



ANNUAL

WATER QUALITY REPORT

Water testing performed in 2009



Presented By:
CALAVERAS COUNTY
WATER DISTRICT

PWS ID#: 0510005

Maintaining High Standards

We are once again proud to present our annual water quality report. This report covers all testing performed between January 1, 2009, and December 31, 2009. The events of the past few years have presented many of us with challenges we could not have imagined. Yet in spite of this, we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of our water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

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 or www.epa.gov/safewater/hotline/.



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 man-made 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 U.S. EPA's Surf Your Watershed at www.epa.gov/surf.

Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the Source Water Assessment Plan, our water system had a susceptibility rating of "medium." If you would like to review the Source Water Assessment Plan, please feel free to contact our office during regular office hours.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the second Wednesday of each month 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, or contact CCWD staff directly by phone at (209) 754-3543.

“WHEN THE WELL’S DRY, WE KNOW
THE WORTH OF WATER. - Benjamin Franklin”

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.

Questions?

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) 754-3306.



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.

Sampling Results

During the past year we have taken hundreds of water samples in order to monitor for certain substances less than once per year because the volatile organic, or synthetic organic contaminants. The table below shows the most recent sample data are included, along with the year in which the only those contaminants that were detected in the water. The state requires sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	Copper Cove		Ehbetts Pass		Jenny Lind		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Bromate (ppm)	2009	10	(0)	ND	ND-0.003	ND	NA	ND	NA	No	By-product of drinking water disinfection
Chlorine (ppm)	2009	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	1.39	1.06-1.66	1.22	0.98-2.48	1.96	1.5-2.8	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (Units)	2009	TT	NA	1.21	0.9-1.9	1.1	1.1-2.1	2.2	1.9-2.5	No	Various natural and man-made sources
Fluoride (ppm)	2009	2.0	1	NA	NA	NA	NA	0.13	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Halocetic Acids ¹ (ppb)	2009	60	NA	27	11-64	32	14-62	30.9	16-59	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2009	45	45	0.97	NA	<0.22	NA	0.58	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewages; erosion of natural deposits
TTHMs [Total Trihalomethanes] ¹ (ppb)	2009	80	NA	28	8.6-77	32.25	9-69	36.9	16-77	No	By-product of drinking water disinfection
Turbidity ² (NTU)	2009	TT	NA	0.04	0.03-0.12	0.08	0.05-0.14	0.06	0.031-0.263	No	Soil runoff
Turbidity ³ (Lowest monthly percent of samples meeting limit)	2009	TT	NA	100	NA	100	NA	100	NA	No	Soil runoff
Tap water samples were collected for lead and copper analyses from sample sites throughout each community											
				Copper Cove		Ehbetts Pass		Jenny Lind			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	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)	2009	1.3	0.3	0.82	0/20	0.3	0/30	0.8	1/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2009	15	0.2	6.9	0/20	4.3	0/30	3.9	0/30	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

REGULATED SUBSTANCES

										Sheep Ranch			West Point-Bear Creek			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Tap water samples were collected for lead and copper analyses from sample sites throughout each community																
Sheep Ranch																
West Point-Bear Creek																
Bromate (ppm)	2009															By-product of drinking water disinfection
Chlorine (ppm)	2009			[4.0 (as Cl ₂)]		1.01	0.54-1.71	1.16	1.06-1.56	No	Drinking water disinfectant added for treatment					
Control of DBP precursors [TOC] (Units)	2009			TT		0.8	0.59-1.1	1.0	0.6-1.3	No	Various natural and man-made sources					
Fluoride (ppm)	2009			2.0		<0.10	NA	<0.10	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories					
Haloacetic Acids ¹ (ppb)	2009			60		26	NA	20.5	16-26	No	By-product of drinking water disinfection					
Nitrate [as nitrate] (ppm)	2009			45		<0.22	NA	<0.22	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits					
TTMHs [Total Trihalomethanes] ¹ (ppb)	2009			80		25	NA	22	19-25	No	By-product of drinking water disinfection					
Turbidity ² (NTU)	2009			TT		0.08	0.07-0.10	0.08	0.05-0.15	No	Soil runoff					
Turbidity (Lowest monthly percent of samples meeting limit)	2009			TT		100	NA	100	NA	No	Soil runoff					
Copper (ppm)	2009	1.3	0.3	0.04	0/5	0.27	0/10	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives							
Lead (ppb)	2009	15	0.2	5.6	0/5	5.1	0/10	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits							

Secondary Substances																				
Substance (Unit of Measure)		Year Sampled	SMCL	PHG (MCLG)	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	Amount Detected	Range Low-High	Typical Source	Violation	Typical Source	
Chloride (ppm)		2009	500	NS	4.6	0.83-4.6	NA	NA	2.8	NA	9.2	NA	NA	4.6	NA	4.1	NA	No	Runoff/leaching from natural deposits; seawater influence	
Color (Units)		2009	15	NS	ND	NA	ND-10	ND	ND	ND-6	ND	ND-6	ND	ND-7	ND	ND-6	ND	ND-4	No	Naturally occurring organic materials
Corrosivity (Units)		2009	Non-corrosive	NS	-1.88	NA	NA	-2.63	NA	NA	-0.91	NA	-1.92	NA	NA	-2.28	NA	No	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water; affected by temperature and other factors	
Manganese (ppb)		2009	50	NS	<5.0	NA	NA	<5.0	NA	NA	30	NA	<5.0	NA	NA	<5.0	NA	No	Leaching from natural deposits	
Odor-Threshold (Units)		2009	3	NS	1.0	1.0-1.0	NA	1.0	1.0-1.0	1.0	1.0	1.0-1.0	1.0	1.0-1.0	1.0	1.0-1.0	1.0	No	Naturally occurring organic materials	
Specific Conductance (µS/cm)		2009	1,600	NS	112	NA	NA	35.5	NA	NA	202	NA	62.4	NA	NA	67.3	NA	No	Substances that form ions when in water; seawater influence	
Sulfate (ppm)		2009	500	NS	5.2	NA	NA	0.53	NA	NA	13	NA	1.0	NA	NA	0.54	NA	No	Runoff/leaching from natural deposits; industrial wastes	
Total Dissolved Solids (ppm)		2009	1,000	NS	88	NA	NA	42	NA	NA	130	NA	76	NA	NA	53	NA	No	Runoff/leaching from natural deposits	
Zinc (ppm)		2009	5.0	NS	0.060	NA	NA	0.148	NA	NA	0.082	NA	0.061	NA	NA	0.17	NA	No	Runoff/leaching from natural deposits; industrial wastes	
Unregulated and Other Substances																				
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	Amount Detected	Range Low-High	Amount Detected	Range Low-High	Typical Source			
Bromochloromethane (ppb)		2009	2	0.83-4.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	By-product of drinking water disinfection		
Bromodichloromethane (ppb)		2009	NA	NA	1.02	ND-1.5	5.8	2.7	NA	NA	1.58	NA	NA	NA	NA	NA	By-product of drinking water disinfection			
Chloroform (ppb)		2009	26.1	7.7-72	26.1	9-68	33.3	11-67	23	NA	20.5	NA	23	NA	NA	NA	By-product of drinking water disinfection			
Hardness (ppm)		2009	47	NA	16	NA	82	NA	23	NA	23	NA	23	NA	NA	23	NA	Hardness in drinking water is caused by two naturally occurring chemicals: calcium and magnesium		
Magnesium (ppm)		2009	5.4	NA	2	NA	7.2	NA	2.2	NA	<2.0	NA	NA	NA	NA	NA	Naturally occurring			
Sodium (ppm)		2009	5.6	NA	3.2	NA	9.1	NA	4.9	NA	5.7	NA	NA	NA	NA	NA	NA	Sodium refers to the naturally occurring salt present in the water		
¹ 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 THMs) result from continuous disinfection of drinking water and form when disinfectants combine with						
														organic matter that naturally occurs in the source water.						
														² 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.						

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 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.

MRDLG (Maximum Residual Disinfectant 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.

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.