

2005

Water Quality Report



Water Quality Report for 2005

In 1996, the United States Congress amended the Safe Drinking Water Act requiring water providers to deliver an annual Water Quality Report to their consumers. The report is intended to provide you, the consumer, with information regarding the quality of your drinking water. In addition, the report is intended to illustrate some of the challenges faced in delivering safe drinking water to a variety of consumers. Cucamonga Valley Water District (CVWD) is committed to keeping its consumers informed, you are encouraged to read this report in its entirety. Informed consumers are more likely to help protect their drinking water supplies and understand the true costs associated with providing the water they depend on.

Water quality is Cucamonga Valley Water District's highest priority. Our team of professionals works diligently to safeguard the water supplied to our consumers ensuring that it meets all federal and state drinking water standards. As a result of CVWD's continued commitment to deliver the highest quality water possible, we are pleased to report that we had no water quality violations during 2005.

Cucamonga Valley Water District

CVWD is a public corporation that was formed in 1955 by local voters under the provisions of Division 12 of the County Water District Section of the State Water Code. CVWD provides water service to the City of Rancho Cucamonga, portions of the cities of Upland, Ontario and Fontana, plus some unincorporated areas of San Bernardino County. CVWD is one of the leading water suppliers in the region thanks to innovative technologies used for treating water and the District's leadership in dealing with both regional and statewide water issues. CVWD has approximately 47,000 water connections and serves a population of approximately 170,000 within a 47 square mile area.

Drinking Water Sources

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. 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 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, that are byproducts 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 the result of oil and gas production and mining activities.

In order to ensure tap water is safe to drink, the United States Environmental Protection Agency and the California 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 that must provide the same protection for public health.





CVWD's Water Sources

The water furnished to CVWD's consumers comes from several sources including - surface water imported from Northern California, groundwater pumped from local aquifers, and a combination of waters collected from canyons and tunnels along the local mountains.

- **Imported Surface Water** – (*Surface Water is water on the earth's surface including creeks, streams, rivers, and lakes*)

The majority, fifty-one percent, delivered to the District's consumers in 2005 was imported from Northern California. CVWD purchases water delivered from Northern California via the State Water Project. This water is treated at the District's Lloyd W. Michael and Royer Nesbit Water Treatment Plants. The treated water flows into storage reservoirs and then into the distribution system.

- **Groundwater** – (*Ground Water is water below the earth's surface typically in subterranean lakes called aquifers*)

Thirty-eight percent of the water delivered by the District in 2005 was ground water pumped from the Cucamonga and Chino Basin aquifers located hundreds of feet below the earth's surface. The water is pumped up through a system

of wells, disinfected, and goes directly into enclosed reservoirs. Upon demand, the water either flows by gravity or is pumped from the reservoirs into the distribution system.

- **Local Canyon and Tunnel Water** – (*A combination of both surface and ground waters*)

The remaining eleven percent of the water delivered last year was supplied by local surface and tunnel water sources. These sources include Cucamonga Canyon, Deer Canyon, Day Canyon, East Etiwanda Canyon, and a number of tunnels in the local San Gabriel Mountains. After treatment, the finished water is stored in enclosed reservoirs ready for distribution to consumers.

Contamination Vulnerability of CVWD's Water Sources

CVWD conducts a source water assessment every five years to determine the contamination vulnerabilities of the District's water resources, the latest assessment was completed in December of 2002. Our sources are considered vulnerable to contamination from activities associated with past citrus agriculture, sewer collection systems, leaking or improper disposal of petroleum products, and recreation activities on or near water supplies.

A copy of the complete assessment is available at the California Department of Health Services district office located at 464 West 4th Street, Suite 437, San Bernardino, CA 92401 or the Cucamonga Valley Water District at 10440 Ashford Street, Rancho Cucamonga, CA 91730. You may request a summary of the assessment by contacting the California Department of Health Services district engineer at (909) 383-4328 or the Cucamonga Valley Water District at (909) 987-2591.

How Your Water Is Treated & Tested

Cucamonga Valley Water District uses state-of-the-art technologies to treat and test the water served to its consumers. The District operates a total of three water treatment facilities which must meet surface water treatment regulations established by the United States Environmental Protection Agency and the California Department of Health Services. These facilities are staffed by professional Water Treatment Plant Operators certified by the California Department of Health Services.

Before, during, and after treatment, CVWD staff collects and analyzes samples of water every four hours, twenty-four hours a day, seven days a week, to ensure customers are provided with the highest quality water. In addition to the routine testing performed at the treatment plants, the water throughout the distribution system is analyzed weekly for disinfectant residuals, microbial content, and other chemical contaminants of concern. Thousands of other tests are conducted throughout the year to ensure your water meets all federal and state regulations.

About Your Water

Last year CVWD collected over 40,000 water samples which were analyzed for more than 170 different contaminants. Only contaminants that were detected are included in the tables provided. If a contaminant is not listed, it was not detected. The data reported in the tables is compiled from analyses performed in 2005, except where noted.

Table 1 lists contaminants regulated by **Primary Drinking Water Standards**. These standards control contaminants that have been determined to pose a risk to health. Compliance with drinking water standards is generally determined by the average level of a contaminant. In the event a single sample exceeds the Maximum Contaminant Level (MCL), a series of repeat samples are analyzed and the results are averaged to determine compliance. In an effort to keep our consumers informed, this report contains both the detected range, which in some instances may exceed the MCL, and the average, demonstrating compliance.

Table 2 lists contaminants regulated by **Secondary Drinking Water Standards**. Generally, these standards have been developed to address the aesthetic properties of drinking water. In addition to constituents regulated by secondary standards, we have included data regarding Sodium and Hardness, which may be of interest to consumers.

Table 3 contains data on contaminants that are **Unregulated**. In an effort to identify new contaminants and their possible health effects, the federal and state environmental and health agencies, along with local drinking water providers, continually monitor and study the occurrence and potential impact of new contaminants as they relate to drinking water. The data reported in this table is compiled from analyses performed in 2001, 2002, 2003, and 2004, as required by state and federal regulations.

Table 1 - Contaminants Regulated by Primary Drinking Water Standards

Contaminant	units	Primary MCL [MRDL]	PHG (MCLG) [MRDLG]	Detected Range (or as noted)	Average (or as noted)	Major Sources in Drinking Water
Inorganic & Organic						
Aluminum	ppm	1.0	0.6	0-0.07	0.01	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic	ppb	50	0.004	0-7.0	0.8	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Barium	ppm	1.0	2.0	0-0.12	0.01	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Dibromochloropropane (DBCP)	ppt	200	1.7	0-150	50	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes and tree fruit
Fluoride	ppm	2.0	1.0	0-0.5	0.2	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as NO ₃)	ppm	45	45	0-41	17	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radiological (Gross Beta data collected in 2001)						
Gross Alpha Particle Activity	pCi/L	15	0	0-8.7	1.3	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	50	0	0-32	1	Decay of natural and manmade deposits
Uranium	pCi/L	20	0.43	0-8.6	6.4	Erosion of natural deposits
Disinfectant, Disinfectant Byproducts, & Precursors						
Chlorine Residual	ppm	[4]	[4]	0.01-1.92	0.76	Drinking water disinfectant added for treatment
Total Trihalomethanes (TTHM)	ppb	80	-	0-95	33	Byproduct of drinking water chlorination
Haloacetic Acids (HAA5)	ppb	60	-	0-36	12	Byproduct of drinking water disinfection
Total Organic Carbon	ppm	TT	-	0.31-3.3	1.7	Various natural and manmade sources
Filtration Performance & Microbiological						
Turbidity (Filtered Surface Water)	As Indicated	TT	-	100% (minimum % <0.3 NTU)	0.22 NTU (maximum)	Soil runoff. Turbidity is a measure of the cloudiness of the water; it is a good indicator of the effectiveness of our filtration systems
Total Coliform	% Positive	Less Than 5%	(0)	0-0.8	0.8 (maximum)	Naturally present in the environment
Lead & Copper						
Lead	ppb	15 (Action Level)	2	0.0 (90th percentile value)	(Zero samples exceeded AL)	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits
Copper	ppm	1.3 (Action Level)	0.17	0.1 (90th percentile value)	(Zero samples exceeded AL)	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Table 2 - Contaminants Regulated by Secondary Drinking Water Standards (plus Sodium and Hardness)

Contaminant	units	Secondary MCL	Detected Range	Average	Major Sources in Drinking Water
Aluminum	ppb	200	0-69	4	Erosion of natural deposits; residual from some surface water treatment processes
Chloride	ppm	500	0-17	6	Runoff/leaching from natural deposits; seawater influence
Foaming Agents (MBAS)	ppb	500	0-56	0.004	Municipal and industrial waste discharges
Odor Threshold at 60 deg C	TON	3	1-1	1	Naturally-occurring organic materials
Specific Conductance	micromhos	1600	190-570	340	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	0-47	23	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	120-390	224	Runoff/leaching from natural deposits
Turbidity (Ground Water)	NTU	5	0.1-0.7	0.2	Soil runoff
Sodium	ppm	-	0-37	19	n/a
Total Hardness (as CaCO ₃)	ppm	-	86-260	140	Note: Average Total Hardness level in grains per gallon is 8.2ppg (divide ppm by 17.1)

Table 3 - Unregulated Contaminants

Contaminant	units	Notification Level (Proposed MCL)	Detected Range	Average	Suspected Health Effects
Boron	ppb	1000	0-120	4	Some men who drink water containing boron in excess of the notification level over many years may experience reproductive effects, based on studies in dogs
Chromium VI	ppb	-	0-6.9	1.7	The health effects of low doses of hexavalent chromium injected through drinking water are still being examined
Perchlorate	ppb	6	0-0	0	Some people who drink water containing perchlorate in excess of the notification level may experience effects associated with hypothyroidism. Perchlorate interferes with the production of thyroid hormones, which are required for normal pre- and postnatal development in humans, as well as normal body metabolism
Radon	pCi/L	300	0-410	85	The health effects of Radon are discussed elsewhere in this report
Vanadium	ppb	50	0-47	16	The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals

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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

KEY TERMS:

Below are terms that may assist consumers in understanding this report:

- **(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 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. Environmental Protection Agency.
- **(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 Environmental Protection Agency.
- **(MRDL)** Maximum Residual Disinfectant Level: The level of a disinfectant added for water treatment that may not be exceeded at the consumer'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. MRDLs are set by the U.S. Environmental Protection Agency.
- **Primary Drinking Water Standard or (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring, reporting, and water treatment requirements.
- **Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.
- **Notification Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

ppm - parts per million or milligrams per Liter (mg/L).

ppb - parts per billion or micrograms per Liter (ug/L).

ppt - parts per trillion or nanograms per Liter (ng/L).

pCi/L - Picocuries per Liter, a measure of radioactivity.

TON - Threshold Odor Number: A number indicating the greatest dilution of a water sample.

TT - Treatment Technique.

NTU - Nephelometric Turbidity Unit: The cloudiness in a water sample.

micromhos - Unit of electrical conductance.

Contaminants Requiring Special Consideration

Certain contaminants pose more risk than others. Additionally, certain groups or individuals may be at more risk than others. The following information details contaminants we believe deserve special consideration, enabling consumers to make informed decisions regarding their drinking water.

Nitrate

As a result of underground septic systems and past agricultural uses within our service area, our groundwater may contain considerable levels of nitrate. CVWD operates a strict and extensive monitoring program to ensure the nitrate levels in the District's drinking water supply never exceed the maximum contaminant level of 45 parts per million (ppm). Nitrate in drinking water at levels above 45 ppm 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 serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 ppm 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 ask advice from your health care provider.

Radon

Through the course of monitoring our water we have found traces of radon in some of our groundwater supplies. Radon is a radioactive gas found throughout the United States that you can not see, taste, or smell. Radon can move up through the ground and into a home through cracks and holes in the foundation. It can also get into indoor air when released from tap water containing radon. Compared to radon entering the home through soil, radon entering the home through tap water will, in most cases, be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. If the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher, you may consider making the necessary repairs. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your State radon program or call EPA's Radon Hotline (1-800-SOS-RADON).

Arsenic

While your drinking water meets the current standard for arsenic, it does contain low levels of arsenic. The standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The California Department of Health Services continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.



Special Precautions

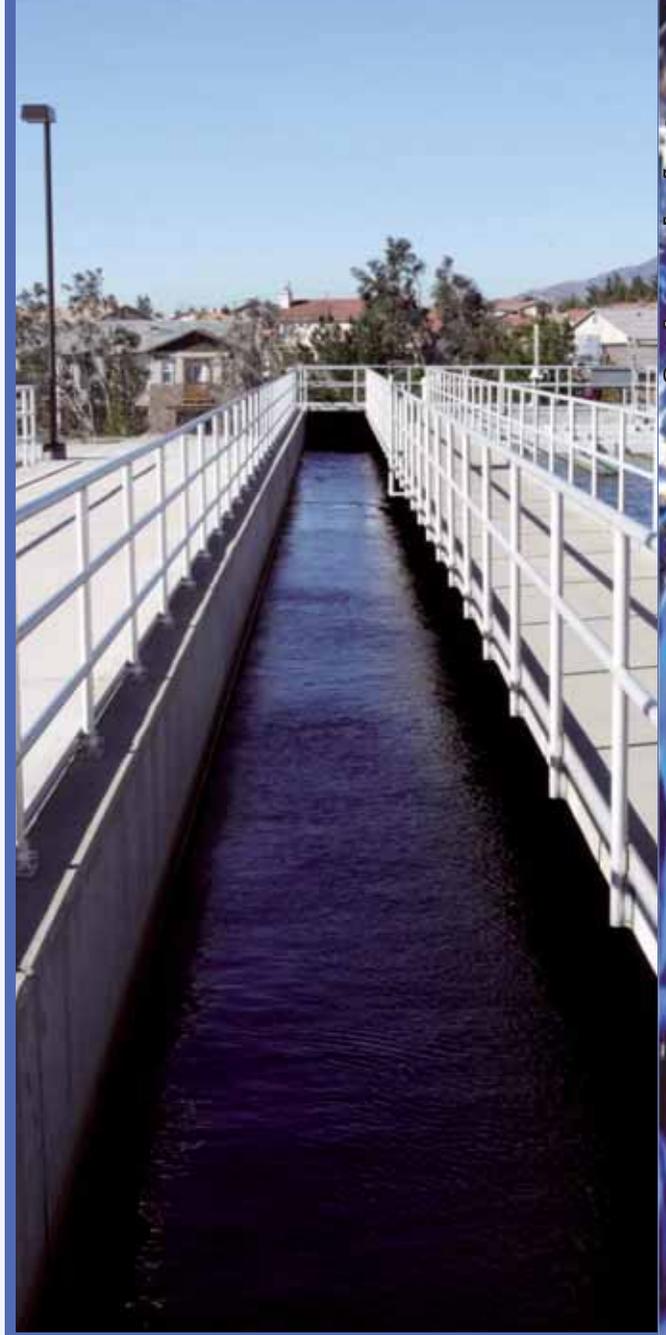
Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants 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 (1-800-426-4791).

Stay Informed

The Cucamonga Valley Water District encourages its customers to become more informed about their water district. If you would like to learn more, please attend any one of our regularly scheduled Board meetings which are held on the 2nd and 4th Tuesday of each month at 6:00 p.m. Board meetings are held at the District office located at 10440 Ashford Street, Rancho Cucamonga. Meeting agendas can be found on our website at www.CVWDwater.com.

For More Information

If you have any questions regarding this report, please contact J.R. Rivas, Water Quality Specialist at (909) 987-2591.



Come join the Cucamonga Valley Water District's

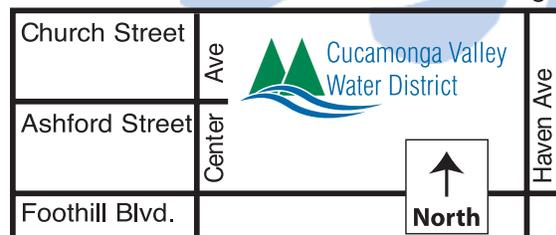
Water Awareness Celebration

The California Water Awareness Campaign is a year-long effort by water agencies throughout California to heighten public awareness of water conservation, management, water supply, water quality and distribution. The campaign focuses on the month of May each year with the observance of Water Awareness Month.

Water Awareness Month Activities:

- Poster Contest Award Ceremony – May 9th at 6PM
 - Water Awareness Day – May 13th 11AM – 2PM
- Located at the CVWD Operations Facility

CVWD
10440 Ashford Street, Rancho Cucamonga



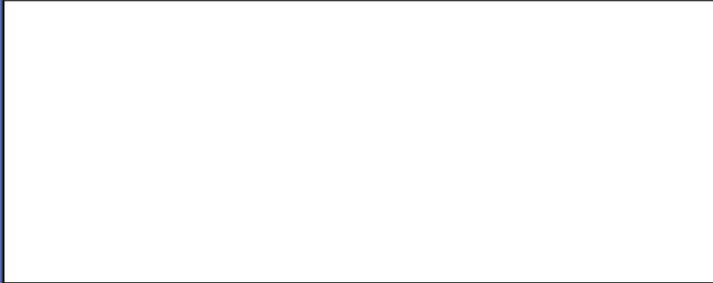
for more information call (909) 987-2591



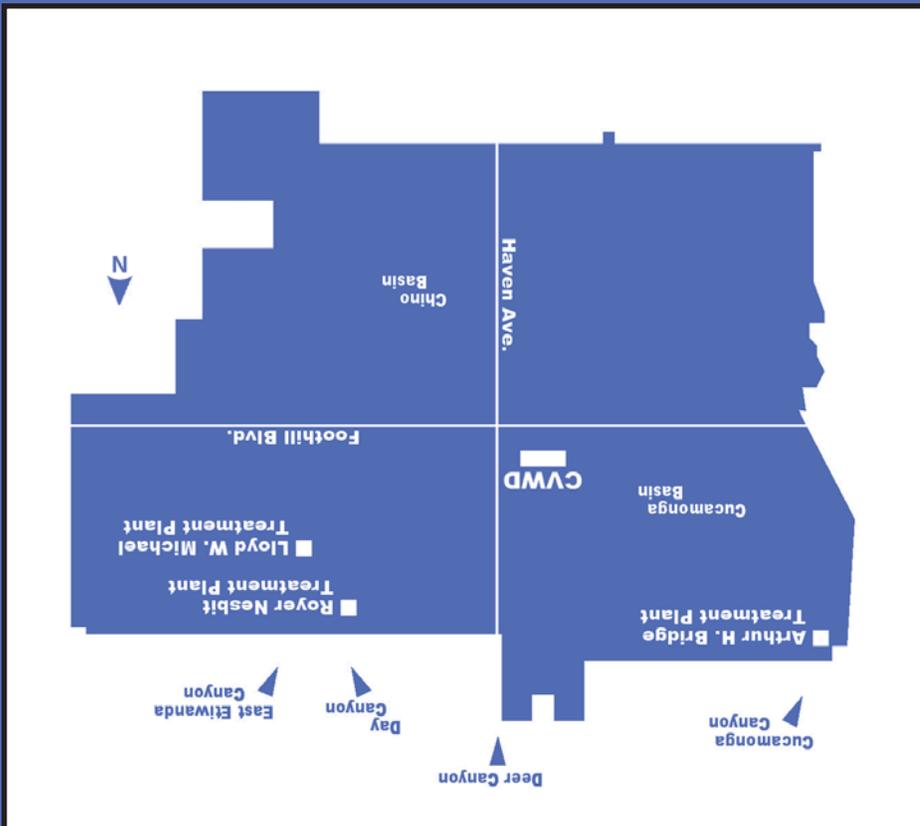
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Water District

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NOTICIA IMPORTANTE
Este informe contiene informacion muy importante sobre su agua de beber. Traduzcalo o hable con alguien que lo entienda bien.