Annual Drinking Water Quality Report
CITY OF CAVALIER
2021

We're pleased to provide you with this year's ***Annual Drinking Water Quality Report***. This report is designed to inform you about the safe clean water 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 protect our water resources. We are committed to ensuring the quality of your water. The City of Cavalier purchases its water from Northeast Regional Water District - North Valley Branch. Northeast Regional Water District water source for North Valley Branch is entirely groundwater. Water for the North Valley Branch system is obtained from the Icelandic Aquifer Source.

Northeast Regional Water District is participating in North Dakota's Wellhead Protection Program. The North Dakota Department of Health has prepared a Source Water Assessment for Northeast Regional Water District- North Valley Branch. The information on both of these programs is available to the public during normal business hours. Our public water system, in cooperation with the North Dakota Department of Health, has completed the delineation and contaminant/land use inventory elements of the North Dakota Source Water Protection Program. Based on the information from these elements, the North Dakota Department of Health has determined that our source water is susceptible to potential contaminants. No significant sources of contamination have been identified.

Cavalier is pleased to report that our drinking water is safe and meets federal and state requirements.

This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact Barry Walton, City of Cavalier at (701) 265-8668. 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 first Monday of each month at 7:00 p.m. at the City Council Chambers in the City Administration Building. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Barry Walton at the number listed above.

The City of Cavalier would appreciate it if large volume water customers would please post copies of the ***Annual Drinking Water Quality Report*** in conspicuous locations or distribute them to tenants, residents, patients, students, and/or employees, so individuals who consume the water, but do not receive a water bill, can learn about our water system.

Cavalier routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table shows the results of our monitoring for the period of January 1st to December 31st, 2021. As authorized and approved by EPA, the state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data [e.g., for inorganic contaminants], though representative, is more than one year old.

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 effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and 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 storm water runoff, industrial or domestic wastewater discharges, oil & gas production, mining or farming.

Pesticides and herbicides**,** which come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

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.

Radioactive contaminants**,** which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

In the tables on page 3, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Not Applicable – (N/A)

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

Parts per billion (ppb) or Micrograms per liter (ug/l) – 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 (AL) – The concentration of a contaminant, which if exceeded, triggers treatment or other requirements, which a water system must follow.

Treatment Technique (TT) – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

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 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 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.

Initial Distribution System Evaluation (IDSE)

TEST RESULTS FOR NORTHEAST RWD - NORTH VALLEY WATER BRANCH					
Lead/Copper Units	Date	#samples	Action level (AL)	90th Percentile	Samples Exceed AL
COPPER 90th Percentile	8/20/2019	20	1.3	0.332	0 ppm
Lead 90th Percentile	8/20/2019	20	15	1.79	0 ppb

Contaminant	**Date**	**MCL**	**MCLG**	**High Comp**	**Units**	**Range**	**Violation Yes/No Other Info**	**Likely Source of Contamination**
Nitrate-Nitrite	2021	10	10	.037	ppb	N/A	no	Erosion of natural deposits, runoff from fertilizer use; leaching from septic tanks, sewage.
Barium	4/4/2017	2	2	0.184	ppm	N/A	no	Discharge of drilling wastes: Discharge from metal refineries;Erosion of natural deposits
Fluoride	4/4/2017	4	4	0.635	ppm	N/A	no	Erosion of natural deposits: Water additive which promotes strong teeth:Discharge from fertilizer and aluminum factories

Radioactive Contaminants	**Date**	**MCL**	**MCLG**	**High Comp**	**Units**	**Range**	**Likely source of contamination**
Gross Alpha, including RA Excluding RN & U	6/18/2018	15	15	ND	pCi/l	N/A	Erosion of natural deposits
Radium, Combined (226,228)	6/18/2018	5		1.128	pCi/l	N/A	Erosion of natural deposits
Uranium Combined	6/18/2018	30		1.07	ppb	N/A	Erosion of natural deposits

Disinfectants	Date	MCL	MGL	High Comp	Units	Range	Violation Yes/No Other Info	Likely source of contamination
Chlorine	1/31/2021	MRDL = 4	MRDL= 4	1.6	ppm	. .09 to1.66	NO	Water additive used to control microbes

Stage 2 Disinfection Byproducts (TTHM/HAA5)

HAA5 System-Wide	2021	60		6.3	ppb	N/A	NO	By-product of drinking water chlorination
TTHM System-Wide	2021	80		16	ppb	N/A	N0	By-product of drinking water chlorination

Unregulated Contaminants	Date	MCL	MCLG	High Comp.	Units	Range
MANGANESE	4/4/2017			0.028	ppm	n/a

TEST RESULTS FOR CITY OF CAVALIER

	DATE	#SAMPLES	Action level (AL)	90th Percentile	Range	Samples Exceed AL	Units	Likely Source of Contamination
1. **COPPER** 90th PERCENTILE	7/2/2019	10	1.3	0.514	N/A	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2. **Lead** 90TH PERCENTILE	7/2/2019	10	15	No detect	N/A	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectants	Date	MCL	MCLG	HIGH Comp	Units PPM	Range	Violation Yes/No Other Info	
3. Chlorine	2/28/2021	MRDL 4	MRDLG 4	1.2		.8 to 1.5	no	Water additive used to control microbes

Stage 2 Disinfection Byproducts (TTHM/HAA5)

HAA5 System-Wide	12/31/21	60		9	ppb	N/A	no	By-product of drinking water chlorination
TTHM System-Wide	12/31/21	80		20	ppb	N/A	no	By-product of drinking water chlorination

* No sites exceeded the lead or copper action levels in 2019.
** Samples were taken during the 2016 – 2020 monitoring period.

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 Cavalier is responsible for providing high quality drinking water, but cannot control the varity of materials used in plumbing components. **Use water from the cold tap for drinking and cooking. 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 drinking water, you may wish to have your water tested. Information and 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.

EPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table above are the only contaminants detected in your drinking water.

As you can see by the table on page 3 and 4, your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water ***IS SAFE*** at these levels.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, 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/Centers for Disease Control and Prevention (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 (1-800-426-4791).

Please call Barry Walton, City of Cavalier at (701) 265-8668 if you have any questions concerning your water system.
The City of Cavalier works diligently to provide top quality water to every tap. 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.