

2015 Consumer Confidence Report

This report contains our water quality data for 2015 required by the United States Environmental Protection Agency

Water Source

GCDC-WWS is supplied water via the Great Lakes Water Authority, which draws its water from Lake Huron. We distribute that water to nineteen communities within Genesee county. Routine samples are taken from the water distribution system monthly and at various times throughout the year. MDEQ/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 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 including agriculture, urban stormwater runoff and residential use.
- 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 stormwater 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 (800-425-4791).

How Do I Read This Chart?

It's easy! Our water is tested to assure that it is safe and healthy. These tables are based on tests conducted by GCDC-WWS and the City of Detroit 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 tables. Sources of Contaminants show where this substance usually originates.

Key to Detected Contaminants Tables		
Symbol	Abbreviation for	Definition/Explanation
LRAA	Locational Running Annual Average	
MCLG	Maximum Contaminant Level Goal	The level of a contaminant in drinking water below which there is no known or expected risk to health.
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.
ug/L	Micrograms per liter	A microgram = 1/1000 milligrams • 1 microgram per liter is equal to 1 part per billion (ppb).
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.
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.
ppb	Parts per Billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligrams.
ppm	Parts per million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 grams.
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
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.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.
N/D	Not Detected	
pCi/l	picocuries per liter	A measure of radioactivity.
n/a	not applicable	
>	Greater Than	
RAA	Running Annual Average	

Genesee County Water and Waste Services Detected Contaminants Tables

Regulated Contaminant	Units	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
2015 INORGANIC Chemicals - Monitoring at the Plant Finished Water Tap							
Fluoride	ppm	4	4	0.43	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	ppm	10	10	0.30	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium (optional)	ppm	n/a	n/a	4.00	n/a	no	Erosion of natural deposits.
2015 DISINFECTION Residual & By-Product Monitoring in Distribution System/Organic Carbon/Turbidity							
Total TriHalonmethanes (TTHM)	ppb	n/a	80	LRAA 26.5	10.9 to 34.4	no	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	ppb	n/a	60	LRAA 12.5	6 to 17	no	By-product of drinking water disinfection.
Disinfectant (Total Chlorine residual)	ppm	MRDGL 4	MRDL 4	RAA 0.93		no	Water additive used to control microbes.
Total Organic Carbon	Treatment Technique: The Total Organic Carbon (TOC) removal 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 requirement for TOC removal.						Erosion of natural deposits.
Turbidity (NTU)	100% of Samples Meet Turbidity Limit of 0.3 NTU 0.20 NTU (Minimum 95%)					no	Soil Run Off.
Turbidity is a measure of the cloudiness of water. It is monitored because it is a good indicator of the effectiveness of the filtration system.							
2015 MICROBIOLOGICAL CONTAMINANTS - Monthly Monitoring in Distribution System							
Total Coliform Bacteria (% positive samples/month)	%	0	>5% of monthly samples	1.1	n/a	no	Naturally present in the environment.
E.coli Bacteria (# positive samples)	#	0	0	none	n/a	no	Human and animal fecal waste.
A violation occurs when a routine sample and repeat sample, in any given month, are total coliform positive, and one is also E-coli positive.							

2014 LEAD AND COPPER MONITORING at CUSTOMERS' TAP

Regulated Contaminants	Test Date	Unit	Health Goal MCLG	Action Level AL	90th Percentile Value	Number of Samples Over AL	Violation Yes/No	Major Sources in Drinking Water
Lead	2014	ppb	0	15	2	0	no	Corrosion of Household Plumbing Erosion of natural deposits.
Copper	2014	ppm	1.3	1.3	0.09	0	no	Corrosion of Household Plumbing System; Erosion of natural deposits; leaching wood preservatives.
Combined Radium, 5/23/2014 Radium 226 & 228		pCi/L	0	5		Level Detected 0.86+ or -0.55	no	Erosion of natural deposits.

Unregulated Contaminants:

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Before EPA Regulates a contaminant, it considers adverse health effects, the occurrence of the contaminant in drinking water, and whether the regulation would reduce health risk. GCDC began monitoring for 28 unregulated contaminants in 2013. The following tables list the unregulated substances detected during the 2013 & 2014 calendar years.

2013-2014 Unregulated Contaminants - Monitoring at the Source

Contaminant	Unit	Range	Source
Strontium	ppb	88.3-110	Erosion of natural deposits.
Hexavalent Chromium	ppb	0.076-0.13	Discharge from steel and pulp mills; Erosion of natural deposits.
Total Chromium	ppb	0.23-0.46	Discharge from steel and pulp mills; Erosion of natural deposits.
Vanadium	ppb	ND-0.32	Erosion of natural deposits.

2013-2014 Unregulated Contaminants - Monitoring at the Distribution Source

Contaminant	Unit	Range	Source
Strontium	ppb	97.2-106	Erosion of natural deposits.
Hexavalent Chromium	ppb	0.082-0.1	Discharge from steel and pulp mills; Erosion of natural deposits.
Total Chromium	ppb	0.22-0.34	Discharge from steel and pulp mills; Erosion of natural deposits.
Vanadium	ppb	ND-0.23	Erosion of natural deposits.