

**CITY OF CARO**  
**2019**  
**WATER QUALITY REPORT**

June 17, 2020

The City of Caro is proud to provide this annual water quality report. This report lists the results of our water quality tests, that were taken in 2019 and contains information about the water and health effects. Our constant goal is to provide you with a safe and dependable supply of drinking water.

Caro's drinking water comes from six wells. These wells range from 145 feet to 300 feet deep. The ground water comes from Mississippi Geological Aquifer.

The Water Department takes bacterial samples every month at all the wells and five locations in the distribution system.

**CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER**

<b>Microbial Contaminants</b>	Viruses, and bacteria which may come from sewage, treatment plants, septic systems, agricultural livestock operations and wildlife.
<b>Inorganic Contaminants</b>	Salts and metals which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas productions or farming.
<b>Pesticides and Herbicide</b>	May come from a variety of sources such as agriculture, storm water runoff and residential uses.
<b>Organic Chemical Contaminants</b>	These are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
<b>Radioactive Contaminants</b>	Can be naturally occurring or be a result of oil and gas production and mining activities.
<b>Arsenic</b>	Arsenic occurs naturally in the earth's crust. Most arsenic in drinking water comes from natural rock formations. As water flows through these formations, it can dissolve arsenic and carry it into underground aquifers, streams, or rivers that may become drinking water supplies. Arsenic also can come from human activities, such as mining or smelting ores that contain arsenic.

In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limits the amount of certain contaminants provided by public water systems.

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

**WATER QUALITY DATA**

The table below lists all the drinking water contaminants that were detected in our water during the calendar year 2019. The presence of these contaminants does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in the table is for testing done from January 1, 2019 to December 31, 2019. We are required 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. Some of the data, though representative of the water quality, is more than one year old.

**DEFINITIONS:**

<b>MCL: Maximum Contaminant Level</b>	The level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLGS, as feasible, using available treatment technology.
<b>MCLG: Maximum Contaminant Level Goal</b>	The level of a contaminant in drinking water which there is no known or expected risk to health. MCLGS allows for a margin of safety.
<b>AL: Action Level</b>	The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
<b>Mg/L/ppm</b>	Parts per million or milligrams per liter.
<b>Ug/L/ ppb</b>	Parts per billion or micrograms per cubic liter.
<b>PCI/L – Picocuries per liter</b>	A measure of radioactivity.
<b>ND</b>	Not detected

**Lead and Copper**

<b>AL</b>	<b>90<sup>th</sup> Percentile Value</b>	<b>No. of samples exceeding the AL</b>	<b>Violation</b>	<b>Typical Source</b>	<b>Date Sampled</b>
Lead ppb 15	3	0	No	corrosion of household plumbing	8-24-17
Copper ppb 1300	400	0	No	corrosion of household plumbing	8-24-17

**RADIOLOGICAL:**

<b>Water Source</b>	<b>Results</b>	<b>Radiological</b>	<b>MCL</b>	<b>Typical Source</b>	<b>Violation</b>
Well #1A	0.9 PCI/L	Gross ALPHA	15 PCI/L	Erosion of natural deposits	No
Well #3A	0.8 PCI/L	Gross ALPHA	15 PCI/L	Erosion of natural deposits	No
Well #5A	0.9 PCI/L	Gross ALPHA	15 PCI/L	Erosion of natural deposits	No
Well #6	1.1 PCI/L	Gross ALPHA	15 PCI/L	Erosion of natural deposits	No
Well #7 & #8	0.9 PCI/L	Gross ALPHA	15 PCI/L	Erosion of natural deposits	No

**Sample Dates**

Well #1A, 5A, 6, 7, 8      7-22-14.

Water Source	Results	Radiological	MCL	Typical Source	Violation
Well #1A	0.5 +/- 0.1	Ra-226	5 pCi/L	Decay of uranium/thorium	No
	< 0.4	Ra-228	5pCi/L	Decay of uranium/thorium	No
	0.5	Ra combined	5pCi/L	Decay of uranium/thorium	No
Well #3A	0.3 +/- 0.1	Ra-226	5pCi/L	Decay of uranium/thorium	No
	<0.5	Ra-228	5pCi/L	Decay of uranium/thorium	No
	0.3	Ra combined	5pCi/L	Decay of uranium/thorium	No
Well #6	.04 +/- 0.1	Ra-226	5pCi/L	Decay of uranium/thorium	No
	1.6 +/- 0.5	Ra-228	5pCi/L	Decay of uranium/thorium	No
	2.0	Ra combined	5pCi/L	Decay of uranium/thorium	No
Wells #7 & 8	0.3 +/- 0.1	Ra-226	5pCi/l	Decay of uranium/thorium	No
	0.5 +/- 0.4	Ra228	5pCi/l	Decay of uranium/thorium	No
	0.8	Ra combined	5pCi/l	Decay of uranium/thorium	No

Sample Dates

Well #1A, 3A, 6, 7, 8 7-22-14.

Water Source	Results	Radiological	MCL	Typical Source	Violation
Well #1A	3.2	Gross Beta	50	Erosion of natural deposits	No
Well #3A	2.8	Gross Beta	50	Erosion of natural deposits	No
Well #5A	2.6	Gross Beta	50	Erosion of natural deposits	No
Well #6	2.3	Gross Beta	50	Erosion of natural deposits	No
Well #7	4.0	Gross Beta	50	Erosion of natural deposits	No

This test was taken 10-13-99.

Contaminants	MCL	MCLG	Results	Typical Source	Violation
Arsenic ppb	10	0	4	Erosion of natural deposits	No
Fluoride ppm	4	4	1.4	Erosion of natural deposits	No
Barium ppm	2	2	0.04	Erosion of natural deposits	No
Sodium	0	0	37	Erosion of natural deposits	No

Disinfection Byproducts	Highest Level	MCL	MCLG	Contaminant	Violation
Total Trihalomethanes	0.0173 mg/l (17 ppb)	80 ppb	N/A	Drinking water chlorination	No
Total Haloacetic Acids	0.003 mg/l (3 ppb)	60 ppb	N/A	Drinking water chlorination	No

Chlorine Residual	Average	Maximum	Minimum
Previous twelve months	0.5 mg/l	0.8 mg/l	0.2 mg/l

The Source Water Assessment (SWA) was completed in 2004 and is available for review at Caro Municipal Building, 317 S. State St., Caro. The Source Water Assessment Program (SWAP) is a program to assess the susceptibility of public water supply sources to contamination. This program requires the DNRE to analyze source sensitivity (natural protection available), delineate source water areas, inventory contaminant sources, determine susceptibility and assure the public is notified of this determination.

The following is the susceptibility of the wells based on the Source Water Assessment Score (SWAS). This is a process that factors geologic and water attributes, water chemistry, and potential contaminant sources for each drinking water source into a ranking system to determine the relative potential for contamination.

Well 1A – Moderate  
Well 3A – Moderately Low  
Well 5A – Moderate  
Well 6 – Moderate  
Well 7 – Moderate  
Well 8 – Very Low

## 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 Caro 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, testing methods, and steps that you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

## Notes about arsenic:

Effective January 23, 2006 the MCL for arsenic became 0.01 mg/l (10 ug/l or ppb) and the MCLG will be 0. As of May 22, 2006 the City of Caro's arsenic removal treatment facility has been line. Tests results have shown that the arsenic level leaving the facility is averaging 0.003 mg/l (3ug/l or ppb). Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulating system and may have an increased risk of getting cancer. The results are taken every month.

## PFAS

The City of Caro had the wells tested for PFAS 10/10/18 with results coming back as not detected on all wells.

For more information on PFOS, PFOA and other PFAS including possible health outcomes, you may visit these web sites: [www.michigan.gov/pfasresponse](http://www.michigan.gov/pfasresponse), [www.epa.gov/pfas](http://www.epa.gov/pfas), [www.atsdr.cdc.gov/pfas](http://www.atsdr.cdc.gov/pfas)

The City Council meetings are on the 1st and 3rd Mondays of each Month at 7:30 p.m. in the Council Chambers of the Caro Municipal Building, 317 S. State Street, Caro. You are welcome.

These results are on file at the Caro Water Department. You can call Jeff Graham, DPW Superintendent at (989) 673-2571.

Respectfully Submitted,

D.P.W Superintendent  
Jeff Graham

