

Water Quality Report

Mutton Hollow Improvement District (MHID)

UTAH060070

CALENDAR YEAR 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 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 are committed to ensuring the quality of your water. Our water is purchased from Weber Basin Water Conservancy District (WBWCD) UTAH290223. WBWCD treats all water used by Mutton Hollow Improvement District (MHID). MHID only provides storage and distribution of the water provided by WBWCD.

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. You can also find more information our website at [Cross Connection \(muttonhollowwater.com\)](http://CrossConnection(muttonhollowwater.com)).

We are pleased to report that our drinking water meets federal and state requirements.

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 **Mark Pinnau at 385-424-7646**. 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 on **the 4th Thursday of February, April, June, August, October and December at 8:00 PM. The meetings are held in the home of Chairman Justin Logan, at 203 East 950 North Kaysville Utah.**

Mutton Hollow Improvement 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 monitoring water for the period of January 1st to December 31st, 2022. 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 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 out-dated.

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							
Mutton Hollow Improvement District							
Contaminant	Violation Y/N	Level Detected ND/Low-High	Unit Measurement	MCLG	MCL	Date Sampled	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria (1 sample / month)	N	a. 0 b. 0	N/A	0	Presence of coliform bacteria in 5% of monthly samples	2022	Naturally present in the environment
Fecal coliform and <i>E.coli</i>	N		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	2022	Human and animal fecal waste
Inorganic Contaminants							
Copper a. 90% results # of sites that exceed the AL	N	a. 0.007 b. 1.112	ppm	1.3	AL=1.3	2021	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead a. 90% results # of sites that exceed the AL	N	a. 0.00 b. 1.54	ppb	0	15	2021	Corrosion of household plumbing systems; Erosion of natural deposits.
Disinfection By-products							
TTHM [Total trihalomethanes]	N	a. 20.1 b. 20.1	ppb	0	80	2022	By-product of drinking water disinfection
Haloacetic Acids	N	a. 13.4 b. 13.4	ppb	0	60	2022	By-product of drinking water disinfection

WATER QUALITY DATA AND INFORMATION
BELOW PROVIDED BY WEBER BASIN WATER CONSERVANCY DISTRICT

The drinking water treated and provided by Weber Basin Water Conservancy District meets and exceeds all state and federal regulations for water quality

Information on the following page lists all regulated and unregulated drinking water contaminants that we have detected during this year and the recent past. We test for over 130

contaminants with almost all being non-detectable. Unregulated contaminant monitoring helps the EPA determine where certain contaminants occur and whether these contaminants need to be regulated. Some of our data, though representative, are less recent because the contaminant levels are stable and require less frequent monitoring. It is important to know that the presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The detected contaminants tables have been divided into three groups representing the District's three culinary distribution systems. These systems are:

- Weber Basin NORTH (covers the area north of Ogden City; Water System # UTAH29109)
- Weber Basin CENTRAL (the area from Ogden City south to Farmington; Water System # UTAH29023)
- Weber Basin SOUTH (the area from Centerville to North Salt Lake; Water System # UTAH06013)

DRINKING WATER TESTING RELATED DEFINITIONS

Detected Contaminant - Any contaminant detected at or above its method detection limit (MDL)

MDL - Method Detection Limit (The lowest level at which a contaminant is detected with a specified degree of certainty by an analytical method used to analyze samples)

MCL - Maximum Contaminant Level (The highest level of a contaminant that is allowed in drinking water)

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)

LRAA – Locational Running Annual Average NA - Not Applicable (there is no Federal or State MCL and/or MCLG)

ND - Not Detected

NTU - Nephelometric Turbidity Unit (a measure of the cloudiness of the water)

ppm - parts per million; equivalent to milligrams per liter (mg/L)

ppb - parts per billion; equivalent to micrograms per liter (µg/L)

pCi/L - picocuries per liter (a measure of radioactivity)

REGULATED MICROBIOLOGICAL CONTAMINANTS

Weber Basin CENTRAL - These data are derived from continuous measuring data collected in 2022.

Contaminants	Percent of Time Meeting below the MCL	Monthly Highest Single Measurement	MCL	MCLG	Violation	Typical Source
Turbidity – Weber South WTP	100%	0.14 NTU	0.3 NTU	0 NTU	No	Soil runoff
Turbidity – Davis North WTP	100%	0.08 NTU	0.3 NTU	0 NTU	No	Soil runoff

Weber Basin SOUTH - These data are derived from continuous measuring data collected in 2022.

Contaminants	Percent of Time Meeting below the MCL	Monthly Highest Single Measurement	MCL	MCLG	Violation	Typical Source
Turbidity – Weber South WTP	100%	0.12 NTU	0.3 NTU	0 NTU	No	Soil runoff

Note: Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

MICROBIOLOGICAL PARAMETERS

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that potentially harmful bacteria may be present. Utah DDW regulations require the District to test a minimum of 140 samples per month for total coliform and E. coli. If more than 5% of monthly samples collected are positive for total coliform, a violation of the MCL has occurred. In 2022, the District did not exceed the monthly MCL for total coliform bacteria; in fact, this has never occurred in our water since this rule was established.

REGULATED INORGANIC CONTAMINANTS

Weber Basin NORTH - These data are derived from samples collected between 2010 and 2019

Contaminants (units)	Average	Lowest	Highest	MCL	MCLG	Violation	Typical Source
Arsenic (ppb)	0.800	0.600	1.20	10	0	No	Erosion of natural deposits; runoff from orchards
Barium (ppm)	0.117	0.0330	0.267	2	2	No	Erosion of natural deposits; Discharge of drilling wastes
Fluoride ^{3 5} (ppm)	0.100	ND	0.200	4	4	No	Erosion of natural deposits; fluoridation in Davis Co.
Nitrate as N (ppm)	1.40	0.988	1.81	10	10	No	Runoff from fertilizer use; erosion of natural deposits
Selenium (ppb)	1.10	ND	2.10	50	50	No	Erosion of natural deposits; discharge from mines
Sodium (ppm)	16.5	13.4	19.6	NA ¹	NA	NA	Erosion of natural deposits
Sulfate (ppm)	11.9	5.00	25.0	1.000 ²	NA	No	Erosion of natural deposits
Total Dissolved Solids (ppm)	214	136	315	2.000 ²	NA	No	Erosion of natural deposits

Weber Basin Central - These data are derived from samples collected between 2017 and 2022

Contaminants (units)	Average	Lowest	Highest	MCL	MCLG	Violation	Typical Source
Antimony (ppb)	0.800	0.600	1.20	10	0	No	Erosion of natural

							deposits; runoff from orchards
Arsenic (ppb)	0260	ND	1.30	10	0	No	Erosion of natural deposits; runoff from orchards
Barium (ppm)	0.109	0.0770	0.267	2	2	No	Erosion of natural deposits; Discharge of drilling wastes
Fluoride ^{3 5} (ppm)	0.647	0.0180	11.2	4	4	Yes	Erosion of natural deposits; fluoridation in Davis Co.
Nitrate as N (ppm)	0.585	ND	1.80	10	10	No	Runoff from fertilizer use; erosion of natural deposits
Selenium (ppb)	0.400	ND	0.700	50	50	No	Erosion of natural deposits; discharge from mines
Sodium (ppm)	38.9	22.5	47.6	NA ¹	NA	NA	Erosion of natural deposits
Sulfate (ppm)	32.4	7.00	43.7	1.000 ²	NA	No	Erosion of natural deposits
Total Dissolved Solids (ppm)	385	352	444	2.000 ²	NA	No	Erosion of natural deposits
Weber Basin Central – These data are derived from samples collected between 2017 and 2019 (Fluoride and Nitrate data up to 2022)							
Contaminants (units)	Average	Lowest	Highest	MCL	MCLG	Violation	Typical Source
Barium (ppm)	0.104	0.0660	0.145	2	2	No	Erosion of natural deposits; Discharge of drilling wastes
Cyanide (ppb)	1.33	ND	4.00	200	200	No	Discharge from steel, metal, plastic and fertilizer factories
Fluoride ^{3 5} (ppm)	0.689	0.051	1.88	4	4	No	Erosion of natural deposits; fluoridation in Davis Co.
Nitrate as N (ppm)	.861	0.0400	3.32	10	10	No	Runoff from fertilizer use; erosion of natural deposits
Selenium (ppb)	1.23	1.10	1.30	50	50	No	Erosion of natural deposits; discharge from mines
Sodium (ppm)	61.6	35.6	92.1	NA ¹	NA	NA	Erosion of natural deposits
Sulfate (ppm)	32.4	7.00	43.7	1.000 ²	NA	No	Erosion of natural deposits
Total Dissolved Solids (ppm)	738	488	988	2.000 ²	NA	No	Erosion of natural deposits
<p>1) The State of Utah requires monitoring for sodium even though no MCL has been established.</p> <p>2) The MCL for sulfate and total dissolved solids is established by the State of Utah.</p> <p>3) This value represents naturally occurring fluoride concentrations.</p> <p>4) Fluoride levels in Davis County have been adjusted to an optimal level of 0.7 ppm. These results are tabulated from weekly routine fluoride sampling.</p> <p>5) The district does not add fluoride to water delivered to Weber County</p>							

REGULATED VOLATILE ORGANIC CONTAMINANTS

Weber Basin CENTRAL – These data are derived from samples collected in 2022							
Contaminants (units)	LRAA	Lowest	Highest	MCL	MCLG	Violation	Typical Source
Total Trihalomethanes (ppb)	12.2	6.10	22.4	80	NA	No	By-product of drinking water chlorination
Total Haloacetic Acids (ppb)	10.6	ND	20.3	60	NA	No	By-product of drinking water chlorination
Weber Basin SOUTH – These data are derived from samples collected in 2022							
Contaminants (units)	LRAA	Lowest	Highest	MCL	MCLG	Violation	Typical Source
Total Trihalomethanes (ppb)	12.2	6.10	22.4	80	NA	No	By-product of drinking water chlorination
Total Haloacetic Acids (ppb)	10.6	ND	20.3	60	NA	No	By-product of drinking water chlorination

REGULATED RADIOACTIVE CONTAMINANTS

Weber Basin CENTRAL – These data are derived from samples collected between 2016 and 2022							
Contaminants (units)	Average	Lowest	Highest	MCL	MCLG	Violation	Typical Source
Gross Alpha Particles (pCi/L)	0.754	ND	2.60	15	0	No	Erosion of natural deposits
Gross Beta Particles (pCi/L)	2.39	0.050	4.40	50	0	No	Decay of natural & man-made deposits
Radium-228 (pCi/L)	0.635	0.060	1.70	5	0	No	Erosion of natural deposits
Weber Basin SOUTH – These data are derived from samples collected between 2015 and 2018							
Contaminants (units)	Average	Lowest	Highest	MCL	MCLG	Violation	Typical Source
Gross Alpha Particles (pCi/L)	3.58	1.20	5.60	15	0	No	Erosion of natural deposits
Gross Beta Particles (pCi/L)	5.78	3.50	7.00	50	0	No	Decay of natural & man-made deposits
Radium-228 (pCi/L)	0.425	0.40	0.580	5	0	No	Erosion of natural deposits

FLUORIDE INCIDENT REPORT

On January 10, 2022, it was found that an increased level of fluoride had been injected into the district's (Weber Basin) distribution system in the South Weber area. Upon this discovery, the fluoride injection at this location was immediately halted and appropriate staff was notified. It was determined that a measuring device for the fluoride system failed, resulting in slightly elevated levels of fluoride near the injection site. District staff and South Weber City immediately started working with local and state entities to form a plan of action. Water throughout the distribution systems immediately began to be tested to verify the extent of the fluoride overfeed. South Weber City began flushing their water system to get rid of any high amounts of fluoride. Testing was completed and results showed that there had been slightly elevated amounts of fluoride at certain locations in the distribution system. The highest measured fluoride level in the system was 3 mg/L (ppm). Testing continued and after system flushing, fluoride levels returned back to normal. The equipment issue that caused the overfeed has been addressed and additional checks have been implemented as a result.

On September 14, 2022, it was found that an increased level of fluoride had been injected

into the District's distribution system at the Roy Fluoride site which feeds the Sunset and Clinton areas. Upon this discovery, the fluoride injection at this location was immediately halted and appropriate staff was notified. It was determined that during a recent equipment upgrade, an incorrect tag was mapped that caused dosing formulas to receive erroneously high values, therefore injecting too much fluoride. District staff and local cities (Sunset and Clinton in Davis County) immediately started working with local and state entities to form a plan of action. Water throughout the distribution systems immediately began to be tested to verify the extent of the fluoride overfeed. Sunset and Clinton cities began flushing their water systems to get rid of any high amounts of fluoride. Testing was completed and results showed that there had been elevated amounts of fluoride at certain locations in the distribution system. The highest measured fluoride level in the system was over 4 mg/L (ppm), which is the MCL for fluoride, for a short period of time. Testing continued and after system flushing, fluoride levels returned back to normal. The equipment issue that caused the overfeed has been addressed and additional checks have been implemented as a result.

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 mg/L (ppm) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system, Weber Basin Water Conservancy District, has a fluoride concentration of 0.7 mg/L (ppm).

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/L (ppm) of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease, including pain and tenderness of the bones. Your drinking water does not contain more than 4 mg/L (ppm) of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/L (ppm) because of this cosmetic dental problem.

For more information, please call Josh Hogge of Weber Basin Water Conservancy District at 801-771-1677. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

OTHER POSSIBLE CONTAMINANTS TO CONSIDER

Cryptosporidium

Cryptosporidium and giardia are microbial pathogens found in surface water throughout the U.S. Although filtration removes cryptosporidium and giardia, the most commonly used filtration methods cannot guarantee 100 percent removal. Monitoring conducted by the District indicates the presence of cryptosporidium and giardia in our source water. The District uses UV light in our water treatment which inhibits these organisms from reproducing and causing sickness. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Radon

Radon is a radioactive gas that you cannot see, taste, or smell. At this time, radon monitoring is not required by the EPA; however, the EPA is considering making radon monitoring a requirement. The proposed MCL for radon is 4,000 pCi/L for systems which have a public education program for radon. For additional information, call your state radon program or call EPA's Radon Hotline (1-800-767-7236).

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. The 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 www.epa.gov/safewater/lead.

PFAS

Per- and Polyfluoroalkyl substances (PFAS) are a large group of synthetic chemicals that have been used in industry and consumer products worldwide since 1940s. These chemicals are used to make household and commercial products that resist heat and chemical reactions and repel oil, stains, grease, and water. Perfluorooctanoic acid (PFOA) and Perfluorooctane sulfonic acid (PFOS) are some of the major PFAS. PFAS are found in humans, wildlife, and fish all over the world. Some PFAS do not break down easily and therefore stay in the environment and human body for a very long time. PFAS may affect human hormones and immunity systems. The EPA and Utah Department of Environmental Quality have been evaluating PFAS in drinking water for many years. For additional information, visit www.epa.gov/pfas or www.deq.utah.gov/pollutants/per-andpolyfluoroalkyl-substances-pfas.

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 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 contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

We at MHID 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.

If you have any questions concerning this report, or any aspect of the quality of your water, please contact one of the following Board of Trustees members or Officers:

Cliff Hokinson	Chairman	801-546-9343
Justin Logan	Trustee	801-444-1965
David Johnson	Trustee	801-455-2853
Dan Call	Financial Officer	385-439-3981
Linda Heusser	Clerk	801-544-9463
Mark Pinnau	Operator	385-424-7646
Porter Heusser	Associate	801-244-8992
Brett Davis	Associate	801-589-2123
Jeff Perkins	Associate	801-529-6532
Frank Ferrante	Associate	801-589-3292