



# 2005 annual drinking Water quality report

This report is being mailed to you as a requirement of the federal Safe Drinking Water Act. NOTE: Industrial and commercial customers, including hospitals, medical centers, and health clinics, please forward this report to your Environmental Compliance Manager.

San Diego's water is safe and healthy to drink for most people. For people with special health concerns, please see the information on page 6.

CITY

N DIEG



Water Department -Public Information Office -2797 Caminito Chollas, MS 43 -San Diego, CA 92105-5097 -

PRSRT STD U.S. POSTAGE PAID PERMIT NO. 134 SAN DIEGO, CA This report contains important information about your drinking water. If the report is not available in your native language, speak with someone who understands it and can translate for you.

Este reporte contiene información importante sobre la calidad del agua en su comunidad. Copias en español de este reporte están disponibles si llama al (619) 527-3121. Tambíen encontrará este reporte por medio del internet en www.sandiego.gov/water.

Ribootkani wuxuu xanbaar sanyahay warbixino muhiim ah oo ku saabsam biyaha aad cabtaan. Hadii aadan fahmeynin, Fadlan ribootka hala turjumo ama kala hadal ruux ku fahansiiya.

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

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。

이 안내는 매우 중요합니다. 본인을 위해 번역인을 사용하십시요.

الفذا فكاربر يعلوي على معاوماً ت مهامة للعلى بعياء أشفة {لو فشريه). ترجم الكريو<sub>م</sub> أو تكلم مع شقص يستلقع أن يقهم الكاريو.\*

Chi tiết này thật quan trơng. Xin nhờ người dịch cho qúy vị. Dear Customers,

The City of San Diego Water Department is pleased to present you with the Annual Drinking Water Quality Report for 2005. The U.S. EPA and the California Department of Health Services (CDHS) require that all water agencies produce an annual report to inform customers about the quality of their drinking water. It is important to know that the production and mailing of this report is mandatory and efforts have been made to keep costs down.

On the following pages, you will find important information about the origin of your water, the composition of your water, and the steps we take to protect your health and safety with our water treatment process and water quality monitoring and testing.

Last year, the Water Department's Water Quality Laboratory conducted more than 225,000 tests for 246 drinking water contaminants. We did not exceed any maximum contaminant compliance levels (MCLs) set by CDHS. This report contains a detailed summary of our water quality monitoring and testing.

Every year, we work hard to provide you with safe, reliable, cost-effective water and outstanding customer service in an environmentally sensitive manner. We are committed to continually improving our services and operations. On a management level, we have already taken action to find ways to maintain and improve services while minimizing expenses within our organization. For example, our Water Operations Division is in its second year of implementing Bid To Goal (BTG), a performance-based program to help us maximize our resources and productivity.

In this report, you will read about how we continue to improve our water systems and water quality through our Capital Improvements Program (CIP). The report highlights several completed CIP projects that have significantly improved our water system and discusses areas where we need to continue to make improvements to meet future water quality regulations. It also addresses our recycled water program and our ongoing efforts to protect the environment through watershed and source water protection, water conservation, and storm water pollution prevention.

Our top priority is providing quality water to all of our customers. I invite you to read on and learn more about our daily work to fulfill this commitment. If you have any questions about this report, or water quality in the City of San Diego, please contact our Public Information Office at (619) 527-3121, or visit us on the web at www.sandiego.gov/water.

Sincerely,

A Barrett

J.M. Barrett Director, City of San Diego Water Department

#### **Table of Contents**

Message from the Director	2
Our Water Supply	3
Capital Improvements Program	4
Our Water Treatment Process	6
Glossary of Terms	7
2005 Water Quality Data	8
Source Waters and Reservoirs	10
San Vicente Closure	11
Our Commitment	12
Resources	14
Watershed Newsletter	15



#### Our Mission

To provide San Diego with Safe, Reliable, Cost-Effective Water and Outstanding Customer Service in an Environmentally Sensitive Manner.

#### Our Vision

To be a "Best-in-Class" water utility for our customers. -

AR EA

## Our Water Supply

#### Why is There Anything in My Water?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water from these sources travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material. Water can also pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source waters include:

- Microbial contaminants, such as viruses and bacteria, which 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, herbicides and fungicides, which may come from a variety of sources such as agriculture, urban runoff, and residential uses.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.
- 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 and septic systems. -

In order to ensure that tap water is safe to drink, the CDHS prescribes regulations which limit the amount of certain contaminants in the water provided by public water systems. The City of San Diego's Water Department treats water according to the CDHS regulations. The CDHS Food and Drug Branch regulations establish limits for contaminants in bottled water which must provide the same protection for public health as tap water. For more information log onto the CDHS website at: www.dhs.ca.gov/fdb. -

#### **Imported Water Assessment (Metropolitan)**

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

#### **Our Imported Water Supply and** the Impact on Water Quality -

The City of San Diego imports an average of 85 percent of its water. This imported water is provided by the San Diego County Water Authority, which purchases water from the Metropolitan Water District of Southern California. Ultimately, our imported water is a blend of Colorado River water and State Water Project water (see maps). Throughout the year, the blend changes.

Several forces negatively impact the quality of water from the Colorado River and State Water Project. The Colorado River winds through thousands of miles of unprotected watershed containing towns, farms, old mining sites and industrial sites. For example, the Kerr-McGee Chemical Plant in Henderson, Nevada is undergoing cleanup efforts, but continues to be a source of perchlorate in the Colorado River. The Colorado River also flows past uranium mine tailing piles in Moab, Utah.

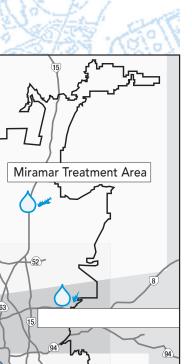
Water from the State Water Project is also subject to potential contaminants such as pesticides and herbicides. This water source also has a higher organic carbon and bromide level than the Colorado River water. As organic carbon and bromide levels increase, the potential for creating higher levels of disinfection by-products exists. (The disinfectants used to treat water can react with naturally occurring materials in the water to form unintended by-products

which may pose health risks).

The City continually alters its treatment process to adjust for changing water San Francisco supplies.

The City of San Diego continuously monitors the quality of our water to ensure all drinking water quality standards are met.





Otay Treatment Area

Your water comes from three municipal water treatment plants (Alvarado, Miramar, and Otay) and MWD's Skinner Plant in Hemet, CA. The City maintains nine reservoirs and purchases imported water Sacramento from the San Diego County Water Authority. Water from the Colorado River Aqueduct and the State Water Project, AQUEDUCT as well as some local PROJECT runoff, constitute COLORADO RIVER AQUEDUCT the source waters for Los Angeles these plants. San Diego

∕⊃ N

Bay Delta

WATER

### SHED WATER CHEMICAL JOING - AREA 80 -----





The Water Department's Capital Improvements Program (CIP) plans, designs and builds projects to maintain and improve the drinking water treatment and delivery system and the distribution system for recycled water. Since the CIP's inception nine years ago, more than 50 projects have been successfully completed.

In addition, 90 miles of cast iron water delivery mains (some of which were over 100 years old and well beyond their useful lifespan) have been replaced. Currently, there are four CIP projects in construction and 17 future projects being designed.

E ANGLE TO RADIUS

ANGLE TO RADIUS

4

Although maintenance, replacement and improvements have been ongoing in the Water Department for many decades, the CIP was organized in 1997 to help better address critical water infrastructure needs and meet new state and federal water quality standards.

Capital improvement projects are expensive and require long-term financing. Since 1998, the City has issued bonds to finance Water Department projects. The City Council approved a series of water rate increases to support the bond financing. In December 2004, the City curtailed the issuance of most new construction contracts due to the City's inability to obtain bond financing. Capital construction projects scheduled to begin after December 2005 were rescheduled based on available financing. Sufficient funding is available to complete the water projects under construction through fiscal year 2006 and to provide for ongoing and essential projects in fiscal year 2007. The Water Department will continue to explore new and alternative financing options to minimize the impacts of the delays to the capital improvement program.

## Expanding the Drinking and Recycled Water Systems

Providing San Diegans with a safe and reliable water supply requires on-going, well-planned and prioritized construction work. Examples include improving and expanding the City's three drinking water treatment plants, as well as water transmission pipelines. Also, the Water Department is replacing old cast iron water mains and upgrading water pumping stations and drinking water reservoirs (tanks).

The Water Department continues to enhance water reliability by expanding the drinking and recycled water delivery systems. Recent improvements to the drinking water system include the La Jolla/Pacific Beach Water Main Replacement, South San Diego Pipeline No. 2, and the Otay 2<sup>nd</sup> Pipeline Alta View Replacement.

Several miles of recycled water mains have been built in the northern part of the city to deliver recycled water to customers from the North City Water Reclamation facility. The recycled water system is kept completely



separate from the drinking water system. Recently completed recycled water projects include the Black Mountain Road Reclaimed Pipeline, Canyonside Reclaimed Water Pump Station and the Black Mountain Reclaimed Water Storage Tank. Using recycled water helps reduce San Diego's reliance on imported water by maximizing the use of our local water resources.

Work on the City's three water treatment plants are largescale projects. More than \$200 million has been spent on these projects since the inception of the Capital Improvements Program.

An additional \$250 million is planned for work at the three treatment plants in the next six years, assuming financing is available.

#### **Alvarado Water Treatment Plant**

The Alvarado Water Treatment Plant began operations in 1951 to treat newly available water from the Colorado River. It currently treats 120 million gallons per day (MGD) of drinking water. Located adjacent to Lake Murray, the plant has served as the "heart" of the City's drinking water system for more than 50 years and was designated an American Water Landmark in 2002 by the American Water Works Association. The current construction project is multi-phased and will increase the plant capacity to 200 MGD by 2011.



## Capital Improvements Program

The Earl Thomas Reservoir Replacement project was completed last year. Now operational, it is the world's largest pre-stressed concrete reservoir with a storage capacity of 35 million gallons. The \$32 million Earl Thomas Reservoir project involved demolishing a 50year old reinforced-concrete reservoir. The new reservoir stores water after it has been treated at the plant. The San Diego International Chapter of the American Concrete Institute selected the reservoir to receive the "Water Resources" award. The reservoir will help the City meet new, stricter water quality regulations and improve long-term water system reliability.

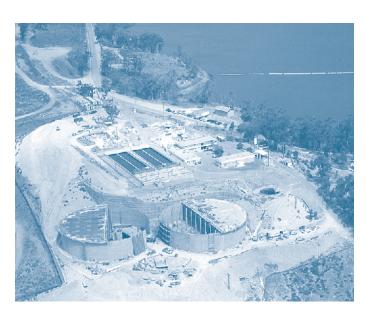
#### **Miramar Water Treatment Plant**

Since 1962, the Miramar Water Treatment Plant has provided drinking water to residents in northern San Diego region. The plant is located in the Scripps Ranch community, adjacent to the Miramar Reservoir. The plant is also undergoing a significant upgrade and expansion. When complete, the water treatment capacity of this plant will increase from 140 to 215 MGD.



The Miramar Treatment Plant Upgrade and Expansion Project began in 2002 and is a multi-phase project designed to maximize current water production, meet future water demands, and comply with federal drinking water regulations. The San Diego section of the American Society of Civil Engineers recognized the Miramar Early Start Improvements Phase II as "Outstanding Civil Engineering Project" of the year.

The Miramar Early Start Improvements Phase II project involved constructing new pipelines as well as improvements outside the premises of the plant. This work needed to be done in advance of the next phases of the upgrade and expansion project. The \$17 million project was completed in February 2005. The subsequent phases of the project will continue through 2010, pending secured financing.



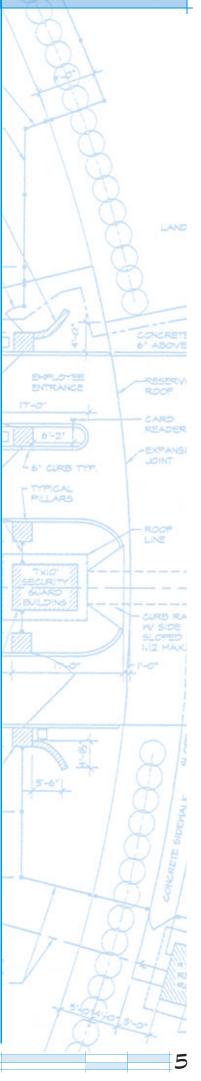
#### **Otay Water Treatment Plant**

The Otay Water Treatment plant began treating water in 1914. It currently produces 34 million gallons of drinking water per day for customers in the southern part of San Diego.

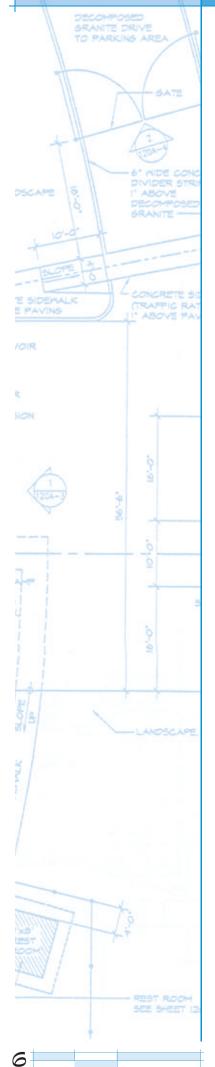
The \$17.9 million Otay Water Treatment Plant Expansion Project included the recent construction of a pair of 7 million gallon treated water storage reservoirs, (clearwells) to comply with state and federal water quality regulations. The clearwells, made of prestressed concrete, provide more operational efficiency and flexibility for maintenance. Installing the clearwells required excavating 87,000 cubic yards of dirt and constructing a 60-foot retaining wall. The San Diego section of the American Society of Civil Engineers honored the Otay Water Treatment Plant Expansion Project with an "Award of Excellence." This work was part of a multi-phased improvement project for the treatment plant.

The Capital Improvements Program will continue to work on improving and constructing the water treatment and delivery systems to meet the needs of current and future San Diegans. For more information on current and planned projects, visit www.sandiego. gov/water/cip or call (619) 533-4679.





## Our Water Treatment Process



San Diego uses a conventional water treatment process similar to many other large water utilities around the nation. The process produces safe drinking water by removing and inactivating potentially harmful substances and organisms.

Raw water is treated using a multi-barrier approach to ensure our water meets federal and state drinking water quality regulations. Each treatment barrier provides an additional step to give added safety to the drinking water. The barriers include coagulation, flocculation/sedimentation, filtration, and disinfection. The coagulation process uses ferric chloride and organic polymer to neutralize particles in the water to allow them to combine. Flocculation is the process in which the neutralized particles combine to form larger clumps of particles. These larger clumps of particles are then allowed to settle out of the water in the sedimentation process. Any remaining particles are then removed through the filtration process. Chlorine is added to the water as the primary disinfectant to prevent illness due to water-borne pathogens. The final barrier is the addition of ammonia to the water to react with chlorine and form chloramines. Chloramines are used to maintain a residual disinfectant throughout the water distribution system to ensure water quality to the

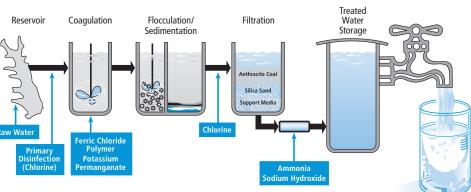
consumer's tap.

Also, as part of the water treatment process, potassium permanganate and chlorine are used to remove taste and odor compounds, and sodium hydroxide to adjust the pH making the water non-corrosive and to protect the pipes, plumbing fixtures and appliances from corrosion (rust).

#### **Important Health Information**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as people with cancer 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. These people should seek advice about drinking water from their health care providers. US EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and Giardia and other microbial contaminants are available from the US EPA's Safe Drinking Water Hotline (800) 426-4791. During calendar year 2005, the City of San Diego analyzed all of our source waters for Cryptosporidium and Giardia. We detected no Giardia cysts or Cryptosporidium oocysts in any of our source water monthly samples.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.



#### How do I Read the Tables?

The tables on the following pages list contaminants which: 1) have associated Primary Maximum Contaminant Levels (MCLs) that are regulated and 2) were detected by the City of San Diego's Water Quality Laboratory. Contaminants were detected at or above the California Department of Health Services (CDHS) Detection Limits for Purposes of Reporting (DLRs) during the calendar year 2005. The presence of these contaminants in the drinking water 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 US EPA's Safe Drinking Water Hotline (800) 426-4791 or by visiting the EPA's website at www.epa.gov/safewater/ hfacts.html. California action levels are available on the CDHS website www.dhs.ca.gov/ps/ddwem/index.htm. Unless otherwise noted, the data presented in these tables are from testing done January 1 through December 31, 2005.

**NOTE:** The CDHS requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

- Table 1lists all the regulated contaminants with PrimaryMCLs that the City of San Diego's Water QualityLaboratory detected in the drinking water at or abovethe CDHS DLRs.
- **Table 2** is a listing of regulated contaminants withSecondary MCLs that were detected at or above theCDHS DLR for each analyte.
- **Table 3** is a listing of detected unregulatedcontaminants that were detected at or above theCDHS DLR for each analyte. Unregulated contaminantmonitoring helps the EPA and the CDHS to determinewhere certain contaminants occur and whether thecontaminants need to be regulated.
- **Table 4** is a listing of disinfection residuals anddisinfection by-products that were detected.

## Glossary of Terms

#### Important Health Effects Language -

The following information is provided on the contaminants that are listed in Tables 1 through 4. None of these contaminants exceed state and federal MCL limits.

#### **Detected Contaminants**

**BARIUM:** Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure. (see Table 1)

**BORON:** Some men who drink water containing boron in excess of the notification level over many years may experience reproductive effects. This information is based on animal studies. (see Table 3)

**CHLORAMINES:** Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia. (see Table 4)

**CHLORIDE:** Runoff/leaching from natural deposits; seawater influence. (see Table 2)

**COLOR:** Naturally-occurring organic materials. (see Table 2)

**COPPER:** Copper is an essential nutrient, but some people who drink water containing copper in excess of the notification level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the notification level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult with their personal doctor. (see Table 1)

**TOTAL COLIFORM BACTERIA:** Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. (see Table 1)

**FLUORIDE:** Some people who drink water containing fluoride in excess of the federal MCL of 4 mg/L over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2 mg/L may get mottled teeth. Currently, all of the fluoride in our drinking water occurs naturally due to erosion. The City of San Diego does not add fluoride to its drinking water. (see Table 1)

**GROSS ALPHA PARTICLE ACTIVITY:** Certain materials are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer. The City of San Diego is required to analyze for radioactive contaminants every four years. (see Table 1)

**GROSS BETA PARTICLE ACTIVITY:** Certain materials are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer. The City of San Diego is required to analyze for radioactive contaminants every four years. (see Table 1)

**HALOACETIC ACIDS:** Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. (see Table 4)

**HARDNESS:** The sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally-occurring. (see Table 1)

**LEAD:** Infants and children who drink water containing lead in excess of the notification level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure. The City of San Diego's service lines do not contain lead and our testing reflects that. If you reside in an older home, lead solder may have been used in the pipes, which could affect the lead content in your drinking water. Visit the American Water Works Association website at www.awwa.org for information on research studies. (see Table 1)

**NICKEL:** Some people who drink water containing nickel in excess of the MCL over many years may experience liver and heart effects. (see Table 1)

**NITRATE:** Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and the blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of blood of pregnant women. (see Table 1)

**ODOR:** Naturally-occurring organic materials. (see Table 2)

**RADIUM 226/228:** Some people who drink water containing radium 226/228 in excess of the MCL over many years may have an increased risk of getting cancer. (see Table 1)

**SPECIFIC CONDUCTANCE:** Substances that form ions when in water; seawater influence. (see Table 2)

**SODIUM:** Salt present in the water and is generally naturally-occurring. (see Table 1)

SULFATE: Runoff/leaching from natural deposits; industrial wastes. (see Table 2)

TOTAL DISSOLVED SOLIDS: Runoff/leaching from natural deposits. (see Table 2)

**TOTAL ORGANIC CARBON (TOC):** TOC has no health effects. However, TOC provides a medium for the formation of disinfection by-products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAA5). Drinking water containing these by-products in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of cancer. (see Table 4)

**TOTAL TRIHALOMETHANES (TTHMS):** Compliance with the MCL regulation for TTHMs are based on the running annual average of samples collected over the entire year. An individual sample greater than 80  $\mu$ g/L does not constitute a violation of the MCL. Some people who use water containing TTHMs in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer. (see Table 4)

**TURBIDITY:** Turbidity is the cloudiness of the water. Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches. (see Table 1)

**URANIUM:** Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer. The City of San Diego is required to analyze for radioactive contaminants every four years. (see Table 1)

#### **Measurement Terms**

**CORROSIVITY:** The corrosivity of a sample is measured by the Langlier Stability Index. A positive index, indicating non-corrosivity, was maintained at all plant effluents.

**CSD MDL:** City of San Diego Water Quality Laboratory Method Detection Limit. Lowest quantifiable concentration of a measured analyte detectable by the Laboratory.

**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 risk to health. MCLGs are set by the 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 risk to health. MRDLs are set by the EPA.

**NOTIFICATION LEVEL/Previously called ACTION LEVEL (NL/AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**PRIMARY DRINKING WATER STANDARDS (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring & reporting requirements and water treatment requirements.

**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 EPA.

**TREATMENT TECHNIQUE (TT):** A required process intended to reduce the level of a contaminant in drinking water.



## 2005 Water Quality Data

#### TABLE 1 – DETECTED REGULATED CONTAMINANTS WITH MCLs

Primary Standa	imary Standards (Mandatory Health Related Standards) – CHEMICAL CONTAMINANTS												
						TREATMEN	IT PLANT EFF						
			PHG	CDHS	ALVA	RADO	MIRAMAR		01	Γ <b>ΑΥ</b>	YEAR	TYPICAL SOURCE OF	
CONTAMINANT	UNITS	MCL	(MCLG)	DLR	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE		CONTAMINANTS	
Fluoride	ppm	2.0	1.0	0.1	0.247	0.199-0.519	0.266	0.206 - 0.520	0.277	0.209 - 0.520	2005	Erosion of natural deposits	
Nitrate	ppm	45 as Nitrate	45 as Nitrate	2	ND	ND - 4.39	ND	ND – 2.66	ND	ND – 3.71		Runoff and leaching from fire damaged watershed: erosion of natural deposits;	
Barium	ppm	1	n/a	0.1	ND	ND	ND	ND - 0.12	ND	ND	2005	Erosion of natural deposits	
Nickel	ppb	100	12	10	ND	ND - 10.3	ND	ND	ND	ND	2005	Erosion of natural deposits	

						TREATMEN	NT PLANT EFF					
			PHG	CDHS	ALVA	ALVARADO MIRAMAR		OTAY		YEAR	TYPICAL SOURCE OF	
CONTAMINANT	UNITS	MCL	(MCLG)	DLR	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE		CONTAMINANTS
Gross Beta Particle Activity	pCi/L	50	0	4.0	ND	ND - 6.25	ND	ND - 6.55	ND	ND - 4.45	2002	Decay of natural and manmade deposits
Gross Alpha Particle Activity	pCi/L	15	0	3.0	3.32	2.86 - 3.82	4.01	3.08 – 5.1	3.40	2.84-3.9	2002	Erosion of natural deposits
Radium 226/228	pCi/L	5	0	1	ND	ND - 1.44	ND	ND – 1.72	ND	ND - 1.90	2002	Erosion of natural deposits
Uranium	pCi/L	20	0.43	2.0	3.40	2.55-4.51	3.42	3.31 – 3.71	3.58	2.49-4.89	2002	Erosion of natural deposits

Primary Standa	Primary Standards – MICROBIOLOGICAL IN THE DISTRIBUTION SYSTEM										
					DISTRIBU	TION SYSTEM					
CONTAMINANT	UNITS	MCL	PHG (MCLG)	CDHS DLR	AVERAGE		TYPICAL SOURCE OF CONTAMINANTS				
Total Coliform Bacteria	/100	< 5% Positive	0	А	0.51	ND – 1.8 %	2005	Human and animal waste			

#### Sodium, Hardness, and Turbidity TREATMENT PLANT EFFLUENT CONCENTRATION **ALVARADO** MIRAMAR **OTAY** PHG LEVEL CSD YEAR -TYPICAL SOURCE OF CONTAMINANT UNITS MCL (MCLG) FOUND -MDL AVERAGE RANGE AVERAGE RANGE AVERAGE RANGE SAMPLED CONTAMINANTS 2005 Sodium ppm n/a n/a n/a -5 75.7 63.4 - 84.481.2 71.6 - 88.980.8 72.0-87.7 Naturally present in the environment Total Hardness 218 156 - 244 181 – 267 216 173 – 244 2005 Naturally present in the environment n/a 2 232 ppm n/a n/a Total Hardness gr/Gal 2005 Naturally present in the environment 0.117 15.2 10.9 - 17.1 16.2 12.7 - 18.7 15.1 12.1 – 17.1 n/a n/a n/a -Turbidity NTU TT= n/a 1 NTU % < 0.3 NTU % < 0.3 NTU % < 0.3 NTU 2005 Soil runoff 1NTU TT=95% of samples 100% 0.04 - 0.19100% 0.06 - 0.16100% 0.06 - 0.26<0.3NTU

Primary Standa	rds (Ma								
		NOTIF.	PHG	CDHS	90th PERCENTILE	At The Tap Sample Results ENTILE NUMBER		YEAR	TYPICAL SOURCE OF
CONTAMINANT	UNITS	LEVEL	(MCLG)	DLR -	CONCENTRATION	SAMPLING SITES	EXCEEDING NL		CONTAMINANTS
Copper	ppm	NL = 1.3	0.17	0.050	0.536	52	0		Internal corrosion of household plumbing systems
Lead	ppb	NL = 15	2	5	ND	52	1	2005	Internal corrosion of household plumbing systems

#### TABLE 2 – DETECTED REGULATED CONTAMINANTS WITH SECONDARY MCLs (SMCL) Secondary Standards - Are set to protect aestehetics of water (Taste and Odor)

Secondary Standards - Are set to protect aestenetics of water (Taste and Odor)													
							TREATMEN	PLANT EFF	LUENT CONC	ENTRATION			
				PHG	CSD	ALVA	ALVARADO		MIRAMAR OTAY		YEAR	TYPICAL SOURCE OF	
CONTAMINANT	UNITS	SMCL	MCL	(MCLG)	MDL	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	SAMPLED	CONTAMINANTS
Color	CU	15	n/a	n/a	1	2.4	ND – 4	1.5	ND – 3	2.4	ND – 8	2005	Naturally-occuring organic materials
Corrosivity		non- corrosive	n/a	n/a		0.68	0.13 – 1.37	0.38	-0.12 - 0.92	0.65	0.19 – .097	2005	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in water. A positive index indicates that the water is non-corrosive
Odor - Threshold	OU	3	n/a	n/a	1	ND	ND – 1.4	ND	ND – 1	1	1 – 1.4	2005	Naturally-occuring organic materials
Total Dissolved Solids	ppm	1,000	n/a	n/a	10	470	379 – 533	510	430 – 595	499	397 – 532	2005	Runoff/leaching from natural deposits
Specific Conductance	µS/cm	1,600	n/a	n/a	n/a	909	684 - 1200	964	754 – 1100	938	758 – 1090	2005	Substances that form ions when in water; seawater influence
Chloride	ppm	500	n/a	n/a	0.5	86.1	77.2 – 95.3	91.5	86.7 - 97.6	97.1	88.7 – 108	2005	Runoff/leaching from natural deposits; seawater influence
Sulfate	ppm	500	n/a	n/a	0.5	134	81.9 – 175	166	111 – 213	139	88.9 – 179	2005	Runoff/leaching from natural deposits; seawater influence

#### TABLE 3 – DETECTED UNREGULATED CONTAMINANTS

J	UNREGULATED	CONTAMINA	ANTS REQUIRI	NG MONITO	RING							
						TREATMEN	T PLANT EFF	LUENT CONC	ENTRATION			
			NOTIFICATION	CDHS	ALVA	RADO	MIRA	MAR	ОТ	AY	YEAR	
	CONTAMINANT	UNITS	LEVEL	DLR	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	SAMPLED	4402
	Boron	ppb	1000	100	ND	ND - 139	123	110 – 137	ND	ND - 140	2005	

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

Distribution System Results

		MCL	MCLG	CDHS	ALVA	RADO	MIRA	MAR	01	OTAY		TYPICAL SOURCE OF	
CONTAMINANT	UNITS	MRDL	MRDLG	DLR	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	SAMPLED	CONTAMINANTS	
Total Organic Carbon [TOC]	ppm	n/a	n/a	0.25	3.77	2.74 – 6.17	2.86	2.20 - 4.98	3.69	2.24 - 5.43	2005	Various natural and manmade sources	
Disinfectant Residual [Chloramines]	ppm	4	4	0.1	DISTRI	DISTRIBUTION SYSTEM AVERAGE = 2.03			RANGE **	* = 0.1 – 2.8		Drinking water disinfectant added for treatment	
Total Trihalomethanes [TTHMs]	ppb	80*	n/a	0.2	HIGHEST	HIGHEST DISTRIBUTION SYSTEM RUNNING ANNUAL AVERAGE = 71.0			= 41.3 - 102		By-product of drinking water chlorination		
Haloacetic Acids [HAA5]	ppb	60*	n/a	0.5	HIGHEST DISTRIBUTION SYSTEM RUNNING ANNUAL AVERAGE = 31.2			= 15.0 – 51.6		By-product of drinking water disinfection			

Note \* = Total Trihalomethanes and HAA5 compliance is based on system wide Running Annual Average

Note\*\* = Ranges are based upon single sample results

#### **Abbreviations**

A: Absent CDHS: California D

- CDHS: California Department of Health Services CSD MDL: City of San Diego Water Quality Laboratory Method Detection Limit CU: Color Units DLR: Detection Limit for Reporting gr/Gal: Grains per Gallon MCL: Maximum Contaminant Level MCLG: Maximum Contaminant Level Goal MDL: Method Detection Limit n/a: Not applicable
- ND: Not detected
  NL: Notification Level
  NTU: Nephelonmetric Turbidity Units
  OU: Odor Units
  P: Present
  pCi/L: picocuries per liter (a measure of radiation)
  PDWS: Primary Drinking Water Standard
  PHG: Public Health Goal
  ppb: parts per billion or micrograms per liter (µg/L) – [1 ppb = 1,000 ppt]
  ppm: parts per million or milligrams per liter (mg/L) – [1 ppm = 1,000 ppb]

ppt: parts per trillion or nanograms per

- liter (ng/L) [1 ppt = 0.001 ppb]
- SMCL: Secondary Maximum Contaminant Level
- TT: A required treatment technique process intended to reduce the level of a contaminant in
- drinking water.
- Year Sampled: This column is to record the last time a contaminant was analyzed.
- µg/l: micrograms per liter (ppb)
- µmhos/cm: measurement of conductivity
- **µS/cm:** micro-siemens/cm
- < Less than > Greater than

STORAGE

## Source Waters & Reservoirs

#### Reservoirs

The City of San Diego has nine drinking water reservoirs: Hodges, Sutherland, Miramar, Murray, San Vicente, El Capitan, Otay, Barrett, and Morena. These reservoirs capture local rainwater and runoff to supply up to 15 percent of the City's drinking water. The reservoirs are important components of the regional water supply system. However, the quality of water stored in these reservoirs can be negatively impacted by residential and commercial development and routine activities in the watershed areas that drain into them.

San Diego residents can do their part to protect watershed areas and our drinking water supply by properly disposing of pet waste, chemicals, and trash. You can be a part of the solution of stopping pollutants from running off into the reservoirs. Follow these simple Best Management Practices (BMPs):

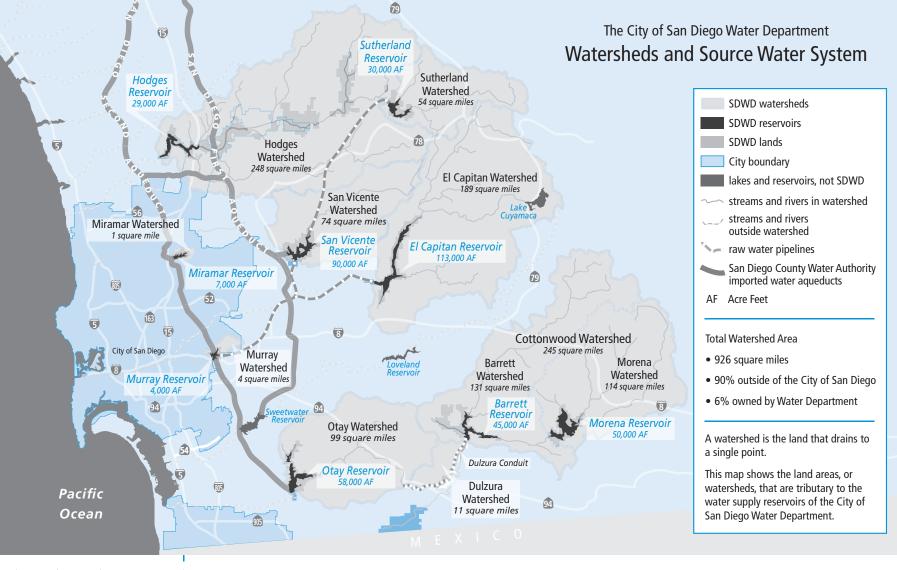
- Sweep-up or wet-mop. Do not use a water hose to clean your driveways, sidewalks, and gutters.
- Litter is not harmless. Sweep-up trash and debris near your home before it gets washed into the storm drain.

- Pick-up after your pets. Animal wastes contribute pathogens to streams and reservoirs.
- Use pesticides and herbicides wisely. See page 15 of this report for more details.
- Don't feed the birds at local reservoirs. Nature provides what they need in abundance.

The City of San Diego is also doing its part to protect watershed areas. Read more about our efforts in the watershed newsletter located on pages 15 and 16 of this report.

For more information about the Storm Water Pollution Prevention Program or to report illegal discharges into the storm drain system, please call (619) 235-1000 or log onto www.thinkbluesd.org. For information on water conservation, log onto www.sandiego.gov/ water/conservation.





## Source Waters & Reservoirs

#### Drinking Water Source Assessment Program

Five of the City's nine reservoirs, plus one groundwater well, directly supply water to our three water treatment plants. Federal and state regulations require the preparation of source water assessments for each of these primary sources.

The Drinking Water Source Assessments for El Capitan, Miramar, Murray, Otay, and San Vicente Reservoirs were completed in June 2002. The assessment for El Cajon Well was completed in February 2003. An assessment of a second well, San Vicente Well #1 was completed in February 2005; however, the well is currently not in production. To receive copies of the assessments call (619) 527-3121 or send an email to waterops@sandiego.gov.

#### **Watershed Sanitary Survey**

In 2006, the City of San Diego updated its Watershed Sanitary Survey. This survey examines the existing and potential sources of contaminants in the watersheds draining into the City's nine reservoirs. The EPA requires that this survey be completed once every five years. The Executive Summary (in printed form) or a CD-ROM of the complete document can be obtained by calling (619) 527-3121. The Executive Summary can also be found on our website at www.sandiego.gov/water. We encourage all San Diegans to take an active role in supporting pollution prevention programs in their communities and to learn more about protecting their local sources of water.

For a more comprehensive description of the source waters supplying our treatment plants, including the Watershed Sanitary Surveys, the Source Water Assessments, and the Source Water Protection Guidelines, log on to www.sandiego.gov/water.

#### Sharing the Responsibility of Water Security

Keeping our water supply safe and secure is a top priority for the City of San Diego. The Water Department operates with heightened awareness and security to safeguard our water sources, water treatment plants, and water distribution system.

The Water Department also relies on you, the community, to be our eyes and ears. Stay alert and report any suspicious activity around Water Department facilities. Your safety is a priority, so do not approach or confront strangers. Please report any suspicious activities immediately to your local law enforcement agency and contact the Water Department at (619) 515-3525. Thank you for being part of our security team.

#### Important San Vicente Reservoir Closure Information

The San Diego County Water Authority is raising the height of San Vicente Dam. The dam raise project is part of the Water Authority's Emergency Storage Project, a system of reservoirs, interconnected pipelines and pumping stations designed to make water available to the San Diego region in the event of an interruption in imported water deliveries. To assure public safety during several years of construction, San Vicente Reservoir will be closed to boating, fishing, and all other water recreation for an extended period. The current timeline for reservoir closure is as follows, and may change as the project schedules are finalized:

**Early 2007 – Late 2008:** Reservoir will be closed Monday through Friday (open on weekends and holidays) at some point during this time period. It is not anticipated that the reservoir will be closed during the summer months.

**2008 – 2013:** Complete closure during San Vicente Dam raise construction and concrete curing.

**2014 – 2017:** Reservoir reopens when water reaches new boat launch. Refilling the reservoir completely could take two to five years, or more, depending on rainfall and water demand and supply.

Currently, the San Diego County Water Authority imports up to 85 percent of the region's water supply. The pipelines that carry imported water travel hundreds of miles and cross several major fault lines on the way to San Diego County. An earthquake, drought, or other disaster could cut off the county's imported water supply for up to six months. Increasing the height of San Vicente Dam is an important investment to ensure that water is available to San Diego County in the event imported water deliveries are interrupted by an earthquake or catastrophic event.

For more information about San Vicente projects and the Emergency Storage Project, visit www.sdcwa.org or call the toll-free information line: (877) 426-2010.





## Our Commitment

#### **Recycled Water**

The need for a local water supply is essential for a growing city like San Diego. Up to 85 percent of the City's total water supply is imported from sources hundreds of miles away. The City's other two sources of water are capturing local rainfall in the City's reservoirs and recycling municipal wastewater. Even with aggressive conservation efforts, the City of San Diego could need 25 percent more water in 2030. Increasing the use of recycled water provides San Diego with a larger local water supply and helps decrease the City's dependence on imported water.

#### **Recycled Water System**

The North City Water Reclamation Plant has the capability to treat 30 million gallons of wastewater a day (MGD) and the South Bay Water Reclamation Plant can treat 15 MGD. These plants treat municipal wastewater to a level that is approved for irrigation, manufacturing, and other non-drinking uses.



Recycled water is delivered from a separate 79-mile pipeline system to 363 recycled water meters, including a connection to the City of Poway. While most customers use recycled water for irrigation; it is also used for industrial processes, toilet/urinal flushing, cooling towers in office buildings, dust suppression at construction sites, and landfills. All recycled water

above-ground fixtures and signage are easily identified by a purple color.

#### Water Quality

A full spectrum of tests is performed on the recycled water by Metropolitan Wastewater's Environmental Monitoring and Technical Services Division. The requirements for this testing program are specified in the permits issued by the Regional Water Quality Control Board authorizing the distribution of recycled water. The testing program is designed by the regulatory agencies to ensure that the recycled water is safe for all intended uses by the recycled water customers.

#### Water Reuse Study

At the direction of City Council in 2004, the Water Department implemented a study that researched ways to increase the use of recycled water from the City's two plants. The Study's six water reuse options

are: expanding the existing system, creating storage reservoirs, adding it to streams or wetlands (or creating new wetlands), and recharging or improving groundwater basins.



Other options are to add recycled water to drinking water supplies in groundwater basins or to surface storage reservoirs that contain untreated drinking water supplies, a process called reservoir augmentation.

Additional advanced treatment to recycled water is necessary before it can be used for these two purposes. The water must be blended and then processed through a drinking water treatment plant before it can be distributed to customers for drinking and other uses. Currently, no reclaimed water is added to reservoirs or groundwater aquifers. Graywater use for private residences and businesses was also analyzed as part of the study.

The Water Department informed and involved City residents about the Study through a speakers bureau, website, video, informal opinion surveys, and other activities. A community stakeholder group was created and through workshop participation, provided input to the Study team. Several possible strategies using the water reuse options were developed for the Study's report. The City Council will review the final report and provide direction to the Water Department.

For more information on recycled water or the Water Reuse Study, please visit www.sandiego/water or call (619) 533-7556.





INTRACTOR

OPERATIONS

(EXIST)

## Our Commitment

#### Continually Improving the Quality of our Services

Every day, the Water Department's Operations Division is hard at work to provide you safe and reliable water with outstanding customer service in an environmentally sensitive manner. To continually improve the quality of our services and reduce environmental impacts, we combined a Bid to Goal (BTG) cost-savings program with an ISO 14001:2004 Environmental

Management System (EMS) program. We are the first utility in the nation to integrate both programs together.



During 2005, our commitment to do business with an environmental

conscience enabled us to reduce waste and recycle paper products, steel, brass, copper, and soil. In recognition of our service improvements, the Water Operations Division has already received three industry honors: 2004 AWWA Gold Award for Competitiveness, 17<sup>th</sup> Annual Savvy Awards Competition, Silver Circle Award, and the City's Environmental Services Department's 2006 Waste Reduction and Recycling Award. With the success of BTG in the Water Operations Division, the Water Department will also implement a similar program in its Customer Support Division. This Division is responsible for account and billing management, revenue recovery, water conservation and water meter maintenance activities.

#### **Drinking Water Fluoridation**

The State of California requires that water agencies serving more than 10,000 customers fluoridate their drinking water supplies if outside funding is provided. At this time, the City has not received sufficient outside funding to pay for a fluoridation system that would cover our entire distribution area. However, we do report a small amount of fluoride in our water supply, which occurs naturally due to erosion.

Please note that Metropolitan Water District of Southern California (MWD – the largest wholesaler of San Diego's imported water) has elected to begin fluoridating their drinking water supplies beginning 2007. Because MWD provides treated water in addition to the water treated at the City's three water treatment plants, there will be areas throughout the City which will receive various blends of fluoridated water. For more information on anticipated blends, please call the Public Information Office at (619) 527-3121 or send an email to waterops@sandiego.gov. For more information on MWD's fluoridation program, please call (213) 217-5709 or visit www.mwdh2o.com.

#### What are Chloramines?

Chloramines are a type of disinfectant that the Water Department uses to prevent re-growth of potentially harmful bacteria in the water distribution system. Chloramines are a combined form of chlorine and ammonia. They are approved by the Environmental Protection Agency (EPA) as a disinfectant for drinking water, and have been used safely for years. Chloraminated water is safe to drink because the digestive process neutralizes the chloramines before they enter the bloodstream. Chloraminated water is also safe for all other daily uses, such as bathing and cooking. In addition, the treatment process that uses chloramines produces fewer disinfection by-products, such as trihalomethanes.

#### Special Exceptions (Kidney Dialysis/Aquariums)

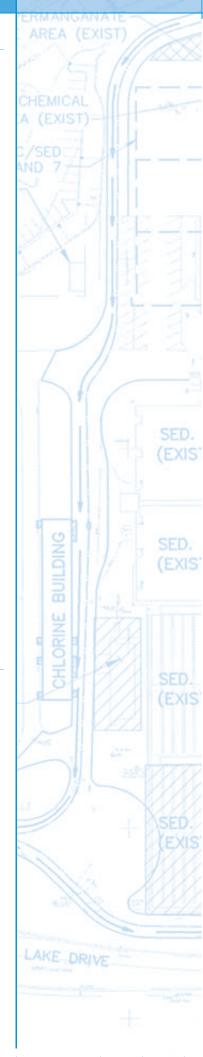
Customers who have unique water quality needs and who use specialized home treatments, such as kidney dialysis machines, should make the necessary adjustments to remove chloramines. Like chlorine, chloramines are toxic in dialysis water. Customers who have fish tanks in their homes should also take precautions to remove chloramines prior to adding water to tanks. Effective treatments include using

granular-activated carbon filters or using chemicals specifically designed to remove chloramines. Allowing drinking water to stand, boiling water, and chemicals that remove chlorine, will not remove chloramines.



#### Why Might My Water Taste or Smell Funny?

Occasionally, water suppliers experience episodes of unpleasant tastes and odors in their water, often characterized as "musty" or "earthy." These taste and odor variations are caused by naturally occurring algae growth in the raw source waters. In San Diego, algae are occasionally found in the source water reservoirs and aqueducts that supply water to the City. These algae may seasonally produce trace amounts of taste and odor chemical compounds. The taste and odor compounds do not pose any health risks to the people using the water. The City of San Diego Water Department closely monitors our source waters for algae growth and, when possible, will switch to a different water source to avoid problems from unpleasant tastes and odors.





## Resources

#### Landscape Watering Calculator

More than half of the water used by San Diegans goes toward landscape irrigation. Help conserve water by using the Landscape Watering Calculator. The

calculator is a free, easy-touse, web-based tool that helps you estimate the amount of water your landscape or garden needs. The calculator uses averages that adjust for weather, plants and soils in San Diego. For more information and to access the calculator, please visit www. sandiego.gov/water.



#### **Speakers Bureau Program**

Have a question? Want more information? Need a speaker for your organization? The Water Department has a Speakers Bureau available to give presentations in the community. We can speak to your business, professional, civic or social group on specific water topics and departmental functions. Our team of experts can address water quality and water treatment, water conservation, recycled water, distribution and delivery systems, and capital improvement projects. Speakers are also available in specific subject areas for high school, college and university classes. We can also tailor a presentation to fit your specific request. Utilize our employee resources to further your knowledge about water. Call our Speakers Bureau Office at (619) 533-6638 or e-mail waterspeakers@sandiego.gov.

#### How Can I Get More Information About My Water?

The Public Utilities Advisory Commission (PUAC) holds monthly meetings (the 3<sup>rd</sup> Monday of each month) to discuss water issues facing the City of San Diego Water Department. The public is welcome to attend and give input. Simply call the PUAC's support line at (619) 236-6750 for information about meeting location, dates and times.

This report meets mandatory federal and state requirements for annual customer notification regarding water quality. It was produced and mailed to residences and businesses in the City of San Diego Water Department's service area at a cost of 25 cents per copy. The direct mailing of this report allows us to provide virtually all of our customers with information they should have about drinking water standards and quality in a cost efficient manner.

Annual Drinking Water Quality Report: Editor, Tedi Jackson

🕾 Printed on recycled newsprint.

This information is available in alternative formats upon request.

#### We Want to Hear From You!

This is a great opportunity to let us know about your experience with our services. If there are areas we could improve upon, we want to hear about it. Our customer surveys are typically left on your door when our crew completes a water-related service call. Additionally, surveys are also available online at: http://www.sandiego. gov/water/operations/opssurvey.shtml

We take pride in our work and aim to provide quality customer service in every aspect of our job. We are pleased to report that from the approximately 200 surveys sent in to date, 75% of our customers rated our service as "Excellent or Above Average."

We value your comments about our services and we want to keep up the good work for each and every one of our customers, so please feel free to give us feedback. Thanks for taking the time to send us your comments.

Important Pl	none Numbers
--------------	--------------

General Information	(619) 515-3500
Emergency Hotline	(619) 515-3525
Water Quality Lab	(619) 668-3232
Capital Improvements Program	(619) 533-4679
Group Job Hotline	(858) 573-5081
Water Conservation	(619) 515-3500
City Lakes Fishing Line	(619) 465-3474
Speakers Bureau	(619) 533-6638
EPA's Drinking Water Hotline	(800) 426-4791
Storm Water Pollution Prevention	(619) 235-1000
Public Information Office	(619) 527-3121

#### **Important Web Links**

City of San Diego Water Department	www.sandiego.gov/water
California Department of Health Services (CDHS)	www.dhs.ca.gov
California EPA	www.calepa.ca.gov
EPA (Groundwater and Drinking Water)	www.epa.gov/safewater
County of San Diego Dept. of Environmental Health	www.co.san-diego.ca.us/deh
San Diego County Water Authority	www.sdcwa.org
Metropolitan Water District of Southern California	www.mwdh2o.com
Project Clean Water	www.projectcleanwater.org
Think Blue	www.thinkbluesd.org

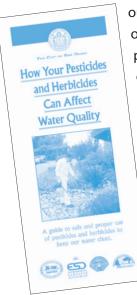
# our Orinking Water, Our Watersheds, Our Responsibility

#### Watersheds and Reservoirs

Watersheds and reservoirs are integral parts of our regional water supply system. A watershed is an area of land that drains local runoff (and everything collected in the runoff) into reservoirs. Reservoirs, more commonly known as lakes, capture local runoff and store imported water, and then supply this water to nearby water treatment plants. In this newsletter, we want to inform you about our efforts to protect water quality and also provide you with resources you can use.

#### **Protecting Water Quality**

While it helps to keep bugs and weeds



out of your garden or landscape, using pesticides and herbicides can affect water quality. In a collaborative effort between City Departments, a new resource is available for protecting water quality. The Water, Environmental Services, Fire-Rescue, and Park and Recreation Departments in coordination with the

City's Storm Water Program created a guide about limiting contamination by keeping pesticides, herbicides, and irrigation runoff out of our waterways.

Get your brochure today at local community service centers, libraries, or online at www.sandiego.gov/water/ operations/environment.

#### New Signs Ahead!

The City of San Diego Water Department is launching a "Pilot Watershed Boundary Sign Program" (WBSP) in San Diego County. The goals of WBSP are to increase public awareness of San Diego's watersheds and encourage environmental stewardship by our community members. This program will bring attention to motorists that they are entering a watershed where a drinking water reservoir is located.

In 2006, the CalTrans Traffic Control Devices Committee unanimously approved our pilot program and Metropolitan Water District of Southern California (MWD) awarded grant funding to assist with the production and installation of signs and to initiate a public awareness campaign.

The sign design is simple enough to use for designated drinking water reservoirs, groundwater basins, and other environmentally sensitive areas near source waters. We are working to make this sign available to our numerous partners such as the California Watershed Network, San Diego River Park Foundation, MWD, and other water agencies and environmental organizations.

Thank you to everyone who supported our program efforts. For information about how you can become involved, please call (619) 527 3121.



Watershed Newsletter 2006

#### **Right to the Source**

Protecting our water supply is a tremendous challenge. Why? Much of our watershed lands are outside of the City's limits, therefore they are also outside of our jurisdictional sphere of authority for land use planning, zoning, and building codes. To assist other jurisdictions that control land use decisions in areas that affect

water quality and watersheds, the Water Department established "Source Water Protection Guidelines for New Development Projects." The goal of the Guidelines is to help



protect local source waters as new residential and commercial developments are designed, planned, and built in the watersheds.

> The Guidelines establish water quality control measures that are specific to drinking water sources, for construction and new development, and also include recommendations for longterm maintenance of the control measures.

The Guidelines can be downloaded at www.sandiego.gov/water, or you can receive a complimentary version on CD-ROM by calling 619-527-3121 or emailing a request to waterops@sandiego.gov.

2005 Annual Water Quality Report

15

## Our Prinking Water, Our Watersheds, Our Responsibility



#### Source to Tap

Protecting water sources provides healthy and safe drinking water for our communities. This graphic illustrates the multiple barriers to protect our water as it moves from source to tap. Each barrier helps protect drinking water from contamination.

At source protection, proper care ensures that trash and other pollutants do not contaminate the water that is stored at a reservoir. In filtration and disinfection, water is filtered and disinfected at treatment plants. When drinking water is ready for consumption, it flows into a secure distribution system for use. At each step, the Water Department continually monitors the water and ensures compliance with federal and state water quality regulations.

#### Managing our Watersheds

The Water Department is actively involved in the development of watershed management plans in three key watersheds in San Diego County: San Diego River Watershed, Otay River Watershed, and San Dieguito Watershed. As much of these watershed areas fall outside of the City limits, successfully protecting them depends on cooperation with other jurisdictions. All of these watershed management plans can be viewed and downloaded at the Project Clean Water website, http://www.projectcleanwater.org.



16

**Get Involved:** We need your help protecting watersheds in the San Diego Region. Please refer to these resources to learn more about watersheds and ways to participate in the protection of our water quality.

Organization	Activity Type	Phone Number	Website Address
California Department of Health Services	A, B, C, E, T	(916) 445-4171	www.dhs.ca.gov
California Watershed Network	A, B, E, L, P, T	(916) 446-6440	www.watershednetwork.org
City of San Diego – Water Department	A, B, C, E,F , L, R, T	(619) 527-3121	www.sandiego.gov/water
County of San Diego – Department of Environmental Health	A, B, C, E, T	(619) 338-2222	www.sdcounty.ca.gov/deh
County of San Diego – Project Clean Water	A, B, E, L, T	Refer to website	www.projectcleanwater.org
I Love a Clean San Diego	A, B, C, E, S	(619) 291-0103	www.ilacsd.org
Multiple Species Conservation Plan – County of San Diego	E, L	(619) 533-4543	www.sandiego.gov/planning/mscp
Otay Valley Regional Park	A, C, E, L	Refer to website	www.ovrp.org
Resource Conservation District – Greater San Diego County	А, В, Е	(760) 745-2061 (619) 562-0096	www.rcdsandiego.org
San Diego Audubon Society	A, C, E, L	(619) 682-7200	www.sandiegoaudubon.org
San Diego Coastkeeper	A, C, E, T	(619) 758-7743	www.sdbaykeeper.org
San Diego Conservation Resource Network	A, C, E, L, P	Refer to website	www.sdcrn.org
San Diego National Wildlife Refuge	A, C, E, F, L	(619) 691-1262	www.fws.gov/sandiegorefuges
San Diego Regional Water Quality Control Board	A, B, C, E, L	(858) 467-2952	www.waterboards.ca.gov/sandiego
San Diego River Conservancy	B, C, E, L, P	Refer to website	www.sdrc.ca.gov
San Diego River Park Foundation	A, B. C, E, F, L, P, R, T	(619) 297-7380	www.sandiegoriver.org
San Dieguito River Park	A, B, E, L, C	(858) 674-2270	www.sdrp.org
San Dieguito River Valley Conservancy	E, L	(858) 755-6956	www.sdrvc.org
Southern California Wetlands Recovery Project	E, L	Refer to website	www.scwrp.org
The Center for Watershed Protection	A, E, P, L, T	(410) 461-8323	www.cwp.org
The Trust for Public Land	A, E, L	(415) 495-4014	www.tpl.org
The Watershed Management Council	Α, Ε, Τ	Refer to website	www.watershed.org
Think Blue	A, B, C, E, S	(888) THINKBLUE	www.thinkblue.org
U.S. Environmental Protection Agency – Region 9: The Pacific Southwest	B, E, L, T	(866) EPA-WEST	www.epa.gov/region9/water
USDA Forest Service – Pacific Southwest Region	A, B, C. E, F, L, P, R	(707) 562-8737	www.fs.fed.us/r5

Activity Type Key	
A: Environmental activism	L: Land conservation and management
B: Business related protection and education activities	P: Planting trees and streambank repair/protection
C: Clean-up of trash and litter	R: Rowing, canoeing, and related boating activities
E: Environmental education	S: Storm drain marking
F: Fishing or fish recreation activities	T: Water quality testing