2023 Annual Drinking Water Quality Report

Emigration Improvement District (Public Water System)

We're very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services that have been delivered to you over the past year. Our goal is, and always has been, to provide canyon residences a safe and dependable supply of drinking water.

WATER SOURCES

Emigration Improvement District's (EID) water source is from four wells. Freeze Creek well is an 8" diameter deep well that produces up to 90 gallons per minute. Well #2, is an 8" diameter deep well that produces up to 250 gallons per minute, however no water from this source was pumped into EID's distribution system during 2023. Brigham Fork well is an 8" diameter deep well that historically produces up to 300 gallons per minute, but due to mechanical issues is currently offline. This source is currently rated as "inactive" and no water from this source was pumped into EID's distribution system during 2023. Upper Freeze Creek is a deep well that produces about 250 gallons per minute. The district has two water storage tanks totaling about one million three hundred thousand gallons (1,300,000 gallons) of capacity.

SOURCE PROTECTION

The EID has a Drinking Water Source Protection Plan available for review. It contains information about source protection zones, potential contamination sources, and management strategies to protect drinking water. The wells have been determined to have a **low susceptibility level** to potential contaminants. The potential contamination sources that could affect the production wells include: roads, and residential areas. EID has also developed management strategies to further protect its water resources from possible contamination. If you have any questions or concerns regarding source protection, contact the District manager Mr. Eric Hawkes at 801-243-5741, or Mr. Larry Hall of Aqua Environmental Services Inc. at 801-209- 6382.

QUESTIONS

The District is operated by a three-member board of trustees and a manager. The water system operations are contracted to Aqua Environmental Services Inc. If you have any questions regarding this report or concerns with the water, please contact Mr. Eric Hawkes, District Manager at 801- 243-5741, or Larry Hall of Aqua Environmental Services Inc at 801-209- 6382**.** We want our valued customers to be informed about their water utility. The EID has a web site at www.ECID.org there you will find the most up-to-date information and most recent District activities. The public is encouraged to attend the Trustee Meetings which are generally held on the second Thursday of each month, 7:00 PM at the fire station (5025 E Emigration Canyon Rd).

MONITORING PERIOD

The EID public water system is routinely monitored for constituents in accordance with the Federal and State laws. The following table shows the results of our monitoring for the period prior to December 31, 2023.

DEFINITIONS

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) - (mandatory language) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) - (mandatory language) 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) - (mandatory language) 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.

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.

2023 OR PRIOR RESULTS

Contaminant	Violation Y/N	Level Detected ND/Low-High	Unit Measurement	MCLG	MCL	Date Sampled	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria	N	0	N/A	0	Presence of coliform bacteria in 5% of monthly samples	2023	Naturally present in the environment
Fecal coliform and *E.coli*	N	0	N/A	0	a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or *E. coli* positive	2023	Human and animal fecal waste
Disinfection By-products							
TTHM [Total trihalomethanes]	N	25900	ppt	80000	80000	2023	By-product of drinking water disinfection
Haloacetic Acids	N	8200	ppt	60000	60000	2023	By-product of drinking water disinfection
Chlorine	N	200 - 1200	ppb	4000	4000	2023	Water additive used to control microbes
Radioactive Contaminants							
Gross Alpha	N	0.8 – 2.5	pCi/l		15	2018-2022	Erosion of natural deposits
Radium 228	N	.49-1.1	pCi/1	0	5	2018 - 2022	Erosion of natural deposits
Inorganic Contaminants							
Antimony	N	ND	ppb	6	6	2022	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	N	ND-900	ppt	N/A	10000	2022	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Asbestos	N	W	MFL	7	7		Decay of asbestos cement water mains; erosion of natural deposits
Barium	N	44-86	ppb	2000	2000	2022	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	N	ND	ppb	4	4	2022	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium	N	ND	ppb	5	5	2022	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium	N	ND	ppb	100	100	2022	Discharge from steel and pulp mills; erosion of natural deposits

Copper a. 90% results b. # Of sites that exceed the **AL**	N	a. 235 b. 0	ppb	1300	AL=1300	2023	Corrosion of household plumbing systems; erosion of natural deposits
Cyanide	N	ND	ppb	200	200	2022	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride	N	119-965	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. 5.4 b. 1	ppb	0	AL=15	2023	Corrosion of household plumbing systems, erosion of natural deposits
Mercury (inorganic)	N	ND	ppb	2	2	2022	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nickel,	N	ND	ppb	100	100	2022	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Nitrate (as Nitrogen)	N	ND	ppb	10000	10000	2023	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	ND-700	ppt	50000	50000	2022	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N	14.2-200	ppm	None set by EPA	None set by EPA	2022	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills.
Sulfate	N	83.8-421	ppm	1000*	1000*	2022	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills, runoff from cropland
Thallium	N	ND	ppb	1	2	2022	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Turbidity *** for Ground Water	Y	10-11	NTU	N/A	5	2023	Soil runoff
Turbidity for Surface Water	N	N/A	NTU	N/A	0.5 in at least 95% of the samples and must		Soil Runoff
TDS (Total Dissolved Solids	N	464-1070	ppm	1000**	2000**	2022	Erosion of natural deposits

*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.

**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.

***Turbidity result of 67 came from well #2 (Water Source 002). This water source has NOT been used since June of 2021 so NO water from this source was pumped into EID's water system in 2022. The high turbidity readings are believed to be from the well sitting for an extended period and the inability to adequately flush the well, due to mechanical issues, prior to testing. Once the mechanical issues have been resolved, the well will be properly flushed, and the turbidity re-tested prior to pumping any water from this source into the water distribution system.

Semi-Volatile Compounds, Pesticides, Herbicides, and Carbamates

2,4-D	N	ND	ppb	70	70	2022	Runoff from herbicide used on row crops
2,4,5-TP (Silvex)	N	ND	ppb	50	50	2016	Residue of banned herbicide
Alachlor	N	ND	ppb	0	2	2019 - 2022	Runoff from herbicide used on row crops
Atrazine	N	ND	ppb	3	3	2019 - 2022	Runoff from herbicide used on row crops
Benzo(a)pyrene (PAH)	N	ND	ppt	0	200	2019 - 2022	Leaching from linings of water storage tanks and distribution lines
Carbofuran	N	ND	ppb	40	40	2019 - 2022	Leaching of soil fumigant used on rice and alfalfa
Chlordane	N	ND	ppb	0	2	2019 - 2022	Residue of banned termiticide
Dalapon	N	ND	ppb	200	200	2019 - 2022	Runoff from herbicide used on rights of way
Bis (2-ethylhexyl) adipate	N	ND	ppb	400	400	2019 - 2022	Discharge from chemical factories
Bis (2-ethylhexyl) Phthalate	N	ND	ppb	0	6	2019 - 2022	Discharge from rubber and chemical factories
Dinoseb	N	ND	ppb	7	7	2019 - 2022	Runoff from herbicide used on soybeans and vegetables
Endrin	N	ND	ppb	2	2	2019 - 2022	Residue of banned insecticide
Heptachlor	N	ND	ppt	0	400	2019 - 2022	Residue of banned termiticide
Heptachlor epoxide	N	ND	ppt	0	200	2019 - 2022	Breakdown of heptachlor
Hexachlorobenzene	N	ND	ppb	0	1	2019 - 2022	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclo-pentadiene	N	ND	ppb	50	50	2019 - 2022	Discharge from chemical factories
Lindane	N	ND	ppt	200	200	2019 - 2022	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	N	ND	ppb	40	40	2019 - 2022	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate]	N	ND	ppb	200	200	2019 - 2022	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCB [Polychlorinated biphenyls] Total	N	ND	ppt	0	500	2019 - 2022	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol	N	ND	ppb	0	1	2019 - 2022	Discharge from wood preserving factories
Picloram	N	ND	ppb	500	500	2019 - 2022	Herbicide runoff
Simazine	N	ND	ppb	4	4	2019 - 2022	Herbicide runoff
Toxaphene	N	ND	ppb	0	3	2019 - 2022	Runoff/leaching from insecticide used on cotton and cattle

Volatile Organic Contaminants							
Benzene	N	ND	ppb	0	5	2019 & 2022	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride	N	ND	ppb	0	5	2019 & 2022	Discharge from chemical plants and other industrial activities
Chlorobenzene	N	ND	ppb	100	100	2019 & 2022	Discharge from chemical and agricultural chemical factories
1,2-Dichlorobenzene	N	ND	ppb	600	600	2019 & 2022	Discharge from industrial chemical factories
1,4-Dichlorobenzene	N	ND	ppb	75	75	2019 & 2022	Discharge from industrial chemical factories
1,2 - Dichloroethane	N	ND	ppb	0	5	2019 & 2022	Discharge from industrial chemical factories
1,1 - Dichloroethene	N	ND	ppb	7	7	2019 & 2022	Discharge from industrial chemical factories
cis-1,2-Dichloroethene	N	ND	ppb	70	70	2019 & 2022	Discharge from industrial chemical factories
trans - 1,2 - Dichloroethene	N	ND	ppb	100	100	2019 & 2022	Discharge from industrial chemical factories
Dibrommethane	N	ND	ppb	0	5	2019 & 2022	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane	N	ND	ppb	0	5	2019 & 2022	Discharge from industrial chemical factories
Methylene Chloride	N	ND	ppb	5	5	2019 & 2022	Discharge from industrial chemical factories
Ethylbenzene	N	ND	ppb	700	700	2019 & 2022	Discharge from petroleum refineries
Styrene	N	ND	ppb	100	100	2019 & 2022	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethene	N	ND	ppb	0	5	2019 & 2022	Leaching from PVC pipes; discharge from factories and dry cleaners
1,2,4 -Trichlorobenzene	N	ND	ppb	70	70	2019 & 2022	Discharge from textile-finishing factories
1,1,1 - Trichloroethane	N	ND	ppb	200	200	2019 & 2022	Discharge from metal degreasing sites and other factories
1,1,2 -Trichloroethane	N	ND	ppb	3	5	2019 & 2022	Discharge from industrial chemical factories
Trichloroethene	N	ND	ppb	0	5	2019 & 2022	Discharge from metal degreasing sites and other factories
Toluene	N	ND	ppb	1000	1000	2019 & 2022	Discharge from petroleum factories
Vinyl Chloride	N	ND	ppb	0	2	2019 & 2022	Leaching from PVC piping; discharge from plastics factories
Xylenes	N	ND	ppb	10000	10000	2019 & 2022	Discharge from petroleum factories; discharge from chemical factories

Unregulated Contaminants

These are contaminants that some systems are required to monitor for but which EPA has not set MCLs.

Contaminant	Level Detected	Unit Measurement	Date Sampled	Contaminant	Level Detected	Unit Measurement	Date Sampled
Alkalinity – Total (as CaCO3)	270-312	ppm	2021	Aldrin	ND	ppb	2019 & 2021
Conductivity	789-1030	ppm	2021	Butachlor	ND	ppb	2019 & 2021
pH	7.3-7.5	ppm	2021	Carbaryl	ND	ppb	2019 & 2021
Calcium	103-121	ppm	2021	Dicamba	ND	ppb	2019 & 2021
Chloroform	ND	ppb	2019 & 2021	Dieldrin	ND	ppb	2019 & 2021
Bromodichlorome thane	ND	ppb	2019 & 2021	3-Hydroxycarbofuran	ND	ppb	2019 & 2021
Dibromochloromethane	ND	ppb	2019 & 2021	Methomyl	ND	ppb	2019 & 2021
Bromoform	ND	ppb	2019 & 2021	Metolachlor	ND	ppb	2019 & 2021
1,1-Dichloropropene	ND	ppb	2019 & 2021	Metribuzin	ND	ppb	2019 & 2021
1,1-Dichloroethane	ND	ppb	2019 & 2021	Propachlor	ND	ppb	2019 & 2021
1,1,2,2-Tetrachloroethane	ND	ppb	2019 & 2021	1,2,4-Trimethylbenzene	ND	ppb	2019 & 2021
1,3-Dichloropropane	ND	ppb	2019 & 2021	1,2,3-Trichlorobenzene	ND	ppb	2019 & 2021
Chloromethane	ND	ppb	2019 & 2021	n-Propylbenzene	ND	ppb	2019 & 2021
Bromomethane	ND	ppb	2019 & 2021	n-Butylbenzene	ND	ppb	2019 & 2021
1,2,3-Trichloropropane	ND	ppb	2019 & 2021	Napthalene	ND	ppb	2019 & 2021
1,1,1,2-Tetrachloroethane	ND	ppb	2019 & 2021	Hexachlorobutadiene	ND	ppb	2019 & 2021
Chloroethane	ND	ppb	2019 & 2021	1,3,5-Trimethylbenzene	ND	ppb	2019 & 2021
2,2-Dichloropropane	ND	ppb	2019 & 2021	p-Isopropyltoluene	ND	ppb	2019 & 2021
2-Chlorotoluene	ND	ppb	2019 & 2021	Isopropylbenzene	ND	ppb	2019 & 2021
4-Chlorotoluene	ND	ppb	2019 & 2021	Tert-butylbenzene	ND	ppb	2019 & 2021
Bromobenzene	ND	ppb	2019 & 2021	Sec-butylbenzene	ND	ppb	2019 & 2021
Cis-1,3 -Dichloropropene	ND	ppb	2019 & 2021	1,1,2-Trichlorotrifluoroethane	ND	ppb	2019 & 2021
Trichlorofluoromethane	ND	ppb	2019 & 2021	Dichlorodifluoromethane	ND	ppb	2019 & 2021
Aldicarb	ND	ppb	2019 & 2021	Bromochloromethane	ND	ppb	2019 & 2021
Aldicarb sulfoxide	ND	ppb	2019 & 2021	Aldicarb sulfone	ND	ppb	2019 & 2021
Methylene Chloride	ND	ppb	2019 & 2021	Methyl tert-Butyl Ether (MTBE)	ND	ppb	2019 & 2021
Tans-1,3-Dichloropropene	ND	ppb	2019 & 2021				

INFORMATION ON LEAD IN DRINKING WATER

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. Emigration Improvement District 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.

CROSS CONNECTIONS

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.

"I DRINK BOTTLED WATER BECAUSE IT'S SAFER"

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man-made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. 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.

WHAT ABOUT FLUORIDE?

Our water contains very little natural fluoride and there is NO fluoride added to the water.

WHAT ABOUT HOME TREATMENT?

As can be seen from this report, your water is safe from your tap. If you decide to install a treatment device on your service, you must take the responsibility for the maintenance of it. It is possible to make your water unsafe by not taking proper care of your personal treatment devices. The district's public water is hard, and you may want to install a water softener. Water is usually softened by ion exchange systems. Sodium and potassium

exchange systems are the most common methods shown to work effectively. Magnetic systems have not proven to be effective.

SPECIAL HEALTH ALERT

Some people may be more vulnerable to contaminants in drinking water. 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)

WHAT DETERMINES THE MCL LEVEL?

Maximum Contaminant Levels or MCLs 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.

Thank you for allowing us to continue providing you with clean quality water. We are pleased to keep you informed and educated on all water matters within our service area. We continue to present you with this report every year. Please contact us if you have any questions or concerns.

***Prepared* By:**

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