



San Dieguito Water District



ANNUAL WATER QUALITY REPORT

WATER QUALITY TEST RESULTS FROM 2018

The water delivered by the San Dieguito Water District not only met,
but exceeded all U.S. Environmental Protection Agency (USEPA)
and State Water Resources Control Board (SWRCB)
drinking water health standards.

Test results from 2018 are available online at:
www.sdwd.org/2018waterqualityreport.pdf

WATER SUPPLY AND SAFETY

What Is This Report About?

This report is a snapshot of the quality of the water that the San Dieguito Water District provided in 2018. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

If you have any questions about this report, please call Tim Bailey, Water Quality Analyst at (858) 756-2424.

Where Does My Water Come From?

The San Dieguito Water District and Santa Fe Irrigation District jointly own and operate the R.E. Badger Filtration Plant. The plant treats both imported and local water. Imported water is delivered by pipeline from Lake Skinner, located in the City of Hemet. Lake Skinner is a blend of water imported by the Metropolitan Water District of Southern California (MWD) from the Colorado River and the Sacramento River Delta.

Local water originates from Lake Hodges. Lake Hodges water is either transferred to the San Dieguito Reservoir through a

small aqueduct and then to the treatment plant, or directly to the treatment plant via the Cielo Pump Station.

Source Water Assessment

Local water supplies are considered most vulnerable to agricultural and urban/stormwater runoff. A copy of the R. E. Badger Filtration Plant Watershed Sanitary Survey is available for review at the treatment plant. Between 2010-2011 MWD completed its source water assessments of our imported water from the Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to recreation, urban/stormwater runoff, increasing urbanization in the watershed, and wastewater. State Water Project supplies are considered to be most vulnerable to urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater. A copy of the assessments can be obtained by contacting MWD by phone at (800) 354-4420.

Is My Water Safe?

Yes! Last year, as in years past, your tap water not only met, but exceeded all U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (SWRCB) drinking water health

standards. The San Dieguito Water District vigilantly safeguards the water supplies and is committed to providing high quality drinking water to its customers.

All 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 USEPA's Safe Drinking Water Hotline (1-800-426-4791). 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, persons 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).

Español (Spanish) - Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Para asistencia en español, llame (760) 633-2810.

R.E. Badger Filtration Plant



WHAT MIGHT BE IN MY DRINKING 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 stormwater 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 stormwater 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 stormwater 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 USEPA and the SWRCB prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. SWRCB regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The SWRCB allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease

within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Lead-Specific Language for Community Water Systems

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 San Dieguito Water District 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. There were zero requests for lead sampling in 2018 from schools within the San Dieguito Water District. 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 <http://www.epa.gov/safewater/lead>.

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TERMS USED IN THIS REPORT

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 (USEPA).

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

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

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

Variances and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

Beta: a measure of radiation

grains/gal: grains per gallon

TOC: Total Organic Carbon

NTU: Nephelometric Turbidity Units

uS/cm: Micro Siemens per centimeter

TON: Threshold Odor Number

The presence of contaminants 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 USEPA's Safe Drinking Water hotline (1-800-426-4791) or on the USEPA's website <http://water.epa.gov/drink/standards/hascience.cfm>.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	Highest Number of Detections	Number of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a month) 1	0	5% positive monthly samples	0	Naturally present in the environment
<i>E. coli</i>	(In the year) 0	0	(a)	0	Human and animal fecal waste

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	Sample Date	Number of Samples Collected	90th Percentile Level Detected	Number of Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	2016	30	2.5	0	15	0.2	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	2016	30	0.43	0	1.3	0.3	Not applicable	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

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TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	2018	104	87 - 120	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2018	250	210 - 290	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring
Grains/Gal. (gpg)		14.4	12.3-19.3			

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Aluminum (ppm)	2018	0.002	ND – 0.025	1	0.6	Erosion of natural deposits; residue from some surface water treatment processes.
Arsenic (ppb)	2018	1.35	1.1 – 1.6	10	0.004	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Barium (ppm)	2018	0.068	0.045 – 0.081	1	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits.
Fluoride (ppm)	2018	0.24	0.19 – 0.27	2	1	Erosion from natural deposits, water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Total THMs (ppb)	2018	57.3	40 - 64	80	-	Byproduct of drinking water disinfection
Total HAA5 (ppb)	2018	19.3	13 - 23	60	-	Byproduct of drinking water disinfection.
Chloramines (ppm)	2018	2.33	2.14 – 2.55	4	4	Drinking water Disinfectant added for treatment.
Chlorite (ppm)	2018	0.39	ND – 0.57	1.0	0.05	Byproduct of drinking water disinfection.
Chlorine Dioxide (ppb)	2018	10	ND - 190	800	800	Drinking water disinfectant added for treatment.
Control of DBP Precursors (ppm)	2018	3.8	1.98 – 5.39	TT	-	Various natural and manmade sources.

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TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	SMCL	PHG (MCLG)	Typical Source of Contaminant
Aluminum (ppb)	2018	2.0	ND – 25	200	0.6	Erosion of natural deposits; residue from some surface water treatment processes.
Turbidity (NTU)	2018	0.03	0.01 – 0.23	-	5	Soil Runoff
Total Dissolved Solids	2018	593	520 – 700	-	1000	Runoff, leaching from natural deposits.
Specific Conductance (uS/cm)	2018	968	880 – 1100	-	1600	Substances that form ions in water; seawater influence.
Chloride (ppm)	2018	128	110 – 140	-	500	Runoff, leaching form natural deposits; seawater influence.
Sulfate (ppm)	2018	165	120 – 200	-	500	Runoff, leaching form natural deposits; industrial wastes.

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
Chlorate (ppb)	2018	285	260 – 310	800 ug/L	Animal studies demonstrated that chlorate exposure in rats caused adverse effects to the pituitary and thyroid glands.
Hexavalent Chromium (ppb)	2018	0.039	0 – 0.39	10	Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer

TABLE 7 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES

Treatment Technique ^(a) (Type of approved filtration technology used)	Conventional Treatment
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to .30 NTU in 95% of measurements in a month. 2 – Not exceed 1.0 NTU for more than eight consecutive hours. 3 – Not exceed 5.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	98.8%
Highest single turbidity measurement during the year	0.23 NTU
Number of violations of any surface water treatment requirements	0

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

^(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

WATER-USE EFFICIENCY PROGRAM

The San Dieguito Water District offers conservation outreach, education, and incentives. Visit our website for new programs, workshops, events, and information: www.sdwd.org/conserve. For conservation questions, e-mail us at conserve@sdwd.org, or call (760) 633-2676.

Conservation

Since 1991, the San Dieguito Water District has developed and participated in water conservation programs aimed at providing information and resources to support the District and individual customers in reducing water demand. The District partners with many national, state, and local resources to improve best management practices, provide marketing and materials, and facilitate rebates and incentives. You can receive program updates by signing up for the SDWD Newsletter at www.encinitasca.gov or by visiting www.sdwd.org/conserve.

WaterSmart Checkups

Help control irrigation costs at your home or business with a checkup from a certified irrigation specialist. This is a great way to increase efficiency and get site-specific recommendations. Single-family home checkups also include recommendations to increase indoor water-use efficiency. There is no obligation, and it's free! Visit www.watersmartcheckup.org to apply.

Rebates

The Metropolitan Water District of Southern California (MWD) offers rebates on a variety of indoor and outdoor water efficient devices for residential and commercial customers. Rebates are available for high efficiency clothes washers and toilets, smart irrigation controllers, rotating sprinkler nozzles, rain barrels, and more through www.socalwatersmart.com.

Sustainable Landscape Guidelines

Download a copy of the regional Sustainable Landscape Guidelines at www.watersmartsd.org/news/sustainable-landscape-guidelines. These guidelines are intended to help homeowners think more sustainably when evaluating, designing, planting, and maintaining landscapes. The guidelines will help achieve greater water-use efficiency, storm water management, groundwater recharge, green waste reduction, and embedded energy savings.

Commercial - Business Water-Use Efficiency

EPA WaterSense offers water-efficiency best management practices to help commercial and institutional facilities understand and better manage their water use and save on costs. Visit www.epa.gov/watersense/best-management-practices.

Resources for Home Water-Use Efficiency

For information about programs and workshops, as well as great ideas to help you save water and money both inside the home and outdoors, visit our website at www.sdwd.org/conserve.

Recycled Water

The San Dieguito Water District and San Elijo Joint Powers Authority (SEJPA) have partnered to bring recycled water to the area's golf course, homeowners' associations, parks, schools, parkways, and medians. In 2018, approximately 218 million gallons of recycled water were provided to the District's customers. By utilizing recycled water, we are making the most of one of Southern California's most precious

resources – water. Using recycled water helps the environment and is an important part of diversifying the local water supply. If you would like to know more about the availability of recycled water in your area, please call us at (760) 633-2709.

Other District Info

The San Dieguito Water District supplies water to Old Encinitas, Cardiff, and Leucadia within the City of Encinitas. It covers 8.9 square miles and generally lies west of El Camino Real to the ocean. When the City of Encinitas was incorporated, the City Council of the City of Encinitas became the governing board of the Water District.

Getting Involved: Unless otherwise noticed, the San Dieguito Water District Board of Directors meets on the third Wednesday of each month at 5:00 pm at Encinitas City Hall. City Hall is located at 505 South Vulcan Avenue, Encinitas. Please feel free to participate in these meetings. Visit www.sdwd.org for the current schedule of upcoming meetings.



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