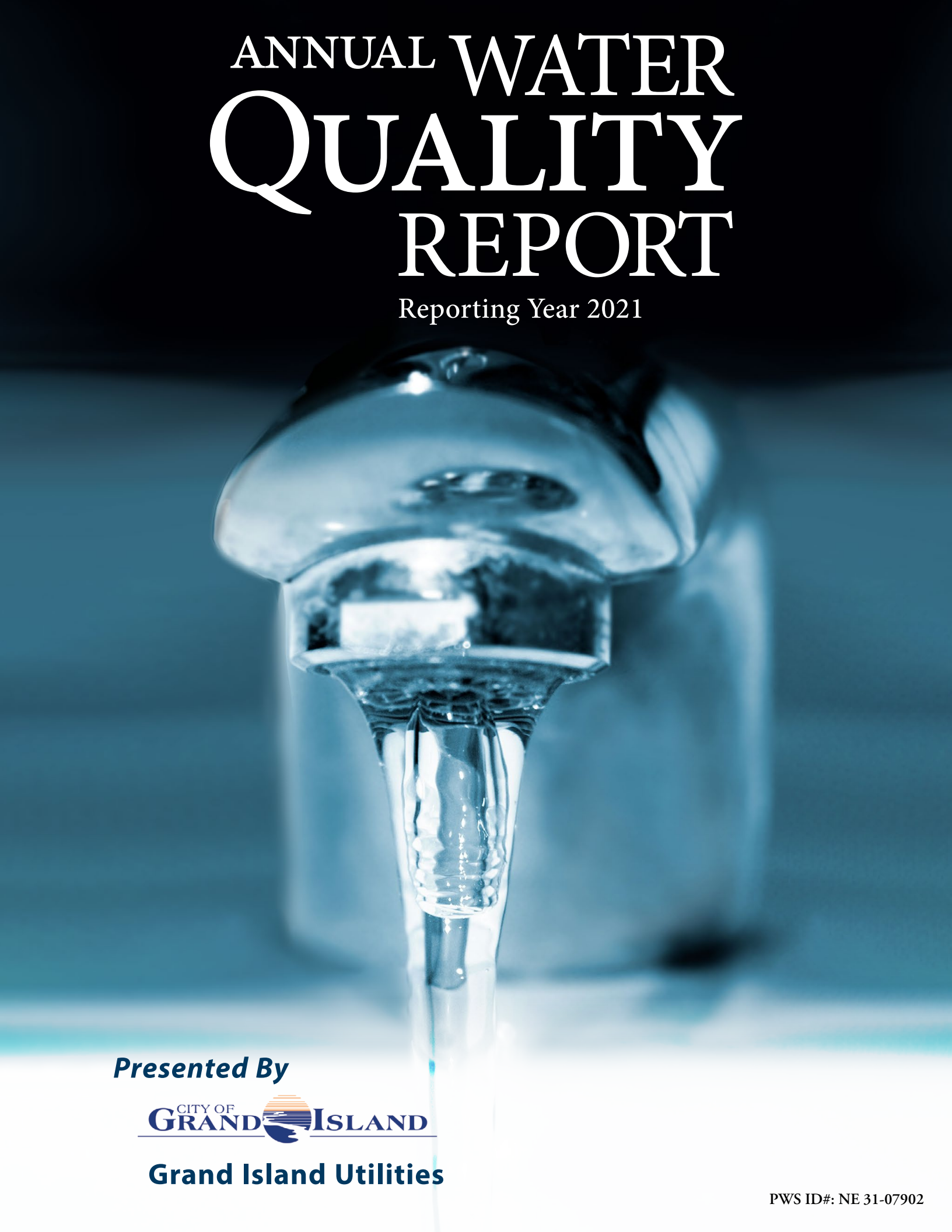
ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By

CITY OF GRAND ISLAND

Grand Island Utilities

PWS ID#: NE 31-07902

We've Come a Long Way

Once again, the City of Grand Island is proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Where Does My Water Come From?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. 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.

Source Water Assessment

The Nebraska Department of Environmental Quality (NDEQ) 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 or for more information, you may contact the NDEQ at (402) 471-6988 or visit www.deq.state.ne.us.

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. EPA/CDC (Centers for Disease Control and Prevention) 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;

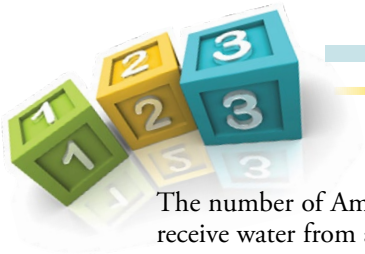
Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

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

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.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Timothy Luchsinger, Utilities Director, at (308) 389-0280.



BY THE NUMBERS

The number of Americans who receive water from a public water system.

300 MILLION

1 MILLION The number of miles of drinking water distribution mains in the U.S.

The number of gallons of water produced daily by public water systems in the U.S.

34 BILLION

135 BILLION The amount of money spent annually on maintaining the public water infrastructure in the U.S.

The number of active public water systems in the U.S.

151 THOUSAND

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 at www.epa.gov/safewater/lead.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit https://bit.ly/3IeRyXy.

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.

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.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2017	10	0	3.29	1.16–3.29	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Atrazine (ppb)	2021	3	3	0.280	ND–0.280	No	Runoff from herbicide used on row crops
Barium (ppm)	2020	2	2	0.17	0.0854–0.17	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Combined Radium (pCi/L)	2020	5	0	2.17	0.816–2.17	No	Erosion of natural deposits
Fluoride (ppm)	2020	4	4	0.562	0.283–0.562	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2021	60	NA	5.73	5.48–5.97	No	By-product of drinking water disinfection
Nitrate (ppm)	2021	10	10	4.24	0.255–4.24	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Coliform Bacteria (positive samples)	2021	TT	NA	0	NA	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2021	80	NA	38.60	35.1–42.1	No	By-product of drinking water disinfection
Uranium (ppb)	2021	30	0	24.3	13.7–24.3	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[1] (ppm)	2019	1.3	1.3	0.647	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2019	15	0	1.6	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

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.

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 (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (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.

OTHER REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Combined Uranium (pCi/L)	2020	NA	NA	17.3	11.8–17.3	No	Erosion of natural deposits
Gross Alpha Particles (pCi/L)	2020	15	0	20.6	5–20.6	No	Erosion of natural deposits
Gross Alpha Particles [excluding radon and uranium] (pCi/L)	2020	15	0	3.6	3.6–3.6	No	Erosion of natural deposits
Radium 226 (pCi/L)	2020	NA	NA	1.31	ND–1.31	No	Erosion of natural deposits
Radium 228 (pCi/L)	2020	NA	NA	0.956	0.816–0.956	No	Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Copper[2] (ppm)	2019	1.0	NA	0.3	ND–0.3	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
pH (units)	2021	6.5-8.5	NA	7.78	7.41–7.78	No	Naturally occurring

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromoform (ppb)	2021	0.54	ND–0.54	By-product of the chlorination process
Dibromochloromethane (ppb)	2021	0.78	ND–0.78	By-product of the chlorination process
Hardness (grains/gal)	2021	19.7	17–21	Minerals in groundwater
Sulfate (ppm)	2021	231	30.8–231	Runoff/leaching from natural deposits; Industrial wastes

[1] Sampled from household taps.
[2] Sampled from city wells.