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**PAID**  
SAN DIEGO, CA  
Permit #1

This report contains important information about your drinking water.

Este informe contiene informaci3n muy importante sobre su agua potable.  
Traduzcalo o hable con alguien que lo entienda bien.

# 2005 Water Quality Report



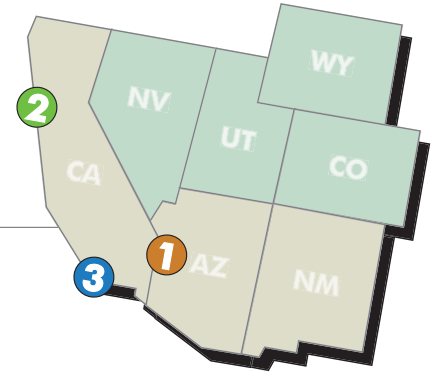
An Everyday Essential





# Supply

## Padre Dam's water sources



**1** Colorado River **64%**

The Colorado River runs from the Continental Divide to the Gulf of California, supplying water from the Rocky Mountains snowpack to Wyoming, Colorado, Utah, New Mexico, Arizona, Nevada, California and Mexico. The Colorado River Aqueduct transports water from the river to Southern California.

**2** Delta **33%**

Nine major rivers flow westward from the Sierra Nevada Mountains and converge in the Sacramento River Delta, east of the San Francisco Bay Area. The California Aqueduct transports water from the Delta to Southern California.

**3** San Diego County **3%**

The recycled water that Padre Dam produces at our Water Recycling Facility and distributes to over 160 customers reduces our demand for imported water by 3%.



### Over the last 50 years

Padre Dam has played an essential role in the development of eastern San Diego County, supplying the rights to an imported water supply, the water district membership required by lenders, and the wastewater treatment capacity to sustain growth.



### November 23, 1955

Because their wells were going dry, Lakeside Irrigation District, Riverview Mutual Water Company, Lakeside Farms Mutual Water Company and a group of Santee residents formed Rio San Diego Municipal Water District to secure rights to imported Colorado River water.

### October 2, 1956

Santee County Water District formed to provide water service, and soon thereafter, wastewater treatment service, to the Santee Valley.





# Reliability

Household Water Is An Everyday Essential

Drought **124%**

The rain that arrived in San Diego in the final months of 2004 brought a six year drought to an end in California and Colorado. In April of this year, the Sierra Nevada snowpack was 124% of normal, and the Colorado Rockies snowpack was 107% of normal.

Treatment Capacity **2007**

Although drought conditions have subsided, insufficient water treatment facilities will continue to challenge the everyday reliability of San Diego's water supply. The Lake Skinner Water Treatment Plants, located just north of Temecula, and owned and operated by the Metropolitan Water District of Southern California, exceeded 95% capacity 43 times in 2004. New water treatment facilities will be completed in 2007.

Conservation **>50%**

Over 50% of household water use in San Diego is for landscaping. Until new water treatment facilities are completed in 2007, conservation is essential to the reliability of San Diego's water supply. How do you conserve water? Start with your landscaping.



## 1957

Ray Stoyer, the visionary developer of Santee Lakes, hired as general manager of Santee County Water District.

## 1959

Santee elects to not connect to San Diego's Metro sewage system, deciding instead to build a water recycling plant and Santee Lakes, using percolation and sunlight to complete the sewer treatment process and provide clean water for recreation and other uses.

## 1960

Blossom Valley, Flinn Springs, Alpine, Mountain Top and Harbison Canyon join Rio San Diego MWD to provide imported Colorado River water to their residents.

## 1961

Santee Lakes opens. Boating only in 1961, then fishing in 1963, and swimming in 1965.



# Reliability

## How To Reduce Water Use In Your Yard

### 1. Don't Over-Water

It's easy to do. It's easy not to do, too. Go to

[www.sandiego.gov/water/conservation](http://www.sandiego.gov/water/conservation)

and use the landscape watering calculator. Simply type in your zip code and select your type of turf, plants, soil and sprinkler system. The calculator will give you a weekly watering schedule for each month of the year.

### 2. Discover California's Native Beauty

Rethink your landscaping. Replacing thirsty turf and ornamental plants with California native and Mediterranean plants can reduce your irrigation needs by up to 60%.

See how beautiful this idea is by visiting

#### The Water Conservation Garden

at Cuyamaca College in El Cajon. Information is available at 619-660-0614 or [www.thegarden.org](http://www.thegarden.org)

### 3. Put Your Irrigation on Automatic

Weather-based irrigation controllers manage your irrigation for you, adjusting water times automatically according to programmed or real-time weather data. We're providing \$65 vouchers towards the purchase of these controllers on a first come/first served basis at

**800-986-4538**

# Quality

## How To Make Your Tap Water Taste Good

The Average San Diegan Drinks

# <1 Gallon

Of Tap Water Daily

Maybe if we made it taste better, you would drink more. And your coffee, ice cubes and oatmeal would taste better, too. While our water meets all public health standards, the chlorine and chloramine we use to treat it affects its taste and smell.

### 1. Put a Pitcher in the Refrigerator

The chlorine will dissipate, improving taste within a few hours.

### 2. Use an Activated Carbon Filter

Pitcher filters and filters that attach to the faucet are inexpensive, reduce chlorine smell and taste, and filter out organic materials.

### 3. [www.waterfiltercomparisons.com](http://www.waterfiltercomparisons.com)

For a comparison and rating of systems, brands and models.



**1962**

Ed Houser begins 26 years of service as general manager of Rio San Diego MWD, Santee County Water District and Padre Dam MWD.

**1974**

Santee's growth surpasses treatment capacity of Santee Lakes, and Padre Dam connects to San Diego Metro sewer system.

**1976**

Santee County Water District dissolves into Rio San Diego Municipal Water District, which is renamed Padre Dam Municipal Water District.

**1985**

Crest joins Padre Dam MWD.



# Safety

## Our #1 Priority

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.

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:

### 1. Microbial contaminants

such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

**In 2004, as in years past, your tap water met all USEPA and California drinking water health standards.**

### 2. Inorganic contaminants

such as salt and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.

### 3. Pesticides and herbicides

which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

### 4. 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 and septic systems.

### 5. 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, USEPA and the California Department of Health Services 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. People with compromised immune systems, such as cancer patients undergoing chemotherapy, people 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 from their health care providers about drinking water.

For more information about contaminants and potential health effects, or for USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants, call the:

**USEPA Safe Drinking Water Hotline 1-800-426-4791**





# Safety

## How To Read The Table

The table on the following pages is a summary of the testing performed on your water in 2004. To read the table, compare the health standards for organic and inorganic constituents in your water with the levels recorded at the Lake Skinner Treatment Plant and the Helix Levy Treatment Plant. The terms used in the table are explained below.

### Health Standards

**Primary Standards** are set by the USEPA and California Department of Health Services for harmful contaminants that are public health concerns.

**Secondary Standards** are set by the California Department of Health Services for constituents that affect the aesthetic quality of water, such as taste, odor and color.

**Unregulated Chemicals/Additional Parameters** are constituents which are under study and must be reported.

### Units of Measurement

**PPM** is the abbreviation for parts per million, or in volume terms, milligrams per liter (mg/L). For example, one part per million is one cent in \$10,000 or one minute in two years.

**PPB** is the abbreviation for parts per billion, or in volume terms, micrograms per liter (ug/L). For example, one part per billion is one cent in \$10,000,000 or one minute in 2000 years.

**NTU** is nephelometric turbidity units.

**pCi/L** is picoCuries per liter, a measure of radioactivity.

**umho/com** is micromhos per centimeter, a measure of conductance.



### Health Standard Levels

**MCL** is the abbreviation for 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 and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**MCLG** is the maximum contaminant level goal, the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

**PHG** is the public health goal, 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.

**MRDL** is the maximum residual disinfectant level, the level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

**MRDLG** is the maximum residual disinfectant level goal, 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 USEPA.

**DLR** is the detection limit for reporting purposes set by the California Department of Health Services.

**PDWS** is the primary drinking water standard, the MCL and MRDL for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

### Recorded Levels

**NA** = not applicable.

**ND** = none detected.

**NR** = not required by regulations.

**NS** = no standard established.

**TT** is treatment technique, a required process intended to reduce the level of a constituent in drinking water.

# Safety

PARAMETER	MEASURE	HEALTH STANDARDS			SKINNER PLANT		LEVY PLANT		SOURCES
		MCL MRDL	PHG MCLG MRDLG	DLR	RANGE	AVERAGE	RANGE	AVERAGE	
<b>PRIMARY STANDARDS Health Related Concerns</b>									
Clarity									
Combined Filter Effluent Turbidity	NTU/ %	0.3/95 (a)	NA	NA	0.09	100%<0.3	0.10	100%<0.3	Soil runoff
<b>Microbiological</b>									
Total Coliform Bacteria	%	5.0 (b)	(0)	NA	0%	0%	0%	0%	Environment
Fecal Coliform and E. Coli	(c)	(c)	(0)	NA	0	0	0	0	Human/animal fecal waste
Cryptosporidium (e)	Oocysts	TT	(0)	NA	TT	TT	0	0	Human/animal fecal waste
Giardia (e)	cysts	TT	(0)	NA	TT	TT	0	0	Human/animal fecal waste
<b>Inorganic Chemicals</b>									
Aluminum (f)	ppb	1000	600	50	ND	ND	160-161	160	Treatment process, environment
Arsenic	ppb	50	0.004	2	ND	ND	ND-2.2	ND	Environment, glass/electronics industry
Barium	ppb	1000	2000	100	ND	ND	ND-110	ND	Oil/metal refineries, environment
Fluoride	ppm	2	1	0.1	0.21-0.30	0.24	0.21-0.27	0.23	Environment, additive for dental health
Nitrate (as N) (h)	ppm	10	10	0.4	ND-0.54	ND	ND	ND	Fertilizer, sewage, erosion
Nitrate and Nitrite (as N)	ppm	10	10	0.4	ND-0.54	ND	ND	ND	Fertilizer, sewage, erosion
<b>Radiologicals (i)</b>									
Gross Alpha Particle Activity	pCi/L	15	NA	3	ND-4.0	3.4	ND-11.3	3.8	Erosion
Gross Beta Particle Activity	pCi/L	50	NA	4	ND-4.1	ND	ND-5.5	ND	Decay of natural and manmade deposits
Uranium	pCi/L	20	0.5	2	ND-2.4	ND	ND-2.7	2.2	Erosion
<b>Disinfectants</b>									
Total Trihalomethanes (TTHM) (k)	ppb	80	NA	0.5	31-70	53	17.4-23.3	20.3	By-product of chlorination
Haloacetic Acids (five) (HAA5) (k,l)	ppb	60	NA	1 (l)	13-38	21	4.7-6.4	5.7	By-product of chlorination
Total Chlorine Residual	ppm	[4.0]	[4.0]	NA	1.7-3.0	2.4	2.3-3.2	2.7	Disinfectant added for treatment
Bromate (m)	ppb	10	(0)	5	NA	NA	ND	ND	By-product of ozonation
DBP Precursors Control (TOC) (k)	ppm	TT	NA	0.30	TT	TT	1.9-3.7	3.0	Various natural and manmade sources
<b>SECONDARY STANDARDS Aesthetic Concerns</b>									
Aluminum (f)	ppb	200	600	50	160-161	160	ND	ND	Treatment process, erosion
Chloride	ppm	500	NA	NA	79-90	84	80-92	85	Natural deposits, seawater
Color	Units	15	NA	NA	1-3	1	1-3	2	Environment
Corrosivity	SI	non-corr.	NA	NA	non-corr.	non-corr.	0.18-0.32	0.26	Elemental balance in water
Odor Threshold (n)	Units	3	NA	NA	1-4	1	1	1	Environment
Specific Conductance	uS/cm	1600	NA	NA	869	869	786-947	827	Substances that form ions in water
Sulfate	ppm	500	NA	0.5	170-210	183	153-212	169	Natural deposits, industrial waste
Total Dissolved Solids (TDS)	ppm	1000	NA	NA	530	530	466-574	492	Natural deposits, seawater
Turbidity (a)	NTU	5	NA	NA	0.04-0.06	0.05	0.05-0.07	0.06	Soil Runoff
<b>UNREGULATED CHEMICALS</b>									
Boron	ppb	NA	AL=1,000	100	120-140	125	130-140	140	Natural deposits, industrial waste
Vanadium	ppb	NA	AL=50	3	3.7-5.2	4.5	ND	ND	Naturally-occurring, industrial waste
<b>ADDITIONAL PARAMETERS</b>									
HPC (d)	CFU/mL	TT	NA	NA	NA	NA	<1-4	<1	Environment
Cryptosporidium	Oocysts	TT	(0)	NA	ND	ND	ND	ND	Human and animal fecal waste
Alkalinity	ppm	NA	Ha	--	95-128	109	103-124	110	
Calcium	ppm	NA	NA	--	54-63	58	51-64	54	
Hardness	ppm	NA	NA	--	225-264	246	218-269	230	
Magnesium	ppm	NA	NA	--	22-26	24	22-26.5	23	
N-Nitrosodimethylamine (NDMA) (q)	ppt	NA	AL=10	2	NA	NA	ND-2.3	ND-12	Chlorination, industrial processes
pH	pH units	NA	NA	--	7.5-8.1	7.9	8.0-8.1	8.1	
Potassium	ppm	NA	NA	--	3.9-5.0	4.5	3.8-4.3	4.0	
Sodium	ppm	NA	NA	--	76-87	81	74-90	78	
TOC (p)	ppm	TT	NA	0.30	1.9-3.7	3.0	2.1-3.0	2.5	Natural and manmade sources

\*Footnotes on following page.

# Questions

## Table Footnotes

- (a) The turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time. Turbidity is a measure of the cloudiness of the water and is an indicator of treatment performance. The monthly averages and ranges of turbidity shown in the Secondary Standards section were based on the plant effluents.
- (b) Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform-positive. Compliance is based on the combined distribution system sampling from all the filtration plants. In 2004, 11,592 samples were analyzed. The MCL was not violated.
- (c) Fecal coliform/E.coli MCLs: The occurrence of 2 consecutive total coliform-positive samples, one of which contains fecal coliform/E. coli, constitutes an acute MCL violation. The MCL was not violated in 2004.
- (d) HPC values were based on the monthly averages of the plant effluent samples. In 2004, all distribution samples collected had detectable total chlorine residuals and no HPC was required.
- (e) In 2004, the plant effluents had no detectable Cryptosporidium, Giardia, or Total Culturable Viruses.
- (f) Aluminum has both primary and secondary standards.
- (h) State MCL is 45 mg/L as nitrate, which equals 10 mg/L as N.
- (i) Helix results from 2001 & Skinner results from 2002/03 4-quarter radiological monitoring program.
- (j) Standard is for Radium-226 and -228 combined.
- (k) Skinner & Helix distribution system-wide average THMs and HAA5 samples were collected quarterly. In 2004, MWD and Helix were in compliance with all provisions of the Stage 1 Disinfectants/Disinfection By-Products (D/DBP) Rule.
- (l) DLR = 1.0 ppb for each HAA5 analyte (dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid) except for monochloroacetic acid which has a DLR = 2.0 ppb.
- (m) Running annual average was calculated from monthly samples.
- (n) Metropolitan has developed a flavor-profile analysis method that can more accurately detect odor occurrences. For more information, contact MWD at (213) 217-6850.
- (p) TOCs at the filtration plants were taken at the filter effluents.
- (q) MWD range for the filtration plant influents and effluents were taken from quarterly samples. No NDMA was detected at the plant influents. Distribution system-wide range were taken from nine (9) samples collected quarterly.

For questions regarding **Water Quality** please contact

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For questions regarding **Water Conservation** please contact

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**619-258-4613**