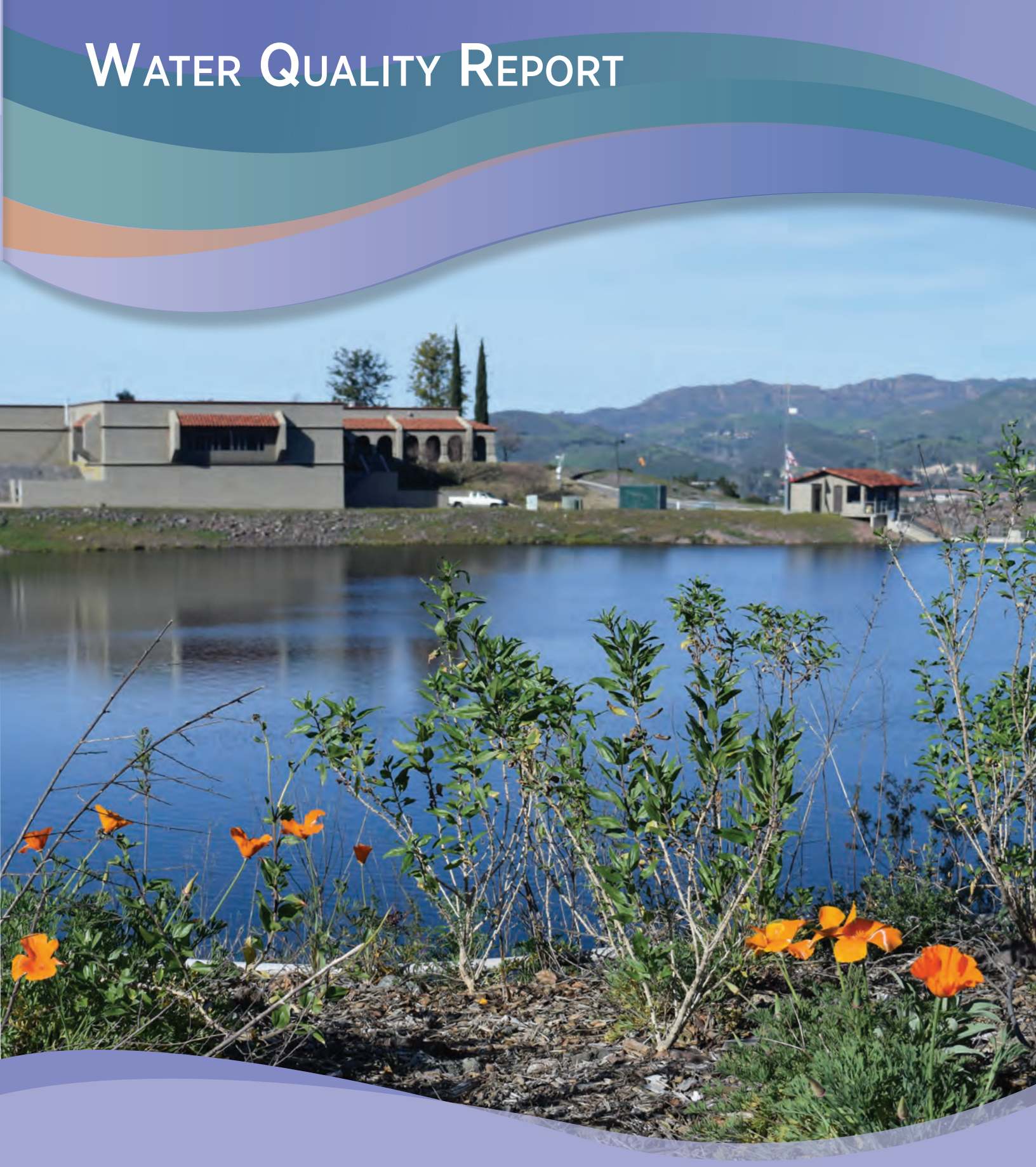
Water Quality Report



In compliance with federal and state requirements, here is your

2016 Consumer Confidence Report

Published June 2017

Dear Las Virgenes Municipal Water District Customer,

This document is our annual report to you on the quality of water we provide. I am happy to say that once again, through 2016, LVMWD tests show the drinking water provided in the LVMWD service area meets or surpasses all state and federal water quality standards.

LVMWD takes great pride in delivering high quality water, but there is much more to the District than what flows from your tap. Reliable service can only be delivered through well-maintained systems and the skills found in a highly proficient workforce.

While a wet winter has provided relief from five years of drought, Californians cannot ever take water for granted. All drinking water served in our District must be imported from sources hundreds of miles away. With that thought in mind, each customer has a role in using water efficiently throughout the year. We thank you for your conservation efforts through the drought and ask that you maintain your water-wise habits to help avoid future shortages.

This annual report is required by state and federal law, but please take a few minutes to use it as a resource. In this report, you'll find water quality data charts, water-saving tips, and important information for those with weakened immune systems. I encourage you to read through it, and I also hope you'll visit our website, www.LVMWD.com for more information on water quality, easy conservation practices and timely information on the services we provide.

Sincerely,

David W. Pedersen, P.E.
General Manager

Stay Informed

LVMWD encourages you to stay informed about your water. Sign up for e-Notification at www.LVMWD.com/e-Notification to receive information on topics that interest you. Be sure to check the website frequently for up to date information on water conservation and other topics.

The District publishes *The e-Current Flow* on our website at www.LVMWD.com/e-Current-Flow. The customer newsletter is also delivered with your bill.

The LVMWD Board of Directors meets at 5 p.m. on the second and fourth Tuesday of each month. Meetings are conducted at District Headquarters, 4232 Las Virgenes Rd., in Calabasas.

If you wish to speak with someone about your water service, contact Darrell Johnson, Customer Service Manager, at (818) 251-2200 or e-mail Customer_Service@LVMWD.com.

LAS VIRGENES MUNICIPAL WATER DISTRICT
The Current Flow

Substances Found in Drinking Water

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals. In some cases, it can pick up radioactive material or substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water include:

- Microbial contaminants such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Radioactive contaminants that can be naturally-occurring or the result of oil and gas production and mining activities.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same public health protection.

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at (800) 426-4791.

Health Advisory for Persons with Weakened Immune Systems

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immunocompromised, such as those undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by microbial contaminants are available by calling the Safe Drinking Water Hotline at (800) 426-4791.

Learning More About Lead Exposure

Recent news stories have raised questions about the presence of lead in drinking water systems. LVMWD's water distribution system has no lead pipes. In compliance with monitoring requirements, the District tests for lead at 30 different locations throughout the service area. Results show that the levels of lead in LVMWD's water are well within state and federal guidelines. (See the table on page 4 for details.)

In our region, lead in drinking water primarily comes from materials and components associated with home plumbing. These sources can include pipes, soldering materials used at pipe joints and older fixtures such as faucets. LVMWD is responsible for providing high quality drinking water but cannot control the variety of materials used in customers' plumbing components. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. We suggest you capture this water in a bucket to water your 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

Parameter	Units	State or Federal MCL	PHG	State DLR	Range Average	Jensen Plant	LVMWD	Major Sources in Drinking Water
SECONDARY STANDARDS—Aesthetic Standards								
Aluminum	ppb	200	600	50	Range	ND-130	ND-66	Residue from water treatment process; natural deposits erosion
					Highest RAA	100	54	
Chloride	ppm	500	NA	NA	Range	89-97	92-98	Runoff/leaching from natural deposits; seawater influence
					Average	93	95	
Color	Color Units	15	NA	NA	Range	1-2	ND-10	Naturally-occurring organic materials
					Average	2	ND	
Odor Threshold	TON	3	NA	1	Range	3	ND-2	Naturally-occurring organic materials
					Average	3	ND	
Specific Conductance	µS/cm	1,600	NA	NA	Range	652-721	650-730	Substances that form ions in water; seawater influence
					Average	687	688	
Sulfate	ppm	500	NA	0.5	Range	86-104	80-110	Runoff/leaching from natural deposits; industrial wastes
					Average	95	93	
Total Dissolved Solids (TDS)	ppm	1,000	NA	NA	Range	377-423	370-400	Runoff/leaching from natural deposits; seawater influence
					Average	400	385	
MICROBIOLOGICAL								
HPC (d)	CFU/mL	NA	NA	NA	Range	ND-1	ND-890	Naturally present in the environment
					Median	ND	ND	
Total Coliform Bacteria (k)	%	NA	NA	NA	Range	ND	ND-2.1	Naturally present in the environment
					Average	ND	0.4	
CHEMICAL								
Alkalinity (as CaCO3)	ppm	NA	NA	NA	Range	92-95	96-100	
					Average	94	98	
Boron	ppb	NL = 1,000	NA	100	Range	270	NA	Runoff/leaching from natural deposits; industrial wastes
					Average	270	NA	
Calcium	ppm	NA	NA	NA	Range	30-36	26-33	
					Average	33	31	
Chlorate	ppb	NL = 800	NA	20				Byproduct of drinking water chlorination; industrial processes
					Range	39	NA	
Corrosivity (l) (as Aggressiveness Index)	AI	NA	NA	NA	Range	12.2	NA	Elemental balance in water; affected by temperature, other factors
					Average	12.2	NA	
Corrosivity (m) (as Saturation Index)	SI	NA	NA	NA	Range	0.35-0.40	-0.45-0.65	Elemental balance in water; affected by temperature, other factors
					Average	0.38	0.23	
Hardness (as CaCO3)	ppm	NA	NA	NA	Range	126-132	113-132	
					Average	129	124	
Magnesium	ppm	NA	NA	NA	Range	12	11-12	
					Average	12	12	
pH	pH Units	NA	NA	NA	Range	8.3	7-9.8	
					Average	8.3	8.2	
Potassium	ppm	NA	NA	NA	Range	2.9-3.2	NA	
					Average	3.1	NA	
Sodium	ppm	NA	NA	NA	Range	84-94	72-87	
					Average	89	81	
TOC	ppm	TT	NA	0.30	Range	1.8-2.8	2.7-3.5	Various natural and man-made sources; TOC as a medium for the formation of disinfection byproducts
					Highest RAA	2.2	3.1	
Vanadium	ppb	NL = 50	NA	3	Range	7.4	NA	
					Average	7.4	NA	Naturally-occurring; industrial waste discharge
N-Nitrosodimethylamine (NDMA)	ppt	NL = 10	3	2	Range	ND-2.7	NA	Byproduct of drinking water chloramination; industrial processes

Parameter	Year Sampled	Units	AL	PHG (MCLG) [MRDLG]	State DLR	90th Percentile	# Sites Sampled	# Sites Over AL	Exceeded AL Y/N	Major Sources in Drinking Water
INORGANIC CHEMICALS										
Lead (n)	2014	ppb	15	0.2	5	9.3	30	0	N	House pipes internal corrosion; erosion of natural deposits
Copper (n)	2014	ppb	1300	300	50	270	30	0	N	House pipes internal corrosion; erosion of natural deposits

Efficient Water Use is Here to Stay

Most of the water delivered in the LVMWD service area is used outdoors. You've done a great job reducing your water use. Stay efficient!

- ✓ Reduce the amount of area you irrigate by replacing lawn areas with drought-tolerant or "California-Friendly" plant varieties.
- ✓ If you have a swimming pool or spa, consider a cover when it is not in use. This will reduce water lost to evaporation.
- ✓ If you have a gardener or landscape maintenance contractor, discuss the importance of staying within your water budget. It is not necessary to water every day.
- ✓ Prevent runoff from irrigated areas onto adjacent properties or into storm drains.
- ✓ Check your irrigation system for broken or misaligned sprinkler heads.
- ✓ Replace your irrigation timer with a new "smart" weather-based irrigation controller.

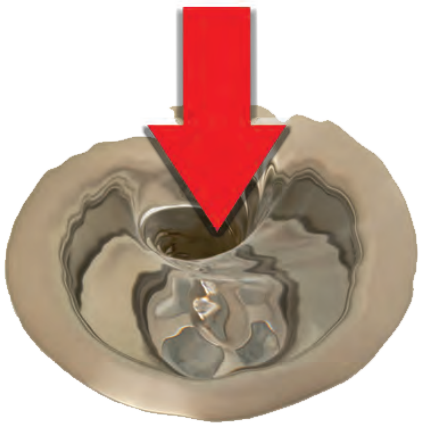
Indoor use can be reduced by:

- ✓ Installing newer, high-efficiency toilets that use 1.28 gallons per flush (or less).
- ✓ Replacing older washing machines with a high-efficiency model.
- ✓ Using a water-efficient shower head and taking showers instead of baths.
- ✓ Only washing full loads of laundry and dishes.
- ✓ Fixing leaking faucets and toilets.
- ✓ Shutting off the water when brushing teeth or shaving.
- ✓ Taking a 5-minute shower while listening to your favorite song!

Protecting Water Resources

Protecting our water resources is everyone's responsibility. We can do this by:

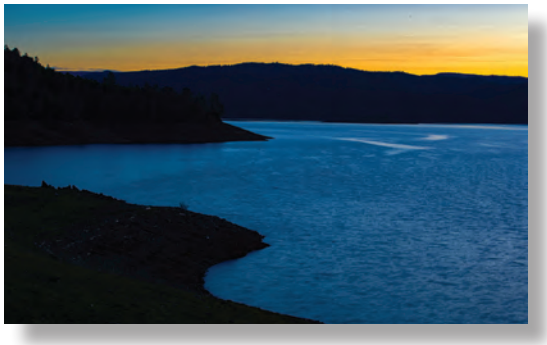
- ☒ Eliminating excess use of lawn and garden fertilizers and pesticides–they contain hazardous chemicals that can reach drinking water sources.
- ☑ Picking up pet waste and properly disposing of it in a trash can.
- ☑ Disposing of chemicals properly. For example, take used paint or motor oil to a hazardous waste collection center.
- ☑ Volunteering to protect your local watershed. Visit www.epa.gov/hwp for more information.
- ☒ Not flushing unused or expired pharmaceuticals down the drain. Find a collection event or take them to the Lost Hills Sheriff's Station, 27050 Agoura Rd., in Calabasas. (Individual parties only–not intended for commercial use.)



How did we do in 2016? Water Quality Report (based on data collected in 2016)

Primary Standards apply to contaminants that may be unhealthy at certain levels. They are measured in terms of Maximum Contaminant Levels (MCLs) as published by the State of California. If water contains a contaminant level above a primary MCL, the safety of the water cannot be assured. None of the tests for water served to LVMWD customers exceeded the MCLs.

Parameter	Units	State or Federal MCL	PHG	State DLR	Range Average	Jensen Plant	LVMWD	Major Sources in Drinking Water
Percent State Project Water	%	NA	NA	NA	Range	100	100	
					Average	100	100	
CLARITY								
Combined Filter Effluent Turbidity	NTU %	TT = 1 TT (a)	NA	NA	Highest % ≤ 0.3	0.05 100	0.29 100	Soil runoff
MICROBIOLOGICAL								
Total Coliform Bacteria (b) State Total Coliform Rule	%	5.0	MCLG = 0	NA	Range	ND-0.3	ND-2.1	Naturally present in the environment
					Average	ND	0.4	
Total Coliform Bacteria Federal Revised Total Coliform Rule	%	TT (c)	NA	NA	Range	ND-0.3	ND-2.1	Naturally present in the environment
					Average	0.1	0.4	
Heterotrophic Plate Count (HPC) (d)	CFU/mL	TT	NA	NA	Range	TT	TT	Naturally present in the environment
					Average	TT	TT	
Semi-Volatile Organic Compounds (e)								
Acrylamide	NA	TT	MCLG = 0	NA	Range	TT	TT	Water treatment chemical impurities
					Average	TT	TT	
Epichlorohydrin	NA	TT	MCLG = 0	NA	Range	TT	TT	Water treatment chemical impurities
					Average	TT	TT	
INORGANIC CHEMICALS								
Aluminum	ppb	1,000	600	50	Range	ND-130	ND-66	Residue from water treatment process; natural deposits erosion
					Highest RAA	100	54	
Arsenic	ppb	10	0.004	2	Range	3.1	2.6-3.3	Natural deposits erosion, glass and electronics production wastes
					Average	3.1	3.0	
Fluoride (f) Treatment-related	ppm	2.0	1	0.1	Range	0.6-0.8	0.5-0.6	Erosion of natural deposits; water additive that promotes strong teeth
					Average	0.7	0.6	
Nitrate (as Nitrogen)	ppm	10	10	0.4	Range	0.6-0.9	0.6-0.8	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
					Average	0.8	0.7	
RADIOLOGICALS (g)								
Gross Alpha Particle Activity	pCi/L	15	MCLG = 0	3	Range	ND–5	ND	Erosion of natural deposits
					Average	3	ND	
Gross Beta Particle Activity	pCi/L	50 (h)	MCLG = 0	4	Range	ND–5	ND	Decay of natural and man-made deposits
					Average	ND	ND	
Uranium	pCi/L	20	0.43	1	Range	2–3	NA	Erosion of natural deposits
					Average	2	NA	
DISINFECTION BYPRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BYPRODUCT PRECURSORS								
Total Trihalomethanes (TTHM) (i)	ppb	80	NA	1.0	Range	19-28	22-43	Byproduct of drinking water chlorination
					Highest LRAA	33	33	
Haloacetic Acids (five) (HAA5) (i)	ppb	60	NA	1.0	Range	3.0-6.7	ND-12	Byproduct of drinking water chlorination
					Highest LRAA	9.0	6.5	
Total Chlorine Residual	ppm	MRDL = 4.0	MRDLG = 4.0	NA	Range	0.9-3.1	ND-2.8	Drinking water disinfectant added for treatment
					Highest RAA	2.4	1.7	
Bromate (j)	ppb	10	0.1	1.0	Range	4.4-13	NA	Byproduct of drinking water ozonation
					Highest RAA	7.4	NA	
DBP Precursors Control as Total Organic Carbon (TOC)	ppm	TT	NA	0.30	Range	TT	TT	Various natural and man-made sources; TOC as a medium for the formation of disinfection byproducts
					Average	TT	TT	



Sunrise over Lake Oroville in Butte County, California.

Photo courtesy of Brian Baer/ California Department of Water, March 29, 2017.

How to read these tables

These tables may contain complex measurements and terminology, but they also contain a lot of valuable information about the water delivered to your tap. While the information in these tables is important, what you don't see is also significant. Water agencies are only required to report contaminants that are detected; none were found at levels considered to be unsafe or unhealthy.

Testing results are presented for the Jensen Water Treatment Plant operated by the Metropolitan Water District of Southern California and for LVMWD's water delivery system. If you have any questions or need clarification, please call us at (818) 251-2200, or contact any of the agencies listed in this report under "Additional Information."

Abbreviations and Footnotes

Abbreviations and Terms ~ Definitions and explanations to help you understand the charts	
AI	Aggressiveness Index
AL	Action Level
Average	Result based on arithmetic mean
CaCO3	Calcium Carbonate
CFU	Colony-Forming Units
DBP	Disinfection Byproducts
DLR	Detection Limits for Purposes of Reporting
LRAA	Locational Running Annual Average; highest LRAA is the highest of all Locational Running Annual Averages calculated as average of all samples collected within a 12-month period
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
NA	Not Applicable
ND	Not Detected
NL	Notification Level to SWRCB
NTU	Nephelometric Turbidity Units
pCi/L	picoCuries per Liter
PHG	Public Health Goal
ppb	parts per billion or micrograms per liter (µg/L)
ppm	parts per million or milligrams per liter (mg/L)
ppt	parts per trillion or nanograms per liter (ng/L)
RAA	Running Annual Average; highest RAA is the highest of all Running Annual Averages calculated as average of all the samples collected within a 12-month period
Range	Results based on minimum and maximum values
SI	Saturation Index (Langelier)
SWRCB	State Water Resources Control Board
TON	Threshold Odor Number
TT	Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water
µS/cm	microSiemen per centimeter; or micromho per centimeter (µmho/cm)

Your Water & This Annual Report

LVMWD is entirely dependent upon water imported from elsewhere; there are no local drinking water sources. The supply to our region travels hundreds of miles from Lake Oroville in the Sierras via the State Water Project and is then treated and conveyed to the District by the Metropolitan Water District of Southern California. LVMWD is one of Metropolitan's 26 member agencies.

Your water is one of the most tested and monitored substances you consume. This report conveys the results of tests conducted in 2016. Readers of this report sometimes ask if the substances identified in the report are harmful. It is normal to find trace amounts of contaminants in tap water or most bottled waters unless it is distilled or treated through a process such as reverse osmosis. Trace salts, chemicals and minerals are natural and keep water from tasting "flat."

When evaluating the presence of contaminants in your water, consider the following comparative measures:

One part per million (milligrams per liter) equals three drops added to a 42-gallon barrel.

One part per billion (micrograms per liter) equals one drop added to a large tanker truck.

One part per trillion (nanograms per liter) equals ten drops added to the Rose Bowl Stadium filled with water.

One part per quadrillion (picograms per liter) equals two teaspoons added to Utah's Great Salt Lake.

(Source: Metropolitan Water District)

Footnotes	
(a)	For the Jensen plant, the turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time. For the Westlake plant, the turbidity level of the filtered water shall be less than or equal to 0.5 NTU in 95% of the measurements taken each month and shall not exceed 5.0 NTU at any time. Turbidity is a measure of the cloudiness of the water and is an indicator of treatment performance. The averages and ranges of turbidity shown in the Secondary standards were based on the treatment plant effluent.
(b)	Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform-positive. Compliance is based on the combined distribution system sampling from all the treatment plants. In 2016, 1184 samples were analyzed. The MCL was not violated.
(c)	Total coliform TT trigger, Level 1 assessments, and total coliform TT violations: More than 5.0% total coliform-positive samples in a month trigger Level 1 assessments. Failure to conduct assessments and correct findings within 30 days is a total coliform violation. No triggers, Level 1 assessments, or violations occurred.
(d)	All distribution system samples collected had detectable total chlorine residuals and no HPC was required. HPC reporting level is 1 CFU/mL. Values are based on monthly median per State guidelines and recommendations.
(e)	Data are from samples collected in 2015. Metropolitan's required triennial monitoring (2017-2019) will be performed in 2018.
(f)	Metropolitan was in compliance with all provisions of the State's Fluoridation System Requirements.
(g)	Data are from samples collected (triennially) during four consecutive quarters of monitoring in 2014 and reported for three years until the next samples are collected.
(h)	SWRCB considers 50 pCi/L to be the level of concern for beta particles.
(i)	These data represent the treatment plant specific core locations per the State approved monitoring plan. For the Jensen service area, the data for the B-5 location were excluded when served by the Weymouth treatment plant.
(j)	No MCL exceedance occurred. Compliance with State and Federal Bromate MCL is based on RAA.
(k)	Noncompliance monthly percentage of coliform-positive samples analyzed at each treatment plant.
(l)	AI ≥ 12.0 = Non-aggressive water AI (10.0–11.9) = Moderately aggressive water AI ≤ 10.0 = Highly aggressive water Reference: ANSI/AWWA Standard C400-93 (R98)
(m)	Positive SI index = non-corrosive; tendency to precipitate and/or deposit scale on pipes Negative SI index = corrosive; tendency to dissolve calcium carbonate
(n)	Thirty (30) households were sampled in 2014 to determine the 90th percentile and none exceeded the action level.

4232 Las Virgenes Road
Calabasas, CA 91302

@LVMWD

2016 LVMWD - Water Quality Report

Published June 2017

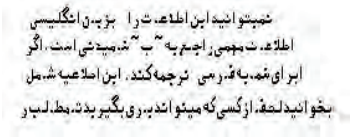
Water Quality - the same in any language

This report contains important information about your drinking water. Translate it or speak with someone who understands it.

Spanish

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Farsi



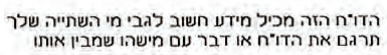
Chinese

这份报告中有些重要的信息，讲到关于您所在社区的水的品质。请您找人翻译一下，或者请能看得懂这份报告的朋友给您解释一下。

Japanese

この資料には、あなたの飲料水についての大切な情報が書かれています。内容をよく理解するために、日本語に翻訳して読むか説明を受けてください。

Hebrew



For More Information

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If you wish to speak with someone about your water service, contact Darrell Johnson, Customer Service Manager at (818) 251-2200 or e-mail Customer_Service@LVMWD.com.

Additional Information About Drinking Water Safety and Standards

California Environmental Protection Agency - State Water Resources Control Board

1001 I Street
Sacramento, CA 95814
(916) 449-5577
www.waterboards.ca.gov/tiny/pws.shtml

U.S. Environmental Protection Agency (USEPA)

Office of Ground and Drinking Water
401 M St., SW
Washington, DC 20460
(800) 426-4791
www.epa.gov/safewater

U.S. Center for Disease Control and Prevention

1600 Clifton Road
Atlanta, GA 30333
(800) 232-4636
www.cdc.gov