



**2017 CONSUMER CONFIDENCE REPORT**  
**Providence Water – Whipple Water System**  
Smithfield, RI  
PWS ID# RI2980461

**The Quality of Your Drinking Water**

We are proud to present our annual water quality report, covering all testing performed between January 1 and December 31, 2017 within the Whipple Water System. Over the years, we at Providence Water have dedicated ourselves to producing world-class drinking water at a bargain price that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we pledge to remain vigilant in meeting the goals of source water protection, water conservation, and community education, while continuing to serve the needs of all our water users.

You need to know that the federal government requires all water systems to use very specific language in this report that can often be confusing or alarming to some people. Rest assured that Providence Water, as it has for the past 100 years, continues to be a reliable, safe source of drinking water for you and your family.

Providence Water and all of its employees are committed to providing our customers with high quality drinking water that meets or exceeds all state and federal standards for quality and safety. After reviewing this report, if you would like to know more about your water system, or if you have questions, please call us at (401) 521-5073.

**General Information**

Meetings of Providence Water's Board of Directors are normally scheduled on the third Wednesday of each month and are open to the public. Meetings begin at 5:00 p.m. and are held in the first-floor Boardroom at our headquarters located at 125 Dupont Drive, Providence, RI.

**The Source of Your Drinking Water**

The water supply to the Whipple service area in the Town of Smithfield is supplied through the Smithfield Water District System, a wholesale customer to Providence Water. The Whipple service area was acquired by Providence Water during the acquisition of the East Smithfield Water District in January 2017. Providence Water owns, operates, and maintains the water mains, valves, and hydrants within this service area. It has approximately 2.8 miles of water mains, 17 public fire hydrants, and multiple line valves for controlling water flow. The water service connections into each building include a connection to the water main, a service connection valve, and water meter to measure usage.

The Providence Water source of supply comes entirely from surface water reservoirs located in a 93 square mile, mostly rural, forested watershed basin within the towns of Scituate, Foster, Glocester, and Johnston. 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, Ponaganset Reservoir, Westconnaug Reservoir, and Moswansicut 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 draft 2017 Source Water Assessment report is available on the Providence Water website at <http://www.provwater.com/swap>.

**Substances That Could Be in 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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. Substances 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 the result of oil and gas production and mining activities.

**Important Health Information**

For most people, the health benefits of drinking plenty of water outweigh any possible health risk from these contaminants. However, 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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

**What’s In My Water?**

In April 2015, as part of the Long Term (2) Enhanced Surface Water Treatment Rule (LT-2 ESWTR), Providence Water began a monthly testing program of the Scituate Reservoir for a microbial parasite found in surface water across the U.S. called *Cryptosporidium*. The program concluded in March 2017, completing 24 consecutive months of monitoring the Scituate Reservoir for the presence of these organisms. Providence Water is happy to report that all sample results were negative for *Cryptosporidium*.

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that do not yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that this data is available. If you are interested in examining the results, please contact Providence Water at (401) 521-5073, or at 125 Dupont Drive, Providence, RI 02907.

The following tables list all of the drinking water contaminants that were detected through our water quality monitoring and testing. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The data presented in this table are from the January – December 2017 monitoring period.

2017 TEST RESULTS FROM PROVIDENCE WATER						
Contaminant	Violation Y/N	Level Detected (Range)	Unit Measurement	MCLG	MCL	Likely Source of Contamination
<b>Microbiological Contaminants</b>						
Total Coliform Bacteria <sup>1</sup> (2017)	N	0.6% (N/A)	%Positive Samples per Month	0 %	Presence of Coliform in >5% of monthly samples	Naturally present in the environment
Total Organic Carbon <sup>2</sup> (2017)	N	1.62 Range: 1.54-1.78	n/a	n/a	TT	Naturally present in the environment

Turbidity <sup>3</sup> (2017)	N	0.22 <i>Range: 0.02-0.22</i>	ntu	n/a	TT	Soil runoff
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<sup>1</sup> This value refers to the highest monthly percentage of positive samples detected during the year. For 2017, Providence Water Collected 2,155 samples for Total Coliform Rule compliance monitoring. One of these samples were positive for total coliform bacteria. None were positive for E. coli.

<sup>2</sup> In order to comply with the EPA standard, the removal ratio must be greater than 1.0. Detected level is the lowest removal ratio per quarter. Range is the lowest and highest removal ratios per month.

<sup>3</sup> 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. 0.22 NTU was the highest single turbidity measurement recorded. The average turbidity value for 2017 was <0.10 NTU.

#### Inorganic Contaminants

Barium (2017)	N	0.01 (N/A)	ppm	2	2	Erosion of natural deposits
Copper <sup>4</sup> (2017)	N	0.015 (N/A)	ppm	1.3	AL=1.3	Corrosion of household plumbing systems
Fluoride (2017)	N	0.86 <i>Range: 0.45-0.86</i>	ppm	4	4	Erosion of natural deposits.
Lead <sup>4</sup> (2017)	N	17.0 (N/A)	ppb	0	AL=15	Corrosion of household plumbing systems

<sup>4</sup> Reported results are the 90<sup>th</sup> percentile value (the value that 90% of all samples are less than). Of the 348 samples collected for Lead, 38 samples were above the action level for Lead. All samples for Copper were below its action level.

#### Synthetic Organic Contaminants including Pesticides and Herbicides

Di(2-ethylhexyl)- phthalate <sup>5</sup> (2017)	N	1.0 <i>(0.0-1.0)</i>	ppb	0	6	Discharge from rubber and chemical factories
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<sup>5</sup> DEHP was detected in a single sample of source water. All subsequent test results for this compound sampled in 2017 were negative.

#### Volatile Organic Contaminants

Chlorine <sup>6</sup> (2017)	N	RAA = 0.46 <i>Range: 0.0-1.06</i>	ppm	MRDLG = 4	MRDL = 4	Water additive used to control microbes
HAA5 <sup>7</sup> [Total Haloacetic Acids] (2017)	N	RAA = 19.2 <i>(10.9-26.9)</i>	ppb	0	60	By-product of drinking water chlorination
TTHM <sup>7</sup> [Total Trihalomethanes] (2017)	N	RAA = 71.3 <i>(23.0-82.0)</i>	ppb	0	80	By-product of drinking water chlorination

<sup>6</sup> Compliance is based upon the highest quarterly running annual average, and the range is based upon the lowest and highest individual measurements.

<sup>7</sup> Compliance is based upon the highest quarterly LRAA and range is based upon lowest and highest individual measurements. Some people who drink water containing trihalomethanes 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.

#### Unregulated Contaminants

Sodium (2017)	N	13.9	ppm	n/a	28	Erosion of natural deposits, urban storm runoff
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### 2017 TEST RESULTS FROM SMITHFIELD WATER

Contaminants	Violation Y/N	Level Detected (Range)	Unit Measurement	MCLG	MCL	Likely Source of Contamination
<b>Inorganic Contaminants</b>						

Copper <sup>1</sup> (2017)	N	0.02	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead <sup>1</sup> (2017)	N	2.0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
<b>Disinfectant Contaminants</b>						
Chlorine (2017)	N	Ave: 0.271 (0.17-0.36)	ppm	MRDLG = 4	MRDL = 4	Water additive used to control microbes
Haloacetic Acids (HAA5) (2017)	N	RAA: 16.46 (12.1-21.1)	ppb	0	60	By-product of water chlorination
Total Trihalomethanes (TTHM)	N	RAA: 90.6 (51.1-138.8)	ppb	0	80	By-product of water chlorination

<sup>1</sup> Reported results are the 90<sup>th</sup> percentile value (the value that 90% of all samples are less than). All of the Lead and Copper sampling results fell below their respective action levels.

## 2017 TEST RESULTS FROM PROVIDENCE WATER – WHIPPLE WATER SYSTEM

Contaminant	Violation Y/N	Level Detected (Range)	Unit Measurement	MCLG	MCL	Likely Source of Contamination
<b>Microbiological Contaminants</b>						
Total Coliform Bacteria <sup>1</sup> (2017)	N	Absent	Highest monthly # of positive samples	Absent	1 positive	Naturally present in the environment
<sup>1</sup> MCL: (systems that collect ≥ 40 samples/month) 5% of monthly samples are positive; (systems that collect < 40 samples/month) 1 positive monthly sample.						
<b>Inorganic Contaminants</b>						
Copper <sup>2</sup> (2017)	N	0.02	ppm	1.3	AL= 1.3	Naturally present in the environment
Lead <sup>2</sup> (2017)	N	20	ppb	0	AL=15	Corrosion of household plumbing systems
<sup>2</sup> Reported results are the 90 <sup>th</sup> percentile value (the value that 90% of all samples are less than). Our Whipple system had 3 Lead samples out of 20 that exceeded the Action Level of 15ppb.						
<b>Volatile Organic Contaminants</b>						
Chlorine (2017)	N	RAA: 0.18 (0.06-0.41)	ppm	MRDLG = 4	MRDL = 4	Water additive used to control microbes
Total Haloacetic Acids (HAA5) (2017)	N	RAA: 18.4 (single sample)	ppb	0	60	By-product of drinking water chlorination
Total Trihalomethanes (TTHM) (2017)	N	RAA: 65 (single sample)	ppb	0	80	By-product of drinking water chlorination

**Parts per million (ppm) or Milligrams per liter (mg/L)** - One part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb) or Micrograms per liter (ug/L)** - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Action Level (AL)** - The concentration of a contaminant which if exceeded, triggers treatment or other requirements which a water system must follow.

**Maximum Contaminant Level (MCL)** -The MCL is 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 (MCLG)** - The MCLG is 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.

**Maximum Residual Disinfection Level Goal (MRDLG)** - 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.

**Maximum Residual Disinfectant Level (MRDL)** - 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.

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

**Nephelometric Turbidity Unit (NTU)** - Nephelometric Turbidity Unit is a measure of the clarity of the water. Turbidity in excess of 5 NTU is just noticeable by the average person.

### **Action Level Exceedance for Lead**

In 2017, routine sampling detected lead in excess of the maximum level allowed. Three of the sites sampled exceeded the action level for lead. This exceedance triggered public notification and treatment technique requirements. Providence Water is working with a panel of nationally recognized corrosion experts to optimize our treatment. We are also committed to improving our distribution system through our flushing and water main rehabilitation programs. **Lead Health Effects:** Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

### **Lead in Home Plumbing**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is caused from lead materials and components associated with your home's water service connection and your home's interior plumbing. Providence Water is responsible for providing high-quality drinking water to your service connection but cannot control the variety of materials used in your home's plumbing components. You can minimize the potential for lead exposure by flushing your cold water tap to rid your home's plumbing of water that may have been in contact with lead-based pipes, solder, or brass in your home. If water has been stagnant for more than 6 hours, run the cold water faucet until the water gets significantly colder, and then for another minute (usually 3-5 minutes total) before drinking and cooking. If you have used toilets, washing machines, or bathtubs, a 3-5 minute flush may not be necessary. For drinking or cooking, however, you should always flush from the cold water faucet for at least 30 seconds.

If you are concerned about lead in your water, you may wish to have your water tested. Providence Water customers can pick up a free lead test kit at our customer service location in Providence. For information, please call our Lead Service Hotline at (401) 521-6303.

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 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

Providence Water is offering 3-year 0% interest loans for homeowners to replace their private lead service lines. Providence Water will ensure that the public side of the lead service line is automatically replaced at no cost whenever a homeowner replaces his/her private side of the lead service line. To find out more information, please call (401) 521-6303 or visit us online at [www.provwater.com/loan](http://www.provwater.com/loan).

### **Main Office:**

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