

2014 CONSUMER CONFIDENCE REPORT

East Smithfield Water District (RI1583814)
East Smithfield Water District – Summerfield Water System (RI2980462)
East Smithfield Water District – Whipple Water System (RI2980461)
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Smithfield, RI
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The Quality of Your Drinking Water

This report informs you about the quality of water and services that we delivered to you in 2013. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

The East Smithfield Water District 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. We're proud to inform you that your drinking water for 2013 met all Federal and State requirements.

To ensure delivery of a quality product, we have made significant investments in distribution piping. We maintain a close relationship with our primary water suppliers, the Providence Water Supply Board and the Town of Smithfield, which also purchases its water from the Providence Water Supply Board. We test the water frequently to assure that it continues to meet all requirements.

After reviewing this report, if you would like to know more about the District's water system or if you have questions, please call the District office at (401) 231-0510. You are also invited to attend the Board's monthly meetings, which are held at the District's office on the first Wednesday of the month between September and June, starting at 6:30 PM.

The Source of Your Drinking Water

The Providence Water Supply Board is the primary supplier of water to the District. The water is delivered through a transmission and distribution system that includes two (2) pressure boosting pumping stations, and approximately 30 miles of piping which includes valves for control of water flow. The water connections into each building include a connection to a main pipe, a valve on the connection pipe and a water meter to measure water use. Water is also available for fire-fighting through direct connection to 139 public fire hydrants.

All of the water from the Providence Water Supply Board comes entirely from surface water reservoirs located in a 92.8 square mile, mostly rural, forested watershed basin in Scituate. The main source of this water supply is the Scituate Reservoir, which is the terminal reservoir in a network of six interconnected reservoirs. Before delivery to the transmission and distribution system, all water from the reservoir system is treated at the Philip J. Holton Water Treatment Plant in accordance with state and federal requirements for drinking water.

The RI Department of Health, in cooperation with other State and Federal agencies, has assessed the threats to Providence Water's 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. The assessment found that Providence Water's sources are 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 Providence Water 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 following table 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 2013 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.

2014 TEST RESULTS FROM THE PROVIDENCE WATER SUPPLY BOARD						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform Bacteria ¹	N	1.0% <i>Range: 0-1.0%</i>	Highest % of positive samples per month	0	5% of monthly samples	Naturally present in the environment
Total Organic Carbon ²	N	1.26 <i>Range: 1.18-1.31</i>	n/a	n/a	TT	Naturally present in the environment
Turbidity	N	0.40 <i>Range: 0.02-0.40</i>	ntu	n/a	TT	Soil runoff
¹ MCL: (systems that collect ≥ 40 samples/month) 5% of monthly samples are positive; (systems that collect < 40 samples/month) 1 positive monthly sample. For 2014, Providence Water collected 2,252 samples for Total Coliform Rule compliance monitoring. Two of these samples were positive for total coliform bacteria. None were positive for <i>E. coli</i> bacteria. ² 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. 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. 0.40 NTU was the highest single turbidity measurement recorded. The average turbidity value for 2014 was <0.10 NTU.						
Inorganic Contaminants						
Barium	N	0.007	ppm	2	2	Erosion of natural deposits
Fluoride	N	3.45 <i>Range: 0.55-3.45</i>	ppm	4	4	Erosion of natural deposits.
Nitrate [as Nitrogen]	N	0.06	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Volatile Organic Contaminants						
Chlorine ⁴	N	RAA = 1.92 <i>Range: 0.0-1.92</i>	ppm	MRDLG = 4	MRDL = 4	Water additive used to control microbes
⁴ Compliance is based upon the highest quarterly running annual average, and the range is based upon the lowest and highest individual measurements.						

Unregulated Contaminants						
Sodium	N	12.0	ppm	n/a	n/a	
Strontium	N	27.0 <i>Range: 26.0-27.0</i>	ppb	n/a	n/a	
Vanadium	N	0.42 <i>Range: 0.33-0.42</i>	ppb	n/a	n/a	
4-androstene-3, 17 -dione	N	0.00052 <i>Range: 0.0-0.00052</i>	ppb	n/a	n/a	

2014 DISTRIBUTION SYSTEM TEST RESULTS

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform Bacteria ¹ E. Smithfield WD ESWD-Summerfield ESWD-Whipple	N	Negative Negative Negative	Highest monthly # of positive samples	0 positive	1 positive	Naturally present in the environment
¹ MCL: (systems that collect ≥ 40 samples/month) 5% of monthly samples are positive; (systems that collect < 40 samples/month) 1 positive monthly sample. One of these samples was positive for total coliform bacteria. All recheck samples were negative. All samples for <i>E. coli</i> bacteria were also negative.						
Inorganic Contaminants						
Copper ² E. Smithfield WD ESWD-Summerfield ESWD-Whipple	N	0.027 (0.0-0.03) 0.01 0.02 (0.0-0.02)	ppm	1.3	AL= 1.3	Naturally present in the environment
Lead ² E. Smithfield WD ESWD-Summerfield ESWD-Whipple	N	0.0 (0.0-3.0) 0.0 6.0 (0.0-13.0)	ppm	n/a	TT	Naturally present in the environment
² Reported results are the 90 th percentile value (the value that 90% of all samples are less than).						
Volatile Organic Contaminants						
Chlorine E. Smithfield WD ESWD-Summerfield ESWD-Whipple	N	RAA: 0.2 (0.1-0.2) RAA: n/a RAA: n/a	ppm	MRDLG = 4	MRDL = 4	Water additive used to control microbes
Total Haloacetic Acids (HAA5) E. Smithfield WD ESWD-Summerfield ESWD-Whipple	N	RAA: 18.38 (11.0-24.0) RAA: 17.0 (single sample) RAA: 28.0 (single sample)	ppb	0	60	By-product of drinking water chlorination
Total Trihalomethanes (TTHM) E. Smithfield WD ESWD-Summerfield ESWD-Whipple	N	RAA: 55.47 (25.9-88.9) RAA: 61.4 (single sample) RAA: 59.8 (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.

Total Trihalomethanes (TTHM) MCL Violations for East Smithfield Water District (RI1583814)

The western Whipple Road area of the East Smithfield Water District public water system receives water from the Smithfield Water Supply Board (Smithfield) public water system, which receives its water from Providence Water. The rest of the East Smithfield Water District, which receives its water directly from Providence, is currently in compliance. Smithfield routinely tests at various sites within the distribution system for disinfectants by-products (DBPs). EPA sets standards for controlling the levels of disinfectants and disinfection by-products in drinking water, including TTHMs. The average results of tests taken during the last four quarters show that their system exceeded the standard, or maximum contaminant level (MCL) for TTHMs at one location. The EPA standard for TTHMs is 80 ppb, parts per billion, for a locational annual running average. Smithfield Water Supply Board water system's locational average level of TTHMs for the last four quarters (July 1, 2013 – June 30, 2014) was 88 ppb. To resolve this issue, we established sampling site in this area to monitor DBPs on a quarterly basis. Both Smithfield and Providence Water are working to minimize the formation of TTHM's while ensuring an adequate level of disinfection to protect customers from exposure to bacteria. 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.

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 East 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 East Smithfield Water District 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.