

Annual Drinking Water Quality Report

The Water We drink 2016

Maeser Water is pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

The District has three sources of water. The primary source is Ashley Springs. The spring receives its water from Dry Fork Creek, which sinks into a limestone formation and resurfaces in the Ashley Springs. The second source is Red Fleet Reservoir. This source has been used in the past when the Ashley spring flow could not meet the demand. This source was not used in 2016. The third source is the Painted Hills Well. The water comes from an underground aquifer that is over 1500 feet deep. This source is used as a backup source in the event that part of the system is cut off from Ashley Springs or Red Fleet and is very limited in capacity. This source was not used in 2016.

There are source protection plans for each source the District gets water from. The Ashley Springs and Painted Hills Well source protection plans can be viewed at the District office during regular business hours. The Red Fleet source protection plan was created by the Central Utah Water Conservancy District. The Maeser Water Improvement District conducts Source Water Assessments to monitor the potential for contamination in the protection area.

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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (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 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 contaminants, such as viruses and bacteria, that 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 water 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, urban storm water runoff, and residential uses; organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that 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.

Customers and the public can get involved by doing their part to conserve water and comply with all cross connection regulations they can also help educate others.

Your water is treated in a "treatment train" (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called "floc," which attract the dirt particles. Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process where the water passes through sand, gravel, charcoal or other filters that remove even smaller particles. A small amount of chlorine or other disinfection method is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before water is stored and distributed to homes and businesses in the community.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Cross Connection Control Survey

The purpose of this survey is to determine whether a cross-connection may exist at your home or business. A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. We are responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow conditions, enter the distribution system. If you have any of the devices listed below please contact us so that we can discuss the issue, and if needed, survey your connection and assist you in isolating it if that is necessary.

- Boiler/ Radiant heater (water heaters not included)
- Underground lawn sprinkler system
- Pool or hot tub (whirlpool tubs not included)
- Additional source(s) of water on the property
- Decorative pond
- Watering trough

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind

Additional Information for 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. Maeser Water 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>.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All 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. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

TEST 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	No	1	CFU	0	Presence of Coliform bacteria in 5% of monthly samples	2016	Naturally present in the environment

Fecal Coliform and <i>E. coli</i>	No	ND	CFU	0	A routine sample and repeat sample are total Coliform positive, and one is also fecal Coliform or <i>E. coli</i> positive	2016	Human and animal fecal waste
Turbidity for Surface Water	No	.26/.02	NTU	N/A	0.3 in at least 95% of the samples and must never exceed 1.0	2016	Soil Runoff (highest single measurement & the Lowest Monthly percentage of samples meeting the turbidity limits)

RADIOACTIVE CONTAMINANTS

Alpha Emitters	No	1.7	pCi/L	0	15	2012	Erosion of natural deposits
Beta Emitters	No	4.0	pCi/L	0	50	2012	Decay of natural and man-made deposits
Radium 228	No	.42	pCi/L	0	5	2012	Erosion of natural deposits
Combined Radium	No	1.27	pCi/L	0	5	2012	Erosion of natural deposits
Inorganic Contaminants							
Barium	No	.087	Mg/L	2	2	2016	Discharge of drilling wastes ;discharge from metal refineries; erosion of natural deposits
Copper a. 90% results b.# of sites that exceed the AL	No	20.7/310	ppb	1300	AL=1300	2015	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives
Lead	No	0 / 3.4	ppb	0	15	2015	Corrosion of household plumbing systems, erosion of natural deposits

Sodium	No	1.0	ppm	2000	2000	2016	Erosion of natural deposits
Nitrate (as Nitrogen)	No	2	ppm	10000	10000	2016	Runoff from fertilizer use; leaching for septic tank, sewage: erosion of natural deposits
Sulfate	No	8	Mg/L	250	250	2016	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills, runoff from cropland
Selenium	No	ND	ppt	50000	50000	20016	Erosion of natural deposits

VOLATILE ORGANIC CONTAMINANTS

TTHM (Total trihalomethanes)	No	19.2	ppb	0	80	2016	By-product of drinking water chlorination
Haloacetic Acid (HAA5)	No	27.8	ppb	0	60	2016	By-product of drinking water chlorination
Total Organic Carbon	No	6.1 raw 1.4 Fin	ppm	0	N / A	2016	Naturally occurring plant matter

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
positive samples	positive samples/yr: The number of positive samples taken that year
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	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.

MCL	MCL: Maximum Contaminant Level: 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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. 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.
MRDL	MRDL: Maximum residual disinfectant level. 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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

The following constituents are regulated more closely, Arsenic, Lead, Nitrate, Radon and Cryptosporidium. Notice of any detection is required.

In addition to the sampling outlined in the table above, we have also sampled for (21 Volatile Organic Chemicals, 28 Pesticides, 35 Unregulated Organic Chemicals and 10 Unregulated Pesticides). These additional chemicals were not detected. Our system has been granted use waivers for these chemicals. If you would like a list of the specific (Pesticides, Organic Chemicals) that we sampled for, please contact David Hatch at 789-9400.

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

For more information please contact:

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