

# Meadow Mtn Ws 2012 Drinking Water Consumer Confidence Report (CCR) For Calendar Year 2011

*Public Water System ID:* CO0207504

**Esta es información importante. Si no la pueden leer, necesitan que alguien se la traduzca.**

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water. Please contact **Rachel Barkworth** at **303-823-2318** with any questions about the Drinking Water Consumer Confidence Report or for public participation opportunities that may affect the water quality.

## General 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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791) or by visiting <http://water.epa.gov/drink/contaminants>. 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 of infections. These people should seek advice about drinking water from their health care providers. 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).

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 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.
- **Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

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.

## Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). 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 lead in your water, you may wish to have your water tested. 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. Additional 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/safewater/lead>.

## Our Water Source(s)

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 <http://www.cdphe.state.co.us/wq/sw/swapreports/swapreports.html>, clicking on **Boulder County** and selecting **207504; Meadow Mtn Ws** or by contacting **Rachel Barkworth** at **303-823-2318**. For general information about Source Water Assessment please visit <http://www.cdphe.state.co.us/wq/sw/swaphom.html>. Potential sources of contamination in our source water area come from:

Evergreen and deciduous forests and wildlife therein.

The Source Water Assessment 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.

Please contact **Rachel Barkworth** at **303-823-2318** to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Consumer Confidence Report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

### Our Water Source(s)

Source	Source Type	Water Type	Location
FOX CREEK	Intake	Surface Water	N/A
WILLOW CREEK	Intake	Surface Water	N/A

### Terms and Abbreviations

- **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.
- **Treatment Technique (TT)** – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **Action Level (AL)** – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **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.
- **Average of Individual Samples (No Abbreviation)** – The typical value. Mathematically it is the sum of values divided by the number of samples.
- **Range of Individual Samples (No Abbreviation)** – The lowest value to the highest value.
- **Number of Samples (No Abbreviation)** – The number or count of values.
- **Gross Alpha, Including RA, Excluding RN & U (No Abbreviation)** – This is the gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222 and uranium.
- **Variance and Exemptions (V/E)** – Department permission not to meet an MCL or a treatment technique under certain conditions.
- **Parts per million = Milligrams per liter (ppm = mg/L)** – One part per million corresponds to one minute in two years or a single penny in \$10,000.
- **Parts per billion = Micrograms per liter (ppb = 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 = Nanograms per liter (ppt = 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 = Picograms per liter (ppq = 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.
- **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.
- **Not Applicable (N/A)** – Does Not Apply.
- **Violation (No Abbreviation)** – A failure to meet a Colorado Primary Drinking Water Regulation.
- **Formal Enforcement Action (No Abbreviation)** – An escalated action taken by the State (due to the number and/or severity of violations) to bring a non-compliant water system back into compliance by a certain time, with an enforceable consequence if the schedule is not met.

### Detected Contaminant(s)

Meadow Mtn Ws routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2011 unless otherwise noted. The State of Colorado requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Therefore, some of our data, though representative, may be more than one year old. Violations and Formal Enforcement Actions, if any, are reported in the next section of this report.

**Note:** Only detected contaminants sampled within the last 5 years appear in this report. If no tables appear in this section, that means that Meadow Mtn Ws did not detect any contaminants in the last round of monitoring.

Lead and Copper Sampled in the Distribution System							
Contaminant Name	Monitoring Period	90th Percentile	Number of Samples	Unit of Measure	Action Level	Sample Sites Above Action Level	Typical Sources
COPPER	01/01/2008 to 12/31/2010	0.55	5	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits.
LEAD	01/01/2008 to 12/31/2010	7	5	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfection By Products (TTHMs, HAA5, and Chlorite) Sampled in the Distribution System									
Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources
TOTAL HALOACETIC ACIDS (HAA5)	2011	42.48	42.48 - 42.48	1	ppb	60	N/A	No	By-product of drinking water disinfection.
TTHM	2011	47	47 - 47	1	ppb	80	N/A	No	Byproduct of drinking water disinfection.

Turbidity Sampled at the Entry Point to the Distribution System					
Contaminant Name	Sample Date	Level Found	TT Requirement	TT Violation?	Typical Sources
TURBIDITY	Date: April 24th, 2011	Highest single measurement: 1.94 NTU	Maximum 5 NTU for any single measurement	No	Soil Runoff
TURBIDITY	Month: April, 2011	Lowest monthly percentage of samples meeting TT requirement for our technology: 90%	In any month, at least 95% of samples must be less than 1.0 NTU	Yes	Soil Runoff
TURBIDITY	Date: May 28th, 2011	Highest single measurement: 2.11 NTU	Maximum 5 NTU for any single measurement	No	Soil Runoff
TURBIDITY	Month: May, 2011	Lowest monthly percentage of samples meeting TT requirement for our technology: 61%	In any month, at least 95% of samples must be less than 1.0 NTU	Yes	Soil Runoff
TURBIDITY	Date: June 1 <sup>st</sup> , 2011	Highest single measurement: 1.93 NTU	Maximum 5 NTU for any single measurement	No	Soil Runoff
TURBIDITY	Month: June, 2011	Lowest monthly percentage of samples meeting TT requirement for our technology: 87%	In any month, at least 95% of samples must be less than 1.0 NTU	Yes	Soil Runoff

Regulated Contaminants Sampled at the Entry Point to the Distribution System									
Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources
BERYLLIUM, TOTAL	2008	0.5	0.5 - 0.5	1	ppb	4	4	No	Discharge from metal refineries and coal burning factories; Discharge from electrical, aerospace, and defense industries.
FLUORIDE	2008	0.1	0.1 - 0.1	1	ppm	4	4	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.

Radionuclides Sampled at the Entry Point to the Distribution System									
Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources
COMBINED RADIUM (-226 & -228)	2011	0.34	0.34 - 0.34	1	pCi/L	5	0	No	Erosion of natural deposits.
COMBINED URANIUM	2011	0.1	0.1 - 0.1	1	ppb	30	0	No	Erosion of natural deposits.
GROSS ALPHA, EXCL. RADON & U	2011	0.03	0.03 - 0.03	1	pCi/L	15	0	No	Erosion of natural deposits.
Secondary Contaminants**									
Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)		Number of Samples	Unit of Measure	Secondary Standard		
SODIUM	2008	3.3	3.3 - 3.3		1	ppm	N/A		
**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.									

### Violation(s) and Formal Enforcement Action(s)

Violations							
Type	Category	Analyte Name	Monitoring Period	Federal Period	Health Effects	Compliance Result	MCL or TT Level
MONTHLY COMB FLTR EFFLUENT (IESWTR/LT1)	Treatment Technique Violation	TURBIDITY	06/01/2011 to 06/30/2011	06/01/2011 to 06/30/2011	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.	N/A	N/A
MONTHLY COMB FLTR EFFLUENT (IESWTR/LT1)	Treatment Technique Violation	TURBIDITY	05/01/2011 to 05/31/2011	05/01/2011 to 05/31/2011	Turbidity has no health effects. However, turbidity can	N/A	N/A

					interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.		
MONTHLY COMB FLTR EFFLUENT (IESWTR/LT1)	Treatment Technique Violation	TURBIDITY	04/01/2011 to 04/30/2011	04/01/2011 to 04/30/2011	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.	N/A	N/A

#### Additional Violation Information

Note: If any violation relates to failing to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes then the water may be inadequately treated. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Meadow Mtn Ws is required to include an explanation of the violation(s) and the steps taken to resolve the violation(s) with this report.

On receipt of this enforcement order on August 28<sup>th</sup>, 2011, Meadow Mountain Water Supply engaged the services of Stewart Environmental to perform water testing on our water treatment plant and to work with the MMWS board to try to determine the cause of the turbidity issue. Stewart Environmental visited the plant in November to understand our water treatment processes and to take samples of water for testing purposes. The water test results were documented and a written report sent to CDPHE for their information. Water tests have also been performed in January and March 2012 to develop a complete set of baseline water test results prior to our water runoff period in 2012. Further water testing will be performed when Meadow Mountain Water Supply recognizes that the water runoff period is in progress in 2012. All 2012 water test results have been sent to CDPHE for their information in the April 1<sup>st</sup>, 2012 report. A further report with final findings will be sent to CDPHE after the runoff period has been tested fully. At this point Stewart Environmental should be able to advise the Meadow Mountain Water Supply company board on actions that we can take to resolve the turbidity issue.

Formal Enforcement Actions				
Status Date	Enforcement Type	Analyte Names Associated with Enforcement Action	Number of Associated Violations	Enforcement Description
08/29/2011	SFL	TURBIDITY	3	State Administrative Order/Compliance Order issued without penalty. An order issued by the Executive branch of the State government that orders the PWS to come into compliance or to undertake remedial actions. No penalty is assessed. (FRDS-DED 1/93)