Dear Residents:

The past several months have been a trying time, as our community, and our nation navigates our new reality in the face of the COVID-19 pandemic. I want to speak directly to each of you, and assure you the Genesee County Drain Commissioner's Office – Division of Water & Waste Services (GCDC-WWS) is taking every precaution to ensure uninterrupted water supply, and other essential services as we always have.

We are going on our 4th year of no rate increase since the KWA pipeline and GCDC water plant have been in operation. We at GCDC-WWS continue to do our part to keep water rates affordable for our community customers. Cost is crucial as everyone feels the economic impact of COVID-19, and we will continue to ensure high quality drinking water to our residents at the lowest possible cost.

Protection of our public health and infrastructure remain a critical priority. During 2019 thru 2020, our office collected over 3,000 water samples from our treatment plant and distribution system. All sampled tests were non-detect or below the levels set by the EPA for safe drinking water. This includes rigorous testing for PFAS/PFOS and other harmful contaminates. Testing protocols have remained stringent during this crisis, and we will continue our policy of being transparent as results become available during the course of the year.

Sincerely,

Jeff Wright, Drain Commissioner

John F. O'Brien, PE, BCEE, Director, Division of Water & Waste Services

Kevin VanSickle, Superintendent, Water Treatment Plant

# Water Quality Report
# 2019 Consumer Confidence Report

This report contains our water quality data for 2019 as required by the United States Environmental Protection Agency.

### Water Source;

Genesee County Drain Commissioner-Division of Water and Waste Services (GCDC-WWS) (WSSN-2615) receives its water from KWA which draws from Lake Huron. We distribute the water to nineteen communities within Genesee County. Samples are taken daily at our Water Plant, as well as weekly, monthly, and yearly from the water distribution system. EGLE/EPA required tests are performed to ensure safe and reliable drinking water.

### Additional Information;

To ensure that tap water is safe to drink, the Environmental Protection Agency (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 Environmental Protection Agency'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 is the general population. Immuno-compromised 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 (Communicable Disease Center) 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.

## How do I read this Chart?

It's easy! These Tables are based on tests conducted by Genesee County Drain Commissioner- Division of Water & Waste Services (GCDC-WWS) within the last five (5) calendar years. We conduct many tests 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

| Term | Meaning Spelled Out | 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, 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. 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. |
| **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 | |
| | 90th Percentile Value | The concentration of lead or copper in tap water exceeded by 10 percent of the sites sampled during a monitoring period. |

# 2019 Regulated Detected Contaminant Tables

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

| Regulated Contaminant | Unit | Health Goal MCLG | Allowed Level MCL | Highest Level Detected | Range of Detection | Violation yes/no | Major Sources in Drinking Water |
|---|---|---|---|---|---|---|---|
| **Fluoride** | ppm | 4 | 4 | 0.61 | 0.59 - 0.61 | no | Erosion of natural deposits; Water additive which promotes strong teeth; discharge from fertilizer and aluminum factories. |
| **Arsenic** | ppb | 0 | 10 | 0.43 | ND - 0.43 | no | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes. |
| **Barium** | ppm | 2 | 2 | .013 | .012 - .013 | no | Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries. |
| **Selenium** | ppb | 50 | 50 | 0.66 | ND - 0.66 | no | Erosion of natural deposits; discharge from petroleum and metal refineries' discharge from mines. |

**Disinfection By-Products - Monitoring in Distribution System**

| Regulated Contaminant | Unit | Health Goal MCLG | Allowed Level MCL | Highest LRAA | Range of Detection | Violation yes/no | Major Sources in Drinking Water |
|---|---|---|---|---|---|---|---|
| **Total Trihalomethanes (TTHM)** | ppb | n/a | 80 | 50.9 | 12 - 62.3 | no | By-product of drinking water chlorination |
| **Haloacetic Acids (HAA5)** | ppb | n/a | 60 | 18.3 | 2 - 25 | no | By-product of drinking water disinfection |

**Disinfectant Residuals - Monitoring in Distribution System**

| Regulated Contaminant | Unit | Health Goal MRDLG | Allowed Level MRDL | Highest RAA | Range of Detection | Violation yes/no | Major Sources in Drinking Water |
|---|---|---|---|---|---|---|---|
| **Total Chlorine Residual** | ppm | 4 | 4 | 0.71 | 0.2 - 1.12 | no | Water additive used to control microbes |

**2019 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 |
|---|---|---|---|
| **0.10** | **98.9%** | 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.

**2019 Lead and Copper Monitoring at Customer Tap**

| Regulated Contaminant | Unit | Health Goal MCLG | Action Level AL | 90th Percentile Value* | Range | Number Samples Over AL | Violation yes/no | Major Sources in Drinking Water |
|---|---|---|---|---|---|---|---|---|
| **Lead** (Jan-June) | ppb | 0 | 15 | 0 | 0 - 4 | 0 | no | Corrosion of household plumbing system; Erosion of natural deposits. |
| **Lead** (July-Dec) | ppb | 0 | 15 | 0 | 0 - 15 | 0 | no | See above. |
| **Copper** (Jan-June) | ppm | 1.3 | 1.3 | 0.1 | 0 - 0.1 | 0 | no | Corrosion of household plumbing system; Erosion of natural deposits: Leaching from wood preservatives. |
| **Copper** (July-Dec) | ppm | 1.3 | 1.3 | 0 | 0 - 0.1 | 0 | no | See above. |

*90 Percentile value is the concentration of lead or copper in tap water exceeded by 10 percent of the sites sampled during a monitoring period. If the 90th percentile value is above the AL, additional requirements must be met.

| | MCL | MCLG | Level Found | Range | Sample Date | Violation | Typical Source |
|---|---|---|---|---|---|---|---|
| **TOC** | **TT** | **N/A** | Average 16.5% Removal (25% is required.) | Removal 0 to 41% | Samples taken monthly | no | Naturally present in the environment. |

**Radionuclides 2019**

| Regulated Contaminant | Test Date | Unit | Health Goal MCLG | 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 ± 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 |

## 2019 Unregulated Detected Contaminant

| Unregulated Parameters | Unit | Average | Range Detected | Source of Contamination |
|---|---|---|---|---|
| **Sodium** | ppm | 8.5 | 8 - 9 | Erosion of natural deposits |
| **Nickel** | ppb | 0.33 | ND to 0.66 | Erosion of natural deposits |

**Additional Sampling results:**
Every 5 years the United States Environmental Protections Agency (USEPA) establishes 30 unregulated contaminants for additional sampling. Unregulated contaminants are those for which the USEPA has not established drinking water standards. As required by the USEPA, Genesee County Drain Commissioner-Division of Water & Waste Services (GCDC-WWS) began testing for several unregulated contaminants in 2013 and will continue additional sampling through 2020. The purpose of unregulated contaminants monitoring is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Before USEPA regulates a contaminant, it considers adverse health effects, the occurrence of the contaminant in drinking water, and whether the regulation would reduce health risk. The following tables list the unregulated contaminants detected during the 2019 calendar year.

| Unregulated Contaminants - Monitored at the Primary Source (AM1: metals, pesticides, alcohols, SVOCs) | | | |
|---|---|---|---|
| **Contaminant** | **Units** | **Range** | **Source** |
| Bromide | ppb | ND - 23.2 | Naturally present in fossil fuel, coal and shale. |
| Total Organic Carbon | ppm | 2 - 2.4 | Erosion of natural deposits. |

| Unregulated Contaminants - Monitored at the Treatment Plant and Entry Point into the System | | | |
|---|---|---|---|
| **Contaminant** | **Units** | **Range** | **Source** |
| Manganese, total | ug/l | 2.1 - 10.6 | Naturally present in the environment. |

| Unregulated Contaminants - Monitored in the Distribution System | | | |
|---|---|---|---|
| **Contaminant** | **Units** | **Range** | **Source** |
| Dichloroacetic acid (DCAA) | ug/l | 1.2 - 13.2 | By-product of drinking water disinfection. |
| Trichloroacetic acid (TCAA) | ug/l | 1.6 - 16.5 | By-product of drinking water disinfection. |
| Bromo chloroacetic acid (BCAA) | ug/l | 0.3 - 3.9 | By-product of drinking water disinfection. |
| Bromo dichloroacetic acid (BDCAA) | ug/l | ND - 3.1 | By-product of drinking water disinfection. |
| Dibromo acetic acid (DBAA) | ug/l | ND - 0.8 | By-product of drinking water disinfection. |
| ChloroDiBromoAcetic acid | ug/1 | ND - 0.6 | By-product of drinking water disinfection. |
| HAA5 Group | ug/l | 2.8 - 22.6 | By-product of drinking water disinfection. |
| HAA6Br Group | ug/l | 0.6 - 8.1 | By-product of drinking water disinfection. |
| HAA9 Group | ug/l | 3.7 - 29.9 | By-product of drinking water disinfection. |

**Tested for but not Detected Unregulated Contaminants:**
Germanium, Chlorpyrifos, Dimethipin, Ethoprop, alpha-Hexachlorocyclohexane, Oxyfluorfen, Total Permethrin, Profenophos, Tebuconazole, Tribufos, butylated hydroxyanisole, o-toluidine, Quinoline, 1-butanol, 2 -methoxyethanol, 2-propen-1-o1, MonoChloroacetic acid, MonoBromoacetic acid, PFAS/PFOS.

**Jeff Wright,**
**Genesee County**
**Drain Commissioner**
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### Important Health Information - Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and children who drink water containing lead in excess of the action level 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.

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. 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 *http://www.epa.gov/safewater/lead*.

Safe drinking water is a shared responsibility. The water that is delivered 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 homes or business. The Division of Water and Waste Services (GCDC-WWS) 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.

### Cryptosporidium

Cryptosporidium (Crypto) is a microbial parasite found in surface water throughout the U.S. The Genesee County Drain Commissioner-Division of Water & Waste Services (GCDC-WWS) Water Treatment Plant went on line in December 2017. GCDC-WWS conducted monthly water (Lake Huron) monitoring for Cryptosporidium (Crypto), Giardia, and E-Coli. Crypto was detected in three 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.

### 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 9:00 a.m. The public is welcome.

### National Primary Drinking Water Regulation Compliance

We'll be happy to answer any questions about Genesee County Division of Water and Waste Services and our water quality. Call Rich Bysko, Dan Lince or Mark Horgan 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.

### 2019 Compliance Notice

We monitor our distribution system for Trihalomethanes (TTHM) and Haloacetic (HAA5) acids by collecting eight samples every three months. One monitoring sample collected in July for TTHM did not meet the lab method pH requirements and cannot be accepted for compliance. Sampling can only take place during specific time periods and specific sites. We have taken steps to monitor for TTHM early in the monitoring period and allow sufficient time to re-sample should the lab find concerns with the collected sample.

There is nothing you need to do at this time. This is not an emergency. There is no public health concern. All previous and subsequent sample period results collected are within drinking water standards and are acceptable for compliance purposes.

For more information, please contact Rick Bysko, Dan Lince, or Mark Horgan at 810-732-7870 or G-4610 Beecher Road.