

Annual
WaterQuality
Report
Water testing performed in 2010



Presented By _____
Calaveras County
Water District

PWS ID#: 0510005

Quality First

We are pleased to present to you our annual water quality report covering all testing performed between January 1 and December 31, 2010. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with quality drinking water.

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

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, 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, 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 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 the U.S. EPA's Surf Your Watershed at www.epa.gov/surf.

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 <http://water.epa.gov/drink/hotline>.

LT2 Rule

The U.S. EPA has created the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) for the sole purpose of reducing illness linked with the contaminant *Cryptosporidium* and other disease-causing microorganisms in drinking water. The rule will bolster existing regulations and provide a higher level of protection of your drinking water supply.

Sampling of our water source has shown the following:

Cryptosporidium:

Bear Creek – ND-1 Organisms/L

Mokelumne River – ND-1 Organisms/L

Hunter's Point Dam – ND-2 Organisms/L

E. coli:

Bear Creek – <2-900 MPN/100mL

Mokelumne River – 7-900 MPN/100mL

Hunter's Point Dam – <2-70 MPN/100mL

It is important to note that these results are from our raw water source only and not our treated drinking water supply. For more information, contact the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

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.

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. It has been detected in three of seven raw water sources. Bear Creek and the Mokelumne River raw water source had one hit each for *cryptosporidium*, which put the two raw water sources into a bin classification of one and no additional treatment is required. The Hunter's Reservoir had two hits for *cryptosporidium*, putting the raw water source into a bin two classification which will require more treatment. This particular raw water source is only used 3 to 5 days out of the year when the main raw water source at McKay's Point Dam is down for maintenance.

Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Teresa Tanaka, Manager of 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.

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 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 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. 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											
				Copper Cove		Ebbetts Pass					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE		
Bromate (ppb)	2010	10	0.1	2	ND-3	NA	NA	No	By-product of drinking water disinfection		
Chlorine (ppm)	2010	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	1.32	1.10-1.58	1.24	0.082-1.63	No	Drinking water disinfectant added for treatment		
Control of DBP precursors [TOC] (ppm)	2010	TT	NA	1.33	0.96-2.04	1.04	1.0-1.6	No	Various natural and man-made sources		
Fluoride (ppm)	2010	2.0	1	0.11	NA	<1.0	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories		
Haloacetic Acids ¹ (ppb)	2010	60	NA	26	15-48	39	26-72	No	By-product of drinking water disinfection		
Nitrate [as nitrate] (ppm)	2010	45	45	0.66	NA	<50	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits		
TTHMs [Total Trihalomethanes] ¹ (ppb)	2010	80	NA	22	12-38	33	21-72	No	By-product of drinking water disinfection		
Turbidity (NTU)	2010	TT	NA	0.038	0.029-0.059	0.08	0.05-0.14	No	Soil runoff		
				Jenny Lind		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	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Bromate (ppb)	2010	10	0.1	ND	NA	NA	NA	ND	NA	No	By-product of drinking water disinfection
Chlorine (ppm)	2010	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	1.86	1.62-2.13	1.22	0.60-1.43	1.17	0.99-1.56	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (ppm)	2010	TT	NA	2.6	2.3-3.3	1.04	0.60-1.64	1.04	0.70-1.50	No	Various natural and man-made sources
Fluoride (ppm)	2010	2.0	1	0.14	NA	<0.10	NA	<1.0	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids ¹ (ppb)	2010	60	NA	46	33.25-52	26	26-26	20.5	16-26	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2010	45	45	0.27	NA	<0.05	NA	<0.22	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] ¹ (ppb)	2010	80	NA	51.63	39.8-71.75	23	23-23	26.25	24-29	No	By-product of drinking water disinfection
Turbidity (NTU)	2010	TT	NA	0.052	0.037-0.089	0.08	0.06-0.10	0.08	0.07-0.15	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 (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

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 (MCLG)	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	0.04	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

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)	2010	500	NS	5.4	NA	6.2	NA	10	NA	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2010	15	NS	<3	<3-4	3.25	<3-4	4	<3-6	No	Naturally occurring organic materials
Corrosivity (Units)	2010	Non-corrosive	NS	-1.74	NA	-2.98	NA	-0.91	NA	No	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water; affected by temperature and other factors
Iron (ppb)	2010	300	NS	<20	NA	<20	NA	<20	NA	No	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2010	50	NS	<5.0	NA	45	NA	<5.0	NA	No	Leaching from natural deposits
Odor-Threshold (Units)	2010	3	NS	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)	2010	1,600	NS	126	NA	45.8	NA	224	NA	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2010	500	NS	7.2	NA	0.56	NA	24	NA	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2010	1,000	NS	100	NA	43	NA	150	NA	No	Runoff/leaching from natural deposits
Zinc (ppm)	2010	5.0	NS	0.062	NA	1.27	NA	0.081	NA	No	Runoff/leaching from natural deposits; industrial wastes

				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		
Chloride (ppm)	2010	500	NS	<3	<3-4	1.09	0.98-1.2	No	Runoff/leaching from natural deposits; seawater influence		
Color (Units)	2010	15	NS	1	1-1	<3	<3-5	No	Naturally occurring organic materials		
Corrosivity (Units)	2010	Non-corrosive	NS	-2.05	NA	-2.01	NA	No	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water; affected by temperature and other factors		
Iron (ppb)	2010	300	NS	87	NA	<20	NA	No	Leaching from natural deposits; industrial wastes		
Manganese (ppb)	2010	50	NS	<5.0	NA	<5.0	NA	No	Leaching from natural deposits		
Odor-Threshold (Units)	2010	3	NS	1.0	1.0-1.0	1.0	1.0-1.0	No	Naturally occurring organic materials		
Specific Conductance (µS/cm)	2010	1,600	NS	61.5	NA	49.6	NA	No	Substances that form ions when in water; seawater influence		
Sulfate (ppm)	2010	500	NS	1.0	NA	0.68	0.59-0.76	No	Runoff/leaching from natural deposits; industrial wastes		
Total Dissolved Solids (ppm)	2010	1,000	NS	63	NA	59	47-71	No	Runoff/leaching from natural deposits		
Zinc (ppm)	2010	5.0	NS	0.07	NA	<5.0	NA	No	Runoff/leaching from natural deposits; industrial wastes		

UNREGULATED AND OTHER SUBSTANCES

		Copper Cove		Ebbetts Pass		Jenny Lind		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2010	3.9	1.3–3.9	1.15	0.93–1.60	7.8	6.23–11.75	By-product of drinking water disinfection
Chloroform (ppb)	2010	34	11–34	32	20–71	42	31–59	By-product of drinking water disinfection
Hardness (ppm)	2010	52	NA	12	NA	95	NA	Hardness in drinking water is caused by two naturally occurring chemicals: calcium and magnesium
Magnesium (ppm)	2010	7.1	NA	<2.0	NA	10	NA	Naturally occurring
Sodium (ppm)	2010	6.8	NA	5.3	NA	11	NA	Sodium refers to the naturally occurring salt present in the water
		Sheep Ranch		West Point-Bear Creek				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE		
Bromodichloromethane (ppb)	2010	7.8	NA	2.3	1.8–3.1	By-product of drinking water disinfection		
Chloroform (ppb)	2010	21	NA	24	22–26	By-product of drinking water disinfection		
Hardness (ppm)	2010	28	NA	20	NA	Hardness in drinking water is caused by two naturally occurring chemicals: calcium and magnesium		
Magnesium (ppm)	2010	<2.0	NA	<2.0	NA	Naturally occurring		
Sodium (ppm)	2010	5.4	NA	3.3	3.1–3.5	Sodium refers to the naturally occurring salt present in the water		

¹We 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.

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.