

Annual Drinking Water Quality Report

Southeast Water Users Districts

2019

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. Southeast Water Users District (SEWUD) draws their water from the Hankinson Aquifer which is located in the Sheyenne Grasslands between Hankinson and Mantador (SEWUD-E), the Spiritwood Aquifer located at Urbana (SEWUD-C), and the Middle LaMoure Aquifer in Wright Township of Dickey County (SEWUD-W).

SEWUD 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 SEWUD. 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 "*moderately susceptible*" to potential contaminants. We have reviewed the wellhead protection area and determined that no sources would threaten your water supply.

If you have any questions about this report or concerning your water utility, please contact Steve Hanson at SEWUD at 701-242-7432 or 800-400-8888. Our office hours are 8:00 a.m. to 5:00 p.m. Monday through Friday. 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 third Tuesday of every month at varied locations. If you would like to attend one of the meetings, please call the office for location and times. If you are aware of non-English speaking individuals who need help with the appropriate language translations, please call Steve Hanson at the numbers listed above.

SEWUD 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.

SEWUD 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, 2019. 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 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 and mining activities.

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the number 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 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:

Not applicable (NA), No Detect (ND)

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) –Pico curies 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.

2019 TEST RESULTS FOR SOUTHEAST WUD (WEST)

<u>Contaminant</u>	<u>MCLG</u>	<u>MCL</u>	<u>Level Detected</u>	<u>Units</u>	<u>Range</u>	<u>Date (year)</u>	<u>Violation Yes/No</u> <u>Other Info</u>	<u>Likely Source of Contamination</u>
Radioactive Contaminants								
Gross Alpha, Including RA, Excluding RN & U	15	15	6.72	pCi/l	N/A	2017	No	Erosion of natural deposits
Radium, Combined (226, 228)	N/A	5	0.4	pCi/l	N/A	2017	No	Erosion of natural deposits
Uranium, Combined	N/A	30	1.05	ppb	N/A	2017	No	Erosion of natural deposits
Lead/Copper								
Copper	1.3	AL=1.3	0.421 90 th % Value	ppm	N/A	2017	0 Sites exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead*	0	AL=15	2.38 90 th % Value	ppb	N/A	2017	0 Sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
Stage 2 Disinfection By-Products (System-Wide)								
HAA5	N/A	60	11	ppb	8.81 to 11.41	2019	No	By-product of drinking water chlorination
TTHM	N/A	80	36	ppb	35.35 to 36.0	2019	No	By-product of drinking water chlorination
Disinfectants								
Chlorine	MRDLG =4	MRDL =4.0	1.8	ppm	1.29 to 2.18	2019	No	Water additive used to control microbes
Inorganic Contaminants								
Arsenic	0	10	1.85	ppb	N/A	2016	No	Erosion of natural deposits; runoff from glass and electronics productions waste.
Barium	2	2	0.0461	ppm	N/A	2018	No	Discharge of drilling wastes, Discharge from metal refineries, Erosion of natural deposits
Chromium	100	100	4.8	ppb	N/A	2018	No	Discharge from steel and pulp mills; erosion of deposits.
Fluoride	4	4	0.266	ppm	N/A	2018	No	Erosion of natural deposits, Water additive which promotes strong teeth, Discharge from fertilizer and aluminum factories
Nitrate-Nitrite	10	10	0.66	ppm	No Detect to 0.66	2019	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Selenium	50	50	2.52	ppb	N/A	2018	No	Discharge from petroleum and metal refineries; erosion of natural deposits; deposits from mines
2019 TEST RESULTS FOR SOUTHEAST WUD (EAST)								
Contaminant	MCLG	MCL	Level Detected	Units	Range	Date (year)	Violation Yes/No Other Info	Likely Source of Contamination
Inorganic Contaminants								
Arsenic**	0	10	8.94	ppb	N/A	2016	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2	2	0.247	ppm	N/A	2018	No	Discharge of drilling wastes, Discharge from metal refineries, Erosion of natural deposits
Chromium	100	100	1.58	ppb	N/A	2018	No	Discharge from steel and pulp mills; erosion of deposits.
Fluoride	4	4	0.733	ppm	N/A	2018	No	Erosion of natural deposits, Water additive which promotes strong teeth, Discharge from fertilizer and aluminum factories
Lead/Copper								
Copper	1.3	AL=1.3	0.564 90 th % Value	ppm	N/A	2019	0 Sites exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead*	0	AL=15	4.46 90 th % Value	ppb	N/A	2097	0 Sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
Disinfectants								
Chlorine	MRDLG =4	MRDL =4.0	1.2	ppm	1.07 to 1.46	2019	No	Water additive used to control microbes
Stage 2 Disinfection By-Products (System-Wide)								
HAA5	N/A	60	17	ppb	N/A	2019	No	By-product of drinking water chlorination
TTHM	N/A	80	23	ppb	N/A	2019	No	By-product of drinking water chlorination
Radioactive Contaminants								
Gross Alpha, including Ra, excluding Rn & U	15	15	0.5	pCi/l	N/A	2017	No	Erosion of natural deposits
Radium Combined (226, 228)	0	5	0.96	pCi/l	N/A	2017	No	Erosion of natural deposits
Uranium, Combined	0	30	2.49	ppb	N/A	2017	No	Erosion of natural deposits
2019 TEST RESULTS FOR SOUTHEAST WUD (CENTRAL-LISBON)								

<u>Contaminant</u>	<u>MCLG</u>	<u>MCL</u>	<u>Level Detected</u>	<u>Units</u>	<u>Range</u>	<u>Date (year)</u>	<u>Violation Yes/No Other Info</u>	<u>Likely Source of Contamination</u>
Disinfectants								
Chlorine	MRDLG =4	MRDL =4.0	1.9	ppm	1.17 to 2.25	2019	No	Water additive used to control microbes
Lead/Copper								
Copper	1.3	AL=1.3	0.132 90 th % Value	ppm	N/A	2018	0 Sites exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead*	0	AL=15	No Detect 90 th % Value	ppb	N/A	2018	0 Sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
Stage 2 Disinfection By-Products (System-Wide)								
HAA5	N/A	60	3	ppb	N/A	2019	No	By-product of drinking water chlorination
TTHM	N/A	80	5	ppb	N/A	2019	No	By-product of drinking water chlorination
2019 TEST RESULTS FOR THE CITY OF LISBON, ND								
<u>Contaminant</u>	<u>MCLG</u>	<u>MCL</u>	<u>Level Detected</u>	<u>Units</u>	<u>Range</u>	<u>Date (year)</u>	<u>Violation Yes/No Other Info</u>	<u>Likely Source of Contamination</u>
Inorganic Contaminants								
Arsenic	0	10	3.63	ppb	N/A	2016	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2	2	0.0312	ppm	N/A	2018	No	Discharge of drilling wastes, Discharge from metal refineries, Erosion of natural deposits
Chromium	100	100	1.36	ppb	N/A	2018	No	Discharge from steel and pulp mills; erosion of deposits.
Fluoride	4	4	0.982	ppm	N/A	2018	No	Erosion of natural deposits, Water additive which promotes strong teeth, Discharge from fertilizer and aluminum factories
Nitrate-Nitrite	10	10	0.13	ppm	N/A	2019	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Lead/Copper								
Copper	1.3	AL=1.3	No Detect 90 th % Value	ppm	N/A	2019	0 Sites exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead*	0	AL=15	25 90 th % Value	ppb	N/A	2019	2 Sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
Disinfectants								

Chlorine	MRDLG =4	MRDL =4.0	1.9	ppm	0.77 to 2.07	2019	No	Water additive used to control microbes
Stage 2 Disinfection By-Products (System-Wide)								
HAA5	N/A	60	3	ppb	N/A	2019	No	By-product of drinking water chlorination
TTHM	N/A	80	8	ppb	N/A	2019	No	By-product of drinking water chlorination
Radioactive Contaminants								
Gross Alpha, including Ra, excluding Rn & U	15	15	0.7	pCi/l	N/A	2017	No	Erosion of natural deposits
Radium Combined (226, 228)	0	5	0.71	pCi/l	N/A	2017	No	Erosion of natural deposits
Uranium, Combined	0	30	No Detect	ppb	-0.67 to 0.0	2017	No	Erosion of natural deposits
Unregulated Contaminants								
Alkalinity, Carbonate	N/A	N/A	18	ppm	9 to 18	2019	No	N/A
Alkalinity, Total	N/A	N/A	113	ppm	101 to 113	2019	No	N/A
Bicarbonate as HCO ₃	N/A	N/A	113	ppm	97 to 113	2019	No	N/A
Calcium	N/A	N/A	49.9	ppm	35.2 to 49.9	2019	No	N/A
Conductivity @ 25 UMHOS/CM	N/A	N/A	813	umho/cm	724 to 813	2019	No	N/A
Orthophosphate	N/A	N/A	0.081	ppm	0.052 to 0.081	2019	No	N/A
pH	N/A	N/A	9.14	ppm	8.85 to 9.14	2019	No	N/A
TDS	N/A	N/A	504	ppm	449 to 504	2019	No	N/A

*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. SEWUD 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 exposure is available from the Safe

Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

**While your drinking water meets EPA's standard for arsenic, 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 levels of 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.

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).

Please call Steve Hanson at SEWUD at 701-242-7432 or 800-400-8888 if you have questions.

SEWUD 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.

Quality On Tap!

Our Commitment  Our Profession