

## WATER SOURCES

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. 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, 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** that 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 also may come from gas stations, urban storm water runoff, and septic systems.

**Radioactive contaminants**, that can be naturally occurring or the result of oil and gas production and mining activities.

### Typical Mineral Content of Our Water

	Fish Creek Filtration Plant	Yampa Wells
<b>pH</b> Measures water's acidity (a pH of 7.0 is neutral)	7.0 – 7.6	7.2
<b>Hardness</b> Measures the concentration of calcium and magnesium	12 mg/l as CaCO <sub>3</sub>	125 mg/l as CaCO <sub>3</sub>
<b>Alkalinity</b> Refers to its capability to neutralize acids	15 mg/l as CaCO <sub>3</sub>	105 mg/l as CaCO <sub>3</sub>
<b>Calcium</b> Is found in most natural waters and contributes to the hardness properties of water	19.8 mg/l as CaCO <sub>3</sub>	82 mg/l as CaCO <sub>3</sub>
<b>Sodium</b> Salts present in nearly all natural waters	10 mg/l	9.5 mg/l
<b>LEVELS OF HARDNESS:</b>	0-75 mg/l, soft; 76-150 mg/l, moderately hard; 151-300 mg/l, hard	

#### Mount Werner Water

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# 2011

## Mount Werner Water

### WATER QUALITY REPORT

PWSID #154524

Mount Werner Water is pleased to provide you with our annual Water Quality Report. Unless otherwise noted, this report details data for January 1 through December 31, 2010. Our constant goal is to provide you with a safe and dependable supply of drinking water.

In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

### OUR WATER SOURCES

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply, you may obtain a copy of the report by visiting [www.cdphe.state.co.us/wq/sw/swaphom.html](http://www.cdphe.state.co.us/wq/sw/swaphom.html) or by contacting: Jeff Peterson at (970) 879-2424.

Potential sources of contamination in our source water area come from: Surface water: existing/abandoned mines, row crops, deciduous, evergreen and mixed forests. Ground water: commercial, industrial, transportation, road miles, high and low intensity residential, urban recreational grasses, row crops, pasture hay, deciduous, evergreen and mixed forests and septic systems.

The Report provides a screening level evaluation of potential contamination that **could** occur. It does not mean that the contamination **has or will** occur. We can use this information to



evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan.

### YOUR DRINKING WATER

Steamboat Springs has two water sources. The main supply is the Fish Creek Filtration Plant, which is a surface water source that draws from Fish Creek. The secondary supply is the Yampa River Well System. This ground water source is Infiltration Gallery C; Infiltration Gallery G; Infiltration Gallery H.

*Esta es informacion importante. Si no la pueden leer, necesitan que alguien la pueda traducir.*

### GIARDIA AND CRYPTOSPORIDIUM

Giardia and Cryptosporidium are protozoan parasites commonly found in surface waters, such as streams, lakes, and reservoirs. If ingested, they can cause diarrhea, cramping, fever, and other gastro-intestinal symptoms. These organisms are typically removed during the water treatment and purification process. Mount Werner Water routinely monitors for Giardia and Cryptosporidium and is pleased to report that they have never been detected in the finished water. Backcountry travelers should be aware that these may be present and should boil or use appropriate filtration cartridges to ensure a safe trip.

### ADDITIONAL HEALTH INFORMATION

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. 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 of infections. These people should seek advice about drinking water from their health care providers.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water.

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants, call the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

### QUESTIONS?

If you have any questions about this report or water quality, please contact Jeff Peterson, Superintendent at (970) 879-2424.

## TABLE OF DETECTED CONTAMINANTS

Unless otherwise noted, all data is based upon 2010 analyses.

Contaminant	MCL	MCLG	Units	Average of Individual Samples	Range	Violation Yes / No	Sample Date	Likely Source of Contamination	
BARIUM	2	2	ppm	0.007	0.007 - 0.007	No	2010	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
FLUORIDE	4	4	ppm	1.2	1.2 - 1.2	No	2010	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	
NITRATE	10	10	ppm	0.052	0.02 - 0.085	No	2010	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
NITRATE-NITRITE	10	10	ppm	0.175	0.03 - 0.32	No	2008	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits	
HEXACHLOROCYCLOPENTADIENE	50	50	ppb	.082	0.082 - 0.082	No	2010	Discharge from chemical factories	
<b>Lead and Copper</b>	AL	Number of Samples	Unit	90th Percentile	Sample Sites Above Action Level	Violation		Likely Source	
COPPER, FREE	1.3	20	ppm	0.228	0	No	2010	Corrosion of household plumbing systems, erosion of natural deposits	
LEAD	15	20	ppb	3	0	No	2010	Corrosion of household plumbing systems, erosion of natural deposits	
<b>Disinfection By-Products</b>	MCL	MCLG	Units	Average	Range	Number of Samples	Violation (Yes or No)	Sample Date/Year	Likely Source
TOTAL TRIHALOMETHANES (TTHM)	80	N/A	ppb	47.12	22.9 - 79.5	5	No	2010	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	60	N/A	ppb	35.26	12.2 - 65.9	5	No	2010	By-product of drinking water disinfection
<b>Total Organic Carbon (Disinfection by Products Precursor)</b>	Average of Individual Ratio Samples	Range (Lowest - Highest)	Number of Ratio Samples	Unit of Measure	TT Minimum Ratio	Violation (Yes or No)	Year	Likely Source	
CARBON TOTAL	1	1-1	4	Ratio	The TT Minimum Level is a Ratio of 1	No	2010	Naturally present in the environment.	
<b>Secondary Contaminants**</b>	Average of Individual Samples	Range (Lowest - Highest)	Number of Samples	Unit of Measure	Year	Secondary Standard	** Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply.		
MPA WTP RAW AND FINISHED	N/A	4.1 - 4.1	1	units	2010	N/A			
SODIUM	13.1	13.1 - 13.1	1	ppm	2010	N/A			
<b>Turbidity</b>	TT Requirement		Level Found		Violation	Sample Date	Likely Source		
TURBIDITY	Maximum 1 NTU for any single measurement		Highest single measurement: 0.13 NTU		No	10/26/2010	Soil Runoff		
	In any month, at least 95% of samples must be less than 0.3 NTU		Lowest monthly percentage of samples meeting TT requirement for our technology: 100%		No	Dec 2010			
<b>Violations</b>									
Type	Category	Analyte	Monitoring Period	Federal Period	Health Effects	Compliance Result	MCL or TT Level		
Failure to submit IDSE/SUBPT V Plan (DBP2)	Failure to Complete Report/Record Keeping Violation	DBP Stage 2	2009 to 2010	01/01/2010 to N/A	N/A	N/A	N/A		
<b>Additional Violation Information</b>									
Mt Werner Water District failed to sample and complete the IDSE Report by January 2010. The District has since taken steps with the Colorado Department of Health and Environment to remedy the sampling and reporting requirements. The District has filed the IDSE Report using Stage I sampling results. The next round of sampling for the IDSE Report is in 2013.									

## TERMS and ABBREVIATIONS

- **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.

- **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.

- **N/A** - Not applicable.

- **Maximum Contaminant Level Goal (MCLG)** - The "Goal" 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 Contaminant Level (MCL)** - The "Maximum Allowed" 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 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.

- **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.

- **Running Annual Average (RAA)** - An average of monitoring results for the previous 12 calendar months.

- **Gross Alpha, Including RA, Excluding Rn & U** - This is the gross alpha particle activity compliance value. It includes radium—226, but excludes radon 222 and uranium.

- **Microscopic Particulate Analysis (MPA)** - An analysis of surface water organisms and indicators in water. This analysis can be used to determine performance of a surface water treatment plant or to determine the existence of surface water influence on a ground water well.

## CONSERVATION TIPS

There are a number of ways to save water, and they all start with you

- ∞ Adjust sprinklers so only your lawn is watered and not the house, sidewalk or street.
- ∞ Water your lawn & garden in the morning or evening when temperatures are cooler.
- ∞ Remember to check your sprinkler system valves periodically for leaks and keep sprinkler heads in good shape.
- ∞ Learn how to shut off your automatic watering system in case it malfunctions or in case of rain.
- ∞ Spread a layer of organic mulch around plants to retain moisture.
- ∞ When you save water, you save money on your utility bills.