



CITY OF
ROCHESTER
HILLS

ANNUAL WATER
QUALITY
REPORT



WATER TESTING
PERFORMED
IN 2015

City of Rochester Hills 2015 Water Quality Report

Interesting Facts About Our Water

The City of Rochester Hills water comes from the greatest freshwater supply in the world, the Great Lakes. Specifically, our water source is Lake Huron.

The City of Rochester Hills customers utilize approximately two and a half billion gallons of water per year. Our goal is to provide a safe water supply with quality service to our customers.

If you have any questions about this report, or for questions relating to your drinking water, please contact the Department of Public Services at 248-656-4685 or by email at dps@rochesterhills.org.



Where Does Our Water Come From?

Your source water comes from the lower Lake Huron watershed. The MDEQ, U.S. Geological Survey, DWSD, and Michigan Public Health Institute, performed a source water assessment in 2004 to determine its susceptibility to potential contamination.

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.

What's in Our Drinking Water?

Drinking water, including bottled water, may reasonably be expected to contain some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material, and 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, or wildlife.

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

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Organic Chemical Contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

To ensure tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. The State and EPA require us to test our water on a regular basis to ensure its safety.

Lead and Drinking Water

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. Rochester Hills is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. You can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking and cooking. If you are concerned, 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 or at <http://epa.gov/safewater/lead>.

In 2015, DSWD received a grant from the MDEQ to develop a source water protection program for the Lake Huron water treatment plant intake. The program includes seven elements that include the following: roles and duties of government 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.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Those with cancer undergoing chemotherapy or who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice from their health care providers about their drinking water. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection are available from the Safe Drinking Water Hotline at 800-426-4791 or <http://water.epa.gov/drink/hotline>. More information about contaminants and potential health effects can be obtained at this site as well.

We invite public participation in discussions that affect drinking water quality.

We want our customers to be informed about their water quality and involved in discussion pertaining to water quality. For more information about your water, or the contents of this report, contact the City of Rochester Hills Department of Public Services at 248-656-4685.

We will update this report annually and will keep you informed of any problems that may occur through the year, as they happen. We're proud that your drinking water meets or exceeds all Federal and State requirements.

Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less water whenever possible. It is not hard to conserve water. Check out our Water Conservation page under 'Living In' on the City's website.

Lake Huron 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 the Plant Finished Water Tap								
Fluoride	5/11/15	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	5/11/15	ppm	10	10	0.30	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)	2015	ppb	n/a	80	32	15 - 47	no	By-product of drinking water chlorination
Haloacetic Acids Five (HAA5)	2015	ppb	n/a	60	14	10 - 20	no	By-product of drinking water disinfection
Disinfectant Residuals Monitoring in DWSD Distribution System by Treatment Plant								
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 2015	ppm	4	4	0.82	0.71-0.91	no	Water additive used to control microbes
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
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	
0.2 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 <i>E. coli</i> 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 th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2014	ppb	0	15	0	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2014	ppm	1.3	1.3	0.0498	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	0.86 + or - 0.55	no	Erosion of natural deposits	
2015 Special Monitoring								
Contaminant	MCLG	MCL	Level Detected			Source of Contamination		
Sodium (ppm)	n/a	n/a	4.00			Erosion of natural deposits		

Collection, sampling result information and table provided by GLWA Water Quality Division, ML Semegen

Glossary: n/a-Not applicable, >- Greater than, ND- Not detected

MCLG (Maximum Contaminant Level Goal) - The level of contaminant in drinking water below which there is no known 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 are 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 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) - The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.

n/a - not applicable

pCi/L - Picocuries per liter

ppm (Parts per Million) - The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.

NTU (Nephelometric Turbidity Units) - Measures cloudiness of 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 the 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 total.

LRAA - Locational Running Annual Average

RAA - Running Annual Average

Visit the City of Rochester
Hills www.rochesterhills.org
Bryan K. Barnett, Mayor



A Message from Mayor Bryan K. Barnett

The City of Rochester Hills is honored to provide you with the 2015 Annual Water Quality Report. This report reviews the sources of our water, lists the results of our tests, and contains important information about water, health, and ways to use water responsibly.

In an effort to help control increasing costs and protect this natural resource, this report will also highlight money savings ideas and conservation tips for you and your family. We also encourage you to become familiar with our watering ordinance found on our website at www.rochesterhills.org. Together we can protect this vital resource for generations to come.



Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- The City Ordinance requests that property owners with automatic watering system to only water lawns between midnight and 5:00 am to reduce water purchase costs. Watering your lawn and garden during these hours will minimize evaporation as well.
- The City also asks businesses and residents to delay the start of their watering systems by 15, 30 and 45 minutes past the top of the hour to avoid sudden water pressure drops that have been detected on the hour.
- Turn your sprinkler system off during or after a rainstorm and leave it off until the plants need to be watered again. Or install a rain sensor on your sprinkler system so it automatically shuts off when it's raining.
- Water your lawn only when it needs it. If you leave footprints on the grass, it is usually time to water. Also, avoid watering your lawn on windy days.
- Remember to check your sprinkler system valves periodically for leaks and keep sprinkler heads in good shape. Adjust sprinklers so that only your lawn is watered and not the house, sidewalk, or street.
- Don't over-water your plants. Learn how much water they need and how best to apply just the right amount.
- Upgrade older toilets and shower heads to energy-efficient models. Make sure there are water-saving aerators on all your faucets.
- Turn the faucet off while you shave, brush your teeth, lather your hands and wash dishes.
- Run your washer and dishwasher only when they are full. You can save up to 1,000 gallons a month. When buying new appliances, consider those that offer cycle and load size adjustments. They're more water and energy efficient.
- Plant in the fall when conditions are cooler and rainfall is more plentiful.
- Adjust your lawn mower to a higher setting. A taller lawn shades roots and holds moisture better than if it is closely clipped.
- Use a hose nozzle or turn off the water while you wash your car. You'll save up to a 100 gallons every time.
- Share water conservation tips with friends and neighbors.
- Report broken pipe, open hydrants, and errant sprinklers to the property owner or to your water provider.
- Monitor your water bill for unusually high use. Your bill and water meter are tools that can help you discover leaks.



Rochester Hills, in partnership with the City of Auburn Hills, the Township of Orion and the Oakland County Water Resources Commissioner (representing the City of Pontiac) created the North Oakland County Water Authority (NOCWA) in 2014.



The purpose of the NOCWA is to provide more reliable water service as well as marginalize water rate increases to the four communities through maximizing the utilization of existing underutilized assets and through increased overall efficiency by operating as a small regional district rather than four individual communities.

A Final Word About Water Safety

As a result of the Flint water crisis, the City of Rochester Hills would like to assure you every possible step has been taken to guarantee the safety and quality of our water. Based on the age of the homes in Rochester Hills, and the age of our water system, no changes need to be made to our infrastructure. We are confident our current system monitoring and maintenance programs are sufficient to ensure safe drinking water for all users.

