

## ***Annual Drinking Water Quality Report 2023*** **BRWCD-BOTHWELL UTAH02066**

We are pleased to present to you this year's Annual 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. 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 sources have been determined to be from groundwater. Our water source is Newman Well, Backup Well, Bothwell.

The Drinking Water Source Protection Plan for Bear River Water Conservancy District 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 from sources such as septic tanks, roads, residential areas, industrial areas, etc. 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.

This report shows our water quality and what it means to you, our customer. If you have any questions about this report or concerning your water utility, please contact the BRWCD General Manager, Carl Mackley, at 435-723-7034. 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 usually held on the fourth Wednesday of each month at 6:00 p.m. in the BRWCD District Office Conference Room at 102 West Forest Street, Brigham City, Utah. Check the schedule on our website.

Bear River Water Conservancy District routinely monitors for constituents in our drinking water in accordance with the Federal and Utah State laws. The following table shows the results of our monitoring for the period of January 1, 2023 to December 31, 2023.

We're proud to report that your drinking water met state and federal requirements during 2023.

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.

**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.

**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.

TEST RESULTS							
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	ND	N/A	0	Presence of coliform bacteria in 5% of monthly samples	2023	Naturally present in the environment
Fecal coliform and <i>E.coli</i>	N	ND	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	2017	Human and animal fecal waste
Turbidity	N	0.02	NTU	0	0.3	2020	Soil runoff
<b>Inorganic Contaminants</b>							
Arsenic	N	.9	ppb	0	10	2020	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	N	0.064	ppm	2	2	2020	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.0.072 b.0	ppm	1.3	AL=1.3	2021	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	N	.2	ppm	4	4	2020	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. 1.6 b. 0	ppb	0	AL=15	2021	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	N	L/2.1 H/2.438	ppm	10	10	2023	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	5.4	ppb	50	50	2020	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N	129	ppm	None	500	2020	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Sulfate	N	77	ppm	1000	1000	2020	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	L/816 H/920	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	-1	ppb	0	80	2016	By-product of drinking water disinfection
<b>Radioactive Contaminants</b>							
Alpha emitters	N	5.7	pCi/L	0	15	2020	Erosion of natural deposits
Combined Radium226/228	N	1.1	pCi/L	0	5	2020	Erosion of natural deposits
Radium 226	N	0.4	pCi/L	0	5	2020	Erosion of natural deposits
Radium 228	N	0.69	pCi/L	0	5	2020	Erosion of natural deposits

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.

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline: (800) 426-4791.

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 microbial contaminants are available from:

Safe Drinking Water Hotline: (800) 426-4791