



# Annual Water Quality Report

# 20

## WATER TESTING PERFORMED IN 2020

# 20

**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:**

Frank Martinez, President  
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Gloria Cordero, Commissioner  
Naomi Rainey, Commissioner





Our water quality staff performed over **63,000** tests in 2020 and analyzed the samples for more than **one hundred** drinking water contaminants.

# CONSUMER CONFIDENCE REPORT 2020

Dear Customer:

We are proud to provide our community with exceptional quality drinking water.

Our skilled staff and our state-of-the-art Groundwater Treatment Plant ensure the water we provide to our nearly half a million customers is safe, reliable, and affordable. Your tap water undergoes a multi-stage treatment process and rigorous testing to meet or exceed all federal and state water quality standards. We take our responsibility to our community very seriously.

We recognize that fresh water is a valuable resource. That's why we offer innovative programs to help all of our customers adopt water-wise lifestyles. As California faces increasing risk of water scarcity brought on by climate change, we support water use efficiency as the Long Beach way of life through programs like Lawn-To-Garden, Certified Blue Restaurants, and pilot programs such as the Direct Install Gardens (DIG) Program which provides a water-wise landscape conversion free of charge to residents with low income living in historically underserved neighborhoods.

We value providing exceptional customer service. Our highly-qualified operators and technicians work 24/7 to quickly and efficiently make necessary pipeline repairs, giving peace of mind to our customers. Thanks to our inventive infrastructure investments, Long Beach Water averages only about 30 main breaks per year, compared to the annual industry standard of 100 main breaks for utilities of our size. We invest in the future of the community; in the fall of 2020, we released virtual youth education curriculum so families with children could continue to engage during distance learning.

Should you have any questions or concerns, please feel free to call our Water Quality Laboratory at 562.570.2479 for more information. In addition, we always welcome your comments and suggestions at our Board of Water Commissioner meetings. Please visit [lbwater.org](http://lbwater.org) to view the upcoming meeting schedule. We appreciate your reading the annual water quality report. Thank you for your time and interest.

Sincerely,

  
Chris Garner



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 2020.

## CCR DELIVERY

The Consumer Confident Report, or CCR, is an annual drinking 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 inform customers about 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 2020 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 **562-570-2479** 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 2020 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 **562-570-2479** para solicitar una copia o visite a una biblioteca de Long Beach en su vecindad.

“ WE ARE PROUD TO PROVIDE OUR CUSTOMERS WITH RELIABLE, AFFORDABLE AND EXCEPTIONAL QUALITY DRINKING WATER. ”

## LONG BEACH DRINKING WATER SOURCES

During 2020, approximately 47 percent of the potable water served by LBWD was supplied by local groundwater; the remaining 53 percent was supplied through purchased imported surface water. The groundwater usage was lower in 2020 compared to recent years, mainly due to the Groundwater Treatment Plant (GWTP) being offline for about two months of scheduled maintenance.

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 GWTP. 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 (US-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 California Aqueduct. 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 GWTP 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.



(Figure 1.0)

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 (referred to as, hardness) changes to the water quality.

Regardless of the area in Long Beach that you work or live in, LBWD's goal is to provide water that meets or surpasses all water quality regulations at the most reasonable cost to our customers. The above figure shows the areas that may be affected by a change in the water blend.

**LBWD's goal is to provide water that meets or surpasses all water quality regulations at the most reasonable cost to our customers.**

## INFORMATION ABOUT DRINKING WATER 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.

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

In order to ensure that tap water is safe to drink, the US-EPA and the 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 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)**.

### **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 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)**.





Regardless of the area in Long Beach that you work or live in, **LBWD's goal** is to provide water that meets or surpasses all water quality regulations at the most reasonable cost to our customers.

## 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 2020 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. The Colorado River supplies are most vulnerable to recreation, urban\storm water runoff, and increasing urbanization in watershed and wastewater. State Water Project water supplies are considered most vulnerable to urban\storm water runoff, wildlife, agriculture, recreation and wastewater. A copy of the assessment can be obtained by contacting [MWD at 213.217.6850](tel: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. The sources are considered 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](tel: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.

**Please contact the LBWD by phone at 562.570.2479 for more details or if you would like to review the assessment document.**



## SAMPLING RESULTS

During the past year, we have tested over 63,000 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 2020 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, 2020. 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.

## LBWD WATER QUALITY DATA - CCR REPORT - YEAR 2020

### Disinfection Byproducts and Maximum Residual Disinfectants, 2020

PARAMETER (UNIT OF MEASURE)	GOALS	REGULATORY LEVELS			MWD ZONE (114)	BLENDED ZONE (325)	TYPICAL SOURCES OF CONTAMINATION
	PHG (MCLG)	MCL	2 <sup>nd</sup> MCL	NL (AL)			
<b>Bromate (ppb)</b>	0.1	10	NS	NS	MWD Jensen plant effluent running annual average (RAA) was 4.4 ppb in 2020; LBWD distribution system RAA is less than 0.5ppb in 2020	Byproduct of drinking water ozonation	
<b>Haloacetic Acids (HAA5) (ppb)</b>	NS	60	NS	NS	City-wide: 11 ppb highest LRAA, range: 3.4 - 20 ppb	Byproduct of drinking water chlorination	
<b>Total-Trihalomethanes (TTHM) (ppb)</b>	NS	80	NS	NS	City-wide: 41 ppb highest LRAA, range: 23 - 53 ppb	Byproduct of drinking water chlorination	
<b>Chloramines (ppm)</b>	MRDL=4.0 (as Cl <sub>2</sub> )	MRDLG=4.0 (as Cl <sub>2</sub> )	NS	NS	City-wide: 2.10 ppm highest running annual average, HRAA; range 0.79 - 2.83 ppm	Drinking water disinfectant added during treatment	



## Regulated Primary Health Standards, 2020

PARAMETER (UNIT OF MEASURE)	GOALS	REGULATORY LEVELS			MWD ZONE (114)			BLENDED ZONE (325)			TYPICAL SOURCES OF CONTAMINATION
	PHG (MCLG)	MCL	2 <sup>nd</sup> MCL	NL (AL)	AVE	MAX	RANGE	AVE	MAX	RANGE	
<b>CLARITY</b>											
<b>Turbidity</b> <sup>2</sup> (NTU)	NA	TT	5	NS	ND	0.10	ND - 0.10	ND	ND	ND	Soil Runoff
<b>Turbidity</b> <sup>2</sup> (Lowest monthly percent of samples meeting limit) = 100%											
<b>MICROBIOLOGY (% POSITIVE)</b>											
<b>Total Coliform Bacteria</b> <sup>4</sup>	(0)	5%	NS	NS	City-Wide: Highest Monthly-0.35%; Range ND-0.35%					Naturally present in the environment	
<b>INORGANIC CHEMICALS</b>											
<b>Aluminum (ppb)</b>	600	1000	200	NS	142	190	71 - 190	50	130	ND - 130	Erosion of natural deposits, added during water treatment
<b>Arsenic (ppb)</b>	0.004	10	NS	NS	ND	2.5	ND - 2.5	ND	ND	ND	Erosion of natural deposits, runoff from orchards and industrial process
<b>Copper</b> <sup>1</sup> (ppb)	300	NS	1000	(1300)	City-wide: 90 <sup>th</sup> percentile = 196, 83 sites sampled; 0 sites over Action Level (AL = 1300)					Corrosion of plumbing, erosion of natural deposits	
<b>Fluoride (ppm)</b>	1	2	NS	NS	0.7	0.8	0.7 - 0.8	0.7	0.8	0.7 - 0.8	Erosion of natural deposits, supplemental additive
<b>Lead</b> <sup>1</sup> (ppb)	0.2	NS	NS	(15)	City-wide: 90 <sup>th</sup> percentile = <DLR, 83 sites sampled; 0 sites over Action Level (AL = 15)					Internal corrosion of household plumbing, erosion of natural deposits	

## Unregulated Contaminants with NL, but No MCLs, 2020

PARAMETER (UNIT OF MEASURE)	GOALS	REGULATORY LEVELS			MWD ZONE (114)		BLENDED ZONE (325)		TYPICAL SOURCES OF CONTAMINATION
	PHG (MCLG)	MCL	2 <sup>nd</sup> MCL	NL (AL)	DS*	MWD PLANT EFFLUENT RANGE	DS*	RANGE	
<b>Boron</b> <sup>3</sup> (ppb)	NS	NS	NS	1000	130	NA	120	NA	Naturally present in the environment
<b>Chlorate</b> <sup>3</sup> (ppb)	NS	NS	NS	800	93	MWD system-wide <sup>5</sup> : 27 - 76	16	NA	Byproduct of drinking water chlorination; industrial process
<b>Nitrosodimethylamine (NDMA)</b> <sup>3</sup> (ppt)	3	NS	NS	10	6.1	MWD system-wide <sup>5</sup> : ND - 5.2	4.1	NA	Formed through natural, industrial and disinfection process

\*DS = Distribution System; Single value from LBWD annual monitoring

## Radiologicals, 2020

PARAMETER (UNIT OF MEASURE)	GOALS	REGULATORY LEVELS			MWD ZONE (114)	BLENDED ZONE (325)	TYPICAL SOURCES OF CONTAMINATION
	PHG (MCLG)	MCL	2 <sup>nd</sup> MCL	NL (AL)			
<b>Gross Alpha (GA)</b> <sup>3</sup> <b>Particle Activity (pCi/L)</b>	(0)	15	NS	NS	MWD plant effluents Gross Alpha detected in the range of ND - 3 pCi/L. <sup>6</sup> Gross Alpha detected in the MWD Zone of LBWD distribution at 3.8 pCi/L		Erosion of natural deposits
<b>Gross Beta (GB)</b> <sup>3</sup> <b>Particle Activity (pCi/L)</b>	(0)	50	NS	NS	MWD plant effluents Gross Beta detected in the range of ND - 7 pCi/L. <sup>6</sup> Gross Beta was detected in the MWD Zone of LBWD distribution at 6.5 pCi/L		Decay of natural and man-made-deposits
<b>Uranium (pCi/L)</b> <sup>3</sup>	0.43	20	NS	NS	MWD plant effluents Uranium detected in the range of 1 - 3 pCi/L. <sup>6</sup> Uranium detected in the MWD Zone of LBWD distribution at 2.7 pCi/L		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.



During 2020, approximately **47 percent** of the potable water served by LBWD was supplied by local groundwater; the remaining **53 percent** was supplied through purchased imported surface water.

## Secondary Drinking Water Standards – Aesthetic Standards, 2020

PARAMETER (UNIT OF MEASURE)	2 <sup>ND</sup> MCL	MWD ZONE (114)			BLENDED ZONE (325)			TYPICAL SOURCES OF CONTAMINATION
		AVE.	MAX	RANGE	AVE.	MAX	RANGE	
Chloride (ppm)	500	91	100	75 - 100	58	96	45 - 96	Runoff/leaching from natural deposits; seawater influence
Color (CU)	15	ND	2	ND - 2	2	4	ND - 4	Naturally-occurring organic materials
Specific Conductance (µS/cm)	1600	930	1020	450 - 1020	620	980	410 - 980	Substances that form ions when dissolved in water; seawater influence
Odor <sup>3</sup> (TON)	3	ND	NA	NA	1	NA	NA	Naturally-occurring organic materials
Sulfate (ppm)	500	210	230	140 - 230	89	230	22 - 230	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	1000	600	650	460 - 650	390	820	240 - 820	Runoff/leaching from natural deposits

## Additional Constituents of Interest, 2020

PARAMETER (UNIT OF MEASURE)	MWD ZONE (114)			BLENDED ZONE 325		
	AVE.	MAX	RANGE	AVE.	MAX	RANGE
Alkalinity (ppm)	117	125	92 - 125	129	136	112 - 136
Calcium (ppm)	62	67	44 - 67	35	64	25 - 64
Hardness (ppm)	218	270	131 - 270	126	263	56 - 263
Hardness (gpg)	12.7	15.7	7.6 - 15.7	7.3	15.3	3.3 - 15.3
Magnesium (ppm)	24	26	18 - 26	10	25	3 - 25
pH (field)	8.16	8.41	8.08 - 8.41	8.20	8.40	8.10 - 8.40
Potassium (ppm)	4.6	4.9	3.6 - 4.9	2.4	4.7	1.4 - 4.7
Silica (ppm)	7.3	9.1	5.0 - 9.1	14	18.3	5.9 - 18.3
Sodium (ppm)	90	95	69 - 95	74	92	64 - 92

## Unregulated Chemicals Requiring Monitoring Under Federal UCMR4: 2018-2020

PARAMETER (UNIT OF MEASURE)	HA	MCL (NL)	PHG	MWD ZONE (114)			WTP EFFLUENT			WTP INFLUENT		
	PPB	PPB	PPB	AVE.	MAX	RANGE	AVE.	MAX	RANGE	AVE.	MAX	RANGE
Germanium (ppb)*	NS	NS	NS	ND	ND	ND	0.42	0.43	0.41 - 0.43	0.5	0.55	0.45 - 0.55
Manganese (ppb)*	NS	50	NS	1.5	2.5	0.49 - 2.5	1.9	2.6	0.95 - 2.6	1.1	1.3	0.86 - 1.3
HAA5 (ppb)*	NS	60	NS	10.59	14.74	6.85 - 14.74	10.4	13.17	8.67 - 13.17	NA	NA	NA
HAA6Br (ppb)*	NS	NS	NS	10.16	12.66	6.7 - 12.66	9.74	11.63	7.22 - 11.63	NA	NA	NA
HAA9 (ppb)*	NS	NS	NS	17.7	23.5	11.5 - 23.5	17.4	21.1	15 - 21.1	NA	NA	NA

Unregulated contaminant monitoring under the USEPA helps to determine where certain contaminants occur and whether the contaminants need to be regulated. \*Germanium, Manganese, HAA5, HAA6Br and HAA9 were detected under the UCMR4 Unregulated Contaminant Monitoring in 2018- 2020. LBWD will report these results each CCR year (2020, 2021, 2022, 2023 and 2024) for five years.

**HA** = Health Advisories; **WTP** = Water Treatment Plant, **NA** = Not Applicable

## FOOTNOTES

- <sup>1</sup>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 monitoring was conducted in 2019 at 83 consumer taps. The values reported are in compliance with the Lead and Copper Rule. The detection limit for reporting (DLR) for lead is 5 ppb. LBWD will report this same result each CCR year (2020, 2021, and 2022) until the next set of samples are taken.
- <sup>2</sup>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.
- <sup>3</sup>Single value from LBWD's annual monitoring
- <sup>4</sup>State Total Coliform Rule and Federal Revised Total Coliform Rule – The State requires, no more than 5.0% total coliform –positive samples found in distribution system in any given month; The new Federal rule requires any positive coliform samples above 5.0% to trigger Level 1 Assessment.
- <sup>5</sup>Data triennially monitored by MWD.
- <sup>6</sup>Data from MWD's 2020 system wide monitoring.

## INFORMATION ON DETECTED SUBSTANCES

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

Disinfection of drinking water was one of the major public health advances in the 20th century. It was a major factor in reducing waterborne diseases caused by pathogenic bacteria and viruses. 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 formed by the disinfectant process 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.

The values for TTHMs in the distribution system ranged from 23 – 53 ppb, with the highest locational running average (LRAA) of 41 ppb; these values are well below the MCL of 80

ppb. The distribution system HAA5 concentrations ranged from 3.4 - 20 ppb, and the highest LRAA was 11 ppb; also well below the MCL of 60 ppb.

**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 was shown to cause 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.

In 2020, MWD's drinking water bromate levels leaving their treatment plant were reported to be as high as 4.4 ppb (on a highest running annual average basis, HRAA). LBWD can usually decrease the bromate levels in most of our system by blending with our treated groundwater. In 2020, the HRAA for bromate was less than 0.5 ppb in our distribution system.



We are proud to provide our customers with **reliable**, **affordable** and **exceptional** quality drinking water.

## WATER QUALITY STANDARDS: DEFINITIONS, ACRONYMS AND ABBREVIATIONS

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 tables in this report show these standards as related to the data detected in 2020.

### What are Water Quality Standards?

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

**AWQR:** Annual Water Quality Report

**DLR (Detection Limit for Purpose of Reporting):** The level at which a contaminant is detected for compliance reporting determination

**HAA5:** Sum of Five Regulated HAAs: Monochloroacetic Acid, Monobromoacetic Acid, Dichloroacetic Acid, Dibromoacetic Acid, and Trichloroacetic Acid.

**HAA6Br:** Sum of Bromochloroacetic Acid, Bromodichloroacetic Acid, Chlorodibromoacetic Acid, Dibromoacetic Acid, Monobromoacetic Acid and Tribromoacetic Acid.

**HAA9:** Sum of nine HAAs: Monochloroacetic Acid, Monobromoacetic Acid, Dichloroacetic Acid, Dibromoacetic Acid, Trichloroacetic Acid, Bromochloroacetic Acid, Bromodichloroacetic Acid, Chlorodibromoacetic Acid, Tribromoacetic Acid.

**HRAA:** Highest running annual average

**LRAA:** Locational running annual average

**MCL (Maximum Contaminant Level):** 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

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

**NL (Notification Level):** 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

**NS:** No standard

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

**PFAS:** Polyfluoroalkyl Substances

**PFOA:** Perfluorooctanoic acid

**PFOS:** Perfluorooctane Sulfonic acid

**RTCR:** Revised Total Coliform Rule

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water  
[What do the Measurements Mean?](#)

**Grains/Gal (grains per gallon):** Grains of compound per gallon of water

**mg/L:** milligram per liter (ppm)

**µS/cm (microsiemens per centimeter):** A unit expressing the amount of electrical conductivity of a solution

**NA:** Not applicable

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water

**PPB (parts per billion):** One part substance per billion parts water (or micrograms per liter)

**PPM (parts per million):** One part substance per million parts water (or milligrams per liter)

**PPT (parts per trillion):** One part substance per trillion parts water (or nanograms per liter)

**TON (Threshold Odor Number):** A measure of odor in water

### What are 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



### **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 2020, the levels found in LBWD's water for boron was 130 ppb; well below the State's NL of 1000 ppb.

### **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 recent 2019 Lead and Copper Monitoring Rule compliance sampling at 83 customer taps, LBWD also conducted compliance monitoring under the 2018 Division of Drinking Water Order, where we partnered with 3 private schools and 72 public schools in the Long Beach Unified School District for lead testing at drinking fountains and food preparation faucets during 2018-19, where results were found 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: [epa.gov/safewater/lead](https://epa.gov/safewater/lead).

### **Fluoridation**

Fluoride is one of the most plentiful elements on earth. It occurs naturally in water supplies throughout California. In 1971, the Long Beach City Council mandated that LBWD add fluoride to its water. 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.

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. Consumers may obtain more information about fluoridation, oral health, and current issues at: [waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.shtml](https://waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml).

### **PFAS News**

Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) were two of the polyfluoroalkyl substances (PFAS) to be recommended for monitoring by utilities in their groundwater supply. In March 2019, California Division of Drinking Water, issued an Order to all water systems to perform four quarterly monitoring for PFAS. LBWD has 14 groundwater wells that were deemed vulnerable to these substances and we began monitoring in 2019. The established notification levels for these two substances are 6.5 ppt for (PFOS) and 5.1 ppt for (PFOA). Long Beach Water Department has conducted 4 quarters of monitoring and has not detected these substances in our groundwater.



**PROUDLY PRESENTED BY:**

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