

City of Batavia 2016 Water Quality Report

Jan. 1, 2016—Dec. 31, 2016



*In 2016, your tap water has met **all** USEPA and state drinking water health standards. Our system vigilantly safeguards its groundwater supply, and we are happy to report that the water department had no violation of a contaminant level or of any other water quality standard in the previous year. This report summarizes the quality of water that we provide, including details about where your water comes from, drinking water facts, contaminants detected in drinking water, and how your tap water compares to standards set by regulatory agencies. The Batavia Water Department is fully committed to providing you with thorough, accurate information because informed customers are our best allies.*

If you would like to learn more, please feel welcome to attend any of our city council meetings. The city council meeting schedule can be found on the city's website: cityofbatavia.net. If you need help understanding this report or have questions, please contact Jeremy Barkei at 630-454-2452 or jbarkei@cityofbatavia.net. This report is updated each year.

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

Sources of drinking water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater 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.

Batavia's drinking water is a combination of shallow well water and deep well water. All water is pumped to the city's water treatment plant where the shallow well water is filtered for the removal of iron, manganese and hydrogen sulfide and is then chlorinated, fluoridated and treated with a corrosion inhibitor before being blended in the ground storage reservoir. The deep well water is processed at the treatment plant utilizing an HMO adsorption process for the removal of radium. All water customers receive the same blended water supply.

Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

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.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

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.

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Other facts about drinking water

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 EPA's Safe Drinking Water Hotline at 800-426-4791.

In order to ensure that tap water is safe to drink, EPA 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. 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 with organ transplants, persons with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. 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 800-426-4791.



Source Water Assessment

Source water protection (SWP) is a proactive approach to protecting our critical sources of public water supply and assuring that the best source of water is being utilized to serve the public. It involves implementation of pollution prevention practices to protect the water quality in a watershed or wellhead protection area serving a public water supply. Along with treatment, it establishes a multi-barrier approach to assuring clean and safe drinking water to the citizens of Illinois. The Illinois EPA has implemented a source water assessment program (SWAP) to assist with wellhead and watershed protection of public drinking water supplies. Batavia's Source Water Assessment has been completed by the Illinois EPA. A copy is available at the City of Batavia Public Works Building at 200 N. Raddant Rd., Batavia, IL. To view a summary version of the completed Source Water Assessments, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at epa.illinois.gov/topics/drinking-water/.

Based on information obtained in a Well Site Survey published in 1990 by the Illinois EPA, sixteen potential sources or possible problem sites were identified within the survey area of Batavia's wells. Furthermore, information provided by the Leaking Underground Storage Tank and Remedial Project Management Sections of the Illinois EPA indicated several additional sites with ongoing remediations which may be of

concern. **The Illinois EPA has determined that the Batavia Community Water Supply's source water is not susceptible to contamination.** This determination is based on a number of criteria including: monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and the available hydrogeologic data on the wells. Furthermore, in anticipation of the U.S. EPA's proposed Ground Water Rule, the Illinois EPA has determined that the Batavia Community Water Supply is not vulnerable to viral contamination. This determination is based upon the completed evaluation of the following criteria during the Vulnerability Waiver Process: the community's wells are properly constructed with sound integrity and proper site conditions; a hydrogeologic barrier exists which prevents pathogen movement; all potential routes and sanitary defects have been mitigated such that the source water is adequately protected; monitoring data did not indicate a history of disease outbreak; and the sanitary survey of the water supply did not indicate a viral contamination threat. Because the community's wells are constructed in a confined aquifer, which should prevent the movement of pathogens into the wells, well hydraulics were not considered to be a significant factor in the susceptibility determination. Hence, well hydraulics were not evaluated for this groundwater supply.

The following tables summarize contaminants detected in your drinking water supply for the year 2016.

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Due to favorable monitoring history, aquifer characteristics, and inventory of potential sources of contamination, our water supply was issued a vulnerability waiver renewal. No monitoring for VOCs and SOCs is required between Jan. 1, 2014 and Dec. 31, 2016.

Regulated Contaminants

Disinfectants & Disinfection By-Products								
	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/2016	0.4	0.3–0.4	MRDLG = 4	MRDL = 4	ppm	No	Water additive used to control microbes
Haloacetic Acids (HAAs)	2016	5	1.25–5.19	N/A	60	ppb	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHm)	2016	25	18.09–24.66	N/A	80	ppb	No	By-product of drinking water disinfection
Inorganic Contaminants								
Barium	1/14/14	0.612	0.0491–0.612	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	1/14/14	1.3	0.971–1.3	4	4.0	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Iron	1/14/14	0.667	0–0.667	N/A	1.0	ppm	No	Erosion from naturally occurring deposits.
Nitrate (measured as nitrogen)	2016	0.231	0.231–0.231	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Sodium	1/14/14	42.7	35.3–42.7	NA	NA	ppm	No	Erosion from naturally occurring deposits: used in water softener regeneration.
Radioactive Contaminants								
Combined Radium 226/228	2016	4.1	N/A	0	5	pCi/L	No	Erosion of natural deposits
Coliform Bacteria	Maximum Containment Level Goal	Total Coliform Maximum Containment Level	Highest Number of Positive	Fecal Coliform or <i>E. coli</i> Maximum Containment Level	Total Number of Positive <i>E. coli</i> or Fecal Coliform Samples		Violation	Likely Source of Contamination
1/1/2016–12/31/2016	0	One Positive Monthly Sample	0	0	0		No	Naturally present in the environment

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

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	#Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	08/15/14	1.3	1.3	0.404	0	ppm	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives;
Lead	08/15/14	15	15	0	0	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits.

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

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 Batavia 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 epa.gov/your-drinking-water

Definitions

MCL—Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology.

MCLG—Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

MRDL—Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water.

MRDLG—Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.

pCi/L—Picocuries per Liter (a measure radioactivity).

ppm or mg/L—Parts per Million or Milligrams per Liter (mg/L)
—one ounce in 7,350 gallons of water.

ppb or µg/L—Parts per Billion or Micrograms per Liter (µg/L)
—one ounce in 7,350,000 gallons of water.

N/A—Not Applicable. N/D—Not Detected.



The City of Batavia Water Department is pleased to announce that no monitoring, reporting, treatment techniques, maximum residual disinfectant level, or maximum contaminant level violations were recorded during 2016.



City of Batavia

Lead awareness—commonly asked questions

Where does the city's water come from?

The city's water supply is a combination of deep and shallow well water. The deep wells are drilled into the Ironton/Galesville Aquifer and the shallow wells are drilled into the St. Charles Aquifer. The city's wells vary in depth from 150' to 1500'.

Is lead a problem with Batavia's water?

Batavia's source water, deep and shallow wells, is lead free. Lead typically enters drinking water after coming in contact with lead products used in plumbing systems. The most common lead based plumbing products are: 1) Lead water service lines that carry water from the city water mains to the house. 2) Lead based solder used to connect copper pipes in homes. 3) Lead plumbing fixtures such as faucets.

Does Batavia treat the water for lead and copper corrosion?

Yes, Batavia has been using an ortho-phosphate corrosion control chemical since the 1990's to help mitigate the effects of lead and copper corrosion. The ortho-phosphate provides a protective barrier on the interior of plumbing so the water does not come in contact with the lead or copper pipe materials.

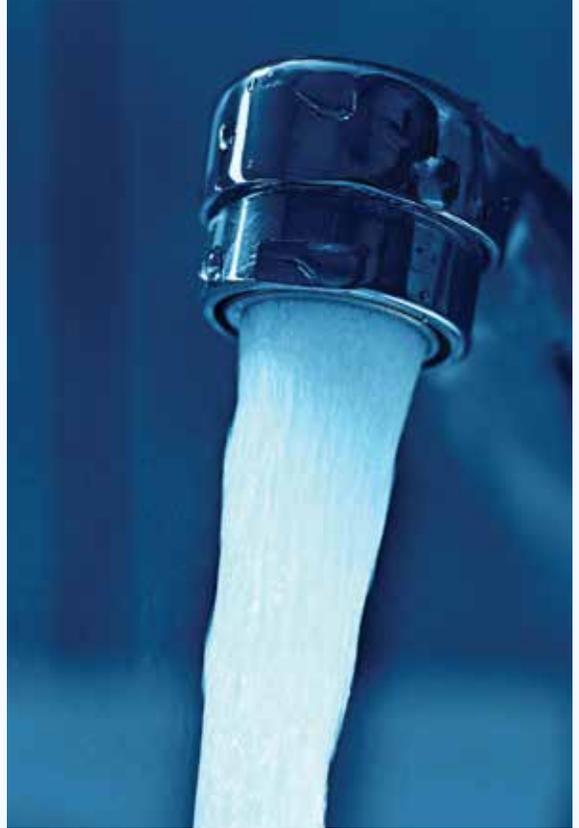
How do I know if my home has a lead service line, solder or plumbing fixtures?

Homes built with copper plumbing typically used lead based solder until approximately 1987. Lead water service lines were typically installed under city streets between 1895 and the late 1940's. Most old homes in Batavia have galvanized steel pipes or copper pipes between the parkway area and the basement. However, some homes built prior to 1950 may also have lead water service lines into the basement. City employees can assist in the investigation of lead based service lines or lead based solder in your home.

What can I do to prevent lead in my water?

If you're concerned about lead in your drinking water, you can take several steps to limit possible exposure.

Flush your tap water: Flushing old water out of your home plumbing is the easiest way to mitigate any possibility of lead in your drinking water. Flushing the tap is particularly important when the faucet has gone unused for more than a few hours. It takes time for lead to dissolve into water, so the first water drawn from the tap in the morning or after a long period of non-use can contain higher levels of lead. Let the water run from the



tap until it is noticeably colder (this may take up to two minutes or more) before using it for cooking or drinking. After the lines have been flushed, fill a glass water pitcher and store the fresh water in the refrigerator for drinking. Don't waste water! Grab the flushed water for use on house plants and other non-potable use.

Purchase a certified ANSI/NSF 53 home water filter:

However, it is imperative to follow the manufacturer's recommendations for regular maintenance and/or replacement in order to avoid water quality issues.

Testing at the tap is the only way to measure the lead levels in your home or workplace. You can't see, smell or taste lead in your water. Testing costs around \$40. If you would like your water tested, call the city, we can assist you. Additional detailed information about Batavia's water system and lead and copper in drinking water can be found elsewhere in this report and on the city's website.

Please remember to use water wisely

Outside

Water lawn only when it needs it. A good way to see if your lawn needs watering is to step on the grass; if it springs back up, it doesn't need water; if it stays flat, it does need water.

Adjust your lawnmower to a higher setting. Longer grass shades root systems and holds soil moisture better than a closely clipped lawn.

Put a layer of mulch around trees and plants. Mulch will slow the evaporation of moisture and discourage weed growth.

Inside

Install low flow faucets and shower heads.

Turn water off while shaving and brushing your teeth.

Use wash and rinse basins when hand washing dishes rather than running water.

Keep a glass water pitcher in the refrigerator for drinking water.

**Visit cityofbatavia.net
for water saving tips**

Water Conservation Ordinance

Know your day and time for watering:

Odd number house addresses can water on **odd calendar days**.

Even number house addresses can water on **even calendar days**

6am–9am and 6pm–9pm

If you have a newly sodded or seeded lawn, you must obtain a watering permit. Permits are available at Batavia City Hall, 100 N. Island Ave. No permits for sod or seed will be issued during the months of July or August.



Batavia's Cross Connection Control Program

What is cross connection?

Plumbing cross connections are defined as actual or potential connections between a potable and non-potable water supply. This may cause a backflow or back-siphon condition (when the water in your pipes, after the meter, goes backward).

Illinois EPA Regulations and Illinois Plumbing Codes require every water supplier to implement a comprehensive cross connection control program. The program is designated to safeguard public health. Batavia sends out bi-annual surveys to our customers and tracks properties that require backflow devices. We ask for your cooperation with our program.



Cross Connection Control devices (backflow preventers) are mandatory for underground lawn sprinkling systems. **Each spring when you turn your sprinkler system on you must have the backflow device tested.**

The city's backflow program administrator, Aqua Backflow, Elgin, IL will send out reminder notices when testing is due.