

# Annual Drinking Water Quality Report

## Burlington City Water Department

For the Year 2019, Results from the Year 2018

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources.

**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/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).**

The Burlington City Water Department routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2018.

TEST RESULTS						
Contaminant	Viola-tion Y/N	Level Detected	Unit Measur-ement	MCLG	MCL	Likely Source of Contamination
<b>Microbiological Contaminants:</b>						
Turbidity Test results Yr. 2018	N	Highest reading= 0.20 Percentage of samples <0.3 NTU = 100%	NTU	N/A	TT % of samples <0.3	Soil runoff
Total Organic Carbon Test results Yr. 2018	N	Running Annual Average = 1.25 Monthly Average Range = 0.95 – 1.54	ppm	N/A	TT 35 – 45 % of removal	Naturally present in the environment
<b>Inorganic Contaminants:</b>						
Barium Test results Yr. 2018	N	0.03	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium Test results Yr. 2018	N	0.6	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper Test results 1 <sup>st</sup> ½ of 2018 Result at 90 <sup>th</sup> Percentile	N	0.02 No samples exceeded the action level	ppm	1.3	AL= 1.3	Corrosion of household plumbing systems; erosion of natural deposits
Copper Test results 2 <sup>nd</sup> ½ of 2018 Result at 90 <sup>th</sup> Percentile	N	0.03 No samples exceeded the action level	ppm	1.3	AL= 1.3	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride Test results Yr. 2018	N	0.05	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead Test results 1 <sup>st</sup> ½ of 2018 Result at 90 <sup>th</sup> Percentile	N	2 2 samples out of 44 exceeded the action level	ppb	0	AL= 15	Corrosion of household plumbing systems, erosion of natural deposits
Lead Test results 2 <sup>nd</sup> ½ of 2018 Result at 90 <sup>th</sup> Percentile	N	2 2 samples out of 47 exceeded the action level	ppb	0	AL= 15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) Test results Yr. 2018	N	1.13	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nickel Test results Yr. 2018	N	1	ppb	N/A	N/A	Erosion of natural deposits
<b>Disinfection Byproducts:</b>						
TTHM Total Trihalomethanes Test results Yr. 2018	Y	Range = 46 - 132 Highest LRAA = 90	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids Test results Yr. 2018	N	Range = 28 - 77 Highest LRAA = 51	ppb	N/A	60	By-product of drinking water disinfection

**For Total Halocetic Acids (HAA5s) and Total Trihalomethanes (TTHMs), which are disinfection byproducts, compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four completed quarters of monitoring results.**

We exceeded the LRAA for TTHMs and HAA5s a number of times in 2018, of which you were notified by Public Notice.

Regulated Disinfectants	Level Detected	MRDL	MRDLG
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Chlorine Test results Yr. 2018	Average = 0.6 ppm	4.0 ppm	4.0 ppm
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Our water is drawn from the Delaware River. The New Jersey Department of Environmental Protection (NJDEP) has prepared Source Water Assessment Reports and Summaries for all public water systems. Further information on the Source Water Assessment Program can be obtained by logging onto NJDEP's source water assessment web site at [www.state.nj.us/dep/swap](http://www.state.nj.us/dep/swap) or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact your public water system at 609-386-0307. Burlington City's Source Water Assessment Summary is included. The City diverts all of its drinking water supply from the Delaware River

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos and synthetic organic chemicals. Our system received a monitoring waiver for synthetic organic chemicals.

**Lead:** 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 Burlington City Water Department 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 second to 2 minutes before using water for drinking and 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 constantly monitor the water supply for various contaminants. We have detected cryptosporidium in the Delaware River, our water source. We detected this contaminant in four out of ten samples tested. We believe it is important for you to know that cryptosporidium may cause serious illness in 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. These people should seek advice from their health care providers.

We employ an advanced treatment process designed to remove cryptosporidium from our finished water. Tests of our finished water do not indicate the presence of cryptosporidium. We are committed to maintaining expertise in cryptosporidium monitoring and filtration, and to effectively employ the best available technologies necessary to deliver safe drinking water.

#### **DEFINITIONS:**

In the "Test Results" table you may find some terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the contaminant is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in water.

Turbidity - is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Maximum Contaminant Level - The "Maximum Allowed" (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 -The "Goal" (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 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.

Maximum Residual Disinfectant 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 contamination.

#### **Drinking Water Sources:**

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.

Contaminants that may be present in the source water include:

- 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 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 septic systems, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. 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 contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

If you have questions about this report or concerning your water utility, please call Joseph Cantwell – Water Superintendent at 609-386-0307. If you want to learn more, please attend any of our regularly scheduled City Council meetings at the City Hall, 525 High Street. Meetings are held on the first and third Tuesdays of each month at 7:30 p.m. Thank you.

**The Burlington City Water Department is following guidelines from the New Jersey Department of Environmental Protection's Self-Assessment of Critical Asset Infrastructure (Plant Security) in response to the September 11, 2001 Terrorist attacks.**

**Burlington City Water Department- PWSID # NJ0305001**

Burlington City Water Department is a public community water system consisting of 1 surface water intake.

This system’s source water comes from the Delaware River.

This system can purchase water from the following water system: Burlington Township Water Department.

**Susceptibility Ratings for Burlington City Water Department Source**

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system’s source water assessment report.

The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes’ susceptibility to radionuclides was not determined and they all received a low rating.

**If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water.** The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

Sources	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors		
	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Surface water intakes - 1	1			1				1			1			1				1			1	1		

- Pathogens:** Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.
- Nutrients:** Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.
- Volatile Organic Compounds:** Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.
- Pesticides:** Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.
- Inorganics:** Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.
- Radionuclides:** Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.
- Radon:** Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.
- Disinfection Byproduct Precursors:** A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.