

Water Quality

Coachella Valley residents drinking high quality water

At the Coachella Valley Water District, Water Quality staff members make it their top priority to ensure that your drinking water meets all federal and state water quality standards. These highly trained employees collect and test drinking water, review the latest scientific studies on water contaminants and monitor government action to change drinking water standards.

The Coachella Valley Water District is governed by a locally elected board of directors, who normally meet in public session at 9 a.m. on the second and fourth Tuesdays of each month at the district's Coachella office at Avenue 52 & Highway 111.

This annual report documents the extremely high quality of water served to all Coachella Valley Water District's water users.

All domestic water served by the Coachella Valley Water District is obtained locally from wells drilled into the Coachella Valley's vast groundwater basin.

Most water quality testing is performed in the district's state-certified laboratory. A few highly specialized tests are performed by other laboratories.

In addition to the detected constituents listed in the table on the following pages, CVWD's water quality staff monitors for more than 100 other regulated and unregulated chemicals. All of these are below detection levels in CVWD's domestic water.

While all of CVWD's domestic water supply meets current requirements, drinking water supplied to some service areas does contain low levels of arsenic. The standard for arsenic balances the current understanding of the chemical's possible health effects against the costs of removing this naturally occurring element 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.

With respect to the presence of arsenic in drinking water in excess of 10 ug/L but less than 50 ug/L — which is the case for wells supplying the communities of Mecca, Bombay Beach, North Shore, Hot Mineral Spa and Valerie Jean — the state Department of Health Services warns that some people who drink

water containing arsenic in excess of the maximum contaminant level (MCL) over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Radon is a naturally occurring, radioactive gas — a by-product of uranium — that originates underground but is found in the air. Radon moves from the ground into homes primarily through cracks and holes in their foundations. While most radon enters the home through soil, radon from tap water typically is less than two percent of the radon in indoor air.

The federal Environmental Protection Agency (EPA) has determined that breathing radon gas increases an individual's chances of developing lung cancer, and has proposed a maximum contaminant level of 300 picoCuries per liter (pCi/L) for radon in drinking water. This proposed standard is far less than the 4,000 pCi/L in water that is equivalent to the radon level found in outdoor air. The radon level in district wells ranges from 80 to 360 pCi/L, significantly lower than that in the air you breathe.

Nitrate in drinking water at levels above 45 milligrams per liter (mg/L) is a health risk for infants younger than six months old. High 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 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 enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Groundwater nitrate is the most closely monitored chemical in drinking water and nitrate levels do not change quickly in the district's deep wells used to supply drinking water. If the nitrate level in a well begins to increase, CVWD increases its monitoring frequency and, if necessary, wells are taken out of service before they become unsafe.

As noted, all drinking water served by CVWD comes from

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“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 or www.epa.gov/safewater.”

—California Department of Health Services



Above: Coachella Valley Water District chemist Mike Stenzel, a 14-year employee, tests water using an Atomic Absorption Spectrometer in the water district's state-certified laboratory.

Far left: Trained laboratory technicians, such as Carlos Ceja, a 20-year employee, analyze water samples daily. CVWD analyzes more than 20,000 water samples annually in the district's laboratory and through outside sources to ensure your drinking water meets federal and state standards.

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wells. The California Department of Health Services requires water agencies to state, however, “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 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 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, 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 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. More information about contaminants and potential health effects can be obtained by calling the USEPA’s Safe Drinking Water Hotline (800-426-4791).”

The district has conducted source water assessments to provide information about the vulnerability of district wells to contamination. Those results are included here:

Cove Communities

An assessment of the drinking water sources for this water system was completed in November 2005. Water from wells serving this area is considered most vulnerable to the following activities associated with detected contaminants: known contaminant plumes, dry cleaners and irrigated crops.

In addition, water from wells serving this area is considered most vulnerable to the following activities not associated with any detected contaminants: known contaminant plumes, dry cleaners, underground storage tanks-confirmed leaking tanks, high density septic systems, automobile gas stations, historic gas stations, historic waste dumps/landfills, automobile repair shops, illegal activities/unauthorized dumping, sewer collection systems, pesticide/fertilizer/petroleum storage, transfer areas and utility stations' maintenance areas.

The Cove Community water system, consisting of 92 wells, is the district's largest system. It serves the communities of Rancho Mirage, Thousand Palms, Palm Desert, Indian Wells, La Quinta and portions of Bermuda Dunes, Cathedral City and Riverside County adjacent to these communities. The drinking water served to these communities complies with all drinking water standards.

Indio Hills, Sky Valley & areas adjacent to Desert Hot Springs

This assessment was completed in December 2002. Water from wells serving this area is considered most vulnerable to activities not associated with any detected contaminants. These are automobile repair shops, illegal activities/unauthorized dumping and low-density septic systems.

All four wells in the system are located in a rural area with a small amount of residential development. Although the possible contaminating activities listed exist, they occur in small numbers. The drinking water served to these communities complies with all drinking water standards.

Valerie Jean

This assessment was completed in October 2003. Water from wells serving this area is considered most vulnerable to high density septic systems, which are not associated with any detected contaminants.

The wells are located in an agricultural area with some small residential areas. The number of septic systems is small. Future development in the area is expected to include centralized sewer collection which will replace existing on-site sewage disposal facilities. The drinking water served to these communities complies with all drinking water standards.

Thermal

This assessment was completed in December 2002. Water from wells serving this area is considered most vulnerable to activities not associated with any detected contaminants. These are airport maintenance and fueling areas, agricultural drainage, illegal activities/unauthorized dumping, low density septic systems and irrigation wells.

The two wells in this system draw from a confined aquifer where the thickness of confining sediments is more than 170 feet. The drinking water served to these communities complies with all drinking water standards.

Desert Shores, Salton Sea Beach & Salton City

This assessment was completed in 2002. No identified activity other than well operations represents a threat to the wells serving this area.

All three wells are located in a remote area surrounded by desert with some agriculture in the outer zones. CVWD owns and maintains the wells. The drinking water served to these communities complies with all drinking water standards.

Mecca, Bombay Beach, North Shore & Hot Mineral Spa

This assessment was completed in December 2002. Water from wells serving this area is considered most vulnerable to activities not associated with any detected contaminants. These are agricultural drainage and sewer collection systems.

These wells are located within agricultural and residential areas and draw from a confined aquifer, where the thickness of confining sediments ranges from 100 feet to more than 400 feet. Drinking water served to these communities complies with all drinking water standards.

To receive a summary of the district's source water assessments, or for additional water quality data or clarification, readers are encouraged to call the district's Water Quality Division at (760) 398-2651.

Complete copies of source water assessments may be viewed at the Coachella Valley Water District office, 85-995 Avenue 52, Coachella, CA 92236.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien. También puede llamar al distrito de agua al número de teléfono (760) 398-2651.

Definitions & Abbreviations

AI or Aggressive Index — This is a measurement of corrosivity. Sources with AI values of 12 or greater are non-corrosive. AI values between 10 and 12 are moderately corrosive and AI values less than 10 are corrosive

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

MCL or Maximum Contaminant Level — The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to public health goals or maximum contaminant level goals as economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water

MCLG or Maximum Contaminant Level Goal — Level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the federal EPA

mg/L — Milligrams per liter (parts per million)

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

MRDLG or 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

NA — Not applicable

ND — None detected

ng/L — Nanograms per liter (parts per trillion)

NL or Notification Level — Health based advisory level established by the California Department of Health Services for chemicals in drinking water that lack maximum containment levels (MCLs) as stated by CDHS.

None — The government has not set a Public Health Goal or Maximum Contaminant Level for this substance.

NTU — Nephelometric turbidity units (measurement of suspended material)

pCi/L — picoCuries per liter

PHG or Public Health Goal — Level of a contaminant in drinking water below which there is no known or expected risk to health. Public Health Goals are set by the California Environmental Protection Agency

Primary Drinking Water Standard — Primary maximum contaminant levels and maximum residual disinfectant levels for contaminants that affect health, along with monitoring and reporting requirements

Secondary Drinking Water Standard — Based on aesthetics, these secondary maximum contaminant levels have monitoring and reporting requirements specified in regulations

ug/L — Micrograms per liter (parts per billion)

umhos/cm — Micromhos per centimeter

CVWD 2005 domestic water quality summary

CVWD analyzes more than 20,000 water samples annually to ensure that your drinking water meets state and federal standards. Every year, the district is required to analyze a select number of these samples for more than 100 regulated and unregulated substances. This chart lists those substances that were detected in the district's six service areas. Of these substances, 21 are state and federally regulated and six are not. The data on the chart summarizes results of the most recent monitoring completed between 1997 and 2005 and shows that CVWD continues to deliver high quality water that meets all water quality standards.

To read this chart: First, determine in which of the six service areas you live (columns 4-9). Then move down the column, comparing the detection level of each chemical or other contaminant with the Public Health Goal, Maximum Contaminant Level Goal and Maximum Contaminant Level (columns 2-3). For example, if you live in La Quinta and want to know the level of fluoride detected in your service area, you would look down the Cove Communities column and stop at the fluoride row. The average fluoride level in that service area is 0.6 mg/L with the range of results varying between 0.2 and 1.0 mg/L. Compare these values to the MCL in Column 3. The [2 mg/L] represents the highest level of fluoride allowed in drinking water. Since the values given for the service area are equal to or below 2 mg/L, the drinking water meets state and federal standards for fluoride.

Detected parameter, units	1	2	3	4	5	6	7	8	9	10
		PHG or (MCLG)	Primary or (secondary) MCL	Cove Communities ⁽¹⁾ Range (Average)	Indio Hills, Sky Valley & areas around Desert Hot Springs Range (Average)	Mecca, Bombay Beach, North Shore & Hot Mineral Spa Range (Average)	Desert Shores, Salton Sea Beach & Salton City Range (Average)	Valerie Jean Range (Average)	Thermal Range (Average)	Major Source(s)
Arsenic, ug/L	0.004	50	ND-5.0 (ND)	ND	ND	9.6-27 (17)	ND-2.1 (ND)	8.1-16 (12)	2.5-3.5 (3.0)	Erosion of natural deposits
Boron, mg/L ⁽²⁾	None	NL = 1.0	ND	ND	ND	ND	0.4	ND	ND	Erosion of natural deposits
Chloride, mg/L	None	(500)	6.6-47 (14)	13-21 (16)	7.6-11 (8.9)	200-250 (230)	7.6-11 (9.4)	7.5-17 (12)		Leaching from natural deposits
Chlorine (as Cl ₂), mg/L ⁽⁴⁾	MRDLG 4.0	MRDL 4.0	ND-1.0 (0.3)	0.07-0.5 (0.4)	ND-0.8 (0.2)	ND-2.2 (0.4)	ND-0.9 (0.4)	ND-1.1 (0.4)		Result of drinking water chlorination
Chromium, ug/L	(100)	50	ND-19 (ND)	13-18 (16)	ND	ND	ND	11-15 (13)	19-22 (20)	Erosion of natural deposits
Chromium VI, ug/L ⁽²⁾	None	None	1.5-18 (8.1)	9.1-19 (15)	ND-6.7 (2.2)	ND	ND	8.1-18 (13)	21-22 (22)	Erosion of natural deposits
Combined radium, pCi/L	(Zero)	5	ND-2 (ND)	ND	NA	NA	ND	NA	NA	Erosion of natural deposits
Copper, mg/L ⁽³⁾ [homes tested/ sites exceeding AL]	0.17	AL=1.3	0.14 [50/ 0]	0.11 [20/ 0]	ND	0.19 [13/ 0]	ND	ND	ND	Internal corrosion of household plumbing
Copper, mg/L	None	(1.0)	ND-0.08 (ND)	ND	ND	ND	ND	ND	ND	Leaching from natural deposits
Corrosivity, AI	None	(Non-corrosive)	11-13 (12)	12	12	12	12	12	12	Natural balance of hydrogen, carbon and oxygen
Electrical conductance, umhos/cm	None	(1,600)	230-730 (360)	580-750 (650)	220-250 (240)	1,400-1,500 (1,500)	230-240 (230)	260-300 (280)		Substances that form ions when in water
Fluoride, mg/L	1	2.0	0.2-1.0 (0.6)	0.5-0.8 (0.6)	0.8	0.2-1.4 (1.0)	0.7-0.8 (0.7)	0.6-1.1 (0.9)		Erosion of natural deposits
Gross alpha particle activity, pCi/L	(Zero)	15	ND-15 (ND)	ND-14 (7.8)	ND-3.8 (ND)	ND-7.8 (ND)	ND-4.2 (ND)	ND-9.6 (ND)		Erosion of natural deposits
Haloacetic acids, ug/L ⁽⁴⁾	None	60	ND	ND	ND	2.3	ND	ND		By-product of drinking water chlorination
Hardness (as CaCO ₃), mg/L	None	None	22-310 (120)	120-200 (170)	22-29 (27)	190-240 (220)	15-22 (20)	25-57 (41)		Erosion of natural deposits
Iron, ug/L	None	(300)	ND-110 (ND)	ND	ND-220 (ND)	ND-120 (ND)	ND-190 (ND)	ND		Leaching from natural deposits
Nitrate (as NO ₃), mg/L	45	45	ND-32 (7.0)	ND-6.2 (3.8)	ND	5.4-6.2 (5.8)	ND-2.0 (ND)	ND-3.2 (ND)		Leaching of fertilizer, animal wastes or natural deposits
Odor threshold, units	None	(3)	ND-1.0 (ND)	ND	ND	ND-1.0 (ND)	ND	ND		Naturally occurring organic materials
pH, units	None	None	7.2-8.3 (8.0)	7.7-8.0 (7.9)	7.4-8.1 (7.7)	7.7-8.2 (8.0)	7.2-8.7 (7.9)	7.7-8.0 (7.9)		Physical characteristic
Sodium, mg/L	None	None	6.1-56 (27)	58-81 (69)	35-42 (39)	200-230 (220)	40-42 (41)	37-50 (44)		Erosion of natural deposits
Sulfate, mg/L	None	(500)	13-160 (37)	150-210 (170)	28-34 (31)	200-300 (250)	20-24 (22)	28-32 (30)		Leaching from natural deposits
Tetrachloroethylene (PCE), ug/L	0.06	5	ND-1.3 (ND)	ND	ND	ND	ND	ND		Discharge from dry cleaners and auto shops
Total dissolved solids, mg/L	None	(1,000)	140-480 (220)	370-480 (420)	130-140 (130)	800-930 (880)	120-140 (130)	150-170 (160)		Leaching from natural deposits
Total trihalomethanes, ug/L ⁽⁵⁾	None	80	0.7-2.8 (1.8)	4.2	3.8	4.9	3	0.5		By-product of drinking water chlorination
Turbidity, NTU	None	(5)	ND-0.7 (ND)	ND	ND-0.5 (ND)	ND	ND-3.5 (1.2)	ND		Leaching from natural deposits
Uranium, pCi/L	0.43	20	ND-12 (3.7)	ND-11 (5.2)	ND-2.6 (ND)	ND-5.2 (2.5)	ND-5.0 (2.5)	3.0-3.1 (3.1)		Erosion of natural deposits
Vanadium, ug/L ⁽²⁾	None	NL=50	ND-39 (12)	5.8-24 (12)	ND-17(7.2)	15-18 (17)	26-42 (34)	22-25 (24)		Erosion of natural deposits

Footnotes

⁽¹⁾ Includes the communities of Rancho Mirage, Thousand Palms, Palm Desert, Indian Wells, La Quinta and portions of Bermuda Dunes, Cathedral City and Riverside County.

⁽²⁾ Unregulated contaminants are those for which EPA and the California Department of Health Services have not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist both regulatory agencies

in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

⁽³⁾ Reported values are 90th percentile levels for samples collected from faucets in water user homes. No sample exceeded the regulatory action level.

⁽⁴⁾ The reported average represents the highest running annual average based on distribution system monitoring.