

Annual Drinking Water Quality Report

Reporting Year 2024



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 01/01/2024 to 12/31/2024, 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 2024, 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.

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 New Castle water customers.

Bellamy Reservoir Dam

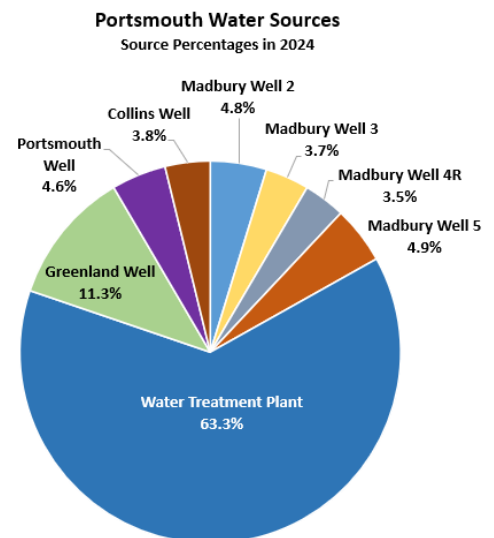


Portsmouth's Water Treatment Operators performing a pump test on Greenland's backup well.

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.



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 2024 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 source water protection. Video recordings and minutes from SWAG meetings are posted on the City's YouTube channel: <https://portsnh.co/3CzI50F>.

The 2024 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.

Earth Day At Connie Bean Center

On April 14, 2024, 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 local 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's Mayor Deaglan McEachern demonstrating the water efficiency display at the 2024 Sustainability Fair.

RESILIENCY

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

A major part of this AMP included an inventory of every domestic, fire, and irrigation water service line and their material makeup. The inventory required the system to pinpoint the location and material of service lines, which are the pipes connecting the water main to a building, and to specifically identify and replace those comprised of lead. The Town of New Castle compiled and submitted their service line inventory to the NH Department of Environmental Services (NHDES) in October 2024 to meet regulatory compliance. Customers were then notified in November 2024 if their service line material was identified as lead, galvanized steel, or unknown.

By and large, 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.



Hydrant installation on Spring Hill Rd. in New Castle

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 began with the installation of valves on each side of Little Bay that 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 in the future could be used to connect a third new water main across the bay. Aging water mains at various locations throughout the City are also being targeted for on-going replacement. Capital Improvement Plans and Project (CIP) information is available online: <https://portsnh.co/cip>.



Little Bay water main valve replacements.

2024 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: 64	53 - 72	N/A	TT: minimum removal 45% - 50%	Naturally present in the environment
	Total Coliform Bacteria	✓	N	No total coliform bacteria were detected in the 12 distribution system samples that were collected and analyzed in 2024.				Naturally present in the environment
	Turbidity (NTU)	✓	N	Highest Level Measured: 0.19	0.02 - 0.19	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	Soil runoff
DISINFECTION BYPRODUCTS	Haloacetic Acids (ppb)	✓	N	Highest LRAA: 41	17 - 60	N/A	60	Byproduct of drinking water disinfection
	Total Trihalomethanes (ppb)	✓	N	Highest LRAA: 46	17 - 84	N/A	80	Byproduct of drinking water chlorination
LEAD AND COPPER	Lead (ppb)	✓	N	90th Percentile = 1	0 sites above AL (18 sites sampled)	15	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
	Copper (ppm)	✓	N	90th Percentile = 0.11	0 sites above AL (18 sites sampled)	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
INORGANIC CONTAMINANTS	Arsenic (ppb) 2022-2024 data	✓	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
	Barium (ppb) 2022-2024 data	✓	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
	Chlorine (ppm)	✓	N	Highest Level Measured: 1.2 Avg System Level: 0.88	0.55 - 1.2	MRDL=4	MRDL = 4	Water additive used to control microbes
	Chromium (ppb) 2022-2024 data	✓	N	Highest Level Measured: 2 Avg Source Level: <1	<1 - 2	100	100	Discharge from steel and pulp mills; erosion of natural deposits
	Fluoride (ppm)	✓	N	Highest Level Measured: 0.77 Avg Level: 0.68	0.35 - 0.77	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
	Nitrate (as Nitrogen) (ppm)	✓	N	Highest Level Measured: 2.5 Avg Source Level: 1.4	<0.2 - 2.5	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
RADIOACTIVE CONTAMINANTS	Compliance Gross Alpha (pCi/L) 2022-2023 data	✓	N	Highest Level Measured: 4	<3 - 4	0	15	Erosion of natural deposits
	Uranium (ppb) 2022-2023 data	✓	N	Highest Level Measured: 2	<1 - 2	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

- **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.

2024 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 April 2024, the US EPA finalized regulations that limit acceptable concentrations of six PFAS compounds in drinking water.



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 2024 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>.

Over the past ten 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 (2023-2024 DATA)	TABLE ABBREVIATIONS & NOTES:
# of samples in 2024			12	12	4	4	4	4	4	4	4	4	<p>ND (none detected): Indicates that the substance was not found by laboratory analysis.</p> <p>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).</p> <p>*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).</p> <p>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.</p> <p>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 <u>detected</u> 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 and 2/7 of 2024.</p>
% of water supplied in 2024			4.7%	3.8%	11.3%	4.6%	3.7%	4.7%	5.0%	63.1%			
Perfluorohexane-sulfonic acid (PFHxS)	18	Average	5	2	<2	ND	ND	ND	ND	ND	ND	<3	
		Range	3 - 8	<2 - 3	ND - 2	ND	ND	ND	ND	ND	ND	ND - 5	
Perfluorononanoic acid (PFNA)	11	Average	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		Range	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Perfluorooctane-sulfonic acid (PFOS)	15	Average	5	4	3	ND	ND	ND	ND	<2	ND	<4	
		Range	4 - 6	3 - 6	3 - 4	ND	ND	ND	ND	ND - 3	ND	ND - 5	
Perfluorooctanoic acid (PFOA)	12	Average	6	3	5	3	3	<2	3	3	3	<4	
		Range	4 - 9	<2 - 5	4 - 5	2 - 3	3	ND - 2	3 - 4	2 - 3	2 - 3	ND - 7	
Perfluorobutane-sulfonic acid (PFBS)	not regulated	Average	5	9	2	ND	ND	ND	3	ND	ND	<3	
		Range	3 - 6	6 - 14	2	ND	ND	ND	2 - 4	ND	ND	ND - 9	
Perfluorobutanoic acid (PFBA)	not regulated	Average	3	3	2	ND	ND	ND	ND	2	3	<5	
		Range	ND - 5	ND - 5	ND - 2	ND	ND	ND	ND	ND - 4	ND - 5	ND - 5	
Perfluoroheptanoic acid (PFHpA)	not regulated	Average	3	ND	2	ND	ND	ND	ND	ND	ND	<3	
		Range	2 - 6	ND	ND - 3	ND	ND	ND	ND	ND	ND	ND - 3	
Perfluorohexanoic acid (PFHxA)	not regulated	Average	5	<2	4	ND	ND	ND	<2	ND	ND	<3	
		Range	3 - 9	<2 - 3	3 - 6	ND	ND	ND	ND - 2	ND	ND	ND - 6	
Perfluoropentanoic acid (PFPeA)	not regulated	Average	6	<2	5	ND	ND	ND	<2	ND	ND	<3	
		Range	4 - 13	ND - 3	3 - 6	ND	ND - 2	ND - 2	ND - 2	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 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, call Mason Caceres, Assistant Water Resource Manager, at 603-312-3804.

SOURCE WATER ASSESSMENT RESULTS	SYSTEM	SOURCE INFORMATION	SUMMARY OF SUSCEPTIBILITY RATINGS		
	PORTSMOUTH		HIGH	MEDIUM	LOW
		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/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

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. More information about this inventory effort can be found at: portsnh.co/serviceinventory.

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. Pregnant women, infants and young children are especially vulnerable because 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.

Due to the age of many homes in New Castle and surrounding towns, and the associated potential for leaded plumbing components, the Division encourages customers to have their water tested by a certified laboratory, especially if there are children under six or pregnant women in the household. The City adjusts the water chemistry at the treatment facility and well facilities according to its 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 a plumbing system, and is in contact with water, some risk remains. Information about the 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 because lead pipe "jumpers" or "goosenecks" were historically used to make these connections to galvanized service lines. The Portsmouth Water Division strongly advises anyone who has a galvanized service line, to replace it with copper as soon as possible and to inform Water Division personnel if/when they do.

In 2024, 18 homes in New Castle were sampled for lead and copper analysis. Of these, 15 samples had no-detection of lead above the laboratory detection limit of 1 ppb, and 3 samples had detected lead concentrations below 3 ppb. No samples exceeded the 15-ppb action level.

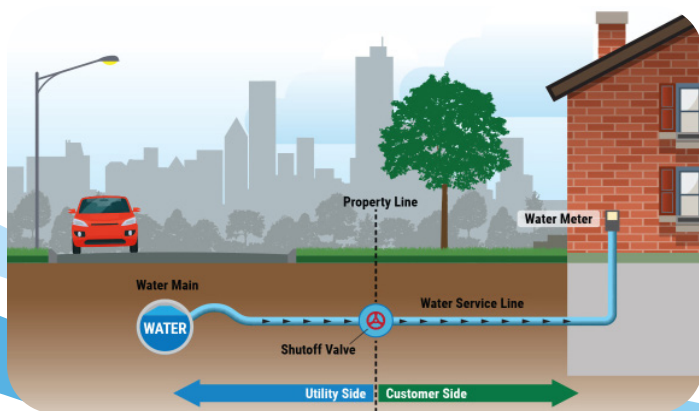
Homeowners can minimize the potential for lead exposure from water that has been sitting in the pipes by flushing the tap for at least 30 seconds before using water for drinking or cooking. Do not use hot water for drinking or cooking. Anyone concerned about possible lead in their water should consider having their water 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 and at US EPA Basic Information about Lead in Drinking Water: <https://portsnh.co/3QvbZ8z>. Additional information is available from NHDES by calling 603-271-2516 and online: <https://portsnh.co/4hg83UX>. A list of water testing laboratories is available on the City's website: <https://portsnh.co/418VJV>.

 **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.**



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).

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 routinely monitored and tested for the presence of radioactive, biological, inorganic, volatile organic and synthetic organic contaminants. The 2024 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)	64	43 - 99	250
	Copper (ppb)	22	3 - 73	1300
	Iron (ppb)	50	40 - 60	300
	Manganese (ppb)	12	5 - 18	50
	pH	7.6	7.4 - 7.9	6.5 - 8.5
	Sulfate (ppm)	15	3 - 26	250
	Conductivity (umhos/cm)	302	242 - 404	N/A
	Alkalinity (ppm)	33	30 - 42	N/A
	Hardness (ppm as CaCO ₃)	35	22 - 53	N/A
	Ortho-Phosphate (ppm)	1.3	1.0 - 1.5	N/A
	Sodium (ppm)	40	21 - 188	250





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

Important Contact Information

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Department of Public Works
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New Castle, NH 03854
www.newcastlenh.org/highway-roads

WATER QUALITY QUESTIONS:

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(603) 312-3804

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

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 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.

