

## Educational Information

### What are sources of contamination to drinking water? :

The sources of drinking water both tap water and bottled water includes 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 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



**Water Division Staff  
2011**

# Annual Water Quality Report City of Urbana 2011

**For more information** about your drinking water and for opportunities to get involved, please contact Robert W. Munch (652-4335). Also you are welcome and encouraged to attend City of Urbana Council meetings on the 2nd and 4th Tuesday of each month at 7 pm.

## 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 2011, 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 2011, the City of Urbana pumped 766 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 Robert W. Munch at 652-4335.

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 72 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 over 100 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.

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. Major maintenance is also needed for the four elevated water tanks to prevent corrosion of the metal bowls and to clean any sediment that may accumulate in them. To this end, The Urbana Water Division was forced to raise rates 17.5% on March 1, 2012 to cover costs for these repairs.

The City is planning on initiating a comprehensive multi-year/ multiphase Water Line replacement project. The first lines to be replaced will be the oldest and the areas where we experience the most numerous breaks. The First phase will be Court, Church and Ward Streets between Main St. and East Lawn Ave., as well as, Wooddale Dr. The Second Phase will be Washington Ave., Lincoln Pl., Lafayette Ave. and Boyce St., as well as, Grimes Circle and Grimes Ave.

The City of Urbana recommends all residents to replace their side of the water service line when the City replaces the Mains and the City Side of those Service Lines.

For more information about this or any other concerns, Please contact Robert Munch at (937) 652-4335

## City of Urbana's 2011 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 Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).*

**Total Coliforms:** Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. In 2011 the City of Urbana was not cited for any violations.

**Nitrate:** Nitrate in drinking water at levels above 10 ppm is a health risk for infants of <6 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.

**Volatile Organic Contaminants (VOC):**  
**Tetrachloroethene PCE:** Some people who drink water containing Tetrachloroethene in excess of the MCL over many years could experience problems with their liver, and may have an increased risk of getting cancer.

**Trichloroethane TCA:** Some people who drink water containing trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.

**Trichloroethene TCE:** Some people who drink water containing trichloroethene in excess of the MCL over many years could experience problems with their liver, and may have increased risk of getting cancer.

**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 <http://www.epa.gov/safewater/lead>."

**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.

**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.

**Treatment Technique or TT:** A required process intended to reduce the level of a contaminant in drinking water.

**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.

Total Hardness was 372 mg/l or 22 grains

pH is 7.4

**For the most current information you may access the City of Urbana website at [www.urbanaohio.com](http://www.urbanaohio.com).**

Unregulated Contaminants	Units	MCLG	MCL	Max Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Chloroform	ppb	0	n/a	9.9	4.7 - 9.9	No	2011	Disinfection By-Products
Bromoform	ppb	0	n/a	0.9	0.9	No	2011	Disinfection By-Products
Bromodichloromethane	ppb	0	n/a	4.7	4.4 - 4.7	No	2011	Disinfection By-Products
Dibromochloromethane	ppb	0	n/a	3.4	3.3 - 3.4	No	2011	Disinfection By-Products
Trihalomethanes, Total	ppb	0	80	18.8	13.4 - 18.8	No	2011	Disinfection By-Products
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	2009	Radiological Decay
Radium 228	pCi/L	0	5	< 1.00	< 1.00	No	2009	Radiological Decay
<b>Inorganics</b>		<b>90th Percentile</b>						
Copper	ppb	0	AL 1300	100	10.0 - 110.0	No	2009	Household Plumbing
Lead	ppb	0	AL 15	7	< 2.0 - 24.0	No	2009	Household Plumbing
Antimony, Total	ppb	0	6	< 3.0	< 3.0	No	2011	Naturally Occurring Deposits
Arsenic, Total	ppb	0	10	< 3.0	< 3.0	No	2011	Naturally Occurring Deposits
Barium, Total	ppb	0	2000	180	110 - 180	No	2011	Naturally Occurring Deposits
Beryllium, Total	ppb	0	4	< 0.5	< 0.5	No	2011	Naturally Occurring Deposits
Cadmium Total	ppb	0	5	< 0.5	< 0.5	No	2011	Naturally Occurring Deposits
Chromium, Total	ppb	0	100	< 10.0	< 10.00	No	2011	Naturally Occurring Deposits
Mercury, Total	ppb	0	2	< 0.2	< 0.2	No	2011	Naturally Occurring Deposits
Nickel, Total	ppb	0	100	< 10.0	< 10.0	No	2011	Naturally Occurring Deposits
Selenium, Total	ppb	0	50	< 3.0	< 3.0	No	2011	Naturally Occurring Deposits
Thallium, Total	ppb	0	2	< 1.0	< 1.0	No	2011	Naturally Occurring Deposits
Fluoride, Total	ppm	0	2	0.321	0.295 - 0.321	No	2011	Naturally Occurring Deposits
Cyanide, Total	ppb	0	200	< 5.0	< 5.0	No	2011	Naturally Occurring Deposits
111 Trichloroethane	ppb	0	200	< 0.5	< 0.5	No	2011	Industrial Solvents
Tetrachloroethene	ppb	0	5	< 0.5	< 0.5	No	2011	Industrial Solvents
Trichloroethane	ppb	0	5	< 0.5	< 0.5	No	2011	Industrial Solvents
Nitrates	ppm	0	10	3.1	2.6 - 3.1	No	2011	Fertilizers and Animal Wastes
Dibromoacetic Acid	ppb	0	n/a	1.3	1.1 - 1.3	No	2011	Disinfection By-Products
Dichloroacetic Acid	ppb	0	n/a	3.3	3.0 - 3.3	No	2011	Disinfection By-Products
Monochloroacetic Acid	ppb	0	n/a	2.7	< 2.0 - 2.7	No	2011	Disinfection By-Products
Trichloroacetic Acid	ppb	0	n/a	< 1.0	< 1.0	No	2011	Disinfection By-Products
Monobromoacetic Acid	ppb	0	n/a	< 1.0	< 1.0	No	2011	Disinfection By-Products