

ANNUAL

# WATER QUALITY REPORT

*Water testing performed in 2008*



CALAVERAS COUNTY  
WATER DISTRICT

PWS ID#: 0510005

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

## Meeting the Challenge

Once again we are proud to present to you our annual water quality report. This edition covers all testing completed from January 1 through December 31, 2008. Our goal has been to produce the highest quality drinking water for our customers. As new challenges to drinking water safety emerge, we will be vigilant in meeting the challenges of source water protection, water conservation and community education while continuing to serve the needs of all our water users.

For more information about this report, or for any questions relating to your drinking water, please call Teresa Tanaka, Deputy Director of Utilities/Operations, at (209) 754-3543, ext. 35.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

## Substances That Could Be in 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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. 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.

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 can 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, which are by-products of industrial processes and petroleum production, and which can also come from gas stations, urban stormwater runoff, agricultural applications and septic systems;

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

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Community Participation

You are invited to participate in our public forum and to voice your concerns about your drinking water. We meet the second Wednesday of each month beginning at 9 a.m. at the Calaveras County Water District (CCWD) Board Room, 423 East St. Charles Street, San Andreas, CA. You may also visit the CCWD on the Internet at [www.ccwd.org](http://www.ccwd.org), or contact CCWD staff directly by phone at (209) 754-3543.

## Where Does My Water Come From?

Calaveras County Water District customers are fortunate because they enjoy an abundant water supply from three sources. CCWD has rights to the water on the three major rivers that flow through our county – Calaveras, Mokelumne and Stanislaus. Our five water systems draw from one of these surface water sources. The source for our Copper Cove system is the Stanislaus River at Lake Tulloch. The source for the Ebbetts Pass system is the Stanislaus River at McKay's Reservoir. The source for our Jenny Lind system is the Calaveras River below Hogan Dam. The source for our Sheep Ranch System is San Antonio Creek below White Pines Reservoir – a tributary to the Calaveras River. The source for our West Point system is the Bear Creek tributary to the Middle Fork of the Mokelumne River.

All three river watersheds have been surveyed for potential contaminants and the watersheds were determined to be pristine. No manmade organic constituents have ever been detected. These survey reports are available for viewing at the district office in San Andreas. To learn more about our watershed on the Internet, go to the U.S. EPA's Surf Your Watershed at [www.epa.gov/surf](http://www.epa.gov/surf).



## Lead and Drinking Water

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. We are 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Water Conservation

You can play a role in conserving water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle regardless of how many dishes are loaded.
- Check every faucet in your home for leaks. Just a slow drip can waste from 15 to 20 gallons a day.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl.
- Use your water meter to detect hidden leaks. Simply turn off all taps and appliances that use water. Then check the meter after 15 minutes. If it moved, you have a leak.

## About Our Violation

As required by the State and Federal law, the District has to notify you of a procedural violation of the Safe Drinking Water Act. In order to ensure proper disinfection, water in the treatment plant must be in contact with chlorine or a similar disinfection for a minimum amount of time. Seven (7) days during the month of May 2008 this did not occur in the Jenny Lind area. Although chlorine quickly kills most bacteria, it is less effective against organisms such as viruses and parasites. For this reason, water needs to mix with chlorine for a longer time period to kill such organisms. The amount of time necessary, or the "contact time," depends on the amount of disinfectant in the water and the temperature of the water. However, for those seven days the contact time ratio was between 90 and 98 percent. The purpose of disinfection is to destroy harmful organisms in the

water. Improperly disinfected water can potentially lead to health issues, primarily intestinal problems.

What happened? On May 21, 2008, maintenance workers repairing a check valve on the main line leading from the Jenny Lind Water Treatment Plant to the A Storage Tank discovered that this line could also directly feed potable water to several customers prior to entering A-Tank, thus reducing their CT ratio (the rest of the District's 3,600 customers who receive water after it enters A-Tank were not affected). The District immediately increased the chlorine concentration at the plant to bring the CT ratio back to 1.0 and notified the California Department of Public Health Services of the violation.

## Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES <sup>1</sup>											
				Copper Cove		Ebbetts Pass		Jenny Lind			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2008	[4.0 (as Cl <sub>2</sub> )]	[4 (as Cl <sub>2</sub> )]	1.57	1.52–2.08	1.2	.077–1.55	1.86	1.45–2.90	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (Units)	2008	TT	NA	1.20	0.98–1.60	0.8	0.59–1.20	1.98	1.80–2.20	No	Various natural and man-made sources
Haloacetic Acids (ppb)	2008	60	NA	24	10–47	25	14–38	31 <sup>2</sup>	23–39 <sup>2</sup>	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2008	45	45	0.49	NA	ND	NA	0.23	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2008	80	NA	24	10–44	31	15–67	37.5	32.8–41.5	No	By-product of drinking water chlorination
Turbidity <sup>3</sup> (NTU)	2008	TT	NA	0.10	0.03–0.10	0.08	0.05–0.12	0.046	0.03–0.13	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2008	TT	NA	100	NA	NA	NA	NA	NA	No	Soil runoff

REGULATED SUBSTANCES <sup>1</sup>											
				Sheep Ranch		West Point-Bear Creek					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE		
Chlorine (ppm)	2008	[4.0 (as Cl <sub>2</sub> )]	[4 (as Cl <sub>2</sub> )]	1.04	0.56–1.72	1.28	1.03–1.28	No	Drinking water disinfectant added for treatment		
Control of DBP precursors [TOC] (Units)	2008	TT	NA	0.8	0.59–1.20	1.04	0.8–1.40	No	Various natural and man-made sources		
Haloacetic Acids (ppb)	2008	60	NA	22	NA	22.75	15–30	No	By-product of drinking water disinfection		
Nitrate [as nitrate] (ppm)	2008	45	45	ND	NA	ND	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits		
TTHMs [Total Trihalomethanes] (ppb)	2008	80	NA	28	NA	24	18–28	No	By-product of drinking water chlorination		
Turbidity <sup>3</sup> (NTU)	2008	TT	NA	0.09	0.06–0.13	0.07	0.03–0.09	No	Soil runoff		
Turbidity (Lowest monthly percent of samples meeting limit)	2008	TT	NA	NA	NA	100	NA	No	Soil runoff		

Tap water samples were collected for lead and copper analyses from sample sites throughout the community				Copper Cove		Ebbetts Pass		Jenny Lind			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2006	1.3	0.3	0.86	0/20	0.22	0/30	0.68	0/20	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2006	15	2	ND	0/20	8.6	3/30	ND	0/20	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community				Sheep Ranch		West Point-Bear Creek					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE		
Copper (ppm)	2006	1.3	0.3	0.63	0/5	0.3 <sup>4</sup>	0/10 <sup>4</sup>	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives		
Lead (ppb)	2006	15	2	6.2	0/5	ND <sup>4</sup>	0/10 <sup>4</sup>	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits		

## SECONDARY SUBSTANCES

				Copper Cove		Ebbetts Pass		Jenny Lind			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2008	500	NS	2.9	NA	2.9	NA	7.8	NA	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2008	15	NS	ND	ND-5	ND	ND-4	3	ND-3.5	No	Naturally occurring organic materials
Corrosivity (Units)	2008	Non-corrosive	NS	-2.26	NA	-2.92	NA	-0.95	NA	No	Natural or industrially-influenced balce of hydrogen, carbon and oxygen in the water; affected by temperature and other factors
Manganese (ppb)	2008	50	NS	ND	NA	ND	NA	12	NA	No	Leaching from natural deposits
Odor-Threshold (Units)	2008	3	NS	1	NA	1	NA	1	NA	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2008	1,600	NS	75.4	NA	33.4	NA	195	NA	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2008	500	NS	2.2	NA	0.61	NA	13	NA	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2008	1,000	NS	45	NA	30	NA	129	NA	No	Runoff/leaching from natural deposits
Zinc (ppm)	2008	5.0	NS	0.058	NA	0.120	NA	0.065	NA	No	Runoff/leaching from natural deposits; industrial wastes



## SECONDARY SUBSTANCES

		Sheep Ranch		West Point-Bear Creek					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Chloride</b> (ppm)	2008	500	NS	4.6	NA	1.5	NA	No	Runoff/leaching from natural deposits; seawater influence
<b>Color</b> (Units)	2008	15	NS	ND	ND-24	ND	ND-5	No	Naturally occurring organic materials
<b>Corrosivity</b> (Units)	2008	Non-corrosive	NS	-2.19	NA	-2.21	NA	No	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors
<b>Manganese</b> (ppb)	2008	50	NS	ND	NA	9.1	NA	No	Leaching from natural deposits
<b>Odor-Threshold</b> (Units)	2008	3	NS	1	NA	1	NA	No	Naturally occurring organic materials
<b>Specific Conductance</b> (µS/cm)	2008	1,600	NS	60.8	NA	60.6	NA	No	Substances that form ions when in water; seawater influence
<b>Sulfate</b> (ppm)	2008	500	NS	1.1	NA	0.61	NA	No	Runoff/leaching from natural deposits; industrial wastes
<b>Total Dissolved Solids</b> (ppm)	2008	1,000	NS	56	NA	62	NA	No	Runoff/leaching from natural deposits
<b>Zinc</b> (ppm)	2008	5.0	NS	0.061	NA	0.260	NA	No	Runoff/leaching from natural deposits; industrial wastes

## UNREGULATED SUBSTANCES

		Copper Cove		Ebbetts Pass		Jenny Lind		Sheep Ranch		West Point-Bear Creek		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
<b>Bromodichloromethane</b> (ppb)	2008	1.5	1.0-1.8	1.35	0.9-2.4	5.6	4.2-7.4	2.3	NA	1.8	1.5-2.2	By-product of drinking water disinfection
<b>Chloroform</b> (ppb)	2008	23	9.4-41	29.5	14-65	30	18-43	26	NA	25	16-27	By-product of drinking water disinfection
<b>Dibromochloromethane</b> (ppb)	2008	ND	NA	ND	NA	1.30	1.075-1.535	ND	NA	ND	NA	By-product of drinking water disinfection
<b>Hardness</b> (ppm)	2008	29	NA	14	NA	77	NA	24	NA	24	NA	Hardness in drinking water is caused by two naturally occurring chemicals, calcium and magnesium
<b>Magnesium</b> (ppm)	2008	2.0	NA	ND	NA	7.8	NA	2.9	NA	2.9	NA	Naturally occurring
<b>Sodium</b> (ppm)	2008	4.1	NA	3.4	NA	7.7	NA	5.1	NA	4.2	NA	Sodium refers to the naturally occurring salt present in the water

<sup>1</sup>We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

<sup>2</sup>Sampled in 2006.

<sup>3</sup>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.

<sup>4</sup>Sampled in 2008.

## Definitions

**AL (Regulatory Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**µS/cm (microsiemens per centimeter):** A unit expressing the amount of electrical conductivity of a solution.

**MCL (Maximum Contaminant Level):** 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 (SMCLs) are set to protect the odor, taste and appearance of drinking water.

**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 are set by the U.S. EPA.

**MRDL (Maximum Residual Disinfectant Level):** The level of a disinfectant added for water treatment that may not be exceeded at the customer's tap.

**MRDLG (Maximum Residual Disinfectant Level Goal):** The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. EPA.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NS:** No standard.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**PDWS (Primary Drinking Water Standard):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**PHG (Public Health Goal):** 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 EPA.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.