

Introduction:

Drinking water quality is important to our community and the region. The City of Centerline 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. City of Centerline 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 City of Centerline 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.

Closing:

City of Centerline and the Great Lakes Water Authority are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. Please contact us with any questions or concerns about your water.

Lead Message: **OPTIONAL LANGUAGE IN ADDITION TO BELOW**

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 Centerline 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.

Information about lead: 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. City of Centerline 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>.

2021 Northeast Regulated Detected Contaminants Table

2021 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	04/13/2021	ppm	4	4	0.44	n/a	no	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	04/13/2021	ppm	10	10	0.33	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	5-16-2017	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

Lead and Copper Monitoring at the Customer's Tap in 2021

Regulated Contaminant	Unit	Year Sampled	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Range of Individual Samples Results	Number of Samples Over AL	Major Sources in Drinking Water
Lead	ppb	2021	0	15	8	0 - 10	0	Lead services lines, corrosion of household, plumbing including fittings and fixtures; erosion of natural deposits.
Copper	ppm	2021	1.3	1.3	0.0	0.0 - 0.2	0	Corrosion of household plumbing system; Erosion of natural deposits

* 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.

2021 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
Total Chlorine Residual	2021	ppm	4	4	0.76	0.58-0.84	no	Water additive used to control microbes

2021 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	2021	ppb	n/a	80	56	35.5 - 56	no	By-product of drinking water chlorination
(HAA5) Haloacetic Acids	2021	ppb	n/a	60	17	12-17	no	By-product of drinking water chlorination

2021 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 has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

2021 Special Monitoring						
Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Source of Contaminant
Sodium	04/13/2021	ppm	n/a	n/a	4.45	Erosion of natural deposits

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

These tables are based on tests conducted by GLWA in the year 2021 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.

About Unregulated Contaminant Monitoring

Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where these contaminants occur and whether it needs to regulate those contaminants.

Example UCMR table if NEEDED

Unregulated Contaminant	Average Level Detected	Range	Year Sampled	Comments
[Name of Unregulated Contaminant] (unit)				
[Name of Unregulated Contaminant] (unit)				

2021 Northeast Tap Water Mineral Analysis

Parameter	Units	Max.	Min.	Avg.	Parameter	Units	Max.	Min.	Avg.
Turbidity	NTU	1.90	0.04	0.30	Phosphorus	ppm	0.51	0.33	0.39
Total Solids	ppm	178	93	137	Free Carbon Dioxide	ppm	11.0	6.4	8.8
Total Dissolved Solids	ppm	149	57	121	Total Hardness	ppm	108	86	99
Aluminum	ppm	1.470	0.018	0.155	Total Alkalinity	ppm	74	66	71
Iron	ppm	0.3	0.1	0.2	Carbonate Alkalinity	ppm	0	0	0
Copper	ppm	0.009	ND	0.003	Bi-Carbonate Alkalinity	ppm	74	66	71
Magnesium	ppm	8.1	6.1	7.4	Non-Carbonate Hardness	ppm	35	19	28
Calcium	ppm	28.5	21.4	25.4	Chemical Oxygen Demand	ppm	5.5	ND	1.9
Sodium	ppm	7.0	4.5	5.2	Dissolved Oxygen	ppm	12.3	8.7	10.4
Potassium	ppm	1.2	0.8	1.0	Nitrite Nitrogen	ppm	ND	ND	0.0
Manganese	ppm	0.005	ND	0.000	Nitrate Nitrogen	ppm	0.43	0.24	0.32
Lead	ppm	ND	ND	0.000	Fluoride	ppm	0.72	0.44	0.57
Zinc	ppm	ND	ND	0.000	pH		7.34	7.08	7.21
Silica	ppm	2.9	1.8	2.2	Specific Conductance @ 25 °C.	µmhos	276	190	227
Sulfate	ppm	28.1	21.9	24.7	Temperature	°C	68.0	9.3	24.0
Chloride	ppm	11.9	9.2	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.
µhms	Micromhos	Measure of electrical conductance of water

STATE AND FEDERAL MANDATORY LANGUAGE

REQUIRED INFORMATION ON SPECIFIC CONTAMINANTS CRYPTOSPORIDIUM, RADON, ARSENIC, NITRATE AND TTHM (40 CRF 141.153(E) AND 141.154 (B), (C) & (E))

**REQUIRED INFORMATION ON HEALTH EFFECTS (40 CFR 141.154)
ALL CCRS MUST PROMINENTLY DISPLAY THE FOLLOWING LANGUAGE:**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as person 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).

THE REPORT MUST CONTAIN THE FOLLOWING BRIEF EXPLANATION REGARDING CONTAMINANTS WHICH MAY REASONABLY BE EXPECTED TO BE FOUND IN DRINKING WATER, INCLUDING BOTTLED 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 (800-426-4791).

THE REPORT MUST ALSO CONTAIN LANGUAGE SIMILAR TO THE PARAGRAPHS BELOW. A CWS MAY USE THIS LANGUAGE OR THEIR OWN COMPARABLE LANGUAGE.

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 can dissolve naturally occurring minerals and, in some cases, radioactive materials, 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 discharge, 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 organic chemicals, 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 the water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for human health.

INFORMATION ABOUT ANY VIOLATIONS OF THE NATIONAL PRIMARY DRINKING WATER REGULATIONS (40 CFR 141.153(F))

THE CCR MUST INCLUDE ALL VIOLATIONS OF THE NATIONAL PRIMARY DRINKING WATER REGULATIONS (NPDWR) THAT OCCURRED OVER THE PAST YEAR. THE REPORT MUST CONTAIN A CLEAR AND READILY UNDERSTANDABLE EXPLANATION OF THE VIOLATION, ANY POTENTIAL ADVERSE HEALTH EFFECTS, AND THE STEPS THE SYSTEM HAS TAKEN TO CORRECT THE VIOLATION.

Reportable violations include:

- All MCL exceedances, Treatment Technique violations and Action level exceedances
- All Failure to Monitor/Report (FTM) violations
- All Failures to install filtration or to disinfect, in accordance with the Surface Water Treatment Rule (SWTR), or some instances of equipment failure
- All failures of lead and copper control requirements
- All Treatment Technique violations for Acrylamide and Epichlorohydrin
- Any violation of record keeping requirements
- Any violation of a variance, exemption, or administrative or judicial order.

Note any violation and provide a clearly and readily understandable explanation of the violation including:

1. *The length of the violation.*
2. *The potential adverse health effects (if MCL violation).*
3. *Actions taken by the system to address the violation.*
4. ***Supplies that failed to send a Consumer Notice of Lead results must say so on the CCR.***

EXAMPLE: WE SUGGEST A STATEMENT SUCH AS, "DURING THE YEAR, WE FAILED TO PROVIDE LEAD RESULTS TO PERSONS SERVED AT THE SITES THAT WERE TESTED AS REQUIRED BY THE LEAD AND COPPER RULE.

THE FOLLOWING "INFORMATION ABOUT LEAD" PARAGRAPH MUST BE INCLUDED IN EVERY CCR:

Information about lead: 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. [NAME OF UTILITY] 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 service line that is lead, galvanized previously connected to lead, or unknown but likely to be lead, 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 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

NEW IN 2019 MICHIGAN LEAD EDUCATIONAL INFORMATION MUST BE INCLUDED EVERY YEAR.

LCR TABLE CHANGES:

The following items must be included when presenting lead and copper data in the data table:

- The most recent 90th percentile value (if sampling was done in both six-month rounds, both sets of 90th percentile data should be included in the CCR).
- The action level (AL) AND the maximum MCLG for both lead and copper.
- The range of individual samples.
- The number of samples above each AL.
- The year that sampling occurred.

The updated "**Typical Source of Contaminant**" Lead language as seen below

"Lead services lines, corrosion of household plumbing including fittings and fixtures; erosion of natural deposits"

The 2019 language change for LCR Table under "**Typical Sources in Drinking Water**" Copper language as seen below

"Corrosion of household plumbing system; Erosion of natural deposits; leaching from wood preservatives."

MANDATORY HEALTH EFFECTS LANGUAGE IS REQUIRED IF ONE OR MORE LEAD RESULT WAS ABOVE THE ACTION LEVEL IN YOUR MOST RECENT ROUND OF SAMPLING.

Please include the mandatory statement in your CCR. Recent rule changes have altered the lead health effects language slightly. **If your system had at least one lead sample above the AL (even if the 90th percentile was below the AL),** the following health effects language must be added to the report. Please note that the phrase "in excess of the action level" has been removed:

"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."

State of Michigan Requirements:

Water supplies shall include the number of lead service lines, the number of service lines of unknown material, and the total number of service lines in the supply in their CCR.

MUST INCLUDE:

CCR LCR CONTENT REQUIREMENT:

- 1. For supplies with lead service lines (or service lines of unknown material),**
 - a. include the number of lead service lines,
 - b. the number of service lines of unknown material,
 - c. the total number of service lines in the supply.

- 2. Must include health effects language for parameters with vulnerable subpopulations and that are detected above the level of concern.**

REQUIRED LANGUAGE SOURCE WATER PROTECTION FOR COMMUNITIES SERVED BY SPRINGWELL WATER PLANT

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 report described GLWA's Detroit River intakes as highly susceptible to potential contamination. GLWA's Northeast water treatment plant that draws water from the Detroit River has historically provided satisfactory treatment and meets drinking water standards.

GLWA has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. GLWA participates in the National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan. In 2021, the Michigan Department of Environmental, Great Lakes and Energy approved the GLWA's Updated Surface Water Intake Protection plan for the Belle Isle intake. The plan has seven elements that include: 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 water 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.