



Long Beach Water  
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## ANNUAL WATER QUALITY REPORT WATER TESTING PERFORMED IN 2016

*Proudly Presented By:*

Long Beach Water Department  
Award Winning Members of  
Partnership for Safe Water (AWWA)  
PWS ID#: 1910065

Long Beach Board of Water Commissioners:

- Art Levine, President
- Robert Shannon, Vice President
- Harry Saltzgaver, Secretary
- Gloria Cordero, Commissioner
- Frank Martinez, Commissioner

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

*Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.*

របាយការណ៍នេះមានព័ត៌មានសំខាន់ៗ  
សម្រាប់អ្នកបរិភោគ ។ សូមបកប្រែ  
ឬពិគ្រោះជាមួយអ្នកដែលមើលយល់  
របាយការណ៍នេះ ។



# LONG BEACH WATER DEPARTMENT WATER QUALITY REPORT FOR 2016

The Long Beach Water Department is pleased to inform you that your tap water met all United States Environmental Protection Agency and State of California drinking water standards for 2016.



**Long Beach Water**  
Exceptional Water - Exceptional Service

## Message from the General Manager

Dear Customer:

For over a century, LBWD has remained vigilant in meeting the challenges of new regulations, source water protection, and water supply reliability while providing robust community engagement. We take our responsibilities to our community very seriously. To safeguard our continued exceptional water quality for nearly half a million customers, our skilled staff ensure that the water we serve meets or exceeds all federal and state water quality standards. Your drinking water is tested routinely for bacteriological as well as chemical quality. Our water quality staff performed over 60,000 tests in 2016 and analyzed the samples for more than one hundred drinking water contaminants. We are proud to provide our customers with reliable, affordable, and exceptional quality drinking water. We are pleased to inform you that your tap water met all United States Environmental Protection Agency (US-EPA) and California primary and secondary drinking water health standards for 2016.

Should you have any questions or concerns, please feel free to call our Water Quality Laboratory at 562.570.2482 for more information. In addition, we always welcome your comments and suggestions at our Board of Water Commissioner meetings that occur on the first and third Thursdays of every month at 9:00 a.m. at the LBWD Administration Building (1800 E Wardlow Rd, Long Beach 90807).

We appreciate your reading the annual water quality report. Thank you for your time and interest.

Sincerely,

Chris Garner



## CCR Delivery

The Consumer Confidence Report, or CCR, is an annual water quality report that the Safe Drinking Water Act (SDWA) requires public water systems to provide each customer. The purpose of the CCR is to raise customer awareness of the quality of their drinking water, where their drinking water comes from, what it takes to deliver water to businesses and homes and the importance of protecting drinking water sources.

LBWD will publish the 2016 CCR electronically at [lbwater.org/annual-water-quality-report](http://lbwater.org/annual-water-quality-report). If you would prefer to receive a hard copy of the CCR, please contact us at 562.570.2482 to request a copy or visit your neighborhood Long Beach Library branch.

*El Reporte de Confianza de los Consumidores, o CCR, es un informe anual de la calidad de agua potable que la Ley de Agua Potable Segura (SDWA) requiere LBWD para ofrecer a cada cliente. El propósito de la CCR es para aumentar la conciencia de los consumidores acerca de la calidad de su agua potable, de donde proviene, lo que se necesita para suministrar agua a las empresas y los hogares y la importancia de proteger fuentes de agua potable.*

*El LBWD publicará el CCR del 2016 electrónicamente, en [lbwater.org/annual-water-quality-report](http://lbwater.org/annual-water-quality-report). Si prefiere recibir una copia impresa del reporte CCR, póngase en contacto con LBWD por teléfono al 562.570.2482 para solicitar una copia o visite a una biblioteca de Long Beach en su vecindad.*

# LBWD DRINKING WATER SOURCES

During 2016, approximately 65 percent of the potable water served by LBWD was supplied by local groundwater; the remaining 35 percent was supplied through purchased imported surface water.

LBWD purchases treated surface water from the Metropolitan Water District of Southern California (MWD) and treats the groundwater pumped from active wells around the Long Beach and Lakewood area at our Groundwater Treatment Plant. Both the purchased surface water quality and the treated groundwater quality surpass the federal and state drinking water standards. The federal regulations are set by the U.S. Environmental Protection Agency (EPA), and the state standards are set by the State Water Resources Control Board (State Board) Division of Drinking Water.

Two major aqueducts supply the surface waters feeding MWD's five regional treatment plants. Colorado River water, which has the higher mineral content of the two supplies, is brought into Southern California through the 242-mile long Colorado River Aqueduct (CRA). This aqueduct, constructed and operated by MWD, originates at Lake Havasu and terminates in Southern California at Lake

Mathews. State Water Project (SWP) water, which contains a lower mineral content but higher natural organic matter content, is conveyed through the State Water Project. This aqueduct, constructed and operated by the California Department of Water Resources, transfers water originating from Lake Oroville in Northern California through 441 miles before terminating in Southern California.



The groundwater treated at the LBWD Groundwater Treatment Plant originates from the San Gabriel watershed. The watershed is

fed by rain and snowmelt and flows through washes and creeks into the San Gabriel River and Whittier Narrows before percolating into the underground aquifer of the central basin area of Los Angeles. The City of Long Beach is a part of the Central Basin service area.

For hydraulic reasons, the Long Beach service area may be divided into two main regions: the MWD zone, which primarily receives purchased treated surface water, and the blended zone, which may receive a combination of treated groundwater and purchased treated surface water. LBWD sometimes changes the blends of water in our system, and the residents may notice the associated mineral content (hardness) changes to the water quality. LBWD's goal is to provide water that meets or surpasses all water quality regulations at the most reasonable cost to our customers. The adjacent graph shows the areas that may be affected by a change in the water blend.

## INFORMATION ABOUT DRINKING WATER CONTAMINANTS

### Natural Sources Used For Drinking Water and Potential Contaminants

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

### Immuno-Compromised People

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people (i.e. those with cancer taking chemotherapy, who have undergone organ transplants, people diagnosed with HIV/AIDS or other immune system disorders, some elderly, and infants) can be particularly at risk from infections. Immuno-compromised people should seek advice about drinking water from their health care providers. US-EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-

426-4791) or at [www.epa.gov/safewater/hotline](http://www.epa.gov/safewater/hotline) or the US-EPA's drinking water website: [www.epa.gov/ground-water-and-drinking-water](http://www.epa.gov/ground-water-and-drinking-water)

### Substances That Could Be In Your Water

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (US-EPA) 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 protection for public health.

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. More information about contaminants and potential health effects can be obtained by calling the US-EPA's Safe Drinking Water Hotline (1-800-426-4791). Additional information on bottled water is available on the California Department of Public Health website [www.cdph.ca.gov/programs/Pages/fdbBWW.aspx](http://www.cdph.ca.gov/programs/Pages/fdbBWW.aspx)

### Natural Contaminants Present in Source Water Prior to Treatment May Include:

**Microbial Contaminants:** such as viruses and bacteria may come from sewage treatment plants, septic systems, agricultural, livestock operations, and wildlife.

**Inorganic Contaminants:** such as salts and metals can be naturally occurring or can result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and Herbicides:** may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

**Organic Chemical Contaminants:** include synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff, agricultural applications, and septic systems.

**Radioactive Contaminants:** can be naturally occurring or can be the result of oil and gas production and mining activities.

# SOURCE WATER ASSESSMENT

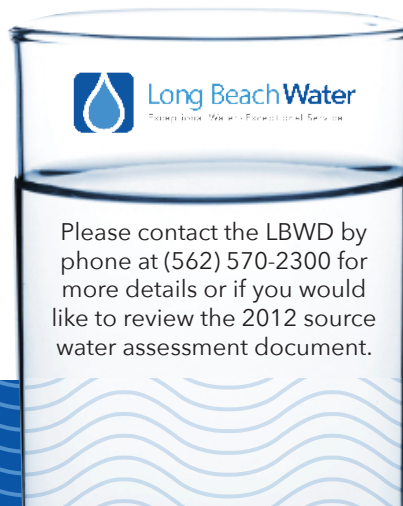
As required under the 1996 Safe Drinking Water Act amendments, a source water assessment must be completed for all active drinking water sources.

The goal of the source water assessment is to inventory all potential activities that may degrade the source water quality. LBWD purchased water in 2016 from the Metropolitan Water District of Southern California (MWD) and City of Lakewood. MWD completed its source water assessment of its Colorado River and State Project water supplies in December 2002. It was established that Colorado River supplies are most vulnerable to recreation, urban/storm water runoff, and increasing urbanization in the watershed and wastewater. State Water Project water supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation, and wastewater. A copy of the assessment can be obtained by contacting MWD by phone at (213) 217-6850.

The City of Lakewood Department of Water Resources completed an assessment in 2003 of all drinking water wells that served the city's drinking water system.

These studies examined the potential vulnerability of each well to contaminants that could enter the water supply. It was established that the groundwater is most vulnerable to current and historic gas stations, repair shops, storage tanks and dry cleaners. A copy of the complete assessment is available at the Lakewood City Clerk's Office at 5050 Clark Avenue or by contacting the Lakewood Department of Water Resources, at 562-866-9771, extension 2700.

LBWD completed a new source water assessment on its active wells in July 2012. New wells that are constructed after this date must also undergo a similar assessment. The assessment concluded that all active wells are considered most vulnerable to the community sewer collection system. Depending on location, some wells are considered vulnerable to gas stations, dry cleaners, leaking underground fuel tanks, airport activities, metal plating/finishing/ fabrication, plastic/synthetics producers and historic landfills. Although the wells are considered vulnerable to the aforementioned activities, the LBWD performs water quality monitoring for each active well and has not detected any constituents that suggests contamination. It is noteworthy to point out that the physical barrier (well containment) has a high effectiveness against these contaminations.



## SAMPLING RESULTS

During the past year, we have taken over 60,000 water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants.

Even though all the substances in these tables are under the maximum contaminant level (MCL), it is important to include in this report the list of drinking water contaminants detected during the 2016 calendar year. The presence of these substances in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table are from the testing performed from January 1 to December 31, 2016. The State requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

### SECONDARY DRINKING WATER STANDARDS - Aesthetic Standards

Parameter (Unit of Measure)	2nd MCL	MWD ZONE (114)			BLENDED ZONE (325)			Typical Sources of Contamination
		AVE.	MAX	RANGE	AVE.	MAX	RANGE	
Chloride (ppm)	500	103	118	94 - 118	49	63	34 - 63	Runoff/leaching from natural deposits; seawater influence
Color (CU)	15	ND	2	ND - 2	1	2	ND - 2	Naturally-occurring organic materials
Specific Conductance (µS/cm)	1600	1003	1072	697 - 1072	517	690	395 - 690	Substances that form ions when dissolved in water; seawater influence
Odor <sup>3</sup> (TON)	3	2	NA	NA	2	NA	NA	Naturally-occurring organic materials
Sulfate (ppm)	500	249	297	215 - 297	47	85	13 - 85	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	1000	654	694	599 - 694	302	369	227 - 369	Runoff/leaching from natural deposits

## REGULATED PRIMARY HEALTH STANDARDS

Parameter (Unit of Measure)	Goals	Regulatory Levels			MWD ZONE (114)			BLENDED ZONE (325)			Typical Sources of Contamination
	PHG (MCLG)	MCL	2nd MCL	NL (AL)	AVE.	MAX	RANGE	AVE.	MAX	RANGE	
Clarity											
Turbidity <sup>2</sup> (NTU)	NA	TT	5	NS	ND	0.11	ND - 0.11	ND	0.11	ND - 0.11	Soil Runoff
Turbidity <sup>2</sup> (Lowest monthly percent of samples meeting limit) = 100%											
Microbiology (% Positive)											
Total Coliform Bacteria	(0)	5%	NS	NS	City-Wide: Highest Monthly-0.86%; Range ND-0.86%					Naturally present in the environment	
Inorganic Chemicals											
Aluminum (ppb)	600	1000	200	NS	129	189	83 - 189	27	55	7.4 - 55	Erosion of natural deposits, added during water treatment
Arsenic (ppb)	0.004	10	NS	NS	2.0	2.4	ND - 2.4	ND	ND	ND	Erosion of natural deposits, runoff from orchards and industrial process
Barium <sup>3</sup> (ppb)	2000	1000	NS	NS	120	NA	NA	ND	NA	NA	
Copper <sup>1</sup> (ppb)	300	NS	1000	(1300)	City-wide: 90th percentile = 144, 149 sites sampled; 0 sites over Action Level (AL = 1300)					Corrosion of plumbing, erosion of natural deposits	
Fluoride (ppm)	1	2	NS	NS	0.73	0.80	0.68 - 0.80	0.73	0.78	0.70 - 0.78	Internal corrosion of household plumbing, erosion of natural deposits
Lead <sup>1</sup> (ppb)	0.2	NS	NS	(15)	City-wide: 90th percentile = <DLR, 149 sites sampled; 0 sites over Action Level (AL = 15)					Runoff/leaching from natural deposits	
Nitrate (N) (ppm)	10	10	NS	NS	ND	0.40	ND - 0.40	ND	ND	ND	Erosion of natural deposits; runoff from fertilizer use and septic systems

*DSMRT* = Distribution System Maximum Retention Time (distribution system site farthest from the drinking water utility);  
*HA* = Health Advisories; *WTP* = Water Treatment Plant

## UNREGULATED CHEMICALS requiring monitoring under federal ucmr3, 2013-2014

Parameter (Unit of Measure)	HA	MCL (NL)	PHG	MWD ZONE (114)			WTP EFFLUENT			DSMRT		
	PPB	PPB	PPB	AVE.	MAX	RANGE	AVE.	MAX	RANGE	AVE.	MAX	RANGE
Chlorate (ppb)	NS	(800)	NS	92	110	78 - 110	ND	ND	ND	53	64	31 - 64
Hexavalent Chromium (ppb)	NS	10	0.02	0.063	0.074	0.053 - 0.074	ND	0.032	ND - 0.032	0.045	0.067	ND - 0.067
Molybdenum (ppb)	40	NS	NS	4.3	4.7	4.0 - 4.7	6.9	7.1	6.7 - 7.1	5.5	6.2	4.8 - 6.2
Strontium (ppb)	4000	NS	NS	890	970	810 - 970	170	180	160 - 180	645	750	530 - 750
Vanadium (ppb)	NS	(50)	NS	2.6	2.9	2.3 - 2.9	0.4	0.41	0.4 - 0.41	1.8	2.4	1.4 - 2.4

Unregulated contaminant monitoring under the USEPA helps to determine where certain contaminants occur and whether the contaminants need to be regulated. This unregulated contaminant monitoring under Federal UCMR 3 was done in 2013-2014. LBWD will report this same result each CCR year (2016, 2017, 2018 and 2019) until 5 years of recommended reporting is completed.



## RADIOLOGICALS

Parameter (Unit of Measure)	Goals	Regulatory Levels			MWD ZONE (114)			BLENDED ZONE (325)			Typical Sources of Contamination
	PHG (MCLG)	MCL	2nd MCL	NL (AL)	AVE.	MAX	RANGE	AVE.	MAX	RANGE	
Gross Alpha (GA) <sup>3</sup> Particle Activity (pCi/L)	(0)	15	NS	NS	MWD plant effluents Gross Alpha detected in the range of ND - 5 pCi/L. <sup>4</sup> Gross Alpha detected at 5.6 pCi/L in the MWD Zone of LBWD distribution in 2016.						Erosion of natural deposits
Gross Beta (GB) <sup>3</sup> Particle Activity (pCi/L)	(0)	50	NS	NS	MWD plant effluents Gross Beta detected in the range of ND - 6 pCi/L. <sup>4</sup> Gross Beta detected at 5.9 pCi/L in the MWD Zone of LBWD distribution in 2016.						Decay of natural and man-made deposits
Uranium (pCi/L) <sup>3</sup>	0.43	20	NS	NS	MWD plant effluents Uranium detected in the range of ND - 4 pCi/L. <sup>4</sup> Uranium detected at 2.6 pCi/L in the MWD Zone of LBWD distribution in 2016.						Erosion of natural deposits

Health Effects Language: Certain minerals are radioactive and may emit forms of radiation known as alpha, beta and photons. Some people who drink water containing alpha, beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer. SWRCB considers 50 pCi/L to be the level of concern for beta particles.

## UNREGULATED CONTAMINANTS WITH NL, BUT NO MCLS

Parameter (Unit of Measure)	Goals	Regulatory Levels			MWD ZONE (114)			BLENDED ZONE (325)			Typical Sources of Contamination
	PHG (MCLG)	MCL	2nd MCL	NL (AL)	AVE.	MAX	RANGE	AVE.	MAX	RANGE	
Boron <sup>3</sup> (ppb)	NS	NS	NS	1000	150	NA	NA	120	NA	NA	Naturally present in the environment
Chlorate <sup>3</sup> (ppb)	NS	NS	NS	800	57	MWD system-wide <sup>5</sup> : 26 - 60		ND	NA	NA	Byproduct of drinking water chlorination; industrial processes
Formaldehyde <sup>3</sup> (ppb)	NS	NS	NS	100	13	NA		7.6	NA		Possible byproduct of drinking water ozonation
Nitrosodimethylamine (NDMA) <sup>3</sup> (ppt)	3	NS	NS	10	4.6	MWD System wide <sup>5</sup> : ND - 5.1		ND	NA	NA	Formed through natural, industrial and disinfection processes

## ADDITIONAL CONSTITUENTS of interest

Parameter (Unit of Measure)	MWD ZONE (114)			BLENDED ZONE (325)		
	AVE.	MAX	RANGE	AVE.	MAX	RANGE
Alkalinity (ppm)	124	145	116 - 145	135	140	125 - 140
Calcium (ppm)	72	79	63 - 79	30	37	23 - 37
Hardness (ppm)	293	320	261 - 320	99	132	68 - 132
Hardness (gpg)	17	19	15 - 19	5.8	7.7	4.0 - 7.7
Magnesium (ppm)	28	30	26 - 30	5.6	9.5	2.3 - 9.5
pH (field)	8.11	8.29	7.96 - 8.29	8.12	8.32	7.82 - 8.32
Potassium (ppm)	5.13	5.47	4.70 - 5.47	2.0	2.6	1.5 - 2.6
Silica (ppm)	6.0	10	2.5 - 10	17	23	11 - 23
Sodium (ppm)	104	110	97 - 110	73	77	64 - 77

### FOOTNOTES FOR TABLES:

- 1 Copper and Lead - lead and copper are regulated as Treatment Technique under the lead and Copper Rule, which requires water samples to be collected at the consumers' tap. If action levels are exceeded in more than 10% of consumers' taps, water systems must take steps to reduce these levels. Compliance lead and copper study was conducted in 2016 at 149 consumer taps. The values reported are in compliance with the Lead and Copper Rule. The detection limit for reporting (DLR) lead is 5 ppb. LBWD will report this same result each CCR year (2016, 2017, and 2018) until the next set of samples are taken.
- 2 Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
- 3 Single value from LBWD's annual monitoring
- 4 Data triennially monitored by MWD (last monitored in 2014)
- 5 Data from MWD's 2016 system wide monitoring

## DISINFECTION BYPRODUCTS and maximum residual disinfectants

Parameter (Unit of Measure)	Goals	Regulatory Levels			MWD ZONE (114)	BLENDED ZONE (325)	Typical Sources of Contamination
	PHG (MCLG)	MCL	2nd MCL	NL (AL)			
Bromate (ppb)	0.1	10	NS	NS	MWD Jensen plant effluent: 7.4 ppb highest running annual average (RAA), Bromate was not detected in LBWD distribution in 2016	Byproduct of drinking water ozonation	
Haloacetic Acids (HAA5) (ppb)	NS	60	NS	NS	City-wide: 11 ppb highest LRAA, range: 7.7 - 14 ppb	Byproduct of drinking water chlorination	
Trihalomethanes (TTHM) (ppb)	NS	80	NS	NS	City-wide: 43 ppb highest LRAA, range: 26 - 60 ppb	Byproduct of drinking water chlorination	
Chloramines (ppm)	MRDL= 4.0 (as Cl <sub>2</sub> )	MRDLG= 4.0 (as Cl <sub>2</sub> )	NS	NS	City-wide: 1.98 ppm highest running annual average, HRAA, range: 0.61 - 2.58 ppm	Drinking water disinfectant added during treatment	

## CHANGES IN REGULATIONS IN 2016

### State Total Coliform Rule and Federal Revised Total Coliform Rule

This CCR will include changes in drinking water regulatory requirements that took place during 2016. All water systems are required to comply with the State Total Coliform Rule. Beginning April 1, 2016, all water systems are also required to comply with the Federal Revised Total Coliform Rule. The new federal rule maintains the purpose of protecting public health by ensuring the integrity of the drinking water distribution system and the monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The US-EPA anticipates greater public health protection, as the new rule requires water systems that are vulnerable to microbial contamination, to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system. LBWD did not exceed the total coliform rule in 2016.

## INFORMATION ON DETECTED SUBSTANCES

Disinfection of drinking water in the 20th century was a major factor in reducing waterborne diseases caused by pathogenic bacteria and viruses.

### Disinfectants and Disinfection Byproducts (Trihalomethanes, Haloacetic Acids and Bromate)

Long Beach Water Department achieves primary disinfection with free chlorine and utilizes chloramine as a secondary disinfectant in the distribution system. We carefully monitor the amount of disinfectant, adding the lowest quantity of chloramine necessary to protect the safety of your water throughout the distribution system. However, chlorine and chloramine can react with naturally-occurring materials in the water to form disinfection by-products (DBPs). Total trihalomethanes (TTHMs) and haloacetic acids (HAA5) are the most common DBPs and are suspected to be carcinogenic in humans.

Some people consuming water containing TTHM in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer. In 2016, the levels for TTHMs in the distribution system ranged from 26 - 60 ppb, and the highest locational running average (LRAA) was 43 ppb, which is well below the MCL of 80 ppb. The distribution system HAA5 concentrations ranged from 7.7 - 14 ppb, and the highest LRAA was 11 ppb; also well below the MCL of 60 ppb.

### Bromate

Bromate, which is also a disinfection by-product, is formed when ozone reacts with naturally occurring bromide found in the source water. Systems using ozone to treat drinking water are required to monitor for bromate at the treatment plant's effluent. While LBWD does not ozonate our water, purchased treated surface water from MWD may have detectable levels of bromate.

Exposure to high concentrations of bromate over a long period of time caused cancer in rats and kidney effects in laboratory animals, and it is suspected of potential reproductive effects in humans. EPA established a MCL of 10 ppb that it considers protective of non-cancer health effects from long-term exposure in humans. The 2016, MWD's drinking water bromate levels were reported to be as high as 7.4 (on a highest running annual average basis) leaving their treatment plant. LBWD can usually decrease the bromate levels in most of our system by blending with our treated groundwater. In 2016, LBWD did not detect any bromate in our distribution system.

### Boron

Boron is naturally present in the environment. Based on studies in laboratory

animals, exposure to high concentrations of boron in excess of the notification levels (NL) by women who are pregnant may increase their risk of having babies with developmental effects. In 2016, the levels found in LBWD's water for boron was less than 160 ppb; well below the State's NL of 1000 ppb.

### Fluoridation

Fluoride occurs naturally in water supplies throughout California. Since 1971, LBWD mandated by the Long Beach City Council began adding fluoride to its water. Blending fluoridated water from different sources does not increase total fluoride levels in drinking water. Fluoridated water does not change the taste, color or odor of your water. Parents should consult with their child's doctor or dentist for guidance in supplementing fluoride. In 2015, the U.S. Public Health Services (PHS) revised the recommended fluoride concentration for drinking water to 0.7 mg/L (parts per million [ppm]), to maintain cavity prevention benefits and reduce the risk of dental fluorosis. Consumers may obtain more information about fluoridation, oral health, and current issues at:

[www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml)

# WATER QUALITY STANDARDS & DEFINITIONS

The US-EPA and State Board set limits for substances that may be found in your water. These standards are set to protect health and the aesthetic quality of drinking water. The table in this report shows these standards as related to the data detected in 2016.

## What are Water Quality Standards?

The US-EPA and State Board set limits for substances that may be found in your water. These standards are set to protect health and the aesthetic quality of drinking water. The table in this report shows these standards as related to the data detected in 2016.

<b>AL</b>	<b>Regulatory Action Level:</b> The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow
<b>DLR</b>	<b>Detection Limit for Purpose of Reporting:</b> The level at which a contaminant is detected for compliance reporting determination
<b>HRAA</b>	<b>Highest running annual average</b>
<b>LRAA</b>	<b>Locational running annual average</b>
<b>MCL</b>	<b>Maximum Contaminant Level:</b> The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water
<b>MRDL</b>	<b>Maximum Residual Disinfectant Level:</b> 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
<b>NL</b>	<b>Notification Level:</b> NLs are health-based advisory levels established by State Board for chemicals in drinking water that lack MCLs. When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply
<b>NS</b>	<b>No standard</b>
<b>PDWS</b>	<b>Primary Drinking Water Standard:</b> MCLs and MRDLs for contaminants that affect health, along with their monitoring and reporting requirements and water treatment requirements
<b>RTCR</b>	<b>Revised Total Coliform Rule</b>
<b>TT</b>	<b>Treatment Technique:</b> A required process intended to reduce the level of a contaminant in drinking water

## What do the Measurements Mean?

<b>Grains /Gal</b>	<b>Grains per Gallon:</b> Grains of compound per gallon of water
<b>µS/cm</b>	<b>Microsiemens per Centimeter:</b> A unit expressing the amount of electrical conductivity of a solution
<b>NA</b>	<b>Not Applicable</b>
<b>ND</b>	<b>Not Detected:</b> Indicates that the substance was not found by laboratory analysis
<b>NTU</b>	<b>Nephelometric Turbidity Units:</b> Measurement of the clarity, or turbidity, of water
<b>PPB</b>	<b>Parts per Billion:</b> One part substance per billion parts water (or micrograms per liter)
<b>PPM</b>	<b>Parts per Million:</b> One part substance per million parts water (or milligrams per liter)
<b>PPT</b>	<b>Parts per Trillion:</b> One part substance per trillion parts water (or nanograms per liter)
<b>TON</b>	<b>Threshold Odor Number:</b> A measure of odor in water

## What are Water Quality Goals?

Water quality goals are often set at such low levels that they are not achievable in practice and are not able to be detected. These goals provide guidelines for water treatment processes. The following are established water quality goals:

### MCLG

**(Maximum Contaminant Level Goal):** 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. EPA

### MRDLG

**(Maximum Residual Disinfectant Level Goal):** 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

### PHG

**(Public Health Goal):** 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 EPA

## OTHER INFORMATION

**Lead and Drinking Water** | If elevated levels of lead is present in your water, it can cause serious health problems, especially for pregnant women and young children. It is possible that lead levels in your home may be higher than levels found at your neighbors as a result of the materials used in your home plumbing. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. LBWD is responsible for providing high-quality drinking water, but we cannot control the variety of materials used in home plumbing components. In addition to the 2016 Lead and Copper Rule compliance monitoring at 149 customer taps, LBWD also conducted an extensive study at over 300 additional customer taps for lead and copper and found results to be in compliance with the Lead and Copper Rule.

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 (this water can be captured for non-potable use). If you are concerned about lead in your water, you may wish to have your water tested by your utility or an independent laboratory. 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](http://www.epa.gov/safewater/lead)