



City of Dearborn Heights
Department of Public Services
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2019 Water Quality Report

Introduction

Drinking water quality is important to our community and the region. The City of Dearborn Heights 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. Dearborn Heights operates the system of water mains that carry this water to your home's service line. This year's Water Quality Report highlights the performance of GLWA and Dearborn Heights water professionals in delivering some of the nation's best drinking water. Together, we remain committed to protecting public health and maintaining open communication with the public about our drinking water.

This report was prompted by the passage of the 1996 Federal Safe Drinking Water Act Amendments. The amendments require that each community perform an annual report to be distributed to each water customer within the community. The purpose of this report is two-fold. First, it is to inform all water customers of the City of Dearborn Heights about the quality of our drinking water, and second, to share with our customers' information on the Dearborn Heights water system.

Dearborn Heights Water System

The Dearborn Heights Water Department provides water to approximately 59,000 residents, 21,100 homes, and over 1,200 businesses, schools, churches, and apartments. Dearborn Heights' water is supplied by the Great Lakes Water Authority from its Springwells and Southwest Water Treatment Plants. 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, Little River, Turkey Creek and Sydenham watersheds in Canada. The Michigan Department of Environmental Quality in partnership with the U.S. Geological Survey, the Detroit Water and Sewerage Department and Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of GLWA Detroit river source water of potential contamination. The susceptibility rating is based on a seven-tiered scale

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 GLWA water treatment plants that draw water from 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 program includes 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 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.

Is our Water Safe to Drink? Yes!

The City of Dearborn Heights is proud to announce to our water customers that we met or exceeded all federal and state standards for drinking water during 2019, when the enclosed data was compiled. This report will be presented annually in the spring-summer edition of the Dearborn Heights Today newsletter.

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 at 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:

- 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.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- 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 storm water runoff, and septic systems.
- 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 human health.

Other Information

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons, such as persons with cancer 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 800-426-4791.

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. Additional information is available from the Safe Drinking Water Hotline 800-426-4791.

Water Quality Data Table

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

2019 Regulated Detected Contaminants Table

2019 Inorganic Chemicals – Monitoring at Plant Finished Water Tap								
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
Fluoride	6/11/2019	ppm	4	4	0.74	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Southwest Plant	6/11/2019	ppm	4	4	0.66	n/a	No	
Nitrate	6/11/2019	ppm	10	10	0.99	n/a	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Southwest Plant	6/11/2019	ppm	10	10	0.48	n/a	No	
Barium	5/16/2017	ppm	2	2	0.01	n/a	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Southwest Plant	5/16/2017	ppm	2	2	0.01	n/a	No	
2019 Disinfection By-Products – Monitoring in Distribution System, Stage 2 Disinfection By-Products								
Regulated Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest Level LRAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2019	ppb	n/a	80	30.4	14.3 – 41.9	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2019	ppb	n/a	60	15.0	10.0 – 17.0	No	By-product of drinking water disinfection

2019 Disinfectant Residuals – Monitoring in Distribution System by Treatment Plant								
Regulated Contaminant	Test Date	Units	Health Goal MRDGL	Allowed Level MRDL	Highest RRA	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Southwest Plant Total Chlorine Residual	Jan.-Dec. 2019	ppm	4	4	0.60	0.49 - 0.69	No	Water additive used to control microbes
Springwells Plant Total Chlorine Residual	Jan.-Dec. 2019	ppm	4	4	0.68	0.57 - 0.72	No	Water additive used to control microbes
2019 Turbidity – Monitored every 4 hours at Plant Finished Water								
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	
Southwest Plant 0.18 NTU		100%				No	Soil Runoff	
Springwells Plant 0.26 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.								
2019 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.	
2019 Lead and Copper Monitoring at Customers' Tap								
Regulated Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	June -Sept 2019	ppb	0	15	34	5	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	June-Sept 2019	ppb	1300	1300	100	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.								

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span or learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

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 Dearborn Heights 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.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Dearborn Heights 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 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>.

Regulated Contaminant	Treatment Technique 2018	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 quarterly and because the level was low, there is no requirement for TOC removal.	Erosion of natural deposits

Radionuclides 2014

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

2019 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm) Southwest Plant Springwells Plant	n/a n/a	n/a n/a	7.25 6.37	Erosion of natural deposits

2019 Unregulated Monitoring

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

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 regulations 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 20 unregulated contaminants in 2019. The above table list the unregulated substance detected during the calendar year 2019.

Key to Detected Contaminants Tables

Symbol	Abbreviation	Definition/Explanation
>	Greater than	
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
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.
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 quarters.
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 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. MRLDG's 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.
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.
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 total
µmhos	Micromhos	Measure of electrical conductance of water

Monitoring and Reporting Requirements

City of Dearborn Heights and the Great Lakes Water Authority are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. The State and EPA requires us to test our water on a regular basis to ensure its safety. We met all the monitoring and reporting requirements for 2019. We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies of this report are available at the City of Dearborn Heights official web page: www.ci.dearborn-heights.mi.us

We invite public participation in decisions that affect drinking water quality. Comments can be received at the regularly scheduled City Council meetings on the second and fourth Tuesdays of each month or contact the Department of Public Works at 313-791-6000. For more information about safe drinking water, visit the U.S Environmental Protection Agency at: www.epa.gov/safewater