Northwestern Water & Sewer District – Portage
Drinking Water Consumer Confidence Report For 2016

In 2016 Northwestern Water & Sewer District – Weston had an unconditioned license to operate our water system. Together, the City of Bowling Green and the Northwestern Water & Sewer District have prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts.

Source Water Information

In November 2016, two of Northwestern Water & Sewer District's public water systems were combined into one. The Village of Bloomdale system was connected to the Portage system. This connection changed the Village of Bloomdale's source water. Prior to November 2016, the Village of Bloomdale had received its drinking water from ground water, drawn from five drilled wells. The water was taken from the primary bedrock aquifer in Bloom Township in southern Wood County. In November the treatment provider changed to the City of Bowling Green.

The City of Bowling Green draws surface water from the Maumee River during periods when the river supply is of high water quality. The water is then stored in the City's 170 million gallon above-ground reservoir to be used at times when the river water quality is less desirable. The reservoir storage provides a means to supply consistently high quality water to the consumer. The water plant's operators work around the clock, 7 days a week to assure the quality of your drinking water meets or exceeds all Federal and State requirements. Your drinking water goes through a continuously monitored, 10-step multi-barrier treatment process, which takes several hours to complete.

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, wastewater 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 quality impacts can be further decreased by implementing measures to protect the Maumee River.
More detailed information is provided in the City of Bowling Green's Drinking Water Source Assessment report, which can be obtained by calling 419-878-6986.

What are sources of contamination to drinking water?

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 source water include: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural 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 chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban Strom 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. FDA 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Federal Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

Who needs to take 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 infection. 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

About your drinking water.

The EPA requires regular sampling to ensure drinking water safety.

- The Northwestern Water & Sewer District – Bloomdale conducted sampling for inorganics; nitrates; volatile organics; bacteria and disinfection byproducts during 2016. Samples were collected for a total of 87 different contaminants most of which were not detected in the Northwestern Water & Sewer District – Bloomdale water supply.
- The Northwestern Water & Sewer District – Portage conducted sampling for bacteria and disinfection byproducts during 2016. Samples were collected for a total of 13 different contaminants most of which were not detected in the Northwestern Water & Sewer District – Portage water supply.
- The City of Bowling Green conducted sampling for inorganics; nitrates; synthetic organics and volatile organics during 2016. Samples were collected for a total of 80 different contaminants most of which were not detected in the City of Bowling Green water supply.

The Ohio EPA requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old.

Listed below is information on those contaminants that were found in the NWWSD – Bloomdale, NWWSD-Portage, and the City of Bowling Green drinking water.

TABLE OF DETECTED CONTAMINANTS – NWWSD – Bloomdale

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Residual Disinfectants							
Total Chlorine (ppm)	4	4	1.23	0.32 – 1.45	NO	2016	Water additive used to control microbes.
Disinfection Byproducts							
Total Trihalomethanes TTHMs (ppb)	0	80	39	28.9 – 39	NO	2016	By-product of drinking water chlorination.
Haloacetic Acids HAA5 (ppb)	0	60	5.6	4.8 – 5.6	NO	2016	
Lead and Copper							
Contaminants (Units)	**Action Level (AL)**	**Individual Results over the AL**		**90% of test levels were less than**	**Violation**	**Sample Year**	**Typical Source of Contaminants**
Lead (ppb)	15 ppb	0		0 ppb	NO	2015	Corrosion of household plumbing systems.
	Zero out of 10 samples was found to have lead levels in excess of the lead action level of 15 ppb.						
Copper (ppm)	1.3 ppm	0		0.134 ppm	NO	2015	Corrosion of household plumbing systems.
	Zero out of 10 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.						

TABLE OF DETECTED CONTAMINANTS – NWWSD – Portage

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Residual Disinfectants							
Total Chlorine (ppm)	4	4	1.21	0.85 – 1.34	NO	2016	Water additive used to control microbes.
Disinfection Byproducts							
Total Trihalomethanes TTHMs (ppb)	0	80	55.3	33.7 – 85	NO	2016	By-product of drinking water chlorination.
Haloacetic Acids HAA5 (ppb)	0	60	19.7	8.1 – 20.6	NO	2016	
Lead and Copper							
Contaminants (Units)	**Action Level (AL)**	**Individual Results over the AL**		**90% of test levels were less than**	**Violation**	**Sample Year**	**Typical Source of Contaminants**
Lead (ppb)	15 ppb	2		0.0114 ppb	NO	2015	Corrosion of household plumbing systems.
	Two out of 22 samples was found to have lead levels in excess of the lead action level of 15 ppb.						

Copper (ppm)	1.3 ppm	0	0.0696 ppm	NO	2015	Corrosion of household plumbing systems.
	Zero out of 22 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.					

TABLE OF DETECTED CONTAMINANTS – City of Bowling Green

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Microbiological Contaminants							
Turbidity (NTU)	NA	TT	0.16	0.05 – 0.16	NO	2016	Soil runoff.
Turbidity (% meeting standard)	NA	TT	100%	100%	NO	2016	
Total Organic Carbon	NA	TT	2.78	2.78 – 2.89	NO	2016	Naturally present in the environment.
Inorganic Contaminants							
Barium (ppm)	2	2	0.013	NA	NO	2016	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium (ppb)	100	100	1.6	NA	NO	2013	Discharge from steel and pulp mills; Erosion of natural deposits.
Fluoride (ppm)	4	4	1.23	0.79 – 1.23	NO	2016	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (ppm)	10	10	6.91	ND – 6.91	NO	2016	Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits.
Synthetic Organic Contaminants							
Atrizine (ppb)	3	3	0.82	ND – 0.82	NO	2016	Runoff from herbicide used on row crops.

Turbidity

Turbidity is a measure of the cloudiness of 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 5 NTU at any time. As reported above, the City of Bowling Green's highest recorded turbidity result for 2016 was 0.16 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.

Nitrate Educational Information

Nitrate in drinking water at levels above 10 ppm is a health risk for infants 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.

Lead Educational Information

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. Northwestern Water & Sewer District – Bloomdale and Portage 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 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 800-426-4791or at http://www.epa.gov/safewater/lead.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

Revised Total Coliform Rule (RTCR) Information

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All water systems were required to comply with the Total Coliform Rule from 1989 to March 31, 2016, and begin compliance with a new rule, the Revised Total Coliform Rule, on April 1, 2016. The new rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of total coliform bacteria, which includes E. coli bacteria. The U.S. EPA anticipates greater public health protection under the new rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, under the new rule there is no longer a maximum contaminant level violation for multiple total coliform detections. Instead, the new rule requires water systems that exceed a specified frequency of total coliform occurrences to conduct an assessment to determine if any significant deficiencies exist. If found, these must be corrected by the PWS.

How do I participate in decisions concerning my drinking water?

Public participation and comment are encouraged at regular meetings of the Board of Trustees which meets at 7:30 am every 2nd and 4th Thursday of each month. Meetings are held at the District's Operations facility located at 12560 Middleton Pike, Bowling Green, OH 43402. For more information on your drinking water contact Customer Service at 419-354-9090.

Definitions of some terms contained within this report.

- 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 Contaminant level (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- 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 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.
- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
- Microcystins: Liver toxins produced by a number of cyanobacteria. Total microcystins are the sum of all the variants/congeners (forms) of the cyanotoxin microcystin.
- Cyanobacteria: Photosynthesizing bacteria, also called blue-green algae, which naturally occur in marine and freshwater ecosystems, and may produce cyanotoxins, which at sufficiently high concentrations can pose a risk to public health.
- Cyanotoxin: Toxin produced by cyanobacteria. These toxins include liver toxins, nerve toxins, and skin toxins. Also sometimes referred to as "algal toxin".
- Parts per Million (ppm) or Milligrams per Liter (mg/L) are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.
- Parts per Billion (ppb) or Micrograms per Liter (µg/L) are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.
- The "<" symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.