



*City of East Providence*

**Department of Public Works**

Water Utilities Division

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**PWSID #RI1615610**

## **WATER QUALITY REPORT 2018**

**Portuguese IMPORTANTE!** O relatório contém informações importantes sobre a qualidade da água da comunidade. Traduza-o ou peça ajuda de uma pessoa amiga para ajudá-lo a entender melhor ou um tradutor será fornecido.

**Where Does My Drinking Water Come From?** Your drinking water comes entirely from surface water reservoirs located in a 93-square mile, mostly rural, forested watershed basin located primarily in Scituate, RI. The main source of this water supply is the Scituate Reservoir, which is the terminal reservoir in a network of six interconnected reservoirs: the Scituate Reservoir, Regulating Reservoir, Barden Reservoir, Moswansicut Reservoir, Ponaganset Reservoir, and Westconnaug Reservoir.

In 2017, Providence Water formally assessed the threats to the Scituate Reservoir. The assessment considered land use, pollution sources, and overall reservoir condition.

The assessment confirmed that the Scituate Reservoir system is at medium risk of contamination. Providence Water is continuing with protection efforts necessary to ensure continued water quality.

The 2017 Source Water Assessment Plan is available on the Providence Water website at [www.provwater.com/swap](http://www.provwater.com/swap).

**How is our water quality measured?** State and federal regulations require all water suppliers to test for microbes and chemicals a specified number of times each year. The test for microbes is done most frequently, based on the size of the population served by the water supplier. The regulations require that these water quality tests be conducted in certified laboratories using federally approved testing methods. Last year the City of East Providence tested over 3000 samples in compliance with the state and federal regulations. The PWSB also conducts extensive testing before, during, and after the water treatment process. The results of those tests are detailed in this report.

**Lead Informational Statement** 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 East Providence Water Utilities Division is 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 your tap for 30 seconds to 2 minutes before using 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 or at <http://www.epa.gov/safewater/lead>.

**Unregulated Contaminant** Sodium is an unregulated contaminant. The PWSB sampled for sodium in 2018 and detected a level of 16.7 mg/l. The major sources of sodium found in water supplies are from erosion of natural deposits and runoff from road de-icing operations.

**Capital Improvements** Over the past three years, the Water Utilities Division has completed over \$21 million in capital improvements. These include construction of a new 6-million gallon storage tank, construction of a new transmission line, chemical feed building, rehabilitating old pipes, and painting and repairs to the Kent Heights elevated storage tank.

The City recently completed installation of a TTHM removal system for approximately \$2 million to reduce disinfection by-products in the water system. Also planned in the near future are an inspection of the main transmission line from the Providence Water Supply Board, \$13 million in rehabilitating old pipelines, and securing a second source of water supply for emergency use.

**Water Main Flushing** The Water Utilities Division will resume flushing water mains in neighborhoods in September 2019. Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, you may notice some short-term increases in the color and iron level in your cold water. Although harmless to health, you should avoid using your tap water for household purposes during this period as it may cause minor staining of fixtures and laundry. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use, and avoid using hot water to prevent sediment accumulation in your hot water tank.

## **Exceedances:**

**TTHM Exceedances:** East Providence's drinking water is disinfected with Chlorine. Chlorine reacts with naturally occurring organic material present in the source water to form Disinfection By-products called Total Trihalomethanes (TTHMs). The standard for TTHMs is 0.080 mg/l. It is calculated by averaging all of the samples at a specific location for the past 12 months. For the first quarter 2018, one location out of four (4) averaged at 0.086 mg/l. For the second quarter 2018, one location out of four (4) averaged 0.081 mg/l. These were both exceedances of the standard. In accordance with the public notification rules, all customers of the system were previously notified of these exceedances. Some people who drink water containing TTHMs in excess of the standard over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.

The City of East Providence took immediate action to resolve this issue. In the spring of 2019, a TTHM removal system became operational. We are currently in performance testing and optimizing the operation of the system. We will continue to monitor the effectiveness of the system.

**Chlorine Residual Exceedance:** The City of East Providence is under a consent order with the Rhode Island Department of Health to maintain a 0.20 mg/l free chlorine residual in more than 10% of its samples. In May 2018, 32 out of 180 or 17.7% of samples had a free chlorine residual less than 0.20 mg/l. These samples had residuals between 0.10 and 0.19 mg/l free residual chlorine. City bacteria tests taken during 2018 were within drinking water standards and of excellent quality.

**Failure to Submit CCR Certification by October 1, 2018:** The City is required to distribute CCR notices to the customers by July 1, 2018. The notices were distributed on time in 2018. The City is required to send certification to the state that this was done by July 1, 2018 on or before October 1, 2018. The City was six (6) weeks late sending that certification to the state.

**?? Questions ??** For additional information please contact: Stephen H. Coutu, P.E. Director, Department of Public Works (401) 435-7701; [scoutu@cityofeastprov.com](mailto:scoutu@cityofeastprov.com)

Emerson J. Marvel, Water Superintendent, East Providence Water Utilities Division (401) 435-7741; [waterdept@cityofeastprov.com](mailto:waterdept@cityofeastprov.com)

Rhode Island Department of Health, Drinking Water Quality (401) 222-6867; [www.health.ri.gov](http://www.health.ri.gov)

**Information on the Internet** The U.S. EPA Office of Water ([www.epa.gov](http://www.epa.gov)) and the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)) websites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. Also, the Providence Water Supply Board has a website ([www.provwater.com](http://www.provwater.com)) that provides complete and current information on our drinking water

The Department of Public Works has prepared and provided to you this annual water quality report in accordance with the requirements of the Safe Drinking Water Act (SDWA). The report includes information on the city's source of water and quality of the water and the water distribution system.

This table shows the results of the 2018 water quality analysis performed by the City (EP) and the Providence Water Supply Board (PWSB). We feel it is important that you know exactly what was detected and how much was detected and how much of the substance was present in the water. Every regulated contaminant that we detected in the water, even in the most minute traces, is listed here along with the highest levels allowed by regulation (MCL), the ideal goals for public health (MCLG), the amounts detected, the usual sources of such contamination, footnotes explaining our findings and a key to units of measurement

### **Key to Table**

AL = Action Level

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

MFL = Million Fibers per Liter

NTU = Nephelometric Turbidity Units

MRDL = Maximum Residual Disinfectant Level

MRDLG = Maximum Residual Disinfectant Level Goal

pCi/L = Picocuries per Liter (a measure of radioactivity)

ppm = Parts per million or milligrams per liter (mg/l)

ppb = Parts per billion or micrograms per liter (ug/l)

TT = Treatment Technique

ND = None Detected

NA = Not Applicable

### **Definitions**

**Maximum Contaminant Level or MCL:** 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.

**Maximum Contaminant Level Goal or MCLG:** 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.

**Action Level (AL):** The concentration of a contaminant which, if exceeded, trigger a treatment or other requirement that a water system must follow.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Variations and Exemptions:** State or EPA permission not to meet a MCL or a treatment under certain conditions.

**Parts per Billion (ppb):** One part per billion (microgram per liter) is the equivalent to one penny in \$10,000,000.00.

**Parts per Million (ppm):** One part per million (milligram per liter) is the equivalent to one penny in \$10,000.00.

**Picocuries per Liter (pCi/L):** A measurement of natural rate of disintegration.

The data presented in this report is from the most recent testing done in accordance with regulations.

**DETECTED CONTAMINANTS TABLE  
2018**

Contaminant	Year	Unit	MCL	MCLG	Amount Detected	Range Low-High	Violation	Typical Source
<b>REGULATED SUBSTANCES</b>								
Substance (unit of measure)								
Barium	2018	ppm	2	2	0.01	NA	NO	Erosion of natural deposits.
Chlorine <sup>⑤</sup>	2018	ppm	MRDL=4.0	MRDLG=4.0	0.69	0.15 to 0.69	NO	Water additive to control microbes.
Di(2-ethylhexyl)phthalate	2018	ppb	6	0	1.0	0 to 1.0	NO	Discharge from rubber and chemical factories.
Fluoride	2018	ppm	4	4	0.83	0.50 to 0.83	NO	Water additive for whitening teeth.
Haloacetic Acids (HAA5) <sup>⑤</sup>	2018	ppb	60	NA	30	9 to 30	NO	By-product of drinking water chlorination.
*Total Trihalomethanes (TTHM) <sup>⑤</sup>	2018	ppb	80	NA	83	53 to 83	YES	By-product of drinking water chlorination.
Total Coliform <sup>②</sup> (% positive samples)	2018	----	TT	NA	<1	NA		Naturally present in the environment.
Total Organic Carbon <sup>④</sup> (removal ratio)	2018	----	TT	NA	1.62	1.20 to 1.84	NO	Naturally present in the environment.
Turbidity <sup>③</sup>	2018	NTU	TT	NA	0.16	0.02 to 0.16	NO	Soil runoff.
Turbidity(lowest monthly percent of samples meeting limit)	2018	----	TT	NA	100	NA	NO	Soil runoff.
<b>LEAD and COPPER</b>								
Substance (unit of measure)								
	Year	Unit	Action Level	MCLG	Amount 90 <sup>th</sup> Percentile	Samples Above Action Level	Violation	Typical Source
Copper <sup>①</sup>	2018	ppm	1.3	1.3	0.018	0/30	NO	Corrosion of household plumbing; erosion of natural deposits.
Lead <sup>①</sup>	2018	ppb	15	0	4.2	0/30	NO	Corrosion of household plumbing; erosion of natural deposits.
<b>UNREGULATED SUBSTANCES</b>								
Sodium	2018	ppm	NA	NA	16.7	NA	NO	Runoff from road deicing; erosion of natural deposits.

① Sampling conducted in accordance with the lead/copper rule of the SDWA. The above data represents the most recent results. No samples were above the action level for copper, and none were above the action level for lead in 2018.

② This value refers to the highest monthly percentage of positive samples detected during the year. In 2018 East Providence Water collected over 3000 samples for the total coliform rule compliance monitoring. Zero samples collected were coliform positive.

③ 0.16 NTU was the highest single turbidity measurement recorded. The lowest monthly percentage of samples meeting the turbidity limit was 100%. The average turbidity value for 2018 was <0.10 NTU.

④ In order to comply with the EPA standard, the removal ratio must be greater than 1. Detected level is the lowest ratio per quarter. Range is the lowest and highest ratios per month.

⑤ Compliance is based upon the highest locational running annual average (LRAA), and the range is based upon the lowest and highest individual measurement.

## UNREGULATED CONTAMINANT MONITORING REGULATION FOURTH CYCLE (UCMR4)

Unregulated contaminants are those that do not yet have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard. In 2018, the City of East Providence sampled for 30 different contaminants as required by the EPA and found low levels of four compounds present in our drinking water. The contaminants and their concentration are listed below. For more information, contact the EPA's Safe Drinking Water Hotline at **1-800-426-4791**.

Substance	Year	Unit	MCL	MCLG	Maximum Result	Sample Range	Compliance	Major Sources
<b>FOURTH UNREGULATED CONTAMINANT MONITORING RULE (UCMR 4)</b>								
Manganese	2018	ppm	0.05	NA	0.0014	0.0007 to 0.0014	Yes	Erosion of natural deposits.
<b>HALOACETIC ACIDS</b>								
HAA5	2018	ppb	60	NA	28.12	17.58 to 28.12	Yes	By-product of drinking water disinfection.
HAA9	2018	ppb	Not Regulated	NA	28.12	19.45 to 28.12	NA	By-product of drinking water disinfection.
HAA6Br	2018	ppb	Not Regulated	NA	3.71	1.89 to 3.71	NA	By-product of drinking water disinfection.

## **Additional Health Information**

To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations established limits for contaminants in bottled water.

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 EPA's Safe Drinking Water Hotline 1-800-426-4791 or the EPA website [www.epa.gov](http://www.epa.gov).

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 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 storm 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, storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and also can come from gas stations, urban storm water 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 the tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.

## **IMPORTANT HEALTH INFORMATION**

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 healthcare providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the following:

**Safe Drinking Water Hotline: 1-800-426-4791 or EPA website at [www.epa.gov](http://www.epa.gov).**

## **Variations and Exceptions**

There were no variances or exemptions granted to East Providence Water or the PWSB by the State in 2018.