JOLIET
June 2020
Joliet, IL

2019 JOLIET DRINKING WATER QUALITY REPORT

Este informe contiene información muy importante. Tradúscalo ó hable con alguien que lo entienda bien.

Dear City of Joliet Water Customers,

This Consumer Confidence Report is required by the Safe Drinking Water Act (SDWA) and is intended to inform all water customers about the quality of the drinking water provided to them. Tap water was tested according to all drinking water regulatory standards.

Providing a quality drinking water supply is the critical mission of the Department of Public Utilities. Please spend some time reading this report to learn more about our water, where it comes from, and what the City does to provide a safe source of drinking water to our customers.

Additional information about our water is provided on our website at www.Joliet.gov/Water. Your comments on this report are welcomed to help us improve our communications regarding the City's water system in future years. The City of Joliet Department of Public Utilities can be contacted at 815-724-4230.

Sincerely,

Allison M.W. Swisher, P.E.
Director of Public Utilities
City of Joliet

Where can I get more information or provide comments?

For general questions:
Department of Public Utilities
150 W. Jefferson Street
Joliet, IL 60432
Phone: (815) 724-4230
Hours: 8:00 AM - 4:30 PM

For maintenance questions or to report water emergencies:
Department of Public Utilities
Phone: (815) 724-4220
Hours: 24 Hours

For billing questions:
Customer Service
150 W. Jefferson Street
Joliet, IL 60432
Phone: (815) 724-3820
Hours: 8:00 AM - 4:30 PM

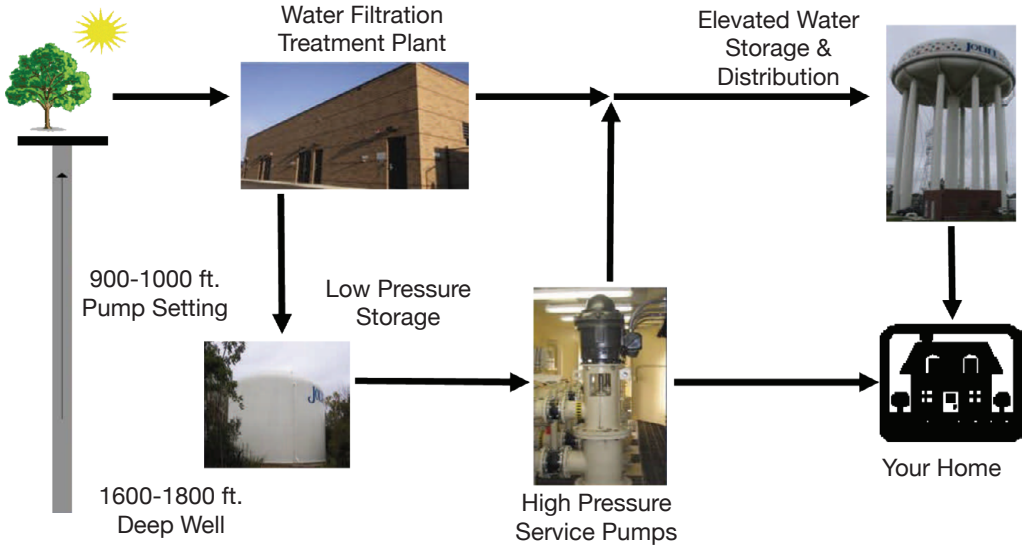
EPA Safe Drinking Water Hotline:
Phone: (800) 426-4791
www.epa.gov/ground-water-and-drinking-water

WHERE DOES YOUR WATER COME FROM?

The City of Joliet draws its groundwater supply from twenty-one deep (bedrock) wells (pumping from 1,000 feet below the surface) and five shallow (gravel) wells (pumping from 80 feet below the surface) located throughout the City. The source water naturally contains radium, iron, manganese, fluoride, and other minerals. The City of Joliet has invested in the construction of eleven water treatment plants to remove the naturally occurring radium from the water supply. All water delivered in 2019 met the federal and state guidelines for safe drinking water.

The water is treated using a Hydrous Manganese Oxide (HMO) Treatment process. HMO chemical is added to the water which binds with the radium like a magnet. Then, the treatment equipment removes the combined HMO chemical and radium. This process removes up to 90% of the radium as well as iron and manganese, which contribute to other water quality issues.

WATER SYSTEM DIAGRAM



Before the water is sent to the distribution system it is treated with a blended ortho-polyphosphate for corrosion control. This reduces rusty water in the distribution system and provides a barrier between the water and metal pipes in your home or business. Sodium hypochlorite (NaClO) is also added for disinfection of the water. Disinfection chemicals are required by the EPA, and sodium hypochlorite, while more expensive, represents the safest disinfection method for City workers and all water customers.

The treated water is then pumped to the distribution system and ultimately to your taps. For more information about the water treatment process or to schedule a group tour of the water supply or wastewater treatment facilities, please contact the Plant Operations Superintendent at (815) 724-3675.

Smart Message Community Alert Network:

everbridge

By enrolling you can receive outage notifications from the Department of Public Utilities in the event of an emergency which requires water to be turned off, along with emergency information from the Joliet Police and Fire Departments regarding pending threats to public safety. The Smart Message Network will send out a text message or e-mail notification. Visit www.Joliet.gov/i-want-to/stay-informed to sign up.

WATER QUALITY

In order to ensure tap water is safe to drink, the USEPA prescribes regulations that limits the amount of certain contaminants in water provided by public water supply 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 USEPA's Safe Drinking Water Hotline at (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as persons with cancer undergoing chemotherapy, people who have undergone organ 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 at (800) 426-4791.

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 human activity. Because of this, some level of treatment is required for all water.

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 may 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 may be naturally-occurring or be the result of oil and gas production and mining activities.

SYSTEM MANAGEMENT

The Joliet public water supply is owned by the City of Joliet. The City of Joliet Mayor and City Council establish the policies that control the operations of the water supply. The public is welcome to attend regular City Council meetings on the first and third Tuesday of every month at 6:30 p.m. in the City Council Chambers at the Joliet Municipal Building, 150 West Jefferson Street, Joliet, Illinois. If you would like to address the City Council at a meeting, please contact the City Clerk at (815) 724-3780.

SOURCE WATER ASSESSMENT

The Safe Drinking Water Act (SDWA) has established the criteria for determining the vulnerability of source water to potential sources of contamination. To determine Joliet's susceptibility to groundwater contamination, a Well Site Survey and a Source Inventory, performed by Illinois Rural Water Association, inside the recharge areas were conducted. During the survey of Joliet's source water protection area, Illinois EPA and Illinois Rural Water Association staff recorded potential sources, routes or possible problem sites within the minimum setback zones of 200 or 400 feet and within the 1,000 foot maximum setback zones around the wells. The tool used to apply these criteria is the source water assessment. The source water assessment for our water supply was prepared by the Illinois EPA. The City of Joliet's source water assessment is as follows:

"The Illinois EPA considers the gravel wells of this facility to be susceptible to Synthetic Organic Contaminant (SOC) contamination and does not consider the bedrock wells to be susceptible to Inorganic Contaminant (IOC), Synthetic Organic Contaminant (SOC) or Volatile Organic Contaminant (VOC) 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 for Joliet's active community water supply wells. The twenty-one bedrock wells have minimum setback zones of 200 feet and the five gravel wells have minimum setback zones of 400 feet. These minimum protection zones are regulated by the Illinois EPA. In addition to the minimum setback zones, five-year recharge areas have been delineated for the five gravel wells. To request additional information on our community's water supply source water assessment, please contact the Department of Public Utilities at (815) 724-4220 or via our website at www.Joliet.gov/Water.

GLOSSARY OF TERMS

N/A	not applicable	mg/L	milligrams per liter or parts per million - or one ounce in 7,350 gallons of water	pCi/L	picocuries per liter, used to measure radioactivity
µg/L	micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water	ppb	micrograms per liter or parts per billion- or one ounce in 7,350,000 gallons of water	ppm	milligrams per liter or parts per million; or one ounce in 7,350 gallons of water

AL	Action Level, or the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
MCL	Maximum Contaminant Level, or 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, or 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, or the highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfectant Level Goal, or the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
HMO	Hydrous Manganese Oxide, or the treatment chemical used for the removal of radium from drinking water.
EPA	Environmental Protection Agency, or the regulatory agency which establishes standards for drinking water at the Federal level (USEPA) or at the State level (IEPA).

LEAD AND COPPER

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. We cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, metals from pipes and brass faucets will leach into the water. 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 USEPA's Safe Drinking Water Hotline (800) 426-4791 or at www.epa.gov/safewater/lead.

LEAD AND COPPER	DATE SAMPLED	MCLG	ACTION LEVEL (AL)	90TH PERCENTILE	NO. SITES OVER AL	Units	VIOLATION	LIKELY SOURCE OF CONTAMINATION
Lead	2018	0	15	8.18	3	ppb	No	Corrosion of household plumbing systems: Erosion of natural deposits
Copper	2018	1.3	1.3	0.553	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems

DISINFECTANTS AND DISINFECTION BY-PRODUCTS

Disinfection of drinking water is one of the major public health advances in the 20th century. One hundred years ago, typhoid and cholera epidemics were common throughout American cities and disinfection was a major factor in reducing these epidemics. However, the disinfectants themselves can react with naturally occurring materials in the water to form unintended by-products that may pose health risks.

DISINFECTANTS	COLLECTION DATE	HIGHEST LEVEL DETECTED	RANGE OF LEVELS DETECTED	MRDLG	MRDL	UNITS	VIOLATION	LIKELY SOURCE OF CONTAMINATION
Chloramines	2019	2	2 - 2	4	4	ppm	No	Water additive used to control microbes

INORGANIC CHEMICALS (IOCs)

Inorganic chemicals (IOCs) include salts, metals, minerals, and nutrients that can be naturally occurring or which can result from storm water runoff, industrial or domestic wastewater discharges, or farm activities. Because our source of drinking water is groundwater, a significant amount of naturally occurring minerals are dissolved in the water. These dissolved minerals can account for the "hardness" of the water.

INORGANIC CONTAMINANTS	COLLECTION DATE	HIGHEST LEVEL DETECTED	RANGE OF LEVELS DETECTED	MCLG	MCL	UNITS	VIOLATION	LIKELY SOURCE OF CONTAMINATION
Barium	2019	0.0349	0.0349	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2019	0.96	0.96	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	2019	0.06	0 - 0.06	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium	2019	43.4	43.4 - 43.4	n/a	n/a	ppm	No	Erosion from naturally occuring deposits. Used in water softener regeneration

UNREGULATED CONTAMINATE MONITORING RULE

The 1996 amendments to the Safe Drinking Water Act (SDWA) require that once every five years, the U.S. Environmental Protection Agency (EPA) issue a new list of no more than 30 unregulated contaminates to be monitored by public water systems (PWSs). The Unregulated Contaminate Monitoring Rule (UCMR) provides EPA and other interested parties with scientifically valid data on the occurrence of contaminants in drinking water. This national survey is one of the primary sources of information on occurrence and labels of exposure that the Agency uses to develop regulatory decisions for contaminates in the public drinking water supply. For more information you can go to the UCMR home page www.epa.gov/dwucmr

UNREGULATED CONTAMINANTS	COLLECTION DATE	HIGHEST LEVEL DETECTED	RANGE OF LEVELS DETECTED	MRL	UNITS	LIKELY SOURCE OF CONTAMINATION
Germanium	2019	0.389	0.300 - 0.389	0.3	ug/l	Naturally occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic system, electronics and solar applications
Manganese	2019	32.7	.822 - 32.7	0.4	ug/l	Naturally occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries, and fireworks; drinking water wastewater treatment chemical; essential nutrient

RADIONUCLIDES

Radionuclides are man-made or natural elements that emit radiation. A picocurie per liter is a unit of radioactivity. A curie is the amount of radioactivity in a gram of radium. A picocurie is one trillionth of a curie.

RADIOACTIVE CONTAMINANTS	COLLECTION DATE	HIGHEST LEVEL DETECTED	RANGE OF LEVELS DETECTED	MCLG	MCL	UNITS	VIOLATION	LIKELY SOURCE OF CONTAMINATION
Gross alpha excluding radon & uranium	2019	22	1.54 - 21.6	0	15	pCi/L	No	Erosion of natural deposits
Combined radium 226/228	2019	4	1.06 - 3.8	0	5	pCi/L	No	Erosion of natural deposits
Uranium	2019	0.5215	0.874 - 0.5215	0	30	ug/l	No	Erosion of natural deposits

GET THE LEAD OUT!

Important information about drinking water and lead

What is lead and how are we exposed to it?

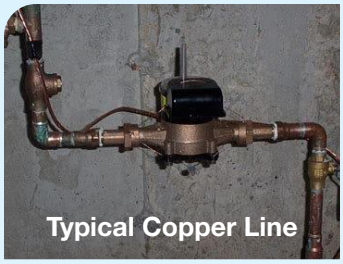
Lead is a common, naturally occurring metal found throughout the environment. Lead seldom occurs naturally in water supplies like rivers, lakes, and groundwater aquifers. Therefore, lead is rarely present in water coming from a treatment plant. Lead enters drinking water primarily as a result of corrosion or wearing away of materials in the water distribution system and household plumbing that contain lead. Despite concerns about drinking water, the U.S. Environmental Protection Agency notes that *"the greatest exposure to lead is swallowing or breathing in lead paint chips or dust."*

Where in my house do I have lead?

There are three main sources that allow lead to leach into drinking water: lead service lines, lead solder, and water faucets made from brass alloys containing lead. In the early 1900s lead was the preferred material for service lines since it is very flexible and durable. In the 1930s Joliet, along with many other communities around the country, banned the use of lead for service lines. At that time, Joliet began to require copper water service lines for all new construction. Before 1986, the solder used to join copper pipes together most likely contained lead. Lead alloy solder was used because it has a lower melting point and flows better to join the pipes. Before 2014, brass water fixtures were commonly made with brass alloys containing as much as 2% lead. While this does not seem to be a lot, when machined, the lead molecules will smear on the finished surface, increasing the contact surface with water. A house with a water softener is more likely to absorb contaminants if present in the home's plumbing.

What is Joliet doing?

The City of Joliet is offering a cost share program to residents with confirmed lead water service lines. The City will replace the public portion of the water service (b-box to water main) at no cost if the homeowner replaces the private portion (b-box to meter). The City already has a contractor on-call to complete the work and will coordinate the work for the homeowner. In most cases, the work will be completed using directional drilling to the maximum extent possible to minimize disruption to your yard. If you have a basement, the basement wall will be core drilled to allow the new water service line to enter at approximately the same location as the existing water service line. If your home is built on a slab, a small section of the slab will be saw cut and removed for installation of the new water service line. Approximate costs to the homeowner are $2500-$5000. Payment plans with the City for this work will be available with negotiable terms. To discuss participating in this program, please contact the Department of Public Utilities at 815-724-4220.



Typical Copper Line

Typical lead line

What should I do?

We encourage families with lead service lines or lead in their home plumbing to take precautions to assure they are not exposed to lead at the tap. Testing at the tap is the only way to measure the lead levels in your home or workplace.

- Testing for lead can help you know if there is too much lead in your drinking water. Water testing is important because you cannot see, taste, or smell lead. The City of Joliet offers water testing for lead at no cost to homeowners. For more information on water testing, please call 815-724-3675.

Families can take steps to reduce their risk by:

- **Let it Run** — Let your water run for at least 3-5 minutes before using it for drinking or cooking. Do this anytime the water has not been turned on for more than six hours. If you have a lead service line, you may need to let the water run longer.
- **Use Cold Water** — When drinking, cooking, or making baby formula use cold tap water. Never use hot water for preparing baby food. Hot water releases more lead from pipes than cold water. Boiling water does NOT remove lead from water.
- **Replace Plumbing Fixtures** — If a test shows your water has high levels of lead after you let the water run, you may want to take extra precautions.
- **Treat Your Water** — Contact the City to discuss a home treatment tool. Point-of-use (POU) water treatment tools are designed to treat small amounts of drinking water. They can sit on the counter, attach to the faucet, or be installed under the sink. All water treatment devices need regular care to work the right way. Not all water treatment devices are the same. Be sure to use a water treatment device made to reduce lead.

Where can I get more information?

For more information, visit our website at **www.Joliet.gov/GetTheLeadOut** or call us at **815-724-4220.**

For information on reducing lead exposure around your home or building and the health effects of lead, visit the EPA's Website at **www.epa.gov/lead** or contact the Will County Health Department Lead Poisoning Prevention Program at **815-727-8830.**

Alternative Water Source Program

Why do we need to find another source of water?

The City currently obtains its water from the Ironton Galesville aquifer. This is a deep aquifer located 1000 feet beneath the ground. We have known since the 1960s that the water being taken out of this aquifer is greater than the amount being recharged. However, it wasn't until recently that we knew the timeframe that depletion of the aquifer would impact our water supply. Modeling completed in the Fall of 2018 and updated in Spring 2020 indicated the aquifer will not meet the City's maximum day demands by 2030. Therefore, the City conducted a two phased alternative water source study in 2018 that was completed in Fall 2019.

What alternative water sources were examined?

Initally, fourteen alternative water sources were evaluated during Phase I of the study. During Phase II, five sources were studied in more detail to replace the existing water source in Joliet. This included Lake Michigan - DuPage Water Commission, Lake Michigan - City of Chicago, Lake Michigan - New Indiana Intake, the Kankakee River, and the Illinois River. In January 2020, the Joliet City Council selected Lake Michigan water and will continue to evaluate simultaneously the New Indiana Intake and City of Chicago alternatives.

When will a decision be made on the two remaining Lake Michigan options?

It is anticipated City Council will select to obtain Lake Michigan water via a new Indiana intake or purchase water from the Chicago Department of Water Management in December 2020.

When will construction begin?

Construction is anticipated to begin in 2025.

How will this affect my water bill?

The current average monthly water bill in 2020 is $30.75. In 2030, with Lake Michigan water, it is estimated the average water bill will increase by an additional $60-$70 per month. These bill increases are being further studied and refined in 2020.

What are the benefits of Lake Michigan water versus Joliet's existing well water supply?

The new treated Lake Michigan Water supply will have a more aesthetically pleasing water quality, with lower hardness and less potential for scaling of water fixtures. For water customers that have home water softeners, these will no longer be necessary.

What are some ways I can conserve water?

The City has a rain barrel subsidy and low flow toilet rebate program to help residents conserve water. Please visit www.RethinkWaterJoliet.org and click on the Conservation tab for more information.

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Where can I get more information?

www.RethinkWaterJoliet.org

Join our mailing list by providing your email address in the upper right corner of the website homepage and subscribe to keep up to date.

The following water restrictions are in place for the City of Joliet water customers year-round per City of Joliet Code of Ordinances, Sec. 31-126:

Lawn watering may only occur between 6:00 a.m. and 10:00 a.m. or 6:00 p.m. and 10:00 p.m. at even numbered addresses on even numbered days and at odd numbered addresses on odd numbered days.