City of Jackson
2018
Drinking Water Consumer Confidence Report

Water Treatment Plant
608 Reservoir Road
Jackson, Ohio 45640
740-286-3010

Important Facts About the Safety of Your Drinking Water

Where Your Water Comes From:
What Is In Your Drinking Water:
How Your Drinking Water is Treated and Tested:

Consumer Confidence Report of 2018

This report was prepared to meet the EPA's National Primary Water Regulation for Consumer Confidence Reports and is available to all customers. Each year we must use the previous full year data (2017).

Source Water Information

The City of Jackson public water system uses surface water drawn from two reservoirs, which are fed by tributaries to Little Salt Creek. For the purposes of source water assessments, in Ohio all surface waters are considered to be susceptible to contamination. By their nature, surface waters are readily accessible and can be contaminated by chemicals and pathogens which may rapidly arrive at the public drinking water intake with little warning or time to prepare. The City of Jackson's drinking water source protection area contains potential contaminant sources such as home sewage disposal system discharges, runoff from residential, agricultural and home sewage disposal system discharges, runoff from residential, agricultural and urban areas, and oil and gas production.

The City of Jackson's public water system treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect the City's two reservoirs. More detailed information is provided in the City of Jackson's Drinking Water Source Assessment report, which can be obtained by calling Ron Aldrich, Water Plant Superintendent at (740) 286-3010.

The City of Jackson has an emergency supply of water that is available from Buckeye Creek, just downstream of the treatment plant. This impoundment is used to supply limited amounts of water if the two reservoirs must be taken off line. To date we have not needed to utilize this source.

Protection of Our Water Source

Protecting our drinking water source from contamination is the responsibility of all residents. While the lake sources are remotely located, they are used for recreational boating and fishing. Other activities include hiking, horseback riding, and hunting. By working together, we can ensure that very little contamination is allowed into the lake. By careful control of the watershed we can ensure an adequate safe supply of water for our use as well as for future generations.

About Your Drinking Water

The City of Jackson has a current, unconditioned license to operate our water system. Since the City of Jackson's drinking water supply is obtained from a surface water source, it requires a significant amount of treatment before it is considered safe for consumption. Water is pumped from City's two reservoirs to the treatment plant where treatment chemicals are added. These chemicals cause many of the contaminants in the lake water to form large particles which can be settled and removed in the settling basins. The water then is filtered, the pH is adjusted, chlorine and fluoride are added, and a inhibitor is also added to aid in prevention of corrosion of the system piping and home fixtures. Chlorine is used as a disinfectant to prevent bacteria, viruses and other microbiological contaminants from regrowing in the water system pipes and storage tanks.

The City of Jackson has installed an Ash brook sludge press to allow all of the solid waste leaving the water plant to be captured and taken to a landfill. This project was mandated by the Ohio EPA, which also provided grants and loans to allow the project to be completed. This project insures that the City of Jackson Water Treatment Plant is committed to provide the same quality of water for the environment as it does for the citizens.

The Ohio EPA requires regular sampling to ensure water safety. The City of Jackson's Water Treatment Plant conducts sampling for bacteria, inorganic, radiological, synthetic organic and volatile organic contaminant sampling during 2017. Samples were collected for a total of 131 different contaminants most of which were not detected in the City of Jackson water supply. The Ohio EPA requires us to monitor for some contaminates 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.

From time to time, City of Jackson may enact a boil advisory for a particular area. This is because the integrity of a water facility has been compromised in some way by depressurization, water break, or some other type maintenance which could allow contamination to enter the waterline. While these normally represent no health hazard, there are laws outlining the situations in which a boil advisories are required. However, it is the practice of City of Jackson to take a conservative course of action in order to protect our customers. The normal means of notification in the event there is a boil alert is to place it on the local radio stations. Please monitor your local radio station for notices for boil alerts and for notification that the boil alert has been lifted. Please feel free to contact our office if you have any questions regarding a boil advisory in your area.

Public participation and comments are encouraged at regular meetings of the Jackson City Council, which meets on a biweekly basis, the second and fourth Monday of the month. For more information on your drinking water contact: Ron Aldrich, Water Plant Superintendent at (740) 286-3010.

Information on those contaminants that were found in the City of Jackson's Drinking Water are provided in the table. Also provided are definitions of some terms that are used in the table but may not be familiar to you.

What Are The Sources of Contamination to Drinking Water?

The source 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 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 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, gas production and mining activities.

In order to ensure that tap water is safe to drink, the 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 a small amount of some contaminants. The presence of contaminants does not necessarily indicate the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agencys Safe Drinking Water Hotline (1-800-426-4791).

Who needs to take special precautions?

Some people may be more vulnerable to contaminants in drinking water other than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, person who undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infection. These people should seek advise 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 (1-800-426-4791).

Table of Detected Contaminants
City of Jackson

Contaminants	MCLG	MCL	Level Found	Range of Detection's	Violations	Year Sampled	Typical Source of Contaminants
Turbidity (NTU)	NA	TT	0.110	0.02-0.100	NO	2017	Soil runoff.
Turbidity (% sample meeting standards)	NA	TT	100%		NO	2017	Soil runoff.
Total Organic Carbon	NA	TT	2.3	1.50-2.30	NO	2017	Naturally present in the environment.
Inorganic Contaminants							
Nitrate (ppm)	10	10	0.32	0-0.32	NO	2017	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium (ppb)	2,000	2,000	0.023	0-0.023	NO	2017	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride (ppm)	4	4	1.22	0.94-1.22	NO	2017	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
. Lead (ppb)	0	15	0	0 - 36	NO	2015	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (ppm)	1.300	1.300	0	0 - 1.1	NO	2015	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
During the Lead monitoring, one out of 20 samples were found to have lead in excess of the Action Level of 15 ppb. Copper Monitoring was zero out of 20 samples were found to have copper levels in excess of the Action Level of 1.3 ppm. Repeat samples were less than detectable limits.							
Volatile Organic Contaminants							
Total Trihalomethanes (ppb)	NA	80	52.2	38.4-76.40	NO	2017	By-product of drinking water disinfection.
Five Haloacetic Acids (ppb)	NA	60	27.09	17.7-39.80	NO	2017	By-product of drinking water disinfection.
Residual Disinfections							
Chlorine (ppm)	MRDLG = 4	MRDL= 4	1.72	1.14-1.72	NO	2017	Water additive used to control microbes.

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 Jackson Water Treatment plant 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 and cooking. If you are concerned about lead in your water, you can 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 at 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

The valve reported under "Level Found" for Total Organic Carbon (TOC) is the lowest ratio between the percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1) indicated that the water system is in compliance with TOC removal requirements. A value of less than (1) indicates a violation of the TOC removal requirements.

Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 5 NTU at any time. As reported above the City's of Jackson's highest recorded turbidity result for 2017 was 0.110 NTU and the lowest monthly percentage of samples meeting the turbidity limits was 100%.

Under the Stage 2 Disinfectants/Disinfection Byproducts Rule (D/DBPR), our public water system was required by USEPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE, and is intended to identify locations in our distribution system with elevated disinfection byproduct concentrations. The locations selected for the IDSE may be used for compliance monitoring under Stage 2 DBPR, beginning in 2013. Disinfection byproducts are the result of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water. Disinfection byproducts are grouped into two categories, Total Trihalomethanes (TTHM) and Haloaetic Acid (HAA5). USEPA sets standards for controlling the levels of disinfectants and disinfectant byproducts in drinking water, including both THMs and HAAs.

The following parameters are required to be tested routinely by EPA Regulation. No detectable amounts were found in the 2017 testing program.

Total Coliform Bacteria, Arsenic, Alachor, Simazine, Benzene, Carbon Tectrachloride, o-Dichlorobenzene, p-Dichlorobenzene, 1,2-Diclorethane, 1,1-Dictoroethylene, cis-1,2-Dicloroehtylene, trans-1,2-Dicloroethylene, Dicloromthane, 1,2-Dicloropropane, Ethylbenzene, Styrene, Tetrachloethylene, 1,2,4-Tricolorbenzene, 1,1,1-Triclorethane, 1,1,2-Trichloroethane, Trichloroethane, 1,1,2-Trichloroethane, Tricloroethylene, Vinyl Chloride, Total Trihalomethanes, Total Organic Carbon, Halo acetic Acids, Xylenes, 2,4-dinitrotoluene, 2,6-dinitrotoluene, DCPA di-acid degradate, EPTC Molinate, Nitrobenzene, Perchlorate, Terbaci, Antimony, Barium, Beryllium, Cadmium, Chromium, Cyanide, Mercury, Nickel, Selenium and Thallium.

Maximum Contaminant Level Goal (MCLG) - The level of contaminant in drinking water below which there is no known or expected risk to health.

Maximum Contaminant Level (MCL) - The highest level of contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment currently known.

Maximum Residual Disinfection Level Goal (MRDLG): The level of drinking water disinfectant below which there is no known expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Parts per Million (ppm) - Are units of measurement for the concentration of a contaminant. A part per million corresponds to one second in approximately 11.5 days.

Parts per Billion (ppb) - Are units of measurement for the concentration of a contaminant. A part per billion corresponds to one second in approximately 31.7 years.

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

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

Nephelometric Turbidity Unit (NTU) - Used to measure the cloudiness in drinking water.

The "<" symbol - A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.

IDSE - Initial Distribution System Evaluation**.**

"NA" - means "Not Applicable"

Backflow Prevention

What is backflow?

Backflow is a condition in the water system where water, sewage, gases or other fluids flow into the distribution piping from any source other than that of the potable water supply. This can occur in one of two ways: via backpressure or back-siphonage.

What is backpressure?

Backpressure is caused by internal plumbing pressure exceeding the pressure of the potable water supply. This can occur in many ways. One cause is private well that is capable of pumping water at a higher pressure than the city supply. This will most likely occur when a cross-connection is made by a homeowner during times of low pressure in the potable water system, i.e. hydrant flushing, water main breaks, fires, or low pumping cycles, in an attempt to compensate for the lower pressure. Another source of contamination is a pressurized fire suppression system which maintains a pressure zone higher than the city water supply.

What is backsiphonage?

Backsiphonage occurs when there is a negative pressure in the city supply lines or a customer's internal piping. Should a low or negative pressure situation occur in the piping, water will be back siphoned from many sources into the distribution system. Low or negative pressures can be caused by many conditions including water main breaks, hydrant flushing, fires, and high demand. ***A few examples of sources for backsiphonage are hoses left in puddles or sinks, submerged water supply inlets, older style toilets, aspirators, lawn irrigation systems, and booster pumps.***

Who regulates backflow prevention and cross connection control?

Protection for the public water system is accomplished by maintaining a complete and comprehensive Backflow Prevention and Cross Connection Control Program. The program is mandated by the Environmental Protection Agency (EPA) and all licensed public water systems must abide by adopted regulations. Laws defining backflow prevention, regulations, requirements, and penalties were written and adopted in 1972 by the Federal EPA. State regulations are contained in the Ohio Board of Building Standards, the Ohio Department of Health, and the Ohio EPA. Local regulations are contained in the City of Jackson Codified Ordinances. ***(Ordinance # 11-89 passed on 3-14-1989)***

How is backflow prevention and cross connection control accomplished?

The water supplier is responsible for the implementation and continuance of a comprehensive backflow prevention/cross connection control program. This begins with the identification of any possible source of contamination to the water system. With commercial customers, this means an on-site inspection of each premise to identify any potential threat to the quality of the water. In the case of an individual homeowner, potential contamination source are identified by several means.

Records of a lawn irrigation system, private water well, or on-site inspection will alert the purveyor to the need for protection.

Once identified, the inspector notifies the customer of the required type of backflow prevention device(s) to be installed and tested. A suitable amount of time is allowed for compliance. The water purveyor maintains records of all inspections, devices in the system, as well as yearly test reports. As a courtesy, the purveyor sends a reminder to each customer prior to the annual test date. Inspections are on a ongoing basis and all customers that receive water may be subject to an inspection at some time in the future. Customers will have an advance notice of such inspection.

Fortunately, keeping your water safe from these contamination is easy. Take the following precautions to protect your drinking water.

- ***Never:*** **submerge hoses in buckets, pools, tubs, or sinks.**
- ***Do not:*** **use spray attachments without a backflow prevention device. The chemicals used on your lawn are toxic and can be fatal if ingested.**
- ***Do:*** **buy and install inexpensive backflow prevention device all threaded faucets around your home. They are available at hardware stores and home-improvement centers.**
- ***Always:*** **keep the end of the hose clear of possible contaminates.**

Vacuum breakers for home water hoses may be purchased at the Utility Office or most hardware stores.

Useful Customer Information

Did you know that 40% of your daily water goes to flush your toilet, 30% goes to your bath and shower, 15% goes to your laundry, 10% goes to preparing food, and only 5% goes to all other uses. The amount of gallons used for these activities are as followed:

*	**Toilet Flushing**	**5 to 7 gallons**
*	**Shower**	**25 to 50 gallons**
*	**Tub Bath**	**36 to 60 gallons**
*	**Dishwashing**	**10 to 25 gallons**
*	**A Load of Washing**	**20 to 35 gallons**
*	**Washing the Car**	**45 to 70 gallons**

Even a small leak can cost you plenty. A leak the size of a pencil lead can cost you heavily on your next bill, if left unattended. All leaks should be fixed promptly. They will only get bigger if not fixed. A leak can add up quickly. The following table illustrates how much money even a small leak can accumulate.

	Diameter of Leak		**Cost to Customer**
○	**25,000 gals/mo.**	**or**	**$ 225.33/mo.**
○	**100,000 gals/mo.**	**or**	**$ 726.80/mo.**
○	**300,000 gals/mo.**	**or**	**$1715.60/mo.**
○	**400,000 gals/mo.**	**or**	**$2108.60/mo.**