CARMICHAEL WATER DISTRICT

2007 Water Quality

Consumer Confidence Report

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 years 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 75 percent of their water from the American River (surface water) and 25 percent from District groundwater wells. With the Bajamont Water Treatment Plant expansion project complete, the District should provide customers with 85 percent surface water and 15 percent groundwater by the end of 2008. 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.

To meet the CDPH requirements and provide our customers with information about our water supply, the District completed its surface source water assessment in May 2003 and its groundwater source assessment in July 2003.

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, nitrosomodimethylamine (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) and Gas stations/gasoline additive (MTBE)

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

Information You Should Know

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 2007 was 2.8 ppm from our surface water source and an average of 12.6 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 2007 was 24 ppm which classifies the water in the "soft" category based on water quality standards. During spring and summer 2007 when we supplement with groundwater, the hardness ranges from 24 ppm to 210 ppm depending on your location within the District. The increase in groundwater will classify the water between "soft" and "very hard".

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).

Legend:
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
MF/L = Million Fibers per Liter
N/A = Not applicable
N/D = Analyzed; not detected
N/S = No standard
NTU = Nephelometric Turbidity Unit
PCi/L = picoCuries per Liter
PHG = Public Health Goal
PPB = Parts per Billion
PPM = Parts per Million
PPT = Parts per Trillion
TT = Treatment Technique

Water Quality Measurement Units:

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

No Standard (NS) – a standard has not yet been established.

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.

Parts per trillion (PPT) – a measurement of the concentration of a substance roughly equivalent to one drop in a 12-million-gallon reservoir or 1 part in 1,000,000,000,000.

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.

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. EPQ/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.

The District has taken hundreds of water samples in order to determine the presence of any constituents. This is a table of detected constituents. The intent is to give you an idea of where the District stands with regard to water quality standards set by the CDPH and the EPA.

Detected Primary Drinking Water Constituents

Constituent	Unit Measurement	MCL	PHG/ (MCLG)	Groundwater	Groundwater Average	Surface Water	Typical Sources
Microbiological Constituents							
Total Coliform Bacteria	% of monthly positive samples	5%	(zero)	zero	N/A	zero	Naturally present in the environment
Turbidity, percent of time less than .1 NTU (MCL for surface only)(a)	NTU	TT = 95% 0f sample < .1	NONE	N/A	N/A	100%	Soil runoff
Turbidity, maximum level found (a)	NTU	TT=1.0 NTU	NONE	1.5	N/A	0.04	Soil runoff
Inorganic Consituents							
Aluminum	ppb	1	0.6	N/D	N/D	0.057	Erosion of natural deposits; runoff from some surface water treatment processes
Arsenic orchards	ppb	10	0.004	N/D-3.2	1.52	N/D	Erosion of natural deposits; runoff from
Barium	ppm	1	2	.026-.16	0.09	N/D	Erosion of natural deposits
Chromium	ppb	50	(100)	2.2-10	5.12	N/D	Erosion of natural deposits
Fluoride	ppm	2	1	N/D-.19	0.08	N/D	Erosion of natural deposits
Mercury(inorganic)	ppb	2	1.2	N/D-.42	0.08	N/D	Erosion of natural deposits; runoff from landfills and cropland
Nitrate(as nitrite, NO3)	ppm	45	45	N/D-26	8.3	N/D	Runoff and leaching from fertilizer use; leaching from septic tanks; erosion of natural deposits
Perchlorate (c)	ppb	6	6	N/D-2.8	N/A	N/D	Chemical used in solid rocket propellant, fireworks, explosives, flares and matches
Organic Constituents							
Tetrachloroethylene[PCE]	ppb	5	0.06	N/D-2.7	0.91	N/D	Discharge from factories, dry cleaners and auto shops (metal degreaser)

Detected Secondary Drinking Water Contituents (regulated for aesthetic qualities)

Iron	ppb	300	NONE	N/D-92	40	0.088	Leaching from natural deposits; industrial waste
Manganese	ppb	50	NONE	N/D-72	27.9	0.016	Leaching from natural deposits
Zinc	ppm	5	NONE	N/D-.014	0.006	N/D	Runoff/leaching from natural deposits
Total Dissolved Solids	ppm	1000	NONE	110-350	208	35	Runoff/leaching from natural deposits
Specific Conductance	micromhos	1600	NONE	107-506	277	58	Substances that form ions when in water
Chloride	ppm	500	NONE	2.6-36	13.8	4.1	Runoff/leaching from natural deposits
Sulfate	ppm	500	NONE	4.3-26	12.5	5.4	Runoff/leaching from natural deposits; industrial wastes
Other Unregulated Constituents of Interest							
Sodium	ppm	NONE	NONE	6.6-27	12.6	2.8	Naturally occurring salt in the water
Calcium	ppm	NONE	NONE	10-44	22	6.3	Erosion of natural deposits
Magnesium	ppm	NONE	NONE	8.6-25	12.1	2	Erosion of natural deposits
Hardness	ppm	NONE	NONE	50-213	105	24	The sum of polyvalent cations present in the water, generally naturally occurring magnesium and calcium

Constituent	Unit Measurement	AL	PHG	90th Percentile	Number of sites exceeding AL out of 35 sites	Typical Sources
Lead and Copper (Sampled 2005)						
Lead	ppb	15	2	N/D	Zero	Internal corrosion of household plumbing systems
Copper	ppm	1.3	0.17	0.083	Zero	Internal corrosion of household plumbing systems
Organic Samples from the Distribution System						
TTHMs [total trihalomthanes] (distribution system) (b)	ppb	80	NONE	Range: 5.5 - 10.3 Average: 7.5		By-product of drinking water chlorination
HAA5 [haloacetic acids] (distribution system) (b)	ppb	60	NONE	Range: 3.4 - 4.6 Average: 3.8		By-product of drinking water chlorination

(a) Only surface water sources must comply with PDWS for turbidity (b) Based on the running annual average (c) Perchlorate was detected in one active groundwater well

Detected Constituents Notes:

The secondary MCL for manganese was exceeded in a single well sample. The MCL for manganese is set to protect against unpleasant aesthetic effects such as color, taste, odor, and staining of laundry and plumbing fixtures. A manganese sample exceeding the MCL does not pose a health risk.

Perchlorate was detected in a single active well site. The sample did not exceed the PHG of 6 ppb. Perchlorate is both a naturally occurring and man-made chemical. Most of the perchlorate manufactured in the U.S. is used as the primary ingredient of solid rocket propellant.

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Este informe coniene informacion muy importante sobre su squa potable.

Traduzcalo o hable con alguien que to entienda bien.

This report contains important information about your drinking water.

Please translate it or speak with someone who understands it.