



CITY OF St. Joseph

ANNUAL WATER QUALITY REPORT FOR 2023

JUNE 2024

We are proud to report the water provided by the City of St. Joseph meets or surpasses established water quality standards



The purpose of this report is to provide you with information on the quality of the drinking water produced by the St. Joseph Water Treatment Plant during the 2023 calendar year. The State of Michigan and the U.S. EPA require us to test our water on a regular basis to insure its safety. We met all monitoring requirements for 2023.

The federal government established the requirement for this Water Quality Report, more formally known as a Consumer Confidence Report, in 1998. We welcome this opportunity to provide you with details of where your water

comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and The Michigan Department of Environment, Great Lakes, and Energy (EGLE) Standards.

Additionally, this report helps keep you informed on current and upcoming projects and the ongoing efforts by the City of St. Joseph and Authority to meet the growing water demands of the service area in the most economical manner possible.

Questions regarding this report can be directed to Greg Alimenti, Water Plant Superintendent, at (269) 983-1240.

Lake Michigan Source Water Assessment



Lake Michigan is the source of the water for the St. Joseph Water Treatment Plant. The new intake construction in 2011 extends approximately one mile into the Lake. In 2004, a Source Water Assessment was conducted by the Michigan Department of Environmental Quality using procedures established in the Great Lakes Protocol, Source Water Assessment Program.

The criteria were used to develop a “sensitivity” rating, which reflects the natural ability of our source water area to provide protection against contamination of the water supply.

A water source “susceptibility” rating was then established based upon the sensitivity rating coupled with other factors that affect whether a contaminant reaches the intake. Surface source sensitivity and susceptibility ratings range from moderate sensitivity/moderately low susceptibility to very high sensitivity/very high susceptibility.

The conclusion of the assessment indicated the Lake Michigan water used by the St. Joseph Water Treatment Plant is considered highly sensitive and highly susceptible to potential contamination but the report also

stated the “City of St. Joseph Water Treatment Plant has effectively treated this source water to meet drinking water standards.”

In 2024, the City updated a Surface Water Intake Protection Plan (SWIPP). Implementation of the SWIPP continues through source water monitoring at the plant’s Lake Michigan intake and from the nearby St. Joseph River, contingency planning, public education and staff training.

For more information on the SWIPP or Source Water Assessment please call the St. Joseph Water Plant at (269) 983-1240.

General Information

Contaminants and Their Presence In Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of 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 (800-426-4791).

Vulnerability of Sub-Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people, such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS, 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).

Sources of Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. Our water comes from surface water. 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.

In order to ensure tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health. Many water suppliers add a disinfectant to drinking water to kill germs such as *giardia* and *E. coli* especially after heavy rainstorms. Your water system may add more disinfectant to guarantee that these germs are killed.

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 and residential uses.
- Radioactive contaminants, which are naturally occurring or the result of oil and gas production and mining activities.
- 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.

Terms and Abbreviations Used On These Pages

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.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that

addition of a disinfectant is necessary for control of microbial contaminants.

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

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

N/A: Not applicable

ND: Not detectable at testing limit

ppb: Parts per billion or micrograms per liter

ppm: Parts per million or milligrams per liter

ppt: Parts per trillion or milligrams per liter

pCi/L: Picocuries per liter (a measure of radioactivity). *

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

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2023 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2023.

The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one year old. Chlorine, HAA5 and TTHM results are reported as "Running Annual Averages" (RAAs).

REGULATED CONTAMINANT	MCL	MCLG	YOUR WATER	RANGE	SAMPLE DATE	VIOLATION YES/NO	TYPICAL SOURCE OF CONTAMINANT
Fluoride (ppm)	4	4	0.67	N/A	3/13/2023	No	Water additive to protect teeth.
Barium (mg/L)	2	2	.02	N/A	10/19/2020	No	Discharge of drilling wastes, discharge from metal refineries, erosion of natural deposits.
Chromium (ppb)	100	100	1.4	N/A	10/18/2020	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
Cyanide (ppb)	150	150	6.1	ND	3/13/2023	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
TTHM - Total Trihalomethanes (ppb)	80	N/A	71.6	33.0 - 68.6	4 quarters	No	Byproduct of drinking water disinfection.
HAA5 Haloacetic Acids (ppb)	60	N/A	38.7	9.5 - 72.9	4 quarters	No	Byproduct of drinking water disinfection.
Chlorine (ppm)	4	4	1.16	0.94 to 1.46	Daily	No	Water additive used to control microbes.
Gross Alpha	15	0	.48	N/A	4/12/2022	No	Erosion of natural deposits.
Beta emitters (pCi/L)	50	0	0	N/A	1/21/2010	No	Decay of natural and man-made deposits.
Combined radium (pCi/L)	5	0	2.2	N/A	4/22/2013	No	Erosion of natural deposits.
Nitrate (ppm)	10	N/A	0.7	N/A	3/13/2023	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

SPECIAL MONITORING AND UNREGULATED CONTAMINANTS*	YOUR WATER	RANGE	SAMPLE DATE	TYPICAL SOURCE OF CONTAMINANT
Sodium (ppm)	12	N/A	3/13/2023	Naturally present in the environment.
Hardness (ppm)	145	139-162	2023	
Calcium (ppm)	39	36-42	2023	
Magnesium (ppm)	12	11-13	2023	
Sulfate (ppm)	32.5	N/A	2023	
Alkalinity (ppm)	107	99-115	2023	
Cyindrospermopsin (ppb)	ND	N/A	2023	
Anatoxin-a (ppb)	ND	N/A	2023	
Total Microcystin (ppb)	0.0096	N/A	7/24/2023	

* Unregulated contaminants are those, for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In 2023 the City of St. Joseph participated in the fifth round of the Unregulated Contaminant Monitoring Rule (UCMR 5). For a copy of the results please call (269) 983-1240.

INORGANIC CONTAMINANT SUBJECT TO ACTION LEVEL AL	ACTION LEVEL	MCLG	YOUR WATER	RANGE	SAMPLE DATE/ LOCATION	NUMBER OF SAMPLES ABOVE AL	TYPICAL SOURCE OF CONTAMINANT
Lead (ppb)	15	0	12	0 - 25	2023 City of St. Joseph	2	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits.
Copper (ppm)	1.3	1.3	0.1	0 - 0.1	2023 City of St. Joseph	0	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb)	15	3.0	3	0 - 5	2023 SMRSS & WA	0	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits.
Copper (ppm)	1.3	1.3	0.1	0 - 0.2	2023 SMRSS & WA	0	Corrosion of household plumbing systems; Erosion of natural deposits.

MICROBIAL CONTAMINANTS	MCL	MCLG	HIGHEST LEVEL DETECTED	VIOLATION YES / NO	TYPICAL SOURCE OF CONTAMINANT
Total Coliform Bacteria	TT	0	0% of all samples collected 0 of 696	No	Naturally present in the environment.
Fecal Coliform and <i>E. coli</i>	Routine and repeat sample total coliform positive, and one is also fecal or <i>E. coli</i> positive	0	0% of all samples collected 0 of 696	No	Human and animal fecal waste.

SUBSTANCE (UNITS)	MCL	MCLG	HIGHEST LEVEL DETECTED	RANGE OF DETECTION	VIOLATION YES/NO	TYPICAL SOURCE OF CONTAMINANT
Turbidity (NTU)	TT= 1 NTU TT=percentage of samples equal to or below 0.3 NTU	N/A	0.52	0.02 - 0.52	No	Soil runoff.

PER-AND POLYFLUOROALKYL SUBSTANCES (PFAS)	MRDL	MRDLG	YOUR WATER	RANGE	YEAR SAMPLED	VIOLATION YES/NO	TYPICAL SOURCE OF CONTAMINANT
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ppt)	370	N/A	ND	N/A	2023	No	Discharge and waste from industrial facilities utilizing the Gen X chemical process.
Perfluorobutane sulfonic acid (PFBS) (ppt)	42	N/A	ND	N/A	2023	No	Discharge and waste from industrial facilities; stain-resistant treatments.
Perfluorohexane sulfonic acid (PFHxS) (ppt)	51	N/A	ND	N/A	2023	No	Firefighting foam; discharge and waste from industrial facilities.
Perfluorohexanoic acid (PFHxA) (ppt)	400,000	N/A	ND	N/A	2023	No	Firefighting foam; discharge and waste from industrial facilities.
Perfluorononanoic acid (PFNA) (ppt)	80	N/A	ND	N/A	2023	No	Discharge and waste from industrial facilities; breakdown of precursor compounds.
Perfluorooctane sulfonic acid (PFOS) (ppt)	60	N/A	2.5	1.9-2.8	2023	No	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities.
Perfluorooctanoic acid (PFOA) (ppt)	4	N/A	2.5	2.2-2.9	2023	No	Discharge and waste from industrial facilities; stain-resistant treatments.



The St. Joseph Water Plant quality control laboratory performs more than 58,000 tests annually on your water before it reaches you.

Water Test FAQ

Information About Lead

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 St. Joseph 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 have a lead service line it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line.

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 EPA's Safe Drinking Water Hotline (800-426-4791) or online at: www.epa.gov/safewater/lead.

Infants and children who drink water containing lead could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Distribution System Material Inventory

The number of services estimated to be lead are 2,359 in the City and 6 in the communities served by the SMRSS&WA (St. Joseph Charter Township, Lincoln Charter Township, and Royalton Charter Township).

The total numbers of services of all materials whether copper, galvanized, plastic or lead are as follows:

- City of St. Joseph = 3941
- Royalton Charter Township = 1404
- Lincoln Charter Township = 5451

What is Turbidity?

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our

filtration system. Nephelometric Turbidity Units (NTU) is a measure of the clarity of water. The lowest monthly average meeting the turbidity limits was 100%.

What is Cryptosporidium?

Cryptosporidium is a microscopic organism that, when ingested can result in diarrhea, fever and other gastrointestinal symptoms. The St. Joseph Water Plant tested for Cryptosporidium in 2018. We have never detected it in our source water.

The organism is present in Lake Michigan and the nearby St. Joseph River. It comes from animal wastes in the watershed. Cryptosporidium is eliminated by an effective combination including filtration, sedimentation and disinfection.

What is the Average Water Hardness?

The average water hardness is 145 ppm (as CaCO₃). This equates to 8.5 Grains.



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The St. Joseph Water Treatment Plant

Originally constructed in 1892, the Treatment Plant serves the St. Joseph area with water drawn through a 48" diameter intake pipe installed in 2011.

Treatment processes include screening, disinfection, settling and filtering. The Treatment Plant is manned 24 hours per day and your water is constantly monitored for quality.

The current Plant personnel listed here have more than 155 years of collective experience at the St. Joseph Water Treatment Plant and are dedicated to providing safe and reliable drinking water to our community.

Contact Information

WATER PLANT SUPERINTENDENT:

Greg Alimenti (Email: galimenti@sjcity.com)

CHIEF PLANT OPERATOR:

Shawn Orlaske

MAINTENANCE FOREMAN:

Monica Herrick

WATER PLANT OPERATORS:

Ty Shindeldecker, Jerrold Thomas,
Jeff Peden, Nick Gard

WATER TREATMENT PLANT PHONE: 269-983-1240