

# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019

***Presented By***  
**Woonsocket**  
**Water Division**



## Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2019. Over the years, we have dedicated ourselves to producing drinking water 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 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.

On 1/1/2019, by resolution of the Woonsocket City Council, the treatment of drinking water is under contract with Woonsocket Water LLC; Suez.

Please remember that we are always available should you ever have any questions or concerns about your water.



## Where Does My Water Come From?

Woonsocket Water Division uses surface water from the Crookfall Brook and Harris Pond watersheds. The Crookfall Brook watershed extends over approximately 7.93 square miles. It is a protected, high-quality, and primary source of supply for the Woonsocket Treatment Plant. Harris Pond has a watershed area of approximately 33.3 square miles. This source is used as a supplemental source as needed. Woonsocket Water maintains an active watershed protection program and closely monitors the watershed lands to protect water quality.

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Public Meetings

For public comment on an ongoing basis, customers can contact the office of Mayor Lisa Baldelli-Hunt or attend the Woonsocket City Council Meetings. The Council holds hearings on budget and other financial matters, approves contracts, and considers ordinances that create or amend local laws. Some of these matters affect the operation of the Woonsocket Water Division. The council meets on the first and third Mondays of every month, at 7:00 p.m., in Harris Hall in City Hall, 169 Main Street, Woonsocket, RI. The meetings are televised live on Cox Cable Channel 17 and Verizon FIOS Channel 22. Public comment is welcome.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Marc Viggiani, Water Superintendent, at (401) 767-1411, or visit our Web site at [www.woonsocketri.org](http://www.woonsocketri.org).

## About Our Violations

Specifically the Treatment Process Operated by Woonsocket Water LLC; Suez

September 11, 2019—Reporting Violation: Failure to submit a satisfactory monitoring report by due date. August report failed to correctly report a result as E. coli present. Correct report submitted 3/9/2019

September 11, 2019—Reporting Violation: Failure to report mechanically adjusted fluoride results by due date. Correct report submitted 3/9/2020

October 2019—Reporting Violation: Failure to collect and report required CT (contact time) calculations and parameters. Correct report submitted 3/9/2020

November 2019—Reporting Violation: Failure to submit a satisfactory monitoring report by due date. Failed to correctly report the number of samples analyzed (102 vs 101). Correct samples analyzed submitted 11/13/2019; returning to compliance with this violation.

December 2, 2019—Reporting Violation: Failure to report the turbidity exceedance on December 2nd of 2019 within 24 hours. Exceedance reported 1/8/2020

January 11, 2020—Reporting Violation: Failure to explain the cause of the elevated turbidity reading, which occurred on December 8, 2019, in the monthly operating report by the January 10, 2020, due date. Cause explained 2/27/2020; returning to compliance with this violation.

Woonsocket Water LLC; Suez has already taken the steps to ensure that adequate monitoring and reporting will be performed in the future so that these oversights will not be repeated.

### Treatment Technique Violation

Explanation: Failure to maintain turbidity below Maximum Contaminant Level (MCL) on December 2, 2019.

Date and Length of Violation: December 2, 2019 1:15 pm; ended December 2, 2019 7:30 pm

What happened: Sludge Valve was not operating properly compromising one of the three filters for drinking water.

Steps Taken to Correct Violation: Woonsocket Water LLC; Suez has taken the following steps; Operating procedures for the process have been updated, Monitoring frequency has been increased, Training has been provided to operations staff on the updated procedures and increased monitoring, and Valve operation is being evaluated and adjusted as needed.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites, which can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

## Testing For *Cryptosporidium*

*Cryptosporidium* is a microbial parasite found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Woonsocket Water Division's 2017 testing of 25 monthly samples of raw water resulted in 24 negative samples and one positive sample with test results 1 oocyst/count or 0.100 oocyst/L. Bin Classification - 1; requires no additional treatment. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctors regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

We are pleased to report that your drinking water meets or exceeds all federal and state requirements.



## How Is My Water Treated and Purified?

The treatment process consists of a series of steps. First, raw water is drawn from our water source into the treatment plant. Chemicals are added to initiate the next process, called flocculation. The addition of these substances causes small particles to adhere to one another (called floc), making them heavy enough to settle to the bottom, from which sediment is removed. This process is called clarification, or sedimentation. The clear supernatant is then filtered through a deep-bed carbon filter that removes the smaller suspended particles. After filtration, the water undergoes disinfection, fluoride addition (to prevent tooth decay), corrosion inhibitor addition, and pH adjustment before it is pumped out into the distribution system.

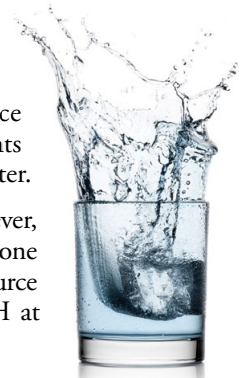
## Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we 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 at (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Source Water Assessment

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

Our monitoring program continues to ensure that the water delivered to your home is safe and wholesome. However, the assessment found that the water source is at moderate risk of contamination. This means that the water could one day become contaminated. Protection efforts are necessary to ensure continued water quality. The complete Source Water Assessment Report is available from Woonsocket Water Division at (401) 767-1411, or from HEALTH at (401) 222-6867.



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only those substances that were detected in our water. (A complete list of all our analytical results is available upon request.) Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public including detected and non-detected test results so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.



Although *E. coli* was detected, the water system is not in violation of the *E. coli* MCL.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Barium</b> <sup>1</sup> (ppm)	2019	2	2	0.044	0.012–0.044	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
<b>Chlorine</b> (ppm)	2019	[4]	[4]	0.45	ND–1.08	No	Water additive used to control microbes
<b>Chromium</b> <sup>1</sup> (ppb)	2019	100	100	1.0	ND–1.0	No	Discharge from steel and pulp mills; Erosion of natural deposits
<b>Di(2-ethylhexyl) Phthalate</b> <sup>1</sup> (ppb)	2019	6	0	1.0	ND–1.0	No	Discharge from rubber and chemical factories
<b><i>E. coli</i></b> <sup>2</sup> (# positive samples)	2019	see footnote 3	0	2	NA	No	Human and animal fecal waste
<b>Fluoride</b> (ppm)	2019	4	4	1.68	ND–1.68	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
<b>Haloacetic Acids [HAAs]</b> (ppb)	2019	60	NA	17.8	10.1–23.8	No	By-product of drinking water disinfection
<b>Nitrate</b> <sup>1</sup> (ppm)	2019	10	10	0.500	0.08–0.500	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<b>TTHMs [Total Trihalomethanes]</b> <sup>4</sup> (ppb)	2019	80	NA	49.2	19.3–83.2	No	By-product of drinking water disinfection
<b>Total Coliform Bacteria</b> (Positive samples)	2019	TT	NA	4	NA	No	Naturally present in the environment
<b>Total Organic Carbon</b> <sup>5</sup> (ppm)	2019	TT	NA	1.66	1.29–1.90	No	Naturally present in the environment
<b>Turbidity</b> <sup>6</sup> (NTU)	2019	TT	NA	2.529	0.040–2.529	Yes	Soil runoff
<b>Turbidity</b> (Lowest monthly percent of samples meeting limit)	2019	TT = 95% of samples meet the limit	NA	99.76	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
<b>Copper</b> (ppm)	2017	1.3	1.3	0.032	0/32	No	Corrosion of household plumbing systems; Erosion of natural deposits
<b>Lead</b> (ppb)	2017	15	0	2	0/32	No	Corrosion of household plumbing systems; Erosion of natural deposits

## SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2019	200	NA	53	ND–180	No	Erosion of natural deposits; Residual from some surface water treatment processes
Manganese (ppb)	2019	50	NA	81	32–299	No	Leaching from natural deposits

## UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	2019	70.56	28.9–111.0	Naturally found in plants, soil, and sodium compounds used for deicing roads
Perfluorohexanesulfonic Acid (PFHxS) <sup>1</sup> (ppt)	2019	1.51	ND–4.55	Foam for firefighting
Perfluorooctanesulfonate Acid (PFOS) <sup>7</sup> (ppt)	2019	4.80	ND–6.93	Industrial facility where PFAS were produced or used to manufacture foam used for fire fighting
Perfluorooctanoic Acid (PFOA) <sup>7</sup> (ppt)	2019	3.75	ND–5.97	Industrial facility where PFAS were produced or used to manufacture foam used for fire fighting

## UNREGULATED CONTAMINANT MONITORING RULE - PART 4 (UCMR4)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromide <sup>1</sup> (ppb)	2019	21.1	ND–32.5	Naturally occurring; Discharge from fossil fuel power plants.
HAA5 (ppb)	2019	22.043	16.24–30.25	By-product of drinking water disinfection
HAA6Br (ppb)	2019	9.373	6.238–12.041	By-product of drinking water disinfection
HAA9 (ppb)	2019	30.195	22.478–40.540	By-product of drinking water disinfection
Manganese <sup>1</sup> (ppb)	2019	77.2	33.7–109.0	Naturally occurring
Total Organic Carbon [TOC] <sup>1</sup> (ppb)	2019	5,290.0	3,110.0–7,150.0	Naturally present in the environment

<sup>1</sup> Raw untreated surface water sampling.

<sup>2</sup> Although 2 positive samples for *E. coli* were taken, the repeat samples, downstream samples, and up stream samples all tested absent for *E. coli*.

<sup>3</sup> Routine and repeat samples are total-coliform-positive and either is *E. coli*-positive, or system fails to take repeat samples following *E. coli*-positive routine sample, or system fails to analyze total-coliform-positive repeat sample for *E. coli*.

<sup>4</sup> Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their livers, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

<sup>5</sup> The value reported under Amount Detected for TOC is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

<sup>6</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. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

<sup>7</sup> Raw untreated surface water and first entry into the distribution system sampling.

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

**LRAA (Locational Running Annual Average):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

**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.

**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.

**NA:** Not applicable

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**ppt (parts per trillion):** One part substance per trillion parts water (or nanograms per liter).

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

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

