

# 2017 CONSUMER CONFIDENCE REPORT

## Smithfield Water Supply Board

Esmond, RI PWS

ID#1615616

We are very pleased to provide you with this year's Consumer Confidence Report. This report provides you with information on the water and services that we delivered to you in 2017. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

We want our valued customers to be informed about their water utility. There are no regularly scheduled meetings, therefore; if after reviewing this report you have any questions, or would like to know more about the Smithfield Water Supply Board's water system, please call Charlie Walsh, Smithfield Public Works Acting Director, at (401) 233-1034, Monday–Friday from 8:00AM to 3:00PM.

### The Quality of Your Drinking Water

Our goal is to provide you with a safe and dependable supply of drinking water. We are committed to ensuring the quality of your water.

### The Source of Your Drinking Water

We purchase all of our water from the Providence Water Supply Board. Providence draws its water entirely from surface water sources located in the Scituate watershed. The main source of supply for the Providence system is the Scituate Reservoir; which is the terminal reservoir in a network of six reservoirs. The five other secondary reservoirs are: Regulating Reservoir, Barden Reservoir, Ponaganset Reservoir, Westconnaug Reservoir, and Moswansicut Reservoir. This reservoir system is located in a basin area totaling 92.8 sq. miles of mostly rural, forested lands of which Providence Water controls approximately 28% through outright ownership or through past purchase of development rights.

The RI Department of Health, in cooperation with other state and federal agencies, has assessed the threats to Smithfield Water Supply Board's water supply sources. The assessment considered the intensity of development, the presence of businesses and facilities that use, store or generate potential contaminants, how easily contaminants may move through the soils in the Source Water Protection Area (SWPA), and the sampling history of the water.

Our monitoring program continues to assure that the water delivered to your home is safe to drink. However, the assessment found that the water source is at LOW RISK of contamination. This does NOT mean that the water cannot become contaminated. Protection efforts are necessary to assure continued water quality. The complete Source Water Assessment Report is available from the Smithfield Water Supply Board or the Department of Health at (401) 222-6867.

### Why Are There Contaminants in My Drinking 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:

- **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.

### Water Quality Test Results

The table below lists 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. Unless otherwise noted, the data presented in this table is from the January – December 2017 monitoring period. For those contaminants that are monitored less frequently the most recent test results are listed.

Maximum Contaminant Levels (MCL's) are set at very stringent levels. The Maximum Contaminant Level Goal (MCLG) is set at a level where no health effects would be expected, and the MCL is set as close to that as possible, considering available technology and cost of treatment. A person would have to drink 2 liters of water every day, as recommended by health professionals, at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

## 2017 TEST RESULTS FROM THE PROVIDENCE WATER SUPPLY BOARD

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% <i>Range: N/A</i>	%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 <i>Range: 1.54-1.78</i>	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
<p><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.</p> <p><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.</p> <p><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 &lt;0.10 NTU.</p>						
<b>Inorganic Contaminants</b>						
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
<p><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.</p>						
<b>Synthetic Organic Contaminants including Pesticides and Herbicides</b>						
Di(2-ethylhexyl)-phthalate (2017)	N	1.0 (0.0-1.0)	ppb	0	6	Discharge from rubber and chemical factories
<b>Volatile Organic Contaminants</b>						
Chlorine <sup>5</sup> (2017)	N	RAA = 0.46 <i>Range: 0.0-1.06</i>	ppm	MRDLG = 4	MRDL = 4	Water additive used to control microbes
HAA <sup>6</sup> [Total Haloacetic Acids] (2017)	N	RAA = 19.2 (10.9-26.9)	ppb	0	60	By-product of drinking water chlorination
TTHM <sup>6</sup> [Total Trihalomethanes] (2017)	N	RAA = 71.3 (23.0-82.0)	ppb	0	80	By-product of drinking water chlorination
<p><sup>5</sup> Compliance is based upon the highest quarterly running annual average, and the range is based upon the lowest and highest individual measurements.</p> <p><sup>6</sup> Compliance is based upon the highest quarterly LRAA and range is based upon lowest and highest individual measurements.</p>						
<b>Unregulated Contaminants</b>						
Sodium (2017)	N	13.9	ppm	n/a	28	Erosion of natural deposits, urban storm runoff

The State of Rhode Island requires testing for other contaminants not regulated by the US EPA. The following contaminant was detected in our well water:

**Sodium:** In 2015, sodium was detected at 14.0 ppm.

### Lead & Copper AL Exceedance for Providence Water

In 2016, routine sampling detected Lead in excess of the maximum level allowed. 32 out of 300 sites sampled, exceeded

the action level for Lead. Drinking water regulations require that samples are taken from homes with a high risk potential for Lead in the plumbing. Public education material was distributed to all residents, shortly thereafter. A corrosion control plan was submitted to the State Drinking Water Program. Lead sampling will continue in 2018. Results of subsequent future Lead testing will be made available to all residents. 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.

2017 TEST RESULTS FROM THE SMITHFIELD WATER SUPPLY BOARD						
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) (2017)	Y	RAA: 90.6 (51.1-138.8)	ppb	0	80	By-product of water chlorination

<sup>1</sup> Reported results are in 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.

**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.

**Picocuries per liter (pCi/L)** - Picocuries per liter is a measure of the radioactivity in water.

**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.

### Total Trihalomethanes (TTHM) MCL Violation

TTHM and HAA5 are formed as a by-product of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in water. Water tests were done on your drinking water this summer, when TTHM and HAA5 are thought to be at their highest. The results of this test revealed levels for TTHM in excess of the MCL of 80 ppb during the fourth quarter of 2017. However, it is important to note that the MCL is supposed to be based on the running annual average, not just one test taken in the summer. We are in the process of exploring the various options to reduce TTHM in your water supply. Some people who drink water containing TTHM 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. We will continue to sample according to our sampling schedule and will continue to post future results.

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).

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 Smithfield Water District 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>.

We at the Smithfield Water Supply Board work to provide top quality water to every tap. We encourage all of our customers to conserve and use water efficiently and remind you to help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please do not hesitate to call our office with any questions.