

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 byproducts 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 State Department of Public Health (Department) 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 must provide the same protection for public health.

Tables 1, 2, 3, 4, and 5 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



Department 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 is a microbial pathogen commonly found in surface waters throughout the U.S. Monitoring for the 2007 year indicated the presence of these organisms in our untreated water. However, the treatment plant when operated within regulatory constraints will remove these organisms. Ingestion of **Cryptosporidium** may cause cryptosporidiosis, an abdominal infection which healthy individuals can overcome within a few weeks. **Cryptosporidium** must be ingested to cause disease and may be spread through means other than drinking water.



San Dieguito Water District
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R.E. BADGER FILTRATION PLANT

ANNUAL WATER QUALITY REPORT

WATER QUALITY TEST RESULTS
FROM 2007

What Is This Report About?

This brochure is a snapshot of the quality of the water that the San Dieguito Water District provided in 2007. 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 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 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/storm runoff. A copy of the R. E. Badger Filtration Plant Watershed Sanitary Survey is available for review at the treatment plant. If you have any questions about this report, please call Cor Shaffer, Plant Manager, or Tim Bailey, Water Quality Analyst at (858) 756-2569.

In December 2002, Metropolitan Water District of Southern California completed its source water assessment 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/storm water runoff, increasing urbanization in the watershed and wastewater. State Water Project supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. A copy of the assessment can be obtained by contacting Metropolitan by phone at (213) 217-6850.

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 state 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 UPEPA'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, 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).

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) 633-2709.



Water Conservation and Preservation Programs

To maximize our precious potable water resources, the San Dieguito Water District continues to offer water conservation programs. In the summer of 2008, many of the programs for Commercial, Industrial, Institutional and Residential customers will change from voucher programs to rebate programs. Please check our website for updates: <http://www.ci.encinitas.ca.us/Government/CityD/SanDWD/>. The following is a list of programs currently available to our customers.

Smart Landscape Grant Program for Large Landscapes

Large landscape property owners may qualify for grants up to \$2500 per acre for a maximum of \$5000 per site, to repair or upgrade existing irrigation system hardware. For more information, call 800-986-4538.

Large Landscape Audits for Commercial and Residential

Receive professional recommendations to improve your landscape irrigation system to save water and money. To take advantage of this free service, please call 800-986-4538.

Commercial, Industrial, Institutional Program

Offers numerous commercial incentives: connectionless food steamers, cooling tower conductivity controller/PH, dry vacuum pumps, steam sterilizers, high efficiency toilets, high efficiency washers,

pre-rinse spray valves, zero water urinals, waterbrooms, and x-ray processing units. For more information, call 760-633-2709.

Commercial Smart Controller Program

Commercial, public and multi-family properties may qualify for a discount up to \$25 per station. For more information, call 800-986-4538. Please call before purchase.

Residential Program

Offers discounts for high efficiency clothes washers and high efficiency toilets. We anticipate the addition of outdoor water savings programs in 2008. Please check our website for updates. For more information, call 760-633-2709.

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 courses, homeowner's associations, parks, schools, parkways and medians. In 2007, over 226 million gallons of recycled water was 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.

Take the 20 Gallon Challenge!
Go to www.20gallonchallenge.com
and pledge to save water.



20gallonchallenge.com



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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: The San Dieguito Water District Board of Directors meets on the fourth Wednesday of each month at 6:00 pm at Encinitas City Hall. City Hall is located at 505 South Vulcan Avenue, Encinitas. Please feel free to participate in these meetings.

For more information about water conservation, please log on to bewaterwise.com.
San Dieguito Water District's conservation line is (760) 633-2709.

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.

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 SDWS do not affect the health at the MCL levels.

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 level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

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

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

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

ND: not detectable at testing limit

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

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

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

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

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

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://www.epa.gov/safewater/hfacts.html>.

TABLE 1 - SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants	Highest No. of detections	No. of months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(in a month) 1	0	More than 5% of monthly samples are positive	0	Naturally present in the environment
Fecal Coliform or E. coli	(in the year) 0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or E. coli	0	Human and animal fecal waste

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

Lead and Copper	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Containment
Lead (ppb) (2007)	30	<5	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm) (2007)	30	0.051	0	1.3	0.17	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives

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)	2007	96.7	87-100	none	none	Generally found in ground & surface water
Hardness (ppm)	2007	263	250-280	none	none	Generally found in ground & surface water
Hardness (Grains/Gal)	2007	15.3	14.6-16.3	none	none	Generally found in ground & surface water

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
Uranium (pCi/L)	2007	0.625	ND - 2.5	20	0.43	Erosion of natural deposits.
Radioactivity (Beta) (pCi/L)	2007	1.47	ND - 5.9	50	0	Decay of natural and man made deposits.
Combined Radium (pCi/L)	2007	0.23	ND - .9	5	0	Erosion of natural deposits.
Arsenic (ppb)	2007	0.55	ND - 2.2	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.
Barium (ppm)	2007	0.087	0.064 - 0.1	1	2	Discharges of oil drilling wastes and metal refineries; erosion of natural deposits.
Fluoride (ppm)	2007	0.2	0.19 - 0.21	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharges from fertilizer and aluminum factories.
Trihalomethanes (ppb)	2007	48.6	30 - 65	80	n/a	Byproduct of drinking water chlorination.
Haloacetic Acids (ppb)	2007	14.4	11 - 19	60	n/a	Byproduct of drinking water chlorination.
Chloramines (ppm)	2007	2.53	1.9 - 2.7	4	4	Drinking water disinfectant added for treatment
Chlorite (ppm)	2007	0.39	ND - 0.55	1	0.8	Byproduct of drinking water disinfection
DBP Precursors (mg/L TOC)	2007	3.7	3.6 - 3.8	TT	n/a	Various natural and man made sources

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

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Color (cu)	2007	3.8	1 - 8	15	-	Naturally occurring organic materials
Manganese (ug/L)	2007	1.17	ND - 4.7	50	-	Leaching from natural deposits
Odor (TON)	2007	2.3	ND - 8	3	-	Naturally occurring organic materials
Total Dissolved Solids (mg/L)	2007	650	628 - 670	1000	-	Runoff/ leaching from natural deposits
Specific Conductance (uS/cm)	2007	1024.7	910 - 1110	1600	-	Substances that form ions in water; sea water influence
Chloride (mg/L)	2007	129	96 - 160	500	-	Runoff/ leaching from natural deposits; sea water influence
Sulfate (mg/L)	2007	200	200	500	-	Runoff/ Leaching from natural deposits; industrial wastes

TABLE 6 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES

Treatment Technique ^(a) (Type of approved filtration technology used)	Conventional Treatment: Coagulation, Flocculation, Sedimentation, Filtration
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 1.0 NTU in 95% of measurements in a month. 2 - Not exceed 0.3 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.	100%
Highest single turbidity measurement during the year	0.13
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.

