

Village of Carsonville, Michigan
Annual Drinking Water Quality Report for 2020
7/1/21

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water source is three screened drift wells located within the village limits. Our wells draw from an aquifer located above the Marshall Sandstone Aquifer. I am pleased to report that the Village of Carsonville's drinking water is safe and meets or exceeds federal and state requirements.

The State of Michigan has produced a Source Water Assessment for the Village's wells. This Assessment reports the susceptibility of our water supply sources to contamination. The susceptibility score is broken down into 7 categories. Very Low, Low, Moderately Low, Moderate, Moderately High and Very High. The score, given by the State, for Well #A located at 49 Maynard Street is Moderate, Well # B located at 3972 Chandler Street is Moderately High, Well #C located at Chandler Street is Moderately High. The complete Source Water Assessment is available by contacting the Department of Public Works.

If you have any questions about this report or concerning your water utility, please contact Bob Kress at 810-657-9400. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on **the third Wednesday of each month at Village Hall.**

The Village of Carsonville routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show the results of our monitoring for the period of January 1st to December 31st, 2020. 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 land or underground, 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 or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 1-800-426-4791.

TERMS AND ABBREVIATIONS USED IN THE TABLES BELOW

Not-Detected (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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 Contaminant Level Goal - The "Goal" (MCLG) is 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 Residual disinfection Level-(MRDL) is the highest level of free chlorine allowed in the distribution system.

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 are more than one year old. The table below represents the most current testing information available.

Inorganic Contaminants Detected in Water at Entry point to Distribution System								
Contaminant	Year of Test	Violation Y/N	Highest Level Detected	Unit of Measure	Range Detected	MCLG	MCL	Likely Source of Contamination
Fluoride	2020	N	.41	ppm		4	4	Erosion of natural deposits, water additive which promotes strong teeth.
Nitrate (as nitrogen)	2020	N	ND	ppm		10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrite as (as nitrogen)	2020	N	ND	ppm		1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Arsenic	2020	N	5	ppb	0-14	0	10*	Erosion of natural deposits; Runoff from glass and electronics production wastes

* On January 23, 2006 the MCL for arsenic was decreased to 10ppb. The Village has constructed a building and has provided equipment to treat wells B and C. The water from these wells is being treated for the removal of Arsenic and is meeting the standard. Well A is not being used; it is for emergency only.

While your drinking water meets the U.S. EPA standard for arsenic, it does contain low levels of arsenic. The U.S EPA standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. 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.

Radioactive Contaminants Detected in Water at Entry point to Distribution System								
Contaminant	Year of Test	Violation Y/N	Highest Level Detected	Unit of Measure	Range Detected	MCLG	MCL	Likely Source of Contamination
Radium (combined 226/228)	2018	N	2.08	(pCi/L)	NA	0	5	Erosion of natural deposits
Gross Alpha	2020	N	2.10	(pCi/L)	NA	0	15	Erosion of natural deposits

Chlorine Residuals from Distribution System Monitoring							
Contaminant	Year Tested	Highest level detected	Range detected	Violation Yes/No	MRDL	Optimum Level of Chlorination	Likely Source of Contamination
Free Chlorine Residuals	2020 Monthly	.50 ppm	.30ppm to .70ppm	No	4 ppm	.5ppm to 1.5 ppm	Water additive used to control microbes

Organic Contaminates from Distribution System Monitoring							
Contaminant	Year of Test	Violation Y/N	Highest Level Detected	Unit of Measure	MCLG	MCL	Likely Source of Contamination
Bromochloroacetic acid	2020	N	4	ppb	NA	NA	By-product of drinking water chlorination
Dibromoacetic acid	2020	N	4	ppb	NA	NA	By-product of drinking water chlorination
Dichloroacetic acid	2020	N	2	ppb	NA	NA	By-product of drinking water chlorination
Total Haloacetic Acid	2020	N	8	ppb	NA	60	By-product of drinking water chlorination
Trichloroacetic acid	2020	N	2	ppb	NA	NA	By-product of drinking water chlorination
Bromodichloromethane	2020	N	8.50	ppb	NA	80	By-product of drinking water chlorination
Bromoform	2020	N	5.20	ppb	NA	80	By-product of drinking water chlorination
Chlorodibromomethane	2020	N	12	ppb	NA	80	By-product of drinking water chlorination
Chloroform	2020	N	4.5	ppb	NA	80	By-product of drinking water chlorination
Total Trihalomethanes	2020	N	30.5	ppb	NA	80	By-product of drinking water chlorination

Lead & Copper Distribution System Monitoring Results							
Contaminant	Date Tested	Number of Sites Tested	90 th Percentile	Range detected	# of Sites over Action Level	Action level/ units of Measurement	Likely Source of Contamination
Lead	2018	10	4 ppb	1ppb to 15ppb	0	15 ppb	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper	2018	10	450 ppb	60 to 520 ppb	0	1300 ppb	Corrosion of household plumbing systems; Erosion of natural deposits

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 Village of Carsonville 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>.

Estimated Number of Service Connections by Service Line Material						
A Service line includes any section of pipe from the water main to the building plumbing at the first shut-off valve inside the building, or 18 inches inside the building, whichever is shorter.						
Any Portion Contains Lead	Contains Galvanized Previously Connected to Lead	Unknown			Contains neither Led nor Galvanized Previously Connected to Lead	Total
		Likely Contains Lead	Likely Does Not Contain Lead	Material(s) Unknown		
			198		45	243

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.

Unregulated Contaminants Detected in Water at Entry point to Distribution System					
Contaminant	Year of Test	Unit of Measure	Highest level detected	Lifetime Health Advisory (LHA)	Likely Source of Contamination
Sodium	2020	ppm	32	NA	Erosion of natural deposits

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be:

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 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 are 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, an can also come from gas stations, urban storm water runoff, and septic systems

Total Coliform: The Total Coliform Rule requires water systems to meet strict limits for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio.

All 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 the 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 at 1-800-426-4791.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Please call our office if you have questions.

Carsonville Village Hall (810) 657-9400

Copies of this report will not be mailed.

Copies of this report are available at Village of Carsonville, Village Hall at 4140 E. Chandler St. or visit us online at www.villageofcarsonville.org