



# CITY OF St. Joseph

## ANNUAL WATER QUALITY REPORT FOR 2024

**JUNE 2025**

*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 2024 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 2024.

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 our SWIPP or the Source Water Assessment please call the St. Joseph Water Plant at (269) 983-1240.*



# SCIP Water Plant and Water System Improvements



**IF YOU'VE BEEN TO LIONS PARK RECENTLY** you may have noticed the large crane hanging over the St. Joseph Water Plant at the end of Lions Park Drive and wondered what was going on. As part of Phase II of the Strategic Capital Improvement Plan (SCIP), the crane is being used to install new water treatment equipment and to load construction materials through the roof of the plant.



The Strategic Capital Improvement Plan (SCIP) outlines funding for three phases of planning, design and building water infrastructure projects in the shared system served by the St. Joseph Water Plant.

## SCIP Phase I

Completed in 2020, Phase I covered the most critical projects based on condition assessments, the consequence and likelihood of failure determinations and service expectations.

### COMPLETED PHASE I PROJECTS:

- converted chlorine gas disinfection to bleach disinfection
- upgraded chemical feed systems
- upgraded electrical switchgear
- replaced yard piping and valves
- improved on-site water storage reservoirs
- constructed a high-service pump station

## SCIP Phase II

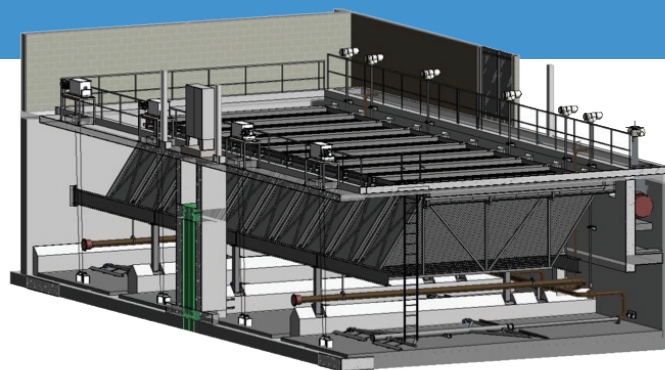
Current SCIP projects on schedule to be completed in this summer include replacing the upflow clarifiers with inclined plate settlers. The existing upflow clarifiers, built in 1974, have reached the end of their service life and replacement parts are no longer available. Older clarifiers like these are sensitive to temperature changes and rapid increases in the flow of Lake Michigan water which can negatively affect the pre-treatment process of water filtration.

This 17.4-million-dollar improvement project is funded by water rates and financed with a Drinking Water State Revolving Fund (DWSRF) low-interest loan and a grant through the State of Michigan. In addition to the new inclined plate settlers, other improvements will include roof work, interior architectural improvements, new ventilation, instrumentation, electrical and valves.



↑ *In the Flocculation Basins, sediment and suspended particles in raw lake water are chemically bound together to facilitate their removal.*





↩↑ Our new inclined plate settlers are custom built into the basins originally constructed for the old clarifiers. The first unit was placed into service in July of 2024. Plant staff reported an immediate improvement in pre-treated water quality and zero temperature-induced process upsets. The improved pre-treatment water quality has led to better filtered water quality, which is central to compliance with the Safe Drinking Water Act.



↑ The new Inclined Plate Settlers separate out the clumps of "floc" particles formed in the flocculation basins. This water is now ready for disinfection and filtration.

### SCIP Phase III

Future SCIP projects include repainting of the St. Joseph, Royalton and Lincoln water towers, completion of the water plant roof, and HVAC upgrades inside the water plant. The City has applied for a fiscal year 2026 Drinking Water State Revolving Fund (DWSRF) loan for this work. The loan funding is through the State of Michigan and is competitive. The list of communities that will be funded is published in August of 2025.

The 2026 DWSRF loan will also cover lead service line and water main replacements in the city of St. Joseph not included in the Strategic Capital Improvement Plan projects. The debt service for these city-only projects

will be funded by city system water rates while the debt service for the SCIP projects will be funded by water customers residing in the St. Joseph City, Lincoln Charter Township, St. Joseph Charter Township and Royalton Charter Township.

The DWSRF loan request of \$5.36 million for city-only projects will result in an estimated \$8.17/quarter increase on the average residential city water bill and the DWSRF loan request of \$2.2 million for the water plant and towers projects will result in an \$0.86/quarter increase for city and township water users.





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.\* (See asterisk text on page 5.)

**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 2024 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, 2024.

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          | 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  | <0.005     | ND           | 4/9/2024    | No               | Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.       |
| TTHM - Total Trihalomethanes (ppb) | 80  | N/A  | 61         | 21.9 - 49    | 4 quarters  | No               | Byproduct of drinking water disinfection.  |
| HAA5 Haloacetic Acids (ppb)        | 60  | N/A  | 39.1       | 9.5 - 72.9   | 4 quarters  | No               | Byproduct of drinking water disinfection.  |
| Chlorine (ppm)                     | 4   | 4    | 1.04       | 0.94 to 1.30 | Daily       | No               | Water additive used to control microbes.   |
| Gross Alpha                        | 15  | 0    | .48        | N/A          | 4/12/2022   | No               | Erosion of natural deposits.   |
| Nitrate (ppm)                      | 10  | N/A  | 0.3        | N/A          | 5/29/2024   | 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)                                     | 11         | N/A       | 5/29/2024   | Naturally present in the environment. |
| Hardness (ppm)                                   | 145        | 135-157   | 2024        |                                       |
| Calcium (ppm)                                    | 39         | 36-43     | 2024        |                                       |
| Magnesium (ppm)                                  | 12         | 11-18     | 2024        |                                       |
| Sulfate (ppm)                                    | 35.1       | 32.4-39.3 | 2024        |                                       |
| Alkalinity (ppm)                                 | 107        | 100-118   | 2024        |                                       |
| Cylindrospermopsin (ppb)                         | ND         | N/A       | 2024        |                                       |
| Anatoxin-a (ppb)                                 | ND         | N/A       | 2024        |                                       |
| Total Microcystin (ppb)                          | ND         | N/A       | 2024        |                                       |

| SUBSTANCE (UNITS) | MCL   | MCLG | HIGHEST LEVEL DETECTED | RANGE OF DETECTION | VIOLATION YES/NO | TYPICAL SOURCE OF CONTAMINANT |
|-------------------|---|------|------------------------|--------------------|------------------|-------------------------------|
| Turbidity (NTU)   | TT= 1 NTU<br>TT=percentage of samples equal to or below 0.3 NTU | N/A  | 0.38                   | 0.02 - 0.38        | No               | Soil runoff.                  |

\* 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    | 3          | 0 - 7   | 2024<br>City of St. Joseph | 0                          | Lead service lines, corrosion of household plumbing including fittings and fixtures;<br>Erosion of natural deposits. |
| Copper (ppm)                                     | 1.3          | 1.3  | 0.1        | 0 - 0.1 | 2024<br>City of St. Joseph | 0                          | Corrosion of household plumbing systems; Erosion of natural deposits.  |
| Lead (ppb)                                       | 15           | 3.0  | 3          | 0 - 5   | 2022<br>SMRSS & WA         | 0                          | Lead service lines, corrosion of household plumbing including fittings and fixtures;<br>Erosion of natural deposits. |
| Copper (ppm)                                     | 1.3          | 1.3  | 0.1        | 0 - 0.2 | 2022<br>SMRSS & WA         | 0                          | Corrosion of household plumbing systems; Erosion of natural deposits.  |

| 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     | 2024         | No               | Discharge and waste from industrial facilities utilizing the Gen X chemical process.                         |
| Perfluorobutane sulfonic acid (PFBS) (ppt)           | 420     | N/A   | ND         | N/A     | 2024         | No               | Discharge and waste from industrial facilities; stain-resistant treatments.                                  |
| Perfluorohexane sulfonic acid (PFHxS) (ppt)          | 51      | N/A   | ND         | N/A     | 2024         | No               | Firefighting foam; discharge and waste from industrial facilities.   |
| Perfluorohexanoic acid (PFHxA) (ppt)                 | 400,000 | N/A   | ND         | N/A     | 2024         | No               | Firefighting foam; discharge and waste from industrial facilities.   |
| Perfluorononanoic acid (PFNA) (ppt)                  | 10      | N/A   | ND         | N/A     | 2024         | No               | Discharge and waste from industrial facilities; breakdown of precursor compounds.                            |
| Perfluorooctane sulfonic acid (PFOS) (ppt)           | 4       | N/A   | 2.1        | 1.9-2.4 | 2024         | No               | Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities. |
| Perfluorooctanoic acid (PFOA) (ppt)                  | 4       | N/A   | 2.1        | 1.9-2.4 | 2024         | No               | Discharge and waste from industrial facilities; stain-resistant treatments.                                  |

| MICROBIAL CONTAMINANTS            | MCL   | MCLG | HIGHEST LEVEL DETECTED                  | VIOLATION YES / NO | TYPICAL SOURCE OF CONTAMINANT         |
|-----------------------------------|---|------|---|--------------------|---------------------------------------|
| Total Coliform Bacteria           | TT  | 0.4  | 0% of all samples collected<br>3 of 719 | 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<br>0 of 719 | No                 | Human and animal fecal waste.         |

## LEVEL 1 ASSESSMENT


Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, water-borne pathogens may be present, or that a possible pathway exists through which contamination may enter the drinking water distribution system.

When a coliform is detected assessments are necessary to identify and correct any problems that found during these assessments. In August of 2024 we were required to conduct

a Level 1 Assessment due to routine distribution samples that tested positive for coliform.

Follow-up testing upstream and downstream of the sample site tested negative for coliform, indicating that the potential contamination was likely from inside the building and not from the distribution system. St. Joseph Water Plant staff inspected the building and discovered a cross connection that was immediately corrected.





**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

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The City of St. Joseph is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home.

Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly.

Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing

laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes 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 and wish to have your water tested, contact City of St. Joseph Water Plant Superintendent at (269) 983-1240 for available resources. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at: [www.epa.gov/safewater/lead](http://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 2,177 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 CaCO<sub>3</sub>). This equates to 8.5 Grains.



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ST. JOSEPH, MI 49085

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### ***The St. Joseph Water Treatment Plant***

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*Originally constructed in 1892, the Water 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 plant personnel listed here have more than 116 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***

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**WATER PLANT SUPERINTENDENT:**

Greg Alimenti (Email: [galimenti@sjcity.com](mailto:galimenti@sjcity.com))

**CHIEF PLANT OPERATOR:**

Shawn Orlaske

**MAINTENANCE FOREMAN:**

Monica Herrick

**WATER PLANT OPERATORS:**

Avie Krauss, Jerrold Thomas,  
Jeff Peden, Nick Gard

**WATER TREATMENT PLANT PHONE: 269-983-1240**

