

Oroville District

2006 Water Quality Report



Your Water Quality Report

At California Water Service Company (Cal Water), we are committed to supplying you with high-quality water. We are pleased to provide this annual water quality report, which includes information about where your water comes from, what it contains, and how it compares to state and federal standards. It also explains the steps we take to protect your water supply.

We care about what you think. If you have any suggestions or concerns, please call us. Also, please watch for bill inserts, where you will find announcements of any water-related public meetings or workshops, as well as important information about your water.

Inside the Water Quality Lab

At Cal Water's multi-million-dollar, state-of-the-art laboratory in San Jose, California, it's the little things that count. Cal Water's chemists and microbiologists conduct more than 300,000 separate water quality tests every year, looking for organic and inorganic compounds in the water in quantities as small as parts per trillion — that's like looking for bad pennies in three football stadiums filled with coins.

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

Our scientists examine water samples that are carefully shipped to the lab from sampling stations throughout Cal Water's systems to ensure that your water meets or surpasses strict state and federal water quality standards.

Because protecting our customers' health and safety is our highest priority, Cal Water staffs its lab with some of the best scientists in the water industry. The entire laboratory operation is fully certified by the California Environmental Laboratory Accreditation Program — one of the toughest certifications to achieve in the country.

You might not have thought much about Cal Water's water quality laboratory, but the scientists in the lab have thought about your water. Every drop of it.



How to Read This Table

We test your water for more than 100 regulated contaminants. **The table in this report lists only those that were detected.**

The table shows water quality test results divided into two main sections: “primary standards” and “secondary standards.” Primary standards protect public health by limiting the levels of contaminants in drinking water. Secondary standards are limits for substances that could affect the water’s taste, odor, or appearance.

Where Your Water Comes From

Cal Water has provided high-quality water utility services in Oroville since 1927. Most of the water we provide to our customers is surface water from the west branch of the Feather River, which is processed at our treatment plant. This surface water supply is supplemented by local groundwater produced by our four wells. Our system includes 52 miles of pipeline, two storage tanks, and six booster pumps. We may also utilize a connection with Thermalito Irrigation District during emergencies or treatment plant maintenance to provide water to our customers. Cal Water proactively maintains and upgrades its facilities to ensure a reliable, high-quality supply.

What About Fluoride?

Fluoride is a safe, effective way to prevent tooth decay, and adding fluoride to water provides these benefits without changing the water’s taste, smell, or appearance. Some fluoride is naturally present in water, but Cal Water adds additional fluoride to your water as well.

Water fluoridation is strongly supported by local, state, and national health agencies — including the American Medical Association, American Dental Association, California Department of Health Services, and Centers for Disease Control — and over 65% of the largest cities in the United States currently have fluoridated drinking water.

Some children take prescription supplements to help them get enough fluoride. Because your water is fluoridated, you should not give your children fluoride supplements. Check with your doctor or dentist for more information.

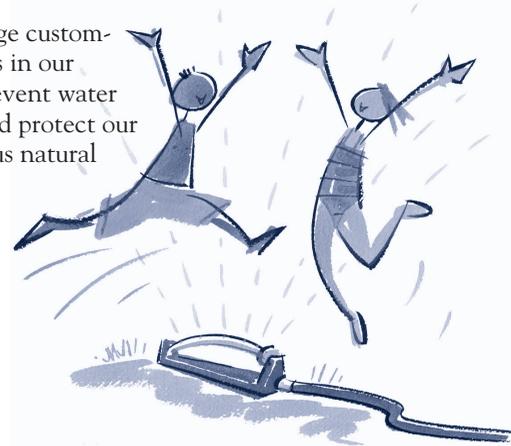
Want to know more? For general information on water fluoridation, visit us online at www.calwater.com.

Drinking Water Source Assessment and Protection Program (DWSAPP)

By the end of 2002, Cal Water had submitted to the California Department of Health Services a DWSAPP report for each water source in the water system. The DWSAPP report identifies possible sources of contamination to aid in prioritizing cleanup and pollution prevention efforts. All reports are available for viewing or copying at our Customer Center.

The water sources in your district are considered most vulnerable to existing and historic gas stations, known contaminant plumes, underground storage tanks, wastewater, dry cleaners, utility stations (maintenance areas), chemical/petroleum processing, plastics/synthetics producers, grazing, agricultural drainage, and managed forests.

We encourage customers to join us in our efforts to prevent water pollution and protect our most precious natural resource.



2006 Water Quality Report

PRIMARY DRINKING WATER STANDARDS										
INORGANIC CHEMICALS	Year Tested	Unit	MCL	PHG (MCLG)	Violation	Groundwater		Surface Water		Source of Substance
						Range	Average	Result or Range	Average	
Arsenic	2004–2006	ppb	10	0.004	No	ND–1	0.5			Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Chromium	2004–2006	ppb	50	(100)	No	ND–6	2.5			Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride ¹	2004–2006	ppm	2	1	No	0.2–1.2	0.9	0.2–1.2	0.9	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as nitrate)	2006	ppm	45	45	No	6–17	13			Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
	Year Tested	Unit	MCL	PHG (MCLG)	Violation	Highest Level	Lowest Monthly Percent	Highest Level	Lowest Monthly Percent	Source of Substance
Turbidity ²	2006	NTU	TT	n/a	No	N/A	N/A	0.5	98%	Soil runoff
ORGANIC CHEMICALS										
Tetrachloroethylene (PCE)	Year Tested	Unit	MCL	PHG	Violation	Range	Average	Range	Average	Source of Substance
	2004–2006	ppb	5	0.1	No	ND–1.2	0.5			Discharge from factories, dry cleaners, and auto shops (metal degreaser)
DISINFECTION BY-PRODUCTS (DBP)										
Total Trihalomethanes (THM)	Year Tested	Unit	MCL	PHG (MCLG)	Violation	Range	Highest Annual Average	Range	Highest Annual Average	Source of Substance
	2006	ppb	80	n/a	No	16–21	21	16–21	21	By-product of drinking water chlorination
Total Haloacetic Acids (HAA)	Year Tested	Unit	MCL	PHG	Violation	Range	Average	Range	Average	Source of Substance
	2006	ppb	60	n/a	No	12–33	29	12–33	29	By-product of drinking water chlorination
DISINFECTANT AND DBP PRECURSOR										
Chlorine	Year Tested	Unit	MRDL	MRDLG	Violation	Range	Average	Range	Average	Source of Substance
	2006	ppm	4	4	No	0.3–1.3	0.9	0.3–1.3	0.9	Drinking water disinfectant added for treatment
Total Organic Carbon ³	Year Tested	Unit	MCL	PHG	Violation	Range	Average	Range	Average	Source of Substance
	2006	ppm	TT	n/a	No	n/a	n/a	0.5–1.1	0.8	Various natural and man-made sources
OTHER REGULATED SUBSTANCES										
METALS										
Copper	Year Tested	Unit	AL	PHG	Violation	90th Percentile	# of Samples Exceeding AL	Level Detected	# of Samples Exceeding AL	Source of Substance
	2004	ppm	1.3	0.17	No	0.3	1 of 31	0.3	1 of 31	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
SECONDARY DRINKING WATER STANDARDS AND UNREGULATED COMPOUNDS										
INORGANIC CHEMICALS										
	Year Tested	Unit	SMCL	PHG (MCLG)	Violation	Range	Average	Result or Range	Average	Source of Substance
Boron ⁴	2004–2006	ppm	NL=1	n/a	No	1.2–1.7	1.3			Erosion of natural deposits
Calcium	2004–2006	ppm	n/a	n/a	No	25–36	30	8.7		Erosion of natural deposits
Chloride	2004–2006	ppm	500	n/a	No	9–44	25	3		Erosion of natural deposits; seawater influence
Color	2004–2006	Units	15	n/a	No	ND–5	2	5		Naturally occurring organic matter
Magnesium	2004–2006	ppm	n/a	n/a	No	16–20	18	4		Erosion of natural deposits
Odor	2004–2006	Units	3	n/a	Yes	ND–1	0.5	1–4	2	Naturally occurring organic matter
pH	2004–2006	Units	n/a	n/a	No	7.5–8.0	7.8	7.4–8.0	7.8	Inherent characteristic of water
Sodium	2004–2006	ppm	n/a	n/a	No	20–57	35	5		Erosion of natural deposits; seawater influence
Specific Conductance	2004–2006	µS/cm	1600	n/a	No	320–576	443	90		Erosion of natural deposits; seawater influence
Sulfate	2004–2006	ppm	500	n/a	No	11–67	39	2		Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	2004–2006	ppm	1000	n/a	No	222–358	285	72		Runoff/leaching from natural deposits
Total Hardness	2004–2006	ppm	n/a	n/a	No	138–164	151	37		Erosion of natural deposits
Turbidity (groundwater)	2004–2006	NTU	5	n/a	No	ND–0.5	0.2			Soil runoff

Notes

1 Fluoride is added to Oroville's water supply.

2 For surface water systems, the Treatment Technique dictates that the turbidity level of the filtered water is less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time. Turbidity is a measurement of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

3 Total Organic Carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection by-products. These by-products include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these by-products in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of cancer.

4 A sample collected at one well (Well 10-01) on 1/27/2004 had a level of 1.7 ppm, which is above the NL for Boron. The Mayor and City Council were notified on 8/9/2004.

Definitions

Public Health Goal (PHG): 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 Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG): 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. Environmental Protection Agency.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as are economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

µS/cm = measure of specific conductance

n/a = not applicable

ND = none detected

NTU = nephelometric turbidity unit

pCi/L = picoCuries per liter (measure of radioactivity)

ppb = parts per billion (micrograms per liter)

ppm = parts per million (milligrams per liter)

SMCL = secondary maximum contaminant level

Maximum Residual Disinfectant Level Goal (MRDLG): 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. Environmental Protection Agency.

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

Notification Level (NL): A health-based advisory level for an unregulated contaminant in drinking water. It is used by DHS to provide guidance to drinking water systems.

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

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

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

Potential Sources of Contamination

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap and bottled) 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 human activity. Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, which 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.

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, the U.S. Environmental Protection Agency (USEPA) and the State Department of Health Services (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, which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people, such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly people, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/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 Drinking Water Hotline at (800) 426-4791.

Questions? Answers!

Is bottled water safer than tap water?

Tap water and bottled water both must meet strict water quality standards, but tap water is subject to more frequent testing and higher reporting standards. Bottled water is generally not better quality than what comes out of your tap, but it can cost \$2 or more per gallon. An average Cal Water customer could get 1,000 gallons of tap water for that same \$2.

Why do Cal Water employees occasionally open fire hydrants?

This is a process known as “flushing.” It is done periodically to remove sediment or sand from the water lines and ensure that water circulates adequately throughout the system. Fire hydrants may also be opened to conduct fire-flow capability tests.

How does dirt or sand get in my water?

Dirt or sand can occur naturally in groundwater or as a result of a water line repair. Flushing reduces the instances of dirt and sand in the water.

What causes an odor in my hot water?

If you detect an odor in your hot water that is not present in your cold water, you may need to adjust, flush, or repair your water heater. Check with the manufacturer for details. If you detect an odor in both the hot and cold water, inform your local Customer Center.

Why does my water have a milky or cloudy appearance?

This is usually caused by air bubbles in the water, which pose no health risk. If the water is allowed to sit, the air will dissipate and the water will clear. If it does not, inform your local Customer Center.



1905 High Street
Oroville, CA 95965-4938
(530) 533-4034
www.calwater.com

Should I buy a home filtration unit?

According to the United States Environmental Protection Agency, home treatment units are rarely necessary for health reasons — they are most often used to improve the aesthetic qualities of the water. If you choose to install a home treatment unit, be sure to follow the manufacturer’s maintenance instructions. Improperly maintained units can actually cause water quality problems. For example, carbon filters can grow bacteria if they are not changed as recommended.

Why does the taste of my water change throughout the year?

In some of our service areas, water sources change at certain times of the year due to the availability of supplies. Surface water, or water that comes from sources like rivers and lakes, tends to taste slightly different than water pumped from underground aquifers. Water from all sources must meet the same rigorous standards.

What causes color in the water?

Colored water is usually caused by naturally occurring organics and metals such as manganese. These typically do not pose a health hazard, but you should report any instances of colored water to your local Customer Center.

If you have any questions, please contact Tony Carrasco, District Manager, at (530) 533-4034.

Water Hardness

Water is considered soft if total hardness is less than 75 ppm, moderately hard at 75 to 150 ppm, hard at 150 to 300 ppm, and very hard at 300 ppm or higher. To convert the hardness of your water from parts per million to grains per gallon, simply divide by 17.1.

Water’s hardness varies with its source. Hard water is not harmful to health, so the choice to buy a water softener is an aesthetic one. However, people on low-sodium diets should be aware that many water softeners increase the sodium content of the water.