Annual Drinking Water Quality Report

Reporting Year 2023

Pease Tradeport Water System

PWS ID: 1951020

OUR COMMITMENT: SAFE DRINKING WATER

The City of Portsmouth Water Division is pleased to present the Annual Water Quality Report for Pease Tradeport Water System. This report summarizes the results of drinking water testing performed from January 1, 2023 through December 31, 2023, 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 by the Pease Tradeport Water System (PWS ID# 1951020).

Through 2023, the Pease Tradeport water 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 regulations and 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 all 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 Supply Updates are prepared and provided on our webpage at least quarterly, and more often when warranted. Water customers can access these reports at: https://portsnh.co/WaterSupplyUpdates.

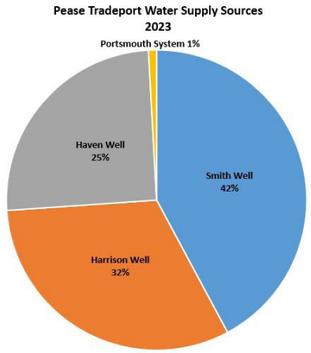
Water supplied to Pease Tradeport Water System customers comes primarily from the groundwater wells located on the Tradeport (Harrison Well, Smith Well, and Haven Well). The Portsmouth Water System (EPA PWS ID#: 1951010) supplies water to the Pease Tradeport Water System as needed. Less than one percent of the water supplied to this area was from the Portsmouth Water System in 2023.

Water from the Harrison Well, Smith Well, and Haven Well is pumped to the Grafton Road Drinking Water Treatment Facility (WTF) where it is treated through ion-exchange resin filters, and granular activated carbon (GAC) filters. This filtration process is designed to remove per- and polyfluoroalkyl substances (PFAS) that are present in these three groundwater sources. Sodium hypochlorite (bleach) for disinfection, fluoride as sodium fluoride (used to prevent tooth decay) and poly/ortho-phosphate (a sequestering agent to reduce oxidation of iron and manganese, and inhibit corrosion, is used to protect distribution system pipes) are added before entering the distribution system.

When additional supply is needed from the Portsmouth Water System, the water that is pumped from Portsmouth primarily consists of water from three groundwater wells, Portsmouth Well #1, Collins Well, and Greenland Well. Sodium hypochlorite and poly/ortho-phosphate are added to the water supplied by these wells. Fluoride as hydrofluorosilicic acid is also added at the Greenland Well. Occasionally, water from the City's sources in Madbury may contribute to the water pumped into Pease from the Portsmouth Water System. The Madbury sources include the Bellamy Reservoir and four wells. The water from the reservoir is treated using a coagulation, dissolved air floatation 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 and poly/ortho-phosphate are also added prior to distribution.

Pease Water Treatment Operators changing out cartridge filters.

Pease Water Treatment Operators removing bags of spent ion-exchange resin to prepare for new media.



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 of all aspects of the City's water supply.

Pease Restoration Advisory Board (RAB)

The Pease Restoration Advisory Board (RAB) is a stakeholder group that meets on a quarterly basis to discuss environmental restoration efforts surrounding the former Pease Air Force Base. The board was established in April 2016 to provide community members an open forum to talk with the Air Force and regulatory agencies about these restoration activities following the discovery of elevated PFAS levels in local groundwaters. With input from the U.S. Environmental Protection Agency and New Hampshire Department of Environmental Services, the Pease RAB was reestablished upon completion of the Pease Tradeport Water Treatment Facility due in part to evolving regulations and continued public concern over the per- and polyfluoroalkyl compounds.

The Pease RAB consists of 14 board members, including eight local volunteer community members and six appointed members representing the Air Force, regulatory agencies, the Pease Development Authority and the City of Portsmouth Water Division staff.

Information about past and upcoming meetings can be accessed here: https://www.afcec.af.mil/Home/BRAC/Pease-Archives/

SUSTAINABILITY

Upgrades to Water Treatment Facility for PFAS Treatment

The Pease Tradeport Water Treatment Facility began operations in 2021. The completion of this facility marks the culmination of a seven-year response to the presence of PFAS contaminants that were found to be impacting the three Pease drinking water wells in May 2014. Historical use of firefighting foam at the former Pease Air Force Base containing PFAS compounds contributed to this contamination. Subsequently, a treatment plant designed to remove PFAS compounds was constructed through an agreement between the Air Force and the City of Portsmouth. This agreement provided the City with funds to reimburse the cost of construction of the final treatment system for all three wells, including a dual filtration system consisting of resin and granular activated-carbon filters. The construction of the new Pease Water Treatment Facility followed extensive research, pilot testing and design of a system to treat the contamination. In partnership with the Air Force, the City conducted a demonstration project starting in September 2016. This project involved the installation of granular activated carbon (GAC) filters for the Harrison and Smith Wells. Subsequently, the City was invited by the firm ECT2 to pilot resin filter technology for the treatment. The success of that pilot led to the inclusion of resin in the final facility, which together with granular activated carbon filters (GAC) removes PFAS compounds from the drinking water.

Delivery of regenerated activated carbon media.

The new treatment processes were started and tested in April 2021 with water from the Harrison Well and Smith Well. After confirming the system was operating as designed, water from the Haven Well was treated through the facility. Upon confirmation of treatment plant performance and approval from NHDES, treated water was then supplied the system. In August 2021, treated water from all three wells entered the system. Water samples are collected to test for PFAS monthly and the operations of the filtration system are carefully monitored to ensure the media is performing as expected and replacement can be scheduled. The first changeout of resin media occurred in May, 2023. Existing resin supplied by ECT2 was replaced by Calgon's "Cal Res 2301" throughout six filtration vessels to maintain optimal removal of PFAS compounds. Data collected and compiled through pilot testing as well as other operational considerations contributed to the selection of this alternative resin media supplied by Calgon.

Resin vessels at the Grafton Road Water Treatment Facility.

2023 WATER QUALITY RESULTS

	CONTAMINANT (UNIT OF MEASUREMENT)	IN COMPLIANCE	VIOLATION (Y/N)	LEVEL MEASURED	RANGE	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
	Total Coliform Bacteria	✓	N	**NO** total coliform bacteria detected in the 120 distribution system samples that were collected and analyzed in 2023				Naturally present in the environment
DISINFECTION BYPRODUCTS	Haloacetic Acids (ppb)	✓	N	Highest Level Measured: <1	Non-Detect	N/A	60	Byproduct of drinking water disinfection
	Total Trihalomethanes (ppb) (Bromodichloro-methane, Bromoform, Dibromo-methane, Chloroform)	✓	N	Highest Level Measured: 1.2	0.5 - 0.7	N/A	80	Byproduct of drinking water chlorination
LEAD AND COPPER	Lead (ppb)	✓	N	90th Percentile = 6	0 sites above AL (20 sites sampled)	15	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
	Copper (ppm)	✓	N	90th Percentile = 0.46	0 sites above AL (20 sites sampled)	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
INORGANIC CONTAMINANTS	Barium (ppb) 2019 - 2023 data	✓	N	Highest Level Measured: 9.9 Avg Source Level: 9.7	9.4 - 9.9	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
	Chlorine (ppm)	✓	N	Highest Level Measured: 1.43 Avg System Level: 0.91	0.44 - 1.43	MRDLG = 4	MRDL = 4	Water additive used to control microbes
	Fluoride (ppm)	✓	N	Highest Level Measured: 0.87 Avg Source Level: 0.62	0.07 - 0.87	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: 0.96 Avg Source Level: 0.92	0.88 - 0.96	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
RADIOACTIVE CONTAMINANTS	Compliance Gross Alpha (pCi/L) 2021 data	✓	N	Highest Level Measured: 1.1	<1 - 1.1	0	15	Erosion of natural deposits
	Uranium (ug/L) 2022 data	✓	N	Highest Level Measured: <1	Non-Detect	0	30	Erosion of natural deposits
	Combined Radium 226 + 228 (pCi/L) 2022 data	✓	N	Highest Level Measured: <1	Non-Detect	0	5	Erosion of natural deposits
UNREGULATED SUBSTANCES	Manganese (ppb) 2019 UCMR data	✓	N	Highest Level Measured: 26	<1 - 26	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		
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

- **AL** (Action Level) - Concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **MCL** (Maximum Contaminant Level) - Highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **MCLG** (Maximum Contaminant Level Goal) - Level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **MRDL** (Maximum Residual Disinfectant Level) - Highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG** (Maximum Residual Disinfectant Level Goal) - Level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **N/A** (not applicable) - Sampling was not completed by regulation or was not required.
- **ND** (Non-Detect) - 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).
- **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 of 2023, the US EPA proposed regulations that would limit acceptable concentrations of six PFAS in drinking water, including the four PFAS currently regulated by the NHDES. The US EPA finalized their PFAS regulations 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.

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. Since the activation of the Haven Well, it has been sampled and tested monthly. The City of Portsmouth samples all of the Portsmouth System water supply sources quarterly. Sample results from 2023 are summarized in the PFAS table in this report. All monitoring data is available online: cityofportsmouth.com/publicworks/water/pease-tradeport-water-system

			PORTSMOUTH WATER SUPPLIED TO PEASE SYSTEM			PEASE TRADEPORT TREATED WELL WATER
PER- AND POLYFLUOROALKYL SUBSTANCE (concentrations* reported in ng/L or ppt)	NHDES MAXIMUM CONTAMINANT LEVEL (MCL)		PORTSMOUTH WELL #1	COLLINS WELL	GREENLAND WELL	SUPPLIED AFTER GAC TREATMENT
# of samples in 2023			13	13	4	13
% of water supplied in 2023			0.5%	0.2%	0.2%	99.1%
Perfluorobutane-sulfonic acid (PFBS)	not regulated	Average	4	10	<2	ND
		Range	3 - 4	9 - 11	ND - 3	ND
Perfluorobutanoic acid (PFBA)	not regulated	Average	4	4	<2	22
		Range	3 - 5	2 - 6	ND - 2	9 - 33
Perfouoroheptanoic acid (PFHpA)	not regulated	Average	4	ND	<2	ND
		Range	3 - 5	ND	ND - 2	ND
Perfluorohexanoic acid (PFHxA)	not regulated	Average	5	<2	4	ND
		Range	3 - 9	ND - 3	4 - 5	ND
Perfluorohexane-sulfonic acid (PFHxS)	18	Average	7	<2	ND	ND
		Range	4 - 9	ND - 2	ND	ND
Perfluorononanoic acid (PFNA)	11	Average	ND	ND	ND	ND
		Range	ND	ND	ND	ND
Perfluorooctane-sulfonic acid (PFOS)	15	Average	5	4	3	ND
		Range	5	3 - 6	3	ND
Perfluorooctanoic acid (PFOA)	12	Average	6	3	4	ND
		Range	5 - 7	2 - 6	4	ND
Perfluoropentanoic acid (PFPeA)	not regulated	Average	7	<2	5	4
		Range	4 - 10	ND - 4	4 - 6	ND - 6

TABLE ABBREVIATIONS & 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).

Averages are calculated using zero for samples that were less than detection, per NHDES guidance.

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

PFAS analyzed but not detected in the samples: 8:2 Fluorotelomer sulfonate (8:2 FTS); Perfluorohexanesulfonic acid (4:2 FTS); Perfluorodecanoic acid (PFDA); Perfluorododecanoic acid (PFDoA); Perfluoroheptanesulfonic acid (PFHpS); Perfluoroundecanoic acid (PFUnA); Perfluoro-3-Methoxypropanoic Acid (PFMPA); Perfluoro-4-Methoxybutanoic Acid (PFMBA); Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA); Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA); Perfluoropentanesulfonic Acid (PFPeS); 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA); 4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA); 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS); and 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)

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

Source Water Assessment

Wellhead protection at Pease Tradeport is a community effort. The purpose of wellhead protection is to safeguard the health of consumers by preventing the contamination of groundwater sources supplying their drinking water. Together, we aim to identify and mitigate potential sources of contamination thereby minimizing the risk of pollutants infiltrating the groundwater. For more information on source water protection please visit: https://www.des.nh.gov/climate-and-sustainability/conservation-mitigation-and-restoration/source-water-protection.

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 above. 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.

SOURCE WATER ASSESSMENT RESULTS

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
	Collins Well - GPW 010	3	2	7
PEASE	Smith Well - GPW 001	4	2	6
	Harrison Well - GPW 009	4	1	7
	Haven Well - GPW 002	5	0	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 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, 20 homes served by the Pease Tradeport Water System were sampled for lead and copper. Of these, 14 of the samples had no-detection of lead above the laboratory method detection limit (<1 ppb), three samples had lead levels below 2 ppb, and two samples had levels below 8 ppb. Only one sample exceeded the 15 ppb action level, and the property owner was notified the same day this report was received.

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 Pease Tradeport 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.

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 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.

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. For more information about contaminants and potential health effects the EPA's Safe Drinking Water Hotline at 800-426-4791.

During the past year, we have taken hundreds of water samples 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 elements 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.*

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 illustrates differences between three groundwater supply wells and their characteristics.

WATER QUALITY PARAMETERS	AVERAGE LEVEL	RESULTS RANGE	SECONDARY DRINKING WATER STANDARD SMCL
Chloride (ppm)	59	29 - 158	250
Copper (ppb) 2018 - 2021 data	24	<2 - 66	1300
Iron (ppb)	13	10 - 20	300
Manganese (ppb)	22	15 - 32	50
pH	7.5	7.3 - 7.9	6.5 - 8.5
Sulfate (ppm) 2018 - 2021 data	15	<1 - 15	250
Conductivity (umos/com)	440	328 - 519	N/A
Alkalinity (ppm)	130	100 - 175	N/A
Hardness (ppm as CaCO3)	106	88 - 143	N/A
Ortho-Phosphate (ppm)	0.99	0.84 - 1.16	N/A
Sodium (ppm)	34	30 - 41	N/A
Zinc (ppb) 2021 data	3.4	2.9 - 3.9	5000

Loading of new ion-exchange resin media into existing vessels.

CITY OF PORTSMOUTH
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Important Contact Information

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cityofportsmouth.com/publicworks/water

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To pay utility bills online
cityofportsmouth.com/city/pay-my-bill

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 located on Comcast Channel 22 and in HD on Comcast Channel 1072. Meetings are broadcast live and rebroadcast. Municipal meetings are also live streamed in HD on the City's YouTube channel.

Think Blue,
What Can You Do?

PRODUCTION FROM PEASE WELLS

518,121 gallons/avg day

WATER DEMAND

528,392 gallons/avg day