

2021 Consumer Confidence Report Mineral County Water District

Here at Mineral County Water District we want you to understand the efforts we make to provide you with a safe and dependable drinking water supply. We continually monitor our drinking water quality and strive to protect our water resources. We regularly test our drinking water for many different constituents as required by State and Federal Regulations. This “Water Quality Report” includes those constituents that were **detected** in 2021 and may include earlier monitoring data.

Our drinking water is supplied by one surface water source at **Martin Creek**, two groundwater sources **Spring 2** used year round and (**HWRP**) used in the summer only.

All sources were evaluated by the Office of Drinking Water to determine if there were possible contaminating activities that might compromise the quality of the water. At the time, there were no associated contaminants detected in the water supply, however all sources were still considered vulnerable to managed forest activities located in the area. A copy of the complete report is available at 364 Knollcrest Drive, Suite 101, Redding, CA 96002. You may contact Reese Crenshaw at 530-224-4861. 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. For questions or concerns about your drinking water you may attend our monthly meeting held the **2nd Monday of the Month** or you may contact **John Frehse at 530- 816-2003**

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse Mineral County Water System a 38292 Scenic Avenue, 530-595-3479 para asistirlo en español.

Terms Used in This Report

Term	Definition
Level 1 Assessment	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Level 2 Assessment	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an <i>E. coli</i> MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
Maximum Contaminant Level (MCL)	The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
Maximum Contaminant Level Goal (MCLG)	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (U.S. EPA).
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	The level of a drinking water disinfectant below which there is no known or

Term	Definition
Disinfectant Level Goal (MRDLG)	expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
Primary Drinking Water Standards (PDWS)	MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
Public Health Goal (PHG)	The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
Regulatory Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Secondary Drinking Water Standards (SDWS)	MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.
Treatment Technique (TT)	A required process intended to reduce the level of a contaminant in drinking water.
Variations and Exemptions	Permissions from the State Water Resources Control Board (State Board) to exceed an MCL or not comply with a treatment technique under certain conditions.
ND	Not detectable at testing limit.
ppm	parts per million or milligrams per liter (mg/L)
ppb	parts per billion or micrograms per liter ($\mu\text{g/L}$)
ppt	parts per trillion or nanograms per liter (ng/L)
ppq	parts per quadrillion or picogram per liter (pg/L)
pCi/L	picocuries per liter (a measure of radiation)
μm	Micron, size of particles in water.

Sources of Drinking Water and Contaminants that May Be Present in Source Water

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.

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 U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

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. U.S. 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 Drinking Water Hotline (1-800-426-4791)

Contaminants that may be present in source water include:

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) that 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**, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- **Radioactive contaminants**, that can be naturally-occurring or be the result of oil and gas production and mining activities.

Regulation of Drinking Water and Bottled Water Quality

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

About Your Drinking Water Quality

Tables 1, 2, 3, 4, 5, 6, and 8 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Table 1.A. Compliance with Total Coliform MCL between January 1, 2021 and June 30, 2021 (inclusive)

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	None]	None	1 positive monthly sample (a)	0	Naturally present in the environment
Fecal Coliform and <i>E. coli</i>	None	None	0	None	Human and animal fecal waste

(a) For systems collecting fewer than 40 samples per month: two or more positively monthly samples is a violation of the total coliform MCL

Table 2. Sampling Results Showing the Detection of Lead and Copper

Complete if lead or copper is detected in the last sample set.

Lead and Copper	Sample Date	No. of Samples of infection by <i>Cryptosporidium</i>	90 th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	December 2020	10	ND	None	15	0.2	None	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	December 2020	10	0.526	None	1.3	0.3	Not applicable	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Table 3. Sampling Results for Sodium and Hardness

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	10/21/2021	6.43	8.6-3	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	05/21/2015	[62]	[18-96]	None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

Table 4. Detection of Contaminants with a Primary Drinking Water Standard

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Total Trihalomethanes (ppb)	07/26/21 10/19/21	30.3 17.4	17.4-30.3	80	NA	Byproduct of drinking water disinfection
Haloacetic Acids (ppb)	07/26/21 10/19/21	26.8 20.6	20.6 26.8	60	NA	Byproduct of drinking water disinfection
Copper (ppb)	08/26/21	276	0-276	1000	300	Internal corrosion of household plumbing system; erosion of natural deposits; leaching from wood preservatives
Aluminum (ppb)	10/12/21	132		1000		Erosion of natural deposits; residue from some surface water treatment processes

Table 5. Detection of Contaminants with a Secondary Drinking Water Standard

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	SMCL	PHG (MCLG)	Typical Source of Contaminant
Iron (ppb)	08/18/15 10/12/21	132	64-204	300	N/A	Leaching from natural deposits; industrial wastes.
Turbidity NTU	08-11-20	0.9	ND-0.9	5	N/A	Soil runoff
Total Dissolved Solids (ppm)	05-21-15 10/12/21	111	54-156	1000	N/A	Runoff/leaching from natural deposits
Specific Conductance (μ S/cm)	05-21-15 08/18/15 10/12/21	153	47 224 188	1600	NA	Substances that form ions when in water; seawater influence
Sulfate (ppm)	08/18/15 05/21/15 10/12/21	5.76	15.0 0.87 1.41	500	N/A	Runoff/leaching from natural deposits; industrial wastes

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. U.S. 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 Drinking Water Hotline (1-800-426-4791).

Lead-Specific Language: 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. Mineral County Water 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. [Optional: If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.] 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 (1-800-426-4791) or at <http://www.epa.gov/lead>.

Table 10. Sampling Results Showing Treatment of Surface Water Sources

Treatment Technique ^(a) Rosedale Bag and Cartridge Filtration System	The water from Martin Creek is treated by a three-stage Rosedale filtration system consisting of a bag-type roughing filter and two cartridge-type filters (one for Giardia and the other for Cryptosporidium). Disinfection is done with sodium hypochlorite solution prior to discharge into the storage tank.
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to [0.20 NTU in 95% of measurements in a month. 2 – Not exceed [0.50 NTU for more than eight consecutive hours. 3 – Not exceed 1.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	64% (October—see explanation below) ^(c)
Highest single turbidity measurement during the year	0.47 (October—water flushed to waste)
Number of violations of any surface water treatment requirements	0 (see explanation below)

(a) A required process intended to reduce the level of a contaminant in drinking water.

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

(c) A variance from CDPH was in effect at this time. This was *not* a violation of treatment technique (TT).

A note from the Mineral County Water District to our customers: What follows is an explanation of the instances when turbidity standards for finished water were not met in 2021. Turbidity refers to the cloudiness of the water. Turbidity is used a measurement of the presence of contaminants, based on the fact that soil in the water may harbor bacteria. The use of the water on the occasions listed below is not considered a violation, since CDPH gave M.C.W.D. permission to do so after determining that the water presented no threat to human health.

Tests performed showed that these high turbidity levels were due to the presence of extremely fine particulate matter ($\leq 2 \mu\text{m}$) in Martin Creek. The bag-and-cartridge filtration that M.C.W.D. currently uses is not designed to remove matter this fine. It will remove matter down to $.5 \mu\text{m}$. The very fine particles may be due to the Dixie Fire impact on the creek.

Generally, matter this fine does not harbor microorganisms that might present a threat to human health; however, allowing the storage tank to drop much further presented a real danger: depressurization of the distribution system. When this happens, a vacuum is created in the lines, and contaminants may be drawn into the system.

For these reasons, CDPH gave M.C.W.D. permission to use Martin Creek water under the condition that a set of Millipore® filtration testing be done twice daily. The Millipore® technology tests the effectiveness of the filtration system itself, thus ensuring that the high turbidity is only attributable to the presence of extremely fine particulate matter in the finished water. CDPH also required hypochlorination of the finished water.