City of

WOODSTOCK

ANNUAL WATER QUALITY REPORT 2017

(January 1 through December 31, 2017)

How Safe is My Water?

During 2017, your tap water met all USEPA and Illinois EPA (IEPA) drinking water health standards. The City vigilantly safeguards your drinking water, and we are able to report that the City had no violation of a contaminant level or of any other quality standard during 2017. This report summarizes the quality of water that we provided last year including details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

The City tests the quality of your drinking water on a daily basis. There are over 33,600 tests performed each year to verify compliance with the Safe Drinking Water Act (SDWA). However, the City does not rely only on the regulatory and water quality standards that are mandated by USEPA and IEPA and we have established our own internal water quality goals to ensure and maintain excellent water quality.

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

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

To request the source water assessment completed by the Illinois EPA, or for more information on this report please contact Will Smith, Water Treatment Superintendent, at (815)338-6118 ext. 22102.

The City of Woodstock holds council meetings the 1st & 3rd Tuesday of each month at 7:00pm. The council chambers are located at 121 W. Calhoun St., Woodstock, IL 60098. The public is welcome

Where Does Woodstock's Water Come From?

The City of Woodstock utilizes two water treatment plants. The treatment plants are served by three ground water wells each. The depth of these wells range from 110' to 189' and are located within the corporate city limits. The pumping capacity for all of the wells combined is 6,962,400 gallons per day or 4,835 gallons per minute.

Preparing Water for Consumption

Woodstock's well water has excessive amounts of iron, manganese, carbon dioxide and hydrogen sulfate. This is where the water treatment begins. The carbon dioxide and hydrogen sulfate are removed by aeration and the iron and manganese are oxidized by aeration then removed by filtration. After filtration, the water gravitates to a filter reservoir and is pumped through the softening process. Then chlorine is added for disinfection, fluoride for the prevention of tooth decay and polyphosphate for corrosion control. Then the water is pumped into the distribution system for consumption.

IMPORTANT!!

Protect and Conserve Woodstock's Water Supply…

Voluntary Water Restrictions

In an effort to delay or minimize the need for mandatory water restrictions, the city needs your help to reduce the volume of water pumped during the peak demand months of June, July and August. When watering lawns we ask that you voluntarily follow an even/odd watering schedule. Houses ending in an even number 0,2,4,6,8 please only water on even numbered calendar days, likewise houses with an address ending in an odd number 1,3,5,7,9 please only water on odd number calendar days.

Watering during the heat of the day can account for up to a 30% loss of water due to evaporation, and can be even higher on windy days. Please refrain from watering between 9am and 6pm. Not only will this be more efficient, but will also save you money since less water is being lost to evaporation. Please refrain from setting sprinklers to water overnight, not only is this a tremendous waste of water, but it will promote mold growth in your lawn.

Watering on an even odd schedule will provide ample amounts of water to keep your lawn healthy, while helping to preserve our most valuable natural resource.

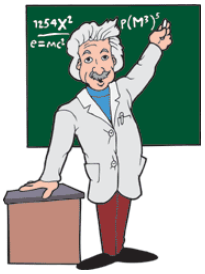
Water Conservation Tips

- Repair dripping faucets by replacing washers. At one drip per second there will be 2,700 gallons wasted annually.
- Install aerators with flow restrictors on faucets.
- Check toilet tanks for leaks by adding food coloring to the tank and see if it appears in the bowl. If so replace flapper in tank.
- Install a "Toilet Dam" in the toilet tank. Use a ½ gallon milk jug filled with water, this will save a ½ gallon per flush.
- Only use dishwashers and clothes washers when they are fully loaded.
- Insulate hot water pipes. This will keep the water in the pipes warmer reducing the amount of time necessary to run the water to get it hot.
- Consider installing point source hot water devices. This will eliminate running water to get it warm; this will save you on water and utility costs.
- Store drinking water in the refrigerator. This will provide cold water for drinking without running the tap. Wash container weekly.
- Take five minute showers.
- Do not use running water to thaw meat.

Outdoor Water Conservation

- Do not over water your lawn. Lawns can remain healthy by watering twice per week in the summer.
- Avoid watering during the heat of the day or when it is windy outside.
- Avoid watering asphalt or concrete; adjust your sprinklers to avoid this.
- Consider purchasing rain barrels to store water that can later be used on landscapes.
- Install irrigation devices that are efficient, such as soaker hoses. Be careful not to over use these.
- Raise your lawn mower's cutting height. Longer grass will hold moisture and will stay green with less water.
- Do not over fertilize your lawn; fertilizers increase the demand for water.
- Do not use a hose to clean your driveway, instead use a broom.
- When washing your car do not allow the hose to run, fill a bucket, wash your car and then rinse with a hose.
- Avoid purchasing recreational water toys which provide a constant stream of water. Try to instill in children the importance of water conservation.

Water Facts



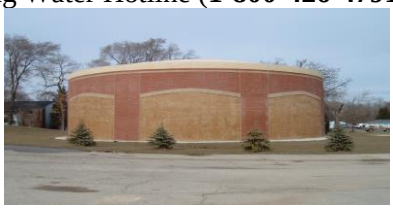
- Water is the most common substances on earth, but only 1% of it is suitable for drinking.
- Over 38 billion (38,000,000,000) gallons of water is processed per day in the United States this equals 13.8 trillion (13,870,000,000,000) gallons per year.
- The average household uses over 100,000 gallons of water per year.
- There are approximately 1 million miles of water pipes underground in the United States, enough to circle the earth 40 times.
- A five minute shower will use 15 to 25 gallons.
- An automatic dishwasher uses between 9 to 12 gallons.
- **Water is the most important resource/element on our planet, more so than oil, natural gas, minerals or any other resource you can imagine. Treat it with respect and conserve it.**

WATER IS NOT UNLIMITED.

Substances Expected 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 transplants, people 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. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (**1-800-426-4791**).

Drinking water, including bottled water, may reasonably be expected to contain 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 USEPA's Safe Drinking Water Hotline (**1-800-426-4791**).



Seminary Avenue Plant Reservoir

What's In It Before We Treat It?

All Drinking water, including tap water and bottled water, originates in rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and radioactive material and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source waters before they are treated 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 discharge, oil and gas production, mining, and farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- **Organic 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 may be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottle water, which must provide the same protection for public health.

In addition to the information section of this Water Quality Report, we have included for your review several tables. The tables will give you a better understanding of the contaminants that were detected in your water.

2017 Water Quality Data

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 Woodstock 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 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

Lead and Copper

Contaminant (unit of Measurement)	Source of Contaminant	MCLG	Action Level (AL)	90th Percentile	No. of Sites Over AL	Violation	Collection Date
Copper (ppm)	Corrosion of household plumbing systems; erosion of natural deposits, leaching from wood preservatives.	1.3	1.3	1.2	1	No	2017
Lead (ppb)	Corrosion of household plumbing systems: erosion of natural deposits.	0	15	8.3	1	No	2017

Regulated Inorganic Contaminants Detected

Contaminant (unit of Measurement)	Source of Contaminant	MCLG	MCL	Level Found	Range of Detections	Violation	Collection Date
Barium (ppm)	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.	2	2	0.040	0.029 – 0.040	NO	6/9/2015
Fluoride (ppm)	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.	4	4	1.08	0.988 – 1.08	NO	6/9/2015
Nitrate (As Nitrogen) (ppm)	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.	10	10	1.0	0.71 – 1.1	NO	2017
Manganese (ppb)	Erosion of naturally Occurring deposits	150	150	9.8	1.2 – 9.8	NO	6/9/2015

Note: Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for during the CCR calendar year. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred.

Disinfectants/Disinfection By-Products

Contaminant (unit of measurement)	Source of Contaminant	MCLG	MCL	Level Found	Range of Detections	Violation	Collection Date
TTHMs (Total Trihalomethanes) (ppb)	By-product of drinking water disinfection	n/a	80	25.0	24.2 – 24.9	NO	2017
HAA (Total Haloacetic Acids) (ppb)	By-product of drinking water disinfection	n/a	60	11.0	10.1 – 10.6	NO	2017

Disinfectant

Constituent (unit of Measurement)	Source of Constituent	MRDLG	MRDL	Level Found	Range of Detections	Violation	Collection Date
Free or Total Chlorine Residual (ppm)	Disinfection of water in treatment against microbiological pathogens	4	4	1.0	0.0 – 1.0	NO	12/31/2017

Note: Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

State Regulated Contaminants Detected

Contaminant (unit of measurement)	Source of Contaminant	MCLG	MCL	Level Found	Range of Detections	Violation	Collection Date
Iron (ppm)	Erosion of naturally occurring deposits;	1	1	0.072	.024 - .072	NO	06/09/2015
Sodium (ppm)	Erosion of naturally occurring deposits; used as water softener	n/a	n/a	160	150 – 160	NO	06/09/2015

Note: These contaminants are not currently regulated by the USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.

Note: The state 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.

Radioactive Contaminants

Contaminant (unit of measurement)	Source of Contaminant	MCLG	MCL	Level Found	Range of Detections	Violation	Collection Date
Combined Radium 226 + 228 (pCi/L)	Erosion of natural deposits	0	5	0.669	0.0 – 0.669	NO	11/12/2014
Gross Alpha Excluding Radon and Uranium (pCi/L)	Erosion of natural deposits	0	15	2.98	2.67-2.98	NO	11/12/2014

Unregulated Contaminants (UCMR3)

Contaminant (unit of measurement)	Source of Contaminant	MCLG	MCL	Level Found	Range of Detections	Violation	Collection Date
Molybdenum (ppb)	Erosion of naturally occurring deposits. Used as a chemical reagent.	N/A	N/A	1.8	1.4-1.8	N/A	7/3/2013
Strontium (ppm)	Erosion of naturally occurring deposits. Commercially usual to block x-ray emissions	N/A	N/A	0.17	0.16-0.17	N/A	7/3/2013

Note: Unregulated contaminant monitoring rule was initiated by the USEPA to identify potential contaminants that are currently not regulated by the USEPA nor the state. There are no MCL or MCLG set for these contaminants..

Coliform Bacteria

Contaminant	Source of Contaminant	MCLG	MCL	Highest No. of Positive	Fecal Coliform or E. Coli MCL	Total No. of Positive E. Coli or Fecal Coliform	Violation
Coliform Bacteria	Naturally present in the environment	0	1 per month	1	0	0	No

Glossary

Definitions of terms used in the above tables.

Action Level (AL): The concentration of a contaminant which if exceeded, triggers treatment or other requirements that a water system must follow.
Maximum Contaminant Level (MCL): The highest level of containment 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.
Maximum Contaminant Level Goal (MCLG): 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.
ppm: parts per million, also mg/l milligrams per liter or one ounce in 7,350 gallons of water.
ppb: parts per billion, also ug/l micrograms per liter or one ounce in 7,350,000 gallons of water.
pCi/l: picocuries per liter (a measure of radioactivity)
n/a: not applicable
Avg: Regulatory compliance with some MCL's is based on running annual average of monthly samples.
Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLG's allow for a margin of safety.

Water Quality Data Table Footnotes

Unregulated Contaminants:
A maximum contaminant level (MCL) for this contaminant has not been established by either state or federal regulations nor has mandatory health effects language. The purpose for monitoring this contaminant is to assist the USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.

Iron:
This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1,000 or more.

Sodium:
There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.

Source Water Assessment Summary

To determine Woodstock's susceptibility to groundwater contamination, the Well Site Survey, published in 1992, and the results of the recharge area survey conducted by the students of Woodstock High School, completed in 1998, were reviewed. During the surveys of Woodstock's source water protection area, Illinois EPA staff recorded potential sources, routes, or possible problem sites within the 200 or 400-foot minimum setback zones and 1,000-foot maximum setback zones and the Woodstock High School students recorded sites within the recharge areas. No sites exist within any of the minimum setback zones. Seven sites are located within the maximum setback zone around wells #8, #9, and #12. One site is located in the maximum setback zone around wells #7A, #10, and #11. Twenty-four sites lie outside the maximum setback zone but within the boundary of the recharge area. Six additional sites are located outside the recharge area. Based on the complex geology of the area and the number and location of potential sources, the Illinois EPA considers the source water of this facility to be 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, the available hydrogeologic data on the wells, and the land-use activities in the recharge area of the wells. The Illinois Environmental Protection Act established minimum protection zones of 200 or 400 feet for Woodstock's active community water supply wells. These minimum protection zones are regulated by the Illinois EPA. As authorized by the Illinois Environmental Protection Act, Woodstock enacted a maximum setback zone ordinance around all of the active wells. This ordinance, which allows county and municipal officials the opportunity to provide additional potential source prohibitions up to 1,000 feet from their wells. In addition to the setback zones, a recharge area has been delineated. A recharge area is the geographic area surrounding a well or well field providing potable water to a community water supply as modeled using computer software to determine a five-year time of travel. The boundary of the recharge area has been marked with road signs on the major roads. A cross connection control ordinance was adopted and a program designed to implement the ordinance. Cross connection protection is crucial to a water system because a cross connection to either the water treatment plant (for example, at bulk water loading stations) or in the distribution system may negate all source water protection initiatives provided by the supply. To further minimize the risk to the City's water supply, the Illinois EPA recommends that the following activities be assessed. First, Woodstock should adopt a wellhead protection plan and a program designed to implement that plan. Second, Woodstock should also consider developing a recharge area management program to address the regulatory and non-regulatory land use activities within the community wells' recharge area. Specifically, these management options should include potential effects from non-point sources related to agricultural land uses. Third, contingency planning documents should be developed to ensure the water department and emergency response staff is aware of and adequately trained to implement emergency procedures. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a water supply will minimize their risk of being without safe and adequate water.

Frequently Asked Questions

What is a drinking water standard?

Under the authority of the Safe Drinking Water Act (SDWA), The Environmental Protection Agency (EPA) sets standards for approximately 90 contaminants in drinking water. For each of these contaminants, the EPA sets a legal limit, called a maximum contaminant level, or requires a certain treatment. Water suppliers may not provide water that does not meet these standards. Water that meets these standards is safe to drink, although people with severely compromised immune systems and children may have special needs. For more description, read about how standards are set, or about the EPA's Office of Ground Water and Drinking Water, visit www.epa.com.

How will I know if my water isn't safe to drink?

The City of Woodstock must notify you by newspaper, mail radio, TV or hand delivery if your water does not meet EPA or state standards or if there is a waterborne disease emergency. The notice will describe any precautions you need to take, such as boiling your water.

Woodstock Receives Annual Fluoride Award

The Illinois Department of Public Health has recognized Woodstock's community water system for maintaining perfect compliance in accordance with the State of Illinois Fluoridation Law in 2017. This is the 23nd consecutive year for which Woodstock's community water system has been recognized for perfect compliance with this law.

Seminary Avenue Plant High Service Pumps