



THE CITY OF SAN DIEGO

Annual Drinking Water Quality Report

This report contains important information about your drinking water. If the report is not available in your native language, we encourage you to identify someone who understands it and can translate for you.

Spanish

Este reporte contiene información importante sobre la calidad del agua en su comunidad. Copias en español de este reporte están disponibles si llama al (619) 527-3121. También encontrará este reporte por medio del internet en www.sandiego.gov/water.

Af-Somali

Ribootkani wuxuu xanbaar sanyahay warbixino muhiim ah oo ku saabsam biyaha aad cabtaan. Hadii aadan fahmeynin, Fadlan ribootka hala turjumo ama kala hadal ruux ku fahansiya.

Tagalog

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

Chinese

此份有關你的食水報告,內有重要資料和訊息,請找他人為你翻譯及解釋清楚。

Korean

이 안내는 매우 중요합니다.
본인을 위해 번역인을 사용하십시오.

Arabic

هذا التقرير يحتوي على معلومات مهمة تتعلق بمياه الشفة (أو الشرب).
ترجم التقرير، أو تكلم مع شخص يستطيع أن يلمم التقرير.

Vietnamese

Chi tiết này thật quan trọng.
Xin nhờ người dịch cho quý vị.



THE CITY OF SAN DIEGO

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The City of San Diego's Drinking Water Quality Report includes details about the source of our water, what it contains, and other important information about the water we provide to our customers. The water provided by the City of San Diego meets all EPA and State drinking water health standards. Approximately 85% of the City of San Diego's water is imported. This imported water is purchased from the San Diego County Water Authority, which purchases the water from the Metropolitan Water District of Southern California. Ultimately, our water is a blend of Colorado River water, State Water Project water, and local water. Throughout the year, the blend changes. The City Water Department serves more than 1.25 million people in a service area of 403 square miles. Depending on where you live, you receive water from one of three City treatment plants: Miramar, Alvarado,

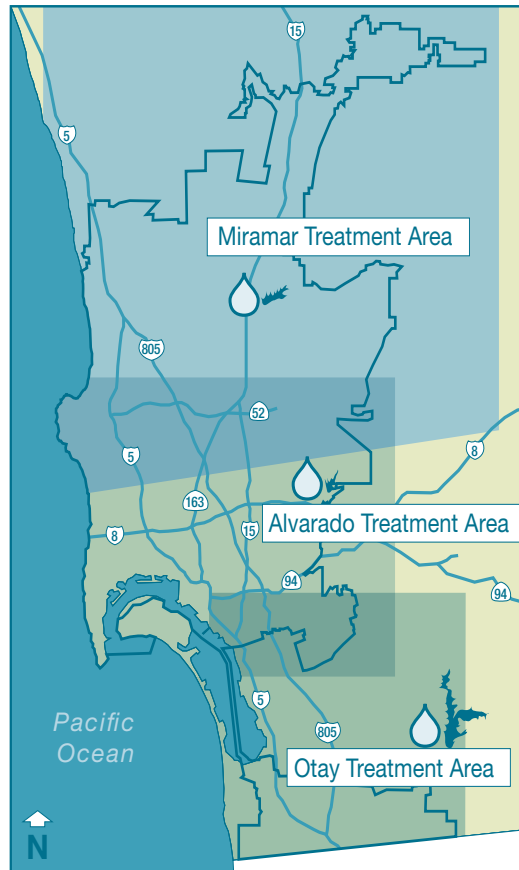
and Otay (see map below for service areas), and San Diego County Water Authority.

Contaminants

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals. Water can also pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in some source waters include:

- Inorganic contaminants, such as salts and metals, that can occur naturally or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- 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.
- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Pesticides, herbicides and fungicides, which may come from a variety of sources such as agriculture, urban runoff and residential uses.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining.

To ensure that tap water is safe to drink, the California Department of Public Health prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The City Water Department treats water according to these state regulations, and continually monitors and adjusts its treatment process to respond to changing water supplies. Through these adjustments, the Water Department ensures that all drinking water safety and quality standards are met.



Water Conservation

San Diego needs to import most of its water, so it is very important to conserve every precious drop. As part of a regional effort to increase voluntary water conservation, the City of San Diego and the San Diego County Water Authority have issued a 20-Gallon Challenge. San Diegans are each being asked to conserve 20 gallons of water each day. For information about how you can save water and save money, visit the City's Water Conservation web page at www.sandiego.gov/water/conservation/index.shtml or call 619-515-3500.



Quagga Mussels

In 2007, quagga mussels were found in several City reservoirs. The mussels can multiply rapidly, clog pipes and machinery, and alter the ecosystem of lakes and reservoirs. Quagga mussels can dramatically change the food chain, leading to reduced sport fish populations. Once the ecosystem is altered, the growth of algae can occur and affect the taste and odor of a region's drinking water. Because the mussels are often spread by boats, efforts to stop the spread of the mussels could affect recreational use of the City's reservoirs. The Water Department is working with state and regional agencies on a comprehensive program to detect and control quagga mussels. For information on how you can help, log onto www.sandiego.gov/water/recreation/quaggamussels.shtml.

How to Contact Us

Emergency Hotline	619-515-3525
General Information	619-515-3500
Water Quality Lab.....	619-668-3232
Capital Improvements Program	619-533-4679
City Lakes Fishing Line.....	619-465-3474
Speaker's Bureau	619-533-6638
Storm Water Prevention	619-235-1000
Water Department email.....	water@sandiego.gov

Fluoridation

In December 2007, the City began receiving fluoridated treated water from the Metropolitan Water District through the San Diego County Water Authority. The City water supply currently consists of approximately 9% of this type of imported treated water. Because this is only a small portion of the City water supply, not all areas receive fluoridated water. Due to seasonal demands and operational changes, fluoride levels will vary throughout the system over time. For more information, log onto www.sandiego.gov/water/quality/fluoridation.shtml.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as people with cancer who are undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk. These people and/or their caregivers should seek advice about drinking water from their health care providers. The U.S. Environmental Protection Agency guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*, *Giardia* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline at 800-426-4791. During calendar year 2007, the City Water Department analyzed all its water sources for *Cryptosporidium* and *Giardia*, and detected no *Cryptosporidium* oocysts or *Giardia* cysts.

Information Web Sites

City of San Diego	www.sandiego.gov
County Water Authority	www.sdcwa.org
Metropolitan Water District	www.mwdh20.org
State Public Health.....	www.cdph.ca.gov
Think Blue.....	www.thinkblue.org
U.S. EPA.....	www.epa.gov/safewater

How to Read the Tables

The tables below list contaminants which: 1) have associated primary Maximum Contaminant Levels (MCLs) that are regulated and 2) were detected by the City of San Diego's Water Quality Lab. Contaminants were detected at or above the California Department of Public Health's Detection Limits for Purposes of Reporting (DLR) during the 2007 calendar year. The presence of these contaminants in the drinking water does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency (EPA) at 800-426-4791 or visiting the agency's web site at www.epa.gov/safewater/hfacts.html. California action levels are available on the Department of Public Health web site at www.cdph.ca.gov. Unless otherwise noted, the data presented in these tables are from testing done from Jan. 1 through Dec. 31, 2007.

NOTE: The Department of Public Health requires the City to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, through representative water quality, is more than one year old.

Table 1 lists all regulated contaminants with Primary MCLs that the City Water Quality Lab detected in the drinking water at or above the state DLR.

Table 2 lists regulated contaminants with Secondary MCLs that were detected at or above the state DLR for each analyte.

Table 3 lists unregulated contaminants that were detected at or above the state DLR for each analyte. Unregulated

contaminant monitoring helps the EPA and the Department of Public Health determine where certain contaminants occur and whether the contaminants need to be regulated.

Table 4 lists disinfection residuals and disinfection byproducts that were detected in the treated water.

Definitions of Terms

Action Level (AL): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (maximum contaminant level): 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 or technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

MCLG (maximum contaminant level goal): The level of a contaminant in drinking water below, which there is no known or expected health risk. MCLGs are set by the EPA.

MRDL (maximum residual disinfectant level): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

MRDLG (maximum residual disinfectant level goal): The level of a contaminant in drinking water below, which there is no known or expected health risk. MRDLGs are set by the EPA.

NL (notification level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

PHG (public health goal): The level of a contaminant in drinking water below, which there is no known or expected health risk. PHGs are set by the California EPA.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Abbreviations

- A: absent
- CDPH: California Department of Public Health
- CSD MDL (City of San Diego Water Quality Lab method of detection limit): lowest quantifiable concentration of a measured analyte detectable by the lab
- CU: color units
- DLR: detection limit for reporting
- gr/Gal: grains per gallon
- ml: milliliter
- n/a: not applicable
- ND: not detected
- NTU: nephelometric turbidity units
- OU: odor units
- pCi/L: picocuries per liter (a measure of radiation)
- ppb: parts per billion or micrograms per liter (µg/L) - [1 ppb = 1,000 ppt]
- ppm: parts per million or milligrams per liter (mg/L) - [1 ppm = 1,000 ppb]
- ppt: parts per trillion or nanograms per liter (ng/L) - [1 ppt = 0.0001 ppb]
- SMCL: secondary maximum contaminant level
- TT (treatment technique): a required process intended to reduce the level of a contaminant in drinking water.
- µS/CM: micro-siemens/cm
- < less than
- > greater than

TABLE 1 – DETECTED REGULATED CONTAMINANTS WITH MCLs

Primary Standards (Mandatory Health Related Standards) – CHEMICAL CONTAMINANTS														
CONTAMINANT	UNITS	MCL	PHG (MCLG)	CDPH DLR	TREATMENT PLANT EFFLUENT CONCENTRATION								YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
					ALVARADO		MIRAMAR		OTAY		MWD SKINNER			
					AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE		
Barium	ppm	1	2	0.1	ND	ND – 0.11	ND	ND – 0.11	ND	ND	ND	ND	2007	Erosion of natural deposits
Fluoride Naturally Occurring		2	1	0.1	0.217	0.155 – 0.261	0.22	0.170 – 0.260	0.255	0.191 – 0.282	0.2	0.2 – 0.3		Erosion of natural deposits
Fluoride Treatment Related	ppm	2.0	1.0	0.1	Not Added	Not Added	Not Added	Not Added	Not Added	Not Added	0.8	0.5 – 0.9	2007	MWD started adding Fluoride on December 3, 2007
Nitrate (as Nitrate)	ppm	45	45	2	ND	ND – 2.14	ND	ND – 2.16	ND	ND – 2.10	ND	ND – 2	2007	Runoff and leaching from fire-damaged watershed; erosion of natural deposits
Gross Beta Particle Activity	pCi/L	50	0	4	ND	ND – 4.75	ND	ND	ND	ND	ND	ND – 5.5	2006	Decay of natural and manmade deposits
Uranium	pCi/L	20	0.43	1	ND	ND – 2.83	ND	ND – 2.85	ND	ND – 2.54	2.3	1.5 – 3.2	2006	Erosion of natural deposits
Total Coliform Bacteria	/100ml	< 5% Positive	0	A	0 – 0.39% Distribution System Average								2007	Naturally present in the environment

Primary Standards (Mandatory Health Related Standards) – AT THE TAP CONTAMINANTS – LEAD AND COPPER RULE

CONTAMINANT	UNITS	ACTION LIMIT	PHG (MCLG)	CDPH DLR	90th PERCENTILE CONCENTRATION	SAMPLES TAKEN AT THE TAP		YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
						NUMBER			
						SAMPLING SITES	EXCEEDING AL		
Copper	ppm	1.3	0.17	0.050	0.536	52	0	2005	Internal corrosion of household plumbing systems
Lead	ppb	15	2	5	ND	52	1	2005	Internal corrosion of household plumbing systems

Note: Annual monitoring not mandated. Most recent monitoring conducted in 2005.

SODIUM, TOTAL HARDNESS, AND TURBIDITY

CONTAMINANT	UNITS	MCL	PHG (MCLG)	CSD MDL	TREATMENT PLANT EFFLUENT CONCENTRATION								YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
					ALVARADO		MIRAMAR		OTAY		MWD SKINNER			
					AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE		
Sodium	ppm	n/a	n/a	5	81.2	70.2 - 89.3	79.7	72.1 - 90.2	85.3	81.9 - 90.5	83	73-89	2007	Naturally present in the environment
Total Hardness	ppm	n/a	n/a	2	221	194 - 244	220	195 - 248	221	210 - 236	226	194-254	2007	Naturally present in the environment
Total Hardness	gr/Gal	n/a	n/a	0.12	12.9	11.3 - 14.3	12.9	11.4 - 14.5	12.9	12.3 - 13.8	13	11.3-14.8	2007	Naturally present in the environment
Turbidity	NTU		n/a		% < 0.3 NTU		% < 0.3 NTU		% < 0.3 NTU		% < 0.3 NTU		2007	Soil runoff
		TT = 95% of samples < 0.3 NTU			100%		100%		100%		100%			

TABLE 2 – DETECTED REGULATED CONTAMINANTS WITH SECONDARY MCLs

CONTAMINANT	UNITS	CA SMCL	CSD MDL	CONCENTRATION IN TREATMENT PLANT EFFLUENT								YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
				ALVARADO		MIRAMAR		OTAY		MWD SKINNER			
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE		
Chloride	ppm	500	0.5	90.7	80.5 – 97.6	88.9	82.9 – 97.0	100	92.4 – 109	92.0	84 – 96	2007	Runoff/leaching from natural deposits; seawater influence
Color	CU	15	1	< 1	ND – 2	< 1	ND – 3	< 1	ND – 2	1	1 – 2	2007	Naturally-occurring organic materials
Odor – Threshold	OU	3	1	ND	ND – 2	ND	ND – 1.4	ND	ND – 2	2	2	2007	Naturally-occurring organic materials
Specific Conductance	µS/cm	1,600	n/a	944	833 – 1,100	927	764 – 1,070	986	832 – 1,330	841	755 – 927	2007	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	0.5	165	140 - 199	167	145 – 203	155	126 – 202	169	134 – 202	2007	Runoff/leaching from natural deposits; seawater influence
Total Dissolved Solids	ppm	1,000	10	516	436 - 595	509	442 – 578	498	418 – 555	495	438 – 551	2007	Runoff/leaching from natural deposits

TABLE 3 – DETECTED UNREGULATED CONTAMINANTS REQUIRING MONITORING

CONTAMINANT	UNITS	ACTION LEVEL	CDPH DLR	CONCENTRATION IN TREATMENT PLANT EFFLUENT								YEAR SAMPLED
				ALVARADO		MIRAMAR		OTAY		MWD SKINNER		
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	
Boron	ppb	1,000	100	114	103 – 127	118	110 – 128	116	108 – 129	114	101 – 129	2007

TABLE 4 – DETECTED DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUAL AND DISINFECTION BY-PRODUCT PRECURSORS

Treatment Plant Effluent														
CONTAMINANT	UNITS	MCL MRDL	MCLG MRDLG	CDPH DLR	CONCENTRATION IN TREATMENT PLANT EFFLUENT								YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
					ALVARADO		MIRAMAR		OTAY		MWD SKINNER			
					AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE		
Total Organic Carbon [TOC]	ppm	n/a	n/a	0.3	2.57	2.07 – 3.44	2.35	2.05 – 2.69	3.33	2.16 – 4.92	2.3	1.9 – 2.7	2007	Various natural and man-made sources
Distribution System Results														
Disinfectant Residual [Chloramines]	ppm	4	4	----	Distribution system average = 2.23				RANGE ** = 1.89 – 2.39				2007	Drinking water disinfectant added for treatment
Haloacetic acids [HAA5]	ppb	60*	n/a	----	Highest running average = 24.3				RANGE ** = 10.2 – 31.0				2007	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs]	ppb	80*	n/a	----	Highest running average = 63.3				RANGE ** = 34.1 – 77.0				2007	By-product of drinking water chlorination

Note * = TTHMs and HAA5 compliance is based on system wide Running Annual Average
 Note ** = Ranges are based upon single sample results