



# Annual Drinking Water Quality Report

*This report covers the drinking water quality for the Village of Grosse Pointe Shores, for the calendar year 2023 {Jan. 1 - Dec. 31}. This information is a snapshot of the quality of the water that we provided to you in 2023. 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 Environment, Great Lakes, and Energy 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 Environment, Great Lakes, and Energy 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, contact GLWA at (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 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).

### **Information about Cryptosporidium and Giardia**

GLWA voluntarily monitors for Cryptosporidium and Giardia in our source water monthly. The untreated water samples collected from our Belle Isle Intake indicated the presence of one Giardia cyst in December 2023 and one Cryptosporidium oocyst in March 2023. All other samples collected from the Bell Isle Intake in 2023 were absent for the presence of Cryptosporidium and Giardia. Systems using surface water like GLWA must provide treatment so that 99.9 percent of Giardia lamblia and Cryptosporidium is removed or inactivated. GLWA's drinking water treatment process is designed to remove and inactivate these protozoans.

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 to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

### **Important health information about lead and copper.**

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

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Our water supply has 993 service lines of unknown material; 0 lead service lines; and 122 non-lead service lines out of a total of 1115 service lines.

The State of Michigan and the U.S. EPA require us to test our water on a regular basis to ensure its safety. We met all the monitoring and reporting requirements for 2023.

We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at 795 Lake Shore Rd, Grosse Pointe Shores, MI, 48236. Or at the following website, <https://gpshoresmi.gov/2023WaterQualityReport.pdf> This report will not be sent to you.

We invite public participation in decisions that affect drinking water quality. The Grosse Pointe Shores Council meets the 3<sup>rd</sup> Tuesday of each month at 7:00pm. For more information about safe drinking water, visit the U.S. EPA at <http://www.epa.gov/safewater>.

## 2023 Northeast Regulated Detected Contaminants Table

2023 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	04-11-2023	ppm	4	4	0.65	n/a	no	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	04-11-2023	ppm	10	10	0.64	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

### Lead and Copper Monitoring at the Customer's Tap in 2023

Regulated Contaminant	Unit	Year Sampled	Health Goal MCLG	Action Level AL	90 <sup>th</sup> Percentile Value*	Range of Individual Samples Results	Number of Samples Over AL	Major Sources in Drinking Water
Lead	ppb	2023	0	15	0	0-5	0	Lead services lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits.
Copper	ppm	2023	1.3	1.3	0.1	0-0.2	0	Corrosion of household plumbing systems; Erosion of natural deposits.

\* The 90<sup>th</sup> percentile value means 90 percent of the homes tested have lead and copper levels below the given 90<sup>th</sup> percentile value. If the 90<sup>th</sup> percentile value is above the AL additional requirements must be met.

### 2023 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
Chlorine Residual	2023	ppm	4	4	0.69	0.55-0.76	no	Water additive used to control microbes

### 2023 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	07-31-2023	ppb	n/a	80	40.7	N/A	no	By-product of drinking water chlorination
(HAA5) Haloacetic Acids	07-31-2023	ppb	n/a	60	11	N/A	no	By-product of drinking water chlorination

**2023 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
0.11 NTU	100%	no	Soil Runoff

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system

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

**2023 Special Monitoring**

Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Source of Contaminant
Sodium	04-11-2023	ppm	n/a	n/a	7.3	Erosion of natural deposits

These tables are based on tests conducted by GLWA in the year 2023 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. The data is representative of the water quality, but some are more than one year old.

## 2023 Northeast Tap Water Mineral Analysis

Parameter	Units	Max.	Min.	Avg.	Parameter	Units	Max.	Min.	Avg.
Turbidity	NTU	3.00	0.03	0.30	Phosphorus	ppm	0.66	0.36	0.47
Total Solids	ppm	157	113	133	Free Carbon Dioxide	ppm	16.4	6.7	10.0
Total Dissolved Solids	ppm	159	101	129	Total Hardness	ppm	138	98	113
Aluminum	ppm	0.071	0.018	0.038	Total Alkalinity	ppm	94	68	81
Iron	ppm	0.4	0.2	0.3	Carbonate Alkalinity	ppm	ND	ND	ND
Copper	ppm	0.003	0.001	0.001	Bi-Carbonate Alkalinity	ppm	94	68	80
Magnesium	ppm	8.3	6.7	7.7	Non-Carbonate Hardness	ppm	48	8	32
Calcium	ppm	28.6	24.9	26.6	Chemical Oxygen Demand	ppm	9.2	ND	4.6
Sodium	ppm	7.3	4.6	5.4	Dissolved Oxygen	ppm	13.5	7.3	10.2
Potassium	ppm	1.3	0.9	1.0	Nitrite Nitrogen	ppm	ND	ND	0.0
Manganese	ppm	ND	ND	ND	Nitrate Nitrogen	ppm	0.64	0.30	0.38
Lead	ppm	ND	ND	ND	Fluoride	ppm	0.86	0.50	0.63
Zinc	ppm	0.003	ND	ND	pH		7.35	7.03	7.21
Silica	ppm	2.8	1.6	2.1	Specific Conductance @ 25 °C.	µmhos	262	177	213
Sulfate	ppm	34.9	22.3	25.8	Temperature	°C	23.2	6.7	15.0
Chloride	ppm	14.0	7.5	10.4					

## 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, di-bromoacetic, 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 our system.
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. MCLGs allow a margin of safety.
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. MRDLG'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 all analytical results for all samples during the previous four quarters.
SMCL	Secondary Maximum Contaminant Level	
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.
µmhos	micromhos	Measure of electrical conductance of water



**Great Lakes Water Authority  
Water Quality**

**RESULTS (BY TOWN) (01/01/2023 To 12/31/2023)**

**Town Name: Grosse Pointe Shores**

<u>Date</u>	<u>Pt.</u>	<u>Br.</u>	<u>Sample #</u>	<u>T.Coliiform</u>	<u>E.Coli</u>	<u>Cl2</u>	<u>Need Recheck</u>	<u>Reckeck Date</u>
<b><u>Town Name: Grosse Pointe Shores</u></b>								
01/20/2023 1 2 - - 0.37								
01/24/2023	1		30	-	-	0.34		
01/25/2023	1		144	-	-	0.28		
02/08/2023	1		60	-	-	0.29		
02/10/2023	1		146	-	-	0.38		
02/22/2023	1		71	-	-	0.60		
02/27/2023	1		19					
03/07/2023	1		143	-	-	0.48		
03/07/2023	2		144	-	-	0.25		
03/24/2023	1		59	-	-	0.27		
04/05/2023	1		104	-	-	0.25		
04/05/2023	2		105	-	-	0.18		
04/18/2023	1		3	-	-	0.38		
05/04/2023	1		41	-	-	0.37		
05/25/2023	1		19	-	-	0.65		
05/25/2023	2		20	-	-	0.52		
05/31/2023	1		352					
05/31/2023	2		353					
06/07/2023	1		118	-	-	0.26		
06/22/2023	3		93	-	-	0.57		
06/29/2023	1		64	-	-	0.11		
07/06/2023	1		46	-	-	0.29		
07/06/2023	2		45	-	-	0.14		
07/13/2023	1		24	-	-	0.16		
08/03/2023	1		95	-	-	0.20		
08/03/2023	2		94	-	-	0.14		
08/14/2023	3		17	-	-	0.14		
09/13/2023	2		163	-	-	0.14		



**Great Lakes Water Authority  
Water Quality**

**RESULTS (BY TOWN) (01/01/2023 To 12/31/2023)**

<b>Date</b>	<b>Pt.</b>	<b>Br.</b>	<b>Sample #</b>	<b>T.Coli</b>	<b>E.Coli</b>	<b>Cl2</b>	<b>Need Recheck</b>	<b>Reckeck Date</b>
09/13/2023	3		164	-	-	0.08		
09/21/2023	3		92	-	-	0.01		
10/04/2023	1		5	-	-	0.22		
10/04/2023	3		6	-	-	0.13		
10/12/2023	1		31	-	-	0.11		
10/26/2023	1		301					
10/26/2023	2		302					
11/03/2023	2		133	-	-	0.15		
11/03/2023	3		134	-	-	0.00		
11/13/2023	1		85	-	-	0.29		
12/06/2023	1		250	-	-	0.69		
12/06/2023	2		251	-	-	0.20		
12/14/2023	1		137	-	-	0.61		

**Total No. of Samples Collected: 41**

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

<u>Date Removed</u>	<u>Pt.</u>	<u>Location</u>	<u>Address</u>
	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	Residence	970 Lake Shore Road
	B	Residence	1040 Lake Shore Road
	3	Residence-Flower Garage Sink- Use N. Driveway *1x	635 Lakeshore @ Lakeshore Lane
	A	Residence	611 Lake Shore Road
	B	Residence	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