

2015 CONSUMER CONFIDENCE REPORT
FORT YATES RURAL WATER SYSTEM
For communities of Fort Yates, Cannonball, Porcupine and Rural Areas
PWSID# 083890007

The purpose of this report is to inform you of the quality of the drinking water that we provide. We are required by the U.S. Environmental Protection Agency (EPA) to test our water frequently for the presence of over 80 different substances, and as a surface water treatment plant, we monitor the water continually to assure compliance with the Safe Drinking Water Act (SDWA). The EPA Region 8 Office in Denver, Colorado reviews all of our testing data to ensure that we are providing safe drinking water to our users, and we are complying with EPA regulations.

The Fort Yates Water Treatment Plant, located on the east side of the community of Fort Yates, pumps raw water from Lake Oahe and treats the water to regulatory standards. The Fort Yates water treatment plant is a conventional surface water plant with flocculators, sedimentation basins, and multimedia filters. Following the treatment process the finished water is injected with chlorine and fluoride prior to pumping to the distribution system. The Fort Yates water treatment plant produces and pumps finished water to the 1.5 million gallon storage tank in Fort Yates, and through various boosters and storage tanks which provide treated water to the communities of Porcupine, Cannonball, and the Prairie Knights casino. The Fort Yates water treatment plant is a wholesale provider to the community of Solen, as a consecutive system. This report shows the water quality produced by the Fort Yates Water Treatment Plant and what that water quality means to you the consumer.

If you have any questions concerning this report, our water system, or water quality concerns, please contact Randez Bailey, Director of Standing Rock Municipal Rural & Industrial (MR&I) Program at (701) 854-7477. If you are aware of individuals who need help with the appropriate language translation, please call Standing Rock MR&I at the number listed above.

The Fort Yates Water System would appreciate community segment employees in Fort Yates, Cannonball, and Porcupine and other large volume water customers post copies of this Consumer Confidence Report (CCR) in visible locations, or distribute them to tenants, residents, patients, students, or employees on the water system.

The Fort Yates Water System routinely monitors for contaminants in your drinking water according to Federal laws. We monitor monthly for coliform bacteria, all samples have been satisfactory, no detects. As authorized and approved by EPA, we have reduced monitoring requirements for certain contaminants to less often than once a year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data (e.g. for organic contaminants), though representative, may be more than one year old. A specific listing of the contaminants can be obtained from the Standing Rock MR&I Office.

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 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, the 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 that must provide the same protection for public health.

2015 Water Quality Test Results

This section of the report contains a table with terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

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

Maximum Contaminant Level (MCL) - 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 (MCLG) - 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.

NA – Not applicable

Parts per million (ppm) or Milligrams per liter (mg/l) – ppm is a measure of the concentration of a contaminant in water, 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) - ppb is a measure of the concentration of a contaminant in water, 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.

Public Water System Identification Number (PWSID) – a unique identifier number assigned by the EPA.

Running Annual Average (RAA) – running annual arithmetic average computed quarterly or monthly depending on the contaminant evaluated.

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

Maximum Residual Disinfectant Level (MRDL) - The highest level of 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.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. These substances can be microbes, inorganic or organic chemicals and radioactive substances. 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.

The table includes only the contaminants that were detected by the laboratory. The laboratory did not detect most of the contaminants that EPA requires us to monitor.

FORT YATES WATER TREATMENT PLANT 2015 SAMPLE RESULTS							
Contaminant	Violation Y/N	Level Detected	Date	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Coliform Bacteria	N	48- samples 0-detects	4/month 2015	Presence or Absence	NA	NA	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacterial may be present.
Disinfection Byproducts/Organics							
Total Trihalomethanes (TTHM) Stage 2	N	Range (17.25 – 46.66) RAA = 31	Qtrly 2015	ppb	0	80	Byproduct of drinking water disinfection
Total Haloacetic Acids (HAA5) Stage 2	N	Range (4.84–13.57) RAA = 10	Qtrly 2015	ppb	NA	60	Byproduct of drinking water disinfection
Total Organic Carbon (TOC)	N	(Removal Ratio of 1.0 required) Removal Ratio = 1.52	Monthly 2015	ppm	NA	TT	Naturally present in the environment
Inorganic Contaminants							
Fluoride	N	0.89	4/8/13	ppm	4	4	Erosion of natural deposits; water additive to promote strong teeth; discharge from fertilizer and aluminum factories.

Chlorine	N	Range (1.1 – 2.49) RAA = 2.09	Monthly 2015	ppm	MRDLG =4	MRDL= 4	Water additive used to control microbes.
Barium	N	0.0187	5/11/15	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide	N	53	2015	ppb	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Nickel	N	3.68	4/08/13	ppb	100	100	Naturally present in the environment
Selenium	N	1.09	4/08/13	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Copper	N	20 samples 90 th percentile 0.15	2015	ppm	1.3	A.L.=1. 3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	N	20 samples 90 th percentile 1.0	2015	ppb	0	A.L.=1 5	Corrosion of household plumbing systems; erosion of natural deposits.
Synthetic Organic Contaminants							
Diquat	N	0.4	2014	ppb	20	20	Runoff from herbicide use
Endothall	N	9	2014	ppb	100	100	Runoff from herbicide use
Secondary Contaminants							
Sodium	N	77	5/11/15	ppm	NA	NA	Naturally present in the environment.
Turbidity – Turbidity is monitored continually with inline turbidimeters at the Fort Yates water treatment plant. The turbidity results for 2015 were all well within the EPA parameters of <0.3 nephelometric turbidity units (ntu). 4 hour ntu readings are recorded and reported monthly to EPA. The highest turbidity measurement for the Fort Yates plant was 1.0 ntu, with 100% of turbidity samples meeting turbidity limits. Turbidity is a measurement of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.							

We constantly monitor for various constituents in the water supply to meet all regulatory requirements.

As you can see by the table, our system had no violations in 2015. We constantly monitor for various constituents in the water supply to meet all regulatory requirements.

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.

More Information About Certain Contaminants

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 Fort Yates Water System 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 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>.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Some people who drink trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

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).

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 affect.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make adjustment and improvements to our system which will benefit our customers. The water treatment plant operators are in consultation with professionals in the field of water treatment when making adjustments as needed.

The Standing Rock MR&I staff work diligently to provide top quality water to every customer on the Fort Yates water system. We ask that all our customers help us protect our water sources, which are the heart of our Reservation, our way of life and our children's future.

Please feel free to contact Randez Bailey, Director of Standing Rock MR&I at (701) 854-7477 if you have questions concerning this report or your water system.