

CITY OF CLIO 2019 CONSUMER CONFIDENCE REPORT

The City of Clio is pleased to present to you this year's annual drinking water quality report. Our goal is to provide you with a safe and dependable supply of drinking water. THE SAFE DRINKING WATER ACT (SDWA) requires that utilities issue an annual (CONSUMERS CONFIDENCE REPORT) to customers in addition to notices that may be required by law. This report details where our water comes from, what it contains, and the risk our water testing and treatment are designed to prevent.

OVERVIEW

The City of Clio has an on-going preventative maintenance program including, but not limited to, meter change out program, cross connection program, hydrant program, and valve program. These programs consist of exercising and preventative maintenance of various water related items. In conjunction to these programs, the City is also working on a mapping project of the City's water lines, hydrants, valve boxes, manholes, and curb boxes. The City cooperates with the Clio Area Fire Authority with regard to the painting of all the fire hydrants.

WATER SOURCE AND TREATMENT

Our water comes from the Genesee County Drain Commissioner – Division of Water and Waste Services via the Great Lakes Water Authority (GLWA). This water's primary source is Lake Huron. In this report is a Lake Huron Water Treatment Plant 2019 Regulated Detected Contaminants Table. These are the levels under which the City of Clio operates. After reaching the City of Clio our Department of Public Service performs routine Coliform, Disinfection By-Products (TTHM & HAA5), and a lead and copper testing. If any test result fails to meet DEQ Water Quality Standards, additional testing is performed until water quality meets guidelines.

Your source of water comes from the lower Lake Huron watershed. The watershed includes numerous short, seasonal streams that drain to Lake Huron. The Michigan Department of Environmental Quality in partnership with the U.S. Geological Survey, the Detroit Water and Sewage Department, and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of potential contamination. The susceptibility rating is on a seven-tiered scale from "very low" to "very high" based primarily on geologic sensitivity, water chemistry, and contaminant sources. The Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminant sources. The Lake Huron water treatment plant has historically provided satisfactory treatment of this source water to meet drinking water standards.

If you would like to know more information about the Source Water Assessment report or a complete copy of this report, please contact your water department (810) 686-5850.

ADDITIONAL INFORMATION

To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water.

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:

A) Microbial contaminants, such as viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

B) 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.

C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

D] 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.

E] Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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.

HOW TO READ THIS CHART

Our water is tested to assure that it is safe and healthy. These tables are based on tests conducted by the City of Clio within the last five (5) calendar years. We conduct many tests throughout the year, however, only test that show the presence of a contaminant are shown here. The table on this page is a key to the terms used in the tables. Sources of Contaminant show where this substance usually originates.

Key to Detected Contaminants Tables		
Symbol	Abbreviation for	Definition/Explanation
>	Greater than	
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.
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.
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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
n/a	Not applicable	
ND	Not Detected	
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 four quarters.
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

**Lake Huron Water Treatment Plant
2019 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
2019 Inorganic Chemicals – Monitoring at Plant Finished Water Tap								
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

*Fluoride is monitored daily in the finished water

2019 Disinfection By-Products –Monitoring in Distribution System								
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)	2019	ppb	n/a	80	34	15.3-56.8	no	By-product of drinking water chlorination
Haloacetic Acids Five (HAA5)	2019	ppb	n/a	60	17	17-24	no	By-product of drinking water disinfection

Disinfectant Residuals Monitoring in DWSD Distribution System								
Regulated Contaminant	Test Date	Unit	Health Goal MRDGL	Allowed Level MRDL	Highest RAA	Quarterly Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Chlorine Residual	Jan-Dec 2019	ppm	4	4	0.5	0.31-0.61	no	Water additive used to control microbes

2019 Turbidity – Monitored every 4 hours at Plant Finished Water Tap			
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 NTU	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	90 th Percentile Value*	Range	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead (Jan-June)	ppb	0	15	0	0	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Lead (July-Dec)	ppb	0	15	0	0 - .013	0	no	See above
Copper (Jan-June)	ppm	1.3	1.3	0.08	0 - .13	0	no	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.
Copper (July-Dec)	ppm	1.3	1.3	.0 - .07	0.27	0	no	See above
*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 requirement for TOC removal.	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

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

Opportunities for Public Participation

The City of Clio does not hold any 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.

National Primary Drinking Water Regulation Compliance

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.