PORTSMOUTH WATER AND FIRE DISTRICT
2020
CONSUMER CONFIDENCE REPORT

Dear Customer:

We are pleased to present a summary of the quality of the water provided to District customers during the past year. The federal Safe Drinking Water Act (SDWA) requires that water utilities issue an annual "Consumer Confidence" report to customers in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and the risks that our water testing and treatment are designed to prevent. The Portsmouth Water and Fire District is committed to providing you with the safest and most reliable water supply available. Informed consumers are our best allies in maintaining safe drinking water.

The Portsmouth Water and Fire District's drinking water meets or exceeds all federal and state drinking water standards.

About the Portsmouth Water and Fire District

The Portsmouth Water and Fire District is a quasi-municipal agency created by the RI General Assembly in 1952. The District is responsible for providing drinking water and water for fire protection for approximately ninety percent of Portsmouth on Aquidneck Island. The District is governed by a seven-member elected Administrative Board and holds an annual election of officers on the second Wednesday in June. The District is not part of the Town of Portsmouth government. However, the District and Town work together to best serve their common constituents.

The original District was known as *Island Park and Common Fence Point Fire District* and its water distribution system was constructed in the mid to late 1950's. In 1956, the name of the District was changed to *Portsmouth Water and Fire District*. In 1965, the District boundaries were changed to include the south end of Portsmouth and the water distribution system was expanded to cover this area in the mid to late 1960's. The Redwood Farms and Raytheon areas were excluded from the District's expanded service area as they were already served by Newport Water. Today the District's water system maintains 6,750 services and consists of over 132 miles of water main, 4 water storage tanks, 2 pumping stations, 1,737 valves and 596 hydrants.

The District does not own any water supplies, but instead purchases its regular water supply on a wholesale basis from the City of Newport and relies on the Stone Bridge Fire District in Tiverton for emergency water supply.

The Administrative Board's goal is to provide the customers of the District with an adequate supply of the best quality water available. Recent and current efforts to improve water quality and customer service include:

- Web Portal that allows customers to pay their water and tax bills on-line using ACH drafts and credit and debit cards. **Go to portsmouthwater.org and click on the "PAY MY BILL" button.**
- Development of a Geographic Information System (GIS) for water system mapping and data analysis.
- Purchase of an Asset Management System web application/server that integrates GIS for record keeping and real-time mobile work orders.
- Construction of a new pump station to replace the 54-year-old Union Street Pumping Station.
- Annual uni-directional water main flushing program based on hydraulic modeling and analysis.
- Looping of new and existing water main extensions whenever possible to avoid dead-ends.
- Implementation of a cross-connection control program.
- Notifying customers of shut downs and emergencies via CodeRED. **Go to https://portsmouthwater.org/codered-emergency-notification-system/ to learn more and to sign up.**

We encourage public interest and participation in our community's decisions affecting drinking water. Regular meetings of the Administrative Board of the Portsmouth Water and Fire District are held on the third Tuesday of every month at 7:00 PM, at the

District's office at 1944 East Main Road and via Zoom. The public is welcome and encouraged to attend these meetings. Written minutes of the meetings are available upon request. This Consumer Confidence Report and minutes of Board meetings are also available on the internet at https://portsmouthwater.org

Your Water Source

In 2020, the Portsmouth Water and Fire District purchased all of its water from the City of Newport. The majority of the water is treated at the Lawton Valley Water Treatment Plant in Portsmouth. On occasion, the water may be treated at the Station One Water Treatment Plant in Newport. Newport Water draws its raw water supply from a system of nine surface water reservoirs: Lawton Valley Reservoir, Sisson Pond and St. Mary's Pond in Portsmouth; Nonquit Pond in Tiverton; Watson Reservoir in Little Compton; North and South Easton Ponds in Middletown and Newport; and Paradise Pond and Gardner Pond in Middletown. Both plants and all nine reservoirs are owned and operated by the City of Newport. The emergency supply from the Stone Bridge Fire District is treated at the Stone Bridge Water Treatment Plant in Tiverton, which draws surface water from Stafford Pond in Tiverton.

Source Water Assessments

In 2003, the University of Rhode Island, in cooperation with the RI Department of Health (RIDOH) and other state and federal agencies, assessed the threats within the watersheds of Newport Water's water supply sources. The assessment found that the water sources on Aquidneck Island and in Little Compton and Tiverton are moderately susceptible to contamination. Monitoring and protection efforts are especially important to assure continued water quality. Newport Water updated the 2003 Assessment in 2010. The complete Source Water Assessment Report is available at our office.

Additional Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or 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 can also come from gas stations, urban stormwater runoff and septic systems;
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food

and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Concerning Lead in Our Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Portsmouth Water and Fire District is responsible for providing high quality drinking water, but cannot control the variety of materials used in its customer's plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap until the water gets as cool as it can and then flush it for another 15 seconds before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your tap 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 or at www.epa.gov/safewater/lead.

Although there is no lead in the water supplied by the District, lead can enter tap water through corrosion of household plumbing materials. Homes built before 1986 are more likely to have fixtures and solder containing lead. However, new homes are also at risk: even legally "lead-free" plumbing may contain up to 8 percent lead. The most common problem is with brass or chrome-plated brass faucets and fixtures which can leach significant amounts of lead into the water, especially hot water.

THE DISTRICT CAN HELP YOU OBTAIN A CERTIFIED LEAD TEST FOR YOUR TAP WATER FOR $23. PLEASE CALL 683-2090 FOR MORE INFORMATION.

About PFAS and our Drinking Water

In 2019, as part of Newport Water System's and Rhode Island Department of Healths ongoing monitoring programs, Newport tested the effluent from Station #1 and Lawton Valley treatment plants and the reservoirs for per- and polyfluoroalkyl substances (PFAS). RIDOH and EPA continue to develop and implement regulations regarding PFAS. Currently the EPA has a health advisory of 70 ppt for Perfluorooctonoic Acid (PFOA) and Perfluorooctonoic Sulfonate (PFOS).

Some PFAS have been shown to cause development toxicity, and effects on cholesterol metabolism, particularly PFOA, PFOS, PFHpA, PFNA, and PFDA. The toxicity of other PFAS is currently not well understood, although they remain in the blood for shorter periods of time. RIDOH is in the process of developing regulations for PFAS in the drinking water.

Below is the effluent results for the monitoring conducted at Lawton Valley treatment plant:

Lawton Valley Effluent	Date	*Unit*	*EPA Health Advisory*	Detected Level	Major Sources
Perfluorooctanoic Acid (PFOA)	6/25/2019	ppt	70*	<4.0	Found in or as flyoropolymers, fire-fighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films.
Perfluorooctanoic Sulfonate (PFOS)	6/25/2019	ppt	70*	11.6	Used in fire-fighting foam, circuit board etching acids, alakaline cleaners, floor polish and as pesticide active ingredient for insect bait traps.
Perfluorohexane Sulfonate (PFHxS)	6/25/2019	ppt	N/A	<4.0	Used in products to make them stain, grease, heat and water resistant.
Perfluoroheptanoic Acid (PFHpA)	6/25/2019	ppt	N/A	<4.0	
Perfluorononanoic Acid (PFNA)	6/25/2019	ppt	N/A	<4.0	
Perfluorodecanoic Acid (PFDA)	6/25/2019	ppt	N/A	<4.0	

Water System UCMR-4 Monitoring

In 2020, both the Portsmouth Water and Fire District and Newport Water System participated in the Unregulated Contaminant Monitoring Rule (UCMR) program. This monitoring is for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. This table shows only the detected contaminant results of the UCMR-4 water quality analysis from January 1, 2020 to December 31, 2020.

Microbiological Contaminants	Unit	MCL	MCLG	Detected Level	Range	Major Sources
Manganese (1)	ppb	n/a	n/a	170	2.9 – 170	Naturally Occurring; Erosion of natural deposits.
Bromide (1)	ppb	n/a	n/a	51.9	34.5 – 51.9	Naturally Occurring; Erosion of natural deposits.
Total Organic Carbon (1)	ppm	n/a	n/a	5.71	4.40 – 5.74	Naturally Occurring; Erosion of natural deposits.

(1) Measured in the Newport Water Department raw water supply.

Newport Water System Special Monitoring – Metals and Synthetic Organic Compounds

As part of Newport Water's ongoing monitoring programs, they have continued testing sites for metals and synthetic organic compounds every quarter in 2020. The sample sites include: Station 1 total plant effluent, Lawton Valley clearwell tank effluent, and Lawton Valley tank effluent. This represents the water produced at both water plants, after treatment, to the distribution system. Eleven metals and thirty-six organic compounds were analyzed. The table presents only contaminants that were detected.

Station 1 TPE metals	**Unit**	**MCL**	**Detected Level**	**Range**	**Major Source**
Barium	ppm	2	0.011	0.004 - 0.011	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Selenium	ppm	0.05	0.001	ND – 0.001	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines
Lawton Valley clearwell metals	**Unit**	**MCL**	**Detected Level**	**Range**	**Major Source**
Barium	ppm	2	0.006	0.003 - 0.006	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Lawton Valley tank effluent metals	**Unit**	**MCL**	**Detected Level**	**Range**	**Major Source**
Barium	ppm	2	0.008	0.004 - 0.008	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nickel	ppm	n/a	0.005	ND – 0.005	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Station 1 TPE Synthetic Organics	**Unit**	**MCL**	**Detected Level**	**Range**	**Major Source**
Di(2-ethylhexyl)phthalate	ppb	6	RAA=0.25	ND – 1.0	Discharge from rubber and chemical factories
Lawton Valley clearwell Synthetic Organics	**Unit**	**MCL**	**Detected Level**	**Range**	**Major Source**
Di(2-ethylhexyl)phthalate	ppb	6	RAA=2.0	ND – 7.0	Discharge from rubber and chemical factories
Lawton Valley tank effluent Synthetic Organics	**Unit**	**MCL**	**Detected Level**	**Range**	**Major Source**
Di(2-ethylhexyl)phthalate	ppb	6	RAA=0.25	ND – 1.0	Discharge from rubber and chemical factories

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Questions

The Portsmouth Water and Fire District prepared this report. We'll be happy to answer any questions about the District and our drinking water quality. Please contact Jessica Lynch, General Manager and Chief Engineer (401-683-2090).

Some water customers of the Newport Water Department and the Naval Station Newport water system, particularly in the Redwood Farms, Bay View and Melville areas, in addition to properties in the District with private wells, may receive this consumer notice, even though they are not customers of the District. This over-coverage is unavoidable in our effort to ensure that all potential water users within the District receive this legal notice through a Postal Customer mailing.

The Portsmouth Water and Fire District is a proud member and supporter of the American Water Works Association, the New England Water Works Association and the Rhode Island Water Works Association.

PLEASE REFER TO THE WATER QUALITY TABLE BELOW

How Do I Read This Water Quality Table?

It's easy! Our water is regularly tested to assure that it is safe and healthy. The column marked Detected Level shows the highest test results during the year. The column marked Major Sources in Drinking Water shows where substances usually originate. Footnotes explain important details. Abbreviations and definitions of key terms are shown in the table below:

Abbreviations and Definitions used in the Water Quality Tables

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.
MFL	**Million Fibers per Liter**
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.
Mrem	**Millirems:** a measure of radiation absorbed by the body.
N/A	**Not Applicable**.
ND	**Not Detectable:** Not detectable at testing limits.
NTU	**Nephelometric Turbidity Units:** a measure of very small particulate matter in drinking water.
pCi/l	**Picocuries per liter:** a measure of radioactivity.
ppb	**parts per billion**, or micrograms per liter (µg/l).
ppm	**parts per million,** or milligrams per liter (mg/l).
ppt	**parts per trillion,** or nanograms per liter (nanograms/l).
RAA	**Running Annual Average**
TT	**Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.

PORTSMOUTH WATER AND FIRE DISTRICT

PUBLIC WATER SYSTEM # RI1592022

2020 WATER QUALITY TABLE *

DETECTED CONTAMINANTS	YEAR TESTED	UNIT	MCL / MRDL	MCLG / MRDLG	DETECTED LEVEL (FOR COMPLIANCE)	DETECTED RANGE	MAJOR SOURCES IN DRINKING WATER	VIOLA-TION
Microorganisms			MCL	MCLG				
Total Coliform Bacteria (1)	2020	% of Positive Samples per Month	TT	N/A	3.70%	N/A	Naturally present in the environment.	NO
Total Organic Carbon (2)	2020	Removal Ratio	TT	N/A	1.44	1.06 – 1.71	Naturally present in the environment.	NO
Turbidity (2)(3)	2020	NTU	TT = 1.0 Lowest monthly % of samples meeting limit	N/A	0.19 100% < 0.3	N/A	Soil runoff.	NO
Disinfection Byproducts			MCL	MCLG				
Chlorite (2)	2020	ppm	1.0	0.8	0.273	<0.010 – 0.360	By-product of drinking water chlorination.	NO
Haloacetic Acids (HAA5s)	2020	ppb	60	N/A	17.2	5.6 – 17.2	By-product of drinking water chlorination.	NO
Total Trihalomethanes (TTHMs) (4)	2020	ppb	80	N/A	59.9	13.9 – 92.6	By-product of drinking water chlorination.	NO
Disinfectants			MRDL	MRDLG				
Chlorine	2020	ppm	4	4	1.10	0.56 – 1.94	Water additive used to control microbes.	NO
Chlorine Dioxide (2)	2020	ppb	800	800	510	10 – 510	Water additive used to control microbes.	NO
Inorganic Chemicals			MCL	MCLG				
Arsenic (5)	2020	ppb	10	0	0.002	ND – 0.002	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production waste.	NO
Barium (6)	2020	ppm	2	2	0.010	0.005 – 0.010	Erosion of natural deposits; discharge of drilling wastes.	NO
Copper (7)	2018	ppm	AL = 1.3	1.3	0.048	N/A	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	NO
Fluoride (2) (8)	2020	ppm	4	4	0.90	0.06 – 0.90	Water additive, promotes strong teeth.	NO
Lead (9)	2018	ppb	AL = 15	0	11.3	N/A	Corrosion of household plumbing systems; erosion of natural deposits.	NO
Nitrate (5)	2020	ppm	10	10	1.03	0.32 – 1.03	Runoff from fertilizer use; leaching from septic tanks, sewerage; erosion of natural deposits.	NO
Asbestos	2020	MFL	7.0	7.0	<0.062	n/a	Decay of asbestos cement in water mains; erosion of natural deposits	
Synthetic Organic Contaminants			MCL	MCLG				
Di(2-ethylhexyl)phthalate (5)	2020	ppb	6	0	RAA=2	ND – 7.0	Discharge from rubber and chemical factories	NO
Unregulated Contaminant Monitoring (10)			MCL	MCLG				
Sodium (2)	2020	ppm	N/A	N/A	70.5	28.0 – 70.5	Erosion of natural deposits; road-salt runoff; contained in water treatment chemicals.	N/A
Metachlor (5)	2020	ppb	N/A	N/A	0.20	ND – 0.20	Used as an herbicide for weed control on agricultural crops	N/A
Chlorate (2)	2020	ppb	N/A	N/A	430	99 – 430	By-product of drinking water chlorination	N/A

*The data presented in this table is from the most recent testing done in accordance with regulations. Test results are from the Portsmouth Water and Fire District's distribution system unless otherwise noted by the footnotes.

Water Quality Table Footnotes

(1) In 2020, the District collected 506 samples that were tested for Total Coliform Bacteria. All samples were negative for except for two samples that tested positive for Total Coliform Bacteria. Three repeat samples within 48-hours at the positive test sites and at test sites upstream and downstream were negative.
(2) Measured after treatment at the Newport Water Department Lawton Valley Treatment Plant.
(3) Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.
(4) Detected level is Stage 2 DBPR highest locational running annual average. *Some people who drink water containing TTHM's in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.*
(5) Measured in the Newport Water Department raw water reservoirs prior to treatment.
(6) Measured in the Newport Water Department raw water supply and entry points to the distribution system.
(7) The detected level indicates the 90th percentile value of the 33 samples obtained at 32 high-risk homes (one home was resampled). None of the samples exceeded the Action Level.
(8) Fluoride is added to the water to help prevent tooth decay in children.
(9) The detected level indicates the 90th percentile value of the 33 samples obtained at 32 high-risk homes (one home was resampled). Three of the 33 samples exceeded the Action Level.
(10) Unregulated contaminants are those that do not yet have a primary drinking water standard set by the US EPA. The purpose of monitoring for these contaminants is to help the US EPA develop regulatory decisions for these contaminants.