2019 Water Quality Report

The Kalamazoo Lake Sewer & Water Authority

Water Supply Serial Number: 3525

This report covers the drinking water quality for the Kalamazoo Lake Sewer & Water Authority (KLSWA) serving Douglas City, Saugatuck City, Saugatuck Township and a portion of Laketown Township around Goshorn Lake during the 2019 calendar year. This information is a snapshot of the quality of water that was provided to you in 2019. Included are details about where your water comes from, what it contains, and how it compares to United States Environmental Protection Agency (U.S. EPA) and state standards.

Your water comes from six groundwater wells, each over 140 feet deep. The State performed an assessment of our source water to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very-low" to "very-high" based on geologic sensitivity, well construction, water chemistry and contamination sources. The susceptibility of our water source is LOW for each well source.

There are no significant sources of contamination including Trichloroethene and PFAS related contaminants in our water supply. We are making efforts to protect our water sources through ordinances related to Well Head Protection along with the activities of the Well Head Protection Team that meet quarterly.

If you would like to know more about this report, please contact the Kalamazoo Lake Sewer & Water Authority
6449 Old Allegan Rd., Saugatuck, MI 49453
Phone (269)857-2703 or email klswa@klswa.com

Contaminants and their presence in 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 U.S. EPA's Safe Drinking Water Hotline (800-426-4791).

Vulnerability of sub-populations: 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 systems 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. U.S. 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).

Sources of drinking water: The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from 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 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 and residential uses.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.
- **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 stormwater runoff, and septic systems.

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Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2019 calendar year. The presence of these 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 January 1, 2019 through December 31, 2019. The State allows us to monitor for certain contaminants less than once per year as the concentrations of these contaminants are not expected to vary significantly from year to year and they are noted by the year sampled.

Terms and abbreviations used below:

- Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- Maximum Contaminant Level (MCL): 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.
- Secondary Maximum Contaminant Level (SMCL): The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.
- Maximum Residual Disinfectant Level (MRDL): The highest level of a 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): The level of a 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.
- N/A: Not applicable
- ppt: parts per trillion or nanograms per liter
- ppb: parts per billion or micrograms per liter
- ppm: parts per million or milligrams per liter
- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Additional Monitoring

Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. Monitoring helps the U.S. EPA determine where certain contaminants occur and whether regulation of those contaminants is needed. The EPA has a Lifetime Health Advisory (LHA) of 70 parts per trillion for Per- and Polyfluoroalkyl Substances (PFAS) and its related compounds.

Unregulated Contaminant	LHA or SMCL	Average Level Detected	Range	Year Sampled	Typical Source of Contaminant
PFAS (ppt)	70	0	0	2019	Various manufactured consumer products
Sodium (ppm)	NA	44	14 - 82	2019	Erosion of natural deposits; road runoff; leaching of water softener treatment waste
Chloride (ppm)	250	70	18 - 157	2019	Erosion of natural deposits; road runoff; leaching of water softener treatment waste
Sulfate (ppm)	250	10	2 - 22	2019	Erosion of natural deposits
Iron (ppm)	0.3	0.25	0 - 0.52	2019	Erosion of natural deposits
Hardness (ppm)	250	196	109 - 313	2019	Erosion of natural deposits

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Regulated Contaminant	MCL or MRDL	MCLG or MRDLG	Level Detected	Range of Results	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Arsenic (ppb)	10	0	4	0 - 4	2015	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.2	0.1 - 0.2	2015	NO	Erosion of natural deposits
Nitrate (ppm)	10	10	0.7	0 - 0.7	2019	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	1	0	0	0	2019	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	0.6	0.3 - 0.6	2019	NO	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Total Trihalomethanes (ppb)	80	N/A	18	5 -18	2019	NO	Byproduct of drinking water disinfection
Haloacetic Acids (ppb)	60	N/A	5	N/A	2019	NO	Byproduct of drinking water disinfection
Chlorine (ppm)	4	4	0.52	0.01 -1.50	2019	NO	Water additive used to control microbes
Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	90^{th} Percentile	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0	2	0 - 5	2019	0	Lead service lines; corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.3	1.3	0.6	0 - 0.9	2019	0	Corrosion of household plumbing systems; Erosion of natural deposits

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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. The Kalamazoo Lake Sewer & Water Authority 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 .

This water system has 436 lead service lines and 1,279 service lines of unknown material out of a total of 2,695 service lines.

Monitoring and Reporting to the Department of Environment, Great Lakes, and Energy (EGLE) Requirements: The State of Michigan and the U.S. EPA require us to test our water on a regular basis to ensure its safety. The water supplied to your home is below all contaminant levels set forth by the U.S. EPA and EGLE during the 2019 calendar year. We met all monitoring and reporting requirements for 2019 except for the monitoring of specific Water Quality Parameters in the last half of October 2019 as noted at the end of this report.

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 our offices located at 6449 Old Allegan Rd., Saugatuck, MI 49453 or on our website at www.klswa.com/2019wqr.pdf along with the websites of the communities we serve. This report will not be mailed to you.

We invite public participation in decisions that affect drinking water quality. The KLSWA holds regular meetings on the third Monday of each month at the KLSWA offices noted above. Please call our offices or go to our website www.klswa.com for any changes to the meeting schedule. For more information about your water, or the contents of this report contact Daryl VanDyke at (269) 857-2709. For more information about safe drinking water visit the U.S. EPA at http://www.epa.gov/safewater .

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IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for Kalamazoo Lake Sewer and Water Authority

We are required to monitor your drinking water for specific analytes on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the monitoring period of October 20, 2019, to November 2, 2019, we did not monitor or test for Water Quality Parameters[1] (WQP) and, therefore, cannot be sure of the quality of our drinking water during that time. However, this violation **does not** pose a threat to your supply's water.

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 did to correct the situation.

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

Analytes	Required sampling frequency	Number of samples taken	When all samples should have been taken	Date the next samples were taken
WQP[1]	4 samples[2]/ every 2 weeks	0	Between 10/20/2019 – 11/02/2019	11/07/2019

What happened? What is being done? During a six-month monitoring period for WQP samples; We are required to collect 13 sets of entry point samples (one sample from each entry point every two weeks). We failed to collect one of our two-week samples between October 20 and November 2, 2019, and therefore only collected 12 of the 13 sets required in the last six months of 2019. WQP samples indicate the corrosivity of our water, and help to determine if treatment is remaining consistent so as to reduce exposure of lead and copper at our customers' taps. We have no reason to believe that the water quality was any different during the time when WQP sampling did not occur. However, we will work to make sure that we complete all required sampling in future monitoring periods.

For more information, please contact Mr. Daryl VanDyke, Operator-In-Charge, at 269-857-2709.

This notice is being sent to you by the Kalamazoo Lake Sewer and Water Authority.

[1] WQP include pH, sulfate, chloride, and orthophosphate.
[2] One from each entry point to the distribution system.