

# **2024 Annual Drinking Water Quality Report**

## **Charleston WCD**

Charleston WCD is pleased to present you, our customer, with the most current Drinking Water Quality report. This report is designed to inform you about the quality of the 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. If you have any questions about this report or concerning your water utility, please contact Wade Webster 435-671-2870. 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 monthly on the 2<sup>nd</sup> Tuesday at 7:00pm.

Charleston WCD provides its consumers with ground water. Our water sources include 2 wells and 2 springs. These sources are listed as Upper Spring, Lower Spring, Charleston Well & Charleston Park Well.

Corrosion of pipes, plumbing fittings and fixtures may cause metals, including lead and copper, to enter drinking water. To assess corrosion of lead and copper, Charleston WCD conducts tap sampling for lead and copper at 5 selected sites every 3 years.

Charleston WCD has completed an initial lead service line inventory. This inventory includes information on the service line material that connects water mains to buildings/houses. These inventory reports are publicly available. Contact Charleston WCD 435-671-2870.

Water samples taken in January 2024 confirmed the presence of total coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Total coliforms are common in the environment and are generally not harmful themselves. The presence of these bacteria can indicate that the water may have been contaminated with organisms that can cause disease. Some symptoms may include diarrhea, cramps, nausea, and possible jaundice, headaches and fatigue. When the monthly samples confirmed the presence of total coliform bacteria, we took steps to identify and correct the problem. Subsequent monthly sampling has confirmed the absence of total coliforms in the water system.

The Drinking Water Source Protection Plan for Charleston WCD is available for your review. It contains information about source protection zones, potential contamination sources and management strategies to protect our drinking water. Our sources have been determined to have a low level of susceptibility from potential contamination sources. We have also developed management strategies to further protect our sources from contamination. Please contact us if you have questions or concerns about our source protection plan.

There are many connections to our water distribution system. When connections are properly installed and maintained, the concerns are very minimal. However, unapproved and improper piping changes or connections can adversely affect not only the availability, but also the quality of the water. A cross connection may let polluted water or even chemicals mingle into the water supply system when not properly protected. This not only compromises the water quality but can also affect your health. So, what can you do? Do not make or allow improper connections at your homes. Even that unprotected

garden hose lying in the puddle next to the driveway is a cross connection. The unprotected lawn sprinkler system after you have fertilized or sprayed is also a cross connection. When the cross connection is allowed to exist at your home, it will affect you and your family first. If you'd like to learn more about helping to protect the quality of our water, call us for further information about ways you can help.

Charleston WCD routinely monitors contaminants in our drinking water in accordance with the Federal and Utah State laws. The following table shows the results of our monitoring for 2024. It is important to remember that all water sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of 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:

**Non-Detects (ND)** - laboratory analysis indicates that the constituent is not present.

**ND/Low - High** - For water systems that have multiple sources of water, the Utah Division of Drinking Water has given water systems the option of listing the test results of the constituents in one table, instead of multiple tables. To accomplish this, the lowest and highest values detected in the multiple sources are recorded in the same space in the report table.

**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.

**Parts per trillion (ppt) or Nanograms per liter (nanograms/l)** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

**Parts per quadrillion (ppq) or Picograms per liter (picograms/l)** - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

**Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.

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

**Million Fibers per Liter (MFL)** - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

**Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**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.

**Date**- Because of required sampling time frames i.e. yearly, 3 years, 4 years and 6 years, sampling dates may seem outdated.

**Waivers (W)**- Because some chemicals are not used or stored in areas around drinking water sources, some water systems have been given waivers that exempt them from having to take certain chemical samples, these waivers are also tied to Drinking Water Source Protection Plans.

<b>TEST RESULTS</b>							
Contaminant	Violation Y/N	Level Detected ND/Low-High	Unit Measurement	MCLG	MCL	Date Sampled	Likely Source of Contamination
<b>Microbiological Contaminants</b>							
Total Coliform Bacteria	N	1	N/A	0	Presence of coliform bacteria in 5% of monthly samples	2024	Naturally present in the environment
Fecal coliform and <i>E.coli</i>	N	0	N/A	0	If a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	2024	Human and animal fecal waste
Turbidity for Ground Water	N	0.34-0.37	NTU	N/A	5	2022	Soil runoff

<b>Inorganic Contaminants</b>							
Arsenic	N	0.9-1.8	ppb	0	10	2022	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	N	0.071-0.205	ppb	2000	2000	2022	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper a. 90% results b. # of sites that exceed the AL	N	a.0.419 b.0	ppm	1.3	AL=1.3	2024	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	N	0.128-0.171	ppb	4000	4000	2022	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead a. 90% results b. # of sites that exceed the AL	N	a.4.3 b.0	ppb	0	AL=15	2024	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	N	0.216-2.27	ppm	10	10	2021, 2024	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	0-1.1	ppb	50	50	2022	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N	11.137-17.178	ppm	None set by EPA	None set by EPA	2022	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills.
Sulfate	N	18.135-51.939	ppm	1000	1000	2022	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills, runoff from cropland
If the sulfate level of a public water system is greater than 500 ppm, the supplier must satisfactorily demonstrate that: a) no better water is available, and b) the water shall not be available for human consumption from commercial establishments. In no case shall water having a level above 1000 ppm be used.							
TDS (Total Dissolved solids)	N	352-408	ppm	2000	2000	2022	Erosion of natural deposits
If TDS is greater than 1000 ppm the supplier shall demonstrate to the Utah Drinking Water Board that no better water is available. The Board shall not allow the use of an inferior source of water if a better source is available.							
<b>Disinfection By-products</b>							
TTHM [Total trihalomethanes]	N	2.76	ppb	0	80	2024	By-product of drinking water disinfection

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least a small amount of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and the potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at (800-426-4791). The sources of drinking water (both tap and bottled water) include rivers, lakes, streams,

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: microbial contaminates, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; inorganic contaminates, such as salts and metals, which can be naturally occurring or 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 agricultural, urban stormwater runoff, and residential uses; organic chemical contaminates, 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; and radioactive contaminates, 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, EPA prescribes regulations that limit the amount of certain contaminates in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminates in bottled water which must provide the same protection for public health.

If present, lead can cause serious health problems, especially for pregnant women and young children. Charleston WCD has conducted 5 lead samples during a 3 year period. Sampling results can be obtained by calling 435-671-2870 or emailing [cwcd.office@gmail.com](mailto:cwcd.office@gmail.com).

Charleston WCD is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. Lead in drinking water is primarily from material and components associated with service lines and home plumbing. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. If 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. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced. If you are concerned about lead in your water, you may wish to have your water tested. Please contact Charleston WCD 435-671-2870. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

Some people may be more vulnerable to contaminates in drinking water than the general population. Immunocompromised people such as people with cancer undergoing chemotherapy, people 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 from their health care providers about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminates are available from the Safe Drinking Water Hotline (800-426-4791).

We at Charleston WCD work 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.