

2018 Water Quality Report for the City of Alma

This report covers the drinking water quality for the City of Alma water system for the 2018 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2018. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

Your water comes from six groundwater wells, depths ranging from 105 feet to 162.5 feet, and the Pine River. The Gratiot Area Water Authority (GAWA) treats the blended well/river source prior to pumping into the city's water distribution system. The State completed an assessment of our source water to determine the susceptibility or the relative potential of contamination in 2003. 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. Well #7 was ranked moderately low. Both well #1 and the Pine River were ranked as having a high degree of sensitivity to potential contamination. New wells #8, #9, #10, and #11 were installed after the assessment was completed and are currently not ranked.

There are no significant sources of contamination to the city's well fields. The City has adopted and implemented a well head protection plan to further protect the well fields from potential contaminants

The Pine River is susceptible to contamination by illegal dumping and runoff. Daily monitoring of the river water entering the treatment plant is performed by plant operators.

This information is outlined in the Source Water Assessment Report and is available to the public upon request.

- **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 **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. 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).

- **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 a blended well/river source and is treated and softened at the GAWA water treatment plant. 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 storm water runoff, and



septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish

limits for contaminants in bottled water which provide the same protection for public health.

Water Quality Data

The table below lists all of the drinking water contaminants that were detected during the 2018 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 – December 31, 2018. 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 of the data is representative of the water quality, but some may be more than one year old. The State and EPA require us to test our water on a regular basis to ensure its safety. As shown by the table below, the City of Alma water system had no violations of EPA’s established Maximum Contaminant Levels. Not listed are the hundreds of other contaminants for which we tested that were not detected. For a complete listing of these contaminants please contact the Water Treatment Plant.

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):** means 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 **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.
- **Level 1 Assessment:** A study of the water supply to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- **Level 2 Assessment:** A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
- **TT:** Treatment technique
- **NTU:** Nephelometric turbidity units

Regulated Contaminant	MCL	MCLG	Level Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Arsenic (ppb)	10	0	2.1	1.7 - 2.5	2018	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Fluoride (ppm)	4	4	0.78	.36 - 1.11	2018	No	Additive which promotes healthy teeth
TTHM - Total Trihalomethanes (ppb)	80	N/A	23	13 - 32	2018	No	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A	4.4	1.3 - 9	2018	No	Byproduct of drinking water disinfection
Nitrate (ppm)	10	10	0.052	N/A	2018	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Dalapon (ppb)	200	200	0.14	N/A	2018	No	Herbicide runoff
Chlorine* (ppm)	MRDL	MRDLG	1.13	.72 - 2.09	2018	No	Water additive used to control microbes
	4	4					
Nephelometric turbidity units	95% of 4 hr compliance periods must be less than .34 NTUs		100%<.34 NTUs	0.04-.18	2018	No	Measure of the cloudiness of water due to soil runoff. Used to monitor effectiveness of filtration system

Radioactive Contaminant	MCL	MCLG	Level Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Combined radium (pCi/l)	5	0	0.1	N/A	2013	No	Erosion of natural deposits
Contaminant Subject to AL	Action Level	MCLG	City of Alma Water 90 th percentile		Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb) **	15	0	0		2017	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm) **	1.3	1.3	0		2017	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Special Monitoring and Unregulated Contaminant ***			Level Detected	Year Sampled	Comments		
Sodium (ppm)			56 ppm	2018	Typical source is erosion of natural deposits		
Chloride			24 ppm	2018	Typical source is erosion of natural deposits		
Iron			<0.1 ppm	2018	Typical source is erosion of natural deposits		
Sulfate			170 ppm	2018	Typical source is erosion of natural deposits		

* Chlorine was calculated using the running annual average.

** 90 percent of the samples collected were at or below the level reported for our water.

*** 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.

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 Alma 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>.

We will update this report annually and will keep you informed of any problems that may occur throughout the year, should they happen. It is recommended that you keep this report as a reference source as it provides useful information as well as contacts and phone numbers you may need from time to time. For additional information regarding the contents of this report, or to request additional copies contact the City of Alma Water Department at 989-463-8349 or City Hall at 989-463-8346. The report may also be viewed on the City of Alma's website at www.ci.alma.mi.us. This report will not be sent to you unless requested. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.

We invite public participation in decisions that affect drinking water quality. City of Alma commission meetings are held the 2nd and 4th Tuesdays of each month at 6:00pm, additionally the Gratiot Area Water Authority meets the 2nd Friday of each month at noon. Please check the city's Web page for possible date/time changes prior to the meeting date.

