

Educational Information

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. Water may also 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 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. 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 Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

City of Urbana Consumer Confidence Report



Annual Water Quality Report City of Urbana 2017

For more information about your drinking water and for opportunities to get involved, please contact Joe Sampson Water Superintendent at (652-4335). Also you are welcome and encouraged to attend City of Urbana Council meetings on the 1st and 3rd Tuesday of each month at 6pm.

City of Urbana Annual Water Quality Report PWSID # 1101212

The City of Urbana Water Division provides water to the community that meets all requirements of the State of Ohio and the USEPA. We take our mission very seriously. As shown in this annual report covering 2017 the water we delivered complies with the regulations of the State of Ohio and the U.S. Environmental Protection Agency. We have a current, unconditional license to operate our water system. In 2017 the City of Urbana pumped 694 million gallons of water.

The City of Urbana draws water from 2 well fields, with a total of 5 operating wells, located in the Mad River Buried Valley Aquifer, and maintains 2 treatment facilities.

Ohio EPA completed a study of the City of Urbana's source of drinking water, to identify potential contaminant sources and provide guidance on protecting the drinking water sources. According to this study, the aquifer that supplies water to the City of Urbana's SR 29 West and Old Troy Pike Well fields have a high susceptibility to contamination. This determination is based on the following:

- Lacks protective layer of clay overlying the aquifer
- Shallow depth (less than 30 feet below ground surface) of the aquifer
- Presence of significant potential contaminant sources in the protection area, and the presence of manmade contaminants in treated water. Nitrate, tetrachloroethene, and trichloroethene were detected in the treated and raw water at levels of concern since 1991. This indicates a manmade influence.

The risk of future contamination can be minimized by implementing appropriate protective measures. More information about the source water assessment or what consumers can do to help protect the aquifer is available by calling Joe Sampson Water Superintendent at 652-4335 or joe.sampson@ci.urbana.oh.us

Urbana disinfects your water using sodium hypochlorite (chlorine) to remove pathogens that may come from the source water. Additionally, a granular activated carbon system is used to remove possible Volatile Organic Contaminants. Iron and Manganese are removed using Green Sand Pressure Filters. Urbana does not soften the treated water.

The City of Urbana water system consists of approximately 87 miles of water main ranging in size from 1-inch to 16-inches in diameter. Many of the mains are greater than 100 years old and are structurally weak. There are many repairs made annually to patch breaks in these lines. This practice buys a little time, but the water pressure will find the next weakest point in the line and again cause failure in the pipe walls. There are less main breaks now, compared to the past, due to the replacement of several old mains.

The City is faced with a distribution system that has old pipes that each season of the ground freezing and thawing are breaking at increasingly higher rates. Some areas have undersized pipes which need to supply fire flow rates to fire hydrants, which should be replaced with larger pipes to ensure adequate pressures.

The City has initiated comprehensive multiyear multiphase water line replacement projects. The First Phase included E. Court, E. Church and E. Ward Streets between Main St. and Jefferson Ave., as well as, Amherst and Wooddale Drives. This Project was completed in 2015.

The Second Phase for water main replacement is in planning and review for 2018 with implementation in 2020 and may include Washington Ave., Grimes Circle and Grimes Ave., N Main, Scioto St. and possibly others depending on funding.

Total Hardness varies, but stays consistently between 315 to 350 mg/l or around 20.0 grains pH is 7.3

Water softeners' should be set no higher than 16 grains to minimize exposure to lead leeching from the home's plumbing.

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.

City of Urbana's 2017 Monitoring Results for Contaminants in Drinking Water

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 at risk. These people should seek advice about drinking water from their health care provider. EPA/CDC guidelines on the appropriate means to lessen the risk of infection by

Contaminants	Units	MCLG	MCL	Max Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Dibromoacetic Acid	ppb	0	n/a	1.1	<1.0 - 1.1	No	2016	Component of Haloacetic Acids
Dichloroacetic Acid	ppb	0	n/a	1.97	1.87 - 1.97	No	2017	Component of Haloacetic Acids
Monochloroacetic Acid	ppb	0	n/a	< 2.0	< 2.0	No	2016	Component of Haloacetic Acids
Trichloroacetic Acid	ppb	0	n/a	1	< 1.0 - 1.0	No	2016	Component of Haloacetic Acids
Monobromoacetic Acid	ppb	0	n/a	< 1.0	< 1.0	No	2016	Component of Haloacetic Acids
Total HAA	ppb	0	60	< 6.0	< 6.0	No	2017	By-product of drinking water chlorination
Chloroform	ppb	0	n/a	16.2	0.57 - 16.2	No	2017	Component of Total Trihalomethan
Bromoform	ppb	0	n/a	1	1.0 - 0.6	No	2017	Component of Total Trihalomethan
Bromodichloromethane	ppb	0	n/a	6.03	2.91 - 6.03	No	2017	Component of Total Trihalomethan
Dibromochloromethane	ppb	0	n/a	3.17	1.78 - 3.17	No	2017	Component of Total Trihalomethan
Trihalomethanes, Total	ppb	0	80	26.4	8.68 - 26.4	No	2017	By-product of drinking water chlorination
Contaminants Radiological	Units	MCLG	MCL	Max Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Alpha, Total	pCi/L	0	15	< 3.00	< 3.00	No	2016	Radiological Decay
Radium 228	pCi/L	0	5	< 1.0	< 1.0	No	2016	Radiological Decay

Lead and Copper								
	AL	Individual Results over the AL		90% Test Level	Range Found	Violation	Year Sampled	
Copper	1.3 ppm	0		0.138	<0.05-0.275	No	2015	Corrosion of household plumbing systems; Erosion of natural deposits
0 out of 30 samples were found to have copper levels in excess of the AL of 1.3 ppm								
Lead	15 ppb	16.7		< 5.0	< 5.0 - 16.7	No	2015	Corrosion of household plumbing systems; Erosion of natural deposits
1 out of 30 samples were found to have lead levels in excess of the AL of 15 ppb								
Inorganic 's								
Chlorine	ppm	MRDLG = 4	MRDL = 4	1.3	0.40 - 1.30	No	2017	Water additive used to control microbes.
Nitrates	ppm	10	10	2.8	1.36 - 2.80	No	2017	Runoff from fertilizer use; leaching from septic tanks; sewage; Erosion of natural deposits
Barium, Total	ppm	2	2	0.154	0.108 - 0.154	No	2017	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride, Total	ppm	4	4	0.26	0.26 - 0.21	No	2017	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer & aluminum factories

The EPA requires regular sampling to ensure drinking water safety. The City of Urbana conducted sampling for bacteria, radiological, synthetic organic and volatile organic's during 2016. Samples were collected for a total of 46 different contaminants most of which were not detected in the Urbana water supply.

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. In 2016 the City of Urbana was not cited for any violations.

Lead Statement "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 Urbana Water Division 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 or at

Definitions

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 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 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.

90th Percentile: 90% of samples are equal to or less than the number in the chart.

N/A: Not applicable
N/D: Not detectable at testing limits.

ppb or parts per billion: micrograms per liter (ug/l), are units of measure for concentration of contaminant. A part per billion corresponds to one second in 31.7 years.

ppm or parts per million: milligrams per liter (mg/l), are units of measure for concentration of contaminant. A part per million corresponds to one second in a little over 11.5 days.

pCi/L or picocuries per liter: a measure of radioactivity.

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

< A sign used to represent less than. In the result table it is used to represent an amount that is less than the range of detection by the lab's testing method. Equal to a non-detected.

≥ A sign to represent greater than or equal to.

For the most current information you may access the City of Urbana website at www.urbanaohio.com.