

Los Angeles  Department of Water & Power

A Quality Partnership

2010 Drinking Water Quality Report

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A Quality Partnership

In 2010, LADWP collected over 25,000 water samples across the city, and performed more than 240,000 water quality tests—not just for compliance, but also for research and operational improvements. We tested for over 200 different contaminants throughout the year including both, regulated contaminants such as arsenic, chromium, lead, and disinfection by-products, as well as unregulated contaminants such as sodium and boron. Every day, hundreds of LADWP employees work diligently to ensure that you receive the high-quality, low cost drinking water you've come to expect. This is our commitment to you.

After water completes multiple treatment processes, it is distributed throughout the City via trunk lines,

distribution lines and ultimately service lines that feed the water to your meter. In 2010, LADWP delivered more than 200 billion gallons of water to 4.1 million residents that met or surpassed all health-based drinking water standards. However, in spite of all our efforts, some of our customers do not get to enjoy this high quality water within their home because degraded in-house plumbing negatively affects the ultimate quality of the tap water.

LADWP would like to invite you to partner with us by learning more about what we do to provide high quality drinking water and what you can do to get the best possible glass of water from your tap (See pages 3-4). Because, at the end of the day, we all want the same thing—the best!

Beginning of L.A. Aqueducts

The Journey Begins: Lee Vining Intake

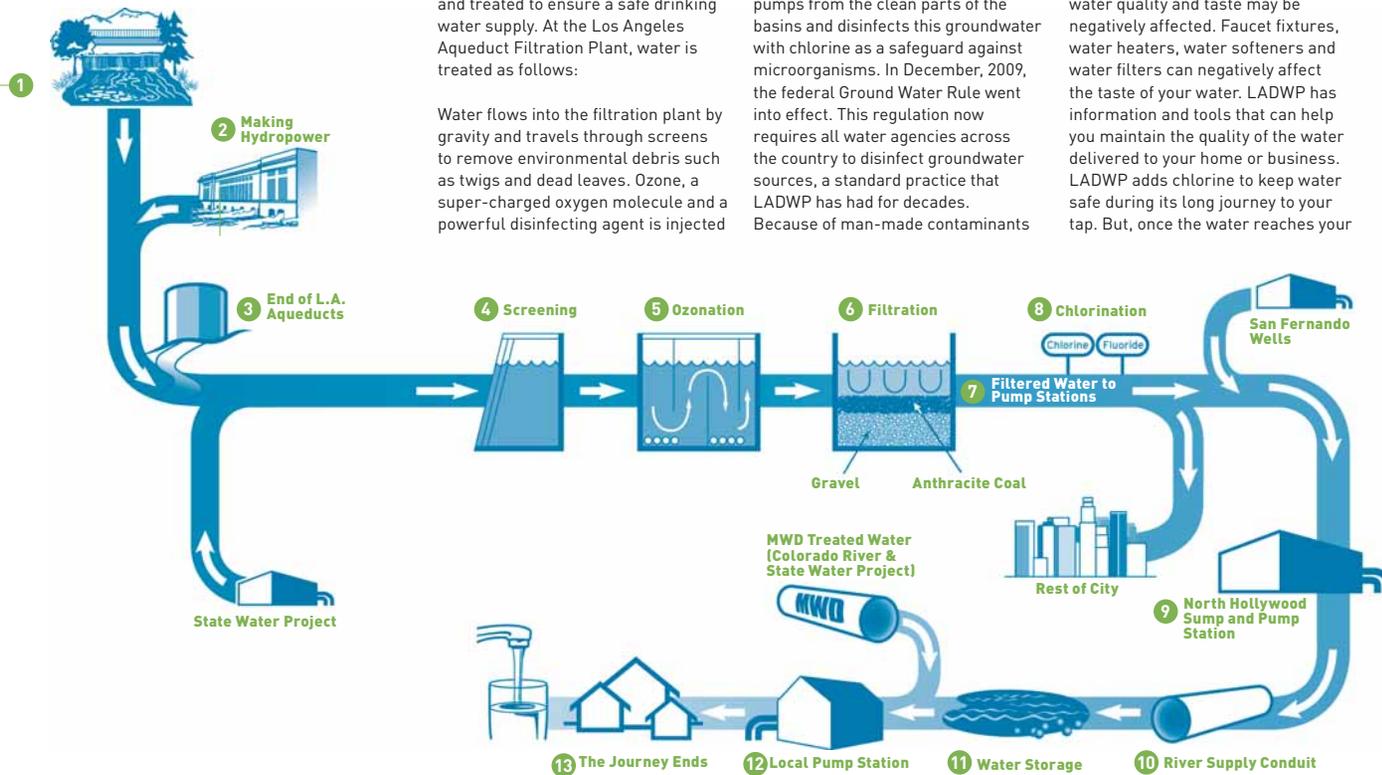
The beginning of the Los Angeles Aqueducts. Water is collected from creeks in the Mono Basin and the Owens River in the Owens Valley and then carried to the City of Los Angeles by the Los Angeles Aqueducts, which operate completely by gravity, making clean hydroelectric energy along the way.



James B. McDaniel
Senior Assistant General Manager - Water



Dr. Pankaj Parekh
Director of Water Quality



Water Treatment Processes

Surface Water Treatment

LADWP water comes from four very different water sources—three are from surface water sources like lakes and rivers, and the other is groundwater from local wells and springs. The taste and appearance of surface water can vary seasonally and groundwater generally contains more minerals. All these factors make for different tasting water. Despite these variations, LADWP water meets all drinking water standards for health and aesthetics.

All water coming from the Los Angeles Aqueducts, the California Aqueduct (a.k.a. State Water Project), 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:

Water flows into the filtration plant by gravity and travels through screens to remove environmental debris such as twigs and dead leaves. Ozone, a super-charged oxygen molecule and a powerful disinfecting agent is injected

into the water to destroy bacteria and other impurities that affect taste, odor and color. Treatment chemicals are quickly dispersed into the water to make fine particles called floc. A six-foot-deep filter (crushed coal over gravel) removes the floc 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 to your tap. Fluoride is optimized to promote oral health by strengthening tooth enamel.

Groundwater Treatment

The City's vast groundwater supply in the San Fernando and Central Basins are generally clean. LADWP pumps from the clean parts of the basins and disinfects this groundwater with chlorine as a safeguard against microorganisms. In December, 2009, the federal Ground Water Rule went into effect. This regulation now requires all water agencies across the country to disinfect groundwater sources, a standard practice that LADWP has had for decades. Because of man-made contaminants

found in San Fernando Valley groundwater wells, LADWP continuously monitors and ensures that all well water meets water quality standards and results are far below the maximum contaminant levels permitted by federal or state regulations. LADWP is formulating a comprehensive long term groundwater treatment plan for the San Fernando Basin that will allow us to extract more water and treat it so we can safely increase our local supply of water.

Improving Water Quality At Home

It is common for the integrity of pipes on the customer-side of the meter to degrade to the point that water quality and taste may be negatively affected. Faucet fixtures, water heaters, water softeners and water filters can negatively affect the taste of your water. LADWP has information and tools that can help you maintain the quality of the water delivered to your home or business. LADWP adds chlorine to keep water safe during its long journey to your tap. But, once the water reaches your



2 Making Hydropower
San Francisquito Power Plant 1
 Water generates electricity as it passes through the hydroelectric plant

3 End of LA Aqueducts
The Cascades
 Seen along Interstate 5, this is the terminus (end) of the Aqueducts. Water flows over the "steps" to release some of the water's energy.



tap, the chlorine is no longer needed. There are numerous home treatment options that can be implemented to improve the smell and taste of your water. To remove any objectionable chlorine odors, simply chill the water in the refrigerator. This alone can significantly improve the taste. You can also use a filter specific for the removal of chlorine or chloramine. Once filtered, be sure to keep the water in the refrigerator to prevent any new growth of bacteria.

If you intend to buy a water filter to improve the taste, odor, or appearance of your tap water, be sure to purchase one that is certified by the National Sanitation Foundation (NSF), an independent testing organization whose certification is the industry's seal of approval.

If you need a more comprehensive home water treatment device due to a health condition, such as a weakened immune system or chemical allergy, be sure the treatment device is certified by the California Department of Public Health (CDPH).

Purchasing and installing a faucet-mounted or under-the-sink filter is another way to improve the taste of your water. As with any filter, be sure to change the filter cartridges regularly according to the manufacturer's recommendation.

To learn more about water quality in your home visit www.ladwp.com, or call (213) 367-3182 Monday through Friday 8 a.m. – 4 p.m.

Water Quality News & Updates

Safeguarding Our Surface Water

The Surface Water Treatment Rule (SWTR), administered by CDPH, is a drinking water regulation that safeguards reservoir supplies from microbiological contamination that may occur when rain runoff from nearby hillsides and slopes enters the water. In Los Angeles, SWTR applied to four open water reservoirs – Lower Stone Canyon, Encino, and Upper and Lower Hollywood.

LADWP successfully met the compliance deadlines and treatment requirements for all four open reservoirs that were subject to SWTR. Upper and Lower Hollywood Reservoirs were successfully removed in July 2001 and replaced with two 30 million gallon buried tanks. New support facilities were successfully commissioned to serve filtered water from Encino Reservoir in January 2006 and Lower Stone Canyon Reservoir in September 2008.

The latest drinking water regulation related to the treatment of surface water is the Long Term 2 Enhanced Surface Water Treatment Rule (LT2). This rule requires

4 Screening
Los Angeles Aqueduct Filtration Plant (LAAF) Inlet Structure
 Water flows through the inlet of the LAAF, where large pieces of debris or algae are removed by screens.



that LADWP cover or remove from service the remaining six uncovered distribution reservoirs, or provide additional treatment to achieve prescribed inactivation or removal of viruses, Cryptosporidium, and Giardia by April 1, 2009 or be in compliance with a state-approved schedule to meet the same requirements. The six reservoirs are Los Angeles, Upper Stone Canyon, Santa Ynez, Ivanhoe, Silver Lake, and Elysian Reservoirs. Santa Ynez Reservoir was removed from service in November 2010. It will be put back in service after a floating cover is installed in 2011.

On April 1, 2008, LADWP notified CDPH that it is fully committed to complying with the new regulations and requested an extension of the April 1, 2009 deadline. LADWP submitted an interim operations plan, a schedule for the required reservoir improvements, and executed a Compliance Agreement with CDPH on March 31, 2009. LADWP is working diligently to bring all reservoirs into compliance as quickly as possible and will provide the public with project updates in the annual water quality

report. The estimated cost to modify the six reservoirs is \$1.65 billion.

In preparation for compliance with LT2, LADWP has been routinely monitoring its water sources for microbial pathogens since 2005. Cryptosporidium and Giardia are occasionally detected in very low numbers in some of our reservoirs and in the L.A. Aqueduct and we are fully committed to achieving compliance with the LT2. To further inform our customers on this topic, below is a generic statement from CDPH 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 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

5 Ozonation
Ozone Contact Chamber, LAAF
 Water is exposed to ozone gas, a disinfectant that prepares the water for filtration.



6 Filtration
Anthracite Coal Filters, LAAF
 Water passes through 60 inches of anthracite coal filters, which remove particles smaller than can be seen through a microscope.



Sources of Water for City Areas

San Fernando Valley Communities

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

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

Western Los Angeles Communities

Sources: Los Angeles Aqueduct and MWD State Water Project.

Bel Air Estates	Mar Vista	West Los Angeles
Beverly Glen	Pacific Palisades	Westchester
Brentwood	Palisades Highlands	Westwood
Castellamare	Palms	
Century City	Playa del Rey	
Cheviot Hills	Sawtelle	
Culver City*	Venice	

Eastern Los Angeles Communities

Sources: MWD State Water Project and Colorado River Aqueduct.

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

Central Los Angeles Communities

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

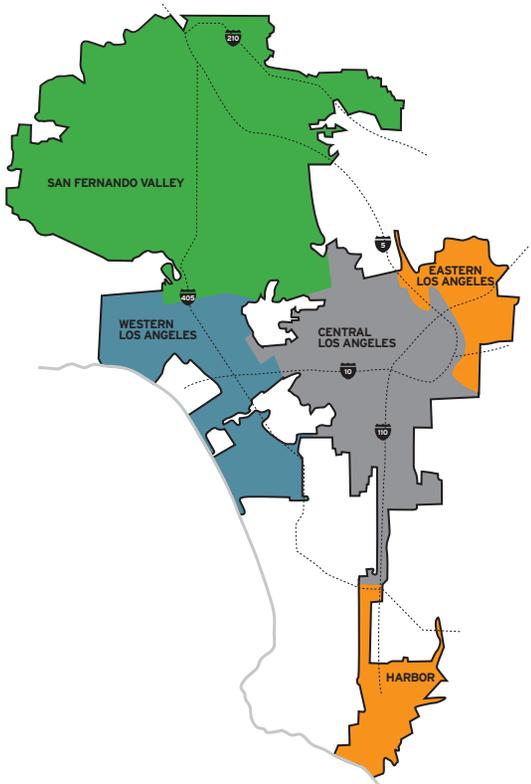
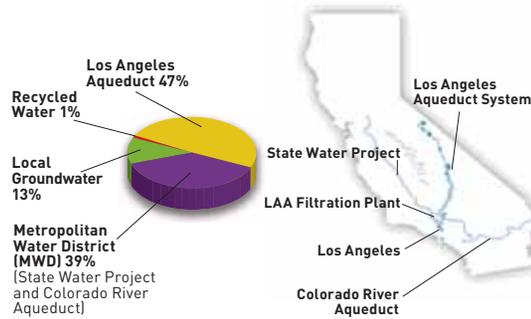
Baldwin Hills	Hollywood	Mt. Olympus
Chinatown	Hyde Park	Park La Brea
Country Club Park	Koreatown	Rancho Park
Crenshaw	L.A. City Strip*	Silverlake
Griffith Park	Little Tokyo	Watts
Hancock Park	Los Feliz	West Hollywood*
	Mid City	Westlake

Harbor Communities

Sources: MWD State Water Project and Colorado River Aqueduct.

East San Pedro (Terminal Island)	Harbor Gateway*	Wilmington
Harbor City	L.A. City Strip*	San Pedro

* parts of



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 persons 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.” [source: CDPH]

Special Population Precautions

There are certain health conditions for which customers may need specially treated water. Customers with weakened immune systems who 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. Customers with these types of health challenges should seek advice about drinking water from their health care providers. Contact the EPA’s Safe Drinking Water Hotline at (800) 426-4791, or visit www.epa.gov, for free guidelines on how to lessen the risk of infection by Cryptosporidium and other microbial contaminants.

Chlorine and Chloramine

LADWP is gradually switching from chlorine to chloramine to disinfect the water we serve. This will take several more years and, in the meantime, customers should expect to receive either type of disinfectant in their water at any time.

Both chlorine and chloramine are effective killers of bacteria and other microorganisms, but chloramine forms less by-products and does not have a chlorinous odor. Customers in the Harbor area of the City have received water treated with



chloramine for more than 25 years. Customers in Eastern Los Angeles and the Sunland-Tujunga area are also receiving water treated with chloramine.

Since chlorine and chloramine are different chemicals, certain types of water users must adjust their additional treatment to handle either disinfectant. Operators of kidney dialysis machines should monitor their equipment more frequently for both “free” and “total” chlorine. The Southern California Renal Disease Council supports this recommendation.

Customers who maintain fish ponds, tanks, or aquaria should also make necessary adjustments in water quality treatment, as both chlorine and chloramine are toxic to fish. For further information, please visit www.ladwp.com or call our Water Quality Customer Services group at (213) 367-3182.

7 Filtered Water to Pump Stations

Water from each of the 24 filters combine at the Filter Weir before leaving the Filtration Plant.

8 Chlorination Station

Chlorinator controls the amount of chlorine added to protect against bacteria and pathogens as water travels through the distribution system.



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2010 Drinking Water Quality Monitoring Results

Tables I-IV list the results of water tests performed by LADWP and MWD from January to December 2010. LADWP tests for over 200 contaminants. These tables include only contaminants with values that are detected.

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 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.

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A Better Understanding of Radon

Radon is a naturally occurring radioactive gas that is not a significant issue in most of California. In 2010, very low levels of radon were detected in some of our ground water supplies (see Table III on page 12). There is no established drinking water standard or monitoring requirement for radon. In general, radon entering a home through tap water is a very small contributor to radon in indoor air. Although the radon levels were well below what the EPA is currently considering for a standard, the EPA has asked us to share the following general 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



North Hollywood Sump and Pump Station

Well Water Blending

Water flows by gravity from the LAAFP to the North Hollywood Pump Station. Well water from the San Fernando Valley mixes with the aqueduct water in the North Hollywood Sump before it is distributed into the city by large pumps.

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Table I Calendar Year 2010 Water Quality Monitoring Results

Health-Based Primary Drinking Water Standards (MCLs) Constituents/Contaminants Detected in Treated Water

Contaminants	Units	Los Angeles Aqueduct Filtration Plant		Northern Combined Wells		Southern Combined Wells		MWD Weymouth Plant		MWD Diemer Plant		MWD Jensen Plant		State Primary Standard (MCL) or [MRDL]	Meet Primary Standard? (Yes/No)	State PHG or Federal (MCLG)	Major Sources in Our Drinking Water
		Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range				
Aluminum	µg/L	<50	<50	<50	<50	<50	<50	170 (a)	<50 – 200	170 (a)	66 – 230	82 (a)	56 – 100	1000	YES	600	Erosion of natural deposits; residue from surface water treatment processes
Arsenic	µg/L	4 (a)	<2 – 6	2	<2 – 4	2	<2 – 3	2 (a)	<2 – 3	2 (a)	<2 – 3	3 (a)	2 – 3.2	10	YES	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium	µg/L	<100	<100	<100	<100	<100	<100 – 127	110	<100 – 130	110	<100 – 120	<100	<100	1000	YES	2000	Erosion of natural deposits
Bromate (a, b)	µg/L	<5	<5 (b)	NA	NA	NA	NA	NA	NA	NA	NA	7 (a)	<5 – 11	10	YES	0.1	By-product of ozone disinfection; formed under sunlight
Gross Alpha Particle Activity (c)	pCi/L	4	4	5	5 – 5.2	5	<3 – 5	5	<3 – 8	6	4 – 9	3	<3 – 7	15	YES	(0)	Naturally present in environment
Gross Beta Particle Activity (c)	pCi/L	<4	<4 – 5	<4	<4 – 5	<4	<4 – 7	4	<4 – 10	4	<4 – 6	<4	<4 – 5	50	YES	(0)	Naturally present in environment
Nitrate (as NO ₃)	mg/L	<2	<2 – 2	8	<2 – 14	8	<2 – 17	<2 (a)	<2 – 2	<2 (a)	<2	2.6 (a)	2 – 3	45	YES	45	Erosion of natural deposits; runoff and leaching from fertilizer use
Nitrate + Nitrite (as N)	mg/L	<0.4	<0.4 – 0.4	2	<0.4 – 3	2.0	<0.4 – 4	<0.4	<0.4 – 0.4	<0.4	<0.4	0.6	0.5 – 0.7	10	YES	10	Erosion of natural deposits; runoff and leaching from fertilizer use
Tetrachloroethylene (PCE)	µg/L	<0.5	<0.5	<0.5	<0.5 – 0.6	<0.5	<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	1	<0.5 – 3	1	<0.5 – 2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	YES	1.7	Discharge from metal degreasing sites and other factories
Turbidity (d)	NTU	100%	2.4 (e)	NA	NA	NA	NA	100%	0.05	100%	0.08	100%	0.05	TT	YES	none	Soil runoff
Uranium (c)	pCi/L	3	2 – 4	3	2 – 4	3	<1 – 6	3	2 – 3.4	3	2.9 – 4	1.8	1.6 – 2	20	YES	0.5	Erosion of natural deposits

Health-Based Primary Drinking Water Standards (MCLs) Constituents/Contaminants Detected in Treated Water and Reported on City-Wide Basis

Contaminants	Units	Average	Range	State Primary Standard (MCL) or [MRDL]	Meet Primary Standard ?	State PHG/ [MRDLG] or Federal (MCLG)	Major Sources in Our Drinking Water
Bromate (f)	µg/L	City-wide Average = 5.7	Range = <5 – 5.8	10	YES	0.1	By-product of ozone disinfection; formed under sunlight
Chlorine Residual, Total	mg/L	Average = 1.8 (a)	Range = 1.6 – 1.8	[4]	YES	[4]	Drinking water disinfectant added for treatment
Copper (at-the-tap) AL = 1300 (g)	µg/L	90th Percentile value = 576	number of samples exceeding AL = 0 out of 110	TT	YES	300	Internal corrosion of household water plumbing systems
Fluoride	mg/L	Average = 0.8	Range = 0.7 – 0.9	2	YES	1	Erosion of natural deposits; water additive that promotes strong teeth
Lead (at-the-tap) AL = 15 (g)	µg/L	90th Percentile value = 5.6	number of samples exceeding AL = 3 out of 110	TT	YES	0.2	Internal corrosion of household water plumbing systems
Total Coliform Bacteria	% Positives	Average = 0.9% Coliform positive samples	Range = 0 – 0.9% Coliform positive samples	5% of monthly samples are coliform positive	YES	(0)	Naturally present in the environment
Total Haloacetic Acids (HAA5)	µg/L	City-wide Average = 27 (a)	Range = <2 – 103	60	YES	none	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	µg/L	City-wide Average = 56 (a)	Range = 13 – 109	80	YES	none	By-product of drinking water chlorination

Table II Calendar Year 2010 Water Quality Monitoring Results

Aesthetic-Based Secondary Drinking Water Standards (SMCLs) Constituents/Contaminants Detected in Treated Water

Contaminants	Units	Los Angeles Aqueduct Filtration Plant		Northern Combined Wells		Southern Combined Wells		MWD Weymouth Plant	
		Average	Range	Average	Range	Average	Range	Average	Range
Aluminum	µg/L	<50	<50	<50	<50	<50	<50	170 (a)	<50 – 200
Chloride	mg/L	42	33 – 57	43	33 – 58	43	25 – 62	93 (a)	84 – 94
Color (unfiltered)	ACU	3.5	3 – 5	3.2	3 – 5	3.2	3 – 7	1 (a)	1
Manganese NL = 500	µg/L	<20	<20	<20	<20	<20	<20 – 37	<20	<20
Odor	TON	<1	<1	<1	<1 – 1	<1	<1 – 1	2	2
Specific Conductance	µS/cm	390	301 – 518	623	320 – 735	616	486 – 750	950 (a)	460 – 1000
Sulfate	mg/L	33	26 – 43	113	36 – 164	113	69 – 164	210 (a)	160 – 250
Total Dissolved Solids (TDS)	mg/L	226	210 – 267	391	225 – 491	391	326 – 522	570 (a)	470 – 630
Turbidity (h)	NTU	<0.1	<0.1 – 0.15	0.1	0.1 – 0.3	0.1	<0.1 – 0.3	0.05 (a)	0.03 – 0.06
Zinc	µg/L	<50	<50	<50	<50	<50	<50 – 1040	<50	<50

Abbreviations and Footnotes

mg/L = milligrams per liter (equivalent to ppm)
µg/L = micrograms per liter (equivalent to ppb)
ng/L = nanograms per liter (equivalent to ppt)
pCi/L = picoCuries per liter
% = percentage
µS/cm = microSiemens per centimeter
NTU = nephelometric turbidity unit
TON = threshold odor number
CFU = colony-forming unit
ACU = apparent color unit
< = less than
NA = not applicable

NT = not tested
HRAA = highest running annual average

(a) Values reflect Highest Running Annual Average (HRAA). HRAA is the highest of all Running Annual Averages (RAAs). RAA is a calculated average of all the samples collected within twelve months period.

(b) Bromate is tested in water treated with ozone. Bromate has also been found in chlorinated treated water of some LADWP reservoirs exposed to sunlight. Metropolitan Water District of Southern California

(MWD) only tests bromate at Jensen Filtration Plant.

(c) Radiological monitoring is performed in cycles of various periods of time. LADWP performed Gross Alpha testing in 2006 – 2009 and all other radiological testing in 2009 - 2010 for samples collected at Los Angeles Aqueduct Filtration Plant, Northern Combined Wells blend points, and Southern Combined Wells blend points. MWD performed all radiological testing in 2008 for samples collected at Weymouth, Diemer, and Jensen Plants.

MWD Diemer Plant		MWD Jensen Plant		State Secondary MCL	Meet Secondary Standard?	Major Sources in Our Drinking Water
Average	Range	Average	Range			
170 (a)	66 – 230	82 (a)	56 – 100	200	YES	Erosion of natural deposits; residue from some surface water treatment process
93 (a)	83 – 93	79 (a)	67 – 80	500	YES	Runoff/leaching from natural deposits; seawater influence
1 (a)	1 – 2	1 (a)	1 – 2	15	YES	Naturally-occurring organic materials
<20	<20	<20	<20	50	YES	Leaching from natural deposits
2	2	3	3	3	YES	Naturally-occurring organic materials
970(a)	460 – 1000	580 (a)	500 – 580	1600	YES	Substances that form ions when in water; seawater influence
230 (a)	160 – 240	63 (a)	55 – 65	500	YES	Runoff/leaching from natural deposits
590 (a)	470 – 610	330 (a)	290 – 330	1000	YES	Runoff/leaching from natural deposits
0.04 (a)	0.03 – 0.16	0.04 (a)	0.03 – 0.08	5	YES	Soil runoff
<50	<50	<50	<50	5000	YES	Run off/leaching from natural deposit

(d) Turbidity is a measure of the cloudiness of the water and is a good indicator of water quality and filtration performance. High turbidity can hinder the effectiveness of disinfectants.

The Primary Drinking Water Standard for turbidity level at water filtration plants is less than or equal to 0.3 NTU in at least 95% of the measurements taken in any month and shall not exceed 1.0 NTU at any time. The reporting requirement for treatment plant turbidity is: report the highest single measurement in the calendar year and the lowest monthly percentage of measurements that are less than or equal to 0.3 NTU.

(e) The highest turbidity at the Los Angeles Filtration Plant effluent was 2.4 NTU on December 30, 2009. This high turbidity reading reflects a single reading taken out of some 35,000 readings. Turbidity is monitored in 15 minute intervals all year round.

(f) Values reflect annual range and average of samples collected from six open reservoirs; Elysian, Ivanhoe, Los Angeles, Santa Ynez, Silver Lake, and Upper Stone Canyon.

(g) At-the-tap monitoring of lead and copper is conducted every three years as required by the Lead

and Copper Rule. A system is out of compliance if the Regulatory Action Level is exceeded in the 90th percentile of all samples at the customers' tap. Although the City's treated water has little, if any, detectable lead, studies were conducted and corrosion control is scheduled for implementation.

(h) Values reflect testing at entry to the distribution system.

(i) NDMA was tested in 2009 – 2010 for compliance to Unregulated Contaminant Monitoring Rule (UCMR2).



10 River Supply Conduit

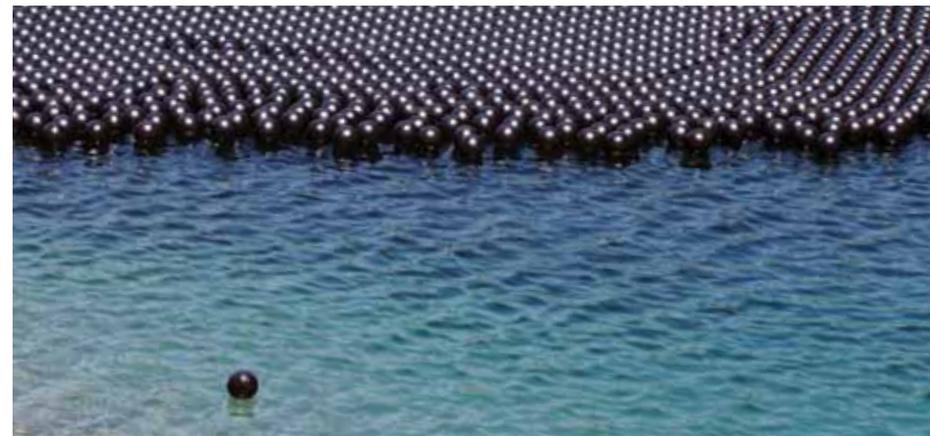
Water Travels through the City

Water from the pump station is carried through a 78" water main to Ivanhoe Reservoir in the Silver Lake area of the City.

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water is, in most cases, 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)."

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11 Water Storage

Ivanhoe Reservoir

Shade balls filling the reservoir will protect the water from sunlight as the water travels onto nearby neighborhoods.

Table III Calendar Year 2010 Water Quality Monitoring Results
Unregulated Drinking Water Constituents/Contaminants Detected in Treated Water

Constituents/Contaminants	Units	Los Angeles Aqueduct Filtration Plant		Northern Combined Wells		Southern Combined Wells	
		Average	Range	Average	Range	Average	Range
Bicarbonate Alkalinity (as CaCO ₃)	mg/L	160	88 – 125	144	104 – 176	144	128 – 201
Boron NL = 1000	µg/L	471	337 – 628	322	256 – 433	322	115 – 390
Bromide	µg/L	23	<20 – 38	25	<20 – 49	25	<20 – 77
Calcium	mg/L	25	23 – 27	57	27 – 74	57	44 – 86
Chromium, Hexavalent	µg/L	<1	<1	<1	<1 – 2	<1	<1 – 3.6
Heterotrophic Plate Count Bacteria (HPC)	CFU/mL	ND	ND	NA	NA	NA	NA
Magnesium	mg/L	8	7 – 9	15	8 – 19	15	10 – 23
N-Nitrosodimethylamine (NDMA) NL=10 (i)	ng/L	<2	<2	<2	<2	<2	<2
pH	Unit	7.4	7.2 – 7.6	7.4	7.1 – 7.6	7.4	7.0 – 7.8
Phosphate (as PO ₄)	µg/L	51	40 – 64	100	40 – 156	100	77 – 1180
Potassium	mg/L	4	3 – 5	4	4 – 5	4	3 – 4
Radon (c)	pCi/L	<100	<100	<100	<100	<100	<100 - 150
Silica (as SiO ₂)	mg/L	17	16 – 18	20	16 – 21	20	19 – 24
Sodium	mg/L	45	38 – 53	49	32 – 53	49	44 – 60
Total Alkalinity (as CaCO ₃)	mg/L	106	88 – 125	144	104 – 176	144	128 – 201
Total Hardness (as CaCO ₃)	mg/L	93	86 – 104	205	103 – 265	205	162 – 294
Total Organic Carbon (TOC)	mg/L	1.5	1.4 – 1.7	0.8	0.7 – 1.7	0.8	0.3 – 1.1
Vanadium NL = 50	µg/L	<3	<3	<3	<3 – 4	<3	<3 – 6

Terms Used In The Tables

Compliance: A drinking water standard based on the health risk (primary standards) and aesthetic (secondary standards) exposure of a contaminant to consumers. For example, bacteria and nitrate have strict limits that must be met at all times due to the acute effects they can cause. Other standards, like small amounts of disinfection by-products and man-made chemicals, have standards that are based on a lifetime of exposure because the risk to consumers is very low. Compliance with most standards is based on an average of samples collected within a year. This allows for some fluctuation above and below the numerical standard, while still protecting public health.

Detection Limit for Reporting Purpose (DLR): DLR means the designated minimum level at or above which any analytical finding of a contaminant in drinking water resulting from monitoring required under Title 22 Code of Regulations shall be reported to the California Department of Public Health (CDPH).

Maximum Contaminant Level (MCL): MCL is 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 Maximum Contaminant Level Goals (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 collected throughout the year.

Maximum Contaminant Level Goal (MCLG): MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Maximum Residual Disinfectant Level (MRDL): MRDL is the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): MRDLG is the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants. MRDLGs are set by the USEPA.

Notification Level (NL): NL is the Health-based advisory levels established by CDPH for chemicals in drinking water that lack maximum contaminant levels (MCLs).

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

Public Health Goal (PHG): PHG is 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 (OEHHA).

Regulatory Action Level (AL): AL is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow. ALs are set by the USEPA.

Secondary Drinking Water Standard (SDWS): SMCLs for contaminants that may affect the taste, odor or appearance for drinking water.

Treatment Technique (TT): TT is a required 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.

MWD Weymouth Plant	MWD Diemer Plant	MWD Jensen Plant	Major Sources in Our Drinking Water			
			Average	Range	Range	
NT	NT	NT	NT	NT	Naturally-occurring dissolved gas; erosion of natural deposits	
120	120 – 130	120	120 – 130	210	200 – 220	Erosion of natural deposits
NT	NT	NT	NT	NT	NT	Runoff/leaching from natural deposits; seawater influence
64 (a)	49 – 71	66 (a)	51 – 70	30 (a)	26 – 31	Erosion of natural deposits; natural hot springs
<1 (a)	<1	<1 (a)	<1	<1 (a)	<1	Industrial discharge; erosion of natural deposits
<1	<1 – 1	1	<1 – 10	<1	<1 – 2	Naturally present in the environment
26 (a)	20 – 28	27 (a)	22 – 28	12 (a)	11 – 12	Erosion of natural deposits
<2	<2 – 3	<2	<2	3	<2 – 5	By-product of chloramination
7.9	7.6 – 8.6	7.9	7.5 – 8.0	8.2	8.1 – 8.4	Naturally-occurring dissolved gases and minerals
NT	NT	NT	NT	NT	NT	Erosion of natural deposits, agricultural run-off
5 (a)	4 – 5	5 (a)	4 – 5	2.7 (a)	2 – 3	Erosion of natural deposits
<100	<100	<100	<100	<100	<100	Decay of natural deposits
NT	NT	NT	NT	NT	NT	Erosion of natural deposits
94 (a)	83 – 98	95 (a)	78 – 95	67 (a)	58 – 65	Erosion of natural deposits
120 (a)	63 – 130	110 (a)	67 – 120	88 (a)	81 – 99	Erosion of natural deposits
260 (a)	84 – 300	270 (a)	92 – 300	120 (a)	86 – 130	Erosion of natural deposits
2.1 (a)	1.6 – 2.4	2.2 (a)	1.9 – 2.3	1.5 (a)	1.3 – 1.8	Erosion of natural deposits
<3	<3 – 3	3	<3 – 3.3	5.2	5 – 6	Erosion of natural deposits

Table IV Calendar Year 2010 Water Quality Monitoring Results
Drinking Water Disinfection By-Products Reported on Area-Wide Basis

Contaminants	Units	San Fernando Valley		Central Los Angeles		Western Los Angeles		Harbor / Eastern Los Angeles		Major Sources in Our Drinking Water
		Average	Range	Average	Range	Average	Range	Average	Range	
Bromodichloromethane (BDCM)	µg/L	13	3 – 26	11	3 – 25	17	2 – 39	13	2 – 28	By-product of chlorine/ chloramine disinfection
Bromoform	µg/L	6	<1 – 26	5	1 – 22	7	<1 – 31	7	3 – 18	By-product of chlorine/ chloramine disinfection
Chlorate NL = 800	µg/L	545	6 – 1044	210	66 – 377	213	60 – 550	71	20 – 110	By-product of chlorine disinfection
Chloroform	µg/L	11	1 – 44	9	1 – 33	25	1 – 97	11	1 – 32	By-product of chlorine/ chloramine disinfection
Dibromoacetic Acid (DBAA)	µg/L	5	<1 – 15	5	<1 – 14	6	<1 – 15	4	2 – 6	By-product of chlorine/ chloramine disinfection
Dibromochloromethane (DBCM)	µg/L	16	4 – 34	13	5 – 31	17	3 – 64	14	4 – 28	By-product of chlorine/ chloramine disinfection
Dichloroacetic Acid (DCAA)	µg/L	9	<1 – 25	9	<1 – 25	19	<1 – 85	6	<1 – 12	By-product of chlorine/ chloramine disinfection
Monobromoacetic Acid (MBAA)	µg/L	1	<1 – 4	1	<1 – 3	2	<1 – 4	1	<1 – 3	By-product of chlorine/ chloramine disinfection
Monochloroacetic Acid (MCAA)	µg/L	2	<2 – 7	2	<2 – 6	5	<2 – 17	<2	<2 – 5	By-product of chlorine/ chloramine disinfection
Trichloroacetic acid (TCAA)	µg/L	3	<1 – 10	3	<1 – 12	8	<1 – 58	4	<1 – 11	By-product of chlorine/ chloramine disinfection



12 Local Pump Station
Fletcher Pump Station
 Additional chlorine is added before large pumps send the water to L.A. neighborhoods, east of Ivanhoe Reservoir.

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Shade Balls Minimize Bromate in City Reservoirs

LADWP continues to minimize bromate levels in open reservoirs, keeping them within regulatory requirements. A creative short-term intervention LADWP recently implemented was the use of “shade balls” to decrease the formation of Bromate. In 2008, shade balls were used to shade the water surfaces of Elysian and Ivanhoe Reservoirs. As a result, bromate levels have been consistently well below the current drinking water standard of 10 parts per billion.

hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. This water can be collected and used to water plants. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Pharmaceutical and Personal Care Products

Very low levels of pharmaceutical and personal care products (PPCPs) are increasingly being detected in U.S. drinking water supplies. PPCPs include medicines, shampoos, soaps, detergents, lotions, and perfumes. Currently, neither the state or federal government require LADWP to test for PPCPs. However, as a forward looking utility, LADWP conducts its own monitoring for these compounds.

In 2009, LADWP tested its source and treated waters for PPCPs. The amount of PPCPs detected was so minute that no adverse health effect from exposure has been reported. LADWP continues to study the issue with several other utilities and the Water Research Foundation. Customers can do their part by disposing of unwanted medications into a waste receptacle or by returning to a pharmacy—not down a toilet or drain.

Lead Exposure from Plumbing Materials

LADWP monitors lead contents in source water and the distribution system and has not found detectable amounts. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with home plumbing. The LADWP is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting in the pipes for several

13 The Journey Ends
At Home Treatment
 Customers can further improve the taste of drinking water through chilling, filtration or by replacing older pipes, faucet fixtures, water heaters, water softeners and water filters.



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About This Report

The 2010 Drinking 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 CDPH guidelines. It was prepared, printed and mailed to you at a cost of 35 cents.

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 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 Customer Services Group at (213) 367-3182.

For questions regarding this report, please call Mr. Nathan Aguayo at (213) 367-4941.

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

For more information about the NSF certification, call (800) 673-8010 or visit www.nsf.org.

For more information about CDPH certification, call (916) 449-5617 or visit www.cdph.ca.gov.

Los Angeles Department of Water and Power www.ladwp.com
 California Department of Public Health (CDPH) www.cdph.ca.gov
 U.S. Environmental Protection Agency (USEPA) www.epa.gov

This report is printed on recycled paper. ♻️

This Message 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.

Spanish

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.

Russian

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.

Farsi

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

Japanese

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。

Armenian

Այս զեկոյցը պարունակում է կարեւոր տեղեկութիւններ ձեր խմելու ջրի մասին: Այս խմելու մասին դրել է հարցում ունենալու պարագային կարող էք հեռաձայնել մեզ՝ (800) 342-5397 հեռախօսահամարով:

Arabic

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.

Korean

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

Chinese

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。

Vietnamese

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.

Thai

รายงานนี้ประกอบด้วยข้อมูลสำคัญเกี่ยวกับน้ำดื่มของท่าน ถ้าหากท่านมีคำถามใดๆเกี่ยวกับรายงานนี้ กรุณาติดต่อเราได้ที่ (800) 342-5397



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