



2016 / 2017 CONSUMER CONFIDENCE REPORT AND
Annual Water Quality Report

Liberty Utilities (Liberty) is pleased to provide you with a copy of this year's Annual Water Quality Report. We have put together a series of articles that we hope will keep you better informed on water quality issues both in general and specific to what comes from your own tap. Please feel free to contact us should you ever have any questions about service or quality.

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

WHERE YOUR WATER COMES FROM

In 2016 Liberty Utilities – Lynwood/Rancho Dominguez system obtained 70% of its source water from the Metropolitan Water District of Southern California (MWD). The MWD imports water from the Colorado River Aqueduct and from the Sacramento-San Joaquin Delta by way of the State Water Project. An additional 30% came from deep wells that pump ground water from the Central Basin aquifer.

About the Metropolitan Water District of Southern California

MWD is a consortium of 26 cities and water districts that provides drinking water to nearly 19 million people in parts of Los Angeles, Orange, San Diego, Riverside, San Bernardino and Ventura counties. MWD currently delivers an average of 1.7 billion gallons of water per day to a 5,200-square-mile service area. The mission of the MWD is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way. MWD continues to add storage, and conservation resources to its already diverse water supply portfolio to insure a reliable water supply well into the future. Further, MWD continues to invest in water quality improvements, including the addition of ozone as a treatment process and the expansion of its treatment capacity that will provide excellent water quality. For more information about MWD, visit their website at www.mwdh2o.com

Two Sources of Imported Water Makes a Difference in the Hardness of your Water

With the decreased availability of State Water Project water to blend with Colorado River water, water supplied to the Liberty Utilities Lynwood/Rancho Dominguez system by MWD has increased in hardness as Colorado River water now dominates as the source. The system now receives the majority of its water from the MWD Diemer filtration plant in Yorba Linda. In 2016, the Diemer plant source water consisted of 10% State Project water and 90% Colorado River water, as opposed to 100% State Project water in past years. This is why the water quality shown in the center of this report shows increases from previous years in sulfate, alkalinity, calcium and magnesium salts all of which comprise the hardness in water.



■ Liberty Utilities services the areas shown in white.

● MWD Connections

What USEPA Says About the Kinds of Contaminants That Might Be Found In Drinking Water

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (USEPA) and the California State Water Resources Control Board (SWRCB) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The federal Food and Drug Administration (FDA) and SWRCB regulations also establish limits for contaminants in bottled water, which must provide the same protection for public health.

Contaminants that may be present in untreated 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 storm water 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 storm water runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants** that can be naturally occurring or be the result of oil and gas production and mining activities.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. The tables in this report indicate which minerals and substances have been detected in the water provided by LU-AV. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline at 1-800-426-4791. You can also go to the following websites for more information:

USEPA - www.epa.gov/safewater

CA State Water Resources Control Board – www.waterboards.ca.gov/drinking_water/programs/index.shtml

What are drinking water standards?

Drinking water standards are regulations that the USEPA sets to control the level of contaminants in the nation's drinking water. USEPA, the SWRCB and the California Public Utilities Commission (CPUC) are the agencies responsible for establishing drinking water quality standards in California. These standards are part of the Safe Drinking Water Act's "multiple barrier" approach to drinking water protection, which includes assessing and protecting drinking water sources; protecting wells and surface water; making sure water is treated by qualified operators; ensuring the integrity of distribution systems; and making information available to the public on the quality of their drinking water. With the involvement of USEPA, SWRCB and the CPUC, drinking water utilities, communities and citizens, these multiple barriers ensure that tap water is safe to drink. The water delivered to your home meets standards required by USEPA, SWRCB and CPUC. To recover the growing cost of meeting and maintaining USEPA, SWRCB and CPUC standards, Liberty submits a General Rate Case to the CPUC every three years. The CPUC is responsible for establishing water rates for Liberty.

If you would like more information about water quality, or to find out about upcoming opportunities to participate in public meetings, please call Liberty Utilities Downey Office at 562-299-5117.

This report describes those contaminants that have been detected in the analysis of almost 200 different potential contaminants, nearly 100 of which are regulated by USEPA and the SWRCB. Liberty is proud to tell you that there have been no contaminants detected that exceed any federal or state drinking water standards. Hundreds of samples every month and thousands every year by Liberty and MWD laboratories assure that all primary (health related) and secondary (aesthetic) drinking water standards are being met. See the tables on the following page to see how your water quality rates.

This report is intended to provide information for all water users. If received by an absentee landlord, a business, or a school, please share the information with tenants, employees or students. We will be happy to make additional copies of this report available. Complete records of water quality analyses are open for inspection by the public upon request. You may also access this report on the Liberty Utilities web page at www.parkwater.com.

Source Water Assessment Completed and Available

The 1996 Safe Drinking Water Act amendments required states to perform an assessment of potentially contaminating activities near drinking water sources of all water utilities. In California, the SWRCB designated this to the utilities themselves. Liberty completed the Source Water Assessment in April of 2003. Liberty's wells are considered most vulnerable to the following activities associated with contaminants detected in the water supply: landfills and dumps, irrigated crops, and sewer collection systems. In addition, Liberty's well sources are considered most vulnerable to these additional activities: gas stations, dry cleaners, metal plating/finishing/fabricating shops, military installations, chemical/petroleum processing and storage facilities, and leaking underground storage tanks.

A copy of the complete assessment is available at Liberty Utilities' Downey office and at the SWRCB Glendale office. You may request a summary of the assessment by contacting Jeanne-Marie Bruno of Liberty Utilities at 562-299-5123 or by calling Ms. Lillian Luong, SWRCB sanitary engineer at 818-551-2038.

MWD completed its assessment in December of 2002. Its sources, including the Colorado River and the Sacramento-San Joaquin Delta, are considered most vulnerable to treated wastewater and recreation. Recreation may contribute sources of methyl-tert-butyl-ether (MTBE) and other fueling compounds, sediment, viruses, pathogens, and bacteria.

Sensitive Populations May be More Vulnerable

Some people may be more vulnerable to contaminants in drinking water than the general population. Persons with compromised immune systems such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care provider. The USEPA and the national Centers for Disease Control (CDC) have guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants. These are available by calling the Safe Drinking Water Hotline at 1-800-426-4791.

Treated wastewater may contribute sources of nutrients, metals, and pathogens. A copy of the assessment is available to the general public upon request by calling SWRCB at the above listed phone number.

Issues to Know About

1,4-Dioxane

In 2011, Liberty Utilities along with other water utilities in the Central Basin aquifer, sampled all wells for 1,4-dioxane at the request of SWRCB. While 1,4-dioxane is not a regulated contaminant, SWRCB had set a Notification Level (NL) of 1 part per billion (ppb) in 2010. Liberty found 1,4-dioxane in one active well in the Lynwood system at 2.1 ppb. SWRCB does not recommend Liberty taking this well out of service unless it exceeds 10 times the NL (now 10 ppb). Little scientific data are available on the long-term effects of 1,4-dioxane on human health, although the EPA has listed it as a probable human carcinogen. Besides this notice, the only action required was notification of the Lynwood City Council and the County Board of Supervisors. This was done in January 2012.

Lead and Copper

Although Liberty has not found lead or copper to be an issue in our water systems, the following information is required by SWRCB. 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 service lines and home plumbing. Liberty Utilities 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 for several 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. 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 www.epa.gov/safewater/lead

Arsenic

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Barium

Your drinking water does contain low level of barium. Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.

Unregulated Contaminant Monitoring Regulation (UCMR-3)

The Safe Drinking Water Act requires EPA to identify unregulated contaminants for potential regulation. Every five years, EPA identifies a list of unregulated contaminants to be monitored for by the nation's water utilities over a three year period. This monitoring occurred in 2013 – 2015 with the third UCMR (UCMR-3). Liberty has monitored for a total of 29 chemical contaminants from all of our wells spread out over the three years along with a corresponding sampling from the distribution system reflecting water from each well. Once EPA has obtained this occurrence data nationally, they are required to determine if there is a meaningful opportunity for increased health protection of drinking water by regulating these contaminants. The findings from this monitoring are reported in this year's Consumer Confidence Report.

PRIMARY STANDARDS Mandatory (health related) INORGANIC CHEMICALS	Water Quality Parameters Detected in Liberty Utilities Sources (MWD and wells)								
	State MCL	PHG or (MCLG)	Units of Measurement	MWD Range (including highest value)	Average for MWD	LU Range (including highest value)	Average for LU Wells (a)	(b) LU Date of Last Measurement	Potential Sources of Contamination
Aluminum	1000	600	ppb	77 - 240	142	<50	ND	2016	Erosion of natural deposits; residual from some surface water treatment processes
Arsenic	10	0.004	ppb	<2 - 3.1	ND	2.8 - 5.8	4.4	2016	Erosion of natural deposits, runoff from orchards, glass and electronics production wastes
Barium	1000	2000	ppb	<100 - 144	ND	110 - 150	129	2016	Erosion of natural deposits; discharges of oil drilling wastes and from metal refineries
Combined Filter Effluent (Turbidity) (c)	≤0.3	none	NTU	highest = 0.05	100%	NA	NA	continuous	Soil runoff
Fluoride (naturally occurring)	2	1	ppm	<0.1 - 0.3	0.2	0.2 - 0.3	0.3	2016	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Fluoride (with treatment added)	0.7 - 1.3*	1	ppm	0.6 - 1.0	0.7	0.4 - 0.7	0.7	2016	Added for dental health; water additive that promotes strong teeth
Nitrate (as N)	10	10	ppm	<0.4 - 0.9	ND	<0.4	ND	2016	Erosion of natural deposits; runoff and leaching from fertilizer use; leaching from septic tanks and sewers
ORGANIC CHEMICALS									
Haloacetic Acids (HAA5)	60	none	ppb	<1 - 13	4.8	NA	NA	2016	By-product of drinking water disinfection
Total Trihalomethanes (TTHM's)	80	none	ppb	13 - 45	23	<0.5	ND	2016	By-product of drinking water disinfection
RADIONUCLIDES									
Gross Alpha	15	(0)	pCi/L	<3 - 5	ND	<3 - 5	ND	2012/13	Erosion of natural deposits
Gross Beta	50 (h)	(0)	pCi/L	4 - 6	ND	NA	NA	2014	Decay of natural and man-made deposits
Uranium	20	0.43	pCi/L	2 - 3	3	<2 - 2.9	ND	2012/13	Erosion of natural deposits
LEAD AND COPPER RULE MONITORING									
	State Action Level	PHG	Units of Measurement	Number of Samples Taken	# Samples Exceeding AL	LU Range (including highest value)	Amount Detected at 90th Percentile (g)	(b) LU Date of Last Measurement	Potential Sources of Contamination
Copper (g)	1300	300	ppb	33	0	<50 - 600	160	2016	Internal corrosion of household plumbing
Lead (g)	15	0.2	ppb	33	1	<3 - 52	ND	2016	Internal corrosion of household plumbing
DISTRIBUTION SYSTEM									
	State MCL	PHG or (MCLG)	Units of Measurement	MWD Range (including highest value)	Average for MWD	LU Range (including highest value)	Average for LU	(b) LU Date of Last Measurement	Potential Sources of Contamination
Chlorate	NL = 800	none	ppb	26 - 60	NA	NA	NA	quarterly	Byproduct of drinking water disinfection; industrial processes
Chlorine residual (d)	MRDL = 4	MRDLG = 4	ppm	0.9 - 3.1	2.4	<0.2 - 2.3	1.5	weekly	Added for disinfection purposes
Coliform Bacteria	5% positive	(0)	% positive	0 - 0.3%	ND	0 - 3%	ND	weekly	Naturally occurring in the environment
Color	15 (h)	none	units	NA	NA	<1 - 11	ND	monthly	Naturally occurring organic materials
Fluoride (with treatment added)	0.7 - 1.3*	1	ppm	0.6 - 1.0	0.7	0.6 - 0.9	0.7	daily	Water additive for dental health
Haloacetic Acids (HAA5) (i)	60	none	ppb	<1 - 31	14	<1 - 16	9.1	quarterly	By-product of drinking water disinfection
Heterotrophic Plate Count Bacteria (HPC)	NS	none	CFU / ml	TT	TT	<1 - 120	2	weekly	Naturally present in the environment
N-Nitrosodimethylamine (NDMA)	NS	none	ppt	<2 - 5.1	ND	NA	NA	quarterly	By-product of drinking water disinfection
Odor-Threshold	NS	none	units	2 - 3	3	<1	<1	weekly	Naturally present in the environment
Total Trihalomethanes (TTHM's) (i)	80	none	ppb	16 - 62	42	<1 - 42	32	quarterly	By-product of drinking water disinfection
Turbidity	TT	none	NTU	NA	NA	<0.1 - 1.2	ND	monthly	Soil runoff
SECONDARY STANDARDS									
Aesthetic Standards (non-health related) CHEMICAL PARAMETERS	State MCL	PHG or (MCLG)	Units of Measurement	MWD Range (including highest value)	Average for MWD	LU Range (including highest value)	Average for LU Wells (a)	(b) LU Date of Last Measurement	Potential Sources of Contamination
Aluminum	200	600	ppb	77 - 240	142	<50	ND	2012/13	Erosion of natural deposits; residue from some
Chloride	500	none	ppm	89 - 103	100	29 - 30	30	2016	Runoff / leaching from natural deposits;
Color	15	none	units	1 - 2	1	<1	ND	2016	Naturally occurring organic materials
Odor Threshold	3	none	units	2 - 3	3	1	1	2016	Naturally occurring organic materials
Specific Conductance	1600	none	micromho/cm	652 - 1050	921	540 - 570	556	2016	Substances that form ions when in water; seawater influence
Sulfate	500	none	ppm	86 - 262	204	62 - 70	66	2016	Runoff / leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	1000	none	ppm	377 - 659	570	330 - 360	346	2016	Runoff / leaching from natural deposits
Turbidity	5	none	NTU	NA	NA	<0.1 - 0.3	0.2	2016	Soil runoff

ADDITIONAL PARAMETERS Unregulated	Detected Unregulated Chemicals That May be of Interest to Consumers							
	State MCL	PHG or (MCLG)	Units of Measurement	MWD Range (including highest value)	Average for MWD	LU Range (including highest value)	Average for LU Wells (a)	(b) LU Date of Last Measurement
Aggressiveness Index (e)	NS	none	units	12.2 - 12.5	12.4	12.3 - 12.4	12.4	2012/13
Alkalinity (as CaCO ₃)	NS	none	ppm	92 - 124	111	180 - 190	185	2012/13
Boron	NL = 1000	none	ppb	150 - 170	190	<100	ND	2012/13
Calcium	NS	none	ppm	30 - 79	62	56 - 62	59	2012/13
Chlorate	NL = 800	none	ppb	39 - 60	51	NA	NA	2014
Corrosivity (Langlier Index) (f)	NS	none	positive/negative	(+0.35) - (+0.60)	+0.50	(+0.97) - (+1.3)	1.1	2012/13
Hardness (as Ca CO ₃)	NS	none	ppm	126 - 306	242	170 - 210	191	2016
Hardness (grains)	NS	none	grains	7.4 - 17	14.1	9.9 - 12.3	11.1	2016
Magnesium	NS	none	ppm	12 - 27	22	6.7 - 13.1	10.1	2012/13
pH	NS	none	units	8.1 - 8.3	8.2	7.9 - 8.0	7.9	2016
Potassium	NS	none	ppm	2.9 - 5.1	4.4	2.6	2.6	2016
Sodium	NS	none	ppm	24 - 107	99	35 - 44	39	2016
Total Organic Carbon (TOC)	TT	none	ppm	1.7 - 2.8	2.4	NA	NA	2014
1,4-Dioxane	NL = 1	none	ppb	NA	NA	<1 - 2.1	1.1	2014

THIRD UNREGULATED CONTAMINANT MONITORING REGULATION (UCMR3) 6 wells monitored in 2013 CHEMICAL PARAMETERS	Monitoring Unregulated Contaminants Helps USEPA Identify Contaminants for Possible Future Regulation									
	State MCL/PHG or (MCLG)	Units of Measurement	Entry Point Range for MWD	Entry Point Average for MWD	Distribution System Range for MWD	Distribution System Average for MWD	Entry Point Range for LU Wells	Entry Point Average for Wells	Distribution System Range for LU Wells	Distribution System Average
Bromodichloromethane	NS	ppt	<80 - 110	ND	<80	ND	<80	ND	<80	ND
Chlorate	NS	ppb	53 - 90	67	58 - 110	88	<20 - 160	80	160 - 180	170
Chromium	NS	ppb	<0.2 - 0.34	ND	<0.2 - 0.33	ND	<0.2	ND	<0.2 - 0.2	ND
Hexavalent Chromium	NS	ppb	0.03 - 0.05	0.042	<0.03 - 0.042	0.028	<0.03	ND	<0.03	ND
Molybdenum	NS	ppb	4.4 - 4.9	4.7	4.5 - 7.3	6.4	9.7 - 10	9.9	9.8 - 10	9.9
Strontium	NS	ppb	1,000 - 1,200	1,000	700 - 1,000	873	420 - 460	440	440 - 490	470
Vanadium	NS	ppb	<0.2 - 7.4	ND	1.5 - 2.8	2	<0.2	ND	<0.2 - 0.41	0.2

KEY TO ABBREVIATIONS AND FOOTNOTES

AL = Action Level

ppb = parts per billion or micrograms per liter

CFU/ml = colony forming units per milliliter

pCi/L = picocuries per liter

MCL = Maximum Contaminant Level, a drinking water standard

ppm = parts per million or milligrams per liter

NA = Not Applicable at this time or not required to analyze for

ppt = parts per trillion or nanograms per liter

ND = Not detected

TT = Treatment Technique

NL = Notification Level, the level at which notification of the public water system governing body is required (formerly called Action Level)

* = Optimal treated fluoride levels for dental health is 0.8 mg/l with and operating control range from 0.7 to 1.3 mg/L.

NS = No Standard

< = less than (essentially equivalent to ND)

NTU = Nephelometric Turbidity Units. This is a measure of the suspended material in water

(a) = The average is weighted according to the individual contribution in pumping by each well to the total (active wells only)

(b) = The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants in groundwater sources do not change frequently. Some of our data, though representative, are more than one year old. MWD water is monitored more frequently.

(c) = The turbidity level of the MWD filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1.0 NTU at any time. Turbidity is a measure of the cloudiness of the water and is a good indicator of water quality and filtration performance.

(d) = Measured as Total Chlorine, the sum of the free chlorine and combined chlorine. MWD water is delivered with chloramine as the disinfectant, a combination of chlorine with ammonia. LU well water is delivered with free chlorine as the disinfectant.

(e) = An aggressiveness index of 11 or greater indicates that the water is not aggressive (noncorrosive)

(f) = A positive number Langlier Index indicates that the water is noncorrosive

(g) = Lead and Copper are regulated as a Treatment Technique under the Lead and Copper Rule. It requires water systems to take samples at "most vulnerable" consumer taps every three years and treatment steps must be taken if more than 10% of tap samples exceed the AL.

(h) = A secondary (aesthetic) standard

(i) = Average value equal to the highest quarter measurements in 2016

DEFINITIONS

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHG's are set by the California Environmental Protection Agency.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCL's are set as close to the PHG's (or MCLG's) as is economically and technologically feasible.

Secondary Drinking Water Standard (SMCL): Requirements that ensure the appearance, taste and smell of drinking water are acceptable.

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

Maximum Residual Disinfectant Level (MRDL): 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): reflect the benefits of the use of disinfectants to control microbial contaminants.

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

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

Notification Level (NL): A health-based advisory level for an unregulated contaminant.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.