

Annual Drinking Water Quality Report Napoleon, North Dakota 2019

We're pleased to present to you 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 continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. The city of Napoleon draws its potable water from the Napoleon aquifer.

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 "*moderately susceptible*" to potential contaminants. No significant sources of contamination have been identified.

The city of Napoleon 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 questions regarding this report, please call Roger Kristiansen, at (701) 754-2266. Questions can also be answered at our regularly scheduled monthly council meeting held the first Monday of each month at 7:30 p.m. in the Napoleon City Hall. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Roger at the number listed above.

The city of Napoleon would appreciate it if large volume water customers would please post copies of *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.

The city of Napoleon routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2019. 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.

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, industrial or domestic wastewater discharges, oil 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.

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the number 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 following table, 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 (NA), No Detect (ND)

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 (µg/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) –Pico curies 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 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.

2019 Test results for the city of Napoleon, ND

<u>Contaminant</u>	<u>MCLG</u>	<u>MCL</u>	<u>Level Detected</u>	<u>Unit Measurement</u>	<u>Range</u>	<u>Date (year)</u>	<u>Violation Yes/No Other Info</u>	<u>Likely Source of Contamination</u>
Lead/Copper								
Copper	1.3	AL=1.3 90% Value	0.929	ppm	N/A	2019	0 sites exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead*	15	AL=15 90% Value	No Detect	ppb	N/A	2019	0 site exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
Inorganic Contaminants								
Arsenic	0	10	1.98	ppb	N/A	2016	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2	2	0.0976	ppm	N/A	2018	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium	100	100	4.46	ppb	N/A	2018	No	Some people who use water containing Chromium well more than the MCL over many years could experience allergic dermatitis.
Fluoride	4	4	0.175	ppm	N/A	2018	No	Erosion of natural deposits; Water additives which promotes strong teeth; Discharge from fertilizer and aluminum factories
Disinfectants								
Chlorine	MRDLG =4	MRDL= 4.0	1.7	ppm	1.2 to 2.1	2019	No	Water additive used to control microbes
Stage 2 Disinfection By-Products (System-Wide)								
HAA5	60	N/A	No Detect	ppb	ND	2018	No	By-product of drinking water Chlorination
TTHM	80	N/A	No Detect	ppb	ND	2018	No	By-product of drinking water chlorination
Radioactive Contaminants								
Gross Alpha, Including RA, Excluding RN & U	15	15	4.14	pCi/l	N/A	2017	No	Erosion of natural deposits
Radium, Combined (226, 228)	N/A	5	0.75	pCi/l	N/A	2017	No	Erosion of natural deposits
Uranium, Combined	N/A	30	0.95	ppb	N/A	2017	No	Erosion of natural deposits
Unregulated Contaminants								
Alkalinity, Total	N/A	N/A	381	ppm	N/A	2018	No	N/A
Bicarbonate as HCO3	N/A	N/A	465	ppm	N/A	2018	No	N/A
Calcium	N/A	N/A	44.5	ppm	N/A	2018	No	N/A
Chloride	N/A	N/A	7.5	ppm	N/A	2018	No	N/A
Conductivity @ 25 UMHOS/CM	N/A	N/A	866	umho/cm	N/A	2018	No	N/A
Hardness, Total (AS CAC03)	N/A	N/A	171	ppm	N/A	2018	No	N/A
Iron	N/A	N/A	0.103	ppm	N/A	2018	No	N/A

Magnesium	N/A	N/A	14.6	ppm	N/A	2018	No	N/A
Manganese**	N/A	N/A	0.707	ppm	N/A	2018	No	N/A
Nickel	N/A	N/A	0.00528	ppm	N/A	2018	No	N/A
pH	N/A	N/A	7.82	pH	N/A	2018	No	N/A
Potassium	N/A	N/A	6.9	ppm	N/A	2018	No	N/A
Sodium	N/A	N/A	125	ppm	N/A	2018	No	N/A
Sodium Adsorption Ratio	N/A	N/A	4.15	obsvns	N/A	2018	No	N/A
Sulfate	N/A	N/A	88.3	ppm	86.2 to 88.3	2018	No	N/A
TDS	N/A	N/A	518	ppm	N/A	2018	No	N/A
Zinc	N/A	N/A	0.00558	ppm	N/A	2018	No	N/A

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

*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 Napoleon is responsible for providing high quality drinking water, but cannot control the variety 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 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>.

People need some manganese to stay healthy, but too much can be harmful. Children and adults who drink water with high levels of manganese may experience nervous system impacts. Infants may experience learning disabilities and behavioral problems if they drink water with too much manganese. Adults may experience impacts to their nervous system resulting in behavioral changes or slow and clumsy movements. **Per U.S. EPA guidance, drinking water should not contain more than 0.3 ppm. For infants under six months of age, tap water with manganese levels above 0.3 ppm should not be used for drinking or making formula. Use bottled water or alternative water source. If additional home treatment is not available: For children greater than 6 months and adults use bottled water or alternative water source. If you are caring for an infant, or are concerned about your health from manganese exposure, discuss your concerns with your health care provider.

We're proud that 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.

Thank you for allowing us to provide your family with clean, quality water this year. To maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all our customers. These improvements sometimes require rate structure adjustments.

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 (1-800-426-4791).

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 (1-800-426-4791).

Tampering with a public water system is a federal offense. Report suspicious activity to local law enforcement immediately.

Please call Roger Kristiansen, at 701-754-2266 if you have questions concerning your city's water system.

The city of Napoleon 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.

