

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, which 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.

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We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2017. This report fulfills an Environmental Protection Agency requirement to provide a "Consumer Confidence Report" to all customers receiving water from a public system. 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 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.

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

Where Does My Water Come from?

The Westerly Water Department's water supply comes from twelve gravel-packed wells located at seven well fields within the Pawcatuck River Aquifer Region. The wellfields are located on Bradford Road, Old Carriage Road, Pound Road, and White Rock Road in the Town of Westerly. The total system production capability is 7.43 million gallons per day.

If you live close to an existing well site, please be very cautious about discharging any type of pollutant into the ground. This could negatively affect the water supply in future years. For information regarding the area where you live in relation to water sources that supply the Westerly System, please call the Westerly Water Department at (401) 348-2559.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not themselves 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 and disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. 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.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.



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>.

ANNUAL WATER QUALITY REPORT

Reporting Year 2017

Presented by
Westerly Water
Department

PWS#: RI1559512

Source Water Assessment

A Source Water Assessment Plan (SWAP) is available for review at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the Source Water Assessment Plan, our water system had a susceptibility rating of medium. If you would like to review the Source Water Assessment Plan, please feel free to contact our office during regular office hours.

Protecting Your Water

Bacteria are a natural and important part of our world. There are around 40 trillion bacteria living in each of us; without them, we would not be able to live healthy lives. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern, however, because it indicates that the water may be contaminated with other organisms that can cause disease.

In 2016, the U.S. EPA passed a new regulation called the Revised Total Coliform Rule, which requires additional steps that water systems must take to ensure the integrity of the drinking water distribution system by monitoring for the presence of bacteria like total coliform and E coli. The rule requires more stringent standards than the previous regulation, and it requires water systems that may be vulnerable to contamination to have in place procedures that will minimize the incidence of contamination. Water systems that exceed a specified frequency of total coliform occurrences are required to assess their system and correct any problems quickly. The U.S. EPA anticipates greater public health protection under the new regulation due to its more preventive approach to identifying and fixing problems that may affect public health. Though we have been fortunate to have the highest-quality drinking water, our goal is to eliminate all potential pathways of contamination into our distribution system, and this new rule helps us to accomplish that goal.

Test Results

Our water is monitored for many kinds of contaminants on a very strict sampling schedule. The information below represents only those substances that were detected; 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.

Regulated Substances							
Substance (Unit of Measure)	Year Sampled	MCL [MRDL]	MCLG [MRDLG]	Amount Detected	Range Low-High	Violation	Typical Source
Barium (ppm)	2017	2	2	0.043	0.01-0.096	No	Discharges of drilling wastes; Discharges from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2017	4	4	0.635	0.21-1.43	No	Water additive used to control microbes
Chromium (ppb)	2017	100	100	1	ND-1	No	Discharge from steel and mills; Erosion of natural deposits
Fluoride (ppm)	2017	4	4	0.011	0.1-0.018	No	Erosion of natural deposits
Haloacetic Acids [HAA] (ppb)	2017	60	NA	9.8	5.6-14.3	No	By-product of drinking water disinfection
Nitrate (ppm)	2017	10	10	1.2	0.21-2.73	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Coliform Bacteria ¹ (Monthly Max %)	2017	Presence of Coliform Bacteria in >5% of the monthly samples	0%	2%	0-2%	No	Naturally present in the environment
Fecalcoliform or E. Coli Bacteria ¹	2017	0	0	1 Sample*	ND-1	No	Human or animal fecal waste
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	19.4	15-23.75	No	By-product of drinking water disinfection

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%tile)	Sites Above AL/Total Sites	Violation	Typical Source
Copper (ppm)	2015	1.3	1.3	0.065	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2015	15	0	8	1/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

Unregulated and Other Substances			
Substance (Unit of Measure)	Year Sampled	Amount Detected	Range Low-High
1,2,4 Trimethylbenzene (ppb)	2013	0.059	ND-0.071
Bromodichloromethane (ppb)	2016	3.0	ND-3.0
Bromoform (ppb)	2017	0.5	ND-0.5
Chloroform (ppb)	2017	0.9	ND-4.9
Dibromochloromethane (ppb)	2016	3.6	ND-3.6
Nickel (ppm)	2017	0.001	ND-0.001
Radon ² (pCi/l)	2017	1167	791-1692
Sodium (ppm)	2017	22.02	7.02-49.3

Table Footnotes:
 1) See Additional Information
 2) 4000 pCi/l of Radon in water contributes about 0.4 pCi/l of Radon to the air in your home.

*Fecal coliforms and E. Coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely-compromised immune systems.

What is a Cross Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems) or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

For more information call the Safe Drinking Water Hotline at (800) 426-4791.

Water Treatment Process

Westerly's groundwater source is very good right out of the ground. The only treatment required prior to distribution is pH adjustment and polyphosphate addition for corrosion control along with mixed oxidants (MIOX) including chlorine for disinfection to protect against bacterial contaminants.

Unregulated and Other Substances			
Substance (Unit of Measure)	Year Sampled	Amount Detected	Range Low-High
Chlorate (ppb)	2015	40.7	26-82
Hexavalent Chromium (ppb)	2015	0.103	0.04-0.21
Molybdenum (ppb)	2015	0.385	0-2.7
Strontium (ppb)	2015	66.7	49-85
Perfluorobutanesulfonic Acid (PFBS) (ppt)	2016	1.90	2.8-5.6
Perfluoroheptanoic Acid (PFHpA) (ppt)	2016	3.06	2.1-4.6
Perfluorononanoic Acid (PFNA) (ppt)	2016	1.89	2.1-5.0
Perfluorooctanesulfonate Acid (PFOS) (ppt)	2016	2.52	3.0-5.1
Perfluorooctanoic Acid (PFOA) (ppt)	2016	9.28	7.0-15.0
Perfluoroundecanoic Acid (PFUnA) (ppt)	2016	0.21	ND-2.1
Perfluorodecanoic Acid (PFDA) (ppt)	2016	3.10	2.4-4.7
Perfluorohexanoic Acid (PFHxA) (ppt)	2016	3.84	2.0-6.0
Perfluorohexanesulfonic Acid (PFHxS) (ppt)	2016	0.60	ND-3.4

Radon

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 pCi/L or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your state radon program or call U.S. EPA's Radon Hotline at (800) SOS-RADON.

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 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 www.epa.gov/safewater/lead.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. The Town Council meets on the first, second, and third Mondays of the month, beginning at 6 p.m., at Town Hall, 45 Broad Street, Westerly, RI.

Additional Information

On November 13, 2017, Phoenix Labs picked up 11 distribution samples in the Westerly Water System. On November 14, 2017, the lab notified the Westerly Water Department that a sample taken at #249 Post Road tested positive for E. Coli and Total Coliform. The Westerly Water Department approached the matter following recommendations and regulations stated by the RI Department of Health.

Several follow up samples were taken on November 14, 2017. On November 15, 2017 all the follow up distribution samples tested negative for E. Coli but the follow up sample from Bradford Well #2 tested positive. The Bradford Well #2 was subsequently put offline. Following a recommendation from the RI Department of Health, a "boil order" notice was issued out of precaution. More follow up samples were taken on November 16, 2017 of the entire water system. All samples tested negative and the "boil order" was removed on November 17, 2017

What should I do?

There is nothing you need to do at this time.

What Happened?

A water sample during a normal round of sampling tested positive for E. Coli and Total Coliform.

What is being done?

Bradford Well #2 was put out of service. A contractor has been hired to inspect, video and redevelop the well in 2018. The Westerly Water Department plans to have the well up and running again in early Summer 2018.

For more information, please contact the Director of Public Works at (401) 348-2561 or 68 White Rock Road, Westerly, RI 02891.

Definitions

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

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. Secondary MCLs (SMCLs) are established to regulate the aesthetics of water (i.e., taste and odor).

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.

pCi/L (picocuries per liter): A measure of radioactivity.

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).

FOG (Fats, Oils, and Grease)

You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses. Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future:

NEVER:

- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

ALWAYS:

- Scrape and collect fat, oil, and grease into a waste container such as an empty coffee can, and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products including nonbiodegradable wipes.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water please contact the Director of Public Works at (401) 348-2561.

