



2023 Annual Drinking Water Quality Report - Updated

OVERVIEW

The City of Clio Department of Public Services (DPS) is dedicated to providing quality drinking water to the residents and businesses of the community. The City of Clio DPS routinely samples and tests the drinking water for a number of different contaminants, and continues to develop and institute an asset management plan for the water system. This asset management program includes but is not limited to, valve inspection and operation, hydrant flushing and inspection, and cross connection inspections. In conjunction with these programs, the City also continues working to update mapping to verify the location, size, and material of the City's water distribution system. The City of Clio DPS is committed to thorough notification to our customers if there is any reason for concern about the quality or safety of the drinking water.

WATER SOURCE AND TREATMENT

The City of Clio purchases water from the Genesee County Drain Commissioner – Division of Water and Waste Services via the Karegnondi Water Authority. The KWA's primary source of water is from Lake Huron. The raw water intake is transported via a watermain to a new state of the art water treatment plant that is in Columbiaville, Michigan. After the drinking water treatment process is completed by state certified professionals, the water is distributed to many communities within Lapeer and Genesee County.

ADDITIONAL INFORMATION

In order to ensure that tap water is safe to drink, 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 and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

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 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 stormwater 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 stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In the following table you will find many terms and abbreviations to help you better understand the contaminant testing results on the following page.

| Key to Detected Contaminants Tables | | |
|-------------------------------------|--|---|
| Symbol | Non-Abbreviated Symbol or Term | 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 | Halo acetic Acids | HAA5 is the total of bromoacetic, chloroacetic, dibromo acetic, 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 technology. |
| MCLG | Maximum Contaminant Level Goal | The level of contaminant in drinking water below which there is no known or expected risk to health. <i>MCLG's allows for a margin of safety.</i> |
| 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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants. |
| n/a | not applicable | Does not apply. |
| ND | Not Detected | Result is not detectable at or below the laboratory detection level. |
| NTU | Nephelometric Turbidity Units | Measures the cloudiness of water. |
| pCi/L | Picocuries Per Liter | A measure of radioactivity. |
| ppb | Parts per billion (one in one billion) | The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram. |
| ppm | Parts per million (one in one million) | The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram. |
| RAA | Running Annual Average | The average of analytical results for all samples during the previous twelve months. |
| TT | Treatment Technique | A required process intended to reduce the level of a contaminant in drinking water. |
| TTHM | Total Trihalomethanes | Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total. |
| ug/L | Micrograms per liter | A microgram = 1/1000 milligrams. 1 microgram per liter is equal to 1 part per billion (ppb) |
| °C | Celsius | A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions |
| > | Greater than | Mathematical symbol that denotes a value "greater than" another value. |
| | 90 th Percentile Value | The concentration of lead or copper in tap water exceeded by 10 percent of the sites sampled during a monitoring period. |

2023 Regulated Detected Contaminants Tables

| Regulated Contaminant | Test Date | Units | Health Goal MCLG | Allowed Level MCL | Highest Level Detected | Range of Detection | Violation yes/no | Major Sources in Drinking Water |
|---|-----------|-------|------------------|-------------------|------------------------|--------------------|------------------|--|
| Inorganic Chemicals – Monitoring at Plant Finished Water Tap | | | | | | | | |
| Fluoride | daily | ppm | 4 | 4 | 0.88 | 0.33 - 0.88 | no | Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Barium | 2023 | ppm | 2 | 2 | 0.014 | 0.012 – 0.014 | no | Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries |
| Arsenic | 2023 | ppb | 0 | 10 | 0.54 | ND – 0.54 | no | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes. |
| Nitrate (as Nitrogen) | 2023 | ppm | 10 | 10 | 0.5 | ND – 0.5 | no | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits. |

| Disinfection By-Products –Monitoring in Distribution System, Stage 2 Disinfection By-Products | | | | | | | | |
|--|-----------|-------|------------------|-------------------|--------------|--------------------|------------------|---|
| Regulated Contaminant | Test Date | Units | Health Goal MCLG | Allowed Level MCL | Highest LRAA | Range of Detection | Violation yes/no | Major Sources in Drinking Water |
| Total Trihalomethanes (TTHM) | 2023 | ppb | n/a | 80 | 32.8 | 19.9-51 | no | By-product of drinking water chlorination |
| Haloacetic Acids Five (HAA5) | 2023 | ppb | n/a | 60 | 8.75 | 6-10 | no | By-product of drinking water disinfection |

| Disinfectant Residuals - Monitoring in Distribution System | | | | | | | | |
|---|-----------|------|-------------------|--------------------|-------------|--------------------|------------------|---|
| Regulated Contaminant | Test Date | Unit | Health Goal MRDGL | Allowed Level MRDL | Highest RAA | Range of Detection | Violation yes/no | Major Sources in Drinking Water |
| Total Chlorine Residual | 2023 | ppm | 4 | 4 | .44 | .05-.87 | no | Water additive used to control microbes |

| 2023 Turbidity – Monitored every 4 hours at Plant Finished Water | | | |
|---|--|------------------|---------------------------------|
| 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 |
| 0.09 NTU | 100% | 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.

| 2023 Microbiological Contaminants – Monthly Monitoring in Distribution System | | | | | |
|--|------|--|-------------------------|------------------|---------------------------------------|
| Regulated Contaminant | MCLG | MCL | Highest Number Detected | Violation yes/no | Major Sources in Drinking Water |
| Total Coliform Bacteria | 0 | > 1 Positive monthly sample, or Presence of Coliform bacteria > 5% of monthly samples | 0 | no | Naturally present in the environment. |
| <i>E.coli</i> Bacteria | 0 | A routine sample and a repeat sample are total coliform positive, and one is also fecal or <i>E.coli</i> positive. | 0 | no | Human waste and animal fecal waste. |

| 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 removal 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 |

| Radionuclides 2019 | | | | | | | |
|------------------------------------|-----------|-------|------------------|-------------------|----------------|------------------|---------------------------------|
| Regulated Contaminant | Test Date | Unit | Health Goal MCLG | Allowed Level MCL | Level Detected | Violation Yes/no | Major Sources in Drinking Water |
| Combined Radium Radium 226 and 228 | 2/13/19 | pCi/L | 0 | 5 | 1.0 +/- 0.50 | no | Erosion of natural deposits |
| Gross Alpha | 2/13/19 | pCi/L | 0 | 15 | 2.0 +/- 1.0 | no | Erosion of natural deposits |

| 2021 Lead and Copper Monitoring at Customer Tap | | | | | | | |
|---|-----|------------------|-----------------|------------------------------------|------------------|---------------------------|---|
| Inorganic Contaminant Subject to ALS | | Health Goal MCLG | Action Level AL | 90 th Percentile Value* | Range of Results | Number of Samples over AL | Major Sources in Drinking Water |
| Lead (Jan-June) 2021 | ppb | 0 | 15 | 0 | 0-2 | 0 | Lead service lines: corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits. |
| Copper (Jan-June) 2021 | ppm | 1.3 | 1.3 | 0.1 | 0-0.1 | 0 | Corrosion of household plumbing system; Erosion of natural deposits |
| Lead (July-Dec) 2021 | ppb | 0 | 15 | 0-2 | 0-2 | 0 | Lead service lines: corrosion of household plumbing system; Erosion of natural deposits. |
| Copper (July-Dec) 2021 | ppm | 1.3 | 1.3 | 0 | 0-0.1 | 0 | Corrosion of household plumbing system; Erosion of natural deposits. |

*The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met.

2023 Unregulated Detected Contaminant

| Contaminant | MCLG | MCL | Level Detected | Source of Contamination |
|--------------|------|-----|----------------|---------------------------------------|
| Sodium (ppm) | n/a | n/a | 11.0 | Erosion of natural deposits |
| Magnesium | n/a | n/a | 8.1 | Erosion of natural deposits |
| Sulfate | n/a | n/a | 25 | Runoff/leaching from natural deposits |

IMPORTANT HEALTH INFORMATION -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. Genesee County Water and Waste Services 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 are concerned about lead in your water, you may wish to have your water tested. 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. 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/drink/info/lead>.

PEOPLE WITH SPECIAL HEALTH CONCERNS

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immunocompromised persons, such as persons with cancer who are undergoing chemotherapy, persons 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. 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).

CRYPTOSPORIDIUM

Cryptosporidium is a disease-causing parasite that lives in the intestinal tract of many animals including dogs and cats. Symptoms of infection include diarrhea, abdominal cramps, headaches, nausea and vomiting. The disease is typically spread through contact with feces of an infected animal or person and consuming contaminated food or water. Cryptosporidium can be introduced into bodies of water by way of surface water run off containing animal waste and sewage discharge. The water supplied to the City of Clio has been tested for Cryptosporidium since 1994 and has never been detected in any water supply samples.

NOTICE OF VIOLATIONS

Monitoring Requirements Not Met for the City of Clio

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During December 1 to December 31, 2023, we did not complete all monitoring or testing for total coliform bacteria, nor properly monitor or test for chlorine residuals, and therefore cannot be sure of the quality of your drinking water during that time. However, this violation **does not** pose a threat to your supply's water.

What should I do? There is nothing you need to do at this time. This is not an emergency. You do not need to boil water or use an alternative source of water at this time. Even though this is not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

The table below lists the contaminant(s) we did not properly test for, how often we are supposed to sample for these contaminants, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date we collected follow-up samples.

| Contaminant | Required sampling frequency | Number of samples taken | When all samples should have been taken | Date additional samples will be taken |
|-------------------------|-----------------------------|-------------------------|---|---------------------------------------|
| Total Coliform Bacteria | 3 samples per month | 2 | December 1 to December 31, 2023 | January 1 to January 31, 2024 |
| Chlorine Residual | 3 samples per month | 2 | December 1 to December 31, 2023 | January 1 to January 31, 2024 |

What happened? What is being done? We inadvertently missed taking a sample within this required sampling period. We are making every effort to ensure this does not happen again. **We returned to compliance January 16, 2024.**

For more information, please contact Enrique Vargas, DPS Superintendent, City of Clio, 505 West Vienna, Clio, MI 48420 at 810-686-5850.

OPPORTUNITIES FOR PUBLIC PARTICIPATION

The City of Clio does not hold any water advisory board meetings; however you are welcome to attend GCWW's Regular Advisory Board Meetings on the third Wednesday of every month at G-4610 Beecher Road, Flint, Michigan 48532 at 9:00 a.m.

If you have questions concerning this Consumers Confidence Report, please call the City of Clio at 810-686-5850.

Please share this information with other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Clio. Copies of this report are available on our website at www.clio.govoffice.com and at Clio City Hall, 505 W. Vienna St, Clio, MI 48420. Individual copies will not be mailed.