FOUR SEASONS AT THE BELLAMY RESERVOIR

PORTSMOUTH ANNUAL DRINKING WATER QUALITY REPORT

PORTSMOUTH WATER SYSTEM
2020 TESTING RESULTS
PWSID 1951010

City of Portsmouth Water Division is pleased to present the Annual Drinking Water Quality Report. This report summarizes the results of drinking water testing performed from 01/01/2020 to 12/31/2020, and is provided to keep you informed about the quality of the water you rely on every day. It is being sent to every water customer served from the Portsmouth water system (PWSID# 1951010).

Through 2020, the City of Portsmouth water has continued to meet all water quality standards as regulated by the US Environmental Protection Agency and the NH Department of Environmental Services.

An extensive amount of information is provided in this report. Please contact us if you would like help understanding the information provided or have suggestions for future reports.

SERVING OUR COMMUNITY

TOURS, LECTURES and COMMUNITY EVENTS

Madbury Water Treatment Facility Tours in 2020: New York City Water Operations Staff & UNH Students

Staff at DPW Household Hazardous Waste Collection Day

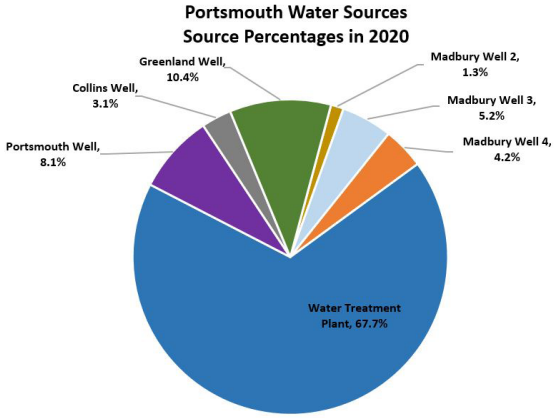
Our mission is to provide the community with drinking water that meets all current federal and state drinking water standards. The Portsmouth Water Division is constantly monitoring and routinely testing the drinking water according to these requirements to ensure the quality of water delivered to our customers consistently meets these water quality 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 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 regionally served water customers.

There are currently three groundwater wells in Madbury (Madbury Wells #2, #3 and #4) 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.

Portsmouth is also served by three groundwater wells. Two of them, Portsmouth Well #1 and Collins Well, are located off Route 33 (Greenland Road). The third 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 by the 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 on the City's website.



PLANNING FOR THE FUTURE

SUSTAINABILITY THROUGH THE CAPITAL IMPROVEMENT PLAN (CIP)

Many capital improvement projects that will increase the resiliency and quality of the water system are currently underway or have been recently completed. The connection of two new wells in Madbury to the water system is currently in design and is scheduled to be under construction in 2021. These wells will replace aging infrastructure and allow for better aquifer management. A backwash tank and a wash-water recycling pumping facility is currently under construction at the WTF. This project will allow for greater optimization of the surface water treatment process. Designs are currently underway for the replacement of the water transmission mains that pass beneath Little Bay to Newington to ensure the supply from Madbury into the City is not interrupted. This construction project is tentatively scheduled for the winter of 2021-2022. Also, aging water mains at various locations throughout the City are being targeted for on-going replacement.

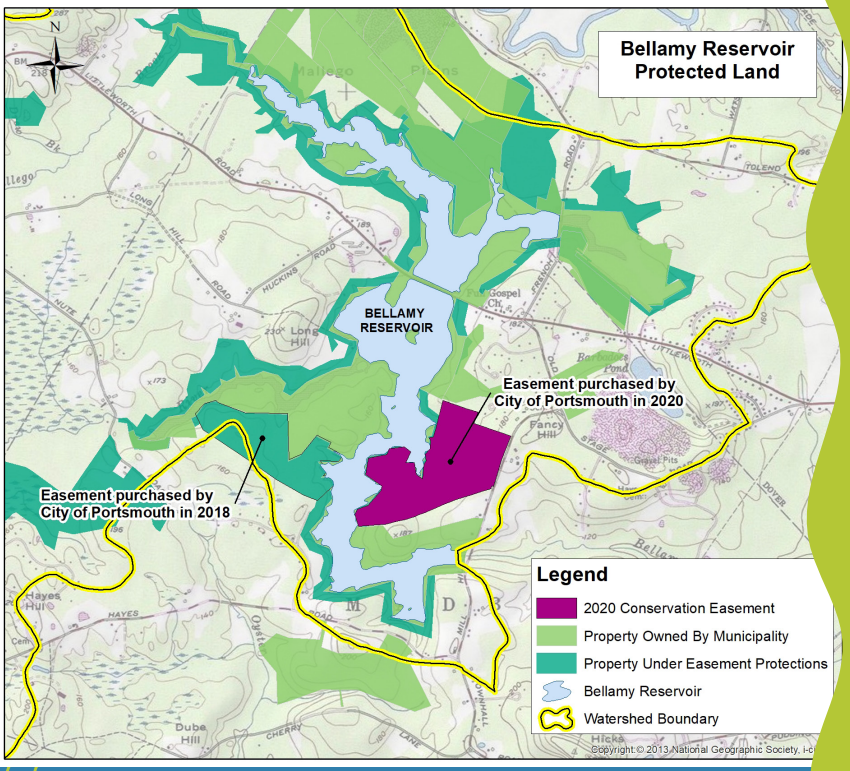
Current CIP information in available online: cityofportsmouth.com/planportsmouth/capital-improvement-plan

CONSERVATION LAND

Taking another significant step in its effort to protect the City of Portsmouth's surface water supply by conserving lands surrounding the Bellamy Reservoir, the City's Department of Public Works Water Division partnered with Southeast Land Trust (SELT) to purchase a conservation easement on approximately 107 acres adjacent to the Reservoir. The transaction closed on December 29, 2020.

This acquisition complements the conservation easement secured in 2018 on 72 acres of property owned by David Olson, also adjacent to the Bellamy Reservoir in Madbury. Both easements were obtained through the combined efforts of the City, SELT and the Town of Madbury to coordinate due diligence activities and prepare the easement documents. With their help, the City applied for and received a $287,000 grant from the New Hampshire Groundwater and Drinking Water Trust Fund and approximately $11,500 from the Great Bay Resource Protection Partnership. The Portsmouth City Council authorized the use of $287,300 from the City's Water Enterprise Fund to complete the purchase of the easement.

The protection of the Bellamy Reservoir is a high priority for the City of Portsmouth because the Reservoir is the primary supply of the fresh water treated at the City's Madbury Water Treatment Facility and delivered to regional communities around the seacoast. Conserving land that surrounds or includes wetlands, rivers, streams and larger bodies of water like the Reservoir protects water resources from the pressures of development and helps the municipal water system provide quality drinking water.



Conservation easement on property adjacent to the Bellamy Reservoir helps protect the drinking water supply for Portsmouth and the other communities served by the Portsmouth Water Division.

2020 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: 69.7	55.2 - 80.0	N/A	TT: minimum removal 45% - 50%	Naturally present in the environment
	Total Coliform Bacteria	✓	N	**NO** total coliform bacteria detected in the 360 distribution system samples that were collected and analyzed in 2020				Naturally present in the environment
	Turbidity (NTU)	✓	N	Highest Measurement: 0.12	0.02 - 0.12	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 LLRA: 41	15 - 42	N/A	60	Byproduct of drinking water disinfection
	Total Trihalomethanes (ppb) (Bromodichloro-methane, Bromoform, Dibromo-methane, Chloroform)	✓	N	Highest LLRA: 44	14 - 43	N/A	80	Byproduct of drinking water chlorination
LEAD AND COPPER	Lead (ppb)	✓	N	90th Percentile = 1	0 site above AL (31 sites sampled)	15	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
	Copper (ppm)	✓	N	90th Percentile = 0.117	0 sites above AL (31 sites sampled)	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
INORGANIC CONTAMINANTS	Arsenic (ppb) 2019 & 2020 data	✓	N	Highest Level Measured: 1.5 Avg Source Level: 1.1	<1 - 1.5	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
	Barium (ppb) 2019 & 2020 data	✓	N	Highest Level Measured: 22.4 Avg Source Level: 13.4	8.8 - 22	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
	Chlorine (ppm)	✓	N	Highest Level Measured: 2.20 Avg System Level: 0.95	0.02 - 2.20	MRDLG = 4	MRDL = 4	Water additive used to control microbes
	Chromium (total) (ppb) 2019 & 2020 data	✓	N	Highest Level Measured: 1.7 Avg Source Level: 1.2	<1 - 1.7	100	100	Discharge from steel and pulp mills; erosion of natural deposits
	Fluoride (ppm)	✓	N	Highest Level Measured: 0.75 Avg Level: 0.60	0.39 - 0.75	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: 4.7 Avg Source Level: 1.8	<0.2 - 4.7	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
RADIOACTIVE CONTAMINANTS	Compliance Gross Alpha (pCi/L) 2016 - 2020 data	✓	N	Highest Level Measured: 1	<1 - 1	0	15	Erosion of natural deposits
	Uranium (ug/L) 2019 & 2020 data	✓	N	Highest Level Measured: 1.6	1.2 - 1.6	0	30	Erosion of natural deposits
	Combined Radium 226 + 228 (pCi/L) 2016 - 2020 data	✓	N	Highest Level Measured: 1.96	<1 - 1.96	0	5	Erosion of natural deposits
UNREGULATED SUBSTANCES	Manganese (ppb) 2019 data	✓	N	Average Source Level: 21.9	2.5 - 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		
	HAA5 (ppb) 2019 data	✓	N	Average Distribution Level: 32	0.3 - 57	Byproducts of drinking water disinfection		
	HAA6Br (ppb) 2019 data	✓	N	Average Distribution Level: 5.5	2.9 - 8.4	Byproducts of drinking water disinfection		
	HAA9 (ppb) 2019 data	✓	N	Average Distribution Level: 38	0.3 - 65	Byproducts of drinking water disinfection		
PFAS	Per- and Polyfluoroalkyl Substances (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): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- MCL (Maximum Contaminant Level): The 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): The 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): The 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): The 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): A required process intended to reduce the level of a contaminant in drinking water.
- LRAA (Locational Running Annual Average): The 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.

2020 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. The EPA Health Advisory concentration has remained at 70 (ppt) for (PFOS) and (PFOA) since 2016.

The City of Portsmouth is in compliance with the NHDES PFAS limits. The City samples all of the Portsmouth water supply sources quarterly in accordance with NHDES rules and use accredited laboratories and EPA approved testing methods. Sample results from 2020 are summarized in the PFAS table below. The complete record of PFAS sample results is available cityofportsmouth.com/publicworks/water/portsmouth-water-system-pfas-update

Over the past seven 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. For more information about PFAS health effects: www.atsdr.cdc.gov/sites/pease/index.html

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

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 #4	BELLAMY RESERVOIR	WATER TREATMENT PLANT
# of samples in 2020			16	15	4	4	4	4	4	4
% of water supplied in 2020			8.1%	3.1%	10.4%	1.3%	5.2%	4.2%	67.7%	
Perfluorobutane-sulfonic acid (PFBS)	not regulated	Average	3	15	2	1	1	2	1	1
		Range	2 - 4	11 - 19	1 - 3	1 - 2	1 - 2	2	ND-1	ND-1
Perfluorobutanoic acid (PFBA)	not regulated	Average	3	4	2	1	1	1	1	12
		Range	2 - 4	3 - 6	2	1 - 2	1 - 2	ND-1	ND-2	ND-22
Perfouoroheptanoic acid (PFHpA)	not regulated	Average	3	1	2	1	1	1	1	1
		Range	2 - 4	ND-2	1 - 2	ND-1	1	ND-1	0 - 2	ND-1
Perfluorohexane-sulfonic acid (PFHxS)	18	Average	6	2	2	1	1	1	BD	BD
		Range	4 - 8	1 - 3	1 - 3	ND-1	ND-1	ND-1	ND-1	ND-<1
Perfluorohexanoic acid (PFHxA)	not regulated	Average	4	2	3	1	1	1	BD	1
		Range	3 - 6	ND-3	2 - 4	ND-1	1- 3	ND-1	ND-2	ND-3
Perfluorononanoic acid (PFNA)	11	Average	BD	ND	ND	ND	ND	ND	BD	BD
		Range	ND-1	ND	ND	ND	ND	ND	ND-1	ND-1
Perfluorooctane-sulfonic acid (PFOS)	15	Average	4	4	3	1	1	1	1	1
		Range	2 - 6	1 - 5	1 - 4	ND-2	1 - 2	ND-1	ND-2	ND-1
Perfluorooctanoic acid (PFOA)	12	Average	5	3	3	2	2	2	2	2
		Range	3 - 6	1 - 5	2 - 4	1 - 3	1 - 3	1 - 4	1 - 3	1 - 3
Perfluoropentanoic acid (PFPeA)	not regulated	Average	5	2	4	1	2	1	BD	BD
		Range	3 - 7	ND-4	2- 4	ND-2	ND-3	ND-1	ND-1	ND-2

TABLE ABBREVIATIONS AND NOTES:

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).

EPA Health Advisory Level for PFOS and PFOA concentration separately or combined is 70 ng/L (ppt).

Averages are calculated using half of the method detection limit for samples that were less than detection, per EPA risk assessment protocols.

ND (none detected): Indicates that the substance was not found by laboratory analysis.

BD (below detected level): Average calculated using half of detection limits for non-detect values resulted in average below the detection limit.

PFAS analyzed but not detected in the samples: 8:2 Fluorotelomer sulfonate (8:2 FTS), N-Ethyl perfluorooctane sulfonamide (EtFOSA), N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE), N-Methyl Perfluorooctane Sulfonamide (MEFOSA), N-Methyl Perfluorooctane Sulfonamidoethanol (MEFOSE), Perfluorodecane sulfonate (PFDS), Perfluorodecanoic acid (PFDA), Perfluorododecanoic acid (PFDoA),Perfluoroheptane sulfonate (PFHpS), Perfluorooctane sulfonamide (PFOSA), Perfluorotetradecanoic acid (PFTeDA), Perfluorotridecanoic acid (PFTrDA), and Perfluoroundecanoic acid (PFUnA)

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, prepared in 2002, are provided in the table. Risk factors, such as proximity of highways and proximity of known contamination, are ranked and summarized in the summary of susceptibility ratings section in terms of the number of factors per risk category. The complete assessment report is available for review at the DPW office and online: www.des. nh.gov/organization/divisions/water/dwgb/dwspp/dwsap.htm

SOURCE WATER ASSESSMENT RESULTS

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 4 - GPW 008	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. 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.

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. This award recognized our water operators for achieving optimal level of fluoride levels (0.7 parts per million) in our drinking water system.

LEAD and COPPER

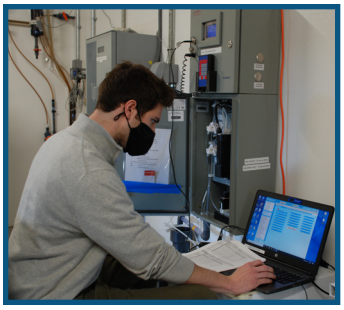
Portsmouth Water Division takes the responsibility of protecting your health very seriously. We want you to make informed decisions about your drinking water. Lead is not present in the water when it leaves our treatment and well facilities, or in the water mains that run below the streets. However, lead can be present in old service line connections that tie homes to the water system or plumbing inside homes and businesses. 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. We actively adjust the water chemistry at the treatment facility and well facilities according 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.

Lead was a common material used in plumbing until the 1980s. It is a powerful toxin that is harmful to human health. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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.

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

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 (2) 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 your 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. Additional information is available from NHDES by calling 603-271-2516 or online: www.des. nh.gov/organization/ divisions/water/dwgb/lead-copper

In 2020, 31 homes served by the Portsmouth water system were sampled for lead and copper. Of these, twenty-seven of the samples had no-detection of lead above the laboratory method detection limit of 1 ppb, and four (4) samples had lead levels between 1 ppb and 7 ppb. **The Portsmouth water system is currently in compliance with the lead and copper rule.** We will continue to monitor lead and copper at 30 or more sites in the Portsmouth system over the third quarter in 2021. For more information on this topic, please visit the City's website.



The City of Portsmouth conducts extensive monitoring to guard against contaminants in your drinking water according to federal and state laws.

POSSIBLE CONTAMINANTS IN DRINKING WATER SOURCES

In order to ensure that tap water is safe to drink, the EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may contain small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects are available by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

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 human activity.

CONTAMINANTS THAT MAY BE PRESENT:

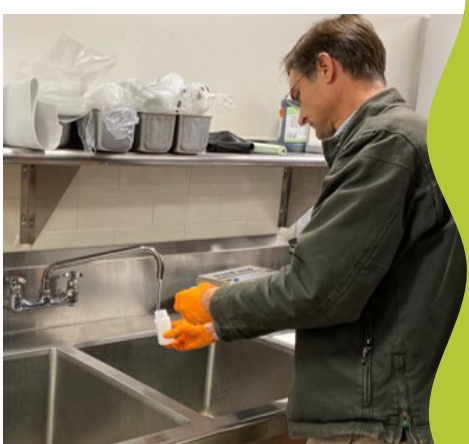
Microbial Contaminants, such as viruses and bacteria, which may come from wastewater treatment plants, septic systems, agricultural livestock operations, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial 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.

REGULATED and UNREGULATED CONTAMINANTS:

During the past year, we have 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 tables presented show only those contaminants that were detected in the water. Many more parameters were tested for, but not detected. They 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 completed the fourth stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program that started in 2018. 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. This helps the EPA determine if it needs to introduce new regulatory standards to improve drinking water quality. Chemicals analyzed for UCMR 4 included ten cyanotoxins, two metals, eight pesticides, one pesticide manufacturing byproduct, three brominated haloacetic acids, three alcohols, and other semi-volatile chemicals. The results of these tests are summarized in this report. Chemicals that were not detected are not included.

In addition to the UCMR4 monitoring, samples of the Bellamy Reservoir untreated water were collected between October 2016 and September 2018 and tested for Cryptosporidium as part of the EPA Long-Term 2 Enhanced Surface Water Treatment Rule requirements. None of the samples contained Cryptosporidium, so the NHDES determined that no additional surface water treatment is needed to meet this rule requirement.



WATER QUALITY PARAMETERS

The water quality parameters are routinely monitored to assess the general characteristics of the water supply. Note that the range of some of these parameters illustrates the differences between the characteristics of the surface water supply and the groundwater supply.

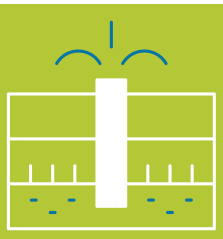
WATER QUALITY PARAMETERS	PARAMETERS (UNITS)	AVERAGE LEVEL	RESULTS RANGE	SECONDARY DRINKING WATER STANDARD SMCL
	Chloride (ppm)	91	31 - 333	250
	Copper (ppb)	35	1 - 197	1000
	Iron (ppb)	82	10 - 510	300
	Manganese (ppb)	30	7 - 65	50
	pH	7.0	6.3 - 7.7	6.5 - 8.5
	Sulfate (ppm) 2019 & 2020	12	3 - 28	250
	Conductivity (umos/com)	700	238 - 1442	N/A
	Alkalinity (ppm)	100	10 - 170	N/A
	Hardness (ppm as CaCO3)	131	16 - 230	N/A
	Ortho-Phosphate (ppm)	0.68	0.03 - 1.40	N/A
	Sodium (ppm) 2019 & 2020	74	22 - 180	30 - 60

CITY OF PORTSMOUTH
DEPARTMENT OF PUBLIC WORKS
WATER DIVISION
680 PEVERLY HILL ROAD
PORTSMOUTH, NH 03801
603-427-1530

WATER FACTS

Bellamy Reservoir

Madbury Water Treatment Facility



6 Wells

152 Miles of Pipe

3 Water Storage Tanks

Average Indoor Water Use
119 gallons/day

Portsmouth Water Production
3.3 million gallons/avg day

Water Efficiency Rebate Program
over 1,100 rebates issued

32% Ground Water

68% Surface Water

7 Water Status Reports published online in 2020

IMPORTANT CONTACT INFORMATION

CITY OF PORTSMOUTH
DEPARTMENT OF PUBLIC WORKS
WATER DIVISION
680 PEVERLY HILL ROAD
PORTSMOUTH NH 03801
(603) 427-1530
cityofportsmouth.com/publicworks/water

Water Quality Questions - please contact:

Albert Pratt, P.E.
Water Supply Operations Manager
anpratt@cityofportsmouth.com (603) 520-0622

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

Billing Questions:
Please call (603) 610-7244 or email billpay@cityofportsmouth.com

Federal and State Agencies:

EPA Hotlines
Safe Drinking Water (800) 426-4791
www.epa.gov/environmental-topics/water-topics

NH Department of Environmental Services
(603) 271-3503 https://www.des.nh.gov/water

It's your drinking water and your input is important. Participate in a City Council meeting. Meeting agendas are posted on the City's website & posted in the lobby of City Hall at 1 Junkins Avenue. Meetings are broadcast on Portsmouth's Government TV Channel 22 and on the City's YouTube channel.

Have you met Blue?
cityofportsmouth.com/publicworks/water