BRISTOL COUNTY WATER AUTHORITY

2017 Water Quality Report

Important Information About Your Drinking Water

Any Questions?

Want to know more about the Bristol County Water Authority? Please call or write to Pamela M. Marchand, P.E., Executive Director, with any questions, comments or concerns.

Our administrative office is located at 450 Child Street, Warren, RI 02885. We hold monthly Board meetings at our Administrative Office. The date and time of our meetings is posted at the Town Halls of Barrington, Bristol, and Warren, at the Secretary of State's website (sos.ri.gov), and BCWA Bulletin Boards. Information can also be found by contacting our office, at 401-245-2022, or by visiting our website at www.bcwari.com.
Our Emergency Phone Number is 401-245-5071

Portuguese IMPORTANTE!

Portuguese IMPORTANTE! O relatorio contem informaçoes importantes sobre a qualidade da agua da comunidade. Traduza-o ou peca ajuda de uma pessoa amiga para ajuda-lo a entender melhor ou um tradutor será fornecido (401) 245-2022.

Bristol County Water Authority
450 Child Street
P.O. Box 447
Warren, Rhode Island 02885
401-245-2022

Bristol County Water Authority System

The Bristol County Water Authority provides water to residents of Barrington, Bristol and Warren.

In June of 2011 the Child St. WTP was removed from service. The Scituate Reservoir is now our sole source of supply and is distributed to all customers. The WTP is being maintained and could be utilized under emergency conditions. Also, management of the BCWA reservoir water sources continues, until an alternate supply is in service.

Where Does My Drinking Water Come From?

Providence Water obtains its water supply from a series of surface water reservoirs located in the northwest portion of the State of Rhode Island. The main source of supply is the Scituate Reservoir, which when at full capacity, contains over 37 billion gallons of water and covers an area of 3,390 acres. In addition to the Scituate Reservoir, there are also five other tributary reservoirs; Regulating Reservoir, Moswansicut Reservoir, Ponaganset Reservoir, Barden Reservoir, and Westconnaug Reservoir. These five additional reservoirs combined add another 4 billion gallons of water for a total water storage capacity of 41 billion gallons. The entire reservoir system is contained within a watershed area which totals 92.8 sq. miles of primarily rural, forested land. Providence Water controls over 28% of the most critical areas of the watershed through outright ownership or through the purchase of the development rights.

The Quality of your Drinking Water

The Bristol County Water Authority (BCWA) is committed to providing its customers with high quality drinking water that meets or surpasses State and Federal standards for quality and safety. However, during the last year the BCWA received a violation from the Rhode Island Department of Health. Between the dates of 09/01/2017 and 09/30/2017, we did not collect water quality samples in the correct time period, from our untreated raw source water, and therefore cannot be sure of the quality of our raw source water during that time. This violation occurred on an emergency source of water that is currently not used and currently has no impact on the water quality delivered to the tap.

To ensure delivery of a quality product, we have made significant investments in treatment facilities, water quality monitoring and the distribution system. We are pleased to report the results of our Year 2017 water testing to inform you about your drinking water.

Important Health Information

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, and some elderly and infants can be particularly at risk from infections. If you are one of these people, you should seek advice from your health care provider. 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.

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 primarily from lead materials and components associated with your home's water service connection and your home's interior plumbing.

Bristol County Water Authority 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 for 3-5 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.

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 bottle 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 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 storm water 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 storm water 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 storm water 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

The BCWA has undertaken a major renovation of the water system infrastructure and operation processes. In 2017, the New England Water Works Association awarded the BCWA "Utility of the Year" for making significant improvements to water system infrastructure, customer service, staff training and operations.

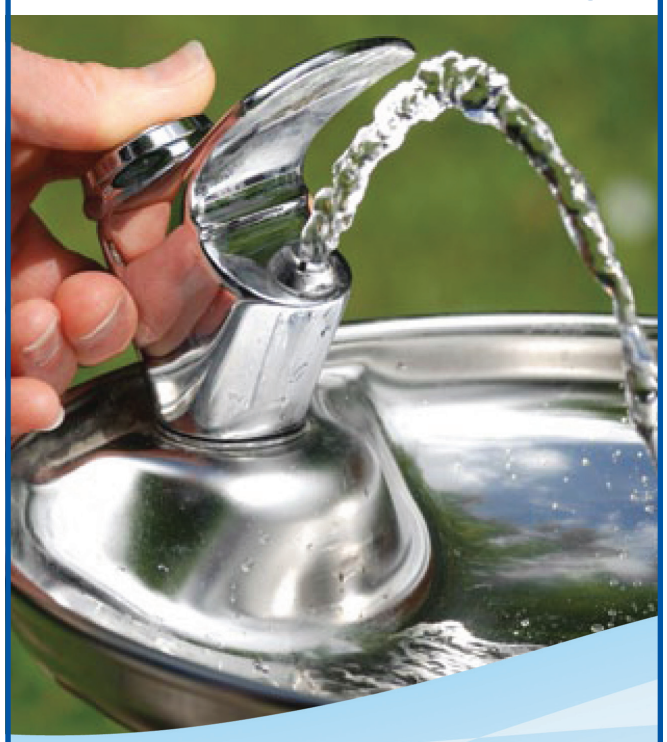
Major Projects Completed in 2017

- Upgraded Nayatt Rd. Pump Station
  - » Installed by-pass to reduce pumping increasing energy savings
  - » Installed new control system for Barrington supply
  - » Installed Tourister control valve for Warren-Barrington supply
- Replaced water main on Main St. Water St., Culter St. and Mulberry St., Warren
- Cleaned and lined water mains on Gibson Rd. and Beach Rd., Bristol
- Installed generators at Administration and Operations facilities
- Installed new customer portal to improve customer payment experience
- Updated hydraulic model and linked to GIS

Major Projects Begun in 2017

- Construction of Metacom Pump Station
- Design of Pawtucket Pipeline
- Design of Child St. pipeline under bridge
- Design Ferry Rd main replacement (with the Town of Bristol)
- Application to DEM to remove Upper Kickemuit Dam (dike)
- Installation of new meter system

Bristol County Water Authority



Water Quality Report

2017 Bristol County Water Authority • WATER QUALITY DATA

Bristol County receives all of its water from Providence Water though the East Bay Pipeline.
The table below represents the results of the testing performed by the Bristol County Water Authority (BCWA) and by the Providence Water Supply Board (PWSB).

REGULATED SUBSTANCES Substance (Unit of Measure)	PERIOD OF TESTING - YEAR 2017 SOURCE	MCL* (MRDL)	MCLG* (MRDLG)	HIGHEST AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	PWSB	2	2	0.01	NA	No	Erosion of natural deposits
Chlorine[1] (ppm)	BCWA	(4)	(4)	0.50	.01–1.10	No	Water additive used to control microbes
Fluoride (ppm)	PWSB	4	4	0.86	0.45-.86	No	Erosion of natural deposits; water additive which promotes strong teeth
Haloacetic Acids (HAA5)[1] (ppb)	BCWA	60	NA	21.2	12.8-27.6	No	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes)[1] (ppb)	BCWA	80	NA	73.5	37.4-82.3	No	By-product of drinking water disinfection
Total Coliform Bacteria[2] (% Positive Samples per month)	BCWA	Presence of coliform bacteria in >5% monthly samples	0	2.89%	NA	No	Naturally present in the environment
Total Organic Carbon[3] (TOC) (Removal ratio)	PWSB	TT*	NA	1.62	1.54-1.78	No	Naturally present in environment
Turbidity[4] (NTU)	PWSB	TT*=<1 NTU	NA	0.22	0.02-0.22	No	Soil runoff.
Di (2-ethylhexyl)phthalate[7] (ppb)	PWSB	6	0	1.0	0-1.0	No	Discharge from rubber and chemical factories

Substance (Unit of Measure)	SOURCE	Action Level	MCLG	Amount Detected 90th% TILE	Sites above AL/total sites	Exceedance	TYPICAL SOURCE
Copper[5] (ppm)	BCWA	1.3	1.3	0.014	0	No	Corrosion of household plumbing systems; Erosion of natural deposits. 35 sites were sampled throughout the community.
Copper[5] (ppm)	PWSB	1.3	1.3	0.015	0	No	Corrosion of household plumbing systems; Erosion of natural deposits. 0 sites out of 319 were above 1.3 ppm
Lead[5] (ppb)	BCWA	15	0	2.6	1	No	Corrosion of household plumbing systems; Erosion of natural deposits. 35 sites were sampled throughout the community.
Lead[5] (ppb)	PWSB	15	0	17.0	38	Yes	Corrosion of household plumbing systems; Erosion of natural deposits. 38 sites out of 348 were above 15 ppb.

UNREGULATED SUBSTANCES Substance (Unit of Measure)	SOURCE	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE	
Sodium (ppm)	PWSB	13.9	NA	Erosion of natural deposits; Runoff from road de-icing operations	NO VIOLATION

* See included list of definitions

1. Compliance is based upon the highest locational quarterly running annual average, and the range is based upon the lowest and highest individual measurements.
2. For 2017, the Bristol County Water Authority collected 761 samples for Total Coliform Rule compliance monitoring; there were 2 positive samples for total coliform bacteria. None were positive for E.Coli.
3. In order to comply with the EPA's TOC standard, the removal ratio between the source and finished water must be greater than 1.0. The detected level is the lowest removal ratio per quarter. Range is the lowest and highest removal ratios per month.
4. 0.22 NTU (Nephelometric Turbibity Unit) was the Highest single turbidity measurement recorded. The lowest monthly percentage of samples meeting the turbidity limit was 99.99 %. The average turbidity value for 2017 was < 0.10 NTU
5. Data reflects sampling performed in 2017.

As part of the Enhanced Surface Water Treatment Rule LT2, Providence Water continued its Cryptosporidium monitoring. To date, Cryptosporidium has not been detected in any samples. Radon was not monitored.
DEHP was detected in a single sample of source water. All subsequent test results for this compound sampled in 2017 were negative.

Water Quality Improvement Program

The customers of the Bristol County Water Authority receive all of their water from the Scituate reservoir, one of the highest quality water sources in the nation.

The Authority focuses its efforts on preserving the high quality of the water delivered through the 233 miles of water mains to our customers by annual flushing of the system, monitoring and treatment, connecting "dead ends," replacing or lining water mains, and through numerous maintenance programs.

The BCWA has recently upgraded our chlorine addition and monitoring controls to insure optimum disinfection and minimization of by-products. In conjunction with the construction of a new pump station to expand the high pressure service area, all the piping has been replaced at the site of the elevated tank and the main storage tank and was specifically designed to promote the continuous movement of the water to maintain the excellent water quality.

Lead in drinking water is still a major issue in light of the Flint, MI debacle. Lead does not come from the water supply or the water mains, which are cast iron, ductile iron or concrete. Lead contamination occurs when corrosive water sits in contact for a period of time with household plumbing that contains lead.

Lead services from the main to the house, such as were found in Flint, were generally not installed in the BCWA water system, and have since been removed. Even so, the BCWA is on a constant look-out for any lead on the homeowner's side of the connection when we inspect or change meters. This will be an important factor in our meter replacement program beginning this year.

We are currently investigating galvanized iron services (about 100 in our system), that may have had a lead connector. Even though our test levels for lead are very low or non-detectable, we will remove any lead found in the BCWA system.

However, the homeowner owns a piece of the service line from the property line into the house. This pipe is the owner's responsibility. Should the BCWA determine the service line is not copper or not in good condition upon inspection, the BCWA will recommend replacement.

Even though the lead levels are low, the BCWA strongly recommends flushing your faucets about 3 to 5 minutes (depending on the length of the service line) until the water is cold - then another minute, if the water has sat in the household plumbing for more than 6 hours. This will insure you are getting fresh water from the water main in the street, and flush out any water that may have picked up contaminates in the household plumbing.

It is the mission of the BCWA to provide safe, high quality drinking water to our customers. The BCWA has been very pro-active in taking aggressive steps to protect water quality. In the previous three years the BCWA has instituted numerous distribution system projects and operations and maintenance programs.

The operations staff of the BCWA is dedicated to providing the best quality drinking water to all of our customers, 24 hours a day, 7 days a week.

For more information, please go to bcwari.com or call me at 401-245-2022.

Pamela M. Marchand, P.E.
Executive Director

Important Information About Your Drinking Water

Monitoring Requirements Not Met for Bristol County Water Authority

PWS# RI1647515

The Bristol County Water Authority water system violated a drinking water standard over the past year. Although this was not an emergency, as our customers, you have the right to know what happened and what we did to correct the situation.

We are required to monitor your drinking water and surface water sources for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. Between the dates of 09/01/2017 and 09/30/2017, we did not collect water quality samples in the correct time period, from our untreated raw source water, and therefore cannot be sure of the quality of our raw source water during that time.

What should I do?

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

The table below lists the contaminant(s) we did not properly test for, how often we are supposed to sample for the contaminant(s) and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminents	Required sampling frequency	Number of Samples	When all samples should have been taken	When samples were or will be taken
E. coli, Cryptosporidium, turbidity	1 sample per month within two days of the assigned sampling date	1	between 09/10/2017 09/14/2017	09/19/2017

What happened? Bristol County Water Authority collected and submitted samples outside of the time period allotted by the State of Rhode Island. The sampling program was performed on raw water sources only and the sources are not utilized by the Bristol County Water Authority. Finished water quality throughout the system would be unaffected by the this matter.

What is being done? The Bristol County Water Authority has resolved this issue and will continue to monitor water quality in accordance with the rules and regulations set forth by the State of Rhode Island and the Environmental Protection Agency.

For more information, please contact Pamela Marchand at 401-245-2022

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by Bristol County Water Authority
PWS ID#: RI1647515 Date distributed: June, 2018.

*Definitions

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

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.

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.

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.

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

Removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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).

NA: Not applicable.