The 2015
Annual Drinking Water Quality Report
City of Lisbon
March 18, 2016

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 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 ground water from three city wells and four wells owned and maintained by Southeast Water Users District. The city wells draw from the Sheyenne River alluvium and undifferentiated glacial outwash. Which means the U.S. Geological Survey has not given this aquifer its' own name. The Southeast Water Users District's wells draw from the Sheyenne Delta Aquifer.

We have a Wellhead Protection Plan that provides more information, such as, potential sources of contamination. This plan is available at our plant; please contact Randy Seelig at 683-5138 for more information. We are pleased to report that our drinking water is safe and meets federal and state requirements.

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 susceptible to potential contaminants.

If you have any questions about this report, or concerning your water utility, please contact Randy Seelig at 683-5138. 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 each month at 7:30 pm in the lower level of the Lisbon Public Library. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Randy Seelig at the number listed above.

The City of Lisbon would appreciate it if large volume water customers post copies of the CCR 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 Lisbon 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, 2015.

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 organic 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 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 this 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:

Non-detects (ND) – laboratory analysis indicates that a contaminant is not present.

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 (ug/l)–one part per billion corresponds to one minute in 2000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) – one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Parts per quadrillion (ppq) or Picograms per liter (pictograms/l) – one pat per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.

Picocuries per liter (pCi/L) – Picocuries per liter is a measure of the radioactivity in water.

Umho/cm – micromhos per centimeter (a measure of conductivity).

Obsvns – Observations/field at 100 Power.

Millirems per year (mrem/yr) – measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) – million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU)– nephelometric turbidity unit is a measure of the clarity of water. Turbidity is 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 Disinfection Level Goal (MRDLG) – The level of drinking water disinfection 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.

Maximum Residual Disinfectant Level (MRDL) – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

Highest Compliance Level – The highest level of that contaminant used to determine compliance with the National Primacy Drinking Water Regulation.

Range of detections – The lowest to the highest result value recorded during the required monitoring timeframe for systems with multiple entry points.

IDSE – Initial Distribution System Evaluation

TEST RESULTS

Contaminant	Date	# Samples	Action Level	90TH Percentile	Samples Exceed AL	Units	Likely Source of Contamination
Lead/Copper							
Copper 90th Percentile	8/3/2015	10	1.3	0.0251	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
*Lead 90th Percentile	8/3/2015	10	15	24.1	3	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
Inorganic Contaminants							
Contaminant	**Date**	**MCL**	**MCLG**	**High Comp.**	**Units**	**Range**	**Likely Source of Contamination**
Arsenic	5/18/2010	10	0	1.32	ppb	N/A	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Barium	4/6/2009	2	2	0.0361	ppm	N/A	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	4/6/2009	100	100	1.05	ppb	N/A	Discharge from steel pulp mills; Erosion of natural deposits.
Fluoride	4/6/2009	4	4	1.23	ppm	N/A	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate + Nitrite (as Nitrogen)	2/25/2015	10	10	0.23	ppm	N/A	Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	4/6/2009	50	50	3.24	ppb	N/A	Discharge from petroleum and metal refineries;

							Erosion of natural deposits; Discharge from mines.

Radioactive Contaminants							
Contaminant	**Date**	**MCL**	**MCLG**	**High Comp.**	**Units**	**Range**	**Likely Source of Contamination**
Gross Alpha, including RA, excluding RN & U	9/10/2009	15	15	3.1	pCi/l	N/A	Erosion of natural deposits.
Radium, combined (226,228)	9/10/2009	5		0.9	pCi/l	N/A	Erosion of natural deposits.
Uranium, combined	9/10/2009	30		0.09	ppb	N/A	Erosion of natural deposits.
Disinfection By-Products							
Total Haloacetic Acids(HAA5)	12/31/2015	60		2	ppb	N/A	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	12/31/2015	80		2	ppb	N/A	By-product of drinking water disinfection.
Disinfectants							
Chloramines	1/31/2015	MRDL=4.0	MRDLG=4.0	1.8	ppm	1.42 to 2	Water additive used to control microbes.

Unregulated Contaminants							
Contaminant	**Date**	**MCL**	**MCLG**	**High Comp.**	**Units**	**Range**	**Likely Source of Contamination**
Alkalinity, Carbonate	10/26/2015			3	ppm	ND -3	
Alkalinity, Total	10/26/2015			78.4	ppm	75.9 to 78.4	
Bicarbonate as HCO3	10/26/2015			96	ppm	87 to 96	
Calcium	10/26/2015			27.8	ppm	24.4 to 27.8	
Conductivity @ 25 C UMHOS/CM	10/26/2015			677	Umho/cm	661 to 677	
Orthophosphate	10/26/2015			0.03	ppm	0.018 to 0.03	

PH	10/26/2015			8.53	PH	7.76 to 8.53	
TDS	10/26/2015			420	ppm	410 to 420	

*The City is in the process of adjusting corrosion control treatment in an effort to reduce the level of lead in the drinking water at consumer's taps. Also, subsequent testing will be performed by June 30, 2016 to determine the effectiveness of the treatment.

As you can see by the table, our system had no violations. 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.

Total Coliform Bacteria, coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially-harmful, bacteria may be present. September had the highest number of positive samples, which was 1. After retesting all results were negative including all other samples taken during 2015.

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.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical and mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems of high blood pressure.

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 others 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 Safe Drinking Water Hotline (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 Lisbon 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, test methods, and steps you can take to minimize exposure is available from Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead

The City of Lisbon 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.