2019 CONSUMER CONFIDENCE REPORT
SPIRIT LAKE WATER RESOURCES WATER SYSTEM
PWSID# 083890025

The purpose of this report is to inform you of the quality of your drinking water by providing you with this year's *Annual Drinking Water Quality Report*. We want to keep you the customer informed about the water quality which is 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 for this report is the Spirit Lake Water Resources (SLWR) water system which consists of 5 groundwater wells which draw water from the Warwick Aquifer. The water is pumped to our treatment plant from the groundwater wells, and is treated prior to pumping to the distribution system. In 2019 SLWR treated and distributed nearly 232 Million Gallons of water to our customers.

A new water treatment plant for the SLWR system has been constructed and was placed into operation in April of 2013. The new water treatment plant utilizes 5 wells for its water supply including 2 fairly newer wells drilled near the new water treatment plant, and the 3 existing wells. The SLWR treatment plant provides treatment for the groundwater by utilizing oxidation and green sand filtration targeted to remove iron, manganese, and arsenic.

If you have any questions concerning this report, our water system, or water quality concerns; please contact Robert Thompson, Director of Spirit Lake Water Resources at (701) 766-1209. We want our valued customers to be informed about their water utility. If you are aware of individuals who need help with the appropriate language translation, please contact Robert Thompson at the number listed above.

Spirit Lake Water Resources would appreciate community segment employees and other large volume water customers to post copies of the *Annual Drinking Water Quality Report* in visible locations, or distribute them to tenants, residents, patients, students, or employees on the water system.

The SLWR 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 Spirit Lake Water Resources.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations currently do not monitor contaminants in bottled water to the extent that public water systems are required to monitor their water systems.

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.*

2019 Water Quality Tests 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 monthly or quarterly.

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.

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 below 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.

SPIRIT LAKE WATER RESOURCE 2019 SAMPLE RESULTS							
Contaminant	**Violation Y/N**	**Level Detected**	**Date**	**Unit Measurement**	**MCLG**	**MCL**	**Likely Source of Contamination**
Coliform Bacteria	N	60-samples **0-detects**	5 per Month 2019	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) DBPs	N	**0.5**	2019	ppb	0	80	Byproduct of drinking water disinfection
Total Haloacetic Acids (HAA5) DBPs	N	**1.35**	2019	ppb	NA	60	Byproduct of drinking water disinfection
Inorganic Contaminants							
Arsenic	Y	(4.81 – 12) **9**	Quarterly 2019	ppb	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	N	**0.0471**	4/9/13	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine	N	Range (0.21–1.88) **RAA = 0.883**	5 per Month 2019	ppm	NA	MRDL=4	Water additive used to control microbes.
Chromium	N	**11**	4/9/13	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper	N	(90^{th} percentile) **0.429** 20 samples All below A.L.	2018	ppm	1.3	A.L.=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Cyanide	N	**76**	3/12/2018	ppb	200	200	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Fluoride	N	**0.52**	4/9/2013	ppm	4	10	Erosion of natural deposits; water additive to promote strong teeth; discharge from fertilizer and aluminum factories.

Lead	N	(90th percentile) **Non Detect** 20 sites All below A.L.	2018	ppb	0	A.L.=15	Corrosion of household plumbing systems; erosion of natural deposits.
Mercury	N	**0.2**	4/9/13	ppb	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nitrate=Nitrite (as N)	N	**0.078**	2019	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium	N	**2.26**	4/9/13	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Synthetic organic contaminates including pesticides and herbicides							
Chlordane	N	**No Detect**	10/2/2019	ppb	0	2	Residue of banned termiticide.

Unfortunately, our system had one violation in 2019. Spirit Lake Water Management RWS (Spirit Lake) failed to meet a requirement of the National Primary Drinking Water Regulations (NPDWR) related to the Arsenic Rule. This violation is described below:

Spirit Lake failed to meet minimum contaminant level (MCL) for arsenic under the Arsenic Rule. Compliance with the MCL is based on the Running Annual Average (RAA) according to 40 C.F.R. § 141.23 of the NPDWR. The RAA for arsenic calculated between the first quarter of 2018 and the first quarter of 2019 is 0.012 mg/L. This RAA exceeds the MCL of 0.010 mg/L for arsenic as stated in 40 C.F.R. § 141.62.

Through adjustment in treatment techniques, Spirit Lake Water Resources has diligently worked to return the Arsenic level below the MCL as noted above. Subsequent special samples and official quarterly samples for arsenic for the remainder of 2019 and so far in 2020 were submitted to the State Lab that returned consistent results well below the MCL for Arsenic. Thus, we are now back in compliance with the Arsenic Rule.

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

Spirit Lake Water Resources monitors arsenic levels in our water system. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low level arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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 Spirit Lake Water Resources 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 form 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.

Spirit Lake Water Resources works diligently to provide top quality water to every customer on our system. We ask that all our customers help us protect our water sources, which are at the heart of our Reservation, our way of life and our children's future.

Please feel free to contact Robert Thompson, Director of SLWR at (701) 766-1209 if you have questions concerning this report or your water system.