Village of
Grosse Pointe
Shores

Annual Drinking Water Quality Report

This report covers the drinking water quality for the Village of Grosse Pointe Shores, for the calendar year 2019 {Jan. 1 - Dec. 31}. This information is a snapshot of the quality of the water that we provided to you in 2019. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

Introduction:

Drinking water quality is important to our community and the region. Grosse Pointe Shores 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. Grosse Pointe Shores 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 Grosse Pointe Shores 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.

About our system:

The Village of Grosse Pointe Shores is one of 126 communities that receive its water from the GLWA, which provides drinking water to approximately 4.2 million people. The system uses water drawn from two intakes in the Detroit River: one to the north near the mouth of Lake St. Clair and one to the south near Lake Erie. The water is directed to (4) large water treatment plants for processing. A fifth water treatment plant located in St. Clair County uses surface water from Lake Huron. The four plants that treat water drawn from the Detroit River service Detroit area customers.

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, 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 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 susceptibility of our Detroit River source water intakes was determined to be highly susceptible to potential contamination. However, all four GLWA water treatment plants that service the city of Detroit and draw water from the Detroit River have historically provided satisfactory treatment of this source water to 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 area, identification of potential of sources of contamination, management approaches for protection, contingency plans, siting of new water sources and public participation and public education activities. If you would like to know more information about the Source Water Assessment report please, contact GLWA (313)926-8102.

Mandatory language regarding contaminants reasonably expected to be found in drinking water.

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 storm water 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 public health.

Warning about the vulnerability of some populations to contaminants in drinking water.

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).

Required 2008 Cryptosporidium language for one or more of the following water plants; Water Works Park' Northeast, Springwells, and Southwest.

Cryptosporidium a microbial pathogen found is 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, compromised-compromised people, infants and small children, and the elderly are at risk of developing life-threatening illness. We encourage immune-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

New LCR CCR requirements covering the year 2009 water supplies must include information about lead, even if lead is not detected.

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. Grosse Pointe Shores 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 or at http:/www.epa.gov/safewater/lead.

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).

Grosse Pointe Shores and the GLWA are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. We will be updating this report annually and will also keep you informed of any water problems that may occur throughout the year, as they may happen.

If you have any questions, please call the Village of Grosse Pointe Shores Public Works at 313-886-0020. The Grosse Pointe Shores Council meets the 3rd Tuesday of each month at 7:00pm. At the Village Municipal building located at 795 Lake Shore Road.

Northeast Water Treatment Plant

2019 Regulated Detected Contaminants Tables

2019 Inorganic Chemicals – Monitoring at the Plant Finished Water Tap

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
Fluoride	6-11-19	ppm	4	4	**0.72**	**n/a**	**no**	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	6-11-19	ppm	10	10	**0.48**	**n/a**	**no**	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	5-16-17	ppm	2	2	**0.01**	**n/a**	**no**	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits

2019 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)	2019	ppb	n/a	80	23.8	23.8	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2019	ppb	n/a	60	14	14	No	By-product of drinking water disinfection

2019 Disinfectant Residuals – Monitoring in Distribution System by Treatment Plant

Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest RAA	Quarterly Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Chlorine Residual	Jan-Dec 2019	ppm	4	4	**0.74**	**0.45-0.83**	**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
0.13 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 Lead and Copper Monitoring at Customers' Tap

Regulated Contaminant	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	2019	ppb	0	15	**0**	**0**	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2019	ppm	1.3	1.3	**.2**	**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.

Northeast Water Treatment Plant
2019 Regulated Detected Contaminants Tables

Regulated Contaminant	Treatment Technique 2019	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

Special Monitoring 2019

Contaminant	MCLG	MCL	Level Detected 2019	Source of Contamination
Sodium (ppm)	n/a	n/a	**6.37**	Erosion of natural deposits

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.

Key to the Detected Contaminants Table

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 occasions.
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 Contaminant 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 the total.
µohms	Microohms	Measure of electrical conductance of water

Great Lakes Water Authority
Water Quality

RESULTS (BY TOWN) 01/01/2019 To 12/31/2019

Date	Pt.	Br.	Sample #	T. Coliform	E. Coli	Cl2	Need Recheck	Recheck Date
Town Name: Grosse Pointe Shores								
01/03/2019	1	-	2	-	-	0.41		
01/08/2019	1	-	13	-	-	0.37		
01/11/2019	1	-	47	-	-	0.43		
02/01/2019	1	-	21	-	-	0.46		
02/07/2019	2	-	52	-	-	0.05		
02/12/2019	3	-	11	-	-	0.13		
03/01/2019	1	-	23	-	-	0.39		
03/06/2019	2	-	2	-	-	0.56		
03/08/2019	3	-	20	-	-	0.23		
04/05/2019	1	-	23	-	-	0.40		
04/11/2019	2	-	2	-	-	0.00		
04/15/2019	1	-	2	-	-	0.32		
05/01/2019	1	-	39	-	-	0.30		
05/07/2019	2	-	40	-	-	0.00		
05/17/2019	3	-	16	-	-	0.05		
06/04/2019	1	-	3	-	-	0.23		
06/14/2019	2	-	3	-	-	0.26		
06/18/2019	3	-	23	-	-	0.13		
07/02/2019	1	-	76	-	-	0.21		
07/09/2019	1	-	16	-	-	0.25		
07/12/2019	3	-	48	-	-	0.13		
07/24/2019	1	-	55	-	-	0.16		
08/02/2019	1	-	39	-	-	0.22		
08/12/2019	2	-	43	-	-	0.23		
08/24/2019	1	-	30	-	-	0.35		

Great Lakes Water Authority
Water Quality

RESULTS (BY TOWN) 01/01/2019 To 12/31/2019

Date	Pt.	Br.	Sample #	T. Coliform	E. Coli	Cl2	Need Recheck	Recheck Date
09/04/2019	1	-	20	-	-	0.34		
09/16/2019	2	-	42	-	-	0.29		
09/20/2019	3	-	12	-	-	0.15		
10/04/2019	1	-	82	-	-	0.14		
10/22/2019	1	-	149	-	-	0.11		
10/22/2019	2	-	148	-	-	0.05		
11/04/2019	1	-	72	-	-	0.10		
11/04/2019	2	-	71	-	-	0.06		
11/04/2019	3	-	75	-	-	0.21		
12/05/2019	1	-	81	-	-	0.19		
12/05/2019	2	-	80	-	-	0.11		
12/05/2019	3	-	82	-	-	0.25		

Total No. of Samples Collected: 37

Great Lakes Water Authority
Water Quality

DISTRIBUTION AND BRACKETING - BRACKETING POINTS FOR A TOWN
Town: GROSSE POINTE SHORES

Date Removed	Pt.	Location	Address
	1	**DPW - Lunchroom(Garage Sink) *1 *M-F 7:30am-4pm**	**795 Lake Shore Rd @ Vernier**
		A Private Residence - tap	771 Lake Shore Road
		B Private Residence - tap	833 Lake Shore Road
	2	**Residence- Garage Sink -Use North Driveway (2nd) *1x**	**1000 Lakeshore**
		A tap	970 Lake Shore Road
		B tap	1040 Lake Shore Road
	3	**Residence-Flower Garage Sink- Use N. Driveway *1x**	**635 Lakeshore @ Lakeshore Lane**
		A tap	611 Lake Shore Road
		B tap	665 Lake Shore Road

Total number of distribution Point numbers :3

Total number of distribution Point numbers in Service : 3

Total number of Bracket Point numbers : 6

Total number of Bracket Point numbers in Service :6