



CARMICHAEL WATER DISTRICT 2008 Water Quality

Consumer Confidence Report

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

This report contains important information about your drinking water. Please translate it or speak with someone who understands it.

A copy of the complete Source Water Assessment is available for inspection at the Carmichael Water District office, 7837 Fair Oaks Blvd., Carmichael, CA, 95608. You may request a summary of the assessment be sent to you by contacting General Manager, Steve Nugent at (916) 483-2452.

www.carmichaelwd.org

Testing Program Shows Carmichael Water District Drinking Water is Safe and Healthy

Demonstrating its commitment to public health protection and the public's right-to-know about local environmental information, the U.S. Environmental Protection Agency (EPA) and California Department of Public Health (CDPH) requires water suppliers to provide annual drinking water quality reports to its customers. This publication summarizes the most recent testing and includes a comparison of detectable constituents in your drinking water against established federal and state standards.

This year's report concludes that, once again, your drinking water meets all federal and state drinking water standards.

Where Does Our Water Come From?

Carmichael Water District's (District) 43,000+ customers receive approximately 90 percent of their water from the American River (surface water) and 10 percent from District groundwater wells. The water is tested for more than 200 constituents on a daily, weekly, monthly, and/or annual basis. Water samples are subject to the most up-to-date testing methods and then are re-tested for accuracy. Samples are then measured against state and federal standards to ensure quality.

The CDPH requires water providers to conduct a Source Water Assessment to help protect the quality of future water supplies. This assessment describes where a water system's drinking water comes from, the types of polluting activities that may threaten source water quality and an evaluation of the water's vulnerability to those threats.

Groundwater and Surface Water Assessment

To meet the CDPH requirements and provide our customers with information about our water supply, the District completed its surface source water assessment and its groundwater source assessment in 2008.

The results indicate that our surface water source (the American River) is considered most vulnerable to contamination from sewer system spills, body contact recreation, urban runoff and discharge of regulated and unregulated contaminants. The contaminants to which the surface water sources are considered most vulnerable include the following:

- Perchlorate, nitrosodimethylamine (NDMA) and volatile organic chemicals discharged into the American River by the Aerojet General Corporation. Aerojet is under the joint regulatory oversight of the EPA, California Department of Toxic Substance Control and the California Regional Water Quality Control Board.

The groundwater sources are considered most vulnerable to contamination from illegal activities and unauthorized dumping, sewer collection systems, dry cleaners, automobile repair shops, chemical/petroleum pipelines, electrical/electronic manufacturing, underground storage tanks and gas stations. The contaminants to which groundwater sources are considered most vulnerable from contaminants detected in the water supply include the following:

- Liquid rocket fuel (NDMA)
- Rocket fuel propellant (Perchlorate)
- Dry cleaning solvent (PCE)
- Gas stations/gasoline additive (MTBE)

What's In Our Water?

Drinking Water – 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 at (800)426-4791.

Drinking Water Contaminants – the sources of drinking water (both tap 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.

In order to ensure that tap water is safe to drink, the EPA and 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 must provide the same protection for public health.

Contaminants that may be present in source water (pre-treated 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 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 source such as agriculture, urban storm water 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 storm water runoff and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

Sodium and Hardness:

Sodium is a naturally occurring chemical element that is present in our source water. The level of sodium measured during 2008 was 3.0 ppm from our surface water source and an average of 10.7 ppm from our groundwater source.

Hardness of the water in our system depends on your location within the District and the season due to the source of supply. The level of hardness measured during fall and winter of 2008 was 26 ppm which classifies the water in the “soft” category based on water quality standards. During spring and summer 2008 when we supplement with groundwater, the hardness ranges from 26 ppm to 150 ppm depending on your location within the District. The increase in groundwater will classify the water between “soft” and “hard”.

The District has taken hundreds of water samples in order to detect detected constituents. The intent is to give you an idea of where the CDPH and the EPA.

Constituent	Unit Measurement	MCL	PHG/ (MCLG)
Detected Primary Drinking Water Constituents			
Microbiological Constituents			
Total Coliform Bacteria	% of monthly positive samples	5%	(zero)
Turbidity, percent of time less than .1 NTU (MCL for surface only) ^(a)	NTU	TT = 95% Of sample < .1	NONE
Turbidity, maximum level found (a)	NTU	TT=1.0 NTU	None
Inorganic Constituents			
Aluminum	ppm	1	0.6
Arsenic	ppb	10	0.004
Barium	ppm	1	2
Fluoride	ppm	2	1
Nitrate(as nitrite, NO3)	ppm	45	45
Organic Constituents			
Tetrachloroethylene[PCE]	ppb	5	0.06
Detected Secondary Drinking Water Constituents (regulated for aesthetic quality)			
Iron	ppb	300	None
Manganese	ppb	50	None
Total Dissolved Solids	ppm	1000	None
Specific Conductance	micromhos	1600	None
Chloride	ppm	500	None
Sulfate	ppm	500	None
Other Unregulated Constituents of Interest			
Sodium	ppm	None	None
Calcium	ppm	None	None
Magnesium	ppm	None	None
Hardness	ppm	None	None
Lead and Copper (Sampled 2005)			
Lead	ppb	15	2
Copper	ppm	1.3	0.17
Organic Samples from the Distribution System			
TTHMs [total trihalomethanes] (b)	ppb	80	None
HAA5 [haloacetic acids] (b)	ppb	60	None

(a) Only surface water sources must comply with PDWS for turbidity (b) Based on the running annual average

How to Read the Table:

1. Identify constituent in the left column.
2. Compare the detection range and average to the Maximum Contaminant Level (MCL) and the Public Health Goal/Maximum Contaminant Level Goal (PHG/MCLG).

determine the presence of any constituents. This is a table of the District stands with regard to water quality standards set by

Groundwater Range	Groundwater Average	Surface Water	Typical Sources
zero	N/A	<.01%	Naturally present in the environment
N/A	N/A	100%	Soil runoff
.19-.74	0.39	0.03	Soil runoff
N/D	N/D	0.074	Erosion of natural deposits; runoff from some surface water treatment processes
N/D-2.5	0.63	N/D	Erosion of natural deposits; runoff from orchards
N/D-.13	0.05	N/D	Erosion of natural deposits
N/D-.14	0.09	N/D	Erosion of natural deposits
N/D-18	9	N/D	Runoff and leaching from fertilizer use; leaching from septic tanks; erosion of natural deposits
N/D-2.7	1.15	N/D	Discharge from factories, dry cleaners and auto shops (metal degreaser)
ties)			
N/D-120	30	100	Leaching from natural deposits; industrial waste
N/D-20	8.3	17	Leaching from natural deposits
120-240	183	53	Runoff/leaching from natural deposits
140-350	240	70	Substances that form ions when in water
4.0-20	9.0	2.6	Runoff/leaching from natural deposits
5.5-12	9.0	2.9	Runoff/leaching from natural deposits; industrial wastes
7.2-15	10.7	3.0	Naturally occurring salt in the water
11-32	21	6.7	Erosion of natural deposits
6.8-17	12.5	2.3	Erosion of natural deposits
55-150	105	26	The sum of polyvalent cations present, generally naturally occurring magnesium and calcium
N/D	Zero		Internal corrosion of household plumbing systems
0.14	Zero		Internal corrosion of household plumbing systems
Range: 5.5-11.1	Average: 8.3		By-product of drinking water chlorination
Range: 2.7-10.2	Average: 5.3		By-product of drinking water chlorination

Legend:

- MCL = Maximum Contaminant Level
- MCLG = Maximum Contaminant Level Goal
- N/A = Not applicable
- N/D = Analyzed; not detected
- NTU = Nephelometric Turbidity Unit
- PHG = Public Health Goal
- PPB = Parts per Billion
- PPM = Parts per Million
- TT = Treatment Technique

Water Quality Measurement Units:

Micromhos – a measure of the ability of water to conduct electricity.

Nephelometric Turbidity Units (NTU) – A measure of water’s clarity. Turbidity in excess of 5 NTU is just noticeable to the average person.

None Detected (ND) – a detection of the contaminant was not found at or above the test detection limit in the samples taken.

Parts per billion (PPB) – a measurement of the concentration of a substance roughly equivalent to one drop in one of the largest tanker trucks used to haul gasoline or one part in 1,000,000,000.

Parts per million (PPM) – a measurement of the concentration of a substance roughly equivalent to 4 drops in 55 gallons or one part in 1,000,000.

Definitions:

Maximum Contaminant Level (MCL) – the highest concentration level of a contaminant that is allowed by the state of California in drinking water. Primary MCLs are set as close to the public health goals and maximum contaminant level goals as 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.

Primary Drinking Water Standards (PDWS) – maximum contaminant levels for contaminants that affect health.

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.

Secondary Drinking Water Standards (SDWS) – maximum contaminant levels for contaminants that affect taste, odor or appearance of the drinking water. Contaminants with secondary drinking water standards do not affect health at the MCL levels.

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

View the entire 2008 Water Quality Report of all constituents tested at www.carmichaelwd.org. For more water quality information or to have a copy of the annual report mailed to you, contact the District office at 483-2452.

CARMICHAEL WATER DISTRICT

2008 Water Quality

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Special Information for Sensitive Populations

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 the 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 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as cancer patients undergoing chemotherapy, people 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. EPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available by calling the Safe Drinking Water Hotline at (800)426-4791.