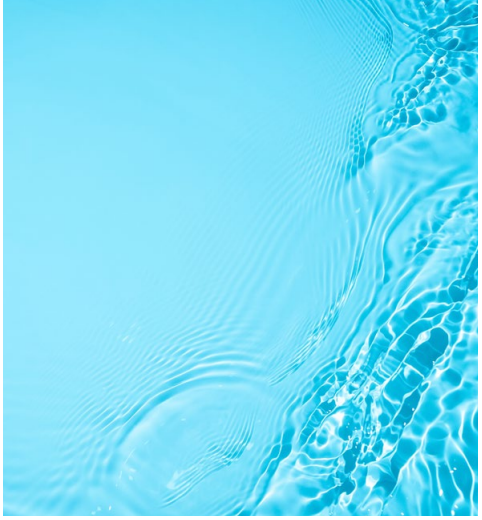


ANNUAL WATER QUALITY REPORT

Reporting Year 2023

Presented By

Grand Island Utilities

CITY OF GRAND ISLAND

Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your source of water, what it contains, and how it compares to standards set by regulatory agencies. 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 and providing you with this information because informed customers are our best allies.

Community Participation

If you would like to observe or participate in the decision-making processes that affect drinking water quality, please attend the regularly scheduled city council meetings at City Hall, 100 East First Street. Visit grand-island.com for the meeting schedule

Source Water Assessment

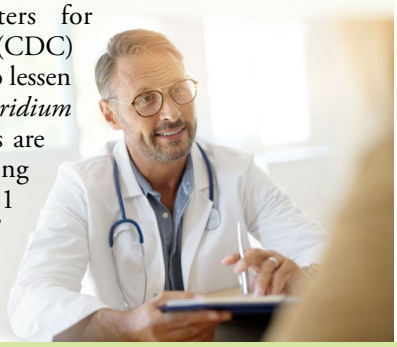
The Nebraska Department of Environment and Energy (NDEE) has completed a source water assessment. Included in the assessment are a wellhead Protection area map, potential contaminant source inventory, vulnerability rating, and source water protection information. To view the source water assessment report, or for more information, you may contact NDEE at (402) 471-6988 or visit www.deq.state.ne.us.

Where Does My Water Come From?

The source of drinking water used by the City of Grand Island is groundwater from the sand-and-gravel aquifer that underlies the area. This water is pumped from wells maintained by the city.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. Environmental Protection Agency (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 the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/hotline.



Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water 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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 40 percent of bottled water is actually just tap water, according to government estimates.

The Food and Drug Administration (FDA) is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to $1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water. For a detailed discussion on the NRDC study results, visit https://goo.gl/Jxb6xG.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 two minutes before using water for drinking or cooking. If you are concerned about lead in your 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 at (800) 426-4791 or www.epa.gov/safewater/lead.

Level 1 Assessment Update

Coliforms are bacteria that are naturally present in the environment and 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. We found coliforms, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct an assessment to identify and correct any problems.

During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. The Level 1 assessment indicated the cause was a sample error verified by additional samples with negative results.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

grains/gal (grains per gallon): Grains of compound per gallon of water.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (µg/L) (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (mg/L) (parts per million): One part substance per million parts water (or milligrams per liter).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Lynn Mayhew, Assistant Utilities Director, at (308) 385-5494.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

Please note that the column labeled Range Low-High indicates the range of detections in our samples, not the range of acceptable levels. The maximum contaminant level (MCL) is the upper limit for concentrations in water that meets federal and state standards. Although *E. coli* was detected, the water system is not in violation of the *E. coli* MCL.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on our drinking water. UCMR5 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water. This sampling helps to determine if the U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Antimony (ppb)	2021	6	6	0.581	ND–0.581	No	Plumbing fittings; discharge from industrial refineries; erosion of natural deposits
Arsenic (ppb)	2023	10	0	3.6	ND–3.6	No	Erosion of natural deposits; Runoff from orchards; runoff from glass and electronics production wastes
Atrazine (ppb)	2023	3	3	0.291	ND–0.291	No	Runoff from herbicide used on row crops
Barium (ppm)	2023	2	2	0.0914	0.0854–0.17	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Combined Radium (pCi/L)	2022	5	0	2.84	ND–2.84	No	Erosion of natural deposits
Combined Uranium (pCi/L)	2023	30	20	16.5	13.3–16.5	No	Erosion of natural deposits
Fluoride (ppm)	2023	4	4	0.52	0.283–0.562	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2023	NA	0	23.9	3.09–23.9	No	Erosion of natural deposits
Gross Alpha Particle Activity [excluding radon and uranium] (pCi/L)	2023	15	0	7.8	2.7–7.8	No	Erosion of natural deposits
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2023	60	NA	7.83	4.34–7.83	No	By-product of drinking water disinfection
Nitrate (ppm)	2023	10	10	3.17	0.06–3.17	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radium 226 (pCi/L)	2023	NA	NA	0.724	ND–0.724	No	Erosion of natural deposits
Radium 228 (pCi/L)	2023	NA	NA	0.901	ND–0.901	No	Erosion of natural deposits
Selenium (ppb)	2020	50	50	4.44	ND–4.44	No	Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2023	80	NA	42.1	30.2–42.1	No	By-product of drinking water disinfection
Uranium (pCi/L)	2023	30	0	28.9	13.6–28.9	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.3	1.3	0.672	0/30	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2022	15	0	0.524	0/30	No	Corrosion of household plumbing systems; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.0	NA	0.3[1]	ND–0.3[1]	No	Erosion of natural deposits, leaching from wood preservatives
pH (units)	2023	6.5-8.5	NA	7.51	7.12–7.51	No	Naturally occurring

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2023	2.07	ND–2.07	By-product of the chlorination process
Bromoform (ppb)	2023	6.94	ND–6.94	By-product of the chlorination process
Dibromochloromethane (ppb)	2023	5.46	ND–5.46	By-product of the chlorination process
Hardness (grains/gal)	2023	22	18–22	Minerals in groundwater
Lithium (ppb)	2023	30.9	14.2–30.9	Erosion of natural deposits
Nickel (ppm)	2021	0.00286	ND–0.00286	Naturally occurring
Perfluorobutanesulfonic Acid [PFBS] (ppb)	2023	0.0048	ND–0.0048	Teflon, firefighting foam, pipe sealant, waterproofing
Perfluorohexanesulfonic Acid [PFHxS] (ppb)	2023	0.0246	ND–0.0246	Teflon, firefighting foam, pipe sealant, waterproofing
Perfluorooctanesulfonic Acid [PFOS] (ppb)	2023	0.0075	ND–0.0075	Teflon, firefighting foam, pipe sealant, waterproofing
Perfluoropentanoic Acid [PFPeA] (ppb)	2023	0.0034	ND–0.0034	Teflon, firefighting foam, pipe sealant, waterproofing
Sulfate (ppm)	2021	231	30.8–231	Runoff/leaching from natural deposits; industrial wastes

[1] These results are from city wells, as compared to the results for tap water in the previous table.