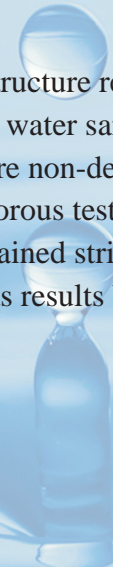




Dear Residents:

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 contaminants. 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](http://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.

<b>Key to Detected Contaminants Table</b>		
<b>Term</b>	<b>Meaning Spelled Out</b>	<b>Definition/Explanation</b>
<b>AL</b>	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
<b>HAA5</b>	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, dibromo acetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.
<b>LRAA</b>	Locational Running Annual Average	The average of analytical results for samples at a particular monitoring location during the previous four quarters.
<b>MCL</b>	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.
<b>MCLG</b>	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health.
<b>MRDL</b>	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.
<b>MRDLG</b>	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.
<b>n/a</b>	Not Applicable	Does not apply.
<b>ND</b>	Not Detected	Result is not detectable at or below the laboratory detection level.
<b>NTU</b>	Nephelometric Turbidity Units	Measures the cloudiness of water.
<b>pCi/L</b>	Picocuries Per Liter	A measure of radioactivity.
<b>ppb</b>	Parts Per Billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.
<b>ug/L</b>	Micrograms per liter	A microgram = 1/1000 milligrams. 1 microgram per liter is equal to 1 part per billion (ppb).
<b>ppm</b>	Parts Per Million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
<b>RAA</b>	Running Annual Average	The average of analytical results for all samples taken during the previous twelve months.
<b>TT</b>	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
<b>TTHM</b>	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane and bromoform. Compliance is based on the total.
<b>°C</b>	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
<b>&gt;</b>	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/l	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-ol, MonoChloroacetic acid, MonoBromoacetic acid, PFAS/PFOS.



