

Antelope Valley District

2007 Water Quality Report for Leona Valley



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.

Water: The Key to Life

Water quality is more than just a collection of test results and government regulations. It's a measure of health and security, because water touches every aspect of your life.

You are what you drink. On average, some 60 to 70 percent of a person's body weight is water, and that water is replenished as you take in liquid throughout the day. Even when you're drinking coffee, soda, or juice, most of what you are drinking is water. Water is also used to make our food. It takes more than 600 gallons of water to produce a single hamburger, and many fruits and vegetables are 80 or 90 percent water.

The water a farmer uses to irrigate crops may come from the same source as the water in your sink, shower, dishwasher, and washing machine. Water is used in many other industries as well. Factories use water to cool machinery, run steam turbines, and control chemical reactions, and high-pressure water is even used as a cutting tool. Water is also used to make the concrete that forms sidewalks and building foundations.

One of water's key characteristics is its flexibility. It can be boiled to cook spaghetti, or made into ice to chill a glass of lemonade. It can fight a fire, steam-clean a carpet, and fill a fish tank. The water that washes your car also washes a doctor's hands before surgery.

Water is used for health, for work, for play. We rely on it from the moment we wake up to the moment we go to sleep. Its sound soothes; its taste refreshes. Truly, it is life's key ingredient.



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

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

We serve approximately 1,450 customer connections in our Fremont Valley, Grand Oaks, Lancaster, Lake Hughes, and Leona Valley water systems. On July 1, 2007, Cal Water took over ownership of the Grand Oaks system. Previously, we served customers and maintained the Grand Oaks system through an operating contract.

The water we provide in Leona Valley is supplied by two active groundwater wells and purchased surface water imported by the Antelope Valley-East Kern Water Agency (AVEK) from the State Water Project in northern California. The Leona Valley system also includes four storage tanks and three booster pumps. Cal Water proactively maintains and upgrades its facilities to ensure a reliable, high-quality supply.

In 2007, AVEK temporarily shut down supply to the Leona Valley system for approximately one week. Through tremendous effort and coordination with AVEK and Los Angeles County Water Works, Cal Water was able to maintain water pressure and supply to the system thanks to re-activation of existing Leona Valley wells, water wheeled from our Lancaster system, and conservation efforts by all our Leona Valley customers.

Drinking Water Source Assessment and Protection Program (DWSAPP)

The possible contaminating activities present within the California Aqueduct watershed are described in the State Water Project Watershed Sanitary Survey conducted by the California Department of Water Resources and their consultants in 1986 and updated in 2001.

The California Aqueduct originates at the Sacramento-San Joaquin Delta at Clifton Court Forebay. Water in the Delta originates in the Sacramento River watershed, the San Joaquin watershed, and the watershed drainage from the Mokelumne River, Stanislaus River, Merced River, and several smaller rivers that drain the eastern slopes of the Sierra Nevadas. Located in these drainage areas are a broad variety of potential sources of contamination including municipal, industrial, and agricultural activities. Also influencing the quality of water pumped from the Delta is the impact of the estuarial nature of the Delta and the naturally occurring salt-water intrusion which is dependent to a large extent on the inflow from the contributing rivers.

A copy of the complete assessment may be viewed at:

Antelope Valley-East Kern Water Agency
6500 West Avenue N
Palmdale, CA 93551

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

2007 Water Quality Report

PRIMARY DRINKING WATER STANDARDS										
						Groundwater		Purchased Surface Water		
RADIOLOGICAL	Year Tested	Unit	MCL	PHG (MCLG)	Exceeded Standard?	Range	Average	Range	Average	Source of Substance
Gross Alpha Particle Activity	2007	pCi/L	15	(0)	No	ND–3.1	1.9	n/a		Erosion of natural deposits
Uranium	2007	pCi/L	20	0.43	No	1.4–1.6	1.5	n/a		Erosion of natural deposits
INORGANIC CHEMICALS	Year Tested	Unit	MCL (SMCL)	PHG	Exceeded Standard?	Range	Average	Range	Average	Source of Substance
Aluminum	2007	ppm	1 (0.2)	0.6	No	ND–0.12	0.03	ND–0.11	ND	Erosion of natural deposits; residue from some surface water treatment processes
Barium	2007	ppm	1	2	No	0.04–0.11	0.07	ND		Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride	2007	ppm	2	1	No	0.15–0.92	0.42	ND		Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrate) ¹	2007	ppm	45	45	No	3.9–35.6	19.7	3.9		Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
	Year Tested	Unit	MCL	PHG (MCLG)	Exceeded Standard?	Highest Level	% < 0.3 NTU	Highest Level	% < 0.3 NTU	Source of Substance
Turbidity (surface water requiring filtration) ²	2007	NTU	TT	n/a	No	n/a		0.24	100%	Soil runoff
ORGANIC CHEMICALS	Year Tested	Unit	MCL	PHG	Exceeded Standard?	Range	Average	Range	Average	Source of Substance
Toluene	2007	ppb	150	150	No	ND–1.1	0.3	ND		Discharge from petroleum and chemical factories; underground gas tank leaks
DISINFECTION BY-PRODUCTS	Year Tested	Unit	MCL	PHG (MCLG)	Exceeded Standard?	Range	Highest Annual Average	Range	Highest Annual Average	Source of Substance
Total Haloacetic Acids (HAAs) ³	2007	ppb	60	n/a	No	8.7–31.6	22.6	8.7–31.6	22.6	By-product of drinking water chlorination
Total Trihalomethanes (THMs) ³	2007	ppb	80	n/a	No	36.6–110	70	36.6–110	70	By-product of drinking water chlorination
DISINFECTANT AND DBP PRECURSOR	Year Tested	Unit	MRDL	MRDLG	Exceeded Standard?	Range	Average	Range	Average	Source of Substance
Chlorine	2007	ppm	4	4	No	0.2–0.9	0.6	0.2–0.9	0.6	Drinking water disinfectant added for treatment
Total Organic Carbon (TOC) ⁴	2007	ppm	TT	n/a	No	0.8		0.9–2.6	1.6	Various natural and manmade sources
OTHER REGULATED SUBSTANCES										
METALS	Year Tested	Unit	AL	PHG (MCLG)	Exceeded Standard	Level Detected (90th Percentile)	Samples >AL	Level Detected (90th Percentile)	Samples >AL	Source of Substance
Copper	2005	ppm	1.3	0.17	No	0.73	0 of 10	0.73	0 of 10	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)	Exceeded Standard?	Range	Average	Range	Average	Source of Substance
Calcium	2007	ppm	n/a	n/a	No	63–114	78.3	24		Erosion of natural deposits
Chloride	2007	ppm	500	n/a	No	34–108	55	79		Erosion of natural deposits; seawater influence
Chromium VI (Hexavalent Chromium)	2007	ppb	n/a	n/a	No	ND–2	1	n/a		Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Color	2007	Units	15	n/a	No	ND–2	0.3	ND–2	0.3	Naturally occurring organic matter
Hardness	2007	ppm	n/a	n/a	No	240–330	282.5	94		Erosion of natural deposits
Iron	2007	ppb	300	n/a	No	ND–130	8.4	n/a		Leaching from natural deposits; industrial wastes
Magnesium	2007	ppm	n/a	n/a	No	7–28	20.7	8.3		Erosion of natural deposits
Manganese	2007	ppb	50	n/a	No	ND–6.6	0.5	n/a		Leaching from natural deposits
Odor	2007	Units	3	n/a	No	ND–2	0.6	ND–2	0.6	Naturally occurring organic matter
Sodium	2007	ppm	n/a	n/a	No	31–206	84.5	63		Erosion of natural deposits; seawater influence
Specific Conductance	2007	µS/cm	1600	n/a	No	720–1460	1025	326–654	492	Erosion of natural deposits; seawater influence
Sulfate ⁵	2007	ppm	500	n/a	No	56–514	179.8	60		Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS) ⁵	2007	ppm	1000	n/a	No	450–1100	627.5	290		Runoff/leaching from natural deposits
Turbidity (groundwater)	2007	NTU	5	n/a	No	ND–0.72	0.2	n/a		Soil runoff
Zinc	2007	ppm	5.0	n/a	No	ND		0.26		Runoff/leaching from natural deposits; industrial wastes

Notes

¹Of the two groundwater wells being pumped in the system, the average nitrate level was 19.7 ppm (1 ppm = 1 mg/L), with a maximum level of 35.6 ppm detected in 2007. We are closely monitoring the nitrate concentrations in the wells. Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant or you are pregnant, you should seek advice from your health care provider.

²For surface water systems, the Treatment Technique (TT) dictates that the turbidity level of the filtered water shall be 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 measure of the cloudiness of the water and is an indicator of treatment performance. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

³Compliance with the MCLs for total haloacetic acids (HAAs) and total trihalomethanes (THMs) are based on running annual averages that may include some higher readings from 2006. Data reported in the range column is from 2007 only. Drinking water containing HAAs or THMs in excess of their respective MCLs may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of cancer.

⁴Total organic carbon (TOC) has no health effects; however, TOC provides a medium for the formation of disinfection by-products. These by-products include THMs and 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. Concerns regarding disinfection by-products are based upon exposure over many years.

⁵Sulfate and total dissolved solids (TDS) were detected above the Secondary Maximum Contaminant Level (SMCL) in one sample collected from one of the two active groundwater wells in the system. In a subsequent sample from this well (Well 1-01), sulfate and TDS were below their respective SMCLs. SMCLs are established for various compounds to protect you against unpleasant aesthetic effects, such as color and taste. Exceeding SMCLs for these compounds does not pose a health risk.

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.

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 the California Department of Public Health 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.

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

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 storm-water 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 storm-water 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 storm-water runoff, agricultural application, 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 California 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, 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 from their health care providers about drinking water. USEPA/Centers for Disease Control and Prevention (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. Although bottled water is generally not better quality than what comes out of your tap, 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 sometimes 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?

Sediment can occur naturally in groundwater or as a result of a water line repair. Flushing reduces the instances of sediment in the water.

What causes white particles in the water?

Calcium and other substances can build up in water lines, home plumbing, and water heaters. If you notice white particles in your water, or if your pressure is lower than usual, check your faucet aerators for buildup. It is also important to maintain your water heater as directed by the manufacturer.

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, contact your local Customer Center.

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.

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.

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 during 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, may taste slightly different than water pumped from underground aquifers. Water from all sources must meet the same rigorous standards.

If you have any questions, please contact Chris Whitley, Local Manager, at (800) 680-1160.



5015 West Avenue L-14, Unit 2
Quartz Hill, CA 93536
(661) 943-9001
www.calwater.com