

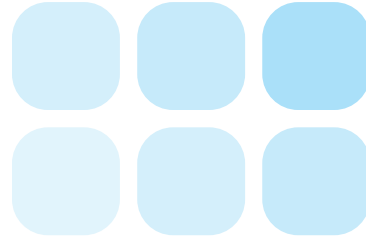


Carlsbad Municipal Water District
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 Carlsbad, CA



2006 Water Quality Report



Carlsbad Municipal Water District

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



Quality



The Carlsbad Municipal Water District is providing this report to customers as an overview of how your potable water is delivered and how the City works to ensure that the highest quality is achieved.

This report includes information about the quality of the water delivered to Carlsbad Municipal Water District customers in 2005.

Clean Environment

Clean waterways not only provide recreational opportunities for us and habitat for animals and plants, but also add beauty to our natural landscape. Everyone benefits from clean water and plays a role in keeping our creeks, lagoons, and ocean clean.

Water Quality

One of the most important environmental issues today is prevention of storm water run-off.

Did you know that storm drains are not connected to sanitary sewer systems and treatment plants? The primary purpose of storm drains is to carry rain water away from developed areas to prevent flooding. Untreated storm water and the pollutants it carries flow directly to creeks, lagoons, and the ocean.

Storm water pollution comes from a variety of sources including oil, fuel, and fluids from vehicles and heavy equipment, lawn clippings, pesticide, and fertilizer runoff from landscaping, concrete and sediment from construction and landscaping activities, bacteria from human and animal waste, and litter.

The City of Carlsbad is committed to improving water quality and reducing the amount of pollutants that enter our precious waterways.

Storm water protection is a shared duty between the City of Carlsbad and the community. The City monitors and cleans storm drains on public streets, property, or easements. The community's role is to keep our storm drains free of trash, debris, excessive vegetation, and other materials that may pollute, contaminate, or block the flow of water through the storm drain system.

What You Can Do To Help

1. Sweep or Rake

Sweep up debris and put it in a trash can. Do not use a hose to wash off sidewalks, parking areas, and garages. Rake up yard waste and start a compost pile.

2. Dispose of Yard Waste More Frequently

By disposing of grass, leaves, shrubs, and other organic matter more frequently, less will wash into storm drains.

3. Reduce Use of Landscape Chemicals

Decrease the use of lawn and garden care products such as pesticides, insecticides, weed killers, fertilizers, herbicides, and other chemicals. Avoid over-irrigation which washes landscape chemicals into the gutter and storm drains.

4. Use Soap Sparingly

When washing your car at home use soap sparingly, divert wash water to landscaped areas, and pour your bucket of soapy water down the sink. NEVER wash your car in the street.

5. Clean Up After Your Pets

Take a bag when you walk your pets and be sure to always clean up after them. Flush pet waste down the toilet or seal it in a plastic bag and throw it in the trash.

6. Buy Non-Toxic Products

When possible, use non-toxic products in household cleaning. If you must use a toxic cleaning product, buy small quantities, use it sparingly and properly dispose of unused portions. For the household hazardous waste collection facility nearest you, call: (800) CLEANUP or (760) 602-4646.



Conserve

The Carlsbad Water Ethic promotes responsible and efficient water use in our Community. If Carlsbad residents adopt these behaviors as a way of life, there will be plenty of clean water for generations to come.

- New landscaping shall incorporate drought-tolerant plant materials and micro-irrigation (drip) systems wherever possible.
- Water can never leave the user's property due to over-irrigation of landscape.
- Watering must be done during the early morning or evening hours to minimize evaporation (between 4:00 pm and 9:00 am the following morning).
- All leaks must be investigated and repaired.
- Water cannot be used to clean paved surfaces, such as sidewalks, driveways, parking areas, etc., except to alleviate immediate safety or sanitation hazards.
- Reclaimed or recycled water shall be used wherever and whenever possible.

For more information on water conservation programs, call: (760) 602-4646.

Supply

Since there are no local sources of fresh drinking water, CMWD imports all of its water supply. This supply is treated by and purchased from the Metropolitan Water District of Southern California (MWD) via our wholesaler, the San Diego County Water Authority (SDCWA).

MWD receives water from two sources: the Colorado River through the Colorado River Aqueduct, and Northern California through the California Aqueduct (also known as the State Water Project). These waters are blended and rigorously treated at MWD's Lake Skinner Treatment Plant in southern Riverside County and delivered to Carlsbad through the San Diego Aqueduct, owned by SDCWA.

An average of 67% of Carlsbad's water comes from the Colorado River, with the remaining 33% coming from the State Water Project.

Safety

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 can pick up substances resulting from the presence of animal or human activity.

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.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria. These 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 sources such as agriculture, urban storm water 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 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.

The water quality data contained in this report is obtained from MWD based on their sampling of waters combined at the Lake Skinner Plants.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at: (800) 426-4791.

Special Note:

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 had 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. Information is also available from the Safe Drinking Water Hotline at: (800) 426-4791.

How to Contact Us

This report covers testing for contaminants in 2005. For questions or concerns regarding the quality of Carlsbad's water, contact Jim Ball at: (760) 438-2722 or by email at jball@ci.carlsbad.ca.us. For more detailed information on testing procedures, results, and source water assessments, contact the Metropolitan Water District of Southern California's Water Quality Division at: (800) CALL MWD.

This report is mailed to all CMWD customers at their billing address and is available at most City facilities. This report may be photocopied and distributed or posted in a prominent place at your facility. Additional copies are available on the Internet at www.ci.carlsbad.ca.us/cserv/water.html or by calling the Carlsbad Municipal Water District at: (760) 438-2722.

The Carlsbad Municipal Water District
5950 El Camino Real
Hours: Monday through Friday, 8 am to 5 pm

Additional sources for water quality information:

San Diego County Water Authority

(858) 522-6600 • www.sdcwa.org

Metropolitan Water District of Southern California

(800) CALL-MWD (225-5693) • www.mwd.dst.ca.us

California Department of Health Services

Division of Drinking Water & Environmental Management
(619) 525-4159 • www.dhs.ca.gov/ps/ddwem

U.S. Environmental Protection Agency

Office of Ground Water & Drinking Water
Safe Drinking Water Hotline: (800) 426-4791
www.epa.gov/safewater/dwhealth.html
www.epa.gov/safewater/faq/faq.html



How to Read this Report

As you read the water quality tables in this report, compare the level of constituents found in CMWD's water in the "Combined Skinner Plant Effluents" column with the standards set for them in the MCL and PHG columns. You'll see that CMWD's water did not violate any drinking water standards in 2005.

The following are key terms to help you understand the standards we use to measure drinking water safety.

Public Health Goals (PHGs)

Reflect 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 Contaminant Level Goals (MCLGs)

Reflect the same levels as PHGs, but are set by the U.S. Environmental Protection Agency.

Maximum Contaminant Levels (MCLs)

Reflect the highest level of a contaminant that is allowed in drinking water. MCLs are divided into two categories: primary and secondary.

Maximum Residual Disinfectant Levels (MRDLs)

Reflect the level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goals (MRDLGs)

Reflect 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.

Maximum Residual Disinfectant Level (MRDL)

The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG)

The level of disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

Treatment Technique

A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level

The concentration of a contaminant, which if exceeded, triggers treatment or other requirements, which a water system must follow.

Abbreviations

CFU/mL	Colony-Forming Units per Milliliter
DCPA	DimethylTetrachloroterephthalate
DBP	Disinfection By-Products
DLR	Detection Limits for purposes of Reporting
HAA5	Haloacetic Acids (five)
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MFL	Million Fibers per Liter
MPN	Most Probable Number
ppm	parts per million or milligrams per liter (mg/L)
ppq	parts per quadrillion or picograms per liter (pg/L)
ppt	parts per trillion or nanograms per liter (ng/L)
RAA	Running Annual Average
SI	Saturation Index (Langelier)
TOC	Total Organic Carbon
TTHM	Total Trihalomethanes
TT	Treatment Technique
µS/cm	microSiemen per centimeter;also equivalent to µmho/cm (micromho per centimeter)

2005 Water Quality Report to MWD Member Agencies

The Metropolitan Water District of Southern California

PARAMETER	UNITS	STATE OR FEDERAL MCL [MRDL]	PHG (MCLG) [MRDLG]	STATE DLR	COMBINED SKINNER PLANTS		MAJOR SOURCES IN DRINKING WATER
					RANGE	AVERAGE	
Percent State Project Water	%	NA	NA	NA	27 - 69	40	
PRIMARY STANDARDS – Mandatory Health-Related Standards							
CLARITY							
Combined Filter Effluent Turbidity	NTU / %	0.3/95 (e)	NA	NA	Highest 0.18	96% < 0.3	Soil runoff
MICROBIOLOGICAL							
Total Coliform/Bacteria	%	5.0 (b)	(0)	NA	0%	0%	Naturally present in the environment
Fecal Coliform and E. coli	(c)	(c)	(0)	NA	Distribution System-wide Fecal Coliform-positive samples = 0		Human and animal fecal waste
Heterotrophic Plate Count (HPC) (d)	CFU/mL	TT	NA	NA	Distribution System-wide		Naturally present in the environment
Cryptosporidium (e)	Oocysts/10 or 200L	TT	(0)	NA	E.coli-positive samples = 0		Human and animal fecal waste
Giardia (e)	Oocysts/10 or 200 L	TT	(0)	NA	TT	TT	Human and animal fecal waste
Total Culturable Viruses (e)	MPN/100 L	TT	(0)	NA	TT	TT	Human and animal fecal waste
Legionella	MPN/100 L	TT	(0)	NA	TT	TT	Naturally present in the environment
ORGANIC CHEMICALS							
Pesticides/PCBs							
Arylamide	NA	TT	(0)	NA	TT	TT	Water treatment chemical impurities
INORGANIC CHEMICALS							
Aluminum (f)	ppb	1000	600	50	ND - 151	73	Residue from water treatment process; natural deposits; erosion
Fluoride (naturally-occurring)	ppm	2.0	1	0.1	0.16 - 0.28	0.23	Erosion of natural deposits; water additives for tooth health
RADIOLOGICALS (j)							
Gross Alpha Particle Activity	pCi/L	15	(0)	3	ND - 5.5	4.2	Erosion of natural deposits
Uranium	pCi/L	20	0.43	2.0	2.9 - 3.2	3.0	Erosion of natural deposits
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS (FEDERAL RULE)							
Total Trihalomethanes (TTHM) (l)	ppb	80	NA	0.5	36 - 89	60	By-product of drinking water chlorination
Total Trihalomethanes (TTHM) (l)	ppb	80	NA	0.5	11 - 85	Highest RAA 61	By-product of drinking water chlorination
Haloacetic Acids (five) (HAA5) (1m)	ppb	60	NA	1 (l)	16 - 40	24	By-product of drinking water chlorination
Haloacetic Acids (five) (HAA5) (1m)	ppb	60	NA	1 (l)	4.9 - 42	Highest RAA 27	By-product of drinking water chlorination
Total Chlorine Residual	ppm	[4.0]	[4.0]	NA	1.5 - 2.8	Highest RAA 2.4	Drinking water disinfectant added for treatment
Bromate (n)	ppb	10	(0)	5	NA	Highest RAA NA	By-product of drinking water ozonation
DBP Precursors Control (TOC) (l)	ppm	TT	NA	0.30	TT	TT	Various natural and man-made sources
SECONDARY STANDARDS – Aesthetic Standards							
Aluminum (f)	ppb	200	600	50	ND - 151	73	Residue from water treatment process; natural deposits erosion
Chloride	ppm	500	NA	NA	83 - 92	88	Runoff/leaching from natural deposits; seawater influence
Color	Units	15	NA	NA	1 - 3	2	Naturally occurring organic materials
Corrosivity (o)	SI	non-corrosive	NA	NA	0.04 - 0.60	0.38	Elemental balance in water, affected by temperature, other factors
Odor Threshold (p)	Units	3	NA	1	2	2	Naturally-occurring organic materials
Silver	ppb	100	NA	10	ND	ND	Industrial discharges
Specific Conductance	µS/cm	1600	NA	NA	687 - 938	854	Substances that form ions in water; seawater influence
Sulfate	ppm	500	NA	0.5	103 - 210	173	Runoff/leaching from natural deposits; industrial wastes
Thiobencarb (f)	ppb	1	70	1	ND	ND	Runoff/leaching from rice herbicide
Total Dissolved Solids (TDS)	ppm	1000	NA	NA	386 - 554	501	Runoff/leaching from natural deposits; seawater influence
Turbidity (a)	NTU	5	NA	NA	0.06 - 0.08	0.07	Soil runoff
Zinc	ppm	50	NA	0.05	ND	ND	Runoff/leaching from natural deposits; industrial wastes
UNREGULATED CHEMICALS REQUIRING MONITORING							
Boron	ppb	NA	NI=1,000	100	150 - 160	150	Runoff/leaching from natural deposits; industrial wastes
ADDITIONAL PARAMETERS							
Alkalinity	ppm	NA	NA	-	95 - 114	107	
Calcium	ppm	NA	NA	-	38 - 62	55	
Hardness	ppm	NA	NA	-	169 - 260	231	
Magnesium	ppm	NA	NA	-	18 - 25.5	23	
N-Nitrosodimethylamine (NDMA) (s)	ppt	NA	NI=10	2	ND - 2.2	ND - 8.0	By-product of drinking water chlorination; industrial processes
pH	pH Units	NA	NA	-	8.1 - 8.2	8.1	
Potassium	ppm	NA	NA	-	3.8 - 4.6	4.3	
Radon (i)	pCi/L	NA	NA	100	ND	ND	
Sodium	ppm	NA	NA	-	69 - 88	82	
TOC (t)	ppm	TT	NA	0.30	2.3 - 3.1	2.7	Various natural and man-made sources

Footnotes

- (a) The turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time. Turbidity is a measure of the cloudiness of the water and is an indicator of treatment performance. The monthly averages and ranges of turbidity shown in the Secondary Standards section were based on the plant effluents.
- (b) Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform-positive. Compliance is based on the combined distribution system sampling from all the treatment plants. In 2005, 10,433 samples were analyzed. The MCL was not violated.
- (c) Fecal coliform/E.coli MCLs: The occurrence of 2 consecutive total coliform-positive samples, one of which contains fecal coliform/E. coli, constitutes an acute MCL violation. The MCL was not violated in 2005.
- (d) HPC values were based on the monthly averages of the plant effluent samples. In 2005, all distribution samples collected had detectable total chlorine residuals and no HPC was required.
- (e) In 2005, the plant effluents had no detectable Cryptosporidium, Giardia, or Total Culturable Viruses. Additionally, there was no Giardia or Total Culturable Viruses found in all of the plant influents. One Cryptosporidium oocyst was detected in the Weymouth plant influent. No Cryptosporidium or Giardia was detected in the source water samples. Cryptosporidium and Giardia samples were collected monthly (10 liters for plant influents and source waters; 200 liters for plant effluents). Total Culturable Viruses samples were collected quarterly.
- (f) Aluminum, copper, MTBE, and thiobencarb have both primary and secondary standards.
- (g) MTBE reporting level is 0.5 ppb.
- (h) Lead and copper are regulated in a Treatment Technique under the Lead and Copper Rule. It requires systems to take water samples at the consumers' tap. The federal action level, which triggers water systems into taking treatment steps if exceeded in more than 10% of the tap water samples, is 1.3 ppm for copper and 15 ppb for lead.
- (i) State MCL is 45 mg/L as nitrate, which equals 10 mg/L as N.
- (j) Results based on two (2) quarterly samplings done in 2005; four (4) quarters of monitoring will be completed by second quarter of 2006.
- (k) Standard is for Radium-226 and -228 combined.
- (l) Average and range for the treatment plant effluents were taken from weekly samples for TTHM and monthly samples for HAA5. Distribution system-wide average and range were taken from 47 samples collected quarterly. In 2005, Metropolitan was in compliance with all provisions of the Stage 1 Disinfectants/Disinfection By-Products (D/DBP) Rule. TOC provides a medium for the formation of DBPs. Metropolitan was also in compliance with the DBP precursor control (TOC) portion of the Stage 1 D/DBP regulation.
- (m) DLR = 1.0 ppb for each HAA5 analyte (dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid) except for monochloroacetic acid which has a DLR = 2.0 ppb.
- (n) Running annual average was calculated from weekly samples. For Jensen Plant, RAA will be calculated when four (4) quarters of monitoring are completed by the second quarter of 2006. Bromate reporting level is 3 ppb.
- (o) SI measures the tendency for a water to precipitate or dissolve calcium carbonate (a natural mineral in water). Positive indices indicate the tendency to precipitate and/or deposit scale on pipes and are assumed to be non-corrosive. Negative indices indicate the tendency to dissolve calcium carbonate and are assumed to be corrosive.
- (p) Metropolitan has developed a flavor-profile analysis method that can more accurately detect odor occurrences. For more information, contact MWD at (213) 217-6850.
- (q) Both PHG (issued by the Office of Environmental Health Hazard Assessment) and NL (issued by CA Department of Health Services) were set at 6 ppb. Perchlorate reporting level is 2 ppb.
- (r) Data collected from January 2002 to January 2003. Minimum reporting levels are as stipulated in the Federal Unregulated Contaminants Monitoring Rule (UCMR). List 1 - Assessment Monitoring consists of 12 chemical contaminants for which standard analytical methods are available. List 2 - Screening Survey consists of 16 contaminants for which new analytical methods are used.
- (s) Range for the plant influents and effluents were taken from quarterly samples. NDMA was detected at the Mills plant influent. The distribution system-wide range was taken from nine (9) samples collected quarterly.
- (t) Average and range for the treatment plant effluents were taken from weekly samples at the combined filter effluent.

