



City of Montague Public Works Department

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City of Montague 2012 Consumer Confidence Report

Spanish (Español)

Este informe contiene información muy importante sobre la calidad de su agua potable. Por favor lea este informe o comuníquese con alguien que pueda traducir la información.

Is my water safe?

We are 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. Last year, we conducted tests for over 30 contaminants. We only found only 1 at a level higher than the EPA allows. As we informed you at the time, our water exceeded drinking water standards. (For more information see the section labeled Violations at the end of the report.)

Do I need to take special precautions?

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).

Where does my water come from?

There are two sources for Montague's drinking water. From about April 1 until October 30 our water comes from Lake Shastina through the Montague Water Conservation District's system of canals. The remainder of the year the water is diverted from the Little Shasta River into the canal system and brought to Montague. The water is stored in two small ponds until needed, then treated, filtered, disinfected and pumped to the storage tanks.

Source water assessment and its availability

In January 2003 the California Dept. of Public Health completed a Source Water Assessment document for Montague's two water sources. Both sources were determined to be vulnerable to agricultural activities. A copy of the Assessment may be obtained by contacting:

City of Montague
P.O. Box 428
Montague, CA 96064
Attn: Chris Tyhurst
(530) 459-5204

or
CDPH Drinking Water Division
364 Knollcrest Dr., Suite 101
Redding, CA 96002
Attn: Tony Weidemann
(530) 224-4800

Why are there contaminants in my drinking water?

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 stormwater 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 stormwater 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 stormwater 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.

Many contaminants were tested for in the past and were not present in Montague's water. This fact, combined with the absence of industries in the area which might introduce the contaminants, has resulted in the monitoring requirements of those contaminants being waived for a number of years.

How can I get involved?

Regular City Council meetings are held the first Thursday of each month at 6:30 P.M. at City Hall. If you would like information directly related to this report or would like to tour our facilities, please contact Chris Tyhurst at the Public Works Dept. at (530) 459-5204.

Description of Water Treatment Process

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.

Other Information

As you may be aware, the City of Montague has been trying for many years to secure funding to design and build a new water treatment plant. The design is completed and grant funding from one source is set in place. At this point (January 2013), we are wading through the paperwork process to obtain additional funds from a second source. Hopefully this will be completed in the near future and the project will be put out to bid in spring of 2013.

The new treatment plant will primarily address the disinfection by-product problem we've faced for many years. Other improvements will include a new filtration system which will be capable of removing much smaller particles, activated carbon filters which will help both with the disinfection by-product formation as well as hopefully improve the taste, and many changes to the chemical feed and sludge handling operations.

Unfortunately the cost of operation will increase, mainly because of increased power use and the regular replacement of exhausted activated carbon. In an effort to control power costs, the City is investigating the use of solar. We are in the very early stages of this and it is unknown whether this is a worthwhile step to take. The cost of a solar installation is quite high and balancing that with the payback period is the issue.

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. City of Montague 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>.

Total Organic Carbon (TOC) Explanation

Total organic carbon is primarily a measure of the organic material in the water. This can be weeds, algae, decaying vegetation, bugs, etc. Total organic carbon itself is not harmful however these measurements have a direct correlation to the amount of disinfection by-products which may be formed when the water is chlorinated. About 30-40% of the TOC is removed by our standard treatment process. The remainder of the TOC is molecular in origin and is not removed by our present treatment. It is this fraction which, when chlorinated, forms disinfection by-products (primarily trihalomethanes and haloacetic acids).

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.

<u>Contaminants</u>	<u>MCLG or MRDLG</u>	<u>MCL, TT, or MRDL</u>	<u>Your Water</u>	<u>Range</u>		<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
				<u>Low</u>	<u>High</u>			
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	14.7	5.7	47.9	2012	No	By-product of drinking water chlorination.
Total Organic Carbon(% Removal)	NA	TT	37.2	NA		2012	No	Naturally present in the environment. Sources include algae, weeds and other decaying vegetation. We are required to remove at least 25% of the TOC during our treatment process. There is a direct correlation between TOC and disinfection by-product formation.
TTHMs [Total Trihalomethanes] (ppb)	NA	80	143	69.9	143	2012	Yes	By-product of drinking water disinfection, primarily related to the TOC levels in the water.
Microbiological Contaminants								
Total Coliform (positive samples/month)	0	1	0	NA		2012	No	Naturally present in the environment
Turbidity (NTU)	NA	0.3	93.7	NA		2012	No	Soil runoff.
93.7% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation. The highest single measurement was 0.69. Any measurement in excess of 1 is a violation unless otherwise approved by the								

<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>Your Water</u>	<u>Sample Date</u>	<u># Samples Exceeding AL</u>	<u>Exceeds AL</u>	<u>Typical Source</u>
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	0.094	2010	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	0	2010	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Violations and Exceedances

TTHMs [Total Trihalomethanes]

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. The City is required to sample 8 times during the year. Six of those samples were above the allowable limit. Generally the levels are higher during the summer months. This has been an ongoing problem and will be solved with the construction of a new water treatment plant. Most of the paperwork for that project has been completed and it is anticipated that construction will begin in the spring of 2013.

Undetected Contaminants

The following contaminants were monitored for, but not detected, in your water.

<u>Contaminants</u>	<u>MCLG or MRDLG</u>	<u>MCL or MRDL</u>	<u>Your Water</u>	<u>Violation</u>	<u>Typical Source</u>
Nitrate [measured as Nitrogen] (ppm)	10	10	ND	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Unit Descriptions

<u>Term</u>	<u>Definition</u>
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
NTU	NTU: Nephelometric Turbidity Units. 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.
positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions

<u>Term</u>	<u>Definition</u>
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

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