

2021 Annual Drinking Water Quality Report
Glenwood Municipal Water Utility
PWS ID # IN5270002
Prepared—MAY / 2022

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services 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 well water from a confined aquifer in the Glenwood area. We have a Wellhead Protection Plan available from our office that provides more information such as potential sources of contamination.

The staff of the Glenwood Water Utility issues this report to show our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact Paul H. Sembach, Certified Operator, at 765-679-5496. 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 normally held on the **second** Monday of the month (excluding holidays) at 7:00 PM at the Town Hall (217 North Main St.). Meeting dates that fall on holidays are generally held the next evening at the same time but will be posted on the bulletin board in the Town Hall window or at the post office. Feel free to contact any members of the Town Council by their telephone numbers listed on the last page of this report for more information.

The Glenwood Municipal Water Utility routinely monitors for constituents 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 2021 or the most recent sampling data available. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

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:

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 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.

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 (MCL) - 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 (MCLG) - 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.

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

n/a – Either not available or not applicable.

ND – Not detected, the result was not detected at or above the analytical method detection level.

RAA – Rolling annual average.

LRAA – Locational rolling annual average

Level 1 Assessment – 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.

Level 2 Assessment – A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

TEST RESULTS

Contaminant	Violation Y/N	Highest Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Radioactive Contaminants –Sampled 05/2019						
Beta/photon emitters	N	0.9	mrem /yr	0	4	Decay of natural & man made deposits
Gross Alpha excluding radon & uranium	N	0.8	pCi/l	0	15	Erosion of natural deposits
Inorganic Contaminants—Unless noted samples taken during 2021						
Arsenic	N	2.2	ppb	0	10	Erosion of natural deposits; Runoff from orchards; Runoff from glass & electronics production wastes.
Barium	N	0.374	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper(90 th percentile) Sampled 8/2021	N	0.0184 Range of <0.005 to 0.0230	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead(90 th percentile) Sampled 8/2021	N	1.8 Range of 1.0 to 2.1	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Fluoride	N	0.7	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel	N	0.0016	ppm	0	100	Possible waste runoff from industry
Nitrate(measured as Nitrogen) 2020	N	<0.10	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage. Erosion of natural deposits
Disinfection Byproducts & Precursors—samples taken 2021						
Total Haloacetic Acids (HAA5)	N	4- LRAA Range of 1.3 to 5.7	ppb	No goal set for total	60	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	N	13. LRAA Range of 10.1 to 16.2	ppb	No goal set for total	80	By-product of drinking water disinfection.

Unregulated Contaminants						
Sodium Sampled- 2021	N	30.2	ppm	n/a	n/a	Erosion of natural deposits; leaching.
Residual Disinfectant—2021 Average		Min	Max			
Chlorine Residual	N	0.60	mg/l	0.15	1.06	Water additive (disinfectant) used to control microbiological organisms.
Revised Total Coliform Rule (RTCR)						
The Revised Total Coliform Rule seeks to prevent waterborne diseases caused by E.coli. E.coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly or immuno-compromised individuals.						
Violation Type	Violation Begin	Violation End	Violation Explanation			
Report sample result/Fail Monitor RTCR	08/01/2021	08/31/2021	IDEM failed to receive sample result from our laboratory. Sample was collected, analyzed and found to be satisfactory. Laboratory failed to submit results in time.			
<p><i>Special Note on Lead: 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. Our 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 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</i></p>						

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. 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 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 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 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, stormwater runoff, and residential uses.
- * Organic chemicals, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- * Radioactive materials, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, 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.

In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. In 2011, the Utility replaced an aging water tower and the water main along West State St. In mid 2012, the water filter was rehabilitated and disinfection processes changed to try to reduce disinfection byproducts. The

utility completed cleaning and inspection of the water tower November 30th, 2016 in the hope that would lower disinfection byproducts. Bacterial testing was performed and the tower placed back in service December 5th.

At the end of 2020, IDEM released the water utility from the previous Agreed Order concerning the exceedances of the MCLs for disinfection by-products (TTHMs & HAA5s). Quarterly sampling has shown our ability to reduce the disinfection by-products to below the MCL. Annual sampling is still required to show we are still in compliance.

Recently, (2020) the town received an OCRA grant for the purpose of upgrading the water facilities. Along with this grant, a SRF loan will be needed for matching funds. This may need to be shown in the water usage rate structure.

This grant & loan will cover the costs associated with improvements being made to the water system. These improvements consist of a new well that may have less organic material in the water that combines with the chlorine making disinfection by-products. This well will have a new raw water line going to the water plant so that treatment can be made before going to the distribution system.

A second improvement consists of installing a mixer in the water tower to keep the water stirred so that there should be a more consistent chlorine residual throughout the stored water. This is needed because the water in the tower stratifies due to temperature differences. We pump cold water in from the well and it stays toward the bottom of the tower as the water is denser. As the water warms during prolonged storage, that rises to the upper levels of the tower. Also as water is used by the consumer, that water comes from the bottom of the tower. This allows older warmer water to combine with the chlorine and produce disinfection by-products. The problem could be reduced by having less water in the tower, but there would then not be enough water in the tower for possible fire fighting conditions or higher than normal consumer use such as filling swimming pools. This extra capacity gives us a beneficial reserve to cover these possibilities and to protect the customers from a temporary power outage.

A new control building has been built near the original water plant. This building houses chemical feed equipment that is presently in the old building. Some equipment was replaced as some of the old equipment had become obsolete. There is also a restroom & better lab facilities along with a safety shower installed. Filter media was replaced again. A new master meter was installed to measure water leaving the water plant for the distribution system.

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).

We at the Glenwood Municipal Water Utility work around the clock to provide top quality water to every tap, said Paul H. Sembach. 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.

Please call our office or any of our Town Council members if you have questions.

Water Utility Office	Leave message	765-679-5600
	Email	glenwood.water@gmail.com
Town Council President	Denny Richardson	765-679-5730
Town Council Vice-President	Jo Temple	317-409-4078
Town Council Member	David Miller	765-561-1476
Utilities Superintendent	Paul H. Sembach	765-561-6289