Introduction

The City of Bowling Green Water Treatment Plant has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included in this report is general health information, water quality test results, how to participate in decisions concerning your drinking water, and water system contacts. The City of Bowling Green will notify you immediately if there is any reason for concern about the water.

The City of Bowling Green has a current unconditional license to operate our Water System.

Source of Bowling Green's Water

The City of Bowling Green draws surface water from the Maumee River when the river supply is of high quality water. The water is stored in our 170 million gallon above ground reservoir which provides water to the Water Treatment Plant and ultimately the consumer. The Water Treatment Plant utilizes two independent treatment systems; a multi-barrier Conventional Treatment process and an Integrated Membrane Treatment process. The water from the two treatment systems are blended for the finished water delivered to consumers. The Water Treatment Plant is operated and staffed 24 hours per day to ensure continuous monitoring of water quality and that we meet or exceed all Federal and State requirements.

Water Treatment Plant Improvements

Two significant improvements were recently completed at the Bowling Green Water Treatment Plant. A second reservoir pumping station was placed into service which allows the City to maximize plant production during high demand periods. Also, the six Rapid Sand Filters were upgraded by completely rebuilding the filter bottoms and adding air to the backwash cycle. An upcoming project to be completed in 2020 will be the addition of two Microfiltration trains which will improve the plants ability to utilize the Reverse Osmosis Membranes.

Source Water Assessment

The City of Bowling Green public water system uses surface water drawn from an intake on the Maumee River. For the purposes of source water assessments, in Ohio, all surface waters are considered to be susceptible to contamination. By their nature, surface waters are readily accessible and can be contaminated by chemicals and pathogens which may rapidly arrive at the public drinking water intake with little warning or no time to prepare. The City of Bowling Green's drinking water source protection area contains potential contaminant sources such as runoff from agriculture, industrial storm water, gas stations, home construction, feed lots, waste water treatment discharges, airports, cemeteries, auto repair shops, landfills, above ground storage tanks, railroads, roadways, and oil and gas wells.

The City of Bowling Green's public water system treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be decreased by implementing measures to protect the Maumee River.

Sources of Contaminants

The source of drinking water and bottled water includes rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive materials, and can pick up substances from the presence of animals or human activity.

Contaminants that may be present in source water include: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agriculture livestock operations and wildlife; (B) 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; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses; (D) Organic chemicals 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; (E) 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, USEPA 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. It's important to remember that the presence of certain contaminants does not necessarily indicate that the water poses a health risk.

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.

Public Involvement

The City of Bowling Green encourages public interest and participation in our community's decisions affecting drinking water. Public participation and comments are welcome at Board of Public Utilities meetings held regularly at 5:00 PM on the second and fourth Monday of each month at the City Administrative Services Building located at 304 North Church Street in the Council Chambers.

For more information on your drinking water contact Mike Fields, Water Supply Superintendent at 419.823.1647 or by email at mfields@bgohio.org

Special Precautions

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. At risk individuals 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.

Regulated Contaminant Monitoring Detections

The following table shows the results of our water quality analysis. Data presented in this table is from the most recent monitoring in compliance with regulations. Every regulated contaminant detected in the water supplied to our customers is listed here. This table does not show the numerous other contaminants we tested for and did not detect in our water.

Contaminant (Units)	Violation	Sample Year	MCLG	MCL	Detected Level	Range of Detection	Likely Source of Contamination
Microbiological Contaminants							
Turbidity (NTU)	No	2018	NA	TT=0.3	0.16	.06-0.16	Soil Runoff
Turbidity (% meeting standard)	No	2018	NA	TT	100%	100%	
Total Organic Carbon (TOC)	No	2018	NA	TT	2.8	2.8-3.4	Naturally present in the Environment
Inorganic Contaminants							
Barium (ppm)	No	2018	2	2	0.012	NA	Discharges from metal refineries & drilling wastes; Erosion of natural deposits
Copper (ppm)	No	2018	1.3	AL=1.3	0.037	NA	Corrosion of household plumbing systems
	0 out of 31 samples were found to have copper levels in excess of the copper AL of 1.3 ppm.						
Fluoride (ppm)	No	2018	4	4	1.05	0.87-1.28	Water additive which promotes strong teeth; Erosion of natural deposits
Lead (ppb)	No	2018	0	AL=15	<4	NA	Corrosion of household plumbing systems
	0 out of 31 samples were found to have lead levels in excess of the lead AL of 15 ppb.						
Nitrate (ppm)	No	2018	10	10	5.9	0.4-5.9	Runoff from fertilizer use; sewage; erosion of natural deposits
Volatile Organic Contaminants							
Total Trihalomethanes (TTHM) (ppb)	No	2018	NA	80	51.0	27.7-77.8	By-product of drinking water chlorination
Bromodichlormethane (ppm)	No	2018	0	NR	18.9	7.3-18.9	EPA regulations require us to monitor for these contaminants while EPA considers setting a limit on them.
Bromoform (ppb)	No	2018	0	NR	5.6	ND-5.6	
Chloroform (ppb)	No	2018	0	NR	41.7	15.4-41.7	
Dibromochloromethane (ppb)	No	2018	0	NR	15.7	3.9-15.7	
Haloacetic Acids (HAA5) (ppb)	No	2018	NA	60	16.8	4.0-22.5	By-product of drinking water chlorination
Dichloroacetic Acid (ppb)	No	2018	NA	NR	12.1	ND-12.1	
Trichloroacetic Acid (ppb)	No	2018	NA	NR	5.8	2.0-5.8	
Dibromoacetic Acid (ppb)	No	2018	NA	NR	5.2	ND-5.2	
Residual Disinfectants							
Total Chlorine (ppm)	No	2018	MRDLG 4	MRDL 4	1.6	1.2-1.6	Water additive used to control microbes

Turbidity is a measure of the cloudiness of the water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1 NTU at any time. As reported above, the Bowling Green WTP highest recorded turbidity result for 2018 was 0.16 NTU and lowest monthly percentage of samples meeting turbidity limits was 100%.

The value reported in the table under "Detected Level" for Total Organic Carbon (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 one indicates that the water system is in compliance with TOC removal requirements. A value of less than one indicates a violation of TOC removal requirements.

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 City of Bowling Green 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 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead levels in your home's 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 800-426-4791or at http://www.epa.gov/safewater/lead.

Nitrates in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

The City of Bowling Green Water Treatment Plant monitored for Cryptosporidium in the source water during 2018. Cryptosporidium was detected in 1 sample of 9 collected from the raw water prior to the treatment process. Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Monitoring of source water indicates the presence of these organisms. Current test methods do not enable 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. However, immune-compromised people are at a greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor 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.

Unregulated Contaminant Monitoring Rule Detections

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In 2018 The City of Bowling Green Water Treatment Plant participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR 4). The following table shows the UCMR 4 detected contaminants. For a copy of the results please call Mike Fields at 419.823.1647.

UCMR 4 Contaminants (Units)	Sample Year	Average Detected Level	Range of Detections
Bromide (ppb)	2018	41.7	38.7-43.7
Haloacetic Acids (HAA5) (ppb)	2018	13.2	8.1-18.7
Haloacetic Acids (HAA6Br) (ppb)	2018	7.4	6.0-8.5
Haloacetic Acids (HAA9) (ppb)	2018	20.1	13.2-29.5
Total Organic Carbon (TOC) (ppb)	2018	6453	6360-6621

Definitions of Terms in the CCR

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

Maximum Contaminant Level (MCL) – 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 (MCLG) – 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 residual disinfectant level allowed.

Maximum Residual Disinfectant Level Goal (MRDLG) – The level of residual disinfectant below which there is no known or expected risk to health.

Nephelometric Turbidity Unit (NTU) – A unit of measure to determine the concentration of particles in the water that affect clarity.

Not Regulated (NR) – Not regulated by the EPA

Not Available (NA) – Not available from the EPA

Parts per Million (ppm) – Units of measure for concentration of contaminant. A part per million corresponds to one second in approximately 11.5 days.

Parts per Billion (ppb) – Units of measure for concentration of contaminant. A part per billion corresponds to one second in approximately 31.7 years.

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

"<" symbol – A symbol which means less than. A result of <5 means that the lowest level detected was 5 and the contaminant in that sample was not detected.