# Annual Water Quality Report

# 2019

## WATER TESTING PERFORMED IN 2019

## 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:***
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Robert Shannon, *Commissioner*
Gloria Cordero, *Commissioner*

Consumer Confident Report 2019

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 2019.

# A Message From The General Manager

Dear Customer:

**We know there's been a lot of things to worry about lately; rest assured that the safety and availability of your tap water is not one of them.** The Coronavirus Disease 2019 (COVID-19) has no impact on the quality or supply of Long Beach's tap water.

**LBWD takes 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. In Long Beach, your water undergoes a multi-stage treatment process and rigorous testing so that your tap water is safe and reliable.

**We care about the safety and health of our customers and our community.**

To aid residents and businesses financially during the COVID-19 pandemic, Long Beach Water temporarily suspended water shutoffs for nonpayment. The shutoff suspension ensured that all residents could continue washing their hands as a necessary precaution to protect themselves amidst the outbreak.

While kids and families were staying Safer-at-Home, Long Beach Water and our partners at Energy Resources and Environmental Services Bureau made our K-8 environmental education online resources available for students to learn about water and energy conservation and waste reduction from the comfort of their living rooms.

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

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. Please visit 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

CCR DELIVERY

## CONSUMER CONFIDENT REPORT

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 2019 CCR electronically at **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 2019 electrónicamente, en **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.

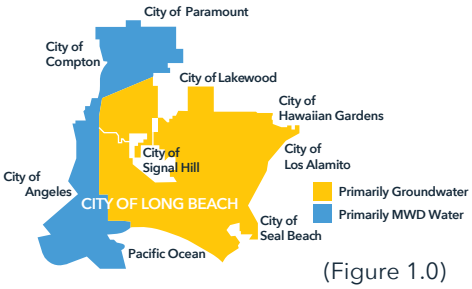
Consumer Confident Report 2019

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 2019.

# Long Beach Drinking Water Sources

During 2019, approximately 61 percent of the potable water served by LBWD was supplied by local groundwater; the remaining 39 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 (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




(Figure 1.0)

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 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 (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 adjacent figure shows the areas that may be affected by a change in the water blend.

# Information About Drinking Water Contaminants

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.

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).**

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

**Biological 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.

# Source Water Assessment

**The goal of the source water assessment is to inventory all potential activities that may degrade the source water quality.** LBWD purchased water in 2019 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/stormwater runoff, and increasing urbanization in watershed and wastewater. State Water Project water supplies are considered most vulnerable to urban/stormwater runoff, wildlife, agriculture, recreation and waste-water. A copy of the assessment can be obtained by contacting MWD 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. 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, 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 **562.570.2482** for more details or if you would like to review the assessment document.

# Monitoring Requirements Not Met For Long Beach Water Department

During November of 2016, four of our groundwater wells were detected for toluene at a level slightly higher than the detection reporting level (DRL) of 0.5 ppb. The maximum contaminant level (MCL) allowable for toluene in drinking water is 150 ppb. Our water system failed to increase monitoring from annually to quarterly, during the following four months for this substance, as is required by the drinking water standards, and was therefore in violation of the regulations. **We are required to monitor your drinking water for specific contaminants on a regular basis.** Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the calendar year 2017, we did not monitor quarterly for toluene from Alamitos Well 13, Commission Well 16, Long Beach Well 11, and Long Beach Well 12 and therefore, cannot be sure of the quality of your drinking water during that time. **Even though this failure was not an emergency, as our customers, you have the right to know what you should do, what happened, and what we did to correct this situation.**

There is no action required on your part at this time. Please see table below for details of the levels of toluene detected in 2016, of when samples should have been taken, the frequency of sampling and the results of these sampling since 2016. Please share this information with all the other people who drink this water, especially those who may not have received this public notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail. If you have any additional questions regarding this notice, **please contact Cynthia Andrews-Tate, Water Quality Manager, at 562.570.2482.**

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

| WELLS | 2016 TOLUENE RESULTS DECTECTED (ug/L;ppb) | REQUIRED SAMPLING FREQUENCY | NUMBER OF SAMPLES TAKEN | WHEN ALL SAMPLES SHOULD HAVE BEEN TAKEN | WHEN SAMPLES WERE TAKEN | RESULTS OF SAMPLES TAKEN SINCE 2016 | FURTHER ACTIONS REQUIRED |
|---|---|---|---|---|---|---|---|
| Alamitos 13 | 0.89 | Quarterly | 0 | 2/2017; 5/2017 | 6/2017*8/2018 *9/2019 11/2019 | Not-detected | Annual monitoring |
| Commission 16 | 0.61 | Quarterly | 0 | 2/2017; 5/2017 | 12/2017*8/2018 *9/2019 11/2019 | Not-detected | Annual monitoring |
| LB 11 | 0.61 | Quarterly | 0 | 2/2017; 5/2017 | 6/2017*8/2018 *9/2019 11/2019 | Not-detected | Annual monitoring |
| LB 12 | 0.73 | Quarterly | 0 | 2/2017; 5/2017 | 6/2017*8/2018 *9/2019 11/2019 | Not-detected | Annual monitoring |

*Annual monitoring for source water wells

# Sampling Results

During the past year, **we have tested over 70,000 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 2019 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, 2019.** 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.

## REGULATED PRIMARY HEALTH STANDARDS, 2019

| 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[2] (NTU) | NA | TT | 5 | NS | ND | 0.11 | ND – 0.11 | ND | 0.08 | ND – 0.08 | Soil Runoff |
| Turbidity[2] (Lowest monthly percent of samples meeting limit) = 100% | | | | | | | | | | | |
| **MICROBIOLOGY (% POSITIVE)** | | | | | | | | | | | |
| Total Coliform Bacteria[4] | (0) | 5% | NS | NS | City-Wide: Highest Monthly-0.70%; Range ND–0.70% | | | | | | Naturally present in the environment |
| **INORGANIC CHEMICALS** | | | | | | | | | | | |
| Aluminum (ppb) | 600 | 1000 | 200 | NS | 54.3 | 100 | 31 - 100 | 5.9 | 31 | ND – 31 | Erosion of natural deposits, added during water treatment |
| Arsenic (ppb) | 0.004 | 10 | NS | NS | 0.4 | 2 | ND – 2 | ND | 1 | ND - 1 | Erosion of natural deposits, runoff from orchards and industrial process |
| Copper[1] (ppb) | 300 | NS | 1000 | (1300) | City-wide: 90th percentile = 196, 83 sites sampled; 0 sites over Action Level (AL = 1300) | | | | | | Corrosion of plumbing, erosion of natural deposits |
| Fluoride (ppm) | 1 | 2 | NS | NS | 0.7 | 0.8 | 0.6 – 0.8 | 0.7 | 0.8 | 0.6 – 0.8 | Erosion of natural deposits, supplemental additive |
| Lead[1] (ppb) | 0.2 | NS | NS | (15) | City-wide: 90th percentile = <DLR, 83 sites sampled; 0 sites over Action Level (AL = 15) | | | | | | Internal corrosion of household plumbing, erosion of natural deposits |
| Nitrate (N) (ppm) | 10 | 10 | NS | NS | ND | 0.47 | ND – 0.47 | ND | ND | ND | Erosion of natural deposits; runoff from fertilizer use and septic systems |

## DISINFECTION BYPRODUCTS AND MAXIMUM RESIDUAL DISINFECTANTS, 2019

| 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 plant effluents highest running annual average (HRAA) was 5.6 ppb in 2019; LBWD distribution system HRAA was 3.1 ppb in 2019 | | Byproduct of drinking water ozonation |
| Haloacetic Acids (HAA5) (ppb) | NS | 60 | NS | NS | City-wide: 8.6 ppb highest LRAA, range: 4.4 - 10 ppb | | Byproduct of drinking water chlorination |
| Total-Trihalomethanes (TTHM) (ppb) | NS | 80 | NS | NS | City-wide: 39 ppb highest LRAA, range: 20 - 43 ppb | | Byproduct of drinking water chlorination |
| Chloramines (ppm) | MRDL=4.0 (as $Cl_2$) | MRDLG= 4.0 (as $Cl_2$) | NS | NS | City-wide: 2.01 ppm highest running annual average, HRAA; range 0.45 - 2.99 ppm | | Drinking water disinfectant added during treatment |

## SECONDARY DRINKING WATER STANDARDS– AESTHETIC STANDARDS, 2019

| 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 | 70 | 96 | 47 - 96 | 45 | 55 | 42 – 55 | Runoff/leaching from natural deposits; seawater influence |
| Color (CU) | 15 | ND | 3 | ND – 3 | 2 | 3 | ND – 3 | Naturally-occurring organic materials |
| Specific Conductance (µS/cm) | 1600 | 572 | 995 | 409 – 995 | 444 | 926 | 388 – 926 | Substances that form ions when dissolved in water; seawater influence |
| Odor[3] (TON) | 3 | 2 | NA | NA | 2 | NA | NA | Naturally-occurring organic materials |
| Sulfate (ppm) | 500 | 103 | 220 | 56 - 220 | 33 | 63 | 22 – 63 | Runoff/leaching from natural deposits; industrial wastes |
| Total Dissolved Solids (ppm) | 1000 | 384 | 614 | 257 – 614 | 264 | 314 | 221 – 314 | Runoff/leaching from natural deposits |

## UNREGULATED CONTAMINANTS WITH NL, BUT NO MCLS, 2019

| PARAMETER (UNIT OF MEASURE) | GOALS | REGULATORY LEVELS | | | MWD ZONE (114) | | BLENDED ZONE (325) | | TYPICAL SOURCES OF CONTAMINATION |
|---|---|---|---|---|---|---|---|---|---|
| | PHG (MCLG) | MCL | 2nd MCL | NL (AL) | DS* | MWD PLANT EFFLUENT RANGE | DS* | RANGE | |
| Boron[3] (ppb) | NS | NS | NS | 1000 | 130 | NA | 120 | NA | Naturally present in the environment |
| Chlorate[3] (ppb) | NS | NS | NS | 800 | 120 | ND - 55 | ND | NA | Byproduct of drinking water chlorination; industrial process |
| Formaldehyde[3] (ppb) | NS | NS | NS | 100 | 7.5 | NA | ND | NA | Possible byproduct of drinking water ozonation |
| Nitrosodimethylamine (NDMA)[3] (ppt) | 3 | NS | NS | 10 | 6.4 | ND - 4.0 | 5.8 | NA | Formed through natrual, industrial and disinfection process |

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

## ADDITIONAL CONSTITUENTS OF INTEREST, 2019

| PARAMETER (UNIT OF MEASURE) | MWD ZONE (114) | | | BLENDED ZONE 325 | | |
|---|---|---|---|---|---|---|
| | AVE. | MAX | RANGE | AVE. | MAX | RANGE |
| Alkalinity (ppm) | 86 | 126 | 73 - 126 | 126 | 138 | 104 - 138 |
| Calcium (ppm) | 36 | 72 | 22 - 72 | 24 | 32 | 18 - 32 |
| Hardness (ppm) | 151 | 287 | 104 - 287 | 80 | 110 | 60 - 110 |
| Hardness (gpg) | 8.7 | 16 | 6.0 - 16 | 4.6 | 6.0 | 3.4 - 6.3 |
| Magnesium (ppm) | 15 | 26 | 11 - 26 | 5.0 | 8.8 | 3.5 - 8.8 |
| pH (field) | 8.35 | 8.65 | 7.95 - 8.65 | 8.22 | 8.38 | 8.07 - 8.38 |
| Potassium (ppm) | 3.2 | 4.9 | 2.2 - 4.9 | 1.7 | 2.4 | 1.4 - 2.4 |
| Silica (ppm) | 9 | 10 | 8.0 - 10 | 16 | 19 | 12 - 19 |
| Sodium (ppm) | 64 | 96 | 47 - 96 | 63 | 70 | 57 - 70 |

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 has been reporting this same result each CCR year (2015, 2016, 2017, 2018 and 2019) until 5 years of recommended reporting is completed. *HAA9 was detected under the UCMR4 Unregulated Contaminant Monitoring in 2019. LBWD will report this result each CCR year (2020, 2021, 2022, 2023 and 2024)

## UNREGULATED CHEMICALS REQUIRING MONITORING UNDER FEDERAL UCMR3: 2013/2014/UCMR4: 2018-2019

| 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 |
| Haloacetic Acids (9) HAA9* | NS | NS | | 18.4 | 23.5 | 11.5 - 23.5 | 18.1 | 21.9 | 15.5 - 21.9 | NA | NA | NA |

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

**FOOTNOTES**

[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 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) 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.

[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] 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.

# 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 20 – 43 ppb, with the highest locational running average (LRAA) of 39 ppb; these values are well below the MCL of 80 ppb. The distribution system HAA5 concentrations ranged from 4.4 - 10 ppb, and the highest LRAA was 8.6 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 2019, MWD's drinking water bromate levels leaving their treatment plant were reported to be as high as 5.6 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 2019, the HRAA for bromate was 3.1 ppb in LBWD's distribution system.

# Water Quality Standards: Definitions, Acronyms & 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 2019.**

**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

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

**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 contaminant that affect health, along with their monitoring and reporting requirements and water treatment requirements

**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 Miligram 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, or 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 or 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 2019, the levels found in LBWD's water for boron was less than 140 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 completed the compliance lead testing at drinking fountains and food preparation faucets for public schools in the Long Beach Unified School District; 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.**

**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.**

**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 3 quarters of monitoring and has not detected these substances in our groundwater.

Long Beach Water
Exceptional Water · Exceptional Service

1800 E. Wardlow Road, Long Beach, CA 90807

*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.*

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