Annual Drinking Water Quality Report 2012

City of San Diego
PUBLIC UTILITIES
Water & Wastewater

SAN DIEGANS WASTE NO WATER

THE CITY OF SAN DIEGO

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 it for you.

Spanish
Este informe contiene información muy importante sobre su agua potable. Copias en español de este informe están disponibles si llama al (619) 515-3500. Tambien encontrará este informe por medio del internet en www.sandiego.gov/water.

Arabic
”هذا ألتقرير يحتوي على معلومآ ت مهمّة تتعلق بمياه ألشفة (أو ألشرب).
ترجم ألتقرير , أو تكلم مع شخص يستطيع أن يفهم ألتقرير.“

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。

Farsi
این اطلاعات مهم است. اگر نمیتوانید این اطلاعات را بزبان انگلیسی بخوانید لطفا از کسی که میتواند برای شما مطالب را برای شما ترجمه کند.

French
Cé rapport contient des information importantes concernant votre eau potable. Veuillez traduire, ou parlez avec quelqu' un qui peut le comprendre.

Hmong
Daimntawv tshaj tawm no muaj lus tseemceeb txog koj cov dej haus. Tshab txhais nws, los yog tham nrog tej tug neeg uas totaub txog nws.

Japanese
この情報は重要です。
翻訳を依頼してください。

Korean
이 안내는 매우 중요합니다.
본인을 위해 번역인을 사용하십시요.

Khamer
របាយការណ៍នេះមានពត៌មានសំខាន់អំពីទឹកបរិភោគ ។ សូមបកប្រែឬពិគ្រោះជាមួយអ្នកដែលចេះយល់របាយការណ៍នេះ ។

Laotian
ລາຍງານນີ້ມີຂໍ້ມູນສຳຄັນກ່ຽວກັບນ້ຳປະປາຂອງທ່ານ. ຈົ່ງໃຫ້ຄົນອື່ນແປຄວາມໃຫ້ທ່ານ, ຫລືໃຫ້ປຶກສາກັບຄົນໃດຄົນໜຶ່ງທີ່ເຂົ້າໃຈເລື່ອງ.

Russian
Данный рапорт содержит важную информацию о вашей питьевой воде. Переведите его или проконсультируйтесь с тем, кто его понимает.

Swahili
Shauri hii niya kufahamisha uzuri wa maji ya kunyua. Shauri nilazima egeuzwe kwa yoyote hajui Kiingereza.

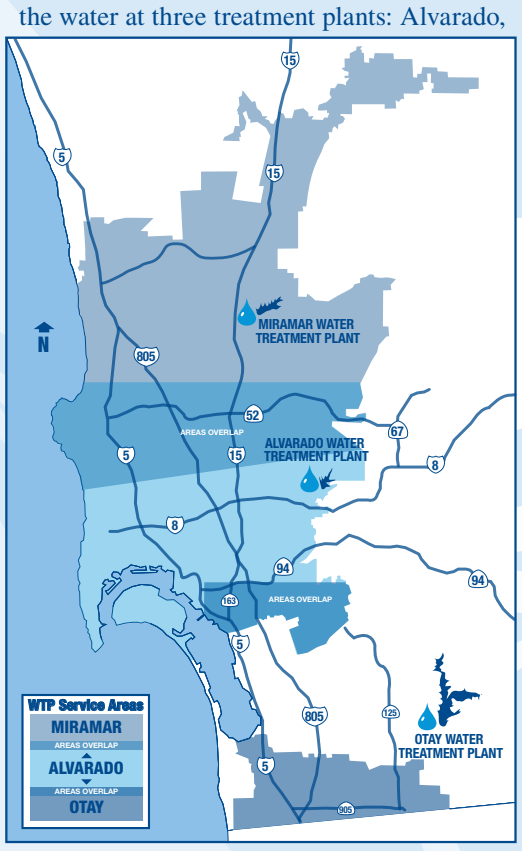
Tagalog
Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

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

The City of San Diego's Drinking Water Quality Report

includes details about where your water comes from, what it contains, and how it compares to state standards. In 2012, as in years past, your tap water met all state and federal drinking water health standards (primary standards for treating and monitoring water). The City of San Diego Public Utilities Department vigilantly safeguards our water supplies and once again, we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard. This report is a snapshot of last year's water quality.

The City imports approximately 85% to 90% of its water from the Metropolitan Water District of Southern California (MWD) via the San Diego County Water Authority. Our water supply is a blend from the Colorado River, State Water Project (Northern California), and local sources. The City treats the water at three treatment plants: Alvarado, Miramar and Otay. Which plant you receive your water from depends upon where you live (see map). A relatively small amount of treated water is also imported from MWD.



Source Water

The sources of drinking water (both tap water 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.

Contaminants that may be present in source 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 that 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, agricultural application, and septic systems.
- Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health. The 2010 Watershed Sanitary Survey, which contains information on the City's watersheds, is available at:
www.sandiego.gov/water/quality/environment/sanitarysurvey.shtml

Lead

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the US EPA Safe Drinking Water Hotline (1-800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of San Diego is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

6/13 *Printed on recycled paper containing 30% post-consumer waste. This information is available in alternative formats upon request.*

Important Health Information

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. USEPA/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). During calendar year 2012, the water supply to each of the City's water treatment plants was monitored for Cryptosporidium and Giarda, and neither was detected.

Your Dollars at Work

The Public Utilities Department recognizes the importance of its responsibility with the money you pay for water service. Water is an expensive resource that must be transported and properly treated to make sure it is safe and healthful. It is also vitally important to the health and well-being of San Diego that we safely collect, treat and dispose of nearly 180 million gallons of sewage every day. The City of San Diego has very complex water system, and the Public Utilities Department continues to look for ways to reduce costs and improve efficiency, including streamlining services and consistently reviewing our processes to make sure we are doing the best job possible. For more information, see the Your Dollars at Work web page at:
www.sandiego.gov/publicutilities/dollarsatwork.shtml

How to Contact Us

Emergency Hotline	619-515-3525
General Information	619-515-3500
Water Quality Lab	619-668-3232
Capital Improvements Projects	619-533-4207
City Lakes Recreation	619-465-3474
Speakers Bureau	619-533-6638
Storm Water Pollution Prevention	619-235-1000
Water-Use Violations	619-515-3500
Department email	water@sandiego.gov

Information Web Sites

City of San Diego	http://sandiego.gov/water/
County Water Authority	http://www.sdcwa.org/
Metropolitan Water District	http://www.mwdh2o.org/
State Public Health	http://www.cdph.ca.gov
Think Blue	www.thinkblue.org
U.S. EPA	http://water.epa.gov/drink/index.cfm
American Water Works Association	http://awwa.org
Watering Calculator	http://apps.sandiego.gov/landcalc/
Be Water Wise (MWD)	http://www.bewaterwise.com/

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 U.S. Environmental Protection Agency's (USEPA) Safe Drinking Water Hotline at 800-426-4791. For a list of action levels, visit the California Department of Public Health (CDPH) web site at www.cdph.ca.gov.

How to Read the Tables

The tables below list contaminants which 1) CDPH requires the City to monitor, 2) CDPH regulates with associated primary [health] or secondary [aesthetic], or no established standards. During 2012, these contaminants were detected at or above the CDPH's Detection Limits for Purposes of Reporting during the reporting year.

These tables summarize monitoring from January – December 2012 with two exceptions (see table footnotes). CDPH mandates monitoring radioactive contaminants every three years. The Lead and Copper Rule was conducted in 2011, and is monitored every three years. The levels of these contaminants are not expected to vary significantly from year to year.

Definition of Terms

Action Level (AL): The concentration of acontaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
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 or 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 health risk. MCLs are set by the U.S. EPA.
Maximum Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below, which there is no known or expected health risk. MRDLGs are set by the U.S. EPA.
Public Health Goal (PHG): 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
CA SMCL: California secondary maximum contaminant level
CDPH: California Department of Public Health
CSD MDL (City of San Diego Water Quality Lab method 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
MWD: Metropolitan Water District of Southern California
n/a: not applicable
ND: not detected
NTU: nephelonmetric 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 = 0.001 ppm]
ppm: parts per million or milligrams per liter (mg/L) – [1 ppm = 1,000 ppb]
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 CCR CONTAMINANTS WITH PRIMARY MCLs

Primary Standards (Mandatory Health Related Standards) – CHEMICAL CONTAMINANTS

CONTAMINANT	UNITS	MCL	PHG (MCLG)	CDPH DLR	TREATMENT PLANT EFFLUENT CONCENTRATION ALVARADO AVERAGE	ALVARADO RANGE	MIRAMAR AVERAGE	MIRAMAR RANGE	OTAY AVERAGE	OTAY RANGE	MWD Skinner AVERAGE	MWD Skinner RANGE	TYPICAL SOURCE OF CONTAMINANTS
Fluoride naturally occurring	ppm	2	1	0.1	0.2	0.1 – 0.3	0.2	0.1 – 0.2	0.3	0.2 – 0.5	0.2	0.1 – 0.2	Erosion of natural deposits
Fluoride Treatment Related	ppm	2	1	0.1	0.7	0.7 - 1.0	0.8	0.7 - 0.9	0.5	0.4 - 0.6	0.8	0.7 – 0.9	Fluoride added at treatment plants

Primary Standards (Mandatory Health Related Standards) – RADIOACTIVE CONTAMINANTS

CONTAMINANT	UNITS	MCL	PHG (MCLG)	CDPH DLR	TREATMENT PLANT EFFLUENT CONCENTRATION ALVARADO AVERAGE	ALVARADO RANGE	MIRAMAR AVERAGE	MIRAMAR RANGE	OTAY AVERAGE	OTAY RANGE	MWD Skinner AVERAGE	MWD Skinner RANGE	TYPICAL SOURCE OF CONTAMINANTS
Gross Alpha Particle Activity	pCi/L	15	(0)	3	3.3	n/a	ND	n/a	ND	n/a	ND	ND – 3	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	50*	(0)	4	ND	n/a	ND	n/a	ND	n/a	ND	ND – 5	Decay of natural and manmade deposits
Uranium	pCi/L	20	0.43	1	1.9	n/a	1.7	n/a	1.2	n/a	1	ND - 2	Erosion of natural deposits

Note: Regulations require monitoring every three years. Most recent monitoring: 2012 for Miramar, Otay, and Alvarado, and 2011 for MWD Skinner. *CDPH considers 50pCi/L to be level of concern for beta particles.

Primary Standards (Mandatory Health Related Standards) – MICROBIOLOGICAL CONTAMINANTS

CONTAMINANT	UNITS	MCL	PHG (MCLG)	CDPH DLR	DISTRIBUTION SYSTEM AVERAGE	DISTRIBUTION SYSTEM RANGE	MWD Skinner AVERAGE	MWD Skinner RANGE	TYPICAL SOURCE OF CONTAMINANTS
Total Coliform Bacteria	/100ml	< 5% Positive	(0)	n/a	0.1%	0 – 0.6%	0.1%	ND – 0.5%	Naturally present in the environment

Above: * Based on monthly percentages of positive total coliform samples.

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

CONTAMINANT	UNITS	ACTION LEVEL	PHG (MCLG)	CDPH DLR	SAMPLES TAKEN AT THE TAP 90th PERCENTILE CONCENTRATION	NUMBER SAMPLING SITES	NUMBER EXCEEDING AL		TYPICAL SOURCE OF CONTAMINANTS
Copper	ppm	1.3	0.3	0.050	0.309	50	0		Internal corrosion of household plumbing systems
Lead	ppb	15	0.2	5	ND	50	3		Internal corrosion of household plumbing systems

Note: Monitoring mandated every three years. Most recent monitoring conducted in 2011. Infants and young children are typically more vulnerable to lead in drinking water than the general population. For more information on lead, please see page 1 of this document.

TABLE 2 – DETECTED REGULATED CCR CONTAMINANTS WITH SECONDARY MCLs

CONTAMINANT	UNITS	CA SMCL	CSD MDL (DLR)	TREATMENT PLANT CONCENTRATION ALVARADO AVERAGE	ALVARADO RANGE	MIRAMAR AVERAGE	MIRAMAR RANGE	OTAY AVERAGE	OTAY RANGE	MWD SKINNER AVERAGE	MWD SKINNER RANGE	TYPICAL SOURCE OF CONTAMINANTS
Chloride	ppm	500	0.5	84.2	70.4 – 95.1	76.6	65 – 86.9	132	107 – 149	76	75 – 77	Runoff/leaching from natural deposits; seawater influence
Color	CU	15	1	2	ND - 5	2	1 – 5	3	1 – 5	1	1	Naturally-occuring organic materials.
Manganese	ppb	50	(20)	ND	ND – 24.3	ND	ND – ND	ND	ND – ND	ND	ND – ND	Leaching from natural deposits
Odor-Threshold	OU	3	1	ND	ND – 1	ND	ND – 1	1	1 –2	2	1 – 2	Naturally-occuring organic materials
Specific Conductance	µS/cm	1,600	n/a	652	538 – 797	617	466 – 776	867	730 – 962	640	440 – 780	Substances that form ions when in water; seawater influence.
Sulfate	ppm	500	0.5	105	66.6 – 155	102	57.6 – 155	122	112 – 144	110	96 – 120	Runoff/leaching from natural deposits; seawater influence
Total Dissolved Solids	ppm	1,000	10	441	342 – 683	386	269 – 469	537	458 – 565	380	360 – 400	Runoff/leaching from natural deposits

CCR contaminants above:

TABLE 3 – DETECTED UNREGULATED CCR CONTAMINANTS REQUIRING MONITORING

CONTAMINANT	UNITS	NOTIFICATION LEVEL	CDPH DLR	TREATMENT PLANT CONCENTRATION ALVARADO AVERAGE	ALVARADO RANGE	MIRAMAR AVERAGE	MIRAMAR RANGE	OTAY AVERAGE	OTAY RANGE	MWD SKINNER AVERAGE	MWD SKINNER RANGE	TYPICAL SOURCE OF CONTAMINANTS
Boron	ppm	1,000	100	101	ND – 121	121	113 – 135	127	120 – 137	130	130 – 130	Runoff/leaching from natural deposits; industrial waste

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

Treatment Plant Effluent

CONTAMINANT	UNITS	MCL [MRDL]	PHG (MCLG) [MRDLG]	CDPH DLR	TREATMENT PLANT CONCENTRATION ALVARADO AVERAGE	ALVARADO RANGE	MIRAMAR AVERAGE	MIRAMAR RANGE	OTAY AVERAGE	OTAY RANGE	MWD SKINNER AVERAGE	MWD SKINNER RANGE	TYPICAL SOURCE OF CONTAMINANTS
Bromate*	ppb	10	0.1	5	ND	ND – 8.5	ND	ND – ND	n/a	n/a	6.5***	1.2 - 11	By-product of drinking water disinfection
Chlorate**	ppb	NL= 800 ppb****		20	n/a	n/a	n/a	n/a	174	ND – 264	n/a	n/a	By-product of drinking water disinfection
Chlorite**	ppm	1	0.05	0.02	n/a	n/a	n/a	n/a	0.32	ND – 0.46	n/a	n/a	By-product of drinking water disinfection
Total Organic Carbon [TOC]	ppm	TT	n/a	0.3	2.7	2.0 – 4.0	2.3	1.9 – 2.6	4.2	3.1 – 5.2	1.8***	1.8 – 2.3	Various natural and manmade sources

Treatment Plant Effluent section above: * Required for Alvarado, Miramar and Skinner. **Required for Otay. Not required for Alvarado and Miramar. ***Highest Running Annual Average. ****NL = Notification Level.

Distribution System Results

Chlorite*	ppm	1	0.05	0.02	***Distribution system average = 0.24	RANGE***	ND – 0.38	--------	By-product of drinking water disinfection
Disinfectant Residual [Chloramines]	ppm	[4][A]	[4]	n/a	***Distribution system average = 2.0	RANGE***	0.11 – 3.4	--------	Drinking water disinfection added for treatment
Haloacetic acids [HAA5]	ppb	n/a	n/a	n/a	** Running Annual Average = 12.0	RANGE***	5.0 – 19	LRAA Violation** NO	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs]	ppb	n/a	n/a	n/a	** Running Annual Average = 57	RANGE***	37 – 90	LRAA Violation** NO	By-product of drinking water chlorination

Dist. System Results section above: * Chlorite is present only in the Southern section of the distribution system. ** Total Trihalomethane and HAA5 compliance for quarter 1 is based on system-wide Running Annual Average (RAA), which includes results from previous quarters not reported in this table. Beginning in quarter 2 of 2012 compliance is based on Locational Running Annual Average (LRAA). *** Range and Average are based upon individual 2012 sample results. [A] Compliance is determined by the distribution system average.

ADDITIONAL CONSTITUENTS - SODIUM, TOTAL HARDNESS AND TURBIDITY

CONTAMINANT	UNITS	MCL	PHG (MCLG)	MDL	TREATMENT PLANT EFFLUENT CONCENTRATION ALVARADO AVERAGE	ALVARADO RANGE	MIRAMAR AVERAGE	MIRAMAR RANGE	OTAY AVERAGE	OTAY RANGE	MWD Skinner AVERAGE	MWD Skinner RANGE	TYPICAL SOURCE OF CONTAMINANTS
Sodium	ppm	n/a	n/a	20	67.8	60.5 – 76.6	64.0	49.8 – 77.8	96.0	81.2 – 108	66	65 – 66	Naturally present in the environment
Total Hardness	ppm	n/a	n/a	10	172	150 – 203	157	116 – 199	225	199 – 237	170	120 – 220	Naturally present in the environment
Total Hardness	gr/Gal	n/a	n/a	0.6	10.0	8.8 – 11.9	9.2	6.8 – 11.6	13.2	11.6 – 13.9	9.9	7.0 – 12.9	Naturally present in the environment
Turbidity	NTU	TT = 1 NTU	n/a	----	Max Level Found = 0.16		Max Level Found = 0.19		Max Level Found = 0.25		Max Level Found = 0.06		Soil runoff
Turbidity	NTU	TT = 95% of samples ≤ 0.3 NTU	n/a	----	% ≤ 0.3 NTU 100%		% ≤ 0.3 NTU 100%		% ≤ 0.3 NTU 100%		% ≤ 0.3 NTU 100%		Soil runoff