

2021 Drinking Water Quality Report





Keeping You Informed!

We at YCUA provide your drinking water and are pleased to present you with our 24th annual water quality report. This report follows the guidelines set by the U.S. Environmental Protection Agency (EPA) and the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Our goal is to provide you with a safe and dependable water supply. This report illustrates that we are achieving our goal.



Information About YCUA

YCUA staff works around the clock to provide you with a safe and reliable supply of water. If you have questions about the YCUA water system, please contact Luther Blackburn, Director, at lblackburn@ycua.org or 734.484.4600 ext. 116. Additional information is available on www.ycua.org. Highlight the tab “Publications,” and then click on “GLWA Lab Reports” for more detailed water quality data.

2021 Water System Improvements

	Improvements	Cost
YCUA	West Cross from Stone tower to Huron: Water main improvements, new water and sanitary service lines	\$1,062,671

YCUA's annual Drinking Water Quality Report contains important information about the source and quality of your drinking water. This report is also published on our website after June 1, 2022, at www.ycua.org/waterreport.pdf. If you are unable to access the Internet and wish to continue having a paper copy of the report delivered, or if you want additional copies, please call YCUA Administration at 734.484.4600 ext. 107.

YCUA and GLWA 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.

Information About GLWA

YCUA obtains your drinking water from the Great Lakes Water Authority (GLWA) water system. Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, and Ecorse River watersheds in the U.S. and parts of the Thames River, Little River, Turkey Creek, and Sydenham watersheds in Canada. With the Great Lakes as our water source and proven treatment technologies, the GLWA consistently delivers safe drinking water to our community. YCUA operates the system of water mains that carries this water to your home's service line.

Drinking water quality is important to our community and the region. YCUA and GLWA are committed to meeting state and federal water quality standards including the Lead and Copper Rule. This year's Drinking Water Quality Report highlights the performance of GLWA and YCUA 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. If you wish to learn more about the plants that treat our water or obtain information regarding GLWA Board meetings, please visit www.glwater.org.



Source Water Assessment

EGLE, in partnership with the U.S. Geological Survey, GLWA, 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. 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 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 the National Pollutant Discharge Elimination System permit program and has an emergency response management plan. In 2016, EGLE approved the GLWA Surface Water Intake Protection Program plan. The program consists of seven elements that include: roles and duties of government units and water supply agencies, delineation of source water protection areas, identification of potential sources of contamination, management approaches for protection, contingency plans, siting of new water sources, and public participation and education activities. If you would like to know more information about the Source Water Assessment report please, contact GLWA at 313.926.8102.

Minimizing Lead Exposure

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. YCUA 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 two 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 five 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 at 1.800.426.4791 or at www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water.

Lead and Copper Facts

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. YCUA 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.

Infants and children who drink water containing lead could experience delays in their physical or 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.

As of 2019, the Safe Drinking Water Act requires water utilities to inventory the service lines in its service area. YCUA's preliminary inventory of its 19,791 total service lines has identified 234 lead service lines and 2,846 of unknown material. Augusta Township identified 0 lead services and 0 of unknown material. Superior Township identified 0 lead services and 0 of unknown material. Pittsfield Township identified 0 lead services and 0 of unknown material.

Since this is preliminary data, follow-up inventories will be completed on the system and YCUA's annual CCR will be updated with new numbers.





Health and Safety Information

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 EPA's Safe Drinking Water Hotline at 800.426.4791.

More Resources

EPA Safe Drinking Water Hotline: 800.426.4791

Website: www.epa.gov/ground-water-and-drinking-water

Michigan Department of EGLE Website: www.michigan.gov/egle

Sources of drinking water (tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over land surfaces 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 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 stormwater 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 stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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 regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Based on testing results during 2017 - 2021 (Test Results Table), all of these contaminants were below the level of concern for safe drinking water standards set by EPA.



YCUA Water Quality Test Results for 2021

Your drinking water is continuously monitored above and beyond Federal and State regulations. The table below lists all of the contaminants detected in your drinking water during calendar year 2021. Lead, copper, bacteriological monitoring, and disinfectant by-product rule sampling are performed by each individual community, except as noted. All other results are for the entire YCUA service area. The presence of contaminants in the water does not necessarily indicate a health risk. This table does not show the hundreds of other contaminants tested for, but not found in your

drinking water. The test results confirm that ALL DETECTED CONTAMINANTS WERE BELOW REGULATED LEVELS. THERE WERE NO VIOLATIONS OF STATE DRINKING WATER STANDARDS. Abbreviations are listed on page 7.



Information for People with Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons (those undergoing chemotherapy, having undergone organ transplants, 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/Center for Disease Control 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).

Regulated Inorganic Parameters (annual monitoring at plant finished water taps)

Contaminant	Test Date	Unit	Level Detected	MCLG	MCL	Likely Sources
Fluoride	2021	ppm	0.58	4	4	Water additive to promote strong teeth, erosion of natural deposits, discharge from fertilizer and aluminum factories
Nitrate	2021	ppm	0.37	10	10	Fertilizer runoff, leaching from septic tanks, sewage, erosion of natural deposits
Barium	2017	ppm	0.01	2	2	Discharge from drilling wastes, discharge from metal refineries, erosion of natural deposits

Regulated Disinfectant Residuals and Disinfection By-Products (sampled in the distribution system)

Contaminant	Test Date	Unit	Result	Low	High	MCLG	MCL	Likely Sources
Charter Township of Ypsilanti, City of Ypsilanti, Southwest Canton Charter Township, and Township of York								
TTHMs	2021	ppb	31	16	41	na	80	By-products of drinking water disinfection
Haloacetic Acids	2021	ppb	15	9	15	na	60	
Augusta Charter Township								
TTHMs	2021	ppb	50	na	na	na	80	By-products of drinking water disinfection
Haloacetic Acids	2021	ppb	<2	na	na	na	60	
Pittsfield Charter Township								
TTHMs	2021	ppb	34	25	43	na	80	By-products of drinking water disinfection
Haloacetic Acids	2021	ppb	15	10	13	na	60	
Superior Charter Township								
TTHMs	2021	ppb	30	na	na	na	80	By-products of drinking water disinfection
Haloacetic Acids	2021	ppb	13	na	na	na	60	

Samples were collected to test for the disinfection by-products TTHMs and Haloacetic Acids in all YCUA's service area communities at the frequencies and times prescribed by Federal regulations. All samples collected throughout the YCUA service area during 2021 met the MCL for disinfection by-products.

Contaminant	Test Date	Unit	Result	Low	High	MCLG	MCL	Likely Sources
Disinfectant Chlorine	2021	ppm	0.69	0.47	0.76	4	4	Water additive used to control microbes

Regulated Microbiological Parameters

Contaminant	Test Date	Unit	Highest Result	MCLG	MCL	Likely Sources
Total Coliform	2021	--	1 positive sample	0	>1 positive sample/month	Naturally present in the environment
E. Coli	2021	--	0	0	>1 positive sample/month	Human or animal fecal waste
Turbidity	2021	NTU	0.20	0	1.0	Soil runoff

Turbidity is a measure of the cloudiness of water. Turbidity is monitored every 4 hours at the plant taps. We monitor it because it is a good indicator of the effectiveness of our filtration system. The rules state that turbidity must never exceed 1.0 NTU (see "highest result") and must not exceed 0.3 NTU in more than 95% of daily samples in any single month. The turbidity in daily samples was below 0.3 NTU 100% of the time. Therefore, we achieved both requirements and remained in compliance.



GLWA is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether our drinking water meets health standards. We routinely monitor your water for turbidity (cloudiness).

This tells us whether we are effectively filtering the water supply. We did not produce a filter profile for EGLE review within 7 days of an August 1, 2021, individual filter exceedance at the GLWA Springwells Water Treatment Plant as required by law. A filter profile is a summary of the turbidity and flow through the filter and is used to identify any trends in filter performance.

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 which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What should I do? There is nothing you need to do currently. This is not an emergency. You do not need to boil water or use an alternative source of water currently. Even though this is not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

What happened? What is being done? The filter profile has since been produced and submitted to EGLE and additional response actions have been implemented at the plant. We are making every effort to ensure this does not happen again.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail. This notice is being sent to you by GLWA.

For more information, please contact the GLWA Water Quality Manager, at 313 926-8102.

Individual Community Regulated Copper and Lead Testing (sampled at individual taps)

Contaminant	Test Date	Unit	90th	Samples >AL	Range of Individual Results	MCLG	MCL	Likely Sources
Charter Township of Ypsilanti, City of Ypsilanti, Southwest Canton Charter Township, and Township of York								
Lead	2021	ppb	9	0	0 ppb - 13 ppb	0	AL=15	Lead services lines, corrosion of household, plumbing including fittings and fixtures, erosion of natural deposits
Copper	2021	ppm	0.2	0	0.0 ppm - 0.2 ppm	1.3	AL=1.3	Corrosion of household plumbing systems, erosion of natural deposits
Augusta Charter Township - Augusta Township Residents See statement at top of Page 5 for Information Regarding 2021 Results								
Lead	2020	ppb	1	0	0 ppb - 1 ppb	0	AL=15	Lead services lines, corrosion of household, plumbing including fittings and fixtures, erosion of natural deposits
Copper	2020	ppm	0.1	0	0.0 ppm - 0.2 ppm	1.3	AL=1.3	Corrosion of household plumbing systems, erosion of natural deposits
Pittsfield Charter Township								
Lead	2021	ppb	1	0	0 ppb - 13 ppb	0	AL=15	Lead services lines, corrosion of household, plumbing including fittings and fixtures, erosion of natural deposits
Copper	2021	ppm	0.1	0	0.0 ppm - 0.5 ppm	1.3	AL=1.3	Corrosion of household plumbing systems, erosion of natural deposits
Superior Charter Township								
Lead	2021	ppb	0	0	0 ppb - 0 ppb	0	AL=15	Lead services lines, corrosion of household, plumbing including fittings and fixtures, erosion of natural deposits
Copper	2021	ppm	0	0	0.0 ppm - 0.1 ppm	1.3	AL=1.3	Corrosion of household plumbing systems, erosion of natural deposits

Lead and Copper compliance is based on the 90th percentile, where nine out of ten samples must be below the Action Level (AL). If the 90th percentile value is above the AL, additional requirements must be met.

Lead and Copper Monitoring Requirements Not Met for Augusta Township

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During June 1 to September 30, 2021, we did not monitor correctly for lead and copper, and therefore cannot be sure of the quality of our drinking water during that time.

What should I do? There is nothing you need to do at this time. This is not an emergency. You do not need to boil water or use an alternative source of water at this time. Even though this is not an emergency, as our customers, you have a right to know what happened and what we are doing to correct the situation.

The table below lists the contaminants we did not properly test for, how often we are supposed to sample for these contaminants, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date we will collect follow-up samples.

Contaminants	Required Sampling Frequency	Number of Sites Sampled	When Samples Should Have Been Collected	Date Additional Samples Will Be Collected
Lead and Copper	20 Sites to be Sampled Every Year	5	June 1, 2021 to September 30, 2021	June 1, 2022 to September 30, 2022

What happened? What is being done? We collected samples from 20 sites in Augusta Township and submitted them to a certified laboratory that was then purchased and merged with another certified laboratory. In the merger, 15 samples and their records were lost, we have since changed certified labs.

For more information, please contact Mr. James Green (734) 652-7374.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Total Organic Carbon (TOC) Removal

The TOC removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. During 2021, TOC was measured each quarter and because the level was low, there is no TOC removal requirement.

UNREGULATED PARAMETERS (No established EPA drinking water standards)

Contaminant	Test Date	Unit	Level Found	EPA Health Guidance	Likely Sources
Sodium	2021	ppm	4.52	20	Erosion of natural deposits

4.52 ppm equates to about 1.07 milligrams of sodium per 8-ounce glass of water. EPA Health Guidance is for people restricted to taking in less than 500 mg of sodium per day according to "Drinking Water Advisory: Consumer Acceptability Advice and Health Effects Analysis on Sodium," US EPA, EPA 822-R-03-006, February 2003.

Unregulated Contaminant Monitoring Rule 4 (sampled in the distribution system)

Contaminant	Test Date	Unit	Ave	Min	Max	Likely Sources
Ypsilanti						
Bromochloroacetic acid	2018-19	ppb	2.52	1.70	3.74	By-products of drinking water disinfection
Bromodichloroacetic acid	2018-19	ppb	4.43	3.06	7.21	By-products of drinking water disinfection
Chlorodibromoacetic acid	2018-19	ppb	1.05	0.66	1.49	By-products of drinking water disinfection
Dibromoacetic acid	2018-19	ppb	0.35	<0.3	0.47	By-products of drinking water disinfection
Dichloroacetic acid	2018-19	ppb	7.13	4.43	13.50	By-products of drinking water disinfection
Monobromoacetic acid	2018-19	ppb	0.31	<0.3	0.36	By-products of drinking water disinfection
Trichloroacetic acid	2018-19	ppb	10.8	5.55	21.1	By-products of drinking water disinfection
Manganese	2018-19	ppb	10.8	1.86	17.2	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient
Pittsfield Township						
Bromochloroacetic acid	2018-19	ppb	2.7	1.4	4.6	By-products of drinking water disinfection
Bromodichloroacetic acid	2018-19	ppb	4.7	4.0	5.9	By-products of drinking water disinfection
Chlorodibromoacetic acid	2018-19	ppb	0.94	0.76	1.2	By-products of drinking water disinfection
Dibromoacetic acid	2018-19	ppb	0.48	0.36	0.68	By-products of drinking water disinfection
Dichloroacetic acid	2018-19	ppb	7.3	3.4	14	By-products of drinking water disinfection
Monobromoacetic acid	2018-19	ppb	0.44	<0.3	0.57	By-products of drinking water disinfection
Trichloroacetic acid	2018-19	ppb	9.8	7.2	15	By-products of drinking water disinfection
Manganese	2018-19	ppb	0.46	<0.4	0.64	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient
Superior Township						
Total Microcystin	2019-20	ppb	0.152	<0.15	0.163	Produced by cyanobacteria in source water

Additional Information: 2021 GLWA Tap Water Mineral Analysis

Parameter	Units	Max.	Min.	Avg.
Turbidity	NTU	0.23	0.03	0.08
Total Solids	ppm	174	94	134
Total Dissolved Solids	ppm	150	75	122
Aluminum	ppm	0.115	0.012	0.043
Iron	ppm	0.3	0.1	0.2
Copper	ppm	0.003	ND	0
Magnesium	ppm	8.3	5.9	7.4
Calcium	ppm	29.9	20.8	25.6
Sodium	ppm	8.4	4.1	5.3
Potassium	ppm	1.3	0.8	1
Manganese	ppm	0.004	ND	0
Lead	ppm	ND	ND	0
Zinc	ppm	ND	ND	0
Silica	ppm	2.8	1.3	2.2
Sulfate	ppm	32	20.7	25.2
Chloride	ppm	13.5	8.9	10.6

Parameter	Units	Max.	Min.	Avg.
Phosphorus	ppm	0.67	0.3	0.4
Free Carbon Dioxide	ppm	12.1	0.7	8.6
Total Hardness	ppm	108	82	100
Total Alkalinity	ppm	76	64	71
Carbonate Alkalinity	ppm	0	0	0
Bi-Carbonate Alkalinity	ppm	76	64	71
Non-Carbonate Hardness	ppm	40	18	29
Chemical Oxygen Demand	ppm	3.9	0	1.3
Dissolved Oxygen	ppm	13.4	7.9	10.5
Nitrite Nitrogen	ppm	ND	ND	0
Nitrate Nitrogen	ppm	0.55	0.21	0.35
Fluoride	ppm	0.76	0.17	0.56
pH	s.u.	8.3	7.07	6.96
Specific Conductance @ 25 °C	µmhos	241	191	224
Temperature	°C	24.3	1.8	14.0



Definitions

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other required actions a water system must follow.

Haloacetic Acids (HAA5) - The total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.

Maximum Contaminant Level (MCL) - The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible, using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs provide a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - 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.

Maximum Residual Disinfectant Level Goal (MRDLG) - Level of drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

na - Not applicable.

Nephelometric Turbidity Unit (NTU) - Measures the cloudiness of water.

Parts per billion (ppb) (One in one billion) - Equivalent to micrograms per liter. A microgram = 1/1000 milligram.

Parts per million (ppm) (one in one million) - Equivalent to milligrams per liter. A milligram = 1/1000 gram.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

Total Trihalomethanes (TTHMs) - The sum of chloroform, bromodichloromethane, dibromochloromethane and bromoform. Compliance is based on the total.

Communities

If you have questions specific to your community's water distribution system, please contact the following individuals or attend your local board meeting:

Augusta Charter Township: James Green, F&V Operations Project Manager: 734.787.2382 or jgreen@fv-operations.com; www.augustatownship.org or 734.461.6117.

Pittsfield Charter Township: Billy Weirich, Utilities Director: WeirichB@pittsfield-mi.gov; 734.822.3105; Water and Sewer 24-hour Emergency Service: 734.942.4911. Township Board meets on the second and fourth Wednesdays of the month at 6:30 pm at the Township Hall, 6201 W. Michigan Avenue, 734.822.3145.

Superior Charter Township: Ken Schwartz, Township Supervisor: utilitydept@superior-twp.org; 734.480.5500. Township Board meets on the third Monday of the month at 7:00 pm at the Township Hall, 3040 North Prospect Road.

Township of York: Chuck Tellas, Township Supervisor: 734.439.8842 or ctellas@twp-york.org. Township Board meets on the second Tuesday of the month at 7:30 pm at the Township Hall, 11560 Stony Creek Road.

Charter Township of Ypsilanti, City of Ypsilanti, and Southwest Canton Charter Township: Luther Blackburn, Director: lblackburn@ycua.org or 734.484.4600 ext. 116. YCUA's Board meets the fourth Wednesday of the month at 3:00 pm at the YCUA Eldon P. Ahles Administration Building at the corner of State and McGregor Roads.

