

Frequently Asked Questions

**Q. Is cloudy water safe?**

A. Water that appears milky is usually the result of harmless tiny air bubbles (dissolved oxygen) trapped in the water, like gas bubbles in carbonated soft drinks. After a glass of this water sits for a few minutes, the water will clear as the air bubbles float to the top. Since cold water can hold more dissolved oxygen than warm water, this type of cloudiness occurs more often in the winter. As the water warms up in your household plumbing, the extra oxygen does not stay dissolved and is released, creating tiny bubbles. Air bubbles do not affect the safety of the water. If you experience cloudy water that does not clear after five minutes, call the Department of Public Works at (586) 446-2440.

**Q. Is the chlorine used to disinfect water harmful to my health?**

A. The GLWA uses chlorine to disinfect our drinking water. Chlorine has been used to treat municipal water in the United States since 1908 and it is the most effective way to ensure that water stays disinfected as it travels through water delivery systems. Chlorine prevents waterborne epidemics such as cholera, typhoid and hepatitis. The amount of chlorine in the drinking water as it leaves the treatment plant is typically 1 milligram per liter (ppm). Chlorine in this quantity poses no known or expected health risk.

Detected Contamination Tables

These tables are based on tests conducted by GLWA in 2022. Many tests are conducted throughout the year however, only tests that show the presence of a contaminant are shown here. Below is a key to the terms used in the tables throughout this report.

| Symbol | Abbreviation for                         | Definition / Explanation   |
|--------|--|--|
| AL     | Action Level                             | The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.  |
| HAA5   | Haloacetic Acids                         | HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.  |
| LRAA   | Locational Running Annual Average        | The average of analytical results for samples at a particular monitoring location during the previous four quarters.   |
| MCL    | Maximum Contaminant Level                | 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 technologies.                                  |
| MCLG   | Maximum Contaminant Level Goal           | The level of contaminant in drinking water below which there is no known or expected risk to health.   |
| MRDL   | Maximum Residual Disinfectant Level      | 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.                        |
| MRDLG  | Maximum Residual Disinfectant Level Goal | 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. |
| n/a    | Not Applicable                           |  |
| ND     | Not Detected                             |  |
| NTU    | Nephelometric Turbidity Units            | Measures the cloudiness of water.  |
| ppb    | Parts Per Billion                        | 1 ppb = micrograms/liter. A microgram =1/1000 milligram (one in one billion)   |
| ppm    | Parts Per Million                        | 1 ppm = 1 milligram/liter. A milligram =1/1,000 gram (one in one million)  |
| RAA    | Running Annual Average                   | The average of analytical results for all samples during the previous four quarters.   |
| TTHM   | Total Trihalomethanes                    | Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.   |

The State of Michigan and the US EPA require us to test our water on a regular basis to ensure its safety, and allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary from year to year. All of the data in the charts below is representative of the water quality, but some testing data is more than one year old. We met all the monitoring and reporting requirements for 2022. We update this report annually and will keep you informed of any problems that may occur throughout the year as they happen.

Copies of this report are available at Sterling Heights City Hall, Community Center, Library, the Department of Public Works, and online at: [www.sterling-heights.net/waterquality](http://www.sterling-heights.net/waterquality). This report will not be sent to you.

2022 Regulated Detected Contaminants Tables

| Inorganic Chemicals – Monitoring at Plant Finished Water Tap                                  |  |      |                   |                    |                |                    |                               |  |
|---|--|------|-------------------|--------------------|----------------|--------------------|-------------------------------|--|
| Regulated Contaminant   | Test Date  | Unit | Health Goal MCLG  | Allowed Level MCL  | Level Detected | Range of Detection | Violation yes/no              | Major Sources in Drinking Water  |
| Fluoride  | 07-12-2022   | ppm  | 4                 | 4                  | 0.71           | n/a                | no                            | Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Nitrate   | 07-12-2022   | ppm  | 10                | 10                 | 0.97           | n/a                | no                            | Runoff from fertilizer use; Leaching from septic tanks & sewage; Erosion of natural deposits                               |
| Barium  | 05-16-2017   | ppm  | 2                 | 2                  | 0.01           | n/a                | no                            | Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits                               |
| Disinfection By-Products – Monitoring in Distribution System Stage 2 Disinfection By-Products |  |      |                   |                    |                |                    |                               |  |
| Regulated Contaminant   | Test Date  | Unit | Health Goal MCLG  | Allowed Level MCL  | Highest LRAA   | Range of Detection | Violation yes/no              | Major Sources in Drinking Water  |
| Total TTHM  | 2022   | ppb  | n/a               | 80                 | 35             | 13-56              | no                            | By-product of drinking water chlorination  |
| HAA5  | 2022   | ppb  | n/a               | 60                 | 15             | 7-21               | no                            | By-product of drinking water disinfection  |
| Disinfectant Residual – Monitoring in Distribution System by Treatment Plant                  |  |      |                   |                    |                |                    |                               |  |
| Regulated Contaminant   | Test Date  | Unit | Health Goal MRDLG | Allowed Level MRDL | Highest RAA    | Range of Detection | Violation yes/no              | Major Sources in Drinking Water  |
| Total Chlorine Residual   | Jan-Dec 2022   | ppm  | 4                 | 4                  | 0.79           | 0.64-0.85          | no                            | Water additive used to control microbes  |
| Regulated Contaminant   | Treatment Technique  |      |                   |                    |                |                    | Typical Source of Contaminant |  |
| Total Organic Carbon (ppm)  | The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC and the TOC removal requirements. The TOC was measured each month and because the level was low, there is no TOC removal requirement. |      |                   |                    |                |                    | Erosion of natural deposits   |  |

2022 Turbidity – Monitored every four hours at Plant Finished Water Tap

| Highest Single Measurement Cannot Exceed 1 NTU   | Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%) | Violation yes/no | Major Sources in Drinking Water |
|--|--|------------------|---------------------------------|
| 0.35 NTU   | 98.4 %   | no               | Soil Runoff                     |
| 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. |  |                  |                                 |

2022 Sterling Heights Lead and Copper Testing Results

| Inorganic Contaminant Subject to Action Levels   | Year Sampled | Unit | Health Goal MCLG | Action Level (AL) | Your Water* | Number of Samples Over AL | Range of Results | Typical Source of Contaminant   |
|--|--------------|------|------------------|-------------------|-------------|---------------------------|------------------|---|
| Lead   | 2022         | ppb  | 0                | 15                | 0           | 0                         | 0 – 2            | Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits. |
| Copper   | 2022         | ppm  | 1.3              | 1.3               | 0.0         | 0                         | 0.0 - 0.1        | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives            |
| *Ninety (90) percent of the samples collected were at or below the level reported for our water.   |              |      |                  |                   |             |                           |                  |   |
| Sterling Heights has 0 (zero) lead service lines and 0 (zero) service lines of unknown materials out of a total of 39,577 service lines. |              |      |                  |                   |             |                           |                  |   |

2022 Special Monitoring

| Regulated Contaminant   | Test Date  | Unit | Health Goal MCLG | Allowed Level MCL | Level Detected | Typical Source of Contaminant |
|---|------------|------|------------------|-------------------|----------------|-------------------------------|
| Sodium  | 07-12-2022 | ppm  | n/a              | n/a               | 5.6            | Erosion of natural deposits   |
| Unregulated contaminants are those for which US EPA has not established drinking water standards. Monitoring helps the EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. |            |      |                  |                   |                |                               |



2022 Annual Water Quality Report

Important Information regarding Sterling Heights Water Quality & Safety

Sterling Heights City Council  
Mayor Michael C. Taylor  
Mayor Pro Tem Liz Sierawski  
Councilwoman Deanna Koski  
Councilman Michael V. Radtke Jr.  
Councilwoman Maria G. Schmidt  
Councilman Henry Yanez  
Councilwoman Barbara A. Ziarko

City Manager  
Mark D. Vanderpool  
Public Works Director  
Michael Moore

Water Supply Serial Number:  
06385  
[www.sterling-heights.net/waterquality](http://www.sterling-heights.net/waterquality)  
586 - 446 - CITY (2489)



## About Our System

Drinking water quality is important to our community and the region. The City of Sterling Heights and the Great Lakes Water Authority (GLWA) are committed to meeting state and federal water quality standards, including the Lead and Copper Rule.

With the Great Lakes as our water source and proven treatment technologies, the GLWA consistently delivers safe drinking water to our community. The City of Sterling Heights operates the system of water mains that carry this water to your home's service line.

This year's Water Quality Report highlights the performance of GLWA and the City of Sterling Heights water professionals in delivering some of the nation's best drinking water. Together, we remain committed to protecting public health and maintaining open communication with the public about our drinking water.

## Source Water

Our source water comes from the lower Lake Huron watershed. The watershed includes numerous short, seasonal streams that drain to Lake Huron. The Michigan Department of Environment, Great Lakes, and Energy (EGLE), in partnership with the US Geological Survey, the Detroit Water and Sewerage Department, and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of potential contamination. The susceptibility rating is a seven-tiered scale ranging from "very low" to "very high" based primarily on geologic sensitivity, water chemistry and contaminant sources. The Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminate sources. The Lake Huron water treatment plant has historically provided satisfactory treatment of this source water to meet drinking water standards.

GLWA has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction plan. GLWA participates in the National Pollutant Discharge Elimination System permit and has an emergency response management plan.

GLWA has a Surface Water Intake Protection Plan (SWIPP) for the Lake Huron intake. The plan has seven elements: roles and duties of government units and water supply agencies, delineation of source water protection areas, identification of potential sources of contamination, management approaches for protection, contingency plans, siting of new water sources, public participation and public education activities. If you would like to know more information about the Source Water Assessment Report, please contact GLWA at 313-926-8127.

## How Do We Know Our Water is Safe?

The GLWA treatment facilities operate 24 hours a day, seven days a week. The treatment process begins with disinfecting the source water with chlorine to kill harmful microorganisms that can cause illness.

Next, a chemical called Alum is mixed with the water to remove the fine particles that make the water cloudy or turbid. Alum causes the particles to clump together and settle to the bottom.

Fluoride is also added to protect our teeth from cavities and decay. The water then flows through fine sand filters called beds. These filters remove even more particles and certain microorganisms that are resistant to chlorine.

Finally, a small amount of orthophosphates and chlorine are added to the treated water just before it leaves the treatment plant. The orthophosphates helps control the lead that may dissolve in water from household plumbing systems. The chlorine keeps the water disinfected as it travels through the water mains to reach your home.

In addition to a carefully controlled and monitored treatment process, the water is tested for a variety of substances before treatment, during various stages of treatment, and throughout the distribution system.

GLWA tests hundreds of samples each week in their certified laboratories by a highly qualified, trained staff. For more information about safe drinking water, visit the US EPA at [www.epa.gov/safewater/](http://www.epa.gov/safewater/).

The City of Sterling Heights will notify you immediately if there is ever any reason for concern about our water.

## Additional Information

In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems.

The Food and Drug Administration (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 can be obtained by calling the EPA's Safe Drinking Water Hotline (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 from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, 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, from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, 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, naturally occurring or the result of oil and gas production and mining activities.

## Public Participation Opportunities

The City of Sterling Heights and the GLWA are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. Please direct any questions or concerns to the Department of Public Works at (586) 446-2440.

## Health Information

### Lead

Safe drinking water is a shared responsibility. The water that GLWA delivers to our community does not contain lead. Lead can leach into drinking water through home plumbing fixtures, and in some cases, customer service lines. Corrosion control reduces the risk of lead and copper from leaching into your water.

Orthophosphates are added during the treatment process as a corrosion control method to create a protective coating in service pipes throughout the system, including in your home or business. The City of Sterling Heights performs required lead and copper sampling and testing in our community. Water consumers also have a responsibility to maintain the plumbing in their homes and businesses, and can take steps to limit their exposure to 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 Sterling Heights 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 Safe Drinking Water Hotline (800) 426-4791 or at: [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead)

### People With Special Health Concerns

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 organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may 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