LONG BEACH UTILITIES

2024 ANNUAL WATER QUALITY REPORT

DRINKING WATER TESTING PERFORMED IN 2024

Proudly presented by

Long Beach Utilities Department
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Partnership for Safe Water
(American Water Works Association)
PWS ID#: 1910065

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Pictured: Long Beach resident refilling their reusable water bottle with Long Beach Utilities delicious drinking water at a community event

2024 Consumer Confidence Report (CCR)

The Long Beach Utilities Department (LBUD) is pleased to share your tap water meets all drinking water standards set by the United States Environmental Protection Agency (EPA) and the State of California Water Resources Control Board (SWRCB). This annual report summarizes the water quality of your drinking water in the City of Long Beach in 2024.

MESSAGE FROM THE

GENERAL MANAGER

Dear Long Beach Utilities Customers,

As your General Manager, I am honored to present the 2024 Consumer Confidence Report (CCR). This report shares important testing, data, and processes that takes place every day to provide you with safe, clean, and reliable drinking water.

I invite you to explore the 2024 CCR. In it, you will discover how the Long Beach Utilities Department (LBUD) treats 32 million gallons of drinking water daily at the Long Beach Groundwater Treatment Plant (GWTP) and distributes this important natural resource, along with imported water, to 90,000 households and hundreds of businesses in our great city. Please peruse through the consolidated data from over 60,000 water quality tests that meet or exceed all federal and state drinking water quality standards. We are particularly proud to introduce you to some of our dedicated staff who are trained and certified by the State of California to ensure that your drinking water meets our high standards.

As we prepare for a climate-resilient future, it is imperative to adapt our aging infrastructure to meet the drinking water needs of the community. The LBUD is taking steps to minimize reliance on imported water, increase opportunities for recycled water, and maximize local ground water supplies. Thank you for working with us to achieve these goals.

LBUD welcomes public comments at our Board of Utilities Commissioner meetings. These meetings are held twice a month at our Administration Building at 1800 East Wardlow Road at 9 a.m. Your insights and feedback are important to helping us maintain our commitment to excellent customer service.

Thank you for your time and interest in the 2024 Consumer Confidence Report.

Sincerely,

B. Anatole Falagán

Pictured: Long Beach Utilities Department (LBUD) 2023 Annual Water Quality Report

CONSUMER CONFIDENCE REPORT DELIVERY

The Consumer Confidence Report (CCR) is an annual drinking water quality report mandated by the State of California via the Safe Drinking Water Act (SDWA), a federal law requiring all public water systems to provide water quality information to every customer. The purpose of this annual CCR, also referred to as the Water Quality Report, is to inform Long Beach Utilities Department (LBUD) customers about the sources of their drinking water, the quality of drinking water, and to outline the water delivery process for businesses and homes.

The LBUD has published the 2024 CCR at: ***www.LBUtilities.org***. To receive a hard copy of this CCR, please contact the LBUD Laboratory Manager at (562) 570-2479 or by visiting your neighborhood Long Beach Library branch after July 1, 2025.

Public comment on this report or other issues related to the LBUD may be shared at a regularly scheduled Long Beach Public Utilities Commission meeting. Meetings are held on the first and third Thursday of every month, starting at 9:00 a.m. at the Long Beach Utilities Administration Building, 1800 E Wardlow Road, Long Beach, CA 90807. The building is conveniently located near four Long Beach Transit Bus routes: 21, 23, 71, and 131. Free visitor parking is also available.

For more information, please scan the QR code using your smart mobile device.

SCAN ME

LONG BEACH
DRINKING WATER SOURCES

The above figure shows the drinking water distribution systems in Long Beach.

In 2024, 60 percent of Long Beach's potable water needs were met by local groundwater supplies. The remaining 40 percent was met by purchased imported surface water from the Metropolitan Water District of Southern California (MWD).

Long Beach's groundwater is sourced from Central Basin and groundwater aquifers. Local groundwater is extracted from wells located throughout portions of Long Beach and are adjudicated and managed by the Water Replenishment District (WRD). Groundwater aquifers are recharged by rain and snowmelt that flow through washes and creeks into the San Gabriel River and Whittier Narrows before percolating into the underground aquifer.

To supplement local groundwater supplies, LBUD purchases imported water from the MWD. MWD imports water into southern California via the Colorado River Aqueduct, which brings in water from the Colorado River, and the State Water Project, which brings in water from the Sacramento-San Joaquin Delta.

Groundwater and imported water are mixed, or "blended", at the Long Beach GWTP prior to distribution to the majority of Long Beach's service area. The quality of treated groundwater and purchased surface water surpasses federal and state drinking water standards. Water quality standards are established by the U.S. Enviromental Protection Agency and the California State Water Resources Control Board.

Pictured: Settled water passing through a weir to the filtration treatment process.

ASSESSING OUR **SOURCES OF DRINKING WATER**

As required under the 1996 Safe Drinking Water Act amendments, a source water assessment must be completed for all active drinking water sources, including Long Beach's groundwater wells. The goal of the source water assessment is to identify threats to drinking water quality, based on the distance and likelihood of potential contaminants reaching the source water itself.

Recognizing that all source water is subject to potential threats is the best way to protect drinking water quality. The Long Beach Utilities Department (LBUD) performs extensive water quality monitoring at every groundwater well from which we source our drinking water. Our centralized treatment process safely and reliably treats groundwater to ensure it meets all state and federal drinking water standards prior to releasing the water into our drinking water distribution system.

LBUD completed an updated source water assessment on active groundwater wells located within the City of Long Beach in July 2012. New wells constructed after that date also undergo a similar assessment prior to being added to the groundwater collection system. The 2012 assessment shows all active Long Beach groundwater wells are considered most vulnerable to contaminants by sewer collection systems. Some existing groundwater wells are also vulnerable to exposure from gas stations, dry cleaners, underground fuel tanks, airport activities, metal plating, finishing and fabrication, plastic and synthetics producers, and landfills.

Although Long Beach groundwater wells are considered vulnerable to these contaminants, Long Beach Utilities performs extensive water quality monitoring for each active well and has not detected any contamination.

All groundwater wells in Long Beach are constructed with a physical barrier around the well. The wall is specifically designed to protect against groundwater contamination.

Pictured: Drinking water pools at the Groundwater Treatment Plant, going through the sedimentation basins before entering the filtration process

MWD completed a source water assessment of Colorado River and State Water Project water supplies in December 2002. Colorado River water supplies are most vulnerable to contaminants from stormwater runoff, recreational activity, and wastewater discharge. State Water Project water supplies are most vulnerable to contaminants from urban and stormwater runoff, as well as wildlife, agriculture, wastewater discharges. For a copy of the assessment and to learn more about source water pollution prevention and safety measure implementation, please visit ***www.mwdh2o.com***.

At times Long Beach purchases local groundwater from the City of Lakewood. The Lakewood Department of Water Resources completed their source water assessment in 2003. Lakewood's drinking water sources are considered most vulnerable to contaminants from current and historic gas stations, repair shops, storage tanks, and dry cleaners. A copy of the complete Lakewood source water assessment is available at the Lakewood City Clerk's Office, 5050 Clark Ave., or by contacting the Lakewood Department of Water Resources at (562) 866 - 9771 ext. 2700.

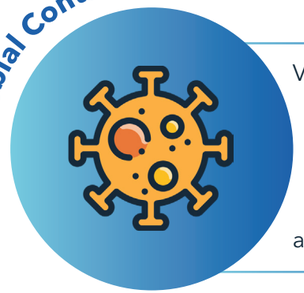
INFORMATION

ABOUT
DRINKING WATER CONTAMINANTS

Drinking water originates from natural groundwater aquifers, rivers, lakes, streams, ponds, reservoirs, and springs. As surface water or groundwater is extracted, the water dissolves naturally occurring minerals that it passes through – sometimes surface water can also pick up substances resulting from animal and human activity.

Contaminants exist in nature, including in water. Drinking water treatment makes the water safe to drink. Laboratory tests confirm drinking water safety *prior* to the water reaching your tap.

Microbial Contaminants



Viruses and bacteria may come from sewage treatment plants, septic systems, agricultural and livestock operations, and wildlife.

Radioactive Materials

Radioactive materials can be naturally occurring, or result from natural resources and mining activities, such as oil and gas production.

Organic Chemicals

Chemicals such as synthetic and volatile organic chemicals are byproducts of industrial processes and petroleum production. These can also come from gas stations, urban stormwater runoff, agricultural applications and septic systems.

Inorganic Chemicals

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

Pesticides & Herbicides

Chemicals can also come from agriculture operations, urban stormwater runoff, home gardens, and household hazardous waste.

To ensure tap water is safe to drink, the U.S. EPA and State Water Resources Control Board set regulations limiting the number of contaminants in water distributed by public water systems. State regulations also establish limits for contaminants in drinking water.

Drinking water, including bottled water, may contain a microscopic amount of contaminants. The presence of contaminants does not necessarily indicate your drinking water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

Pictured: Sample vials and reagents for sulfide analysis

NOTE FOR
IMMUNOCOMPROMISED PEOPLE

People who have an impaired immune system are more vulnerable to contaminants in drinking water compared to the general population. Immunocompromised individuals, such as those undergoing chemotherapy treatment, who have undergone organ transplants, who have HIV/AIDS or other immune system disorders, as well as older adults and infants, can be particularly at risk for infections. Immunocompromised individuals should seek advice on drinking water from their healthcare providers. U.S. EPA and Federal Centers for Disease Control guidelines on ways to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1 (800) 426-4791.

Pictured: An aliquot of water is poured from a sample bottle into a sample cell for ammonia analysis

Pictured: Mudra, a LBUD laboratory analyst, loads samples for nitrite analysis on a discrete analyzer

DRINKING WATER TESTING
SAMPLING RESULTS

In 2024, LBUD conducted water quality testing on more than 62,300 samples taken from across the city to assess for radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. We are proud to report 2024 testing confirms contaminants allowable by the U.S. EPA and Federal Centers for Disease Control are **below** the maximum contaminant level (MCL). Although the presence of these contaminants do not indicate health risk, each year we provide this Consumer Confidence Report to show the list of drinking water contaminants detected.

Unless otherwise noted, data presented in this report is from testing performed during Jan. 1 to Dec. 31, 2024. State regulations require water agencies monitor 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.

LBUD WATER QUALITY DATA 2024

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)	AVG	MAX	RANGE	AVG	MAX	RANGE	
Clarity											
Turbidity[1] (NTU)	NA	TT	5	NS	ND	0.1	ND – 0.1	ND	0.1	ND – 0.1	Soil runoff
Turbidity[1] (Lowest monthly percent of samples meeting limit) = **100%**											
Microbiology (% Positive)											
Coliform Assessment[2]	N/A	TT	NS	NS	Citywide: Highest Monthly - 0.44%; Range ND-0.44%						Naturally present in the environment
Inorganic Chemicals											
Aluminum (ppb)	600	1000	200	NS	94	160	45 - 160	17	54	ND - 54	Erosion of natural deposits, added during water treatment
Barium[3] (ppb)	2000	1000	NS	NS	110	NA	NA	ND	NA	NA	Erosion of natural deposits, oils and metals refineries discharge
Arsenic (ppb)	0.004	10	NS	NS	1.5	2.1	0.7 – 2.1	0.7	1.4	ND – 1.4	Erosion of natural deposits, runoff from orchards, and industrial process
Copper[4] (ppb)	300	NS	1000	(1300)	Citywide: 90th percentile = 265 ppb, 74 sites sampled. 0 sites over Action Level (AL = 1300)						Corrosion of plumbing, erosion of natural deposits

Regulated Primary Health Standards Continued

PARAMETER (UNIT OF MEASURE)	Goals	Regulatory Levels			MWD ZONE (114)			BLENDED ZONE (325)			Typical Sources of Contamination
	PHG (MCLG)	MCL	2nd MCL	NL (AL)	AVG	MAX	RANGE	AVG	MAX	RANGE	
Nitrate (ppm)	10	10	NS	NS	0.37	0.66	0.20 - 0.66	0.09	0.50	ND - 0.50	Erosion of natural deposits; runoff from fertilizer use and septic systems
Fluoride (ppm)	1	2	NS	NS	0.69	0.76	0.58 - 0.76	0.72	0.76	0.67 - 0.76	Erosion of natural deposits, supplemental additive
Lead[4] (ppb)	0.2	NS	NS	(15)	Citywide: 90th percentile = <DLR, 74 sites sampled. 0 sites over Action Level (AL = 15)						Internal corrosion of household plumbing, erosion of natural deposits

Radioactive Contaminants

PARAMETER (UNIT OF MEASURE)	Goals	Regulatory Levels			MWD ZONE (114)			BLENDED ZONE (325)			Typical Sources of Contamination
	PHG (MCLG)	MCL	2nd MCL	NL (AL)	AVG	MAX	RANGE	AVG	MAX	RANGE	
Gross Alpha (GA)* Particle Activity (pCi/L)	(0)	15	NS	NS	MWD plant effluents Gross Alpha detected in the range of ND - 5 pCi/L.[5] Gross Alpha in the MWD Zone of LBUD distribution is at 2 pCi/L. Gross Alpha detected in the Blended Zone of LBUD distribution is ND.						Erosion of natural deposits
Gross Alpha (GB)* Particle Activity (pCi/L)	(0)	50	NS	NS	MWD plant effluents Gross Beta detected in the range of ND - 5 pCi/L.[5] Gross Beta in the MWD Zone of LBUD distribution is at 3.7 pCi/L. Gross Beta detected in the Blended Zone of LBUD distribution is at 0.8 pCi/L.						Decay of natural and man-made deposits
Uranium (pCi/L)*	0.43	20	NS	NS	MWD plant effluents Uranium detected in the range of ND - 3 pCi/L.[5] Uranium detected in the MWD Zone of LBUD distribution is at 2.7 pCi/L. Uranium detected in the Blended Zone of LBUD distribution is at 0.3 pCi/L.						Erosion of natural deposits

*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 cancer. California 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)	DS*	RANGE	DS*	RANGE	
Boron[3] (ppb)	NS	NS	NS	1000	140	NA	120	NA	Naturally present in the environment
Chlorate[3] (ppb)	NS	NS	NS	800	53	NA	15	NA	Byproduct of drinking water chlorination, industrial processes
Formaldehyde[3] (ppb)	NS	NS	NS	100	7.5	NA	ND	NA	Possible byproduct of drinking water
Nitrosodimethylamine (NDMA)[3] (ppt)	3	NS	NS	10	2.9	MWD System wide[5]: ND – 3.0	7.4	NA	Formed through natural, industrial, and disinfection processes

*DS = Distribution system; Single value from annual monitoring.

Pictured: Mark, a LBUD Analyst readies his Gas Chromatograph/Mass Spectrometry (GC/MS) instrument for analysis of volatile organic compounds

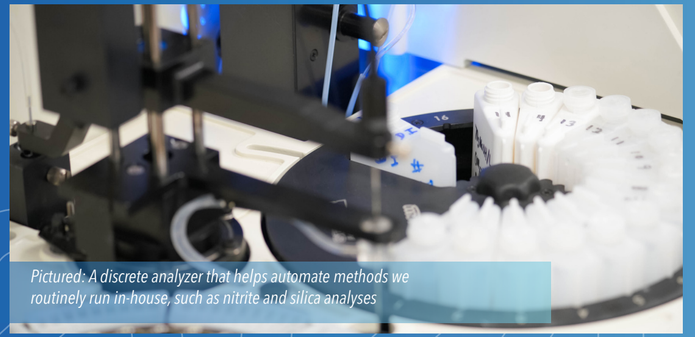
Unregulated Chemicals Requiring Monitoring Under Federal UCMR4: 2018 - 2020

PARAMETER (UNIT OF MEASURE)	HA	MCL (NL)	PHG	MWD ZONE (114)			WTP EFFLUENT			WTP INFLUENT		
	PPB	PPB	PPB	AVG	MAX	RANGE	AVG	MAX	RANGE	AVG	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	15.0 – 21.1	NA	NA	NA

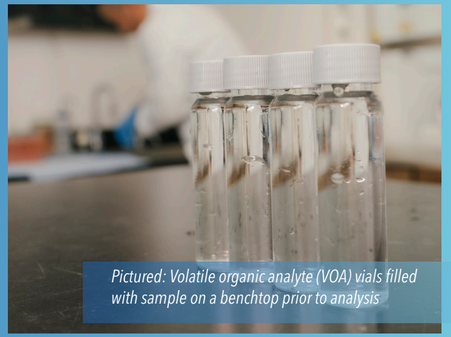
Unregulated contaminant monitoring under the U.S. EPA helps to determine where certain contaminants occur and whether the contaminants need to be regulated. The EPA uses the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and did not have a health base standard set under SDWA.

*Germanium, Manganese, HAAS, HAA6Br, and HAA9 were detected under the UCMR4 Unregulated Contaminant Monitoring in 2018-2020. Long Beach Utilities will report these results each CCR year for five years (2020, 2021, 2022, 2023, and 2024).

HA = Health Advisories; **WTP** = Water Treatment Plant, **NA** = Not Applicable; **NS**= No Standard; **ND**= None Detect.



Pictured: A discrete analyzer that helps automate methods we routinely run in-house, such as nitrite and silica analyses



Pictured: Volatile organic analyte (VOA) vials filled with sample on a benchtop prior to analysis

Unregulated Chemicals Requiring Monitoring Under Federal UCMR5: 2023 - 2025

PARAMETER	UNITS	MCL (NL)	PHG	MWD ZONE (114)			BLENDED ZONE (325)			Source of Contamination
				AVG	MAX	RANGE	AVG	MAX	RANGE	
Perfluorooctanoic Acid (PFOA)	ppt	(5.1)	0.007	ND	ND	ND	ND	ND	ND	PFAS are a group of synthetic chemicals used in a wide range of consumer products and industrial applications including non-stick cookware, water-repellent clothing, firefighting foams, and electroplating.
Perfluorooctanesulfonic Acid (PFOS)	ppt	(6.5)	1	ND	ND	ND	ND	ND	ND	
Perfluorobutanesulfonic acid (PFBS)	ppt	(500)	NS	ND	ND	ND	ND	ND	ND	
Perfluorononanoic acid (PFNA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluorohexanesulfonic acid (PF-HxS)	ppt	(3)	NS	ND	ND	ND	ND	ND	ND	
Perfluoroheptanoic acid (PFHpA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluorodecanoic acid (PFDA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluorododecanoic acid (PFDoA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluorohexanoic Acid (PFHxA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluoroundecanoic acid (PFUnA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
4,8-dioxa-3H-perfluorononanoate (ADONA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
F-53B Major (11Cl-PF3OUdS)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
F-53B Minor (9Cl-PF3ONS)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
GenX (HFPO-DA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluorotetradecanoic acid (PFTA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluorotridecanoic acid (PFTrDA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
N-ethyl Perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
N-methyl Perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	

Unregulated Chemicals Requiring Monitoring Under Federal UCMR5: 2023 - 2025 Continued

PARAMETER	UNITS	MCL (NL)	PHG	MWD ZONE (114)			BLENDED ZONE (325)			Source of Contamination
				AVG	MAX	RANGE	AVG	MAX	RANGE	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	PFAS are a group of synthetic chemicals used in a wide range of consumer products and industrial applications including non-stick cookware, water-repellent clothing, firefighting foams, and electoplating.
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluoro-3-methoxypropanoic acid (PFMPA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluoro-4-methoxybutanoic acid (PFMBA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluorobutanoic acid (PFBA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluoroheptanesulfonic acid (PFHpS)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluoropentanesulfonic acid (PFPeS)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluoropentanoic acid (PFPeA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ppt	NS	NS	ND	ND	ND	ND	ND	ND	
Lithium	ppb	NS	NS	22.75	54	ND-54	11.25	20	ND-20	Naturally occurring, used in electrochemical batteries.

Unregulated contaminant monitoring under the U.S. EPA helps to determine where certain contaminants occur and whether the contaminants need to be regulated. The EPA uses the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and did not have a health base standard set under SDWA.

29 PFAS compounds and Lithium were monitored for four quarters under the UCMR5 Unregulated Contaminant Monitoring in 2023-2024, all PFAS were not detected. Long Beach Utilities department will report these results each CCR year (2024,2025,2026,2027 and 2028) for five years.

NL= Notification level; **PHG**= Public Health goal; **NS**= No Standard; **ND**= None Detect.

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's highest running annual average (RAA) at 3.1[5] ppb and LBUD distribution system's highest RAA is none-detect in 2024	Byproduct of drinking water ozonation
Haloacetic Acids (HAA5) (ppb)	NS	60	NS	NS	Citywide: 10.7 ppb highest LRAA, range: 2.1 – 16 ppb	Byproduct of drinking water chlorination
Total-Trihalomethanes (TTHM) (ppb)	NS	80	NS	NS	Citywide: 46.2 ppb highest LRAA, range: 25 - 51 ppb	Byproduct of drinking water chlorination
Chloramines (ppm)	MRDL = 4.0 (as CL_2)	MRDLG = 4.0 (as CL_2)	NS	NS	Citywide: 2.18 ppm highest running annual average, RAA; range of chloramine in distribution system: 0.80 – 2.79 ppm	Drinking water disinfectant added during treatment

Secondary Drinking Water Standards - Aesthetic Standards: 2024

PARAMETER (UNIT OF MEASURE)	2nd MCL	MWD ZONE (114)			BLENDED ZONE (325)			Typical Sources of Contamination
		AVG	MAX	RANGE	AVG	MAX	RANGE	
Chloride (ppm)	500	97	120	75 - 120	55	120	37 - 120	Runoff/leaching from natural deposits; seawater influence
Color (CU)	15	ND	2	ND -2	2	3	ND - 3	Naturally occurring organic materials
Specific Conductance (µS/cm)	1600	960	1100	600 - 1100	570	1100	450 - 1100	Substances that form ions when dissolved in water; seawater influence
Odor (TON)	3	ND	2	ND-2	ND	2	ND-2	Naturally occurring organic materials
Sulfate (ppm)	500	200	260	92 - 260	70	260	22 - 260	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	1000	570	690	340 - 690	330	670	260 - 670	Runoff/leaching from natural deposits

Additional Constituents of Interest: 2024

PARAMETER (UNIT OF MEASURE)	MWD ZONE (114)			BLENDED ZONE (325)		
	AVG	MAX	RANGE	AVG	MAX	RANGE
Alkalinity (ppm)	110	130	83 - 130	130	140	93 - 140
Calcium (ppm)	57	73	30 - 73	31	72	23 - 72
Hardness (ppm)	240	300	140 - 300	110	300	69 - 300
Hardness (gpg)	14	17.5	8.2 - 17.5	6.4	17.5	4 - 17.5
Magnesium (ppm)	22	28	15 - 28	7	29	3 - 29
pH (field)	8.29	8.67	8.21 - 8.67	8.23	8.30	8.13 - 8.30
Potassium (ppm)	4.9	5.7	3.8 - 5.7	2.4	5.5	1.7 - 5.5
Silica (ppm)	8.6	11	7.2 - 11	16	19	7.4 - 19
Sodium (ppm)	94	110	65 - 110	74	110	66 - 110

FOOTNOTES

1. Turbidity is a measure of the cloudiness of the water. LBUD monitors turbidity because it is a reliable indicator of the effectiveness of our filtration system.
2. The Revised Total Coliform Rule established the Coliform Treatment Technique using a "find-and-fix" approach. When positive coliform samples in any given month are above 5 percent, a Level 1 Assessment is triggered and corrective action is taken.
3. Single value from LBUD's annual monitoring.
4. Copper and lead are regulated as Treatment Technique under the U.S. EPA and California Lead and Copper Rule, which requires water samples to be collected at the consumers' tap. If action levels are exceeded in more than 10 percent of consumers' taps, water systems must take steps to reduce these levels. Compliance lead and copper monitoring was conducted in 2022 at 74 consumer taps. The values reported comply with the Lead and Copper Rule. The detection limit for reporting for lead is 5 ppb. Long Beach Utilities will report this same result each CCR year (2022, 2023, and 2024) until the next set of samples are taken.
5. Data from MWD's 2024 Treatment Plant Effluents and Distribution System.

WATER QUALITY STANDARDS:

DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

The U.S. EPA and State Water Quality Board set limits for substances that can be found in 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 2023 data.

Pictured: Glass amber bottles on a benchtop awaiting nitrite analysis

What are water quality standards?

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

CCR (Customer Confidence Report): A document that provides information about the quality of drinking water

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, trichloroacetic acid

HAA6Br: Sum of six regulated HAAs – bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, monobromoacetic acid, tribromoacetic acid

HAA9: Sum of nine regulated HAAs – monochloroacetic acid, monobromoacetic acid, dichloroacetic acid, dibromoacetic acid, trichloroacetic acid, bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, tribromoacetic acid

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, or 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.

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

RTCR: Revised Total Coliform Rule

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

What are water quality goals?

MCLG (Maximum Contaminant Level Goal): Set by the U.S. EPA, the level of a contaminant in drinking water below which there is no known or expected risk to health.

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 Office of Environmental Health Hazard Assessment (OEHHA).

What do the measurements mean?

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

mg/L: Milligram per liter, or 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

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

PPT (Parts per trillion): One part substance per trillion parts of water, or nanograms per liter

PPB (Parts per billion): One part substance per billion parts of water, or micrograms per liter

PPM (Parts per million): One part substance per million parts of water, or milligrams per liter

Pictured: Sample collection from a LBUD distribution sample tap

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, most filtration methods cannot guarantee 100 percent removal. Annual monitoring of Cryptosporidium in our distribution water system indicates no detection for Cryptosporidium.

Chromium (hexavalent)

Chromium (hexavalent) sources are erosion of natural deposits and discharges from industrial waste. 2024 annual monitoring of LBUD's distribution water system indicates no detection for Chromium (hexavalent).

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 babies born with developmental delays. In 2024, the highest level of boron found in Long Beach's water was 140 ppb, well below the state's NL of 1,000 ppb.

Fluoridation

Fluoride is one of the Earth's most plentiful elements and occurs naturally in water supplies throughout California. In 1971, the Long Beach City Council mandated Fluoride be added to Long Beach's drinking water. In 2015, the U.S. Public Health Service revised the recommended Fluoride concentration for drinking water to 0.7 mg/L to maintain cavity prevention benefits and reduce the risk of dental fluorosis. In 2024, the average Fluoride in the LBUD distribution system is at 0.72 mg/L.

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 on supplementing fluoride. More information about fluoridation, oral health, and current issues is available at ***bit.ly/CAWaterboards_fluoridation.***

Pictured: Alex, a LBUD Analyst preparing a standard by using a volumetric flask

Lead and drinking water

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed) and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The LBUD is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. A filter, certified by an American National Standards...*(continued on page 28)*

ADDITIONAL INFORMATION

Institute accredited certifier, can also reduce in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formulas, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry, or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact Long Beach Utilities Department's Water Quality Laboratory at (562) 570-2479. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at ***epa.gov/safewater/lead***.

In addition to the 2022 Lead and Copper Monitoring Rule, compliance sampling at 74 customer taps, LBUD also conducted compliance monitoring under the 2018 Division of Drinking Water Order. The LBUD partnered with three private schools and 72 public schools in the Long Beach Unified School District for lead testing at drinking fountains and food preparation faucets in 2018 and 2019. The results are in compliance with the Lead and Copper Rule.

The LBUD has completed the initial lead service line inventory required by U.S. EPA Lead and Copper Rule Revisions in October 2024. LBUD has no lead or galvanized requiring replacement services line in its distribution system, including any privately-owned or customer-owned serviced lines. LBUD's full Non-lead statement can be found here: ***LBUtilities.org/waterquality***

PFAS

In March 2019, State Water Resources Control Board (SWRCB) issued an order to all water systems to perform four quarterly monitoring for perfluorooctanoic acid, or PFOA, and perfluoroctane sulfonic acid, or PFOS – together known as PFAS. LBUD has 14 groundwater wells that were deemed vulnerable to these substances and began monitoring in 2019. The established notification levels for these two substances are 6.5 ppt for PFOS and 5.1 ppt for PFOA. LBUD has not detected these substances in our groundwater since monitoring began.

In October 2022, the SWCRCB distribution issued an order to the public drinking water system to monitor water specific sources quarterly beginning with the first calendar quarter of 2023 for a list of twenty-five PFAS. The established notification levels for the four specific PFAS are 500 ppt for PFBS, 3 ppt for PFHxS, 6.5 ppt for PFOS and 5.1ppt for PFOA. LBUD has been monitoring two designated wells, Citizens 9 and Commission 25, for four quarters with no detected PFAS results.

The fifth Unregulated Contaminant Monitoring Rule (UCMR 5) was published on December 27, 2021. UCMR 5 requires LBUD to monitor four consecutive calendar quarters of point of entry to the distribution system for 29 per- and polyfluoroalkyl substances (PFAS). Sample collection started in April 2023 and concluded in 2024.

Pictured: Ana, a LBUD Analyst flame sterilizing a bottle containing media prior to performing microbiological analysis.

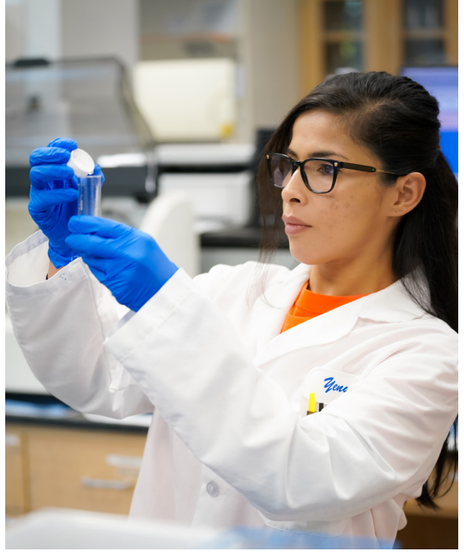
The LBUD has not detected PFAS in our system since monitoring began.

On April 10, 2024, the US EPA announced the final drinking water standards for six PFAS. These new standards are legally enforceable levels, called Maximum Contaminant Levels (MCLs), for six PFAS in drinking water. PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. The EPA also finalized health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these PFAS. Because the LBUD has not detected these chemicals in our system since monitoring began, no changes to our drinking water distribution system need to be made at this time. The LBUD will continue to monitor and report as required by state and federal laws.

Disinfectants and disinfection byproducts (trihalomethanes, haloacetic acids and bromate)

Disinfection of drinking water has been one of the major public health advances in the 20th century and has reduced waterborne diseases caused by pathogenic bacteria and viruses. The LBUD achieves primary disinfection with free chlorine and utilizes chloramine as a secondary disinfectant in our drinking water distribution system. We carefully monitor the amount of disinfectants, 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 byproducts, or DBPs.

Total trihalomethanes, or TTHMs, and Haloacetic acids, or HAA5, are the most common DBPs formed by the disinfectant process and are suspected to be carcinogenic in humans. Some people consuming water containing... *(continues on page 30).*



Pictured: Yeny, a LBUD Analyst is testing water sample for ammonia nitrogen

Pictured: A water sample with a powdered reagent (called DPD) added to see the concentration of chlorine in the sample

Pictured: Only the best drinking water in town presented in a sustainable water container.

TTHM in excess of the maximum contaminant level, or MCL, over many years may experience liver, kidney or central nervous system problems and may have an increased risk of cancer.

The values for TTHMs in the 2024 distribution system ranged from 25–51 ppb, with the highest locational running annual average, or LRAA, of 46.2 ppb. These values are well below the MCL of 80 ppb. The 2024's distribution system HAA5 concentrations ranged from 2.1 - 16 ppb, and the highest LRAA was 10.7 ppb. This is also well below the MCL of 60 ppb.

Bromate, which is also a disinfection byproduct, 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 the LBUD does not ozonate its water, the purchased treated surface water from Metropolitan Water District (MWD) may have detectable levels of bromate.

Exposure to high concentrations of bromate over a long period of time has been shown to cause cancer in rats and have kidney effects in laboratory animals. The California Office of Environmental Health Hazard Assessment (OEHAA) has suspected high concentrations of bromate to cause reproductive harm in humans. The EPA established an MCL of 10 ppb to prevent non-cancer health effects from long-term exposure in humans.

In 2024, MWD drinking water bromate levels leaving MWD treatment plants is 3.1ppb RAA. The LBUD can usually decrease the bromate levels in our system by blending groundwater with imported water. In 2024, the RAA for bromate was not detected in our distribution system. The LBUD continues to ensure safe and high-quality drinking water for every customer.

Pictured: LBUD Water Quality Laboratory Staff

Here at the Long Beach Utilities Department, we strive to provide you with exceptional water, natural gas, and sewer service. Our dedicated staff at the Long Beach Groundwater Treatment Plant are proud to serve the community of Long Beach with safe and reliable drinking water year after year. Thank you for reading the 2024 CCR.

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