

The background of the cover is a photograph of a park-like setting. In the foreground, a calm body of water reflects the sky and the surrounding environment. To the left, a row of tall palm trees stands on a grassy bank. In the middle ground, a fountain with several jets of water is active. The background shows a city skyline with various skyscrapers under a clear blue sky. A thin white diagonal line is visible in the upper right corner of the image.

# Water **Quality** Report '07



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

## Overview

### LADWP Water Meets or Surpasses All Water Quality Standards

I am pleased to report that LADWP consistently provided the City of Los Angeles with high quality drinking water in the year 2007. Last year, all 200 billion gallons of water supplied to the 4 million residents of Los Angeles met or surpassed all health-based drinking water standards. These standards are set by the U.S. Environmental Protection Agency (EPA) and the State of California Department of Public Health (CDPH) Drinking Water Program.

LADWP achieves this high quality water by protecting our water sources, using state-of-the-art water treatment processes, prudently maintaining and operating our facilities, and vigilantly monitoring and testing the water we serve. In 2007, LADWP conducted more than 350,000 field and laboratory tests on nearly 23,000 samples collected throughout the year for both regulated contaminants such as arsenic, chromium, lead, and disinfection by-products, as well as contaminants such as chromium 6 that is not yet regulated.

The California Department of Public Health requires that every LADWP customer receive a copy of this report, which is printed at the lowest possible cost of 35 cents per copy. This report summarizes the results of those water quality tests and provides specific information about the quality of the water served in your neighborhood. Its purpose is to help you to make informed choices about the water you drink. In addition, this report features ways we can help preserve this precious resource through daily conservation efforts. Throughout the report, there are helpful conservation tips that show just how easy it is to decrease your indoor and outdoor water use every day.

I would like to thank you for your ongoing efforts to conserve, and urge continued diligence during this dry and potentially very warm summer.  
--H. David Nahai, Chief Executive Officer and General Manager, LADWP

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## A Message to Our Customers

The Los Angeles Department of Water and Power would like to thank and congratulate our customers for conserving water. The residents and businesses of Los Angeles used the same amount of water in 2007 as they did 25 years ago, despite a population increase of more than one million people. During this dry and potentially very warm summer, we urge you to continue to be vigilant in saving water. The water you save today may be the water we need tomorrow.

## 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 occurring 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 CDPH enforce

regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH 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, and 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.gov](http://www.epa.gov).

### 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. People with these types of health challenges should seek advice about drinking water from their health care providers. Guidelines from the EPA 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 by contacting the EPA's Safe Drinking Water Hotline at (800) 426-4791, or visiting its website at [www.epa.gov](http://www.epa.gov).

**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. Both chlorine and chloramines are effective killers

of bacteria and other microorganisms, 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 to fish. For further information, please visit [www.ladwp.com/water](http://www.ladwp.com/water), click on water quality, then click on "Constituents & Hot Topics."



## Prohibited Water Use

In Los Angeles, water is precious and there are certain uses of water that are prohibited.

- Use water on hard surfaces such as sidewalks, walkways, driveways or parking areas (with the exception of water brooms).
- Water lawns between 10 a.m. - 5 p.m., April 1 to September 30 and between 11 a.m. - 3 p.m., October 1 to March 31.
- Allow leaks to go unattended.
- Allow excess water from sprinklers to flood gutters.
- Use water to clean, fill or maintain decorative fountains unless the water is part of a recirculation system.
- Serve water to customers in eating establishments, unless requested.

## Water Quality News

### 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 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 suggest possible short-term effects, including low birth weight and miscarriages. Yet other studies show no such linkages or the results were inconclusive. Long-term studies also have associated 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 regarding drinking water and pregnancy. 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. Please visit us online at [www.ladwp.com/water/quality](http://www.ladwp.com/water/quality).

LADWP currently meets all the disinfection by-product standards (see Tables I and III on pages 8-13). In addition, LADWP is in the process of switching from chlorine to chloramines to maintain water disinfectant residual, which will further reduce levels of TTHMs.

### Update on Surface Water Treatment Rule

The Surface Water Treatment Rule (SWTR), administered by CDPH, 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, 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 that were subject to SWTR requirements. Construction of support facilities will continue but water from these reservoirs will no longer be served unless it is filtered.

LADWP has complied with SWTR by removing these reservoirs from regular service. The following is a progress report for each of the reservoirs affected by SWTR.

**Upper and Lower Hollywood Reservoirs** – were replaced by two 30-million-gallon tanks on July 2001.

**Encino Reservoir** – was removed from service on December 27, 2002. The permanent air gap was completed in August 2004. Operation of a new microfiltration plant to treat the reservoir water along with related facilities began in

January 2006. This plant currently produces high quality drinking water at a maximum capacity of up to ten million gallons per day.

**Lower Stone Canyon Reservoir** – was removed from service on December 28, 2004. The permanent air gap and associated work for the reservoir was completed on September 12, 2005. As of March 2008, the chlorination station and microfiltration plant are undergoing startup / performance testing.

### Update on Enhanced SWTR and Message for Cryptosporidium

Protection of surface water sources as outlined in the SWTR regulation is very important to the quality of treated drinking water. The Long-Term 2 Enhanced Surface Water Treatment Rule (LT2) is the latest drinking water regulation related to the treatment of surface water. LT2 provides for further protection from microbial pathogens like Cryptosporidium and Giardia. Required microbial monitoring under LT2 started in July 2006. In preparation for compliance to this rule, LADWP has been



monitoring its source and treated waters for Cryptosporidium and Giardia since 2005. Although both were not detected in the finished treated water, Cryptosporidium was detected in some raw water reservoirs and the L.A. Aqueduct at very low concentrations of 1 to 2 oocyst per 10 liter sample. Below is CDPH's statement regarding Cryptosporidium:

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished

water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor

regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

### Message for Radon

Radon is mostly found in areas outside of California. In 2005, very low levels of radon were detected in some of our water supplies that serve the Central Los Angeles area (see Table III on pages 12-13). There is no established drinking water standard or monitoring requirement for radon. Radon, entering a home through tap water, is a small source of radon in

continued on page 14



## Smart Sprinkler Controller

These controllers can save 40 gallons a day.

## Water Saving Tips

- Adjust your sprinklers so that water lands on your lawn or garden where it belongs – and only there. Saves 500 gallons a month.
- Use only as much water on your lawn as you need. Step on your grass. If it springs back when you lift your foot, it doesn't need water. Use the watering calculator and watering index found at [www.bewaterwise.com](http://www.bewaterwise.com) to learn just how much you should water. Saves 750 to 1,500 gallons a month.
- Install a new "smart" sprinkler controller that applies the right amount of water for your landscape. These controllers can save 40 gallons a day.

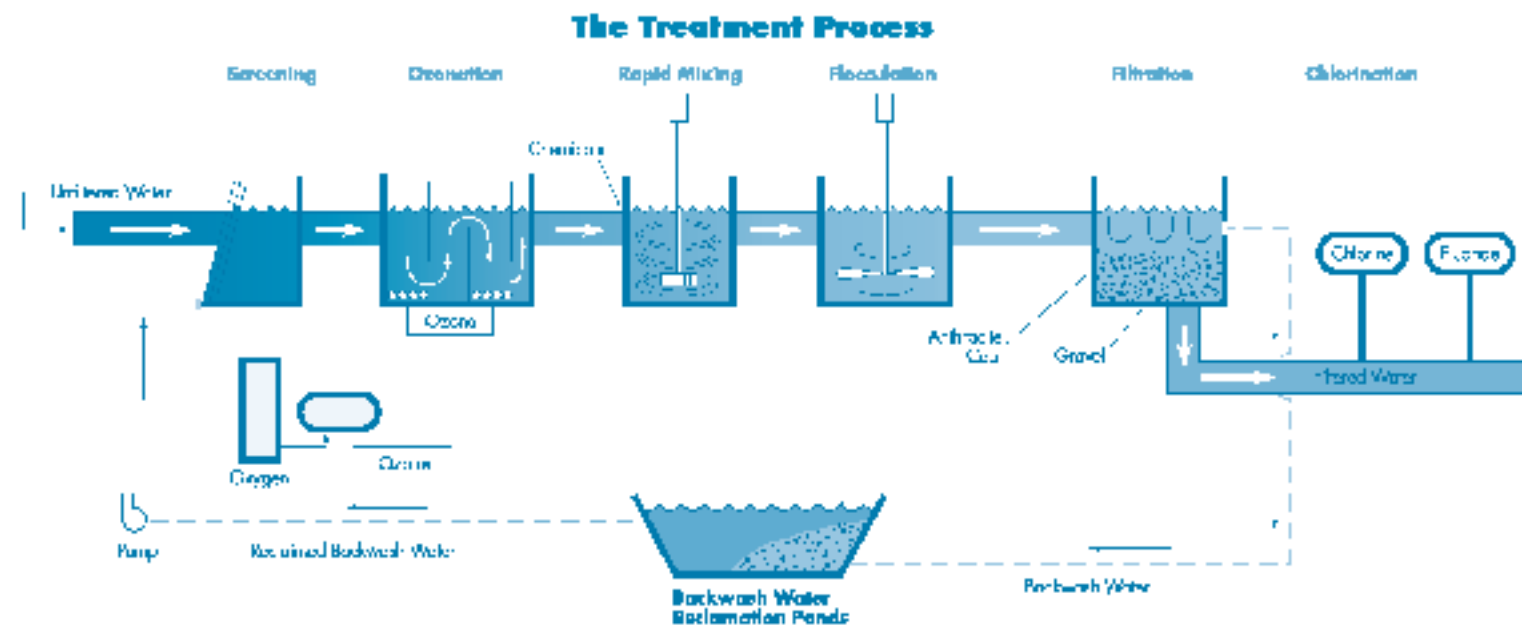
# Water Conservation Tips

- Fix leaky faucets, plumbing joints and your sprinkler system. Saves 20 gallons a day for every leak stopped.
- Use a broom to clean driveways and sidewalks. Saves 150 gallons or more each time.
- Shorten your showers. Even a one- or two-minute reduction can save up to 375 gallons per month.
- Don't use the toilet as a wastebasket. Saves up to 200 gallons a month.
- Run only full loads in the washing machine and dishwasher. Saves 300 to 800 gallons a month.
- Replace your old washing machine with a new, high-efficiency model. Saves 20 to 30 gallons per load. Learn more about how you can receive a \$250 rebate from LADWP at [www.ladwp.com](http://www.ladwp.com).



## 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. At the Los Angeles Aqueduct Filtration Plant, water is treated as follows:



**W**ater 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 are quickly dispersed 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.

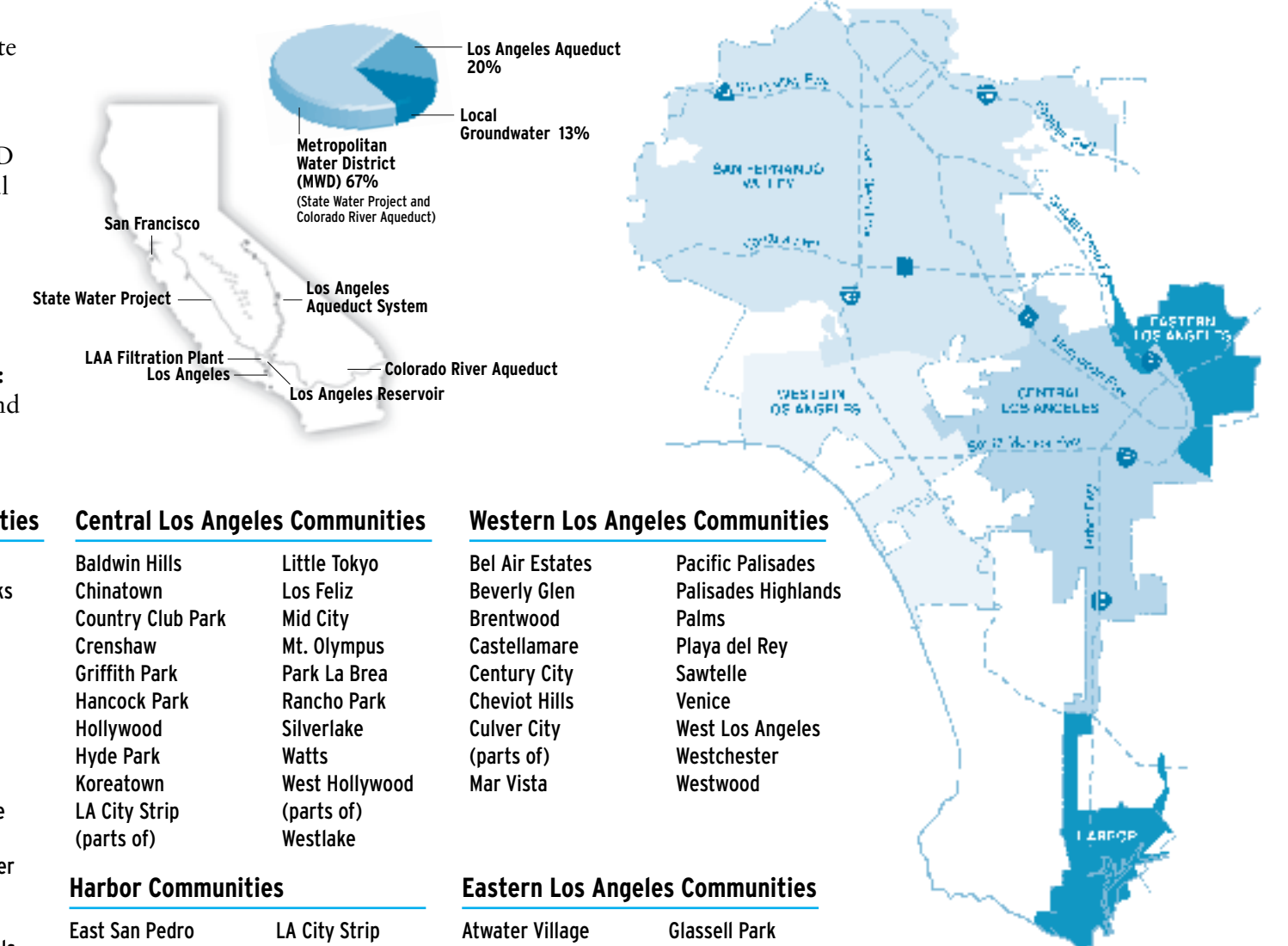
Because of a history of contaminants found in the San Fernando Valley groundwater wells,

LADWP adheres to strict operating limits to keep TCE, PCE, hexavalent chromium, perchlorate and nitrates far below the maximum 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

- San Fernando Valley:** Los Angeles Aqueduct, local groundwater, and MWD State Water Project.
- Central Los Angeles:** Los Angeles Aqueduct, MWD State Water Project, and local groundwater.
- Western Los Angeles:** Los Angeles Aqueduct and MWD State Water Project.
- Harbor/Eastern Los Angeles:** MWD State Water Project and Colorado River Aqueduct.

### Water supply sources



### 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
- Sylmar
- Tarzana
- Toluca Lake
- Tujunga
- Valley Village
- Van Nuys
- Warner Center
- West Hills
- Winnetka
- Woodland Hills

### 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

### 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 del Rey
- Sawtelle
- Venice
- West Los Angeles
- Westchester
- Westwood

### Harbor Communities

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

### Eastern Los Angeles Communities

- Atwater Village
- Boyle Heights
- Cypress Park
- Eagle Rock
- Echo Park
- El Sereno
- Glassell Park
- Highland Park
- Lincoln Heights
- Montecito Heights
- Monterey Hills
- Mt. Washington

# Report for All Water Quality Areas

Tables I-III list the results of water tests performed by LADWP and MWD from January to December 2007. These tables include only contaminants with values that are equal to or greater than the limit of detection.

### How to Read the Tables

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

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

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

## Calendar Year 2007 Water Quality Monitoring Results

**Table I**  
Health-Based Primary Drinking Water Standards Contaminants Detected In Treated Water

Contaminants	Units	Los Angeles Filtration Plant		Northern Combined Wells		Southern Combined Wells		MWD Diemer Filtration Plant		MWD Jensen Filtration Plant		MWD Weymouth Filtration Plant		State and Federal Primary Standard (MCL or MRDL)	MEET PRIMARY STANDARD ?	State PHG or (Federal MRDLG or MCLG)	Major Sources of Contaminants In Our Drinking Water
		Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average				
Alpha Emitters (a)	pCi/L	<3.0 - 5.5	3.6	3.2 - 6.0	4.3	<3.0 - 6.0	4.3	<3.0 - 7.2	<3.0	<3.0 - 4.2	<3.0	<3.0	<3.0	15	YES	(0)	Erosion of natural deposits
Aluminum	µg/L	<50 - 74	<50	<50	<50	<50	<50	<50 - 120	75	53 - 110	84	<50 - 140	70	1000	YES	600	Residue from surface water treatment process; erosion of natural deposits
Arsenic	µg/L	<2.0 - 5.4	<2.0	<2.0 - 3.6	<2.0	<2.0 - 2.0	<2.0	<2.0 - 2.8	<2.0	<2.0 - 2.4	<2.0	<2.0 - 2.6	<2.0	10	YES	0.004	Erosion of natural deposits; natural hot springs
Barium	µg/L	<100	<100	<100	<100	<100 - 106	<100	<100 - 103	<100	<100	<100	<100	<100	1000	YES	2000	Erosion of natural deposits
Beta Emitters (a)	pCi/L	<4.0 - 8.4	4.6	<4.0 - 5.3	4.0	<4.0 - 6.4	4.0	<4.0 - 6.4	<4.0	<4.0	<4.0	<4.0	<4.0	50	YES	(0)	Decay of natural and man-made deposits
Bromate (e)	µg/L	<5.0 - 9.2	<5.0	NA	NA	NA	NA	NA	NA	3.4 - 10	6.3	NA	NA	10	YES	(0)	By-product of ozone disinfection
Nitrate (as NO <sub>3</sub> )	mg/L	<2.0 - 2.9	2.2	<2.0 - 18	9.2	<2.0 - 18	9.2	<2.0 - 3.1	2.2	<2.0 - 3.5	2.7	<2.0 - 3.5	2.2	45	YES	45	Erosion of natural deposits; runoff and leaching from fertilizer use
Nitrate + Nitrite (as Nitrogen)	mg/L	0.4 - 0.6	0.5	<0.4 - 4.0	2.1	<0.4 - 4.0	2.1	<0.4 - 0.7	0.5	<0.4 - 0.8	0.6	<0.4 - 0.8	0.5	10	YES	10	Erosion of natural deposits; runoff and leaching from fertilizer use
Selenium	µg/L	<5.0	<5.0	<5.0	<5.0	<5.0 - 5.2	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	50	YES	(50)	Erosion of natural deposits; mine tailing run off
Tetrachloroethylene [PCE]	µg/L	<0.5	<0.5	<0.5 - 1.2	<0.5	<0.5 - 1.2	<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)
Trichloroethene [TCE]	µg/L	<0.5	<0.5	<0.5 - 2.7	1.0	<0.5 - 2.7	1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	YES	0.8	Discharge from metal degreasing sites and other factories
Turbidity (b)	NTU	0.24	100%	NA	NA	NA	NA	0.05	100%	0.05	100%	0.08	100%	TT	YES	none	Soil runoff
Uranium (a)	pCi/L	1.2 - 4.7	3.4	2.2 - 6.6	4.8	<1.0 - 6.1	5.4	<1.0	<1.0	1.1 - 1.9	1.4	<1.0	<1.0	20	YES	0.43	Erosion of natural deposits

Health-Based Primary Drinking Water Standards Contaminants Detected In Distribution System and Reported On City-Wide Basis

Constituents / Contaminants	Units	Range	Average	State and Federal Primary Standard (MCL or MRDL)	MEET PRIMARY STANDARD ?	State PHG or (Federal MRDLG or MCLG)	Major Sources of Contaminants In Our Drinking Water
Copper (at-the-tap) (c)	µg/L	Number of Samples Exceeding AL = 1 out of 106	90th Percentile Value = 802	TT, AL=1300 (d)	YES	300	Internal corrosion of household water plumbing systems
Fluoride	mg/L	Range = 0.11 - 1.6	Average = 0.57	2	YES	1	Erosion of natural deposits; water additive that promotes strong teeth
Lead (at-the-tap) (c)	µg/L	Number of Samples Exceeding AL = 2 out of 106	90th Percentile Value = 10	TT, AL=15 (d)	YES	2	Internal corrosion of household water plumbing systems
Total Chlorine Residual	mg/L	Range = 0 - 12	Average = 1.7	4.0	YES	4.0	Drinking water disinfectant added for treatment
Total Coliform Bacteria	%	Range: 0 - 1.0% Coliform Positive Samples	Average = 0.3 % Coliform Positive Samples	5% of monthly samples are coliform positive	YES	(0)	Naturally present in the environment
Total Haloacetic Acids	µg/L	Range = 7.0 - 173	City-wide Highest Running Annual Average = 42	60	YES	none	By-product of drinking water disinfection
Total Trihalomethanes [TTHM]	µg/L	Range = 18 - 132	City-wide Highest Running Annual Average = 68	80	YES	none	By-product of drinking water chlorination

# Water Quality Lab

## Protecting our City's Water Supply

Maintaining and ensuring high-quality drinking water for the City of Los Angeles is at the heart of what we do here at the LADWP. In 2007, we provided our customers with drinking water that met or surpassed all state and federal drinking water standards. To do so requires round-the-clock monitoring, testing and analysis by 36 highly trained and certified employees who staff the Water Quality lab.

In 2007, Water Quality Lab employees processed and analyzed more than 23,000 samples collected from across the City. These samples were subjected to dozens of State and Federal mandated tests that ensure our drinking water stays in compliance with various regulations. Samples are routinely monitored for more than 170 different contaminants and individual tests can take anywhere from 1 hour to 21 days to complete.

When a water sample is received by the Lab, it is immediately entered into a tracking system. The sample is then sent to a chemist or microbiologist for processing and analyses. When the analyses are complete, the chemist or microbiologist enters the data into the system and the data are validated by the supervisor of the Lab and finally by the Lab Manager. Additionally, each sample must meet specific Quality Assurance criteria based

on the type of tests performed. Only then are the results ready to be reported to the group that requested the test.

The employees at the Water Quality Lab see their goal as simple—to provide accurate analytical data in a timely manner. But to LADWP and the customers we serve, these employees play an important role in the protection of our most important natural resource.



## Calendar Year 2007 Water Quality Monitoring Results

**Table II**  
Aesthetic-Based Secondary Drinking Water Standards Constituents/Contaminants Detected In Treated Water

Constituents/Contaminants	Units	Los Angeles Filtration Plant		Northern Combined Wells		Southern Combined Wells		MWD Diemer Filtration Plant	
		Range	Average	Range	Average	Range	Average	Range	Average
Aluminum	µg/L	<50 - 74	<50	<50	<50	<50	<50	<50 - 120	75
Chloride	mg/L	48 - 61	56	30 - 69	49	23 - 69	49	75 - 101	88
Color	Units	4 - 5	4	3 - 5	4	3 - 8	4	1 - 2	2
Foaming Agents (MBAS)	µg/L	<0.05	<0.05	<0.05 - 0.15	<0.05	<0.05 - 0.09	<0.05	<0.05	<0.05
Manganese NL = 500	µg/L	<20	<20	<20	<20	<20 - 41	<20	<20	<20
Odor	TON	<1 - 1	<1	<1 - 1	<1	<1 - 1	<1	2	2
Specific Conductance	µS/cm	432 - 458	445	439 - 789	687	462 - 890	687	674 - 893	801
Sulfate	mg/L	34 - 56	46	38 - 165	131	38 - 177	131	122 - 179	158
Total Dissolved Solids [TDS]	mg/L	243 - 270	258	248 - 498	427	248 - 608	427	394 - 519	469
Turbidity	NTU	ND - 0.15	0.09	ND - 0.25	0.14	0.10 - 0.60	0.14	0.03 - 0.05	0.04
Zinc	µg/L	<50	<50	<50	<50	1000	<50	<50	<50

## Abbreviations and Footnotes

< = less than (example: In Table 1, Aluminum has an average value of <50 for Los Angeles Aqueduct 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.  
mg/L = milligrams per liter (equivalent to ppm)

NA = Not applicable  
ng/L = nanograms per liter (equivalent to ppt)  
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)  
µS/cm = micro Siemens per centimeter

MWD Jensen Filtration Plant		MWD Weymouth Filtration Plant		State and Federal Standard MCL	MEET SECONDARY STANDARD?	Major Sources of Contaminants In Our Drinking Water
Range	Average	Range	Average			
53 - 110	84	<50 - 140	70	200	YES	Residue from some surface water treatment process; erosion of natural deposits;
40 - 70	61	71 - 101	86	500	YES	Runoff/leaching from natural deposits; seawater influence
1 - 2	2	1 - 2	2	15	YES	Naturally-occurring organic matter
<0.05	<0.05	<0.05	<0.05	500	YES	Municipal and industrial discharges
<20	<20	<20	<20	50	YES	Leaching from natural deposits
2	2	1	1	3	YES	Naturally occurring organic materials
414 - 520	477	603 - 876	751	1600	YES	Substances that form ions when in water; seawater influence
46 - 57	52	96 - 175	140	500	YES	Runoff/leaching from natural deposits
248 - 285	267	348 - 509	437	1000	YES	Runoff/leaching from natural deposits
0.04 - 0.05	0.04	0.05 - 0.07	0.06	5	YES	Soil runoff
<50	<50	<50	<50	5000	YES	Runoff/leaching from natural deposits

(a) Radiological data for LADWP samples are based on 2006 monitoring except for radon which was tested in 2005. Radiological monitoring is done every three years.  
(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.  
(c) At-the-tap monitoring was conducted in 2006 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) Bromate is a by-product of ozonation and is tested only in water treated with ozone. Diemer and Weymouth filtration plants will eventually use ozone to treat the water.

## Calendar Year 2007 Water Quality Monitoring Results

**Table III**  
Unregulated Drinking Water Constituents / Contaminants Detected In Treated Water

Constituents/Contaminants	Units	Los Angeles Filtration Plant		Northern Combined Wells		Southern Combined Wells	
		Range	Average	Range	Average	Range	Average
Alkalinity	mg/L	72 - 89	79	78 - 185	141	78 - 200	141
Boron NL = 1000	µg/L	152 - 278	210	126 - 262	220	111 - 248	220
Bromide	µg/L	<20 - 50	<20	<20 - 50	<20	<20 - 70	<20
Calcium	mg/L	24 - 28	26	24 - 78	61	24 - 91	61
Chromium 6	µg/L	<1.0	<1.0	<1.0 - 3.7	1.1	<1.0 - 3.3	1.1
Magnesium	mg/L	9.8 - 12	11	9.8 - 21	18	10 - 26	18
N-Nitrosodimethylamine (NDMA) NL=10	ppt	NA	NA	NA	NA	NA	NA
pH	units	7.3 - 7.5	7.4	7.2 - 7.7	7.4	7.2 - 7.9	7.4
Phosphate (as Phosphorus)	µg/L	22 - 26	24	20 - 43	38	24 - 442	38
Potassium	mg/L	2.2 - 3.3	2.7	2.8 - 4.4	3.6	2.8 - 3.9	3.6
Radon (a)	pCi/L	NA	NA	<100	<100	<100 - 530	<100
Silica	mg/L	13 - 14	14	15 - 24	20	15 - 26	20
Sodium	mg/L	40 - 47	44	35 - 59	54	45 - 59	54
Total Hardness (as CaCO <sub>3</sub> )	mg/L	102 - 136	118	106 - 286	231	106 - 341	231
Total Organic Carbon [TOC]	mg/L	1.7 - 2.2	2.0	<0.3 - 1.6	0.98	<0.3 - 1.5	0.99
Trichloropropane (1,2,3-TCP) NL = 5	ng/L	<5.0 - 6.7	<5.0	<5.0	<5.0	<5.0 - 17	<5.0
Vanadium NL = 50	µg/L	<3.0	<3.0	<3.0 - 7.9	<3.0	<3.0 - 3.9	<3.0

Unregulated Contaminants Reported on Area-Wide Basis

Contaminants	Units	Central Los Angeles		Harbor/Eastern Los Angeles	
		Range	Average	Range	Average
Bromodichloromethane [BDCM]	µg/L	4.0 - 60	10	5.2 - 26	18
Bromoform	µg/L	1.0 - 25	7.5	3.2 - 13	8.3
Chlorate NL = 800	µg/L	119 - 361	234	ND - 38	29
Chloroform	µg/L	1.9 - 66	6.4	3.3 - 23	12
Dibromochloromethane [DBCM]	µg/L	5.5 - 56	14	8.0 - 27	18

## Terms Used in Tables

**Detection Limit for Reporting Purposes (DLR):** The DLR is the lowest level at which all CDPH 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 (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 level 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 EPA. 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 EPA.

MWD Diemer Filtration Plant		MWD Jensen Filtration Plant		MWD Weymouth Filtration Plant		Major Sources of Contaminants In Our Drinking Water
Range	Average	Range	Average	Range	Average	
82 - 103	93	76 - 92	82	80 - 97	88	Erosion of natural deposits
130 - 150	140	170 - 200	180	130 - 170	150	Erosion of natural deposits
NT	NT	NT	NT	NT	NT	Runoff/leaching from natural deposits; seawater influence
36 - 55	46	23 - 26	24	30 - 49	41	Erosion of natural deposits; natural hot springs
<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	Industrial discharge; erosion of natural deposits
16 - 23	21	11 - 13	12	14 - 22	19	Erosion of natural deposits
<2.0	<2.0	<2.0 - 3.0	<2.0	<2.0	<2.0	By-product of chloramination
8.1 - 8.3	8.2	8.2 - 8.4	8.3	8.1 - 8.4	8.2	Naturally occurring dissolved gases and minerals
NT	NT	NT	NT	NT	NT	Erosion of natural deposits, agricultural run-off
3.4 - 4.3	3.9	2.5 - 2.9	2.7	3.1 - 4.3	3.7	Erosion of natural deposits
<100	<100	<100	<100	<100	<100	Decay of natural deposits
NT	NT	NT	NT	NT	NT	Erosion of natural deposits
73 - 91	83	40 - 58	50	66 - 93	80	Erosion of natural deposits
158 - 228	201	108 - 117	112	137 - 211	181	Erosion of natural deposits
1.9 - 2.9	2.2	1.5 - 2.6	2.2	1.8 - 2.8	2.2	Erosion of natural deposits
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Discharge from metal degreasing sites and other factories
<3.0 - 3.7	3.3	<3.0 - 3.7	3.1	<3.0 - 4.1	3.3	Erosion of natural deposits

San Fernando Valley		Western Los Angeles		Major Sources of Contaminants In Our Drinking Water
Range	Average	Range	Average	
5.4 - 48	18	4.1 - 50	11	Disinfection by-product of chlorination
0.9 - 15	5.1	0.7 - 11	6.0	Disinfection by-product of chlorination
24 - 458	188	240 - 1279	644	Disinfection by-product of chlorination
1.4 - 60	18	2.3 - 82	10	Disinfection by-product of chlorination
6.2 - 36	18	5.2 - 32	15	Disinfection by-product of chlorination

**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 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 Office of Environmental Health Hazard Assessment.

**Treatment Technique (TT):** A required treatment process intended to 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.

**Notification Levels (NL):** Health-based advisory levels established by CDHS for chemicals in drinking water that lack maximum contaminant levels (MCLs). When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply.

**Regulatory Action Level (AL) - Federal:** The concentration of a contaminant established by EPA that, if exceeded, triggers treatment or other requirements that a water system must follow.



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## Water Quality News continued from page 5

indoor air. Although the radon levels were well below what EPA is currently considering as a standard, the EPA has asked us to share the following information with you to help you better understand radon.

Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picoCuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your State radon program or call EPA's Radon Hotline (800-SOS-RADON).

### Drinking Water Source Assessment and Protection Program

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. Other activities that may impact water quality in these watersheds are livestock grazing, wildlife, and unauthorized public use of reservoirs. 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 systems. 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) 367-3335.

In December 2002, 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 recreation, urban/storm water runoff, increasing urbanization in the watershed and wastewater. State Water Project

supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. A copy of the assessment can be obtained by contacting MWD at (213) 217-6850.

### Bromate in Los Angeles Reservoirs

In late fall 2007, LADWP discovered bromate at unusually high levels in Silver Lake and Elysian reservoirs. The discovery of this suspect carcinogen in a public drinking water system was the first of its kind anywhere in the country and was caused by the combination of ground water containing naturally occurring bromide, chlorine, and intense sunlight. The level of bromate in the reservoirs, if allowed to continue and be served to our customers, could have resulted in the Department exceeding the acceptable drinking water standard. As a result, the reservoirs were immediately isolated and the water contained in them was no longer served to our customers. There was no immediate health risk due to this finding. The Department worked closely with the California Department of Public Health to investigate the problem and has since changed operations to prevent a repeat of its occurrence. All water being served to our customers continues to meet all public health standards. The water in the reservoirs was safely disposed of and the two reservoirs are scheduled to return to service in time to meet the summer water demand.

For more information, please visit our website at [www.ladwp.com](http://www.ladwp.com)

## About This Report

The 2007 Water Quality Report was prepared by the Los Angeles Department of Water and Power (LADWP). This report is required by the California Department of Public Health (CDPH) and was prepared in accordance with CDHS guidelines. It was produced and mailed to you at a cost of 35 cents. This report is printed on recycled paper.

### Contact Information

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 4 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](http://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](http://www.ladwp.com).

For questions regarding water quality, call the LADWP Water Quality Customer Services Group 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	<a href="http://www.ladwp.com">www.ladwp.com</a>
California Department of Health Services (CDHS)	<a href="http://www.cdph.ca.gov">www.cdph.ca.gov</a>
U.S. Environmental Protection Agency (EPA)	<a href="http://www.epa.gov">www.epa.gov</a>

## Messages for Non-English-Speaking Customers

This report contains important information about your drinking water. If you have any questions regarding this report, please contact us at (800) 342-5397.

Este informe contiene información importante sobre su agua potable. Si tiene alguna pregunta sobre este informe, por favor comuníquese con nosotros llamando al (800) 342-5397.

**В этом отчете содержится важная информация о вашей питьевой воде. Если у вас есть вопросы по этому отчету, вы можете позвонить по телефону (800) 342-5397.**

این گزارش حاوی اطلاعات مهمی در مورد آب آشامیدنی شماست. چنانچه سؤالی در مورد این گزارش دارید لطفاً با شماره تلفن (800)342-5397 با ما تماس بگیرید.

この報告書には皆さんの飲料水に関する重要な情報が含まれています。この報告書に関して何かご質問があれば(800) 342-5397 までお問い合わせください。

Այս զեկույցը պարունակում է կարևոր տեղեկություններ ձեր խմելու ջրի մասին: Այս խնդրի մասին որեւէ հարցում ունենալու պարագային կարող էք հեռաձայնել մեզ՝ (800) 342-5397 հեռախոսահամարով:

يحتوي هذا التقرير على معلومات هامة عن مياه الشرب في لوس انجلوس. إذا كان لديك أسئلة عن هذا التقرير نرجو الاتصال بنا على الرقم (800) 342-5397.

이 보고서는 여러분의 수도물에 관한 중요한 정보를 포함하고 있습니다. 이 보고서에 관해 질문이 있으시면, (800) 342-5397 로 연락 주십시오.

本報告包含有關您的飲用水的重要資訊。您對本報告如有任何疑問，請致電：(800) 342-5397。

**Báo cáo này có tin tức quan trọng về nguồn nước uống của quý vị. Nếu quý vị có thắc mắc về báo cáo này, xin liên lạc với chúng tôi tại số (800) 342-5397.**

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