City of Del Mar - 2015 Annual Drinking Water Quality Report

This report is a snapshot of the quality of the water the City of San Diego provided to the City of Del Mar in 2015. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

Where does my water come from?

The City of Del Mar purchases untreated water from the San Diego County Water Authority, which purchases water from multiple sources[1], including the Metropolitan Water District of Southern California. The City of San Diego treats the water for the City of Del Mar at the Miramar Water Treatment Plant. The treated water is pumped to and stored in the City's four reservoirs.

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 State Water Resources Control Board – Division of Drinking Water (SWRCB-DDW) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

In 2015, as in past years, your tap water not only met, but exceeded all U.S. Environment Protection Agency (USEPA) and State drinking water health standards.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 2015, the water supply to each of the City's purveyor water treatment plants was monitored for Cryptosporidium and Giardia, and neither was detected.

Lead and Copper

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 Del Mar 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 two minutes before using water for drinking or cooking. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead or from the Safe Drinking Water Hotline at (1-800-426-4791).

Lead and copper enter drinking water primarily through plumbing materials. Exposure to lead and copper may cause health problems ranging from stomach distress to brain damage. In 1991, the EPA published the Lead and Copper Rule to control lead and copper in drinking water. The rule requires the City to monitor drinking water at customer taps. If lead concentrations exceed an Action Level (AL) of 15 ppb, or copper concentrations exceed an AL of 1.3 ppm in more than 10 percent of taps sampled, i.e. the 90th percentile, the City would be required to undertake a number of additional actions to inform the public and control corrosion.

In 2015, 22 customers provided samples from their taps to the City of Del Mar for Lead and Copper analysis. The results of these tests are presented here. Only one of the 22 sites had a result above the AL for Copper. Because less than 10 percent of our results were above the AL for Lead and Copper, no additional actions are required. Lead and Copper Rule monitoring must be conducted every three years - our next study will be conducted in 2018.

Este informe contiene información muy importante sobre la calidad de su agua de beber.
Tradúzcalo ó hable con alguien que lo entienda bien.

This report is also available online at City's website at: **http://www.delmar.ca.us/ccr2015**

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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 web site of the State Water Resources Control Board - Division of Drinking Water (SWRCB-DDW): http://www.waterboards.ca.gov

How to Read the Tables

The tables below list contaminants which
1) SWRCB-DDW requires the City to monitor, and
2) SWRCB regulates with associated primary [health] or secondary [aesthetic], or no established standards. During 2015, these contaminants were detected at or above the SWRCB's Detection Limits for Purposes of Reporting during the reporting year.

These tables summarize monitoring from 2015, with exceptions (see table footnotes). SWRCB mandates monitoring radioactive contaminants every three years. The lead and copper testing was conducted in 2015, 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 a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Location-based Running Annual Average (LRAA): The average of the most recent four quarters of monitoring performed at a distinct location in the distribution system. LRAAs are calculated quarterly using twelve months of data and may include values obtained in 2014.

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. MCLGs 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, reporting, and water treatment requirements.

Abbreviations

A: Absent
CA SMCL: California Secondary Maximum Contaminant Level
SWRCB-DDW: California State Water Resources Control Board - Division of Drinking Water
CSD MDL: City of San Diego Water Quality Laboratory
Method Detection Limit: Lowest quantifble concentration of a measured analyte detectable by the laboratory.
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 (less than DLR, where applicable)
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 = 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 PARAMETERS	UNITS	MCL	PHG	DDW DLR	CITY OF SAN DIEGO - MIRAMAR TREATMENT PLANT AVERAGE	RANGE	MAJOR SOURCES IN DRINKING WATER
Fluoride (naturally occurring)	ppm	2	1	0.1	0.3	0.2 - 0.3	Erosion of natural deposits
Fluoride (treatment-related)	ppm	2	1	0.1	0.6	0.4 - 0.8	Water additive that promotes strong teeth
Barium	ppm	1	2	0.1	0.12	0.12 - 0.13	Erosion of natural deposits

Note: Optimal Fluoride Level as established by US Dept. of Health and Human Services and California Waterboards Division of Drinking Water is 0.7 ppm.

Primary Standards (Mandatory Health Related Standards) - RADIOACTIVE CONTAMINANTS

RADIOACTIVE PARAMETERS	UNITS	MCL	PHG (MCLG)	DDW DLR	CITY OF SAN DIEGO - MIRAMAR TREATMENT PLANT AVERAGE	RANGE	MAJOR SOURCES IN DRINKING WATER
Gross Alpha Particle Activity	pCi/L	15	(0)	3	ND	N/A	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	50*	(0)	4	ND	N/A	Decay of natural and manmade deposits
Uranium	pCi/L	20	0.43	1	2.4^	N/A	Erosion of natural deposits

* DDW considers 50 pCi/L to be the level of concern for beta particles. ^Monitoring required every three years. Most recent monitoring 2014.

CITY OF DEL MAR - DISTRIBUTION SYSTEM AVERAGE

MICROBIOLOGICAL	UNITS	Systems that collect <40 samples/month MCL <5%, and	No. of Months in Violation	PHG (MCLG)	MAJOR SOURCES IN DRINKING WATER
Total Coliform Bacteria	/100ml	No more than 1 positive monthly sample	0	(0)	Naturally present in the environment
Fecal Coliform and *E. coli*	/100ml	A routine sample and a repeat sample are Total Coliform positive, and one of these is also Fecal Coliform or E. coli positive.	0	(0)	Human and animal fecal waste

City of Del Mar performed 72 water quality tests during CY2015. Zero samples were found positive for Coliform, the Distribution average was therefore 0/72, or 0% (<5% MCL).

LEAD AND COPPER RULE

CITY OF DEL MAR - SAMPLES TAKEN AT THE TAP OF 22 DIFFERENT SAMPLE SITES (JUNE 2015)

LEAD AND COPPER STUDY	UNITS	ACTION LEVEL	PHG	DDW DLR	90th PERCENTILE CONCENTRATION	Exceeding AL	MAJOR SOURCES IN DRINKING WATER
Copper	ppm	1.300	0.3	0.05	0.590	1	Internal corrosion of household plumbing systems
Lead	ppb	15	0.2	5	<0.2	0	Internal corrosion of household plumbing systems

Note: Monitoring mandated every three years. City of Del Mar most recently monitoring conducted in June 2015.

TABLE 2 -- DETECTED REGULATED CCR PARAMETERS WITH SECONDARY MCLs

	UNITS	CA SMCL	CSD MDL (DLR)	MIRAMAR TREATMENT PLANT EFFLUENT CONCENTRATION AVERAGE	RANGE	MAJOR SOURCES IN DRINKING WATER
Chloride	ppm	500	0.5	99.2	90.3 - 105	Runoff/leaching from natural deposits; seawater influence
Color	CU	15	1	ND	ND - ND	Naturally occurring organic materials
Odor - Threshold	OU	3	(1)	ND	ND - 1	Naturally occurring organic materials
Specific Conductance	µS/cm	1600	N/A	985	744 - 1150	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	(0.5)	232	198 - 264	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	10	618	560 - 651	Runoff/leaching from natural deposits

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TABLE 3 -- DETECTED UNREGULATED CCR PARAMETERS REQUIRING MONITORING

	UNITS	NOTIFICATION LEVEL	DDW DLR	MIRAMAR TREATMENT PLANT EFFLUENT CONCENTRATION		
				AVERAGE	RANGE	MAJOR SOURCES IN DRINKING WATER
Boron	ppm	1	0.1	0.14	0.13 - 0.15	

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

Treatment Plant Effluent		MCL	(MCLG)	DDW	MIRAMAR TREATMENT PLANT EFFLUENT CONCENTRATION		
	UNITS	[MRDL]	[MRDLG]	DLR	AVERAGE	RANGE	MAJOR SOURCES IN DRINKING WATER
Bromate*	ppb	10	0.1	5 / 1**	ND	ND - ND	By-product of drinking water disinfection
Chlorate**	ppb	NL=800 PPB		20	N/A	N/A	By-product of drinking water disinfection
Chlorite**	ppm	1	0.05	0.02	N/A	N/A	By-product of drinking water disinfection
Total Organic Carbon [TOC]	ppm	TT	N/A	0.3	2.4	2.1 - 3.0	Various natural and manmade sources

*Required for Miramar Water Treatment plant ** City of San Diego DLR = 5

Distribution System Results (Secondary MCL)		SMCL	(MCLG)	DDW	CITY OF DEL MAR - DISTRIBUTION SYSTEM AVERAGE		
	UNITS	[MRDL]	[MRDLG]	DLR	AVERAGE	RANGE**	MAJOR SOURCES IN DRINKING WATER
Color, Visual	Color Units	15	----	3	2	ND - 5	Naturally occuring organic materials.
Odor	OU (Ton)	3	----	1	1.1	ND - 2	Naturally occuring organic materials.
Turbidity	NTU	1	----	0.1	≤0.77	ND - 1.0	Soil runoff

Distribution System Results		MCL	MCLG	DDW	CITY OF DEL MAR - DISTRIBUTION SYSTEM AVERAGE		
	UNITS	[MRDL]	[MRDLG]	DLR	AVERAGE	RANGE**	MAJOR SOURCES IN DRINKING WATER
Disinfectant Residual [Chloramines as Cl2]	ppm	[4]^	[4]	----	1.6	0.2 – 2.7	Drinking water disinfectant added for treatment
HaloAcetic Acids [HAA5]	ppb	60*	N/A	----	Max LRAA = 13	8.8 – 14.0	By-product of drinking water disinfection
Total TriHaloMethanes [TTHMs]	ppb	80*	N/A	----	Max LRAA = 42	19.4 – 42.1	By-product of drinking water chlorination

NOTES: * Total Trihalomethane and HAA5 compliance is based on quarterly Locational Running Annual Average (LRAA)

** Ranges and average are based upon individual 2015 sample results. ^Compliance is determined by Distribution System Average.

ADDITIONAL CONSTITUENTS - SODIUM, TOTAL HARDNESS, AND TURBIDITY

	UNITS	MCL	PHG (MCLG)	CSD MDL	MIRAMAR TREATMENT PLANT EFFLUENT CONCENTRATION		
					AVERAGE	RANGE	MAJOR SOURCES IN DRINKING WATER
Sodium	ppm	N/A	N/A	20	93.8	85.2 - 102	Naturally present in the environment
Total Hardness	ppm	N/A	N/A	10	292	271 - 324	Naturally present in the environment
Total Hardness	gr/Gal	N/A	N/A	0.6	17	15.8 - 18.9	Naturally present in the environment
Alkalinity - Total as CaCO3	ppm	N/A	N/A	10	126	118 - 155	
pH	pH	N/A	N/A	N/A	8.1	7.09 - 8.69	
Ammonia as Nitrogen	ppm	N/A	N/A	0.03	0.77	0.35 - 1.54	
Turbidity	NTU	TT= 1 NTU	N/A	---	Max. Level found = 0.09 NTU		Soil runoff
Turbidity	NTU	TT=95% of samples ≤ 0.3 NTU	N/A	---	100% of samples ≤ 0.3 NTU		Soil runoff

DETECTED UNREGULATED PARAMETERS REQUIRING MONITORING

UCMR3 PARAMETERS	UNITS		UCMR3 MRL		MIRAMAR TREATMENT PLANT EFFLUENT CONCENTRATION		
					AVERAGE	RANGE	MAJOR SOURCES IN DRINKING WATER
Bromochloromethane	ppb	----	0.06	----	ND	ND - ND	Fire extinguishers; pesticide solvent
Chlorodifluoromethane (HCFC-22)	ppb	----	0.08	----	ND	ND - ND	Refrigerant
Chlorate	ppb	----	20	----	ND	ND - 25	By-product of drinking water disinfection
Chromium-6	ppb	----	0.03	----	0.16	0.03 - 0.36	Naturally occurring metal; steel; chrome plating
Molybdenum	ppb	----	1	----	3.9	3.4 - 4.2	Naturally occurring element; in ores and plants
Strontium	ppb	----	0.3	----	843	750 - 920	Naturally occurring element
Vanadium	ppb	----	0.2	----	ND	ND - 0.26	Naturally occurring metal; used as a catalyst

Note: UCMR3 (Third Unregulated Contaminant Monitoring Rule) Public water systems (PWSs) subject to Assessment Monitoring will sample within a 12-month period during 2013 - 2015. City of San Diego samples were collected in 2013 and 2014.

(1) A Watershed Sanitary Survey containing information about the City of San Diego's source water was completed in 2010 and is available at: www.sandiego.gov/water/quality/environment/sanitarysurvey.shtml

Additional tables and information about the water quality can also viewed via http://www.sandiego.gov/water/quality/reports

The public is invited to discuss water quality related items during the regularly scheduled City Council Meetings, held the first and third Mondays of the month from 6 p.m. at City Hall - Communications Center, 240 Tenth Street, Del Mar, CA 92014. Council meetings are occasionally held on the second Mondays and/or special meetings called.

City of Del Mar - Public Works Department

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We, the Experienced Professional Staff of the Public Works Department take ownership of the Operation and Maintenance of the City of Del Mar's Infrastructure.

With our Customer's needs in mind We deliver this 24/7 service in a Prompt, Courteous and Efficient Manner.

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