Annual Drinking Water Quality Report
Langdon, North Dakota
2013

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. Our water source is Mount Carmel Dam that is part of the Pembina River and Mulberry Creek.

The North Dakota Department of Health has prepared a Source Water Assessment for Langdon's surface water intakes. This information will be made available at the respective offices during normal business hours. Information on Langdon's Source Water Assessment can be obtained from Chad Mittleider, Public Works Superintendent. 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 Langdon's source water is "moderately susceptible" to potential contaminants. No significant sources of contamination have been identified.

Langdon 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 Chad Mittleider, Water Plant Superintendent, at (701) 256-2369. 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 second and fourth Monday of each month at 4:00 PM in Langdon City Hall. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Chad Mittleider at the number listed above.

The city of Langdon 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.

Langdon 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, 2013. 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 radioactive 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, industrial or domestic wastewater discharges, oil production, mining or farming.

Pesticides and herbicides, which 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 tables on pages 3 & 4 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 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.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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 - The highest level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

TEST RESULTS FOR THE CITY OF LANGDON								
Contaminant	MCLG	MCL	Level Detected	Unit Measurement	Range	Date (year)	Violation Yes/No Other Info	Likely Source of Contamination
Microbiological Contaminants								
1. Turbidity	NA	TT	0.31	NTU	N/A	2013	*	Soil runoff
Inorganic Contaminants								
2. Copper	1.3	AL=1.3	0.0733 90th % Value	ppm	N/A	2012	No**	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
3. Lead	0	AL=15	2.3 90th % Value	ppb	N/A	2012	No**	Corrosion of household plumbing systems, erosion of natural deposits
4. Nitrate-Nitrite	10	10	0.21	ppm	N/A	2013	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
5. Barium	2	2	0.011	ppm	N/A	2010	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
6. Fluoride	4	4	1.39	ppm	N/A	2010	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
7. Selenium	50	50	2.6	ppb	N/A	2010	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Disinfection Byproducts								
8.Total Haloacetic Acids (HAA5)		60	2	ppb	1.13 to 1.36	2013		By-product of drinking water chlorination
9. Total Trihalomethanes (TTHM)		80	59	ppb	50.97 to 52.03	2013		By-product of drinking water chlorination

Disinfectants								
10. Chloramine	MRDLG=4	MRDL= 4.0	3.1	ppm	2.39 to 3.8	2013	No	Water additive used to control microbes
Total Organic Carbon Removal								
11. Alkalinity - Source			308	ppm	162.00 to 308.00	2013	No	Nature erosion, certain plant activities, certain industrial wastewater discharges
12. Carbon, Total Organic (TOC)-Finished			12.4	ppm	6.05 to 12.40	2013	No	Naturally present in the environment
13. Carbon, Total Organic (TOC)-Source			18.4	ppm	11.00 to 18.40	2013	No	Naturally present in the environment
Unregulated Contaminants								
14. Alkalinity, Carbonate			11	ppm	ND - 11	2013		
15. Bicarbonate As HCO3			376	ppm	197-376	2013		
Volatile Organic Contaminants								
16. P-Dichlorobenzene	75	75	3.08	ppb	N/A	2013		
Radioactive Contaminants								
17. Radium Combined (226, 228)	5		1.45	pCi/l	N/A	2013	No	Erosion of natural deposits
18. Uranium, Combined	30		0.88	ppb	N/A	2013	No	Erosion of natural deposits
Microbiological Contaminants								
19. Total Coliform Bacteria	0	1 per month for systems <40,000 pop	1		N/A	2013	***	Naturally present in the environment

* Lowest monthly percentage of samples meeting turbidity limits = 99

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

* * No sites exceeded the copper or lead action level in 2012.

*** September had the highest number of Total Coliform Samples 1. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in one sample. Systems under 40,000 population are allowed one positive sample per month. All follow-up samples came back in compliance.

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.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms, such as, nausea, cramps, diarrhea, and associated headaches.

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the 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.

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. City of Langdon 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.

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

Please call Chad Mittleider, Water Plant Superintendent, at (701) 256-2369 if you have questions concerning your city's water system.

The City of Langdon 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.