

Northwestern Water & Sewer District - Bowling Green Road West Drinking Water Consumer Confidence Report For 2015

In 2015 Northwestern Water & Sewer District – Bowling Green Road West had an unconditioned license to operate our water system. *This institution is an equal opportunity provider.*

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

The City of Bowling Green receives its drinking water from 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 that takes several hours to complete.

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 - Bowling Green Road West conducted sampling for bacteria and disinfection byproducts during 2015. Samples were collected for a total of 13 different contaminants most of which were not detected in the Northwestern Water & Sewer District - Bowling Green Road West 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.

The EPA requires regular sampling to ensure drinking water safety. The City of Bowling Green conducted sampling for bacteria; inorganic; synthetic organic; volatile organic; disinfection byproducts; lead and copper during 2015. Samples were collected for a total of 56 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.

Monitoring & Reporting Violations & Enforcement Actions

September 10, 2015 through October 6, 2015 the treatment provider, the City of Bowling Green, failed to monitor continuously the filtrate turbidity of the microfiltration membrane in accordance with rules 3745-81-73(C) and 3745-91-08(G)(1). On 9/10/15 staff was performing calibration on the Microfiltration Membrane Turbidity In-line Meters as required by the OEPA. After the calibration was performed, the operator failed to return the meter to active mode, which caused the meter to stay on hold position and record false turbidity readings in the SCADA data records.

To correct this problem the treatment plant implemented a manual 8-hour shift recording on paper for Pall Rack 1 & Rack 2 meter readings to alert operators of problems in the future. All fully chemical certified operators have been informed of their responsibilities as related to these turbidity meters. Engineering controls are being pursued within our new SCADA system to prevent this in the future.

This was not an emergency. Plant tap turbidity is also measured at the entry point of the water distribution system in which all effluent turbidities met all OEPA standards. If it had been an emergency, you would have been notified immediately. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Listed below is information on those contaminants that were found in the Northwestern Water & Sewer District - Bowling Green Road West drinking water.

TABLE OF DETECTED CONTAMINANTS: Northwestern Water & Sewer District - Bowling Green Road West

| Contaminants (Units) | MCLG | MCL | Level Found | Range of Detections | Violation | Sample Year | Typical Source of Contaminants |
|-----------------------------------|---|---------|--------------------------------------|---------------------|-----------|-------------|--|
| Inorganic Contaminants | | | | | | | |
| Lead (ppb) | 0 | AL=15 | 90 th Percentile 0.0 | NA | NO | 2013 | Corrosion of household plumbing systems. |
| | Zero out of 5 samples were found to have lead levels in excess of the lead action level of 15 ppb. | | | | | | |
| Copper (ppm) | 0 | AL=1.3 | 90 th Percentile 0.093 | NA | NO | 2013 | Corrosion of household plumbing systems. |
| | Zero out of 5 samples were found to have copper levels in excess of the copper action level of 1.3 ppm. | | | | | | |
| Residual Disinfectants | | | | | | | |
| Total Chlorine (ppm) | MRDL=4 | MRDLG=4 | 1.26 | 0.91 – 1.43 | NO | 2015 | Water additive used to control microbes. |
| Contaminants (Units) | | | | | | | |
| Disinfection Byproducts | | | | | | | |
| Total Trihalomethanes TTHMs (ppb) | 0 | 80 | 46 | 46.2 – 46.2 | NO | 2015 | By-product of drinking water chlorination. |
| Haloacetic Acids HAA5 (ppb) | 0 | 60 | 16 | 15.6 – 15.6 | NO | 2015 | By-product of drinking water chlorination. |

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 | 2015 | Soil runoff. |
| Turbidity (% meeting standard) | NA | TT | 100% | 100% | NO | 2015 | |
| Total Organic Carbon | NA | TT | 2.5 | 2.50 – 2.9 | NO | 2015 | Naturally present in the environment. |
| Inorganic Contaminants | | | | | | | |
| Barium (ppm) | 2 | 2 | 0.016 | NA | NO | 2015 | 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 | 1.22 | 0.80 – 1.22 | NO | 2015 | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Nitrate (ppm) | 10 | 10 | 4.73 | 0.20 – 4.73 | NO | 2015 | Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits. |
| Unregulated Contaminants | | | | | | | |
| 1, 4-Dioxane | NA | NA | 0.09 | NA | NO | 2013 | Presently, there are no MCL or Action Levels for these contaminants. Unregulated contaminants monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. |
| Bromochloro-methane (ppb) | NA | NA | 0.09 | NA | NO | 2013 | |
| Chlorate (ppb) | NA | NA | 380 | NA | NO | 2013 | |
| Chromium Hexavalent (ppb) | NA | NA | 1.5 | NA | NO | 2013 | |
| Molybdenum (ppb) | NA | NA | 5.4 | NA | NO | 2013 | |
| Strontium (ppb) | NA | NA | 620 | NA | NO | 2013 | |

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 2015 was 0.16 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.

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 Bowling Green Road West 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 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

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

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.

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 ($\mu\text{g/L}$) are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

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.

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.

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.

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.