# City of River Rouge, MI 2015 Annual Water Quality

# Report

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 Detroit Water & Sewerage Department, Southwest Treatment Plant, located in Allen Park and the Springwells 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 presences 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, 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.

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. 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.

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 with the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River in the US and parts of the Thames River, Little River, Turkey Creek and Sydenham watersheds in Canada. The Michigan Department of Environmental Quality, in partnership with the US Geological Survey, the Detroit Water & Sewerage Department and the Michigan Public Health Institute performed a source water assessment to determine the susceptibility of potential contamination.

The susceptibility rating is on a seven-tiered scale from Sources "very low" to "very high", based primarily on geologic sensitivity, water chemistry and contaminant

The susceptibility of our Detroit River source water intakes were determined to be highly susceptible to potential contamination. However, all four Detroit water treatment plants that use source water from the Detroit River have historically provided satisfactory treatment of this source water to meet drinking water standards.

DWSD has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. DWSD participates in a National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan. If you would like to know more about this report, or for a complete copy of this report, please contact your City of River Rouge Water Department at 313-842-4803.

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. Cryptosporidium was detected once, during a twelve-month period at our Detroit River intake plants. 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

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 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 (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								
RAA	Running Annual Average								
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 bromaecetic, 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.							
pCi/I	Picocuries per liter	A measure of radioactivity							
n/a	Not applicable								
mmhos	Micromhos	Measure of electrical conductance of water							
С	Celsius	A scale of temperature in which water freezes at 0 degrees and boils at 100 degrees under standard conditions							
>	Greater than								

Infants and young children are typically more vulnerable to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

# 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 2015. 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.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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.

The City of River Rouge Water Department 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 two (2) minutes before using the tap water for drinking or cooking.

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 two (2) minutes before using tap water for drinking or cooking. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewatre/lead.at 1-800-426-4791

# **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 <u>www.glwater.org</u>.

# Southwest Water Treatment Plant

2015 Regulated Detected Contaminants Tables
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Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water		
Inorganic Chemicals – Monitoring at Plant Finished Water Tap										
Fluoride	5/11/2015	ppm	4	4	0.54	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.		
Nitrate	5/11/2015	ppm	10	10	0.43	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.		
Disinfection By-Products – Monitoring in Distribution System Stage 2 Disinfection By-Products										
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water		
Total Trihalomethane s (TTHM)	8/25/2015	ppb	n/a	80	22	0.5-80	no	By-product of drinking water chlorination.		
Haloacetic Acids (HAA5)	8/25/2015	ppb	n/a	60	8.3	1.0-60	no	By-product of drinking water disinfection.		
Disinfection – M	lonitoring in	Distribu	ition Syst	em by Trea	tment Plant					
Regulated Contaminant	Test Date	Unit	Health Goal MRDGL	Allowed Level MRDL	Highest RAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water		
Total Chlorine Residual	Jan.–Dec. 2015	ppm	4	4	0.64	0.56-0.79	no	Water additive used to control microbes.		

2015 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					
0.14 NTU	100%	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.								

2015 Microbiological Contaminants – Monthly Monitoring in Distribution System								
Regulated Contaminant	MCLG	MCL	Highest Number Detected	Violation yes/no	Major Sources in Drinking Water			
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	0	no	Naturally present in the environment.			
<i>E. coli</i> Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E.coli positive.	0	no	Human waste and animal fecal waste.			

2014 Lead and Copper Monitoring at Customers' Tap								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Action Level AL	90 <sup>th</sup> Percentile Value*	Number of Samples Over <mark>AL</mark>	Violation yes/no	Major Sources in Drinking Water
Lead	8/2014	ppb	0	15	3.9	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	8/2014	ppm	1.3	1.3	54.3	0	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.								

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 quarter and because the level was low, there is no requirement for TOC removal.	Erosion of natural deposits

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	5/13/2014	pCi/L	0	5	0.65 + or - 0.54	no	Erosion of natural deposits

2015 Special Monitoring							
Contaminant	MCLG	MCL	Level Detected	Source of Contamination			
Sodium (ppm)	n/a	n/a	5.41	Erosion of natural deposits			

Collection and sampling result information in the table provided by Detroit Water and Sewerage Department (DWSD) Water Quality Division, ML Semegen.

# Springwells Water Treatment Plant

# 2015 Regulated Detected Contaminants Tables

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water		
Inorganic Chemicals – Monitoring at Plant Finished Water Tap										
Fluoride	5/11/15	ppm	4	4	0.45	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.		
Nitrate	5/11/15	ppm	10	10	0.33	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.		
Disinfection By-Products – Monitoring in Distribution System Stage 2 Disinfection By-Products										
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water		
Total Trihalomethanes (TTHM)	8/25/2015	ppb	n/a	80	22	0.5-80	no	By-product of drinking water chlorination		
Haloacetic Acids (HAA5)	8/25/2015	ppb	n/a	60	8.3	1.0-60	no	By-product of drinking water disinfection		
<b>Disinfectant Resid</b>	uals – Moni	itoring i	n Distribu	ition System	n by Treatmo	ent Plant				
Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest RAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water		
Total Chlorine Residual	JanDec. 2015	ppm	4	4	0.70	0.64-0.74	no	Water additive used to control microbes		

2015 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					
0.18 NTU	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.								

2014 Microbiological Contaminants – Monthly Monitoring in Distribution System								
Regulated Contaminant	MCLG	MCL	Highest Number Detected	Violation yes/no	Major Sources in Drinking Water			
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	0	no	Naturally present in the environment.			
<i>E.coli</i> Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E.coli positive.	0	no	Human waste and animal fecal waste.			

2014 Lead and Copper Monitoring at Customers' Tap								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Action Level AL	90 <sup>th</sup> Percentile Value*	Number of Samples over AL	Violation yes/no	Major Sources in Drinking Water
Lead	8/2014	ppb	0	15	3.9	0	no	Corrosion of household plumbing system; Erosion of natural deposits.

Copper	8/2014	ppm	1.3	1.3	0.0543	0	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.								

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 quarter and because the level was low, there is no TOC removal requirement.	Erosion of natural deposits

#### 2015 Special Monitoring

Sodium (ppm)n/an/a5.15Erosion of natural deposits	Contaminant	MCLG	MCL	Level Detected	Source of Contamination
	Sodium (ppm)	n/a	n/a	5.15	Erosion of natural deposits

Collection and sampling result information in the table provided by Detroit Wate

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

#### Did You Know?

The City of River Rouge is the oldest community water system that receives their water from the Great Lakes Water Authority formerly the City of Detroit. 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.

The three (3) largest water users in the City of River Rouge are U.S. Steel Great Lakes Works, DTE Energy and Pennzoil.

GLWA uses the Great Lakes, the world's largest concentration of fresh water, as their water source

GLWA is the largest water system in the State of Michigan

GLWA supplies water to four million people in Southeast Michigan

GLWA is the 3<sup>rd</sup> largest provider of high-quality drinking water in the United States

GLWA water rates have consistently been among the lowest in the nation's twenty largest municipalities

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**City of River Rouge** 

Water Department

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