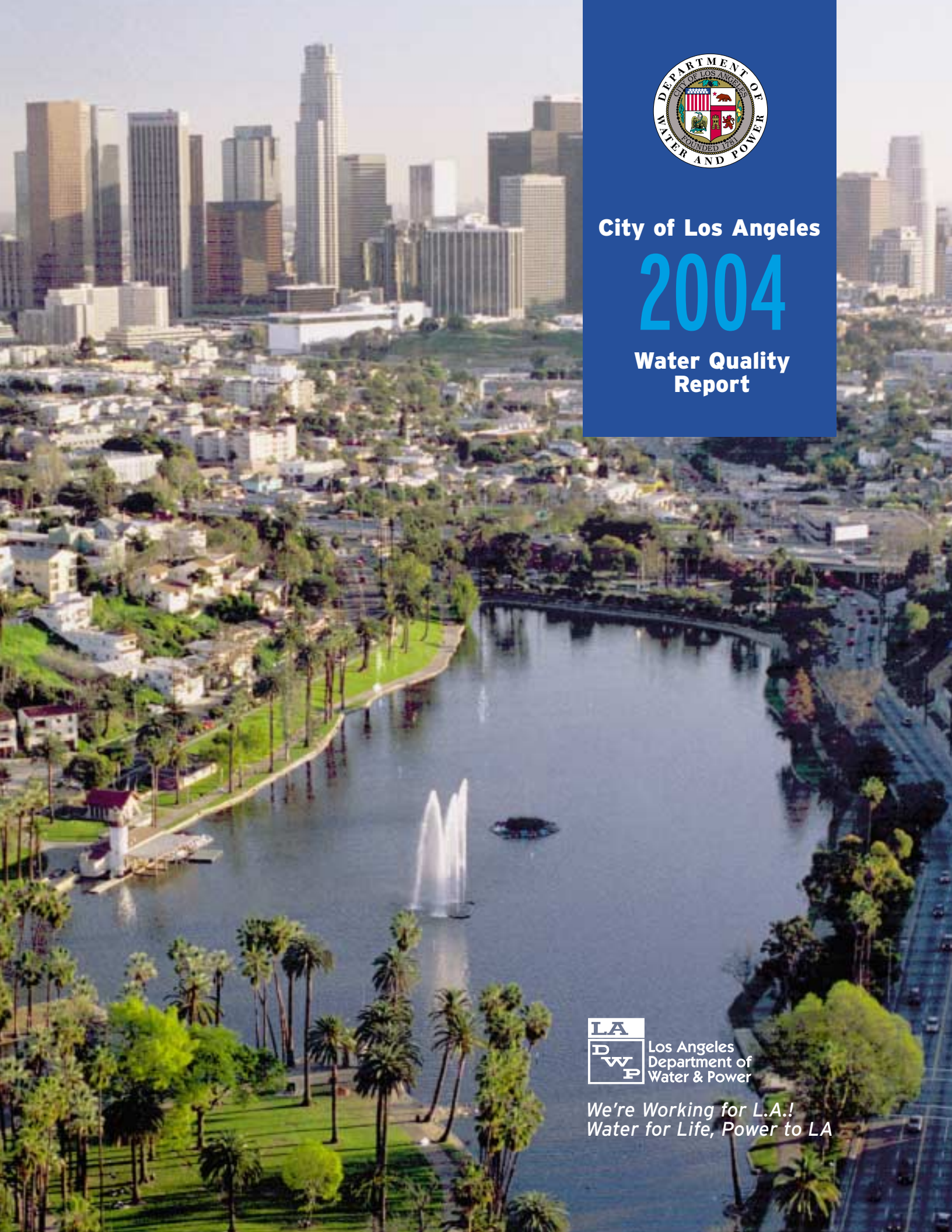


City of Los Angeles

2004

Water Quality Report

Los Angeles Department of Water & Power

We're Working for L.A.!
Water for Life, Power to LA

Table of **Contents**

Our mission is to provide our customers with reliable, high quality, and competitively priced water services in a safe, publicly and environmentally responsible manner.

Contact Information

ABOUT THE LOS ANGELES DEPARTMENT OF WATER AND POWER (LADWP)

LADWP, the largest municipal utility in the nation, was established more than 100 years ago to provide a reliable and safe water and electric supply to the city's 3.9 million residents and businesses.

LADWP is governed by a five-member Board of Water and Power Commissioners, appointed by the Mayor and confirmed by the City Council.

The Board meets regularly on the first and third Tuesdays of each month at 1:30 p.m. Meetings are held at:

Los Angeles Department of Water and Power
111 North Hope Street, Room 1555H
Los Angeles, CA 90012-2694

The meeting agenda is available to the public on the Thursday prior to the week of the meeting. You can access the Board agenda at *www.ladwp.com* or by calling (213) 367-1351.

For general information about LADWP, call 1-800-DIAL DWP (1-800-342-5397) or visit www.ladwp.com.

For questions regarding water quality, call the LADWP Water Quality Investigators Unit at (213) 367-3182.

For questions regarding this report, please call Cesar Vitangcol at (213) 367-1767.

Want to know more about your drinking water and related regulations?

Los Angeles Department of Water and Power . . . . . *www.ladwp.com*
California Department of Health Services (CDHS) . . . . *www.dhs.ca.gov/ps/ddwem*
US Environmental Protection Agency (EPA) . . . . . *www.epa.gov*

Overview

"At LADWP, we pride ourselves on providing the highest quality water possible, at consistently low rates, in a safe, publicly and environmentally responsible manner." *Jim McDaniel, Chief Operating Officer – LADWP Water System*

Jim McDaniel

LADWP Water Meets or Surpasses All Water Quality Standards

As in past years, LADWP supplied water to our 3.9 million customers in 2004 that met or surpassed all health-based drinking water standards with the exception of one turbidity event (see page 12). These standards are set by the U.S. Environmental Protection Agency (EPA) and the State of California Department of Health Services (CDHS).

LADWP achieves this high-quality water through state-of-the-art water treatment processes, extensive rehabilitation and replacement of distribution system piping, diligent maintenance and operation of facilities, and vigilant monitoring and testing of our water.

LADWP conducted more than 340,000 tests on 24,000 samples collected throughout the year for regulated contaminants such as arsenic, chromium, lead, copper, as well as contaminants that are not yet regulated.

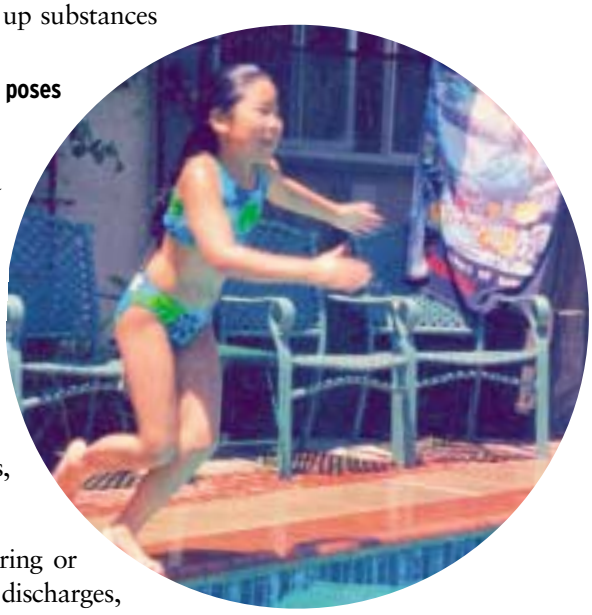
This report summarizes the results of water quality monitoring and testing as well as offers specific information about the quality of the water sources served in your area of the city.

Drinking Water and Your Health

Notice from the EPA

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. Why? Because the sources of drinking water (both tap 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 occuring minerals and in some cases, radioactive materials, and can pick up substances resulting from the presence of animal or human activity.

However, the presence of contaminants does not necessarily indicate that the water poses a health risk.



In order to ensure that tap water is safe to drink, the EPA, and the California Department of Health Services (CDHS) enforce regulations that limit the amount of certain contaminants in water provided by public water systems. CDHS regulations also establish limits for the same contaminants in bottled water to ensure the same protection for the public.

Contaminants that may be present in source waters 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, can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

- **Radioactive contaminants,** that can be naturally occurring or be the result of oil and gas production and mining activities.
- **Organic chemical contaminants,** including synthetic and volatile chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.
- **Pesticides and herbicides** that may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

Learn more about contaminants and potential health effects by calling EPA's Safe Drinking Water Hotline at (800) 426-4791 or visiting its website at www.epa.org.

Health-Related Notices

Precautions For People With Weakened Immune Systems

Some people may be more vulnerable to contaminants in drinking water than the general population. People with weakened immune systems may have undergone chemotherapy treatment, received organ transplants, suffer from HIV/AIDS, or other immune system disorders. Some elderly and infants can be particularly at risk from infection. These people should seek advice about drinking water from their health care providers. Guidelines from the EPS and Centers for Disease Control (CDC) offer ways to lessen the risk of infection by Cryptosporidium and other microbial contaminants. These are available at no cost from the EPS's Safe Drinking Water Hotline at (800) 426-4791 or its website at www.epa.org.

Sensitivity to Chlorine and Chloramines

LADWP is gradually switching from chlorine to chloramines as its disinfectant, though customers should expect to receive both types of treatment in their water at any time. (See article on Page 15). Both chlorine and chloramines are effective killers of bacteria, and other contaminents, but chloramines form less disinfection by-products and have no odor when used properly.

People who use kidney dialysis machines may want to take special precautions and consult their physician for the appropriate type of water treatment. Customers who maintain fish ponds, tanks or aquaria should also make necessary adjustments in water quality treatment, as these disinfectants are toxic for fish. For further information, pelase visit www.ladwp.com/water, and click on water quality, then click on "constituents & hot topics."

Research on Disinfection By-Products

One of the most significant distinctions of drinking water in the United States compared to other parts of the world is that we practice continuous disinfection of our treated water supplies. This provides some of the safest water anywhere in the world and helps prevent outbreaks of many water-related diseases that plague other nations.

However, some studies suggest possible long-term and short-term adverse health effects associated with disinfection by-products (DBPs), especially one group of by-products known as total trihalomethanes (TTHMs).

A few recent studies indicate possible short-term effects include low birth weight and miscarriages. Yet, other studies found no such linkages or the results were inconclusive. Long-term studies also have connected TTHMs to adverse health effects such as cancer. Scientists continue to study TTHMs to provide a clearer understanding of the risks involved.

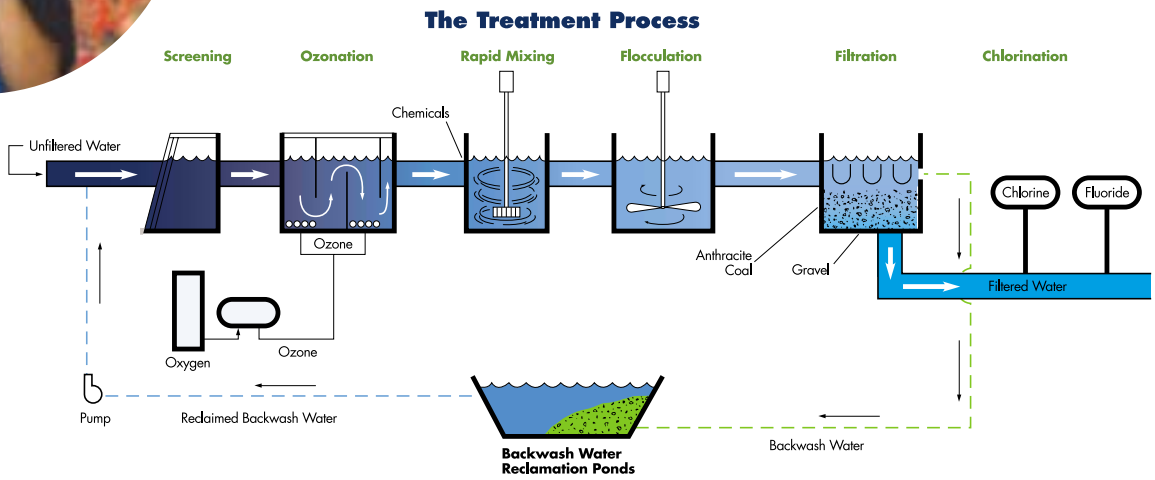
LADWP encourages women who are pregnant or think they may become pregnant to consult their physicians. For more information about water quality and your drinking water, contact LADWP or visit us online at www.ladwp.com. LADWP will continue to keep customers informed about the results of any future studies. LADWP also will continue to diligently track and implement new regulations as they go into effect.

LADWP currently meets all disinfection by-product standards (see levels reported in Table 1 and 3 on Pages 8-11). In addition, LADWP is in the process of switching from chlorine to chloramines to maintain water disinfectant residual, which will further reduces levels of TTHMs.

Making **Drinking Water** Safe

Surface Water Treatment

All water coming from the Los Angeles Aqueduct, the California Aqueduct, and the Colorado River Aqueduct is filtered and treated to ensure a safe drinking water supply. The schematic below depicts the water treatment process that occurs at the Los Angeles Aqueduct Filtration Plant, which is located at the northern end of Los Angeles.



Water flows into the filtration plant by gravity and travels through a screener to remove environmental debris such as twigs and dead leaves. The process injects ozone, a super-charged oxygen molecule and a powerful disinfecting agent, into the water to destroy bacteria and other impurities that affect taste, odor, and color. Chemicals quickly disperse into the water to make fine particles called floc. A 6-foot-deep filter (crushed coal over gravel) then removes the flock and previously added chemicals. Chlorine, added during the final step, ensures lasting disinfection and protects the water as it travels through the City's distribution system.

Groundwater Treatment

The City's vast groundwater supply in the San Fernando Valley and Central Basin are generally clean and clear. However, LADWP also disinfects this groundwater with chlorine as a safeguard against microorganisms.

Because of a history of contaminants found in the San Fernando Valley groundwater wells, LADWP adheres to strict operating limits to keep TCE, PCE, hexavelant chromium, perchlorate and nitrates far below the maxium contaminant levels (MCLs) permitted by federal or state regulations. This provides an additional safety margin for City customers. Additionally, blending allows the use of wells that would be otherwise unavailable. In the long term, additional well field treatment will become necessary. LADWP is formulating a comprehensive groundwater treatment plan for the San Fernando Basin that will address current and future contaminants of concern.

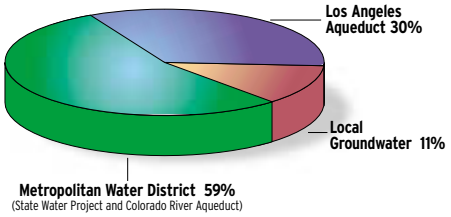
Where **L.A.'s Water** Comes From

Quick Facts About Your Water Supply in 2004

In an average water year, 50 percent of the City's water comes from the Eastern Sierra watershed via the Los Angeles Aqueduct, 35 percent is purchased from the Metropolitan Water District of Southern California (MWD) which flows from the San Joaquin/Sacramento Delta (via the State Aqueduct) and the Colorado River (via the Colorado River Aqueduct), and 15 percent comes from local groundwater.

However, 2004 was anything but average because years of below-normal snowfall have reduced the water supply from the Sierra Nevada, increasing the need to purchase more water from MWD.

WATER SUPPLY SOURCES



WATER DISTRIBUTION SYSTEM

Storage (reservoirs/tanks)	108
Piping (in miles)	7,226
Water Samples collected	24,444
Water Tests Conducted	340,917

WATER USAGE

LADWP customers purchased 201 billion gallons in 2004.

Single Residential	40.7%
Multi Residential	31.1%
Commercial	17.9%
Industrial	3.4%
Other	6.9%

SOURCES OF WATER FOR YOUR COMMUNITY

Central Los Angeles: Los Angeles Aqueduct, MWD State Water Project, and local groundwater.

Harbor/Eastern Los Angeles: MWD State Water Project and Colorado River Aqueduct.

San Fernando Valley: Los Angeles Aqueduct, MWD State Water Project, and local groundwater.

Western Los Angeles: Los Angeles Aqueduct and MWD State Water Project.

(See Water Quality Area Map on page 7)

Water Quality Area Map

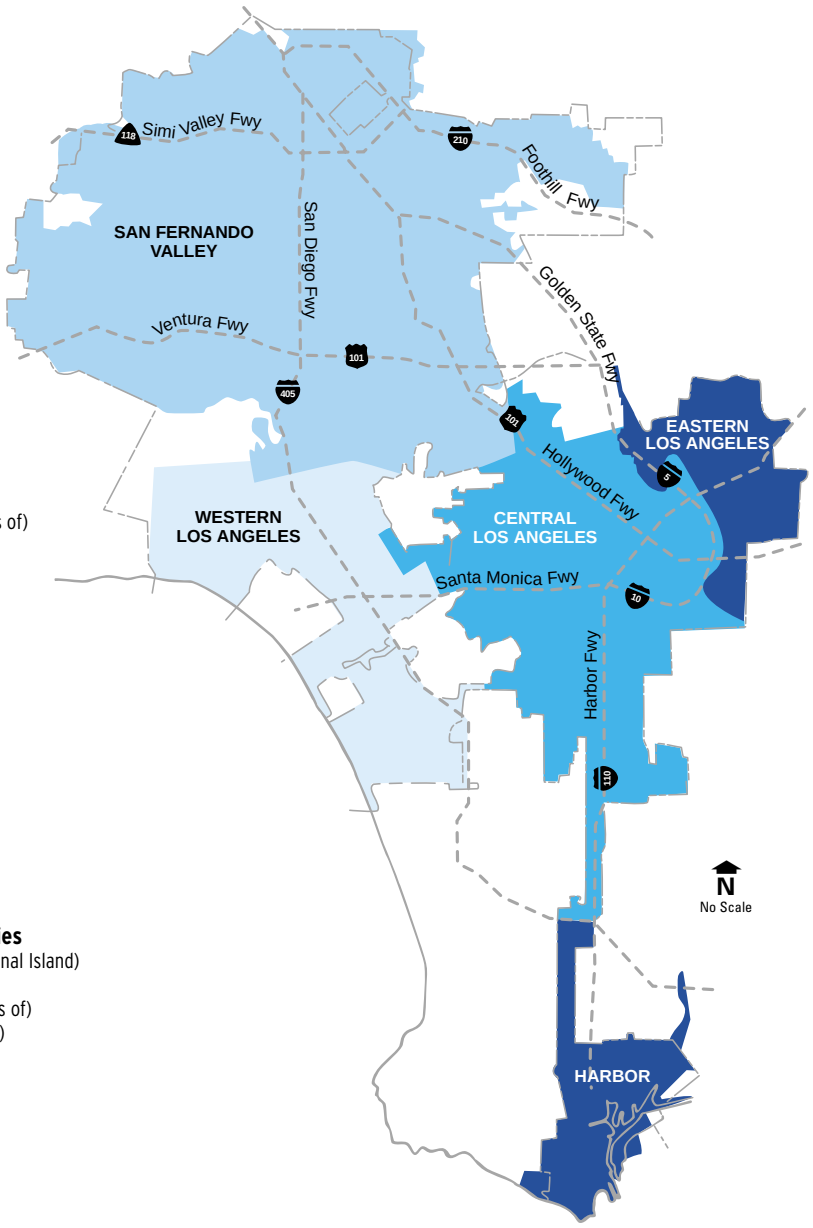
Western Los Angeles Communities
Bel Air Estates
Beverly Glen
Brentwood
Castellamare
Century City
Cheviot Hills
Culver City (parts of)
Mar Vista
Pacific Palisades
Palisades Highlands
Palms
Playa de Rey
Sawtelle
Venice
West Los Angeles
Westchester
Westwood

Central Los Angeles Communities
Baldwin Hills
Chinatown
Country Club Park
Crenshaw
Griffith Park
Hancock Park
Hollywood
Hyde Park
Koreatown
LA City Strip (parts of)
Little Tokyo
Los Feliz
Mid City
Mt. Olympus
Park La Brea
Rancho Park
Silverlake
Watts
West Hollywood (parts of)
Westlake

San Fernando Valley Communities
Arleta
Canoga Park
Chatsworth
Encino
Granada Hills
Hollywood Hills
Lake View Terrace
Mission Hills
North Hills
North Hollywood
Northridge
Olive View
Pacoima
Panorama City
Porter Ranch
Reseda
Sherman Oaks
Studio City
Sun Valley
Sunland
Tarzana
Toluca Lake
Tujunga
Valley Village
Van Nuys
Warner Center
West Hills
Winnetka
Woodland Hills

Eastern Los Angeles Communities
Atwater Village
Boyle Heights
Cypress Park
Echo Park
El Sereno
Glassell Park
Highland Park
Lincoln Heights
Montecito Heights
Monterey Hills
Mt. Washington

Harbor Communities
East San Pedro (Terminal Island)
Harbor City
Harbor Gateway (parts of)
LA City Strip (parts of)
San Pedro
Wilmington



How to Read the Tables

The constituents/contaminants found in the water served in your area are listed as follows:

- **For Central Los Angeles Area** – water test results are under the Los Angeles Filtration Plant and the Southern Combined Wells columns
- **For Harbor/Eastern Los Angeles Area** – water test results are under the Diemer, Jensen, and Weymouth Filtration Plants columns
- **For San Fernando Valley Area** – water test results are under the Los Angeles Filtration Plant, the Northern Combined Wells, and Jensen Filtration Plant columns
- **For Western Los Angeles Area** – water test results are under the Los Angeles Filtration Plant and the Lower Stone Canyon Reservoir columns

Some constituents/contaminants detected are reported on **city-wide basis** as required by the California Department of Health services. The unregulated contaminants reported on **area-wide basis** are included for additional information on the water served in your area.

Calendar Year 2004 Water Quality Monitoring Results

Report for **All Water** Quality Areas

Tables I, II, and III list the results of water tests performed by LADWP and MWD from January to December 2004. LADWP conducted more than 340,000 tests on 24,000 samples collected throughout the year for regulated contaminants such as arsenic, chromium, lead and copper; as well as contaminants and constituents that are not yet regulated. These Tables include only contaminants that were above the limit of detection, which is less than 5 percent of all the tests performed in the year 2004.

TABLE I – HEALTH-BASED PRIMARY DRINKING WATER STANDARDS CONTAMINANTS DETECTED IN TREATED WATER

Constituents/Contaminants	Units	Los Angeles Filtration Plant		Southern Combined Wells		Lower Stone Canyon Reservoir		Northern C Well
		Range	Average	Range	Average	Range	Average	Range
Alpha Emitters (a)	pCi/L	3.2-5.4	4.3	1.8-7.0	4.8	2.3-4.4	3.7	1.4-6.5
Aluminum	µg/L	<50	<50	<50	<50	<50	<50	<50
Arsenic	µg/L	<2.0-7.9	3.3	<2.0-5.1	3.1	3.3-5.0	4.1	<2.0-5.1
Barium	µg/L	<100	<100	<100	<100	<100	<100	<100-120
Beta Emitters (a)	pCi/L	<4.0	<4.0	<4.0-5.6	4.0	<4.0-4.6	<4.0	<4.0-5.6
Bromate	µg/L	<5.0-11	5.5	NA	NA	NA	NA	NA
Nitrate (as NO_3)	mg/L	<2.0-2.2	<2.0	<2.0-19	9.1	<2.0	<2.0	<2.0-19
Nitrate + Nitrite (as Nitrogen)	mg/L	0.40-0.49	0.40	<0.40-4.2	1.9	<0.40	<0.40	<0.4-4.2
Selenium	µg/L	<5.0	<5.0	<5.0-7.0	<5.0	<5.0	<5.0	<5.0-7.0
Radium (Total 226 and 228) (a)	pCi/L	<0.5	<0.5	<0.5	<0.5	<0.5-0.85	<0.5	<0.5-1.0
Tetrachloroethylene [PCE]	µg/L	<0.5	<0.5	<0.5-1.2	<0.5	<0.5	<0.5	<0.5-2.3
Trichloroethene [TCE]	µg/L	<0.5	<0.5	<0.5-3.0	0.71	<0.5	<0.5	<0.5-3.4
Turbidity (b)	NTU	1.7	99.5%	0.1-1.2	0.19	0.21-6.0	0.56	0.10-0.40
Uranium (a)	pCi/L	2.1-5.3	3.4	0.10-1.2	0.19	<2.0-3.9	2.6	<2.0-9.6

PRIMARY CONSTITUENT/CONTAMINANTS REPORTED ON CITY-WIDE BASIS

Copper (at-the-tap) (c)	µg/L	number of samples exceeding AL = 1 out of 222
Fluoride	mg/L	Range = 0.10 – 1.4
Lead (at-the-tap) (c)	µg/L	number of samples exceeding AL = 11 out of 222
Total Chlorine Residual	mg/L	Range = 0.02 – 4.2
Total Coliform Bacteria	%	Range: 0.0 – 1.5% Coliform positive samples
Total Haloacetic Acids	µg/L	Range = 2.6 – 117
Total Trihalomethanes [TTHM]	µg/L	Range = 14 – 112

TABLE II – AESTHETIC-BASED SECONDARY DRINKING WATER STANDARDS CONSTITUENTS/CONTAMINANTS DETECTED IN TREATED WATER

Constituents/Contaminants	Units	Los Angeles Filtration Plant		Southern Combined Wells		Lower Stone Canyon Reservoir		Northern C Well
		Range	Average	Range	Average	Range	Average	Range
Aluminum	µg/L	<50	<50	<50	<50	<50	<50	<50
Chloride	mg/L	36-60	51	26-66	53	56-62	59	30-64
Color	Units	3.0-4.0	3.5	3.0-13	3.8	5.0-7.0	5.5	3.0-5.0
Corrosivity (e)	LSI	(-0.67)-(-0.23)	-0.47	(-0.42)-0.59	-0.15	(-0.72)-(-0.39)	-0.55	(-0.62)-(-0.03)
Manganese AL=500	µg/L	<20	<20	<20-44	<20	<20	<20	<20
Odor	TON	<1	<1	<1-1	<1	<1-1	<1	<1-1
pH	units	7.6-7.7	7.6	7.5-8.6	7.6	7.4-7.8	7.6	7.4-7.7
Specific Conductance	µmhos/cm	387-9463	426	448-840	634	436-445	442	444-840
Sulfate	mg/L	28-41	35	38-190	105	36-38	37	37-190
Total Dissolved Solids [TDS]	mg/L	228-265	245	245-542	394	244-272	253	245-542
Turbidity	NTU	0.10-0.25	0.16	0.10-1.2	0.19	0.21-6.0	0.56	0.10-0.40
Zinc	µg/L	<50	<50	<50-721	<50	<50	<50	<50

Calendar Year 2004
Water Quality Monitoring Results

TABLE I – HEALTH-BASED PRIMARY DRINKING WATER STANDARDS
CONTAMINANTS DETECTED IN TREATED WATER

ombined ls	Diemer Filtration Plant		Jensen Filtration Plant		Weymouth Filtration Plant		State and Federal Primary Standard (MCL or MRDL)	MEET PRIMARY STANDARD?	State PHG or MRDLG or (Federal MCLG)	Major Sources in Our Drinking Water
Average	Range	Average	Range	Average	Range	Average				
4.8	<3.0	<3.0	<3.0	<3.0	<3.0-4.3	<3.0	15	YES	none	Erosion of natural deposits
<50	<50	<50	<50-55	<50	<50	<50	1000	YES	600	Erosion of natural deposits; residue from surface water treatment process
3.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	50	YES	0.004	Erosion of natural deposits; natural hot springs
<100	<100	<100	<100	<100	<100	<100	1000	YES	2000	Erosion of natural deposits
4.0	<4.0-5.9	<4.0	<4.0-6.2	4.9	<4.0-5.0	<4.0	50	YES	none	Decay of natural and man-made deposits
NA	NA	NA	NA	NA	NA	NA	10	YES	(0)	By-product of drinking water disinfection
9.1	<2.0-3.4	2.2	2.3-3.2	2.7	<2.0-3.3	2.1	45	YES	45	Erosion of natural deposits; runoff and leaching from fertilizer use
2.1	<0.40-0.77	0.50	0.52-0.72	0.61	<0.40-0.74	0.47	10	YES	10	Erosion of natural deposits; runoff and leaching from fertilizer use
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	50	YES	(50)	Erosion of natural deposits; discharge from industrial activities
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	YES	none	Erosion of natural deposits
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	YES	0.06	Discharge from factories, dry cleaners, auto shops (metal degreaser)
0.71	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	YES	0.8	Discharge from metal degreasing sites and other factories
0.19	0.10	100%	0.07	100%	0.11	100%	TT	NO	none	Soil runoff
5.2	<2.0-2.6	<2.0	<2.0	<2.0	<2.0-3.0	<2.0	20	YES	0.43	Erosion of natural deposits

PRIMARY CONSTITUENT/CONTAMINANTS REPORTED ON CITY-WIDE BASIS

Average 90th Percentile value = 774	TT, AL=1300 (d)	YES	170	Internal corrosion of household water plumbing systems
Average = 0.68	2	YES	1	Erosion of natural deposits; water additive that promotes strong teeth
Average 90th Percentile value = 10	TT, AL=15 (d)	YES	2	Internal corrosion of household water plumbing systems
Average = 1.7	4.0	YES	4.0	Drinking water disinfectant added for treatment
Average = 0.6% Coliform positive samples (b)	5% of monthly samples are coliform positive	YES	(0)	Naturally present in the environment
Average = 33	60	YES	none	By-product of drinking water disinfection
Average = 60	80	YES	none	By-product of drinking water disinfection

TABLE II – AESTHETIC-BASED SECONDARY DRINKING WATER STANDARDS
CONSTITUENTS/CONTAMINANTS DETECTED IN TREATED WATER

ombined ls	Diemer Filtration Plant		Jensen Filtration Plant		Weymouth Filtration Plant		State and Federal Secondary MCL	MEET SECONDARY STANDARD?	Major Sources in Our Drinking Water
Average	Range	Average	Range	Average	Range	Average			
<50	<50	<50	<50-55	<50	<50	<50	200	YES	Erosion of natural deposits; residue from some surface water treatment process
53	76-110	87	65-77	71	76-104	86	500	YES	Runoff/leaching from natural deposits; seawater influence
3.8	1.0-3.0	2.0	2.0-3.0	3.0	1.0-3.0	2.0	15	YES	Naturally-occurring organic matter
-0.15	0.03-0.29	0.18	0.06-0.14	0.09	0.06-0.32	0.20	non-corrosive	NO/NO/NO/NO/ YES/YES/YES	Natural or industrially influenced balance of hydrogren, carbon and oxygen in the water; affected by temperature and other factors.
<20	<20	<20	<20	<20	<20	<20	50	YES	Leaching from natural deposits
<1	1	1	3	3	2	2	3	YES	Naturally occurring organic materials
7.6	8.1-8.2	8.2	8.3-8.4	8.3	8.1-8.2	8.2	6.5-8.5	YES	Naturally occurring dissolved gases and minerals
634	644-877	749	479-512	500	641-867	762	1600	YES	Substances that form ions when in water; seawater influence
105	92-194	138	39-56	46	104-189	145	500	YES	Runoff/leaching from natural deposits
394	370-521	435	266-286	275	371-515	445	1000	YES	Runoff/leaching from natural deposits
0.19	0.04-0.08	0.05	0.05-0.06	0.05	0.06-0.07	0.06	5	YES	Soil runoff
<50	<50	<50	<50	<50	<50	<50	5000	YES	Corrosion control additive; runoff/leaching from natural deposits

Calendar Year 2004 Water Quality Monitoring Results

TABLE III – UNREGULATED DRINKING WATER CONSTITUENTS/CONTAMINANTS DETECTED IN TREATED WATER

Constituents/Contaminants	Units	Los Angeles Filtration Plant		Southern Combined Wells		Lower Stone Canyon Reservoir		Northern Combined Wells		Diemer Filtration Plant		Jensen Filtration Plant		Weym Filtratio
		Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range
Alkalinity	mg/L	81-100	91	85-180	131	79-88	82	91-183	131	76-89	89	79-84	81	75-99
Boron AL = 100	µg/L	310-410	358	120-360	305	330-370	350	160-360	305	130-140	140	150-180	160	140-150
Calcium	mg/L	24-29	26	28-86	55	25-28	26	28-86	55	31-48	40	22-24	23	32-47
Chromium 6	µg/L	<1.0	<1.0	<1.0-2.1	<1.0	<1.0	<1.0	<1.0-3.8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Magnesium	mg/L	8.4-11	9.8	9.3-23	16	9.5-10	10	10-23	16	15-22	19	12-14	13	15-22
Phosphate (as Phosphorous)	µg/L	23-37	32	20-251	42	23-67	41	30-78	42	NT	NT	NT	NT	NT
Potassium	mg/L	3.1-3.8	3.4	2.8-4.3	3.8	3.3-3.5	3.4	3.4-4.3	3.8	3.0-4.0	3.5	2.5-3.0	2.7	3.0-4.1
Radon	pCi/L	NA	NA	<100-602	<100	NA	NA	<100	<100	<100	<100	<100	<100	<100
Silica	mg/L	18-20	19	14-26	22	16-18	17	18-27	22	NT	NT	NT	NT	NT
Sodium	mg/L	39-48	43	42-62	52	43-46	44	33-62	52	74-94	80	52-56	54	75-94
Total Hardness (as $CaCO_3$)	mg/L	94-248	134	102-281	195	96-110	103	114-281	195	139-210	179	106-116	110	142-206
Total Organic Carbon [TOC]	mg/L	1.6-3.3	2.1	<0.7-2.5	1.2	1.3-2.8	1.7	0.59-2.5	1.2	1.7-3.1	2.2	2.0-2.6	2.2	1.7-2.9
Vanadium AL = 50	µg/L	<3	<3	<3-3.7	<3	<3	<3	<3-7.9	<3	<3	<3	<3-3.4	<3	<3-3.6

UNREGULATED CONTAMINANTS REPORTED ON AREA-WIDE BASIS

Contaminants	Units	Central Los Angeles		Harbor/Eastern Los Angeles		San Fernando Valley		Western Los Angeles	
		Range	Average	Range	Average	Range	Average	Range	Average
Bromodichloromethane [BDCM]	µg/L	3.2-35	17	15-43	21	2.6-36	18	6.5-32	20
Bromoform	µg/L	1.6-24	7.8	0.7-13	5.2	1.1-10	6.0	1.7-8.3	4.4
Chlorate AL = 800	µg/L	87-321	208	NT	NT	26-483	261	156-917	636
Chloroform	µg/L	2.3-41	16	1.1-32	16	1.3-37	13	3.1-126	26
Dibromochloromethane [DBCM]	µg/L	4.3-37	18	7.2-40	18	6.0-34	20	7.2-26	16
N-Nitrosodimethylamine (NDMA) AL = 10	ng/L	NT	NT	<2.0-12	2.0	<2.0-5.9	3.0	NT	NT

Terms Used in the Tables

Detection Limit for Reporting Purposes (DLR): The DLR is the lowest level at which all DHS certified laboratories can accurately and reliably detect a compound. The DLR provides a standardized basis for reporting purposes. For example, if two separate laboratories report that lead is "not detected," it is understood that the amount of lead in both waters was less than the DLR for lead.

Primary Drinking Water Standard or PDWS: MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Maximum Contaminant Level (MCL): The highest amount of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the Public Health Goals (PHGs) (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect odor, taste, and appearance of drinking water. For certain contaminants, compliance with the MCL is based on the average of all samples taken throughout the year.

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. For known or suspected carcinogens, EPA automatically sets the level at zero.

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 U.S. Environmental Protection Agency.

Milligram per liter(mg/L), Microgram per liter(µg/L), Nanogram per liter (ng/L): These are units of measure used to indicate the amount of a contaminant in a certain volume of water. One milligram

Calendar Year 2004
Water Quality Monitoring Results

TABLE III – UNREGULATED DRINKING WATER CONSTITUENTS/ CONTAMINANTS DETECTED IN TREATED WATER

outh n Plant Average	Major Sources in Our Drinking Water
90	Erosion of natural deposits
140	Erosion of natural deposits; residue from surface water treatment process
41	Erosion of natural deposits; natural hot springs
<1.0	Industrial discharge; erosion of natural deposits
20	Erosion of natural deposits
NT	Erosion of natural deposits, agricultural run-off
3.6	Erosion of natural deposits
<100	Decay of natural deposits
NT	Erosion of natural deposits
82	Erosion of natural deposits
181	Erosion of natural deposits
2.2	Erosion of natural deposits
<3	Erosion of natural deposits

UNREGULATED CONTAMINANTS REPORTED ON AREA-WIDE BASIS

Major Sources in Our Drinking Water
Disinfection by-product of chlorination
Disinfection by-product of chlorination
Disinfectant breakdown product; disinfection by-product
Disinfection by-product of chlorination
Disinfection by-product of chlorination
Disinfection by-product of chlorination; industrial processes

per liter is equivalent to one part per million (ppm). Likewise, one microgram per liter is equivalent to one part per billion (ppb) and one nanogram per liter is equivalent to one part per trillion (ppt).

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.

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

Treatment Technique (TT): A required treatment process, which will reduce the level of a contaminant in drinking water. For example, the filtration process is a treatment technique used to reduce turbidity (the cloudiness in water) and microbial contaminants from surface water. High turbidities may be indicative of poor or inadequate filtration.

Abbreviations and Footnotes

< = less than (example: In Table 1, Aluminum has an average value of <50 for Los Angeles Filtration Plant. This means that the average value is less than 50 micrograms per liter, which is the lowest detection level (DLR) for reporting Aluminum.)

% = Total coliform is reported for compliance as percentage of positive samples, but the unit for analytical reporting of total coliform bacteria is Colony Forming Units per 100 milliliters (CFU/100 ml) of sample.

LSI units = Langelier Saturation Index (an indicator of corrosivity)

mg/L = milligrams per liter (equivalent to ppm)

ng/L = nanograms per liter (equivalent to ppt)

NA = Not applicable

NT = Not tested

NTU = Nephelometric Turbidity Units; Turbidity is a measure of the cloudiness of the water. High turbidity can hinder the effectiveness of disinfectants.

pCi/L = picoCuries per Liter

TON = Threshold Odor Number

μg/L= micrograms per Liter (equivalent to ppb)

μmhos/cm = micromhos per centimeter

(a) Radiological data are based on 2002 to 2003 monitoring.

(b) The new reporting requirement for treatment plant turbidity is: report the highest single measurement and the lowest monthly percentage of measurement that is less than or equal to 0.3 NTU. The turbidity level of the water from water filtration treatment plant must be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1.0 NTU at any time.

Turbidity is a measure of the cloudiness of the water and is a good indicator of water quality and filtration performance. Compliance is based on a weighted system-wide average; however, these results are specific to this water quality region. The combined filter effluent turbidity exceeded 1.00 NTU for 42 minutes, on February 26, 2004. See page 12 for more information.

(c) At-the-tap monitoring was conducted in 2003 according to the Federal Lead and Copper Rule guidelines. Although the City's source and treated waters have little if any detectable lead, studies were conducted and corrosion control is scheduled for implementation, as required by the Lead and Copper Rule.

(d) A system is out of compliance if the Action Level is exceeded in the 90th percentile of all samples at the customer's tap.

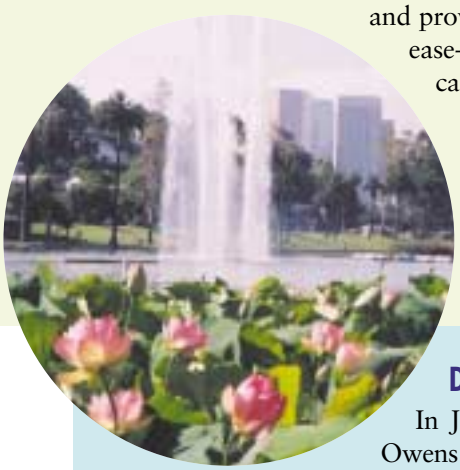
(e) Corrosivity values were taken from calculated Langelier Index: negative value means that the water may be corrosive, positive value means that the water is non-corrosive.

Turbidity Notice

The Los Angeles Aqueduct Filtration Plant consistently produces drinking water that meets all required regulations, including turbidity, which relates to the cloudiness of the water. Turbidity, measured in units of NTU, is a good indicator of water quality and filtration performance. (See Page 5 for more information about the treatment process.)

On February 26, 2004, the plant received unusual, highly turbid water from the Los Angeles Aqueduct, apparently due to recent storm runoff into the aqueduct system and as a result of maintenance work at an upstream reservoir. The turbidity of the water entering the plant rose from 2 NTU to 27 NTU. Continuous monitoring indicated that the turbidity of the treated water leaving the plant exceeded the standard of 1 NTU for less than one hour and peaked at 1.67 NTU. In immediate response to the initial exceedance, LADWP reduced water flows to the plant and increased chemical and disinfection treatments.

LADWP staff responded quickly to the treatment emergency, thereby minimizing the amount of higher turbidity water leaving the plant. Fortunately, all of this water received either significant dilution, extended disinfectant contact time, or both prior to delivery to customers. All of the follow-up sampling and testing of the water indicated neither bacteriological contamination nor a decrease in disinfectant residual. These factors helped assure that the risk to consumers was minimal.



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.

Based on investigation of the incident, LADWP has developed new guidelines and procedures to address the treatment of highly turbid water. The new guidelines will help ensure continued compliance with all aspects of plant performance and water quality standards. This notice is being provided at the direction of the EPA and CDHS.

Drinking Water Source Assessment and Protection Program (DWSAP)

In July 2002, LADWP completed an assessment of drinking water sources in the Owens Valley and Mono Basin watersheds that supplement the Los Angeles Aqueduct supply. These sources are most vulnerable to geothermal activities that release naturally occurring arsenic in creeks that feed into the Owens River. (See accompanying article on arsenic on page 14.) Other activities that may impact water quality in these watersheds are livestock grazing, wildlife, and unauthorized public use of reservoir. The extent and significance of water quality impact from these activities are not yet fully determined. Regular monitoring for Cryptosporidium and Giardia indicates that their presence is infrequent and at very low levels.

Assessment for groundwater sources in San Fernando and Sylmar was completed in December 2002. Assessment for groundwater sources in the Central Basin was completed and submitted in March 2003. Since these wells are located in urban areas, they are most vulnerable to the following activities that are associated with contaminants found in the well water; dry cleaning, chemical processing/storage, fertilizer/pesticide storage, metal finishing, and septic system. LADWP closely manages the use of this water by blending it with water from other sources to ensure that the drinking water standards are not exceeded. A copy of the assessment can be obtained by contacting LADWP Regulatory Affairs and Consumer Protection Group at (213) 367-3344.

In December 2002, MWD completed it source water assessment of its 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 watewater. A copy of the assessment can be obtained by contacting MWD at (213) 217-6850.

Update Surface Water Treatment Rule

The Surface Water Treatment Rule (SWTR), administered by the California Department of Health Services (CDHS), is a drinking water regulation designed to help safeguard reservoir supplies from microbiological contamination that may occur when rain runoff from nearby hillsides and slopes enters the water. In Los Angeles, the SWTR applies to four open water reservoirs – Lower Stone Canyon, Encino, and Upper and Lower Hollywood.

LADWP has successfully met the compliance deadlines for all four open reservoirs subject to the requirements of the SWTR. Construction of support facilities will continue but water from these reservoirs will no longer be served unless it is filtered.

LADWP is complying with SWTR by removing these reservoirs from regular service. The water distribution system is being redesigned through construction of larger pipelines and storage facilities, so that water will bypass these reservoirs but continue to serve customers in the reservoirs' service areas. These bypassed reservoirs will be maintained for use as reserve water supply in emergency conditions.

LADWP operates the water from these reservoirs under strict CDHS guidelines that among other things, call for more frequent monitoring and treatment. According to CDHS, "Drinking water which is treated to meet CDHS requirements…should be considered safe." Following is a progress report for each of the reservoirs affected by SWTR.

Upper and Lower Hollywood Reservoir

After more than 70 years of reliable service to Los Angeles, the Hollywood Reservoirs were removed from service and replaced by two 30-million-gallon tanks on July 2001 ahead of the November 2001 compliance date. The Hollywood Reservoirs will be maintained and will only be used for emergency needs such as a major earthquake.

Encino Reservoir

The Encino Reservoir was removed from service on December 27, 2002. Several new facilities are being constructed on the Encino Reservoir property including a new 6.5 million-gallon-per-day membrane filtration plant, and new pumping and chlorination stations. Construction of the Encino project, which began in November 2002, is expected to last about three years.

LADWP completed construction of offsite pipeline improvements needed to take the reservoir out of service. LADWP will maintain a small portion of the Encino Reservoir water for drinking purposes and also maintain the reservoir for adequate flood control. The remaining untreated reservoir water will be used only for emergency needs such as a major earthquake.

Lower Stone Canyon Reservoir

The Lower Stone Canyon Reservoir was removed from service on December 28, 2004. Several new facilities will be build at the Stone Canyon Reservoir complex to ensure reliable water service. These facilities include a membrane filtration plant, a reconstructed pump station, a one million gallon water diversion structure, a replacement chlorination station, and an additional bypass pipeline. Most of these facilities are either replacements of existing, older facilities or are required to move additional flow around Lower Stone Canyon Reservoir. The small

membrane filtration plant will filter water from the Lower Stone Canyon Reservoir before it enters the City's distribution system and flows to customers' taps.

When the new facilities are in place, most of the water entering the Stone Canyon complex will be diverted through the new diversion structure and bypass pipeline. This water will then bypass Lower Stone Canyon Reservoir and enter the distribution system below the dam.

Construction of the Stone Canyon facilities began in January 2004 and construction is expected to last about two years.

All future SWTR updates on the progress of these reservoir facilities will be included in Water Quality Reports that are mailed annually to every LADWP customer.

Puede usted conseguir éste información en español en los oficinas del Department of Water and Power o puede llamar 1-800-342-5397.

Commitment to **Water Quality**

LADWP Outlines 10-Year Capital Improvement Program

LADWP's 10-Year Capital Improvement Program, published in 2003, provides a blueprint for maintaining the quality and reliability of the City's water supply over the next decade. LADWP's water system will require significant capital improvements due to its aging water infrastructure, customer expectations for improved water quality, and anticipated changes in state and federal water quality regulations. Approximately $3.5 billion will be needed to improve the quality and reliability of Los Angeles' water supply through the fiscal year 2011-12.

About one-quarter of the total capital budget will support the many water quality improvement projects to meet more stringent water quality standards and customer expectations. LADWP is currently addressing new state and federal water quality regulations for open reservoirs in California under the Surface Water Treatment Rule (See page 13).

Arsenic

LADWP continually works to reduce the level of arsenic. After treatment at the LAAFP, the City's water contains no more than 5 ppb – half of the revised federal drinking waer standard, which takes effect in January 2006. LADWP is conducting several studies of arsenic treatment methods in collaboration with the Association of California Water Agencies, the American Water Works Association Research Foundation, and the EPA.

Lead

In Los Angeles, residential testing conducted in 2003 and 2004 showed lead below the federal action level. In addition, LADWP's experience with chloramines in the Harbor area – where chloramines have been used as the primary disinfectant since 1984 – also indicates low lead levels in drinking water. No lead service lines were ever installed in LADWP service area, and installation of lead connectors ceased circa 1925. The few lead connectors that remain are completely removed when encountered by LADWP crews. LADWP will continue to communicate clearly and accurately on the lead issue, and has developed a corrosion control program that goes beyond regulatory compliance. A demonstration facility to address customer corrosion issues is expected to go online in the Fall of 2005.

As part of a proactive program to minimize lead exposure from drinking water, LADWP embarked on a water meter replacement program in 2001 to replace existing meters with lead-free meters. As of April 2005, LADWP has replaced more than 138,900 meter. The current standard for water meters allows up to 6% lead in the composition metal. The program is being funded through monies received from a lawsuit against a supplier that produced sub-standard meters.

Protecting L.A.'s High-Quality Water

To ensure the protection of the City's high-quality, safe water, LADWP is pursuing a $132 million, five-year upgrade of its safety and security system. Among the security initiatives are: doubling security patrols; constructing a central monitoring and dispatch center; increasing the number of water quality tests; and reinforcing or adding security barriers, video surveillance, and alarms at LADWP water facilities.

Conversion to Chloramines

In response to stricter water standards for disinfection by-products (DBPs), LADWP has begun a system-wide conversion from chlorine to chloramines disinfectant. Switching to chloramines reduces the amount of DBPs, improve the taste and smell of the water, and make LADWP water compatible with water purchased from MWD.

LADWP completed the conversion to chloramines in the Eastern area of Los Angeles, served by Eagle Rock Reservoir, in mid-2003. The Harbor area has received chloraminated water purchased from MWD since 1984. The Sunland-Tujunga area of Los Angeles will be converted sometime in 2005. Full conversion of the city's water supply to chloramine disinfection is anticipated by 2008.

Annual Water Quality Report
Los Angeles Department of Water and Power
P.O. Box 51111 Room 1213
Los Angeles, California 90051-0100

About This Report

The 2004 Water Quality Report was prepared by the Los Angeles Department of Water and Power. This report is required by the California Department of Health Services (CDHS) and was prepared in accordance with CDHS guidelines. It was produced and mailed to you at a cost of 34 cents. This report is printed on recycled paper.

Messages for Non-English-Speaking Customers

This report contains important information about your drinking water. If you do not understand the content, please contact us at (800) 342-5397.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Puede usted conseguir esta información en español en las oficinas del Departamento de Agua y Energia o puede llamar (800) 342-5397.

這項報告包括有關您飲用水的重要資訊。如您看不懂這些內容，請與我們聯係，我們將幫您搞懂這項報告。

Bản báo cáo này có tin tức quan trọng về nước uống của quý vị. Nếu quý vị không hiểu nội dung, xin liên lạc với chúng tôi để được giúp đỡ.

この報告書には飲料水に関する重要な情報が含まれています。内容が理解できない場合はご連絡下さい。ご説明いたします。

본 보고서에는 여러분이 드시는 음료수에 대한 중요한 정보가 포함되어 있습니다. 내용이 이해되지 않으실 경우, 연락해 주시면 보고서를 납득하실수 있도록 도와드릴수 있습니다. 감사합니다.

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Այս զեկուցումը ձեր խմելիք ջրի մասին պարունակում է կարևոր տեղեկություններ: Եթե բովանդակությունը չեք հասկանում, խնդրվում է մեզ հետ կապվեք, որպեսզի զեկուցումը հասկանալու համար կարողանանք ձեզ օգնել:

รายงานนี้ประกอบด้วยข้อมูลที่สำคัญเกี่ยวกับน้ำดื่มของท่าน หากท่านไม่สามารถเข้าใจเนื้อหาใจความโปรดติดต่อเราเพื่อที่เราจะสามารถช่วยให้ท่านได้เข้าใจรายงานนี้ได้

این گزارش در مورد آب آشامیدنی شما اطلاعات مهمی را در بر دارد. اگر محتوی آن را نمیفهمید, لطفاً با ما تماس بگیرید, تا بتوانیم به شملا کمک کنیم که این گزارش را بفهمید.

يحتوي هذا التقرير على معلومات هامة بخصوص مياه الشرب. إذا لم تستطع فهم محتويات التقرير ، رجاء الاتصال بنا لكي نقوم بمساعدتك على فهم هذا التقرير.

1-800-342-5397

Los Angeles LA DWP Department of Water & Power

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