

2024 Water Quality Report

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

Water provided by the Carlsbad Municipal Water District meets all 2024 state and federal drinking water standards. This report provides detailed water quality test results and more information about where Carlsbad's water comes from.

Where our water comes from

CMWD currently imports 81% of its drinking water. The water supply begins hundreds of miles away as snow melt or rainfall that flows into rivers. The two main water sources are the Colorado River, where the water is transported through the Colorado River Aqueduct, and Northern California, where water moves through the California Aqueduct (also known as the State Water Project).

Water from these sources is treated by the Metropolitan Water District of Southern California at its Lake Skinner Treatment Plant in Riverside County and by the San Diego County Water Authority. After rigorous treatment, the water travels through pipelines owned by the San Diego County Water Authority, and is then purchased and distributed by CMWD to its customers.

The Claude "Bud" Lewis Carlsbad Desalination Plant produces 19% of Carlsbad's water through the San Diego County Water Authority, which blends the water with the region's imported water supply and delivers it to water agencies throughout San Diego County.



What's in your water before it's treated?

Both tap and bottled drinking water comes from oceans, rivers, lakes, streams, ponds, 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, picks 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 can come from wastewater 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.
- Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.
- Pesticides and herbicides, that can 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application and septic systems.

**CMWD
has met all
2024 federal and
state drinking
water standards.**

2024 Carlsbad Water Quality Analysis

Parameter	Units	State or Federal MCL [MRDL]	PHG (MCLG) [MRDL]	State DLR	Range Average	Skinner Plant Effluent	Twin Oaks Plant	CMWD System Samples	Carlsbad Desal Plant	Major Sources in Drinking Water		
Percent State Project Water	%	NA	NA	NA	Range	0 - 64	NA	NA	NA			
					Average	NA	NA	NA	NA			
PRIMARY STANDARDS--Mandatory Health-Related Standards												
CLARITY												
Combined Filter	NTU	0.1	NA	NA	Highest	0.07	0.02-0.087	NA	0.08			
Effluent Turbidity(a)	NTU	0.1	NA	NA	Average	NA	0.03	NA	NA			
	%	95(a)	NA	NA	% ≤ 0.1	100%	100%	NA	100.0%	Soil runoff		
MICROBIOLOGICAL												
Total Coliform Bacteria (b)	%	5.0	MCLG=0	NA	Range	0	ND	NA	0			
					Average	0	ND	NA	ND	Naturally present in the environment		
E. coli (c)	NA	TT	MCLG=0	NA	Positive sample	NA	ND	ND	ND	Human and animal fecal waste		
INORGANIC CHEMICALS												
Arsenic	ppb	10	0.004	2	Range	ND	NA	NA	ND	Natural deposits erosion, glass and electronics, production wastes		
					Average	ND	2.1	NA	ND			
2024 Copper Samples (e)	ppm	AL = 1.3	0.3	0.05	No >AL	NA	NA	0	ND	Internal corrosion of household pipes, natural deposits, erosion, next set of samples to be taken in 2028		
					90%ile	NA	ND	0.16	ND			
Fluoride (d)	Control Range				0.6 - 0.8	0.6 - 1.2	NA	NA				
	Optimal Fluoride Level				0.7	0.7	NA	NA				
Treatment-related Fluoride	ppm	2.0	1	0.1	Range	0.6 - 0.8	0.6 - 0.7	NA	0.606-0.790	Erosion of natural deposits water additive that promotes strong teeth		
					Average	0.7	0.64	NA	0.692			
2024 Lead Samples €	ppb	AL = 15	0.2	5	No >AL	0	0	0	0	House pipes internal corrosion; erosion of natural deposits, next set of samples to be taken in 2028		
					90%ile	ND	ND	1.3	ND			
Nitrate	ppm	10	10	0.4	Range	ND	ND	NA	ND	Runoff and leaching from fertilizer use, septic tank and sewage; natural deposits erosion		
					Average	ND	ND	NA	ND			
RADIOLOGICALS												
Uranium	pCi/L	20	0.43	1	Range	ND - 3	1.7-2.8	NA	ND	Erosion of natural deposits		
					Average	2	2.3	NA	ND			
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCT PRECURSORS (o)												
Total Trihalomethanes (f) (TTHM)	ppb	80	NA	1.0	Range	15 - 48	14 - 42	6.4 - 34	ND	By-product of drinking water chlorination		
					Highest LRAA	34	42	26	ND			
Haloacetic Acids (HAA5) (f)	ppb	60	NA	1.0	Range	1.2 - 23	ND - 2.8	ND- 11	ND	By-product of drinking water chlorination		
					Highest LRAA	12.0	2.8	7.0	ND			
Total Chlorine Residual	ppm	[4.0]	[4.0]	NA	Range	NA	2.0-3.9	0.21 - 3.0	2.95-3.47	Drinking water disinfectant added for treatment		
					Highest RAA	NA	3.1	1.97	3.18			
Bromate (g)	ppb	10	0.1	1.0	Range	ND - 6.0	ND - 8.5	NA	NA	By-product of drinking water ozonation		
					Highest RAA	1.5	1.7	NA	NA			
SECONDARY STANDARDS--Aesthetic Standards												
Chloride	ppm	500	NA	NA	Range	92 - 100	NA	NA	48-110	Runoff leaching from natural deposits seawater influence		
					Sample	96	NA	NA	80			
Color	Units	15	NA	NA	Range	1 - 2	ND - 1	NA	ND	Naturally-occurring organic materials		
					Average	2	ND	NA	ND			
Odor Threshold	TON	3	NA	1	Range	1	ND	NA	ND	Naturally-occurring organic materials		
					Average	NA	ND	NA	ND			
Specific Conductance	µS/cm	1600	NA	NA	Range	903 - 917	NA	NA	242.3 - 551.4	Substances that form ions in water seawater influence		
					Average	910	827	NA	430.80			
Sulfate	ppm	500	NA	0.5	Range	195 - 203	152 - 217	NA	12.0 - 17.0	Runoff leaching from natural deposits Industrial wastes		
					Average	199	191	NA	14.8			
Total Dissolved Solids (TDS)	ppm	1000	NA	NA	Range	560 - 572	474 - 614	NA	149 - 311	Runoff leaching from natural deposits seawater influence		
					Average	566	545	NA	240			
OTHER PARAMETERS												
CHEMICAL												
Alkalinity	ppm	NA	NA	NA	Range	103 - 107	99 - 120	NA	47-88			
					Average	105	112	NA	66			
Boron	ppb	NL=1,000	NA	100	Range		NA	NA	0.44-0.92	Runoff leaching from natural deposits, Industrial wastes		
					Average	130	NA	NA	0.65			
Calcium	ppm	NA	NA	NA	Range	61 - 62	NA	NA	19.76-60.00			
					Sample	62	NA	NA	23.30			
Chlorate	ppb	NL=800	NA	20	Range	80	220 - 380	NA	NA	By-product of drinking water chlorination Industrial processes		
					Average		291	NA	NA			
Chromium VI (h)	ppb	10	0.02	1	Range	ND	ND - 0.32	NA	ND	Runoff leaching from natural deposits; discharge from industrial waste factories		
					Average		0.03	NA	ND			
Corrosivity (i) (as Aggressiveness Index)	AI	NA	NA	NA	Range	12.3 - 12.4	NA	NA	NA	Elemental balance in water; affected by temperature, other factors		
					Average	12.4	NA	NA	NA			
Corrosivity (j) (as Saturation Index)	SI	NA	NA	NA	Range	0.46 - 0.57	NA	NA	NA	Elemental balance in water affected by temperature & other factors		
					Average	0.52	NA	NA	NA			
Hardness	ppm	NA	NA	NA	Range	242 - 243	NA	NA	60.4-75.2			
					Average	242	NA	NA	68.10			
Magnesium	ppm	NA	NA	NA	Range	22 - 23	NA	NA	1.2-1.5			
					Sample	22	NA	NA	1.4			
pH	pH	NA	NA	NA	Range	8.1	7.5 - 8.7	NA	8.30-8.76			
					Average		8.4	NA	8.50			
Potassium	ppm	NA	NA	NA	Range	4.6 - 4.9	NA	NA	0.000-33.892			
					Average	4.8	NA	NA	7.501			
Sodium	ppm	NA	NA	NA	Range	91 - 95	NA	NA	54.6-61.5			
					Average	86	NA	NA	57.00			
TOC	ppm	TT	NA	0.30	Range Average	2.3 - 3.0 2.6	2.0 - 2.4 2.2	NA	NA	Various natural and man-made sources		
					Range	2.5	ND	NA	NA			
N-Nitrosodimethylamine (NDMA)	ppt	NL = 10	3	2	Average	NA	ND	NA	NA	By-product of drinking water		
FIFTH UNREGULATED CONTAMINANT MONITORING RULE												
Lithium, Total	ug/L	NA	9 ug/L	NA	Range	24 - 32	NA	10 - 52.5	NA	Naturally occurring; used in electrochemical cells, batteries, organic syntheses an pharmaceuticals		
					Average	28	NA	26.2	NA			
Per and Polyfluorinated Alkyl Substances (PFAS) (k)	ppt	4 ppt - 10 ppt	0.007 ppt	4 ppt - 10 ppt	Range	ND	ND	ND	ND	Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes		
					Average	ND	ND	ND	ND			

How to read this report

As you read the water quality tables in this report, compare the level of contaminants found in the “Skinner Plant”, “Twin Oaks Valley Plant”, and “Desal plant” and CMWD system samples columns with the standards set for them in the MCL and PHG columns. The CMWD met all drinking water standards in 2024.

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

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 and reporting requirements, and water treatment requirements.

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 that a water system must follow.

This report can be downloaded from www.carlsbadca.gov/water-quality-report.



Abbreviations

AI	Aggressiveness Index
AL	Action Level
CDPH	California Department of Public Health
CFE	Combined Filter Effluent
CFU	Colony-Forming Units
DBP	Disinfection By-Products
DLR	Detection Limits for purposes of Reporting
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MFL	Million Fibers per Liter
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
N	Nitrogen
NA	Not Applicable
ND	Not Detected
NL	Notification Level
NTU	Nephelometric Turbidity Units
pCi/L	picoCuries per Liter
PHG	Public Health Goal
ppb	parts per billion or micrograms per liter (µg/L)
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; highest RAA is the highest of all Running Annual Averages calculated as average of all the samples collected within a 12-month period
SI	Saturation Index (Langelier)
TOC	Total Organic Carbon
TON	Threshold Odor Number
TT	Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water
µS/cm	microSiemen per centimeter; or micromho per centimeter (µmho/cm)

Required information for lead

“Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. Carlsbad Municipal Water District is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family’s risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking,

Footnotes

- (Skinner) As a Primary Standard, the turbidity levels of the filtered water were < 0.3 NTU in 100% of the online measurements taken each month and did not exceed 1 NTU for more than one hour.
The turbidity levels for grab samples at these locations were in compliance with the Secondary Standard. (Twin Oaks) The turbidity level from the CFE of the membranes shall be < 0.1 NTU in 95% of the measurements taken each month and shall not exceed 1.0 NTU at any time. Turbidity, a measure of the cloudiness of water, is an indicator of treatment performance.
- Total coliform MCLs: No more than 5% of the monthly samples may be total coliform positive. Compliance is based on the combined distribution system sampling. In 2022, 1,560 samples were analyzed with no positive samples. The MCL was not violated.
- E. coli MCL: The occurrence of two consecutive total coliform- positive samples, one of which contains E. coli, constitutes an acute MCL violation. The MCL was not violated.
- Skinner and Twin Oaks were in compliance with all provisions of the State’s Fluoridation System Requirements.
- Lead and copper are regulated by Action Levels under the Lead and Copper Rule, which requires water samples to be collected at the consumers’ tap. If action levels are exceeded in more than 10% of the samples, water systems must take steps to reduce these contaminants.
- Twin Oaks/Skinner met all provisions of the Stage 1 Disinfectants/ Disinfection By-Products (D/DBP) Rule. Compliance was based on Locational RAA. Average and range for the treatment plant effluent were taken from daily and monthly samples for TTHM and HAA5.
- Twin Oaks running annual average was calculated from quarterly results of monthly and daily samples.
- Chromium VI reporting level is ND, which is below the state DLR of 1 ppb.
- AI <10.0 = Highly aggressive and very corrosive water
AI >12.0 = Non-aggressive water
AI (0.14 – 13.0) = Moderately aggressive water
- Positive SI index = non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative SI index = corrosive; tendency to dissolve calcium carbonate.
- Drinking water testing results were non-detect for all 29 PFAS compounds covered by the sampling method in the Carlsbad’s drinking water.

cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you are concerned about lead in your water and wish to have your water tested, contact Carlsbad Municipal Water District @ 442-339-2722. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <https://www.epa.gov/lead>.”

Carlsbad Municipal Water District has completed the initial lead service line inventory required by U.S. EPA’s Lead and Copper rule revisions. The deadline for the initial inventory was October 16, 2024. Based on historical records review and field investigations, Carlsbad Municipal Water District has determined it has no lead service lines in its distribution system or any galvanized steel service lines that would require replacement.

"In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resource Control Board (State Water Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health."

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. U.S. EPA/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).

Water conservation

Carlsbad encourages residents and businesses to continue making water conservation a way of life. With water being a precious and limited resource, Carlsbad is doing our part by making water conservation and the efficient use of water a major priority. Even the simplest changes to daily routines make a difference.

Visit www.carlsbadca.gov/conservation for programs, incentives, water rules, and more tips and resources.

Indoor

- Take short showers or fill the bathtub halfway
- Turn water off when brushing teeth or shaving
- Wash only full loads of clothes
- Fix leaks (toilets, faucets, etc.)
- Install high-efficiency fixtures

Outdoor

- Install drip-irrigation
- Adjust sprinklers to reduce water lost from overspray onto impervious surfaces
- Water during cool parts of the day to reduce evaporation
- Install a smart irrigation controller
- Convert to a native landscape
- Repair broken sprinkler heads and/or irrigation lines (do not irrigate until repair is made)

How to contact us

This report covers testing for contaminants in 2024. For questions or concerns regarding the quality of Carlsbad's drinking water, contact CMWD at 442-339-2722 or email water@carlsbadca.gov.

CMWD Board meetings are held in conjunction with the Carlsbad City Council on an as needed basis on Tuesday evenings. Agendas may be obtained at www.carlsbadca.gov or Carlsbad City Hall, 1200 Carlsbad Village Drive. Comments regarding drinking water are always welcome by the CMWD Board of Directors.

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Carlsbad Municipal Water District

5950 El Camino Real, Carlsbad, CA 92008
Hours: Monday through Friday, 8 a.m. to 5 p.m.
442-339-2722 • water@carlsbadca.gov

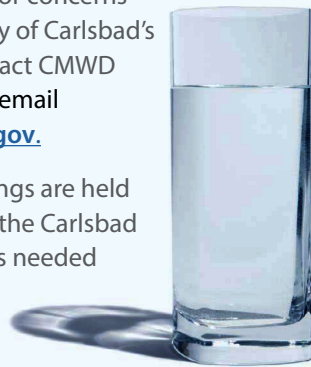
Additional sources for water quality information:

San Diego County Water Authority
858-522-6600 • www.sdcwa.org

Metropolitan Water District of Southern California
800-225-5693 • www.mwdh2o.com

State Water Resources Control Board
Division of Drinking Water & Environmental Management
619-525-4159 • www.waterboards.ca.gov

U.S. Environmental Protection Agency
Office of Ground Water & Drinking Water Safe Drinking Water Hotline:
800-426-4791 • www.epa.gov/watersense/state-water-facts



Colorado River