Annual Drinking Water Quality Report

Harwood, North Dakota

2016

We're very pleased to provide you with this year's *Annual Drinking Water Quality Report.* We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is to provide you with a safe and dependable supply of drinking water. Our water source is ground water from the West Fargo Aquifer. We have a water treatment/storage plant, and two 200' deep wells. The water plant has detection, aeration, and iron & manganese removal filtration system.

The city of Harwood is participating in North Dakota's Wellhead Protection Program. A copy of this program is available upon request. The North Dakota Department of Health has prepared a Source Water Assessment for Harwood. Information regarding this program is also available upon request.

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 **"not likely susceptible"** to potential contaminants.

If you have any questions about this report or concerning your water utility, please contact Bernie Stasch, Water Works Superintendent at 701-281-0314. 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 every month at 7:00 pm at the City Hall. If you are aware of non-English speaking individuals who need help with the appropriate language translations, please call Bernie at the number listed above.

The city of Harwood 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.

The city of Harwood 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, 2016**.** 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 stormwater 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 stormwater 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 stormwater 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 following tables 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)

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) - 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 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.

TEST RESULTS FOR THE CITY OF HARWOOD

Contaminant	MCLG	MCL	Level Detected	Unit Measurement	Range	Date (year)	Violation Yes/No Other Info	Likely Source of Contamination
Inorganic Contaminants								
Nitrate-Nitrite*	10	10	0.97	ppm	N/A	2016	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Arsenic**	0	10	1.93	ppb	N/A	2016	No	Erosion of natural deposits; runoff from glass and electronics production wastes
Lead / Copper								
Copper (90th Percentile)	1.3	AL=1.3	0.76	ppm	N/A	2015	No	Corrosion of household plumbing systems, erosion of natural deposits
Lead (90th Percentile)	0	AL=15	1.16	ppb	N/A	2015	No	Corrosion of household plumbing systems, erosion of natural deposits
Radioactive Contaminants								
Radium Combined (226, 228)	N/A	5	0.084	pCi/l	N/A	2013	No	Erosion of natural deposits
Uranium, Combined	N/A	30	0.36	ppb	N/A	2013	No	Erosion of natural deposits
Gross Alpha, Including RA, Excluding RN & U	15	15	1.56	pCi/l	N/A	2013	No	Erosion of natural deposits
Disinfectants								
Chlorine	MRDLG=4	MRDL=4.0	0.6	ppm	0 to 1.1	2016	No	Water additive used to control microbes
Stage 2 Disinfection Byproducts (TTHM/HAA5)								
HAA5 (Haloacetic Acids)	N/A	60	18	ppb	1.84-21.29	2016	No	By-product of drinking water disinfection
TTHM (Total Trihalomethanes)	N/A	80	104	ppb	10.23-100.8	2016	yes	By-product of drinking water disinfection
TTHM (Total Trihalomethanes) STG2-01	N/A	80	103	ppb	12.38-100.8	2016	Yes	By-product of drinking water disinfection
TTHM (Total Trihalomethanes) STG-02	N/A	80	104	ppb	10.23-100.2	2016	Yes	By-product of drinking water disinfection

Violations for 2016

Violation: *Total Trihalomethanes (TTHM) – Maximum Contaminant Level Exceedance, 2nd and 3rd quarter of 2016*. We exceeded the Maximum Contaminant Level for TTHM during the 2nd and 3rd quarter of 2016. Some people who drink water containing trihalomethanes in excess of the MCL over many years could experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. The City of Harwood is taking steps to correct this TTHM violation.

Violation: *Disinfectants and Disinfection Byproducts Rule (DBP) – Failure to Routine Monitor Chlorine (Major), 3rd quarter of 2016*. We failed to take the required number of samples for Chlorine during the 3rd quarter of 2016. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort. The City of Harwood is taking steps to correct this violation of the Disinfectants and Disinfection Byproduct Rule by returning to a normal testing routine.

Violation: *Revised Total Coliform Rule (RTCR) – Failure to Routine Monitor July 2016.* Our water system is required to sample for total coliform bacteria on a monthly basis. We failed to collect the required number of total coliform samples during the month of July 2016 and are therefore unsure of the quality of the water at that time. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. The City of Harwood is taking steps to correct this violation of the Revised Total Coliform Rule by returning to a routine testing schedule. Subsequent total Coliform samples have been satisfactory.

Violation: *Consumer Confidence Report (CCR) Rule-Failure to Submit 2016 CCR-July 2015*. We failed to submit the required 2015 CCR to the North Dakota Department of Health by the July 1, 2016 deadline. The CCR improves public health protection by providing educational material to allow consumers to make educated decisions regarding any potential health risks pertaining to the quality, treatment, and management of their drinking water supply. The City of Harwood intends to return to compliance by submitting future CCRs as required.

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.

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.

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).

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. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of 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).

If present, elevated levels of lead can cause serious health problems, especially for pregnant woman and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Harwood 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 expo-sure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Please call Bernie Stasch, Water Works Superintendent, at 701-281-0314 if you have questions.

The city of Harwood works around the clock 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.