

City of River Rouge *2020 Annual Water Quality* *Report*

City of River Rouge, 10600 West Jefferson Avenue, River Rouge, Michigan 48218

The purpose of this report is to provide you with information about your drinking water. The report explains to you where your water comes from and the treatment it receives before it reaches your tap. The report also lists all the contaminants detected in your water and an explanation of all the violations in the past year.

The City of River Rouge receives its drinking water from the Great Lakes Water Authority (GLWA), Southwest Treatment Plant, located in Allen Park and the Springwell Plant located in Dearborn Heights. Water treated at the plants is drawn from the Detroit River. The water flows to the plants by gravity through a large water tunnel.

The treatment process begins with disinfecting the source water with chlorine to kill harmful microorganisms that can cause illness. Next, a chemical called Alum is mixed with the water to remove the fine particles that make the water cloudy or turbid. Alum causes the particles to clump together and settle to the bottom. Fluoride also is added to protect our teeth from cavities.

The water then flows through several sand filters to remove even more particles and certain microorganisms that are resistant to chlorine. Finally, a small amount of phosphoric acid and chlorine are added. The phosphoric acid helps control the lead that may dissolve in water from household plumbing systems. The chlorine keeps the water disinfected as it travels through the mains to your home.

The sources of drinking water (both tap 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:

- 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.
- Organic chemicals contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also can come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which are naturally occurring or can be the result of oil and gas production and mining activities.
- Pesticides and herbicides, which may come from a variety of sources, such as agriculture, urban storm water runoff and residential uses.

Drinking water quality is important to our community and the region. The City of River Rouge and the Great Lakes Water Authority (GLWA) are committed to meeting state and federal water quality standards including the Lead and Copper Rule. With the Great Lakes as our water source and proven treatment technologies, the GLWA consistently delivers safe drinking water to our community. River Rouge operates the system of water mains that carry this water to your home service line. This year's Water Quality Report highlights the performance of GLWA and River Rouge water professionals in delivering some of the nation's

We invite public participation in decisions that affect drinking water quality. The City of River Rouge Council Meetings are held on the first and third Tuesdays of each month at River Rouge City Hall located at 10600 W. Jefferson Avenue, River Rouge, MI 48218. For more information about your water or the contents of this report, contact the River Rouge Water Department at 313-842-4803. For more information about safe drinking water, visit the US Environmental Protection Agency at www.epa.gov/safewater.

best drinking water. Together, we remain committed to protecting public health and maintaining open communication with the public about our drinking water.

In order to ensure that tap water is safe, the US Environmental Protection Agency (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.

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 the water poses a health risk. More information about the contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. These include immune-compromised persons, such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, or those with HIV/AIDS or other immune system disorders. Also, some elderly residents and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. The EPA/CDC guidelines on appropriate means to lessen the risk of the infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

[Detroit River Intakes](#)

Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River watersheds in the U.S. and parts of the Thames River, Littler River, Turkey Creek, and Sydenham watersheds in Canada. The Michigan Department of Environmental Quality, in partnership with the U.S. geological Survey, Detroit Water & Sewerage Department, and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of GLWA's Detroit River source water for potential contamination. The susceptibility rating is based on a seven-tiered scale and ranges from "very low" to "very high", determined primarily using geologic sensitivity, water chemistry and potential contaminant sources. The report described GLWA's Detroit River intakes as highly susceptible to potential contamination. However, all four Detroit water treatment plants that service the City of Detroit

and draw water from the Detroit River have historically provided satisfactory treatment and meet drinking water standards.

GLWA has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. GLWA participates in a National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan. In 2016, the Michigan Department of Environmental Quality approved the GLWA Surface Water Intake Protection Program Plan. The programs include seven elements that include the following: roles and duties of government units and water supply agencies, delineation of a source water protection areas, identification of potential sources of contamination, management approaches for protection, contingency plans, siting of new water sources, public participation and public education activities. If you would like to know more information about the Source Water Assessment report, please, contact GLWA at 313-926-8102.

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water.

Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an 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.

Great Lakes Water Authority voluntarily monitors for Cryptosporidium and Giardia in our untreated source water monthly. Systems using surface water like GLWA must provide treatment so that 99.9 percent of Giardia lamblia is removed or inactivated.

Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those (UCMR2).

KEY TO DETECTED CONTAMINANTS TABLES

Symbol	Abbreviation for	Definition/Explanation
MCLG	Maximum Contaminant Level Goal	The level of 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.
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 microbials.
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 milligram.
ppm	Parts per million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
LRAA	Locational Running Annual Average	The average of analytical results for samples at a particular monitoring location during the previous four quarters
RAA	Running Annual Average	The average of analytical results for all samples during the previous four quarters.
SMCL	Secondary Maximum Containment Level	An MCL which involves a biological, chemical or physical characteristic of water that may adversely affect the taste, odor, color or appearance (aesthetics), which may thereby affect public confidence or acceptance of the drinking water.
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
ND	Not Detected	
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 that 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.
Level 1	Level 1 Assessment	A level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in the water system.
Level 2	Level 2 Assessment	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane and bromoform. Compliance is based on the total.
pCi/L	Picocuries per liter	A measure of radioactivity
n/a	Not applicable	
µohms	Micromhos	Measure of electrical conductance of water
°C	Celsius	A scale of temperature in which water freezes at 0 degrees and boils at 100 degrees under standard conditions
>	Greater than	

contaminants. Beginning in July of 2008, the Detroit Water and Sewerage Department (DWSD) began monitoring quarterly for unregulated contaminants under the Unregulated Contaminant Monitoring Rule 2.

Water Quality Data

Your drinking water is continuously monitored above and beyond Federal and State laws. Monitoring frequencies vary by parameter, so some of the test dates for the results are a few years old because it is the most recent information. In addition, monitoring must be performed by the individual community. The community-specific information is presented in a separate table above. The following tables show all the contaminants that were detected in your water.

Your drinking water met all the State and EPA monitoring and reporting requirements for 2018. Not listed are the hundreds of other contaminants tested for, but not found in your water.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community, as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water.

Lead and Copper Testing

It is estimated there is approximately 3025 lead services in River Rouge. 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. The City of River Rouge 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 the water for drinking or cooking. If you have a lead service line it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service lead. 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://water.epa.gov/drink/info/lead>.

Safe drinking water is a shared responsibility. The water that GLWA delivers 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 home or business. The City of River Rouge 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.

Public Participation

Each and every month the Great Lakes Water Authority Board meet at the Water Board Building at 735 Randolph Street, Detroit, Michigan 48226. These meetings as well as public hearings are open to the public. To confirm dates and times of the GLWA meetings residents are encouraged to visit the GLWA website at www.glwater.org.

The City of River Rouge and the Great Lakes Water Authority are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. Please contact us with any questions or concerns about your water.

2020 Southwest Regulated Detected Contaminants Table

2020 Inorganic Chemicals - Annual Monitoring at Plant Finished Tap								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
Fluoride	3-10-2020	ppm	4	4	0.71	n/a	no	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	3-10-2020	ppm	10	10	0.61	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	5-16-2017	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
2020 Disinfection Residual - Monitoring in the Distribution System								
Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest Level RAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
Total Chlorine Residual	2020	ppm	4	4	0.62	0.49-0.72	no	Water additive used to control microbes
2020 Disinfection By-Products - Stage 2 Disinfection By-Products Monitoring in the Distribution System								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level LRAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
(TTHM) Total Trihalomethanes	2020	ppb	n/a	80	33 ppb	.05 – 30 ppb	no	By-product of drinking water chlorination
(HAA5) Haloacetic Acids	2020	ppb	n/a	60	7.5 ppb	1.0 – 7.5 ppb	no	By-product of drinking water chlorination
2020 Turbidity - Monitored Every 4 Hours at the 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	Major Sources in Drinking Water
0.13 NTU	100%						no	Soil Runoff
Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.								
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 is measured each quarter and because the level is low, there is no requirement for TOC removal.						Erosion of natural deposits	
Radionuclides - Monitored at the Plant Finished Tap in 2014								

Regulated Contaminant	Test Date	Unit	MCLG	MCL	Level Detected	Violation	Major Sources in Drinking Water
Combined Radium Radium 226 and 228	5-13-14	pCi/L	0	5	0.65 ± 0.54	no	Erosion of natural deposits

Lead and Copper Monitoring at the Customer's Tap in 2020

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Number of Samples Over AL	Range of Individual Samples Results	Violation	Major Sources in Drinking Water
Lead	2020	ppb	0	15	5.05 ppb	0	Nd – 10.92 ppb	no	Lead services lines, corrosion of household, plumbing including fittings and fixtures; erosion of natural deposits”
Copper	2020	ppm	1.3	1.3	.04125 ppm	0	Nd - .115 ppm	no	Corrosion of household plumbing system; Erosion of natural deposits; leaching from wood preservatives.

* 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.

2020 Special Monitoring

Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Source of Contaminant
Sodium	3-10-2020	ppm	n/a	n/a	6.81	Erosion of natural deposits

These tables are based on tests conducted by GLWA in the year 2020 or the most recent testing done within the last five calendar years. GLWA conducts tests throughout the year only tests that show the presence of a substance or require special monitoring are presented in these tables. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one year old.

Unregulated Contaminant Monitoring Rule - Unregulated contaminants are those for which the Environmental Protection Agency (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 will reduce health risk. The Great Lakes Water Authority monitored for 20 unregulated contaminants quarterly in 2020. The following table list the unregulated substance detected during the calendar year 2020.

Unregulated Contaminant	Test Date	Unit	Highest Level Detected	SMCL	Range of Detection	Noticeable Effects above the SMCL	Major Sources in Drinking Water
Manganese	2019	ppb	0.48	50	0.0-0.48	black to brown color; black staining; bitter metallic taste	Erosion of natural deposits and corrosion of iron pipes

These tables are based on tests conducted by GLWA in the year 2019 or the most recent testing done within the last five calendar years. GLWA conducts tests throughout the year only tests that show the presence of a substance or require special monitoring are presented in these tables.

Springwells Water Treatment Plant 2020 Regulated Detected Contaminants Tables

2020 Inorganic Chemicals - Annual Monitoring at Plant Finished Tap								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
Fluoride	3-10-2020	ppm	4	4	0.63	n/a	no	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	3-10-2020	ppm	10	10	0.37	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	5-16-2017	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
2020 Disinfection Residual - Monitoring in the Distribution System								
Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest Level RAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
Total Chlorine Residual	2020	ppm	4	4	0.70	0.60-0.79	no	Water additive used to control microbes
2020 Disinfection By-Products - Stage 2 Disinfection By-Products Monitoring in the Distribution System								
<i>Regulated Contaminant</i>	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level LRAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
(TTHM) Total Trihalomethanes	2020	ppb	n/a	80	33 ppb	.05 - 30 ppb	no	By-product of drinking water chlorination
(HAA5) Haloacetic Acids	2020	ppb	n/a	60	7.5 ppb	1.0–7.5 ppb	no	By-product of drinking water chlorination
2020 Turbidity - Monitored Every 4 Hours at the 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	Major Sources in Drinking Water
0.21 NTU	100%						no	Soil Runoff
Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.								
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 is measured each quarter and because the level is low, there is no requirement for TOC removal.						Erosion of natural deposits	

Lead and Copper Monitoring at the Customer's Tap in 2020

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Number of Samples Over AL	Range of Individual Samples Results	Violation	Major Sources in Drinking Water
Lead	2020	ppb	0	15	5.05 ppb	0	Nd -10.92 ppb	no	Lead services lines, corrosion of household, plumbing including fittings and fixtures; erosion of natural deposits"
Copper	2020	ppm	1.3	1.3	.04125 ppm	0	Nd - .115 ppm	no	Corrosion of household plumbing system; Erosion of natural deposits; leaching from wood preservatives.

* 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.

2020 Special Monitoring

Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Source of Contaminant
Sodium	3-10-2020	ppm	n/a	n/a	5.37	Erosion of natural deposits

These tables are based on tests conducted by GLWA in the year 2020 or the most recent testing done within the last five calendar years. GLWA conducts tests throughout the year only tests that show the presence of a substance or require special monitoring are presented in these tables. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one year old.

These tables are based on tests conducted by GLWA in the year 2019 or the most recent testing done within the last five calendar years. GLWA conducts tests throughout the year only tests that show the presence of a substance or require special monitoring are presented in these tables.

CITY OF RIVER ROUGE AND GREAT LAKES WATER AUTHORITY (GLWA) FACTS

The City of River Rouge is the oldest community water system that receives their water from the Great Lakes Water Authority. River Rouge has been a customer of DWSD/GLWA since 1900. The City of Hamtramck and the City of Ecorse rank as the second and third oldest customers of the Great Lakes Water Authority/DWSD. The City of Ecorse became a customer of the City of Detroit in 1904, four years after the City of River Rouge.

You can save hundreds even thousands of gallons of water each day by making adjustments in your daily routines. Install a faucet aerator to save 1 to 3 gallons of water per minute of use. A low flow shower head can save you 10 gallons of water per minute which is an average of about 20,000 gallons per year. Watch for any drips in faucets. A running toilet can waste up to 74,000 gallons of water in just 3 months.

If you see any suspicious activity around the water system or fire hydrants you should contact the City of River Rouge Water Department at 313-842-4803 during normal business hours, the River Rouge Police Department 24 hours a day and 7 days a week or dial 911.

This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.