



2018 Drinking Water Quality Report

City of Dickinson, North Dakota

The City of Dickinson is pleased to present our Annual Drinking Water Quality Report, also commonly referred to as the “Consumer Confidence Report (CCR)”. The purpose of this report is to provide information to our customers about the quality of our drinking water and the potential health risks, if any, associated with any detected contaminants. It will also provide access to additional information that will allow you to make informed decisions regarding drinking water consumption. Our water system was in compliance with Drinking Water Regulations in 2018. This report has been prepared in accordance with recent amendments to the Safe Drinking Water Act and it contains definitions of terms, specific language requirements, a table of water quality data (on Table 1, on the back page of this report), and other pertinent information we hope you will find useful and educational. If you have any questions, or would like additional information, please contact: City Hall, c/o: Mr. Greg Stack, Utilities Manager, 99 2nd Street East, Dickinson, North Dakota 58601 or at: 1-701-456-7779. We would appreciate that our large volume water customers post copies of this report in a conspicuous location or distribute them to tenants, residents, students, and/or employees. This will allow individuals who consume our drinking water, but do not receive water bills, to view this report, which is also available at: www.dickinsongov.com. Non-English speaking individuals who need assistance with the translation of this report may also contact us at the number listed above.

On April 1, 2000, the Southwest Water Authority (SWA) took over management, operation, and maintenance of the Dickinson Water Treatment Plant so there are (2) reporting entities for 2018: SWA and the City of Dickinson. The City of Dickinson purchases drinking water from SWA, which in turn receives its water from Lake Sakakawea, a surface water source. As part of a nationwide program, the North Dakota Department of Health completed an assessment of our source water and determined that our water system is moderately susceptible to potential contaminant sources. They also noted that “historically, SWA has effectively treated this source water to meet drinking water standards.” The Source Water Assessment is completed by SWA, and their results are included in this report. For additional information please call SWA at: 1-701-225-9149. SWA has a program of testing its untreated water supply for Cryptosporidium, Giardia and E. Coliform as part of Round 2 of the Long Term 2 Enhanced Surface Water Treatment Rule. Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. SWA monitoring did not detect any presence in the source water. Giardia is a microbial parasite commonly found in source water. Filtration, as used at the Dickinson Water Treatment Plant, effectively removes Giardia. SWA monitoring did not detect any presence in the source water. E. Coliform is a pathogenic bacteria commonly found in surface water and originates in the intestinal tract of warm-blooded animals. In the ten (10) samples taken, only two (2) detected any presence in the source water, with the highest measuring 55 MPN/100ml. Disinfection and filtration effectively removes E. Coliform.

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 at: 1-800-426-4791. 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 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:

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, 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, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 microbial contaminants are available from the Safe Drinking Water Hotline at: 1-800-426-4791.

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 Dickinson – Water Utilities Department 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: www.epa.gov/safewater/lead.

The City of City of Dickinson was selected by EPA to sample for 23 unregulated contaminants during 2018. Samples were taken eight times from Entry Point (EP) and Maximum Residence (MR) Time sample points within our system.

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Should you have any questions, please contact our office.

The following unregulated contaminant(s) was/were the only contaminant(s) detected during this sampling. Results are from the EP and MR sampling points within our system.

City of Dickinson Detected Unregulated Contaminants	Average value at EP sampling point (ug/L)	Average value at MR sampling point (ug/L)
HAA6Br (ppb)	N/A	8.49 (Range: 5.73 – 11.36)
HAA9 (ppb)	N/A	57.77 (Range: 34.13 – 82.26)
Manganese (ppb)	0.31 (Range: ND to 0.61)	N/A

Contaminant (units)	MCLG	MCL	Level Detected	Detection Range	Test Date	Exceedance or Violation?	Major Sources in Drinking Water
Southwest Water Authority – Detected Regulated Contaminants – Total Organic Carbon (TOC) Removal – Sample Test Results							
Alkalinity (ppm) Source Water	N/A	N/A	165	128 – 165	2018	N/A	natural erosion, plant activities, and certain industrial wastes
Total Organic Carbon (ppm) Source Water	N/A	TT	3.80	3.25 – 3.80	2018	N/A	naturally present in the environment
Total Organic Carbon (ppm) Finished Water	N/A	TT	2.57	2.12 – 2.57	2018	N/A	naturally present in the environment
Southwest Water Authority - Detected Regulated Contaminants – Microbial Contaminants – Sample Test Results							
Turbidity ¹ (NTU)	N/A	TT = 0.3	0.292	N/A	2018	100% of samples met turbidity limit	soil runoff
Southwest Water Authority - Detected Regulated Contaminants – Inorganic Contaminants – Sample Test Results							
Barium (ppm)	2	2	0.0126	N/A	2016	No	discharge of drilling wastes and/or from metal refineries; erosion of natural deposits
Fluoride (ppm)	4	4	0.92	N/A	2016	No	erosion of natural deposits; additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate-Nitrite (ppm)	10	10	0.12	N/A	2018	No	fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Southwest Water Authority - Detected Regulated Contaminants – Disinfectants – Sample Test Results							
Chloramines (ppm)	MRDLG = 4	MRDL = 4.0	3.1	2.38 – 3.43	2018	No	water additive used to control microbes
Southwest Water Authority - Detected Unregulated Contaminants² – Sample Test Results							
Bromide (ppm)	N/A	N/A	35	6.3 – 35	2018	N/A	N/A
Bicarbonate as HCO ₃ (ppm)	N/A	N/A	201	157 – 201	2018	N/A	N/A
City of Dickinson - Copper and Lead – Sample Test Results							
Copper, (30 samples taken) (ppm)	N/A	AL = 1.3 ppm	90 th % = 0.0616 ppm	N/A	August 2016	Zero (0) sites exceeded AL	household plumbing systems, erosion of natural deposits
Lead, (30 samples taken) (ppb)	N/A	AL = 15 ppb	90 th % = 4.23 ppb	N/A	August 2016	Two (2) sites exceeded AL	household plumbing systems, erosion of natural deposits
City of Dickinson – Disinfectants and Bacteriological Monitoring Data – Sample Test Results							

Chloramine (ppm)	MRDL = 4	MRDL = 4.0	3.0 ppm	2.24 – 3.00	monthly 2018	No	water additive used to control microbes
Total Coliform Data	0	0	0	N/A	monthly 2018	No	naturally present in environment
City of Dickinson - Stage 2 Disinfection Byproducts – Sample Test Results							
HAA5 (ppb)	N/A	60	High Comp. = 26 ppb	9.27 – 65.05	December 2018	No	byproduct of drinking water disinfection
TTHM (ppb)	N/A	80	High Comp. = 38 ppb	5.44 – 110	December 2018	No	byproduct of drinking water disinfection

Table 1: 2018 Water Quality Data

1. Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicate of the effectiveness of the filtration system.
2. The EPA requires testing for certain unregulated contaminants, but has not established enforceable drinking water standards for them. They are monitored to determine if future regulation is, or is not warranted.

(AL) Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

(HAA5) Haloacetic Acids: HAA5 includes: dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, trichloroacetic acid

(High Comp.) Highest Compliance Level: The highest level of that contaminant used to determine compliance with a National Primary Drinking Water Regulation.

(MCL) Maximum Contaminant Level: 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.

(MCLG) Maximum Contaminant Level Goal: 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.

(MPN/100ml) Most Probable Number per 100 ml: The measure of particular particles in 100 milliliters of a water sample.

(MRDL) Maximum Residual Disinfectant Level: 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.

(MRDLG) Maximum Residual Disinfectant Level Goal: 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.

(ppb) Parts per billion: a measurement of concentration; equal to micrograms per liter ($\mu\text{g/L}$)

(ppm) Parts per million: a measurement of concentration; equal to milligrams per liter (mg/L)

($\mu\text{mho/cm}$) Micromhos per centimeter: a measure of conductivity

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

(TTHM) Total Trihalomethanes

(N/A) Not Applicable

(ND) Not Detected

(NTU) Nephelometric Turbidity Units

(Obsvns) Observations/field at 100 power