The Genesee County Drain Commissioner's Office-Division of Water & Waste Services (GCDC-WWS) Water Treatment Plant will begin test operations in early July 2017. The Plant will treat water from Lake Huron, the same water source from which you currently receive your drinking water.

The GCDC-WWS Water Treatment Plant will treat, test, and verify the quality of the water produced for several months before distributing any water to our customers. None of the water produced during the test period will be put into the distribution system. The purpose of this test period is to verify the consistent production of high quality drinking water that meets or exceeds drinking water standards that our customers have come to expect.

All water produced will be thoroughly and continuously tested and monitored at our water treatment plant. Our goal is to have a seamless transition from the current purchased supply to our own drinking water supply by October 2017.

Please review the information provided.

We appreciate your continued support and should you have any questions, please contact us at the Division of Water and Waste Services at 810 732-7870.

Sincerely,

Jeff Wright, Drain Commissioner
John F. O'Brien, Director, Division of Water and Waste Services
Tim Davidek, Assistant Director, Division of Water and Waste Services
Kevin VanSickle, Superintendent, Water Treatment Plant
Mark Horgan, Chief, Operation and Maintenance
Matt Raysin, Assistant Director of Engineering

2016 Consumer Confidence Report

This report contains our water quality data for 2016 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 (800-426-4791) or www.epa.gov/safewater.

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 and GLWA 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	The average of analytical results for samples at a particular monitoring location during the previous four quarters.
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	The average of analytical results for all samples taken during the previous twelve months

2016 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
2016 INORGANIC Chemicals - Monitoring at the Plant Finished Water Tap							
Fluoride	ppm	4	4	0.50	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	ppm	10	10	0.46	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.
2016 DISINFECTION Residual & By-Product Monitoring in Distribution System/Organic Carbon/Turbidity							
Total TriHalonmethanes (TTHM)	ppb	n/a	80	LRAA 26	10.3 to 37.3	no	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	ppb	n/a	60	LRAA 12.3	5 to 15	no	By-product of drinking water disinfection
Disinfectant (Total Chlorine residual)	ppm	MRDGL 4	MRDL 4	RAA 0.87	0.2 to 1.48	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)	Highest single measurement cannot exceed 1 NTU: 0.28 NTU highest detected Lowest monthly % of Samples Meeting Turbidity Limit of 0.3 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.							
2016 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	0	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 CUSTOMER'S 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	1.2	0	no	Corrosion of Household Plumbing Erosion of natural deposits.
Copper	2014	ppm	1.3	1.3	0.114	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	n/a	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

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 (800) 426-4791 or at *http://www.epa.gov/safewater/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 9:00 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 Jim Thompson or Dan Lince at (810) 732-7870. You may also visit our website *http://www.gcdcwws.com.*

Lake Huron Plant Source Water Assessment
Your source 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 Sewerage Department, and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility to potential contamination. The susceptibility rating is a seven-tiered scale ranging 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 contamination. The Lake Huron water treatment plant has historically provided satisfactory treatment of this source water to meet drinking water standards.

GLWA voluntarily developed and received approval in 2016 for a source water protection program (SWIPP) for the Lake Huron Water Treatment Plant intake. The program includes seven elements that include the following: roles and duties of government units and water supply agencies, delineation of a source water protection area, identification of potential source water protection area, management approaches for protection, contingency plans, siting of new sources and public participation and education. If you would like to know more information about the Source Water Assessment or the SWIPP, please contact your water department 810-732-7870.

2015 Consumer Confidence Report Correction Notice
The annual Consumer Confidence Report (CCR) containing water quality information for 2015 was published and sent out in June 2016. This report has been amended to provide the corrected 2014 Lead and Copper Monitoring 90th percentile values. Lead was reported as 2ppb, but should have been listed as 1.2ppb. Copper was reported as 0.09ppm, but should have been listed as 0.114ppm. These 90th percentile values are still well below the health standards for both lead and copper as listed in the report. This information is being sent to you to meet Michigan Department of Environmental Quality and EPA reporting requirements. The method used to calculate the 90th percentile value was in error and has been corrected. We apologize for the error.

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

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