

Annual Drinking Water Quality Report

Reporting Year 2023

· NEW CASTLE ·
THE GREAT ISLAND
SETTLED 1623
INCORPORATED 1693

PLANTINGS
Courtesy Of
Great Island Garden Club



New Castle
Water System
PWS ID: 1661010



Prepared by the
Portsmouth Water Division

ISLANDER

OUR COMMITMENT: SAFE DRINKING WATER



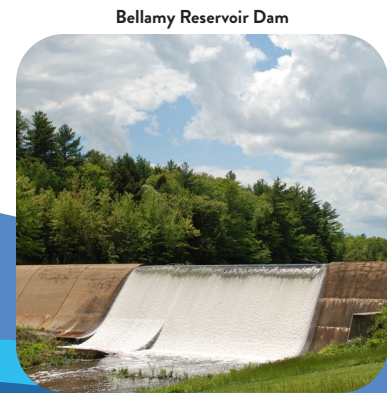
On behalf of the Town of New Castle, the City of Portsmouth Water Division is pleased to present the Annual Water Quality Report. This report summarizes results of drinking water testing performed from 01/01/2023 to 12/31/2023, and is provided to keep you informed about the quality of the water you rely 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 2023, 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

Our mission is to provide the community with drinking water that meets all current federal and state drinking water standards. The Portsmouth Water Division is constantly monitoring and routinely testing the drinking water to ensure that water delivered to our customers consistently meets these standards. Potential contaminants and impacts from changing weather cause new challenges. We remain 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 our water users. Water supply updates are prepared and provided on our webpage at least quarterly, and more often when warranted. Water customers can access these reports at: portsnh.co/watersupply

Water supplied to Portsmouth Water System customers 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 our water customers.



Bellamy Reservoir Dam

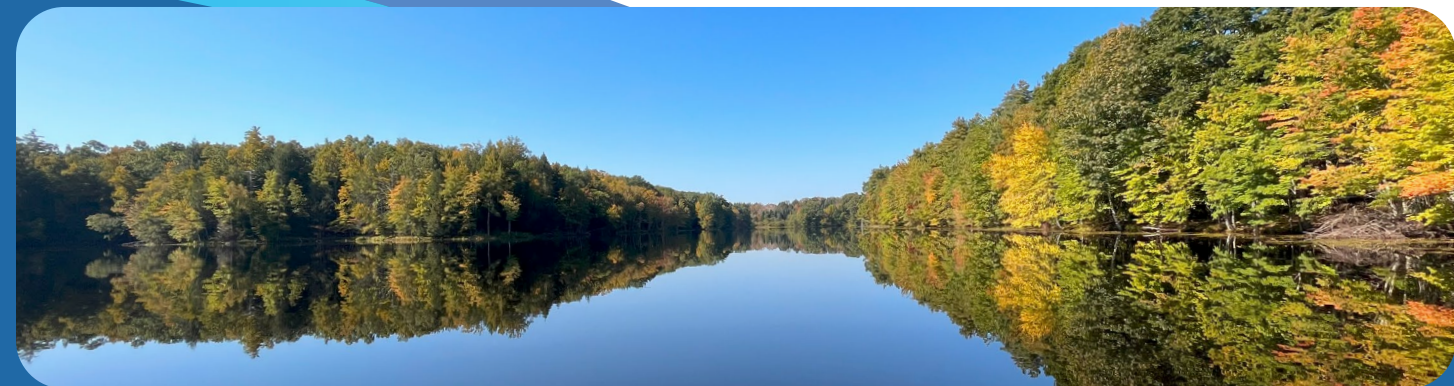
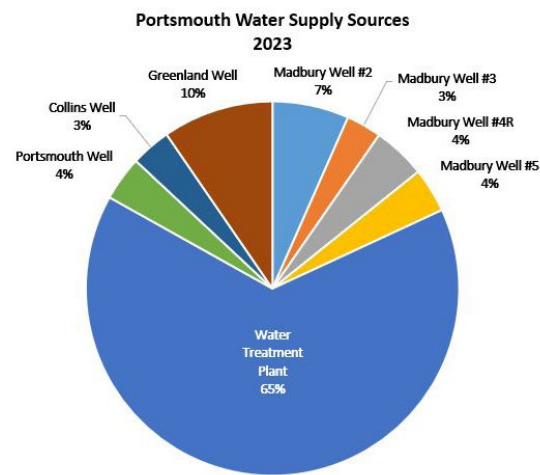


Portsmouth Water Treatment Operators receiving CDC Water Quality Award for fluoride optimization.

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 a Booster Pumping Station in Newington. Customers in Madbury, Durham, and some along Fox Point Road in Newington receive water from the transmission main. Water is pumped from the Newington Booster Pumping Station to customers through the Portsmouth distribution system.

Two additional wells, Portsmouth Well #1 and Collins Well, are located off Route 33 (Greenland Road). Another well, the Greenland Well, is located off Post Road in Greenland. The area in Greenland served by the public water system, and a southern portion of Portsmouth, is primarily supplied by the Greenland Well. 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 drinking 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 and also on the City's website.



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 mission is to review and communicate the latest science on the health and environmental effects of drinking water contaminants (with a heavy focus on PFAS), to monitor federal and state level legislative changes, and to anticipate policy changes that could impact the City of Portsmouth. The SWAG met four times in 2023 and discussed topics including PFAS regulations, extent, treatment, and testing programs; legislative items associated with drinking water, private well studies, lead and copper testing, water supply updates, and community organizing. Video recordings of SWAG meetings are posted on the City's YouTube channel.

The 2024 Portsmouth City Council voted to reinstate the SWAG for another 2 years. The public is invited to attend meetings and encouraged to be involved with the community and informed about the City's water supply.

Earth Day At Connie Bean Center

On April 21, 2023 the Portsmouth Water Division participated in the Sustainability Fair held at the Connie Bean Center to celebrate Earth Day by providing the public with information about the City's water, wastewater and stormwater systems. City staff who help manage and operate these systems offered insight on the processes, water quality dynamics and the importance of efficiency when it comes to community water usage. An interactive display created by City Engineer Erich Fiedler showed the difference between a water-efficient toilet and another that uses almost two and a half times the volume of water per flush. Water-saving techniques help homeowners save on their water bills, divert less water from our rivers, bays, and estuaries, and help to reduce water and wastewater treatment costs and the amount of energy used to treat, pump, and heat water.



Portsmouth Water Division staff at the 2023 Sustainability Fair.

RESILIENCY

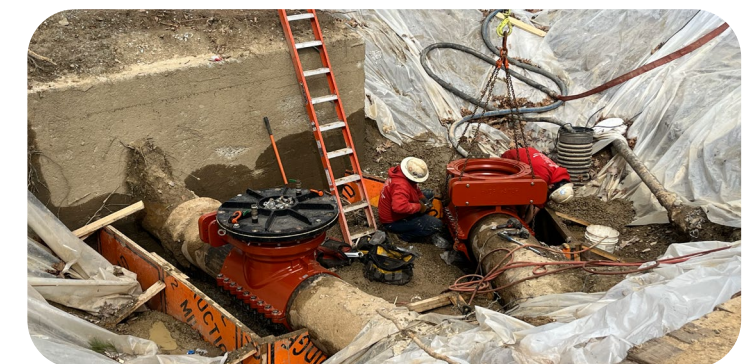
The Town of New Castle is currently developing an Asset Management Plan (AMP) for its water infrastructure with the goal of enhancing the efficiency and sustainability of its water system. This comprehensive initiative is focused on inventorying and evaluating the town's water assets, which include pipes, pumps, valves, and meters. By systematically documenting the condition and performance of these assets, the Public Works Department can prioritize maintenance and replacement projects.

The AMP will integrate data collection methods and analytical tools to provide a detailed understanding of the water system's current state. This approach allows New Castle to forecast future needs, budget more effectively, and ensure regulatory compliance. Overall, the Asset Management Plan represents a proactive step towards securing New Castle's water infrastructure for the long term, balancing cost-efficiency with the delivery of reliable and safe water services to the community. Information regarding capital improvement projects are available from the Water & Sewer Commission Meeting Minutes at www.newcastlenh.org/water-sewer-commission.



Tie-in connection on Lavenger Rd. (2022)

Portsmouth water supply projects include the Little Bay Water Transmission Main Replacement. This water main conveys drinking water from Madbury, under Little Bay, to the Portsmouth Water System. The City's project to improve the resiliency of this transmission main has begun with the installation of valves on each side of Little Bay. These valves will allow the City to close one of the two water mains as they cross under Little Bay if one were to begin to leak. This project will also provide connections to the transmission main that can be used to connect a third new water main across the bay. The valve installation project is scheduled to be complete by the end of June 2024. Aging water mains at various locations throughout the City are also being targeted for on-going replacement. CIP information is available online: <https://portsnh.co/cip>.



Little Bay water line valve replacements.

2023 WATER QUALITY RESULTS

CONTAMINANT (UNIT OF MEASUREMENT)	IN COMPLIANCE	VIOLATION (Y/N)	LEVEL MEASURED	RANGE	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
MICROBIOLOGICAL CONTAMINANTS	✓	N	Average % Removal: 74	66 - 81	N/A	TT: minimum removal 45% - 50%	Naturally present in the environment
	✓	N	No total coliform bacteria were detected in the 12 distribution system samples that were collected and analyzed in 2023.				Naturally present in the environment
	✓	N	Highest Level Measured: 0.21	0.02 - 0.21	N/A	1	Soil runoff
	✓	N	100%	N/A	N/A	TT = 95% of samples < or = 0.3 NTU	Soil runoff
DISINFECTION BYPRODUCTS	✓	N	Highest LRAA: 45	26 - 67	N/A	60	Byproduct of drinking water disinfection
	✓	N	Highest LRAA: 46	24 - 63	N/A	80	Byproduct of drinking water chlorination
LEAD AND COPPER	✓	N	90th Percentile = 2	0 sites above AL (42 sites sampled)	15	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
	✓	N	90th Percentile = 0.196	0 sites above AL (42 sites sampled)	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
INORGANIC CONTAMINANTS	✓	N	Highest Level Measured: 3 Avg Source Level: 1	<1 - 3	0	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
	✓	N	Highest Level Measured: 32 Avg Source Level: 18	8 - 32	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
	✓	N	Highest Level Measured: 0.99 Avg System Level: 0.71	0.35 - 0.99	MRDL=4	MRDL = 4	Water additive used to control microbes
	✓	N	Highest Level Measured: 2 Avg Source Level: 1	<1 - 2	100	100	Discharge from steel and pulp mills; erosion of natural deposits
	✓	N	Highest Level Measured: 0.88 Avg Level: 0.68	0.06 - 0.88	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
	✓	N	Highest Level Measured: 4.6 Avg Source Level: 1.8	<0.2 - 4.6	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
RADIOACTIVE CONTAMINANTS	✓	N	Highest Level Measured: 4.1	<3 - 4.1	0	15	Erosion of natural deposits
	✓	N	Highest Level Measured: 2.1	<1 - 2.1	0	30	Erosion of natural deposits
UNREGULATED SUBSTANCES	✓	N	Average Source Level: <9	<9 - 10	Naturally occurring metal 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		
	✓	N	Average Source Level: 21.9	2.50 - 211	Naturally-occurring element used in a variety of applications including use in steel production to improve hardness, stiffness and strength. Essential nutrient found in vitamin/mineral supplement and in fortified foods		
	✓	N	Average Distribution Level: 32	0.30 - 57	Byproducts of drinking water disinfection		
	✓	N	Average Distribution Level: 5.5	2.9 - 8.4	Byproducts of drinking water disinfection		
	✓	N	Average Distribution Level: 38	0.30 - 65	Byproducts of drinking water disinfection		
PFAS	✓	N	See PFAS section	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff / leachate from landfills and septic systems			

DEFINITIONS OF TERMS

- AGQS** (Ambient Groundwater Quality Standard) - Groundwater quality standard established by the State of New Hampshire per Env-Or 600.
- AL** (Action Level) - Concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- BD** (below detected level) - Average calculated resulted in value below the detection limit.
- 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 TTHMs and HAAs are reported as LRAAs.

2023 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. In March 2023, the US EPA proposed regulations that would limit acceptable concentrations of six PFAS compounds in drinking water. The US EPA's finalized regulation is expected in the Spring of 2024. We are meeting the current NHDES PFAS limits and will continue our efforts to respond and comply with the new EPA regulations.



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 of the Portsmouth water supply sources quarterly in accordance with NHDES rules and uses accredited laboratories and EPA approved testing methods. Sample results from 2023 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: www.atsdr.cdc.gov/sites/pease/index.html.

Over the past eight years, the Harrison Well and Smith Well in the Pease Tradeport Water System, and Portsmouth Well #1 and Collins Well in the Portsmouth Water System, have been routinely monitored for PFAS by the Air Force. All monitoring data is available online.

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	TABLE ABBREVIATIONS & NOTES:
												ND (none detected): Indicates that the substance was not found by laboratory analysis.
# of samples in 2023		4	4	4	4	4	4	4	4	4	2	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 2023		3.8%	3.5%	9.6%	6.6%	3.0%	4.7%	3.8%	64.9%			
Perfluorohexane-sulfonic acid (PFHxS)	18	Average	7	<2	ND	ND	ND	ND	ND	ND	<3	*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).
		Range	4 - 9	ND - 2	ND	ND	ND	ND	ND	ND	<3 - 5	
Perfluorononanoic acid (PFNA)	11	Average	ND	ND	ND	ND	ND	ND	ND	ND	ND	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Perfluorooctane-sulfonic acid (PFOS)	15	Average	5	4	3	ND	ND	ND	ND	ND	<4	Two analytical methods were used to determine PFAS compound concentrations in Portsmouth's drinking water sources. The right-hand column of the results table provides the average and range of detected compounds solely found in the Portsmouth, Collins, and Greenland Well sources. There were two sample collection rounds in 2023 - one on 7/18, and the other on 10/12.
		Range	5	3 - 6	3	ND	ND	ND	ND	ND	<4 - 4	
Perfluorooctanoic acid (PFOA)	12	Average	6	3	4	3	3	2	3	<2	<2	<4
		Range	5 - 7	2 - 6	4	2 - 3	3 - 4	ND - 2	2 - 3	ND - 3	ND - 3	<4 - 6
Perfluorobutane-sulfonic acid (PFBS)	not regulated	Average	4	10	<2	ND	<2	<2	2	ND	ND	4
		Range	3 - 4	9 - 11	ND - 3	ND	ND - 3	ND - 2	ND - 3	ND	ND	<3 - 4
Perfluorobutanoic acid (PFBA)	not regulated	Average	4	4	<2	ND	<2	ND	ND	2	5	<5
		Range	3 - 5	2 - 6	ND - 2	ND	ND - 2	ND	ND	ND - 4	2 - 6	<5 - 5
Perfluoroheptanoic acid (PFHpA)	not regulated	Average	4	ND	<2	ND	ND	ND	ND	ND	ND	ND
		Range	3 - 5	ND	ND - 2	ND	ND	ND	ND	ND	ND	ND
Perfluorohexanoic acid (PFHxA)	not regulated	Average	5	<2	4	ND	2	ND	<2	ND	ND	<3
		Range	3 - 9	ND - 3	4 - 5	ND	2 - 3	ND	ND - 2	ND	ND	<3 - 4
Perfluoropentanoic acid (PFPeA)	not regulated	Average	7	<2	5	ND	2	<2	ND	ND	<2	<3
		Range	4 - 10	ND - 4	4 - 6	ND	2 - 3	ND - 2	ND	ND	ND - 2	<3 - 5
6:2 Fluorotelomer Sulfonate (6:2 FTS)	not regulated	Average	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Range	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source Water Assessment

The Portsmouth Water Division routinely updates inventories of potential contaminant threats and is actively pursuing opportunities to increase the protection of our 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 results of the assessment have been updated and 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 about PFAS health effects: www.atsdr.cdc.gov/sites/pease/index.html

SYSTEM	SOURCE INFORMATION	SUMMARY OF SUSCEPTIBILITY RATINGS		
		HIGH	MEDIUM	LOW
PORTSMOUTH	Greenland Well - GPW 003	2	3	7
	Portsmouth Well - GPW 004	5	2	5
	Madbury Well 2 - GPW 006	1	3	8
	Madbury Well 3 - GPW 007	1	1	10
	Madbury Well 4R - GPW 011	1	1	10
	Madbury Well 5 - GPW 013	1	1	10
	Bellamy Reservoir - 009	2	5	5
	Collins Well - GPW 010	3	2	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. Immunocompromised persons (e.g., 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. The US EPA/Centers for Disease Control and Prevention (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 at 800-426-4791.

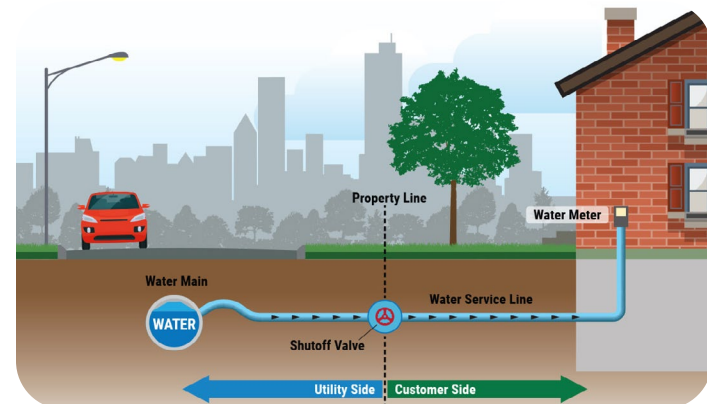
Lead and Copper

Portsmouth Water Division takes the responsibility of protecting your health very seriously. We want you to make informed decisions about your drinking water. Lead is not present in the water when it leaves our 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 in the plumbing inside homes and businesses. Because of this historical issue, the United States Environmental Protection Agency (EPA) published a Lead and Copper Rule Improvement requirement that all water suppliers complete an inventory of all water service lines and their material makeup by October 16, 2024. Water Division staff are inspecting water service lines where they enter residential and commercial buildings to determine the material type. They appreciate the help of water customers in scheduling these inspections. More information about this inventory effort can be found here: portsnh.co/servicelineinventory.

Lead was a common material used in plumbing until the 1980s. It is a powerful toxin that is harmful to human health. Elevated levels of lead can cause serious health problems, especially for pregnant women and young children who are especially vulnerable. Even low levels of lead in the blood of children can result in behavior and learning problems, lower IQ and hyperactivity, slowed growth, hearing problems and anemia. Adults who drink water with lead concentrations over 15 parts per billion (ppb) for many years could develop kidney problems or high blood pressure.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City is responsible for providing high-quality drinking water but cannot control the variety of materials used in private plumbing components.

Due to the age of many homes in Portsmouth and surrounding towns, and the associated potential for leaded plumbing components, we encourage customers to have their water tested by a certified laboratory, especially if there are children under six or pregnant women in the household. Operators actively adjust the water chemistry at the treatment facility and wells according



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

to our Corrosion Control Program, to reduce the potential for lead in households to dissolve into the water and end up at the tap. But if lead is present in your plumbing system and is in contact with water some risk remains. Information about our Corrosion Control Program can be found on the City's website.

Old, galvanized service lines are still in service at some locations in Portsmouth, even though their service life is typically only between 20 and 40 years. This type of pipe, besides being at high risk of failing and causing water quality issues, has the potential to contain lead. Lead 'jumpers' or 'goosenecks' were often used to make connections to galvanized service lines. If you have a galvanized service line, the Water Division strongly advises that it be replaced with copper as soon as possible. Please call Water Division personnel if/when you decide to replace your service line.


In 2023, 42 homes in New Castle were sampled for lead and copper. Of these, 33 of the samples had no-detection of lead above the laboratory detection limit of 1 ppb, and 8 samples had lead levels below 4 ppb. The highest lead detection was found at 5 ppb, and all residents were notified of their results within 30 days of report retrieval.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing the tap for 30 seconds to two minutes before using water for drinking or cooking. Do not use hot water for drinking or cooking. If you are concerned about lead in your water, you may wish to have it tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 800-426-4791. Additional information is available from NHDES by calling 603-271-2516 or online: <https://www.des.nh.gov/water/drinking-water/lead>. A list of laboratories that can test your water for lead is available on the City's website: <https://portsnh.co/3WBPDq8>.

 **The New Castle Water System is currently in compliance with the lead and copper rule.**

Fluoridation

Your public water supply is fluoridated. According to the CDC, if your child under the age of six 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, and may be present in source water as:

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

Inorganic contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

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

To ensure that tap water is safe to drink, the EPA imposes regulations limiting the amounts of certain contaminants in the water provided by public water systems. FDA regulations also limit the contaminants allowed in bottled water to provide the same protection for public health. Therefore, drinking water including bottled water may contain small amounts of some contaminants; but that does not necessarily mean that the water poses a health risk. For more information about the potential health effects of water contaminants, call the EPA Safe Drinking Water Hotline at 800-426-4791 or visit epa.gov/safewater.

During the past year, the City has taken hundreds of water samples in order to monitor and test for the presence of radioactive, biological, inorganic, volatile organic and synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Tests included many more substances that registered at 'non-detect' levels are not included in this report. The state requires us 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, along with the year when the sample was taken.

Portsmouth has started the fifth stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program that started in 2023. The UCMR program benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water. Chemicals analyzed for UCMR5 included 29 per- and polyfluoroalkyl (PFAS) substances and lithium to improve the agency's understanding of how often these substances are found in the nation's drinking water systems, at what levels, and whether new regulatory standards are needed to improve drinking water quality. The results of these tests are summarized in this report. *Unregulated contaminants that were not detected are not included.*

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 measures reflects the difference between the surface water supply and the groundwater supply.

PARAMETERS (UNITS)	AVERAGE LEVEL	RESULTS RANGE	SECONDARY DRINKING WATER STANDARD SMCL
Chloride (ppm)	55	47 - 65	250
Copper (ppb)	18	3 - 73	1300
Iron (ppb)	34	10 - 50	300
Manganese (ppb)	14	6 - 25	50
pH	7.6	7.3 - 8.1	6.5 - 8.5
Sulfate (ppm)	15	3 - 26	250
Conductivity (umhos/cm)	309	222 - 461	N/A
Alkalinity (ppm)	47	25 - 120	N/A
Hardness (ppm as CaCO3)	40	16 - 131	N/A
Ortho-Phosphate (ppm)	1.06	0.77 - 1.24	N/A
Sodium (ppm)	61	23 - 168	N/A





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

Important Contact Information

TOWN OF NEW CASTLE
DEPARTMENT OF PUBLIC WORKS
301 WENTWORTH ROAD
PO BOX 367
NEW CASTLE NH 03854
www.newcastlenh.org/highway-roads

QUESTIONS:

Chris Robillard
Public Works Superintendent
publicworks@newcastlenh.org
(603) 431-6710 ext. 4

Mason Caceres
Water Quality Specialist II
mecaceres@cityofportsmouth.com
(603) 312-3804

BILLING QUESTIONS:

Town of New Castle
Lori Ruest - Finance Administrator
(603) 431-6710 Ext. 6

FEDERAL & STATE AGENCIES:

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

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

Participate in a New Castle Select Board meeting and/or a Portsmouth City Council meeting.

Town of New Castle meeting agendas are online:

newcastlenh.org/select-board

City of Portsmouth meeting agendas are online:

cityofportsmouth.com/citycouncil/city-council-agendas



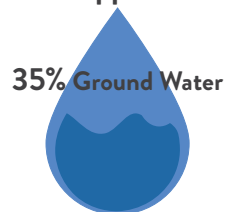
Water
Production



3.3 million gallons/avg day

**WATER
FACTS**

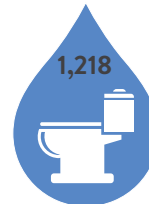
Water
Supplied



65% Surface Water

\$181,950 in

Water Efficiency Rebates
2016 - 2023



1,218



401

**Think Blue,
What Can You Do?**

