Cucamonga Valley Water District

2010 Water Quality Report

Dear Consumers,

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 and safe delivery of your drinking water. CVWD is pleased to report there were no water quality violations during 2010.

CVWD provides water service to the City of Rancho Cucamonga, portions of the cities of Upland, Ontario and Fontana, plus an unincorporated area of San Bernardino County. CVWD has approximately 47,000 water connections and serves a population of approximately 180,000 residents and businesses. CVWD's sole purpose is to provide high quality, safe and reliable water and wastewater services, while practicing good stewardship of natural and financial resources.

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 drinking water to our community. CVWD is committed to develop, strengthen and acquire water resources which will ensure the reliability of future water supplies for the next generation of customers.

Sincerely,

Cucamonga Valley Water District Board of Directors

CVWD 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**: is water on the earth's surface, including creeks, streams, rivers, and lakes. Forty-three percent, of the water delivered to CVWD's consumers in 2010 was imported from Northern California. CVWD purchases water delivered from Northern California via the State Water Project. This water is treated at CVWD's Lloyd W. Michael water treatment plant. The treated water flows into storage reservoirs and then into the distribution system.
- **Groundwater**: is water below the earth's surface typically in subterranean lakes called aquifers. Forty-nine percent of the water delivered by CVWD in 2010 was groundwater 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.
- **Local Canyon and Tunnel Water**: is a combination of both surface and groundwater. Eight percent of the water delivered in 2010 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. This water is treated at CVWD's Arthur H. Bridges or Royer Nesbit water treatment plants.

Your Drinking Water Sources

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.

- Contaminants that may be present in source drinking 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 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 that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
  - ✓ Radioactive contaminants that 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 (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Contamination Vulnerability of CVWD's Water Sources

In 2003, CVWD completed a source water assessment to determine the contamination vulnerabilities of CVWD's water resources. Our sources are considered vulnerable to contamination from activities associated with former citrus agriculture, sewer collection systems, leaking or improper disposal of petroleum products, and recreation activities on or near water supplies.

You may request a summary of the assessment by contacting the California Department of Public Health sanitary engineer for CVWD at (909) 383-4328 or CVWD at (909) 987-2591.

How Your Water is Treated and Tested

CVWD 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 that must meet surface water treatment regulations established by the EPA and the CDPH. These facilities are staffed by professional Water Treatment Plant Operators certified by the CDPH.

Before, during, and after treatment, CVWD staff members collect and analyze 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 routine testing performed at the treatment plants, water throughout the distribution system is analyzed weekly for disinfectant residuals and bacteriological content. Thousands of other tests are conducted throughout the year to ensure your water meets all federal and state regulations

About Your Water

In 2010, CVWD collected more than 40,000 water samples that 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 in 2010. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though represented, is more than one year old. The data reported in each table is compiled from analyses performed in 2010, except where noted.

Table 1 lists contaminants regulated by **Primary Drinking Water Standards**. These standards have been developed to 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 is 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 not regulated.

Table 1 - Contaminants Regulated by **Primary Drinking Water Standards**
Groundwater sampled in 2008/Surface water sampled 2010

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	0-0.09	0	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic	ppb	10.0	0.004	0-3.5	0.3	Erosion of natural deposits; runoff from orchards, glass and electronic production wastes
Dibromochloropropane	ppt	200	1.7	0-150	40	Banned nematocide that may still be present in soils due to leaching from former agriculture uses
Fluoride	ppm	2.0	1.0	0.1-0.7	0.3	Erosion of natural deposits
Nitrate (as NO_3)	ppm	45	45	0-30	13.5	Runoff and leaching from fertilizer use; erosion of natural deposits
Selenium	ppb	50	(30)	0-36	0.9	Discharge from petroleum, glass, and metal refineries, erosion of natural deposits, discharge from mines and chemical manufacturers, runoff from livestock lots. (feed additive)
Disinfectant, Disinfectant Byproducts & Precursors						
Chlorine Residual	ppm	[4]	[4]	0.0-1.72	0.7	Drinking water disinfectant added for treatment
Total Trihalomethanes	ppb	80	NA	0-120	50	Byproduct of drinking water chlorination
Haloacetic Acids	ppb	60	NA	0-35	14.7	Byproduct of drinking water disinfection
Total Organic Carbon	ppm	TT	NA	0.35-2.8	1.3	Various natural and manmade sources
Filtration Performance & Microbiological						
Cryptosporidium (source Water) 2008	oocystsL	TT	0	0-0.1	0	Naturally present in the environment. Greater than 99% of cryptosporidium is removed during treatment
Turbidity	As Indicated	TT	NA	100% (minimum % < 0.3NTU)	0.12 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 system
Total Coliform	% positive	Less than 5%	(0)	0-0.8	0.8 (maximum)	Naturally present in the environment
Lead & Copper measured at the consumers tap in 2009						
Lead	ppb	15 (Action Level)	0.2	0.0 (90th percentile value)	(0 of 51 samples exceeded AL)	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits
Copper	ppm	1.3 (Action Level)	0.3	0.2 (90th percentile value)	(0 of 51 samples exceeded AL)	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Radioactive Contaminants						
Total Alpha	pCi/L	15	(0)	0-3.5	0.3	Erosion of natural deposits

Table 2 - Contaminants Regulated by **Secondary Drinking Water Standards**
(plus Sodium and Hardness)
Groundwater sampled in 2008/Surface water sampled 2010

Contaminant	Units	Secondary MCL	Detected Range	Average	Major Sources in Drinking Water
Aluminum	ppb	200	0-87	25	Erosion of natural deposits; residual from some surface water treatment processes
Apparent color Unfiltered	Units	15	0-10	0.02	Naturally-occurring organic material
Chloride	ppm	500	2-90	10	Runoff/leaching from natural deposits; seawater influence
Copper	ppb	1000	0-650	21	Internal corrosion of household plumbing systems: erosion of natural deposits
Iron	ppb	300	0-710	22	Leaching from natural deposits; industrial wastes
Odor Threshold at 60 deg C	TON	3	1-2	1	Naturally occurring organic materials
Sodium	ppm	NA	4-73	19	"Sodium" refers to the salt present in the water and is generally naturally occurring
Specific Conductance	micromhos	1600	240-600	324	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	5.2-52	19	Runoff/leaching from natural deposits; industrial wastes
Total Alkalinity (as $CaCO_3$)	ppm	NA	100-160	137	
Total Dissolved Solids	ppm	1000	136-360	223	Runoff/leaching from natural deposits
Turbidity	NTU	5	0-3.1	0.1	Refer to Turbidity in Table 1
Total Hardness (as $CaCO_3$)	ppm	NA	79-190	133	Leaching from natural deposits. Note: Average Total Hardness level in grains per gallon is 8.2 gpg (divide ppm by 17.1)
Zinc	ppm	5000	0-53	1.4	Runoff/leaching from natural deposits; industrial wastes

Table 3 - Unregulated Contaminants
Groundwater sampled in 2008/Surface water sampled 2010

Contaminant	Units	Notification Level (Proposed MCL)	Detected Range	Average
Boron	ppb	1000	0-260	17
Chromium VI	ppb	NA	0-3.7	1.5
Vanadium	ppb	50	0-51	11.5

KEY TERMS:
Below are terms to assist consumers in understanding this report.

- **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 is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.
- **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.
- **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 Residual Disinfectant Level (MRDL):** 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
- **Maximum Residual Disinfectant Level Goal (MRDLG):** 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.
- **Primary Drinking Water Standard (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring, reporting and water treatment requirements.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

ppm - parts per million or milligrams per Liter (mg/L). Equivalent to: one second in eleven days and 16 hours.

ppb - parts per billion or micrograms per Liter (ug/L). Equivalent to: one second in thirty two years.

ppt - parts per trillion or nanograms per Liter (ng/L). Equivalent to: one second in three hundred twenty centuries.

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

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

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 and certain groups or individuals may be at greater risk than others. The following information defines contaminants that deserve special consideration, to help consumers make informed decisions regarding their drinking water.

Nitrate
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 ask advice from your health care provider.

Cryptosporidium
Cryptosporidium is a microbial pathogen found in surface water throughout the United States. CVWD operates its treatment plants in accordance with a Cryptosporidium Action Plan prescribed by CDPH in an effort to remove cryptosporidium from finished drinking water. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and may be spread through means other than drinking water.

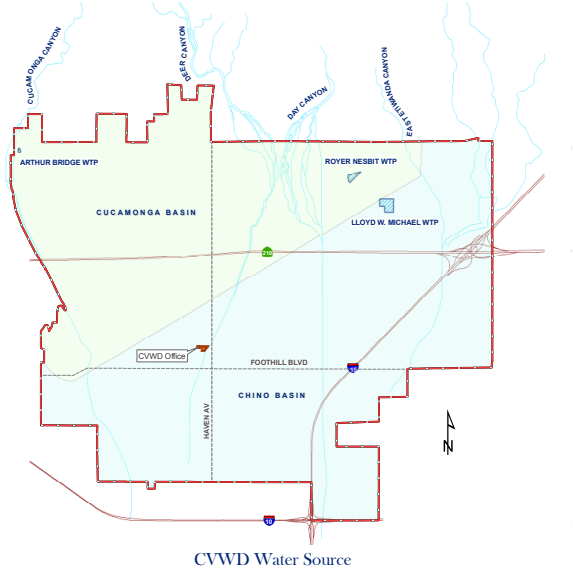
More Information Available
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

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
CVWD encourages customers to stay informed by attending 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 CVWD office located at 10440 Ashford Street, Rancho Cucamonga. Meeting agendas can be found on the CVWD website at www.cvwdwater.com.

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

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



CVWD Water Source