

2019

Water Quality Report

for the City of Parchment

The City of Kalamazoo provides its customers with information about the quality of our drinking water each year in a Water Quality Report (sometimes referred to as a Consumer Confidence Report). Much of the information provided in this report, along with the additional monitoring and testing conducted throughout the year, is beyond what is required by the Safe Drinking Water Act and is provided as an extra service to our customers. The 2019 water quality data in this report demonstrates that the water

we provide to our customers exceeds the standards established by federal and state regulations.

Water Source:

The City of Kalamazoo Public Water Supply System is the largest groundwater-based drinking water system and the fifth largest water utility in Michigan. It is also ranked among the lowest for water rates out of the 50 largest systems within the state. Our

system utilizes limited treatment through chlorine, fluoride, and phosphate additives. Two stations are equipped with air strippers and iron removal capabilities.

This report summarizes our efforts and commitment to provide safe, reliable, and affordable drinking water. Our facilities operate 24 hours a day, 7 days a week and are monitored continuously both on and off site by qualified, trained and licensed personnel.

2019 Kalamazoo Water Facts:

SOURCES:

- 17 active wellfields
- 16 point of entry treatment facilities
- 98 wells
- 19 million gallons per day produced on average
- 33 million gallons per day maximum in 2019
- 46 million gallons per day of treatment capacity

DISTRIBUTION:

- 196,292 customers served
- Service in 11 jurisdictions
- 831 miles of Water Main
- 6225 hydrants
- 11 pressure service districts

STORAGE:

- 10 water storage facilities with 17.8 million gallons of treated water storage capacity

Printed copies of this report are available at (269) 337-8000.

If you are interested in learning more, have questions on the contents of the report or would like to comment on water issues, please feel free to contact the Public Services Programs Manager at 311 or 337-8000, or go to protectyourwater.net

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) performed Source Water Assessments to assess the susceptibility of all public water supply sources to contamination. The susceptibility rating is on a six-tiered scale from "very low" to "high" based primarily on geologic sensitivity, water chemistry, well construction and contaminant sources. The susceptibility rating of the City's (then) 19 wellfields was: Moderate (2 wellfields), Moderate High (12 wellfields) and High (5 wellfields). For more information contact the Public Services Programs Manager at 311 or (269) 337-8000.

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.

Monitoring Data for Regulated Contaminants

Regulated Contaminant	MCL, TT, OR MRDL	MCLG OR MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contamination
*Nitrate (ppm)	10	10	1.9	0.8-1.9	2019	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
*Fluoride (ppm)	4	4	0.65	0.57-0.65	2019	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
*Sodium ¹ (ppm)	N/A	N/A	36	8.7-36	2019	No	Erosion of natural deposits
*TTHM Total Trihalomethanes (ppb)	80	N/A	19.8	N/A	2019	No	Byproduct of drinking water disinfection
*HAA5 Haloacetic Acids (ppb)	60	N/A	5	N/A	2019	No	Byproduct of drinking water disinfection
Chlorine ² (ppm)	4	4	0.8	ND-2.2	2019	No	Water additive used to control microbes
Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	Your Water ³	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0	58	ND-333	1/1/19-6/30/19	20	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
	15	0	89	ND-230	7/1/19-12/31/19	21	
Copper (ppm)	1.3	1.3	0.9	ND-1.4	1/1/19-6/30/19	1	Corrosion of household plumbing systems; Erosion of natural deposits
	1.3	1.3	0.9	ND-1.3	7/1/19-12/31/19	0	

¹ Sodium is not a regulated contaminant.

² The chlorine "Level Detected" was calculated using a running annual average.

³ Ninety (90) percent of the samples collected were at or below the level reported for our water.

UCMR TESTING 2018 & 2019

Analyte	Units	Lowest	Highest	Average	Violation Yes/No
Germanium µg/L	µg/L	ND	0.370	0.122	N
Manganese µg/L	µg/L	ND	261	256	N
o-Toluidine µg/L	µg/L	ND	0.562	0.036	N
Total Haloacetic Acids (5) µg/L	µg/L	10.60	18.82	15.01	N
Total Haloacetic Acids (6) µg/L	µg/L	12.98	21.60	17.62	N
Total Haloacetic Acids (9) µg/L	µg/L	16.70	26.80	22.23	N

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

** A lead level of 2 ppb was detected at a pumping station in 2014.

TT Violation	Explanation	Length	Steps Taken to Correct the Violation	Health Effects
In 2019, the City of Kalamazoo violated a water treatment technique.	The state requires that public water supplies maintain several water quality parameters within a range of acceptable levels. A public water supply is allowed nine days during a six-month period to be out of those ranges.	The City of Kalamazoo did not meet the acceptable ranges for all water quality monitoring parameters for more than 9 days during the monitoring periods of January 1-June 30, 2019 and July 1-Dec 31, 2019.	Treatment changes have been implemented to improve reliability, accuracy and precision of the phosphate feeding systems; new policies and procedures were adapted to address hydraulic demands and system monitoring was increased to provide faster water quality results.	This notice is not a violation of lead and copper rules, but any violation related to corrosion control requires education concerning lead and copper health effects. Please find this information on page 11 of this report. More information regarding this violation is provided at: https://www.kalamazoozoo.org/ttv .

While your drinking water meets EPA's standards for arsenic, it does contain low levels. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.



Water Quality Data

Over 20,000 tests were performed on our drinking water in 2019! All were within state and federal drinking water standards.

The table (left) 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 through December

31, 2019. 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. All the data is representative of the water quality, but some are more than one year old.

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.

In order to ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the levels of certain contaminants in water provided by public water systems. Federal Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health.

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.
- **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.
- **Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water.
- **N/A**: Not applicable
- **ND**: not detectable at testing limit
- **ppb**: parts per billion or micrograms per liter
- **ppm**: parts per million or milligrams per liter
- **pCi/l**: picocuries per liter (a measure of radioactivity).
- **Action Level (AL)**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.



Lead & Copper Program

The City of Kalamazoo has removed all lead and galvanized service lines in the City of Parchment. A lead and copper monitoring program will be complete by July 1, 2020, and customers will receive an update on the testing results as soon as they are available.

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 City of Kalamazoo 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 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.

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.

The City of Kalamazoo Performance Standards for groundwater and stormwater can be found at: www.kalamazoo.org/environment and <https://protectyourwater.net/stormwater-regulations/>

If you would like to address issues in a public forum, the City of Kalamazoo Commission meetings are held on the 1st and 3rd Monday of each month at 7:00 p.m. in City Hall at 241 West South Street, Kalamazoo, Michigan 49007.

In 2019, the City of Parchment had 1280 total service lines and 353 service lines of unknown material.

By April of 2020, the City of Kalamazoo identified Parchment's unknown service lines and replaced each lead and galvanized service line with copper. There are currently no lead or galvanized service lines remaining in the Parchment distribution system.

Information on Boil Water Advisories and customer communications is available at: <https://www.kalamazoo.org/bwa>

Additional copies of this report are available at <https://www.kalamazoo.org/waterqualityreport>, We invite public participation in decisions that affect drinking water quality. For specific concerns about drinking water, contact the City of Kalamazoo at (269) 337-8000. If you need more information about your water or the contents of this report, contact the City of Kalamazoo at (269) 337-8000 or 311.

For more information about safe drinking water, visit the U.S. EPA at <http://www.epa.gov/safewater/>.

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