Dear Residents;

The Genesee County Drain Commissioner's Office – Division of Water and Waste Services (GCDC-WWS) continues to provide exceptional services to our residents, while at the same time being forward looking in ways to safeguard the public health of our region.

As we reach the 6-year anniversary of treating water at GCDC-WWS's own water treatment plant and operating and optimizing our own water supply system, we continue our commitment to provide the highest quality water at the lowest possible cost.

Despite an unprecedented inflationary environment, we proudly announce the 7th consecutive year of no water rate increases. By operating our own system, we are able to stabilize prices, while still supplying the highest quality water possible.

On August 13, the Great Lakes Water Authority (GLWA) experienced a catastrophic water main break on a 120-inch water transmission main that supplies several communities including the City of Flint. During the GLWA transmission main repair, the GCDC-WWS's office supplied water to the City of Flint for 62-days as well as other GLWA communities while maintaining optimal service to all of our customers. Our water treatment plant produced a maximum daily volume of 30,100,000 gallons during this period to meet GCDC-WWS customers and City of Flint demands. The men and women of GCDC-WWS, the City of Flint and GLWA did an outstanding job during this historic challenge to meet Genesee County's and the City of Flint's water needs.

The construction of the new 1-million-gallon elevated storage tank in the City of Burton is completed and online. This tank has been designed to ensure peak hour demands of the water system are met while providing essential fire protection.

Construction of Phase 1 of the Southern Lakes water main extension is also well underway. This water system expansion will deliver water to new customers in Mundy Township and to Fenton Township. Phase 2 & Phase 3 are under design and will be completed over the next couple of years to provide water to additional portions of Fenton Township and the City of Linden. All totaled, the 3 Phases will include approximately 10 miles of new water main to provide County residents and businesses with an option to connect to GCDC-WWS's water supply or remain on their existing well. This multi-community project is being financed through the American Rescue Plan Act (ARPA) and low interest rate loans through the Drinking Water Revolving Fund (DWRF).

We have met, or exceeded, all water quality standards set by The Michigan Department of Environment, Great Lakes, and Energy (EGLE) and the Environmental Protection Agency (EPA), for 2022.

Sincerely,

Jeff Wright, Genesee County Drain Commissioner
Dan Potter, Chief Deputy Drain Commissioner
John F. O'Brien, PE, BCEE, Director, Division of Water & Waste Services
Terry Biederman, PE, Assistant Director of Water
Kevin VanSickle, Superintendent, Water Treatment Plant

# Water Quality Report
# 2022 Consumer Confidence Report

This report contains our water quality data for 2022 required by the United States Environmental Protection Agency.

## Water Source:

The Genesee County Drain Commissioner Division of Water & Waste Services (GCDC-WWS) (WSSN-2615) draws its water from Lake Huron. We distribute the water to nineteen (19) communities within Genesee County. Routine samples are taken daily at our Water Treatment Plant, as well as weekly, monthly, and yearly from the Water Distribution System. Michigan Department of Environment, Great Lakes & Energy (EGLE) and Environmental Protection Agency (EPA) required tests are performed throughout the year to ensure safe and reliable drinking water.

## Additional Information:

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 & 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 EPA's Safe Drinking Water Hotline (800-426-4791).

The sources for 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 waters 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 including 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, which can be naturally occurring or be the result of oil and gas production and mining activities.

## People with Special Health Concerns:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons includimg 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. The EPA and Communicable Disease Center (CDC) establishes guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants. These are available from the Safe Drinking Water Hotline (800-426-4791) or www.epa.gov/safewater.

## Cryptosporidium:

Cryptosporidium (Crypto) is a microbial parasite found in surface water throughout the U.S. The GCDC-WWS Water Treatment Plant went on line in December 2017. As part of the coming online process, GCDC-WWS conducted monthly source water (Lake Huron) monitoring for Cryptosporidium (Crypto), Giardia, and E-Coli. Crypto was detected in two (2) of the 24 source water samples collected. Crypto was **NOT** detected in any of the finished water samples.

Ingestion of Crypto may cause cryptosporidiosis, and abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

**Jeff Wright,**
**Genesee County**
**Drain Commissioner**
Water & Waste Services
G-4610 Beecher Rd.
Flint, MI 48532


**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. GCDC-WWS 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. 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 at *http://www.epa.gov/drink/info/lead.*

Safe drinking water is a shared responsibility. The water that is delivered to our community does not contain lead. However, 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. GCDC-WWS performs required lead and copper sampling and testing in our community. Water consumers also have responsibility to maintain the plumbing in their homes and businesses, and can take steps to limit their exposure to lead. GCDC-WWS provides operation and maintenance services for several communities within Genesee County, which include 19,013 water service connections, none of which are lead.

**Opportunities for Public Participation:**
We encourage public interest and participation in our community's decisions affecting drinking water. Regular Advisory Board Meetings occur on the third Wednesday of every month, at G-4610 Beecher Road, Flint, Michigan at 9:00a.m. The public is welcome.

**National Primary Drinking Water Regulation Compliance:**
GCDC-WWS staff are happy to answer any questions and provide more information about GCDC-WWS's services and our water quality. Please call Jim Thompson, Dan Lince or Adam Clark at (810) 732-7870. You may also visit our website *http://www.gcdcwws.com* For more information about safe drinking water, visit U.S. EPA at http://www.epa.gov/safewater.

### How do I read this Chart?

It's easy! GCDC-WWS water is tested to assure that it is safe and healthy. These Tables are based on tests conducted by **GCDC-WWS**, EGLE, and privately contracted laboratories within the last five (5) calendar years. Many tests are conducted throughout the year, however, only tests that show the presence of a contaminant are shown here. The table on this page is a key to the terms used in the following table. Sources of Contaminants show where this substance usually originates.

## Key to Detected Contaminants Table

| 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 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. |
| **MRDL** | Maximum Residual Disinfectant Level | The highest level of 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. MRLDG'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. |
| **ug/L** | Micrograms per liter | A microgram = 1/1000 milligrams. 1 microgram per liter is equal to 1 part per billion (ppb). |
| **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 taken 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. |
| **°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. |
| | 90th Percentile Value | The concentration of lead or copper in tap water exceeded by 10 percent of the sites sampled during a monitoring period. |

# 2022 Regulated Detected Contaminant Tables

**Inorganic Chemicals - Monitoring at the Plant Finished Water Tap**

| Regulated Contaminant | Test Date | Unit | MCLG or MRDLG | MCL, TT, or MRDL | Highest Level Detected | Range of Detection | Violation yes/no | Major Sources in Drinking Water |
|---|---|---|---|---|---|---|---|---|
| **Fluoride** | Daily | ppm | 4 | 4 | 0.82 | 0.36 - 0.82 | no | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| **Barium** | 2022 | ppm | 2 | 2 | 0.014 | n/a | no | Erosion of natural deposits; discharge of metal refineries; discharge of drilling wastes. |

**Disinfection By-Products - Monitoring in Distribution System, Stage 2 Disinfection By-Products**

| Regulated Contaminant | Test Date | Unit | MCLG or MRDLG | MCL, TT, or MRDL | Highest LRAA | Range of Detection | Violation yes/no | Major Sources in Drinking Water |
|---|---|---|---|---|---|---|---|---|
| **Total Trihalomethanes (TTHM)** | 2022 | ppb | n/a | 80 | 52.7 | 17.3-57.0 | no | By-product of drinking water disinfection |
| **Haloacetic Acids (HAA5)** | 2022 | ppb | n/a | 60 | 18. 0 | 0-24.0 | no | By-product of drinking water disinfection |

**Disinfectant Residuals - Monitoring in Distribution System**

| Regulated Contaminant | Test Date | Unit | MCLG or MRDLG | MCL, TT, or MRDL | Highest RAA | Quarterly Range of Detection | Violation yes/no | Major Sources in Drinking Water |
|---|---|---|---|---|---|---|---|---|
| **Total Chlorine Residual** | 2022 | ppm | 4 | 4 | 0.6 | 0.2 - 1.40 | no | Water additive used to control microbes |

**2022 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** | **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.

**2022 Lead and Copper Monitoring at Customer Tap**

| Regulated Contaminant | Test Date | Unit | Health Goal MCLG | Action Level AL | 90th Percentile Value* | Range of Detection | Number Samples Over AL | Violation yes/no | Major Sources in Drinking Water |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** (June - September) | 2022 | ppb | 0 | 15 | 0 | 0 - 1 | 0 | no | Lead service lines; corrosion of household plumbing includes fitting and fixtures; Erosion of natural deposits. |
| **Copper** (June -September) | 2022 | ppm | 1.3 | 1.3 | 0 | 0 - .17 | 0 | no | 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.

| 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 | MCLG or MRDLG | Allowed Level | Level Detected | Violation yes/no | Major Sources in Drinking Water |
|---|---|---|---|---|---|---|---|
| **Combined Radium 226 and 228** | 2/13/19 | pCi/L | 0 | 5 | 1.0 $\pm$ 0.50 | no | Erosion of natural deposits |
| **Gross Alpha** | 2/13/19 | pCi/L | 0 | 15 | 2.0 $\pm$ 1.0 | no | Erosion of natural deposits |

## 2022 Unregulated Detected Contaminant

| Contaminant | MCLG | MCL | Level Detected | Source of Contamination |
|---|---|---|---|---|
| **Sodium (ppm)** | n/a | n/a | 8.9 | Erosion of natural deposits |
| **Magnesium** | n/a | n/a | 7.5 | Erosion of natural deposits |
| **Sulfate** | n/a | n/a | 24 | Runoff/leaching from natural deposits |

### Per- and Polyfluoroalkyl Substances (PFAS):

Per- and polyfluoroalkyl substances (PFAS), sometimes called PFCs, are a group of chemicals that are resistant to heat, water, and oil. PFAS have been classified by the EPA as an emerging contaminant on the national landscape. For decades, they have been used in many industrial applications and consumer products such as carpeting, waterproof clothing, upholstery, food paper wrappings, fire-fighting foams, and metal plating. They are still used today. PFAS have been found at low levels both in the environment and in blood samples from the general U.S. population. These chemicals are persistent, which means they do not break down in the environment. They also bioaccumulate, meaning the amount builds up over time in the blood and organs. Although our understanding of these emerging contaminants is constantly evolving, elevated levels of PFAS have the potential to cause increased cholesterol, changes in the body's hormones and immune system, decreased fertility, and increased risk of certain cancers. Links to these health effects in humans are supported by epidemiologic studies and by laboratory studies in animal models.

### How can I stay updated on the situation?

The State of Michigan has created a website where you can find information about PFAS contamination and efforts to address it in Michigan. The site will be updated as more information becomes available. The website address is: http://michigan.gov/pfasresponse.
PFAS testing of treated water was conducted by GCDC-WWS in April 2022 and the results for all samples were below the detection limit (ND).

### 2022 Compliance Notice

One sample collected in July for TTHM did not meet the lab method for pH requirements and was not accepted for compliance. Sampling can only take place during specific time periods and at specific sites. Changes were implemented to the sampling process by EGLE to improve the collection and testing process moving forward. We have taken steps to test for TTHM's early in the monitoring period and have implemented the update to our sample collection process. This modification will allow sufficient time to re-sample should the EGLE lab find concerns with the collected sample. This compliance issue has been resolved through GCDC-WWS procedural and EGLE lab methodology updates and is not an emergency. There is no public health concern and nothing that you need to do. All previous and subsequent sample period results collected are within drinking water standards and are acceptable for compliance purposes. For more information, please contact Jim Thompson, Dan Lince or Adam Clark at 810-732-7870.