Los Angeles Department of Water & Power

2011

Drinking Water Quality Report

Quality in Every Drop

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For over 100 years, LADWP has been the steward of our City's water system and supply. It's a responsibility we take very seriously. Every day, we import raw water, purify it and deliver it to your tap 24-hours a day—all for less than a penny per gallon. It's our duty to maintain the value of this precious resource, and to comply with increasingly stringent state and federal water quality mandates that protect every drop of the water we deliver.

In 2011, every drop of the more than 200 billion gallons of water that LADWP delivered to over 4 million residents met or surpassed all health-based drinking water standards. To maintain such a high level of water quality, LADWP collected over 25,000 water samples across the city, and performed more than 240,000 water quality tests—not just for regulation compliance, but also for research and operational improvements. Throughout the year, we tested for over 200 different contaminants, including both regulated contaminants, such as arsenic, chromium, lead, and disinfection by-products, as well as unregulated contaminants of interest such as sodium and boron.

To continue to comply with newer more stringent water quality regulations into the future, LADWP is undertaking the most significant capital investments in water quality history, totaling $1.1 billion in capital costs in the next five years. Thanks to a recently approved adjustment to our water rates, we can ensure funding for several of these critical water quality projects. Approved on February 1, 2012, the 35-cent per billing unit increase to water rates, discussed later in this report, will provide much-needed funding for major water quality investments.
As we continue to uphold the safety and quality of LA's drinking water, LADWP is also working to make it more sustainable and protect its affordability.

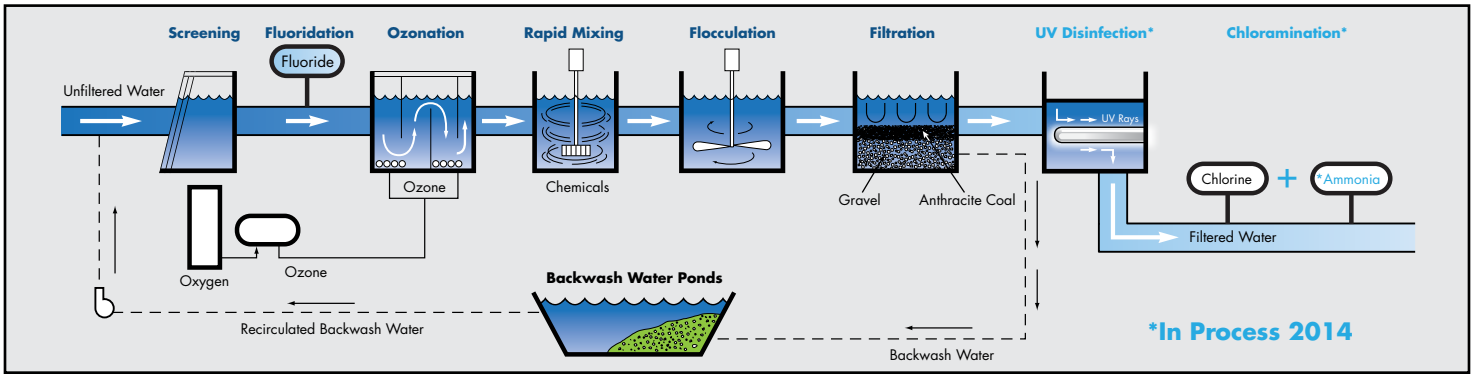
It's our duty to maintain the value of this precious resource, and to comply with increasingly stringent state and federal water quality mandates that protect every drop of the water we deliver.

The amount of water imported has rapidly increased throughout the years, accounting for more than 80% of our water supply today. Changing climate conditions and regulatory restrictions have severely limited these imported sources and are driving costs up. To protect our customers from rising costs of imported water, LADWP is aggressively working on developing our local water supply.

Long-term investments in water conservation, stormwater capture, water recycling, and groundwater cleanup will reduce our reliance on imported water and will provide greater stability in the price of water for the future. Investments to develop local water supplies and uphold water quality, in addition to needed investments in replacing aging pipeline, will enable LADWP to maintain Los Angeles' water system and ensure the availability and affordability of clean, reliable drinking water for future generations. These efforts will ensure that LADWP can continue to provide reliable high quality water at an affordable price for another 100 years.

Table of Contents

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.

Expanding Use of Chloramine

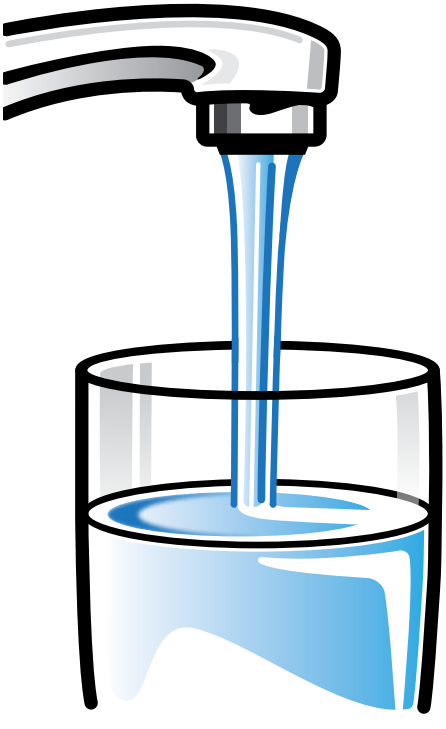
LADWP continually strives to improve water quality. In an ongoing effort to reduce the level of disinfection by-products in drinking water, LADWP is gradually expanding the use of monochloramine (also known as chloramine) to provide the necessary protection to water as it travels through miles of pipe to reach your tap. While both chlorine and chloramine are effective killers of bacteria and other microorganisms, chloramine lasts longer, forms fewer byproducts of disinfection and does not have a chlorinous odor.

A new drinking water regulation that further reduces the allowable level of disinfection by-products will take effect April 2012. In order to comply with the new regulation, LADWP must complete construction of critical facilities before a complete change to chloramine can happen. The LADWP entered into a Compliance Agreement (Agreement) with the California Department of Public Health (CDPH) that allows us to complete the necessary construction projects while allowing us to stay in compliance. While most of the distribution system meets the new compliance requirements, there are some areas that may not on a consistent basis without the use of chloramine. To obtain the Agreement, LADWP demonstrated to CDPH and US Environmental Protection Agency (USEPA) that compliance with the new requirement would be achievable within two additional years and that with the time extension further public health protection from waterborne diseases caused by microorganisms such as Cryptosporidium and viruses will be provided. For more information on the new Disinfection By-Products regulation, please turn to page 4 of this report.

Customers in the Harbor area of the City have received water treated with chloramine for more than 25 years with complete satisfaction. Customers in Eastern Los Angeles and the Sunland-

What determines the cost of tap water?

1) The cost of transporting raw water to Los Angeles
2) Treating and cleaning the water to make it drinkable, and
3) Delivering the clean water to your tap.



Tujunga areas also receive water treated with chloramine and have reported improved taste.

Since chlorine and chloramine are different chemicals, adjustments to existing treatment must be made for certain types of water uses. 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.

Complete expansion to chloramine will continue for a few more years but should be completed by early 2014. Meanwhile, all LADWP customers should expect to receive either type of disinfectant in the water at any time. For more information on chloramine please visit www.ladwp.com, or call Water Quality Customer Service at (213) 367-3182.

Water Quality News & Updates

New Disinfection By-Products Regulation

The latest drinking water standard for disinfection by-products (DBPs) is the Stage 2 Disinfectants/Disinfection By-Products Rule (Stage 2) which took effect April 1, 2012. The allowable levels of 80 micrograms per liter (µg/L) for total trihalomethanes (TTHMs) and 60 µg/L for total haloacetic acids (HAA5) remain unchanged. The changes to the current DBP regulation are few but significant.

Under Stage 2, all compliance locations used to monitor disinfection by-products (DBPs) must represent maximum values in the distribution system. In anticipation of Stage 2, LADWP's current monitoring plan already represents all maximum values. Under Stage 2, compliance will no longer be based on a system-wide running annual average of all locations. Instead, each location must now meet the standard for TTHMs and HAA5 on a running annual average. This new requirement will result in a system-wide reduction of DBPs levels in the drinking water. LADWP's strategy to achieve compliance is the expansion of the use of chloramine. LADWP submitted a request to State Health for a two year extension to complete a critical project that will allow complete use of chloramine in the distribution system. This extension is allowed under a provision of the federal Safe Drinking Water Act (1996 amendments). As a condition of the extension, LADWP will begin monitoring Stage 2 locations, but will continue to base compliance on a system-wide running annual average. After April 2014, LADWP will begin reporting and complying with Stage 2 compliance calculations, of which we expect to full comply. If at any time the running annual average at any location exceeds the allowable levels for TTHMs or HAA5, public notification is required, with specific health-effects language, to customers in the area represented by the compliance location. The cost of compliance with this regulation is anticipated to exceed $240 million.

Further Protecting Our Distribution System

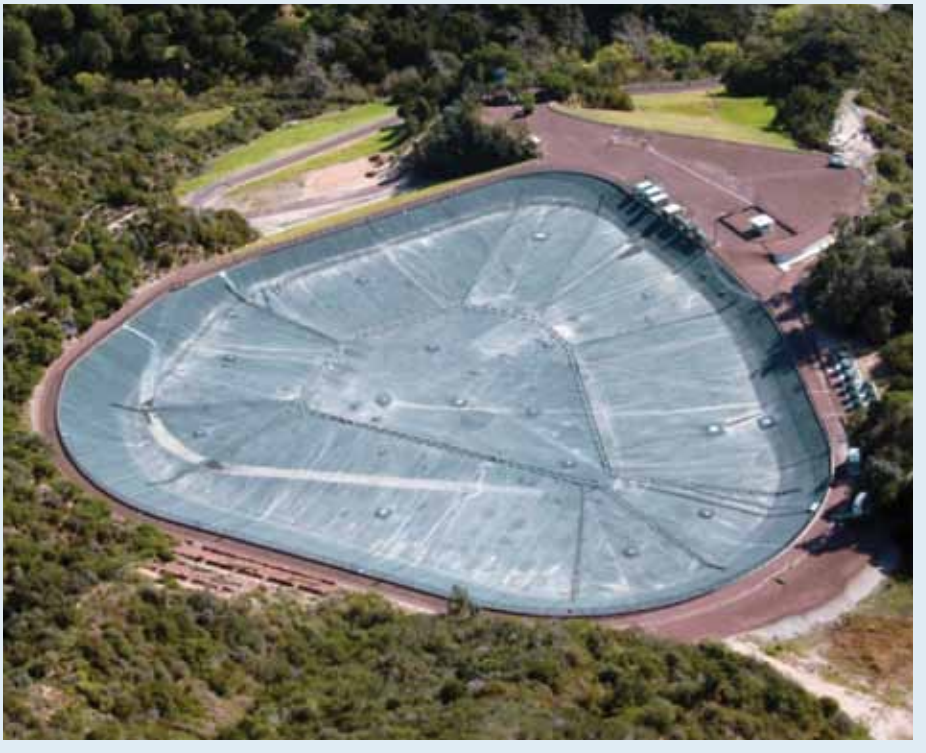
The Surface Water Treatment Rule (SWTR), administered by CDPH, is a drinking water regulation that safeguards reservoir supplies from microbiological contamination that may occur when rain runoff from nearby hillsides and slopes enters the water. In Los Angeles, SWTR applied to four open water reservoirs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

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, but no later than the dates specified in the Compliance Agreement.

Santa Ynez Reservoir was removed from service in November 2010 for the installation of a floating cover, and was placed back into service as a covered reservoir in May 2011. The Final EIR for Elysian Reservoir Water Quality Improvement Project was completed in September of 2011. The Final EIR for Upper Stone Canyon Reservoir WQIP was completed in January of 2012. Both EIRs were submitted to the Board of Water and Power Commissioners for approval in the first quarter of 2012. The Silver Lake Reservoir Bypass Tunnel construction contract will be advertised in the middle of 2012 while LADWP continues to work with the Silver Lake community on environmental concerns. A new 110 MG Headworks Reservoir will be designed and constructed to replace the storage capacity lost when Ivanhoe Reservoir is removed from service. A construction contract should be awarded in mid 2012. Lastly, an Ultraviolet Disinfection Treatment facility is currently in development to treat water leaving LA Reservoir. In addition, LA Reservoir will have shade balls installed beginning in Summer, 2012. The estimated cost to bring the six reservoirs into compliance is $1.1 billion.

To meet strict compliance deadlines, LADWP must award nearly $600 million in project contracts in 2012. While the contracts will spread the cost over the next 5 to 7 years, LADWP must be prepared to fund projects in a timely manner. To ensure sufficient funding for water quality compliance activities, LADWP proposed a one-time increase to the Water Quality Factor of 35 cents per billing unit, or one hundred cubic feet (HCF), which was approved on February 1, 2012. In preparation for compliance with LT2, LADWP has been routinely monitoring its water sources for microbial pathogens since 2005. Cryptosporidium and



In May 2011, LADWP completed the installation of a floating cover on Santa Ynez Reservoir.

As state and federal drinking water quality standards have become more stringent, LADWP is required to invest in over 100 water quality improvement projects, the most significant of which require LADWP to cover, bypass or remove from service all 10 water reservoirs in the Los Angeles basin. Five reservoirs have been covered or bypassed, including Santa Ynez Reservoir, and there are five more to go.

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 Terrace	Sherman Oaks	West Hills
Mission Hills	Studio City	Winnetka
North Hills	Sun Valley	Woodland Hills
North Hollywood	Sunland	
	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

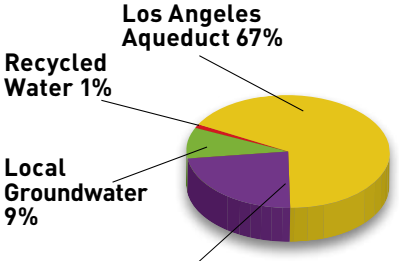
Harbor Communities

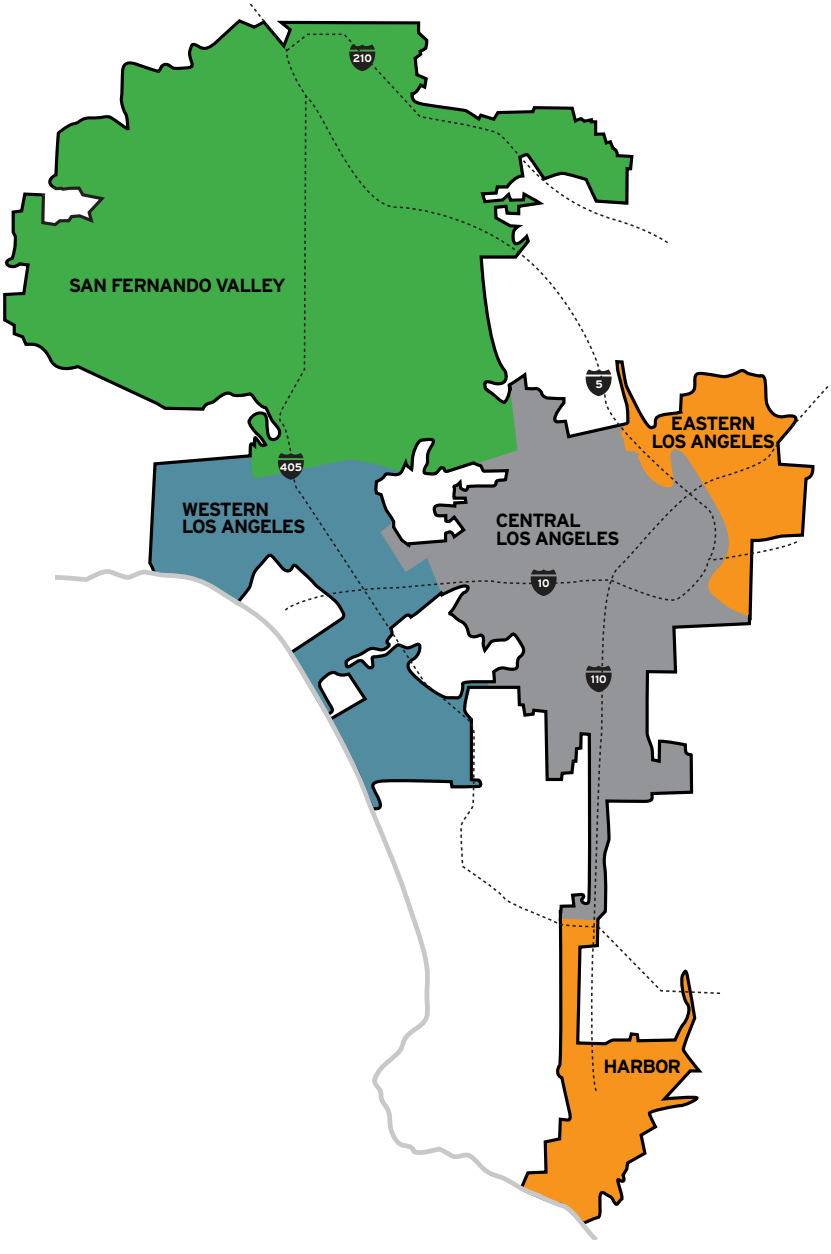
Sources: MWD State Water Project and Colorado River Aqueduct.

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

* parts of

FY 2011 / 2012 Sources





To continue to comply with newer more stringent water quality regulations, LADWP is undertaking the most significant capital investments in water quality history, totaling $1.1 billion in capital costs over the next five years.

Giardia are occasionally detected in very low numbers. To further inform our customers on this topic, below is a standard 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 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."

Special Population Precautions

There are certain health conditions for which customers may need specially treated water. For example, 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.

continued on page 9

WeTap App

Looking for a refreshing drink of water while you're on the go? Don't waste your money on bottled water, find the closest drinking water fountain by downloading the WeTap drinking water fountain finder application to your smart phone or mobile device.

2011 Drinking Water Quality Monitoring Results

Tables I-IV list the results of water tests performed by LADWP and MWD from January to December 2011. 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.

Table I

Calendar Year 2011 Water Quality Monitoring Results

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

Constituents / 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 - 52	< 50	< 50	110 (a)	< 50 - 220
Arsenic	µg/L	4 (a)	< 2 – 4	2	< 2 - 4	2	< 2 - 3	< 2	< 2
Barium	µg/L	< 100	< 100	< 100	< 100	< 100	< 100 - 117	< 100	< 100
Bromate (b)	µg/L	< 5	< 5	NA	NA	NA	NA	NA	NA
Gross Alpha Particle Activity (c)	pCi/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3 - 3
Gross Beta Particle Activity (c)	pCi/L	< 4	< 4	< 4	< 4 - 5	< 4	< 4 - 5	4	< 4 - 6
Nitrate (as NO_3)	mg/L	< 2	< 2	5	< 2 - 18	5	< 2 - 14	< 2	< 2 - 2
Nitrate + Nitrite (as N)	mg/L	< 0.4	< 0.4	1	< 0.4 - 4	1	< 0.4 - 3	< 0.4	< 0.4 - 0.4
Tetrachloroethylene (PCE)	µg/L	< 0.5	< 0.5	< 0.5	< 0.5 - 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene (TCE)	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5 - 0.8	< 0.5	< 0.5
Turbidity (d)	NTU	100%	0.58	NA	NA	NA	NA	100%	0.07
Uranium	pCi/L	3	< 1 - 4	3	< 1 - 4	3	< 1 - 5	2	1 - 2

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

Constituents / Contaminants	Units	Average	Range
Chlorine Residual, Total	mg/L	HRAA = 1.7 (a)	Range = 1.6 – 1.8
Copper (at-the-tap) AL = 1300 (e)	µg/L	90th Percentile value = 576	number of samples exceeding AL = 0 out of 110
Cryptosporidium spp (f)	oocysts/sample	Number of positive samples = 2 out of 126 (g)	
Escherichia coli Bacteria	CFU/sample	Number of positive samples = 2 (h)	
Fecal Coliform Bacteria	CFU/sample	Number of positive samples = 2 (h)	
Fluoride	mg/L	Average = 0.7	Range = 0.7 – 0.8
Giardia spp (f)	cysts/sample	Number of positive samples = 2 out of 126 (g)	
Haloacetic Acids (Five) (HAA5)	µg/L	HRAA = 28 (a)	Range = 6 – 68
Lead (at-the-tap) AL = 15 (e)	µg/L	90th Percentile value = 5.6	number of samples exceeding AL = 3 out of 110
Total Coliform Bacteria	% Positives	Highest monthly % positive samples = 0.7%	Range = 0 – 0.7% positive samples
Total Trihalomethanes (TTHM)	µg/L	HRAA = 45 (a)	Range = 13 - 104

continued from page 7

A Better Understanding of Radon

Radon is a naturally occurring radioactive gas that is not a significant issue in most of California. Last tested 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 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)."

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				
140 (a)	< 50 - 240	86 (a)	61 - 99	1000	YES	600	Erosion of natural deposits; residue from surface water treatment processes
< 2	< 2	2	2	10	YES	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
< 100	<100	<100	<100	1000	YES	2000	Erosion of natural deposits
NA	NA	6 (a)	< 5 - 9	10	YES	0.1	By-product of ozone disinfection; formed under sunlight
3	< 3 - 3	< 3	< 3	15	YES	(0)	Naturally present in environment
< 4	< 4 - 4	< 4	< 4 - 4	50	YES	(0)	Naturally present in environment
< 2	< 2 - 2	< 2	< 2 - 2	45	YES	45	Erosion of natural deposits; runoff and leaching from fertilizer use
< 0.4	< 0.4 - 0.4	0.4	0.4 - 0.5	10	YES	10	Erosion of natural deposits; runoff and leaching from fertilizer use
< 0.5	< 0.5	< 0.5	< 0.5	5	YES	0.06	Discharge from factories, dry cleaners, auto shops (metal degreaser)
< 0.5	< 0.5	< 0.5	< 0.5	5	YES	1.7	Discharge from metal degreasing sites and other factories
100%	0.08	100%	0.05	TT	YES	none	Soil runoff
2	2	1	< 1 - 2	20	YES	0.5	Erosion of natural deposits

State Primary Standard (MCL) or [MRDL]	Meet Primary Standard ?	State PHG/ [MRDLG] or Federal (MCLG)	Major Sources in Our Drinking Water
[4]	YES	[4]	Drinking water disinfectant added for treatment
TT	YES	300	Internal corrosion of household water plumbing systems
TT	YES	(0)	Naturally present in the environment
0	YES	(0)	Naturally present in the environment
TT	YES	(0)	Naturally present in the environment
2	YES	1	Erosion of natural deposits; water additive that promotes strong teeth
TT	YES	(0)	Naturally present in the environment
60	YES	none	By-product of drinking water disinfection
TT	YES	0.2	Internal corrosion of household water plumbing systems
5% of monthly samples are coliform positive	YES	(0)	Naturally present in the environment
80	YES	none	By-product of drinking water chlorination

Table II

Calendar Year 2011 Water Quality Monitoring Results

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

Constituents / 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 - 52	< 50	< 50	110 (a)	< 50 - 220
Chloride	mg/L	26	18 - 33	38	23 - 62	38	28 - 61	70	63 - 76
Color, Apparent	ACU	4	3 - 4	4	3 - 5	4	3 - 5	2	1 - 2
Foaming Agents (as MBAS)	µg/L	< 50	< 50	< 50	< 50	< 50	< 50 - 55	< 50	< 50
Manganese NL = 500	µg/L	< 20	< 20	< 20	< 20	< 20	< 20 - 41	< 20	< 20
Odor	TON	< 1	< 1	< 1	< 1 - 1	< 1	< 1	2	2
Specific Conductance	µS/cm	310	214 - 427	456	279 - 640	456	385 - 693	630	320 - 870
Sulfate (as SO_4)	mg/L	23	13 - 29	53	19 - 96	53	22 - 100	150	120 - 170
Total Dissolved Solids (TDS)	mg/L	168	101 - 202	258	144 - 394	258	194 - 468	440	390 - 480
Turbidity (i)	NTU	< 0.1	< 0.1 - 0.1	0.16	< 0.1 - 0.3	0.16	0.1 - 0.3	0.05	0.02 - 0.07
Zinc	µg/L	< 50	< 50	< 50	< 50	< 50	< 50 - 1170	< 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 units
TON = threshold odor number
CFU = colony-forming unit
ACU = apparent color unit
< = less than
NA = not applicable
NR = not reported
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 one calendar year period that often includes test data from previous year. HRAA may be higher than the range which is based on the test data in the current calendar year.

(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 testing of Gross Alpha Particle Activity, Radium-226 and Radium-228 in 2009, testing of Gross Beta Particle Activity, Strontium-90 and Tritium in 2011, as well as testing of Radon in 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 2011 for samples collected at Weymouth, Diemer, and Jensen Plants.

(d)Turbidity is a measure of the cloudiness of the water and is a good indicator of water quality and

Great Value: Tap Water

On average, one gallon of LA's tap water costs a half-penny or $0.005.
In comparison:

- a gallon of bottled water is $1.00
- a gallon of gasoline is $4
- a gallon of milk is $3

MWD Diemer Plant		MWD Jensen Plant		State Secondary MCL	Meet Secondary Standard?	Major Sources in Our Drinking Water
Average	Range	Average	Range			
140 (a)	< 50 - 240	86 (a)	61 - 99	200	YES	Erosion of natural deposits; residue from some surface water treatment process
72	70 - 75	64	59 - 69	500	YES	Runoff/leaching from natural deposits; seawater influence
1	1	1	1	15	YES	Naturally-occurring organic materials
< 50	< 50	< 50	< 50	500	YES	Municipal and industrial waste discharges
< 20	< 20	< 20	< 20	50	YES	Leaching from natural deposits
2	2	2	2	3	YES	Naturally-occurring organic materials
690	320 - 960	500	420 - 530	1600	YES	Substances that form ions when in water; seawater influence
160	150 - 170	56	54 - 58	500	YES	Runoff/leaching from natural deposits
470	440 - 490	280	280 - 290	1000	YES	Runoff/leaching from natural deposits
0.05	0.03 - 0.25	0.03	0.03 - 0.09	5	YES	Soil runoff
< 50	< 50	< 50	< 50	5000	YES	Run off/leaching from natural deposit

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.

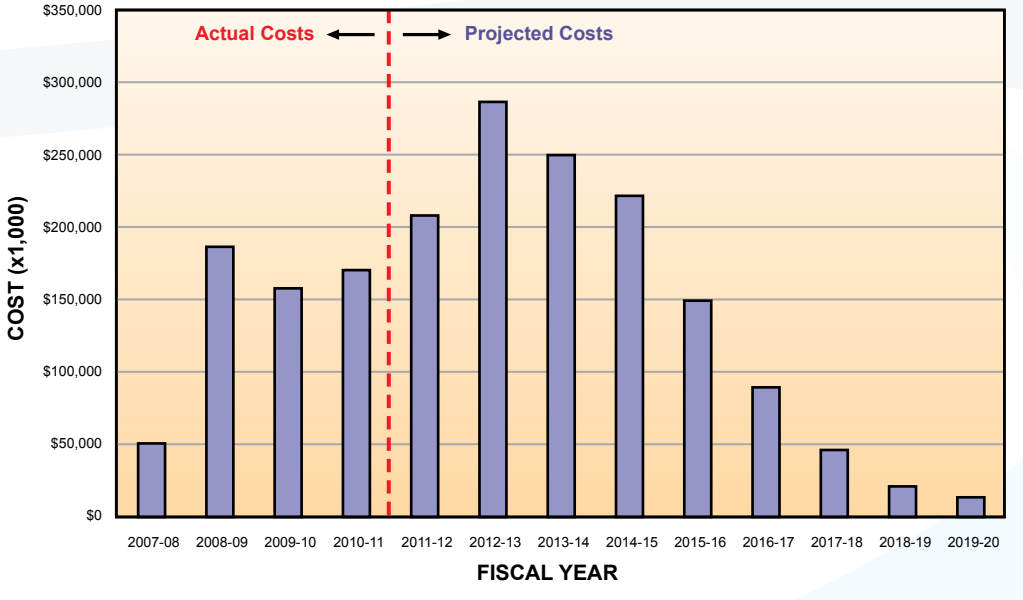
(e)At-the-tap monitoring of lead and copper is conducted every three years as required by the Lead and Copper Rule. A system is out of compliance if the Regulatory Action Level is exceeded in the 90th percentile of all samples at the customers' tap. The most recent monitoring was conducted in 2009. Although the City's treated water has little, if any, detectable lead, studies were conducted and corrosion control has been implemented in Western Los Angeles area in 2010.

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

(g)The primary standards for Cryptosporidium spp and Giardia spp are established for treated water sources. The filtered water effluents stored in the uncovered reservoirs are further treated to regulatory standards.

(h)The Total Coliform Rule states that the MCL for Escherichia Coli Bacteria or Fecal Coliform Bacteria is exceeded when a routine sample and a repeat sample are Total Coliform positive, and one of these is also E. coli or Fecal Coliform positive. The two positive test results here did not match this criterion.

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



Drinking Water Quality Improvements total $1.1 billion over the next 5 years - the largest water quality capital costs in LADWP history.

Water Quality Investments

Compliance with newer water quality regulations requires major investment in LADWP's water distribution system, including $600 million in major new contracts that must be awarded in 2012, and $1.1 billion in capital costs over the next five years to comply with these standards.

Table III Calendar Year 2011 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
Alkalinity, Total (as $CaCO_3$)	mg/L	87	50 - 106	108	64 - 193	108	98 - 199
Bicarbonate Alkalinity (as $CaCO_3$)	mg/L	87	50 - 106	108	64 - 193	108	98 - 199
Boron NL = 1000	µg/L	378	158 - 529	328	122 - 533	328	97 - 460
Bromide	µg/L	< 20	< 20	< 20	< 20 - 50	< 20	< 20 - 60
Calcium	mg/L	21	16 - 25	36	23 - 78	36	26 - 83
Chromium, Hexavalent	µg/L	< 1	< 1	< 1	< 1 - 4	< 1	< 1 - 4
Hardness, Total (as $CaCO_3$)	mg/L	76	52 - 90	131	77 - 261	131	90 - 285
Heterotrophic Plate Count Bacteria (HPC)	CFU/mL	< 1	< 1	NA	NA	NA	NA
Magnesium	mg/L	6	3 - 7	10	5 - 16	10	6 - 19
N-Nitrosodimethylamine (NDMA) NL=10	ng/L	NT	NT	NT	NT	NT	NT
pH	Unit	7.5	7.2 - 7.7	7.6	7.1 - 7.8	7.6	7.1 - 7.8
Phosphate (as PO_4)	µg/L	< 31	< 31	100	50 - 200	100	50 - 1300
Potassium	mg/L	4	2 - 4	4	3 - 5	4	3 - 4
Radon (c)	pCi/L	< 100	< 100	< 100	< 100	< 100	< 100 - 150
Silica (as SiO_2)	mg/L	17	12 - 19	18	14 - 24	18	16 - 23
Sodium	mg/L	31	16 - 38	37	17 - 47	37	31 - 47
Total Organic Carbon (TOC)	mg/L	1.3	0.9 - 1.5	1.0	< 0.3 - 1.3	1.0	< 0.3 - 1.4
Vanadium NL = 50	µg/L	< 3	< 3	< 3	< 3 - 7	< 3	< 3 - 3

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	Average	Range	Average	Range	
82	43 - 110	90	48 - 120	85	76 - 93	Erosion of natural deposits
NT	NT	NT	NT	NT	NT	Naturally-occurring dissolved gas; erosion of natural deposits
130	130	130	130	190	190	Erosion of natural deposits
NT	NT	NT	NT	NT	NT	Runoff/leaching from natural deposits; seawater influence
48	41 - 54	51	47 - 55	27	26 - 28	Erosion of natural deposits; natural hot springs
< 1	< 1	< 1	< 1	< 1	< 1	Industrial discharge; erosion of natural deposits
170	60 - 250	190	57 - 270	110	100 - 120	Erosion of natural deposits
< 1	< 1 - 1	< 1	< 1 - 1	< 1	< 1 - 1	Naturally present in the environment
18	16 - 21	20	19 - 21	12	12	Erosion of natural deposits
< 2	< 2	< 2	< 2	NR	< 2 - 6	By-product of chloramination
8.1	7.8 – 8.8	8.0	7.0 - 8.6	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
4	3 - 4	4	4	3	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
69	62 - 76	72	67 - 77	54	52 - 57	Erosion of natural deposits
2.3 (a)	1.7 - 2.9	2.4 (a)	1.7 - 3.0	1.9 (a)	1.6 - 2.1	Erosion of natural deposits
< 3	< 3	< 3	< 3	3	3	Erosion of natural deposits

Table IV

Calendar Year 2011 Water Quality Monitoring Results

Drinking Water Disinfection By-Products Reported on Area-Wide Basis

Constituents/ 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	9	5 - 19	11	3 - 21	14	2 - 26	13	3 - 24	By-product of chlorine/ chloramine disinfection
Bromoform	µg/L	2	< 1 - 13	2	< 1 - 6	1	< 1 - 10	4	< 1 - 10	By-product of chlorine/ chloramine disinfection
Chlorate NL = 800	µg/L	368	61 - 992	202	27 - 877	234	39 - 614	39	26 - 48	By-product of chlorine disinfection
Chloroform	µg/L	13	5 - 37	17	1 - 46	29	1 - 80	20	3 - 56	By-product of chlorine/ chloramine disinfection
Dibromoacetic Acid (DBAA)	µg/L	7	2 - 24	8	4 - 16	8	< 1 - 27	9	5 - 19	By-product of chlorine/ chloramine disinfection
Dibromochloromethane (DBCM)	µg/L	2	< 1 - 7	3	1 - 6	3	<1 - 11	3	1 - 6	By-product of chlorine/ chloramine disinfection
Dichloroacetic Acid (DCAA)	µg/L	11	2 - 38	14	<1 - 32	24	< 1 - 46	10	2 - 25	By-product of chlorine/ chloramine disinfection
Monobromoacetic Acid (MBAA)	µg/L	< 1	< 1 - 2	< 1	< 1 - 3	< 1	< 1 - 3	< 1	< 1 - 2	By-product of chlorine/ chloramine disinfection
Monochloroacetic Acid (MCAA)	µg/L	4	< 2 - 10	5	< 2 - 10	6	< 2 - 10	3	< 2 - 9	By-product of chlorine/ chloramine disinfection
Trichloroacetic acid (TCAA)	µg/L	5	1 - 16	7	< 1 - 23	9	< 1 - 21	8	< 1 - 24	By-product of chlorine/ chloramine disinfection

Next Century Water

Over the last century, LADWP has built and maintained a water system that transports, treats, and delivers daily hundreds of millions of gallons of water to the City of Los Angeles. Our customers rely on us to provide water to their taps when they need it, keeping our system in operation every day of the week and every hour of the day. Protecting and maintaining our distribution system into the future requires significant investments, not only for the mandated investments in water quality, but also to develop local water supplies and replace aging infrastructure.

Much of the water we serve to our customers travels hundreds of miles from the Eastern Sierra Nevada, Sacramento-San Joaquin Delta, and the Colorado River to reach Los Angeles. These imported supplies supplement our local water supplies and serve a population of nearly 4 million people. As imported supplies are increasingly limited by climatic conditions and regulatory restrictions, they also become more expensive. To reduce our reliance on imported supplies, LADWP is pursuing investments in water conservation, recycled water, stormwater capture, and groundwater clean-up.

Los Angeles has been a leader in water conservation for several decades, showing the rest of the country how to do more with less. In 2011, Los Angeles recorded per capita water use at 123 gallons daily – the lowest of any U.S. city with a population over one million. The installation of water-saving devices and acceptance of water-conserving behaviors have proven to be highly effective and permanent solutions in the fight against water waste in the last several decades. As we move into the next century of water service, increases in the amount and availability of customer rebates and other financial incentives for water-efficient devices, water-saving projects and landscape irrigation efficiency measures will help reduce the amount of water needed to serve Los Angeles.

Another method of reducing the demand for potable water is through the increased use of recycled water. Water recycling is one of the least expensive and most feasible sources of additional water, allowing customers to utilize recycled water for non-potable uses such as irrigation and other industrial purposes. Future investments in recycled water will allow LADWP to expand the purple pipe network, increase the number of recycled water users in the City, and ultimately, increase the local potable water supply through the use of highly treated recycled water to replenish groundwater supplies.

Similarly, investments in stormwater capture are also aimed at replenishing local groundwater supplies. When it rains in Los Angeles, millions of gallons of stormwater runs off into storm drains, collects in flood control channels, and flows out to the ocean. Stormwater capture projects would allow that rainfall to be collected, seep into the ground, and increase the amount of groundwater in the San Fernando Basin.

The San Fernando Basin is a major component to the successful development of our local water supplies. Many of our customers may not realize that Los Angeles' greatest local water resource is contained in an aquifer that lies below the San Fernando Valley. This groundwater resource, known as the San Fernando Basin, was Los Angeles' original source for water years ago. Today, it holds the key to our future water supply.

Over the course of history, industrial pollution caused significant contamination to the groundwater in San Fernando Basin, cutting the availability of that local supply by more than half. Because LADWP will only serve high quality water that meets or exceeds federal and state water quality regulations, several groundwater pumping wells in LADWP's system were removed from service. By investing in a facility to purify our groundwater, we can place those wells back in service and maximize the benefits of stormwater capture and recycled water to replenish our groundwater supply.

Providing water service also requires ongoing investments in replacing aging pipes, valves, pumping stations, and other infrastructure that ensures that water is delivered to our customers' tap without fail. Much of our water system, our pipes in particular, are aging rapidly and are at or exceeding their expected life. We need to invest in our system to accelerate replacement cycles and to keep it strong and robust.

There are over 7,200 miles of pipe in the water distribution system. Our current pipe replacement levels are at 95,000 feet per year. While not all of our pipes need immediate replacement, the current rate of replacement only allows pipes to be replaced once every 400 years. This makes our system vulnerable to leaks and breaks that can interrupt service, and potentially compromise water quality depending on the severity of the interruption.

These long-term water system investments will ensure that high-quality water continues to reach our customers in a reliable manner just as it has for the last century. As we work to make the water system more reliable and sustainable, LADWP remains committed to providing Los Angeles with reliable high-quality water at an affordable price today and into the next century.

Take the Water Quality Online Survey

What's important to you?
Please take a few moments to take our online survey about water quality.
www.ladwpnews.com/go/survey/1475/10323

About This Report

The Drinking Water Quality Report is prepared by the Los Angeles Department of Water and Power (LADWP) every year. This report is required by the California Department of Public Health (CDPH) and is prepared in accordance with CDPH guidelines. It is prepared, printed and mailed to you at a cost of 38 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 or email at Nathan.Aguayo@ladwp.com.

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

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

LADWP's website has a wealth of information specific to improving water quality in your home. If you have specific water quality questions or problems, you should call (213) 367-3182 Monday through Friday 8 – 4 p.m., or anytime at 1-800- DIAL-DWP or contact us on the web at www.ladwp.com.

Here are some useful links for more information on home water filters:

http://www.consumerreports.org/cro/home-garden/kitchen/water-filters/index.htm

http://www.nrdc.org/water/drinking/gfilters.asp

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

For more information about CDPH certification, call (916) 499-5600 or visit www.cdph.ca.gov.

This report is printed on recycled paper.

Los Angeles Department of Water & Power

2011 Drinking Water Quality Report

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 لطفا 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 զեկույցը պարունակում է կարեւոր տեղեկութիւններ ձեր խմելու ջուրի մասին: Այս խնդրի մասին որեւէ 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) 342-5397** 로 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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Los Angeles Department of Water & Power
P.O. Box 51111 Room 1213
Los Angeles, California 90051-0100

2011 Drinking Water Quality Report

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