mason Caceres, Assistant Water Resource Manager, at 603-312-3804.

SYSTEM	SOURCE INFORMATION	SUMMARY OF SUSCEPTIBILITY RATINGS		
		HIGH	MEDIUM	LOW
PORTSMOUTH	Greenland Well - GPW 003	4	3	5
	Portsmouth Well - GPW 004	5	4	3
	Madbury Well 2 - GPW 006	2	4	6
	Madbury Well 3 - GPW 007	0	5	7
	Madbury Well 4R - GPW 011	2	4	6
	Madbury Well 5 - GPW 013	2	4	6
	Bellamy Reservoir - 009	1	6	5
	Collins Well - GPW 010	4	1	7

# WHAT'S IN YOUR DRINKING WATER AND WHAT'S NOT

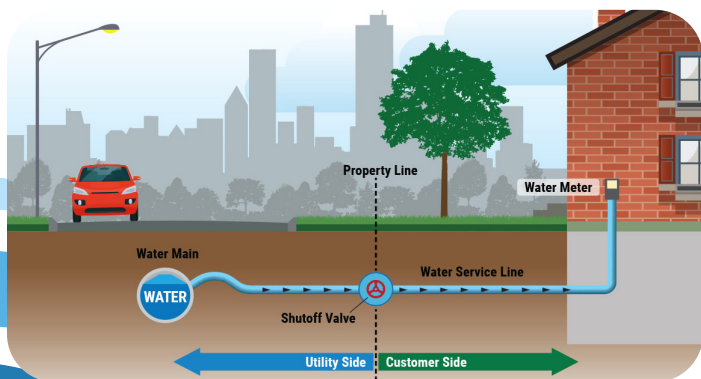
Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791) or on EPA's website [epa.gov/safewater](http://epa.gov/safewater).

## Lead and Copper

The Portsmouth Water Division takes the responsibility of protecting the public's health very seriously. The Division supplies data to make informed decisions about health and drinking water. Lead is not present in the water when it leaves City treatment and well facilities, or in the water mains that run below the streets. However, lead can be present in old service line connections that tie homes to the water system or plumbing inside homes and businesses. Because of this historical issue, the United States Environmental Protection Agency (USEPA) published a Lead and Copper Rule Improvement requirement that all water suppliers complete an inventory of all water service lines and their material makeup, which was submitted on October 16, 2024. Water Division staff continue to visually inspect water service lines where they enter residential and commercial buildings to determine the material type and request the help of their customers to schedule these inspections. Access to this inventory and more information about Portsmouth's identification efforts can be found at: [portsnh.co/servicelineinventory](http://portsnh.co/servicelineinventory).

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The Portsmouth Water System is responsible for providing high quality drinking water and the New Castle Water System is responsible for removing lead pipes, but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk.

Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry



Common water service line arrangement where the water system (New Castle utility) and the property owner (customer) each own a portion of the supply line (Source: Federal Reserve Bank of Chicago).

or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact New Castle's Director of Public Works, Chris Robillard, at (603) 766-3613 or [publicworks@newcastle.nh.gov](mailto:publicworks@newcastle.nh.gov). Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <https://www.epa.gov/safewater/lead>.

**Health Effects of Lead:** Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.


**Lead In Schools:** Per RSA 485:17-a, all NH schools and licensed child care facilities must test for lead at all drinking water outlets where children can drink the water and to remediate any outlets testing at or above 5 ppb. Three rounds of testing at least 6 months apart are required. A comprehensive list of facilities and results are available at [www.gettheleadoutnh.org](http://www.gettheleadoutnh.org) or direct link here: [View Results | NH Department of Environmental Services](#).

In 2025, 10 homes in New Castle were sampled for lead and copper analysis. Of these, 9 samples had no-detection of lead above the laboratory detection limit of 1 ppb and one sample had a detected lead concentration of 4.5 ppb. No samples exceeded the 15-ppb action level.

 **The Portsmouth Water System remains in compliance with the lead and copper rule.**

## Fluoridation

Your public water supply is fluoridated. According to the Centers for Disease Control and Prevention, if your child under the age of 6 months is exclusively consuming infant formula reconstituted with fluoridated water, there may be an increased chance of dental fluorosis. Consult your child's health care provider for more information. Dental fluorosis, in moderate or severe forms, may result in brown staining and/or pitting of the permanent teeth before they erupt from the gums. Concerns for dental fluorosis arise when fluoride levels are greater than 2 mg/L.

 **The City of Portsmouth's water operations staff were recently awarded a NH Safe Lives certificate for fluoride optimization in the Portsmouth Water System.**

# WATER QUALITY MONITORING

## Possible Contaminants in Drinking Water Sources

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material. It can pick up substances resulting from the presence of animals or from human activity. Such substances are called contaminants (any physical, chemical, biological, or radiological substance or matter in water), and may be present in source water as:

**Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

**Inorganic contaminants**, such as salts and metals, which can occur naturally in the soil or groundwater or may result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;

**Pesticides**, generally, any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest;

**Herbicides**, any chemical(s) used to control undesirable vegetation;

**Organic chemical contaminants**, including per- and polyfluoroalkyl substances, synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems;

**Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

To protect public health, EPA and the State of New Hampshire prescribe regulations which limit the amount of certain contaminants in tap water provided by public water systems. The US Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily mean that water poses a health risk. More information about contaminants and potential health effects can be obtained by contacting the Environmental Protection Agency by calling the Safe Drinking Water Hotline (800-426-4791) or visiting the website [epa.gov/safewater](https://epa.gov/safewater).

Throughout 2025, the City has routinely monitored and tested for the presence of radioactive, biological, inorganic, volatile organic and synthetic organic contaminants. The 2025 Water Quality Results table (located on page 4) shows only those contaminants that were detected in the water. Tests included many more substances that registered at 'non-detect' levels and are not included in this report. The state requires the City to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included.

The Portsmouth Water System participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on the City's drinking water. UCMR5 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water, should the U.S. EPA consider introducing new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

A summary of the Portsmouth Water System's UCMR5 results is compiled on pages 4 and 5 of this report, and the dataset is also available for download and review at <https://portsnh.co/3ECeVgW>.

## Water Quality Parameters

Water quality parameters are routinely monitored to assess the general characteristics of the water supply. Note that the range of some of these parameters reflect the difference between the surface water supply and the groundwater supply.

WATER QUALITY PARAMETERS	PARAMETERS (UNITS)	AVERAGE LEVEL	RESULTS RANGE	SECONDARY DRINKING WATER STANDARD SMCL
	Chloride (ppm)	58	50 - 78	250
	Copper (ppb)	17	2 - 64	1300
	Iron (ppb)	58	30 - 170	300
	Manganese (ppb)	25	3 - 172	50
	pH	7.6	7.4 - 7.9	6.5 - 8.5
	Sulfate (ppm)	7	3 - 24	250
	Conductivity (uS/cm)	270	236 - 357	N/A
	Alkalinity (ppm)	30	24 - 40	N/A
	Hardness (ppm as CaCO <sub>3</sub> )	28	19 - 44	N/A
Ortho-Phosphate (ppm)	1.0	0.9 - 1.4	N/A	
Sodium (ppm)	44	2 - 178	100 - 250	





CITY OF PORTSMOUTH  
DEPARTMENT OF PUBLIC WORKS  
680 PEVERLY HILL ROAD  
PORTSMOUTH, NH 03801

## Important Contact Information

City of Portsmouth  
Department of Public Works  
Water Division  
680 Peverly Hill Road  
Portsmouth NH 03801  
(603) 427-1530  
[portsmouthnh.gov/publicworks/water](http://portsmouthnh.gov/publicworks/water)

### WATER QUALITY QUESTIONS:

**Mason Caceres**  
Assistant Water Resource Manager  
[mecaceres@portsmouthnh.gov](mailto:mecaceres@portsmouthnh.gov)  
(603) 312-3804

**Chris Robillard**  
Public Works Superintendent  
[publicworks@newcastlenh.org](mailto:publicworks@newcastlenh.org)  
(603) 431-6710 ext. 4

### BILLING QUESTIONS:

**Kelly Williamson**  
Finance Administrator  
(603) 431-6710 ext. 6

### FEDERAL & STATE AGENCIES:

EPA Safe Drinking Water (800) 426-4791  
[epa.gov/environmental-topics/water-topics](http://epa.gov/environmental-topics/water-topics)  
NH Department of Environmental Services  
(603) 271-3503 [des.nh.gov/water](http://des.nh.gov/water)

**Get involved! It's your drinking water and your input is important to us.**

Participate in a City Council Meeting. Meeting agendas are posted on the City's website and posted in the lobby of City Hall at 1 Junkins Avenue. Portsmouth's Government tv channel is Comcast Channel 22 (HD Comcast Channel 1072). Meetings are broadcast live and rebroadcast. Municipal meetings are also live streamed in HD on the City's YouTube channel.



## WATER FACTS

Water Production



3.3 million gallons/avg day

Water Supplied

30% Ground Water

70% Surface Water

Source Water Protection Acquisitions



226 Acres

