A dynamic, high-speed photograph of water splashing, creating a sense of movement and freshness. The water is clear and bright blue, with many droplets and ripples visible. The background is a soft, light blue gradient.

ANNUAL WATER QUALITY REPORT

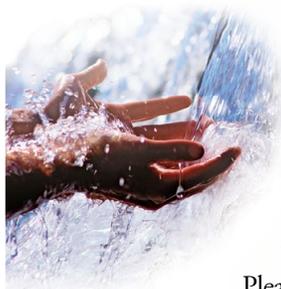
REPORTING YEAR 2019



Presented By
**Bristol Water and
Sewer Department**

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.



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

Important Health Information

Sources of lead in drinking water includes corrosion of household plumbing system and erosion of natural deposits. 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.

Sources of copper in drinking water includes corrosion of household plumbing systems, erosion of natural deposits, and leaching from wood preservatives. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 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.



Source Water Assessment

In 2003, a source water assessment was completed by the Department of Public Health, Drinking Water Division. The updated assessment report can be found on the Department of Public Health website at <https://www.dir.ct.gov/dph/Water/SWAP/Community/CT0170011.pdf>. The assessment found that the Bristol reservoir system has a rating of low and the wellfields have a rating of high. Specifics are available on the website.

Water Conservation Tips

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So, get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you can save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

QUESTIONS?

For more information about this report, or for any questions related to your drinking water, please call our Superintendent Robert Longo at (860) 582-7431.

Chairwoman's Report 2020

This has been another rewarding and challenging year for the Bristol Water and Sewer Department. There were many challenges to unite the two City departments of Water and Sewer because in their creation, the two entities were governed by different regulations and charter sections. With the support of the citizens of Bristol who voted strongly in favor of the Charter Referendum, the formal process is almost complete.

The Water and Sewer merger has resulted in a sharing of equipment and personnel, and each day there are signs of growing efficiencies and cost savings. Commendations to the staff of both departments for their cooperation and hard work.

Much appreciation to our customers for signing up to make electronic payments. Currently, 40 percent of our customers utilize this method to pay their water bills, which helps the department control costs and helps our customers ensure they are never late with a payment. In addition, thanks to our customers who have signed up on our website to receive e-mail notifications. E-mails are sent for scheduled work, including hydrant flushing, water main replacement projects, and scheduled outages. In the event of emergencies such as water main breaks, we also send out e-mail notification as needed. Customers can sign up through our website at www.BristolWaterDept.org.

Over the past year, the Bristol Water and Sewer Department has not only continued our education programs with the Bristol School system, providing tours at our water treatment plant for all fifth-grade students, but also expanded our work to educate our customers on the value of water. "Imagine a Day Without Water," held on October 23, was a National Day dedicated to the Value of Water across the Country. In Bristol, we set up many events, including tours for high-school students, a poster contest for Bristol's grade-three students, and many social media educational posts throughout the day. The third-grade posters were amazing and were judged by State Regulators, Mayor Ellen Zoppo-Sassu, and other water industry representatives at a conference of the Connecticut Section of the American Water Works Association. Everyone in attendance was truly impressed with all the posters received and the amazing artwork by the City's students.

In our continued effort to show the value of water, the department donated new drinking fountains to many City buildings this past year and provided each City employee with a reusable water bottle. These fountains allow for reusable water bottles to be filled with tap water, not only saving costs but also reducing the amount of plastic bottles that end up in landfills each year. To date, the fountains have prevented thousands of plastic water bottles from making it to landfills. We would like to thank all of the City's employees for helping us protect the environment.

The Bristol Water and Sewer Board of Commissioners consists of Commissioners Robert Badal, Ron Suarez, Kathy Ferrier, and Sean Dunn who continue to hope the citizens of Bristol, our customers, stay safe and be assured that our water is the best!



Source Water Protection

The Bristol Water Department is always working to protect our water sources. Each year, our watershed division inspects all septic systems in the vicinity of our reservoirs to assure that they are not failing, which could cause contamination to our water sources. The Bristol Water Department also constantly monitors the sanitary radius around all wells and works with land use officials to review any new construction in the source water areas as required by the Aquifer Protection Act to assure that future contamination does not occur.

Where Does My Water Come From?

The Bristol Water and Sewer Department has supplied the City of Bristol with high-quality drinking water since the early 1900s. The Bristol Water Department has accomplished this by making major investments in the supply, treatment, and distribution facilities needed to operate a sophisticated water system.

The Bristol Watershed area is composed of six contributing reservoir areas. Reservoirs in the towns of Burlington, Harwinton, Plymouth, and Bristol are channeled through the Poland River to transmission mains from these to the water treatment plant, where it is treated and sent into the distribution system and storage facilities. Along with the reservoir system, we have five gravel-packed wells, which provide water to the distribution system Low Service Area and an interconnection with the City of New Britain Water Department to supplement the Stevens Street area. In 2019, the Bristol Water Department produced a total of 1 billion 907 million gallons of water, or approximately 5.23 million gallons per day. On July 15, 2019, we produced 8,733,140 gallons of water, which was the highest production day of the year.



Monitoring and Reporting Violation

Our public water system recently violated drinking water monitoring and/or reporting requirements. As a supplier of public drinking water, we are required to monitor the water quality of our water supply to ensure that it meets the current drinking water standards. Failure to conduct monitoring and/or report results of such monitoring to the State Department of Public Health Drinking Water Section constitutes a violation. Although this incident was not an emergency, as our customers, you have the right to know what happened and what we did to correct this situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. We did not complete the monitoring or did not report the results for the requirement(s) listed below:

Total Haloacetic Acids (WSF ID: 00600; Monitoring Period: October 1, 2019 – December 31, 2019)

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

About This Violation

Between October and December of 2019, one of the independent laboratories we use to analyze our samples had an issue with the surrogate in the bottles the laboratory supplied Bristol Water for us to collect water samples for Total Haloacetic Acids. Samples were required to be collected in November 2019 per Public health Code. When the issue was found, samples could not be collected in the Department of Public Health's required time frame from October to December. New samples were collected in December of 2019, and all results were in compliance. There was no concern over the water during this time; however, the Department of Public Health issued a "Monitoring and/or Reporting Notice of Violation" because the new results were not submitted in their time frame, so we must provide notification to all of our customers through this report.

We would like to assure all of our customers that this "Monitoring and Reporting Violation" had no impact on the water supplied to your homes and were simply clerical in nature. We do not believe that missing this monitoring requirement had any impact on public health and safety. We have already taken the steps to ensure that adequate monitoring and reporting will be performed in the future so that this oversight will not be repeated. We expect to return to compliance or resolve the situation by July 1, 2020.

If any of our customers has any questions concerning this Violation, we ask that you contact Superintendent Robert Longo at our office at (860) 582-7431 or by mail at 119 Riverside Avenue, Bristol, CT 06010.

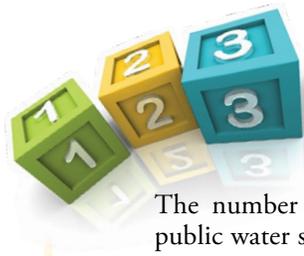
You may also contact the Department of Public Health Drinking Water Section at (860) 509-7333.

Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Maintaining optimal water chemistry;
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

So, the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.



BY THE NUMBERS

The number of gallons of water produced daily by public water systems in the U.S.

34
BILLION

1
MILLION

The number of miles of drinking water distribution mains in the U.S.

The amount of money spent annually on maintaining the public water infrastructure in the U.S.

135
BILLION

300
MILLION

The number of Americans who receive water from a public water system.

The age in years of the world's oldest water found in a mine at a depth of nearly two miles.

2
BILLION

151
THOUSAND

The number of active public water systems in the U.S.

The number of highly trained and licensed water professionals serving in the U.S.

199
THOUSAND

93

The number of federally regulated contaminants tested for in drinking water.

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.



Community Participation

You are invited to attend our Water and Sewer Board Meetings. We meet the third Tuesday of each month, beginning at 6:00 p.m. for the Sewer Commission and 6:30 p.m. for the Water Commission, at the Water Treatment Plant, 1080 Terryville Avenue, Bristol, CT. We are also now on Facebook! By liking us on Facebook or Signing Up for Email Notifications on our website at www.bristolwaterdept.org, you can get up-to-date information on Hydrant Flushing, Water Main Break, Special Meetings, and more.

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.

We remain vigilant in delivering the best-quality drinking water

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 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.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. And, the water we deliver must meet specific health standards. Here, we only show 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 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)	2019	2	2	0.018	0.0183–0.0188	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2019	[4]	[4]	1.58	0.1–1.58	No	Water additive used to control microbes
Fluoride (ppm)	2019	4	4	0.73	0.55–0.85	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2019	60	NA	20.30	11–42	No	By-product of drinking water disinfection
Nitrate (ppm)	2019	10	10	0.70	0.135–1.33	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] ¹ (ppb)	2019	80	NA	45	20–64	No	By-product of drinking water disinfection
Turbidity ² (NTU)	2019	TT	NA	2.01	0.05–2.01	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2019	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff

Tap Water Samples Collected for Copper and Lead 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
Copper (ppm)	2017	1.3	1.3	0.0728	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2017	15	0	3.3	0/30	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
Chloride (ppm)	2019	250	NA	22.2	19.1–22.2	No	Runoff/leaching from natural deposits

¹MCL is based on a Quarterly Average.

²Turbidity 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.

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 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.

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.

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).

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.