PUBLIC HEALTH GOAL REPORT

BELLFLOWER/NORWALK SYSTEM

March 2025

9750 Washburn Rd., Downey, CA 90241

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LIBERTY UTILITIES – BELLFLOWER/NORWALK SYSTEM

2025 REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS

1. INTRODUCTION

The following report details the risks to public health associated with certain levels of contaminants that may be found in tap water. It further describes the best technology available for reducing contaminants and estimates the total cost, and cost per customer to install and operate the technology.

2. BACKGROUND

Division 104, Part 12, Chapter 4, Article 5, Section 116470(b) of the California Health and Safety Code (Reference No. 1) specifies that water utilities with greater than 10,000 service connections prepare a special report every three years if, within that three years' time frame, the level of certain contaminants with an existing Maximum Contaminant Level (MCL) have exceeded any Public Health Goals (PHGs). Liberty Utilities -Bellflower/Norwalk (BN) system is such a water utility. The California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) sets PHGs at levels in drinking water that are not expected to pose a significant health risk to individuals consuming an average of two liters a day of that water over a 70-year lifetime. The PHGs are based solely on health risk considerations and do not analyze costs, benefits, or technical feasibility to achieve the specific PHG level. Therefore, PHGs represent desirable goals for healthful drinking water that may or may not be achievable. These goals are non-enforceable, and water systems are not required to meet PHGs.

The law also requires that where OEHHA has not adopted a PHG for a regulated constituent, water suppliers are to use the established Maximum Contaminant Level Goals (MCLGs) adopted by the United States Environmental Protection Agency (USEPA). MCLGs are the federal equivalent to PHGs. Only constituents that have a California primary drinking water standard and for which either a PHG or MCLG has been set are to be addressed in this report. Appendix A contains a list of all regulated constituents with the MCLs and PHGs or MCLGs. MCLs are the enforceable drinking water standards set by either the USEPA or the California Department of Public Health (DPH). MCLs are based on the lowest observed health effects plus a margin of safety and consider the technological and economic feasibility to detect and treat the contaminant. A cost-benefit analysis was also conducted and considered when setting MCLs.

If a regulated constituent was detected in the Liberty Utilities – Bellflower/Norwalk water system between 2022 and 2024 at a level exceeding an applicable PHG or MCLG, this report provides the information required by law. Included is the numerical public health risk associated with the MCL and the PHG or MCLG and the category or type of risk to health that could be associated with each constituent (Table 1), the best treatment technology available that could be used to reduce the constituent level, and an estimate of the cost to install that treatment if it appropriate and feasible.

3. DRINKING WATER SUPPLIES

Liberty Utilities – Bellflower/Norwalk system obtains 89% of its source water from the Metropolitan Water District of Southern California (MWDSC). The MWDSC imports water from the Colorado River Aqueduct and the Sacramento-San Joaquin Delta by way of the State Water Project. An additional 11% comes from deep wells that pump groundwater from the Central Basin Aquifer. The Liberty Utilities – Bellflower/Norwalk system service area is shown in the attached 2024 Consumer Confidence Report (CCR) (Reference No. 2).

4. GUIDELINES FOLLOWED

The Association of California Water Agencies (ACWA) prepared suggested guidelines for the preparation of required reports on Public Health Goals (PHGs) to satisfy requirements of the California Health and Safety Code, Section 116470(b). The ACWA guidelines, updated in February 2025, were used in the preparation of this report.

5. BEST AVAILABLE TREATMENT TECHNOLOGY AND COST ESTIMATE

Both the USEPA and DDW adopt what are known as Best Available Technologies (BATs), which are the best-known methods of reducing contaminant levels to the MCL. Costs can be estimated for such technologies. However, since many PHGs and all MCLGs are set much lower than the MCL, it is not always possible or feasible to determine what treatment is needed to further reduce a constituent downward to or near the PHG or MCLG - many are set at zero. Estimating the costs to reduce a constituent to zero is difficult, if not impossible because it is not possible to verify by analytical means that the level has been lowered to zero. In some cases, installing treatment to try and further reduce very low levels of one constituent may have adverse effects on other aspects of water quality.

6. WATER QUALITY CONSIDERED

All of the water quality data collected in the Liberty Utilities – Bellflower/Norwalk System between 2022 and 2024 was considered for the purposes of determining compliance with drinking water standards. This data was previously summarized in our 2022, 2023, and 2024 Consumer Confidence Reports (CCRs), which are available on Liberty's website.

7. REGULATED CONSTITUENTS DETECTED

Table 1 summarized the regulated constituents that were detected in one or more of the Liberty Utilities – Bellflower/Norwalk System's sources from 2022-2024 at levels above the PHG, or if no PHG, above the MCLG. Table 1 shows the Detection Limit for the purpose of Reporting (DLR) as well. Liberty wells provided approximately 12.4% of the source water in 2022.

Table 1: MCL, PHGs, and DLRs for Constituents of Concern for Liberty Utilities – Bellflower/Norwalk System Water Sources

Constituent	MCL	DLR	PHG (MCLG)
Arsenic (µg/L)	10	2	0.004
Perfluorooctanoic acid (PFOA) (ng/L)	-	-	0.007
Perfluorooctane sulfonic acid (PFOS) (ng/L)	-	-	1
Uranium (ρCi/L)	20	1	0.43

µg/L = micrograms per liter (equivalent to parts per billion, ppb)
ng/L= nanograms per liter (equivalent to parts per trillion, ppt)
ρCi/L = picoCuries per liter (one trillionth of a curie)

7.1. INORGANIC CHEMICALS

Arsenic: Although the inorganic form of arsenic tends to be more predominant than organic forms, contamination of a drinking water source by arsenic can result from either natural or human activities. Typically, arsenic occurrence in water is caused by the weathering and dissolution of arsenic-bearing rocks, minerals, and ores. Arsenic contamination in water is also caused by its use in industry for wood preservatives, paints, drugs, dyes, soaps, metals, and semiconductors. Agricultural applications, mining, and smelting also contribute to arsenic release.

The Public Health Goal for arsenic is 0.004 µg/L. The federal and state MCL for arsenic is 10 µg/L (the federal MCLG is 0 µg/L). The DLR for arsenic is 2 µg/L and currently, there are no laboratory analytical methods available that can reliably measure arsenic as low as the PHG. The health risk category associated with arsenic is carcinogenicity. At the PHG, the theoretical cancer risk is 1×10^{-6}. This means one excess cancer case per million people exposed to the PHG level for a lifetime of 70 years. At the federal and state MCL of 10 µg/L, the theoretical cancer risk is 2.5×10^{-3}. This means 2.5 excess cancer cases per one thousand people exposed to the MCL for a lifetime of 70 years.

7.2. URANIUM

Most drinking water sources have very low levels of radioactive contaminants (radionuclides) originating from natural sources, not man-made sources. These very low levels are not considered to be a public health concern, although at high levels, there may be an increased risk of cancer. OEHHA has established cancer risk values for radium 228 and uranium but not for gross alpha radiation.

OEHHA has established a PHG of 0.43 ρCi/L for Uranium. The MCL for Uranium is 20 ρCi/L. The average of uranium for the Liberty's sources is 2 ρCi/L. Uranium in MWDSC is not detected. At the PHG, the theoretical cancer risk is 1×10^{-6}. This means one excess cancer case per million people exposed to the PHG level for a lifetime of 70 years. At the federal and state MCL of 20 ρCi/L, the theoretical cancer risk is 5×10^{-5}. This means 5 excess cancer cases per one hundred thousand people exposed to the MCL for a lifetime of 70 years.

7.3. UNREGULATED CONTAMINANTS

Perfluorooctanoic acid (PFOA) and Perfluorooctane sulfonic acid (PFOS): For more than a half-century, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) were widely used in industrial applications and consumer products, notably, PFOA in nonstick cookware and PFOS in stain and water-repellant fabrics and in fire-fighting foams. The manufacture of these chemicals was phased out in the US following concerns about their extreme persistence in the environment and their detection in virtually all human blood serum samples. Although levels in the environment have declined from their peak around the year 2000, PFOA and PFOS continue to be present in the environment and are found in California drinking water. Because exposure to these chemicals is so prevalent and elimination times are so long, it is critical to understand the toxicity associated with these compounds and their impacts on human health**.**

Human data wase used to derive the PHG for PFOA and the noncancer Health Protective Concentrations (HPCs) for PFOA and PFOS. The PHG of 0.007 ppt for PFOA is based on the increased risk of kidney cancer in humans (Vieira et al., 2013; Shearer et al., 2021). This level should protect against noncancer toxicity as well. Similarly, the PHG of 1 ppt for PFOS is based on increased liver and pancreatic tumor incidence in a two-year rat study (Butenhoff et al., 2012b). The PHG should be protective for all noncancer toxicity endpoints, as it is lower than the HPC of 2 ppt, based on elevated total cholesterol in humans.

8. HEALTH RISK INFORMATION FOR PUBLIC HEALTH GOALS

As previously stated, contaminants with California MCLs that do not yet have PHGs will use the federal MCLG for the purpose of complying with the requirements of the once-every-three-years Public Health Goal Report and public hearing. MCLGs, like PHGs, are strictly health-based and include a margin of safety. One difference, however, is that the MCLGs for carcinogens are set at zero because the USEPA assumes there is no absolutely safe level of exposure to them. PHGs, on the other hand, are set at a level considered to pose no significant risks of cancer. This is usually a "no more than" one-in-a-million excess cancer risk level for a lifetime of exposure. The cancer risks discussed in Table 2 are based on the OEHHA evaluations.

Table 2: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category	California PHG	Cancer Risk @ PHG	California MCL	Cancer Risk @ California MCL
Uranium	Cancer	0.43 ρCi/L	One per million	20 ρCi/L	5×10^{-5} (Five per hundred thousand)
Arsenic	Cancer	0.004 ppb	One per million	0.010 ppm	2.5×10^{-3} (2.5 per thousand)
PFOA	Cancer	0.007 ppt	One per million	NA	NA
PFOS	Cancer	1 ppt	One per million	NA	NA

9. RECOMMENDATIONS FOR FURTHER ACTION

The water quality of drinking water provided by Liberty meets all State of California Department of Public Health and USEPA drinking water standards which are set to protect public health. Additionally, costly treatment processes would be required to further reduce the levels of constituents to the PHG levels. The effectiveness of the treatment process to provide any significant reduction in constituent levels at the current low values is uncertain as these treatment processes have been designed to meet the drinking water standards and not PHGs. The health protection of these further hypothetical reductions is not at all clear and may not be quantifiable. Due to this uncertainly, the lack of a regulatory driver to require treatment to such levels, and the significant rate increase required to implement this treatment, no action is proposed by Liberty.

The public hearing to receive comments from the public and Liberty Utilities – Bellflower/Norwalk system customers is scheduled online for March 27th, 2025, from 9:00 a.m. to 11:00 a.m.

10. REFERENCES

Reference 1: State of California Health and Safety Code, Section 116470 (b) – (f).
Reference 2: Liberty Utilities – Bellflower/Norwalk. 2022 Consumer Confidence Report on Water Quality for 2024.

REFERENCE 1: STATE OF CALIFORNIA HEALTH AND SAFETY CODE SECTION 116470 (B) - (F)

(b) On or before July 1, 1998, and every three years thereafter, public water systems serving more than 10,000 service connections that detect one or more contaminants in drinking water that exceed the applicable public health goal, shall prepare a brief written report in plain language that does all of the following:

(1) Identifies each contaminant detected in drinking water that exceeds the applicable public health goal.

(2) Discloses the numerical public health risk, determined by the office, associated with the maximum contaminant level for each contaminant identified in paragraph (1) and the numerical public health risk determined by the office associated with the public health goal for that contaminant.

(3) Identifies the category of risk to public health, including, but not limited to, carcinogenic, mutagenic, teratogenic, and acute toxicity, associated with exposure to the contaminant in drinking water, and includes a brief plainly worded description of these terms.

(4) Describes the best available technology, if any is then available on a commercial basis, to remove the contaminant or reduce the concentration of the contaminant. The public water system may, solely at its own discretion, briefly describe actions that have been taken on its own, or by other entities, to prevent the introduction of the contaminant into drinking water supplies.

(5) Estimates the aggregate cost and the cost per customer of utilizing the technology described in paragraph (4), if any, to reduce the concentration of that contaminant in drinking water to a level at or below the public health goal.

(6) Briefly describes what action, if any, the local water purveyor intends to take to reduce the concentration of the contaminant in public drinking water supplies and the basis for that decision.

(c) Public water systems required to prepare a report pursuant to subdivision (b) shall hold a public hearing for the purpose of accepting and responding to public comment on the report. Public water systems may hold the public hearing as part of any regularly scheduled meeting.

(d) The department shall not require a public water system to take any action to reduce or eliminate any exceedance of a public health goal.

(e) Enforcement of this section does not require the department to amend a public water system's operating permit.

(f) Pending adoption of a public health goal by the Office of Environmental Health Hazard Assessment pursuant to subdivision (c) of Section 116365, and in lieu thereof, public water systems shall use the national maximum contaminant level goal adopted by the United States Environmental Protection Agency for the corresponding contaminant for purposes of complying with the notice and hearing requirements of this section.

REFERENCE 2: LIBERTY UTILITIES – BELLFLOWER/NORWALK. 2024 CONSUMER CONFIDENCE REPORT ON WATER QUALITY FOR 2023.

2024 Consumer Confidence Report on Water Quality for 2023

Annual Water Quality Report

Bellflower/Norwalk

PWS Number 1910211

Liberty

Message from the President

Liberty is committed to providing customers with safe, quality drinking water. We are proud to present this Water Quality Report (Consumer Confidence Report) that shares detailed information regarding local water service and our compliance with state and federal water quality standards during the 2023 calendar year.

Liberty makes appropriate investments each year to deliver water that meets the safety standards established by the California State Water Resources Control Board's Division of Drinking Water (DDW), the California Public Utilities Commission (CPUC), and the United States Environmental Protection Agency (EPA). We invest responsibly to maintain the local water infrastructure because a strong infrastructure is key to delivering quality water. The water we deliver to your home or business is thoroughly tested by independent laboratories, and data is provided to DDW to verify compliance with primary and secondary state and federal water quality standards.

We know our customers rely on us for water that is safe to drink, and we take this responsibility seriously. At Liberty, "Sustaining Energy and Water for Life" is more than a tagline. Our employees live in the community and take pride in providing quality water and reliable service to you and your neighbors.

If you have any questions about this report, please don't hesitate to contact us at 800-727-5987.

On behalf of the entire Liberty family, thank you for being a valued customer and neighbor. We are proud to be your water provider.

Sincerely,

Edward Jackson

President, Liberty California

This report contains important information about your drinking water. Please contact Liberty at (800) 727-5987 for assistance in Spanish.

Este informe contiene información muy importante sobre su agua para beber. Favor comunicarse con Liberty al (800) 727-5987 para asistirlo en Español.

To request a printed copy of this report, please call us at 1-800-727-5987. This report can also be found at www.libertyenergyandwater.com.

Where Does My Water Come From?

Communities Served

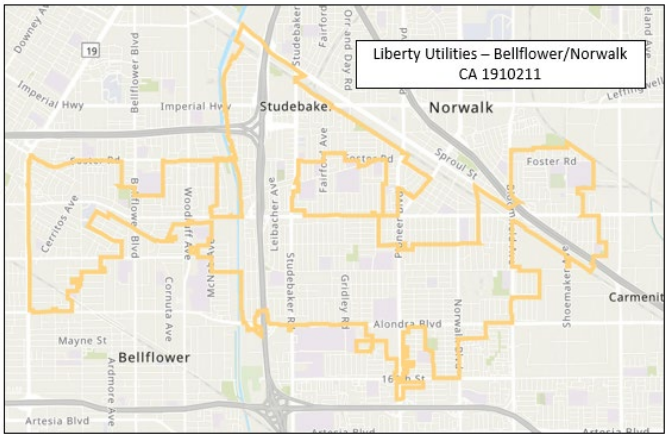
In 2023, Liberty Utilities – Bellflower/Norwalk system obtained 86.75% of its source water from the Metropolitan Water District of Southern California (MWD). The MWD imports water from the Colorado River Aqueduct and the Sacramento-San Joaquin Delta by way of the State Water Project. An additional 13.25% came from wells that pump groundwater from the Central Basin Aquifer.

About the Metropolitan Water District of Southern California

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

Two Sources of Imported Water

The Bellflower/Norwalk system receives the majority of its water from the MWD Diemer Filtration Plant in Yorba Linda. In 2023, the Diemer Plant source water consisted of 0 to 100% State Water Project supply, and 0 to 100% Colorado River Water supply.



Source Water Assessment

The 1996 Safe Drinking Water Act amendments required states to perform an assessment of potentially contaminating activities near drinking water sources of all water utilities. Liberty updated the Source Water Assessment in 2017. Liberty's well sources are considered most vulnerable to the following activities: gas stations; dry cleaners; metal plating/finishing/fabricating shops; military installations; chemical /petroleum processing and storage facilities; and underground storage tanks.

A copy of the complete assessment is available at Liberty Utilities' Downey office and the SWRCB office in Glendale. You may request a summary of the assessment by contacting Vanessa Lumley of Liberty at 562-805-2066, or by contacting Ms. Lillian Luong, SWRCB sanitary engineer, at 818-551-2038.

What are Drinking Water Standards?

Drinking water standards are the regulations set by the USEPA to control the level of contamination in the nation's drinking water. The USEPA and the SWRCB are the agencies responsible for establishing drinking water quality standards in California. This approach includes assessing and protecting drinking water sources; protecting wells and surface water; making sure water is treated by qualified operators; ensuring the integrity of the distribution system; and making information about water quality available to the public. The water delivered to your home meets the standards required by the USEPA and the SWRCB.

This report describes those contaminants that have been detected in the analyses of almost 200 different potential contaminants, nearly 100 of which are regulated by the USEPA and the SWRCB. Liberty is proud to tell you that there have been no contaminants detected that exceed any federal or state drinking water standards. Hundreds of samples analyzed every month by Liberty's contract certified laboratory assures that all primary (health-related) and secondary (aesthetic) drinking water standards are being met. Sample results are available in the Table that is part of this report.

This report is intended to provide information for all water users. If received by an absentee landlord, a business, or a school, please share the information with tenants, employees or students. We are happy to make additional copies of this report available. You may also access this report on the Liberty web page at www.libertyenergyandwater.com.

Substances That Could be in Water

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

Contaminants that may be present in source water include:

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

Inorganic Contaminants, such as salts and metals, which can be naturally- occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive Contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the SWRCB prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (USFDA) also establishes limits for contaminants in bottled water that provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline at 1-800-426-4791 or visiting their website at https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations. For information on bottled water visit the USFDA website at www.fda.gov.

Do I Need to Take Special Precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. The USEPA and 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 at 1-800-426-4791.

Important Health Information

Lead - If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Liberty is responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

1,4- Dioxane - In 2011, Liberty, along with other water utilities in the Central Basin aquifer, sampled all wells for 1,4-dioxane at the request of the SWRCB. While 1,4-dioxane is not a regulated chemical, SWRCB had set a Notification Level (NL) of 1 part per billion (ppb) in 2010. In 2023, Liberty found 1,4-dioxane in one active well in the Bellflower/Norwalk system. SWRCB does not recommend that Liberty remove this well from service until it exceeds 10 times the NL. Little scientific data are available on the long-term effects of 1,4-dioxane on human health, although the USEPA has listed it as a probable human carcinogen. Besides this notice, the only action

required was notification of the Lynwood City Council and the County Board of Supervisors. This was done on June 08, 2023.

Per- and polyfluoroalkyl substances (PFAS) - Per- and polyfluoroalkyl substances (PFAS), sometimes called PFCs, are chemicals resistant to heat, water, and oil. PFAS have been classified by the United States Environmental Protection Agency (U.S. EPA) as an emerging contaminant on the national landscape.

The State Water Board's Division of Drinking Water (DDW) established response levels for PFAS. A response level is a non-regulatory, precautionary health-based measure that represents a recommended level that water systems consider taking a water source out of service or providing treatment if that option is available to them. The response level for PFOA is 10 ng/L; the response level for PFOS is 40 ng/L.

PFOA and PFOS are readily absorbed but not readily eliminated from the human body. Health effects associated with long-term exposure include harmful effects to a developing fetus or infant, harmful effects to the immune system, thyroid, and liver, and cancer. In addition to water, humans can be exposed to PFOA and PFOS through various sources, including food, dust in homes, and imported consumer products. For information on PFOA, PFOS, and other PFAS, including possible health outcomes, you may visit these websites: https://www.epa.gov/pfas

Sampling conducted in 2023 indicated the presence of PFOA and PFOS in the source water over the response levels. Liberty placed the wells offline in 2020, so no customers receive water from these sources. In addition, we are studying treatment options for all affected wells to protect public health.

Chloramines

To help prevent waterborne diseases, Liberty adds small amounts of chlorine to its groundwater supply in accordance with state and federal regulations.

Liberty also purchases water from the Metropolitan Water District (MWD). MWD applies a different disinfectant, called chloramine, to their water supply. Chloramine is a combination of chlorine and ammonia. You are receiving this information because Liberty purchases water from MWD, and we want you, our customer, to be informed about chloramine.

Chloramine does not pose a health hazard to the general population. Chloramine has been used as a disinfectant for municipal water supplies since the early 1900s and is safe for drinking, bathing, cooking, and other normal uses.

Two specific groups, however, may need to take extra precautions with chloraminated water – kidney dialysis patients and fish hobbyists. While chloraminated water does not pose a risk to kidney dialysis patients who drink, cook, or bathe in it, those who use kidney dialysis machines may want to take special precautions or consult their physician for the appropriate type of water treatment to remove chloramines from the water used for dialysis. Customers who maintain fishponds, tanks, or aquariums should also make necessary adjustments in water quality treatment, as chloramines are toxic to fish. Contact your local pet store or fish shop for additional assistance. For more information on chloramines, call Liberty at (800) 727-5987 or visit https://www.epa.gov/dwreginfo/chloramines-drinking-water.

Drinking Water Fluoridation

Fluoride has been added to U.S. drinking water supplies since 1945. Of the 50 largest cities in the U.S., 43 fluoridate their drinking water. Liberty treats your water by adding fluoride to the naturally occurring level to help prevent dental caries in consumers. State regulations require the fluoride levels in the treated water to be maintained within a range of 0.6 mg/L to 1.2 mg/L with an optimum dose of 0.7 mg/L. Our monitoring showed that the fluoride levels in the treated water ranged from 0.6 mg/L to 0.8 mg/L, with an average of 0.7 mg/L. Information about fluoridation, oral health, and current issues is available from https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html

How Might I Become Actively Involved?

If you would like to observe the decision-making process that affects drinking water quality or if you have any further questions about your drinking water report, please call us at 1-800-727-5987 to inquire about scheduled meetings or contact persons.

Testing Results

During the year, Liberty collects water samples to determine the presence of any radioactive, biological, inorganic, or organic contaminants. All of the substances listed in the table below tested under the Maximum Contaminant Level (MCL). Liberty believes it is important you know what was detected, and how much of the substance was present. The state allows the monitoring of certain substances less than once a year because the concentrations of these substances do not change frequently. If a substance was tested and there was no detection, it is not listed in this table. You can find Definitions, Terms and Abbreviations related to this Table in the next section for easy reference.

Bellflower/Norwalk 2023 Annual Water Quality Report							
PRIMARY STANDARDS – Health Based							
DISTRIBUTION SYSTEM							
Microbiological Constituents (Units)	**Violation? (Yes/No)**	**Primary MCL (MRDL)**	**PHG (MRDLG)**	**Value**		**Most Recent Sampling Date**	**Typical Source of Constituent**
Total Coliform Bacteria ≥40 samples/month (Present/Absent)	**No**	TT	(0)	Highest percent of monthly samples positive was 2.4%		2023	Naturally present in the environment
Disinfectant Residuals	**Violation? (Yes/No)**	**Primary MCL (MRDL)**	**PHG (MRDLG)**	**Range of Detection**	**Average**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Chlorine [as Cl_2] (ppm)	**No**	(4.0)	4	0.2 - 2.7	1.8	2023	Drinking water disinfectant added for treatment
Disinfection By-Products[(a)]	**Violation? (Yes/No)**	**Primary MCL**	**PHG (MCLG)**	**Range of Detection**	**Average**	**Most Recent Sampling Date**	**Typical Source of Constituent**
TTHMs [Total of Four Trihalomethanes] (ppb)	**No**	80	N/A	ND - 84	54	2023	Byproduct of drinking water disinfection
HAA5 [Total of Five Haloacetic Acids] (ppb)	**No**	60	N/A	ND - 37	21	2023	Byproduct of drinking water disinfection
Fluoridation	**Violation? (Yes/No)**	**Primary MCL**	**PHG (MCLG)**	**Range of Detection**	**Average**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Fluoride (ppm) [Treatment Added] - Fluoridated area	**No**	2.0	1	0.6 - 0.8	0.7	2023	Fluoride added for treatment

Lead and Copper (Residential Internal Plumbing)	Violation? (Yes/No)	Action Level	PHG (MCLG)	Sample Data	Range of Detection	90th Percentile Level	Most Recent Sampling Date	Typical Source of Constituent
Copper (ppm)	No	1.3	0.3	0 of the 30 samples collected exceeded the action level.	ND - 0.3	ND	2022	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	No	15	0.2	0 of the 30 samples collected exceeded the action level.	ND	ND	2022	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SOURCE WATER									
Turbidity [(b)]	**Violation? (Yes/No)**	**Primary MCL**	**PHG (MCLG)**	**Range of Detection for MWD**	**Average Level for MWD**	**Range of Detection for LU Sources**	**Average Level for LU Sources**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Highest single measurement of the treated surface water (NTU)	No	TT = 1.0	N/A	0.08	N/A	N/A	N/A	2023	Soil runoff
Lowest percent of all monthly readings less than 0.3 NTU (%)	No	TT = 95	N/A	100	N/A	N/A	N/A	2023	Soil runoff
Inorganic Constituents	**Violation? (Yes/No)**	**Primary MCL**	**PHG (MCLG)**	**Range of Detection for MWD**	**Average Level for MWD**	**Range of Detection for LU Sources**	**Average Level for LU Sources**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Aluminum (ppm)	No	1	0.6	ND - 0.07	N/A	ND	ND	2022	Erosion of natural deposits; residual from some surface water treatment processes
Fluoride (ppm) [Naturally occurring]	No	2.0	1	0.6 - 0.8	0.7	0.3	0.3	2023	Oil and metal refineries discharge; natural deposit erosion
Nitrate [as N] (ppm)	No	10	10	0.7	0.7	1	1	2023	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Organic Constituents	**Violation? (Yes/No)**	**Primary MCL**	**PHG (MCLG)**	**Range of Detection for MWD**	**Average Level for MWD**	**Range of Detection for LU Sources**	**Average Level for LU Sources**	**Most Recent Sampling Date**	**Typical Source of Constituent**
cis-1,2-Dichloroethylene (c-1,2-DCE) (ppb)	No	6	13	ND	ND	0.9 - 1.2	1.1	2023	Discharge from industrial chemical factories; major biodegradation byproduct of TCE and PCE groundwater contamination

Radioactive Constituents	Violation? (Yes/No)	Primary MCL	PHG (MCLG)	Range of Detection for MWD	Average Level for MWD	Range of Detection for LU Sources	Average Level for LU Sources	Most Recent Sampling Date	Typical Source of Constituent
Combined Radium 226/228 (pCi/L)	No	5	(0)	ND	ND	2	2	2019	Erosion of natural deposits
Gross Alpha Activity (pCi/L)	No	15	(0)	ND - 5	ND	3	3	2022	Erosion of natural deposits
Gross Beta Activity (pCi/L)	No	50	(0)	ND - 6	ND	N/A	N/A	2022	Decay of natural and man-made deposits
Uranium (pCi/L)	No	20	0.43	ND - 3	1	4	4	2022	Erosion of natural deposits
SECONDARY STANDARDS - Aesthetics									
SOURCE WATER									
	Violation? (Yes/No)	**Secondary MCL**	**PHG (MCLG)**	**Range of Detection for MWD**	**Average Level for MWD**	**Range of Detection for LU Sources**	**Average Level for LU Sources**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Aluminum (ppb)	No	200	N/A	ND-70	N/A	ND	ND	2022	Erosion of natural deposits; residual from some surface water treatment processes
Chloride (ppm)	No	500	N/A	42 - 91	66	73	73	2022	Runoff/leaching from natural deposits; seawater influence
Color (units)	No	15	N/A	1 - 2	2	ND	ND	2023	Naturally-occurring organic materials
Odor---Threshold (units)	No	3	N/A	2	ND	1	1	2023	Naturally-occurring organic materials
Specific Conductance (µS/cm)	No	1600	N/A	424 - 859	642	920	920	2023	Substances that form ions when in water; seawater influence
Sulfate (ppm)	No	500	N/A	70 - 175	122	150	150	2023	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	No	1000	N/A	253 - 534	394	590	590	2023	Runoff/leaching from natural deposits
OTHER CONSTITUENTS									
	Violation? (Yes/No)	**Notification Level**	**PHG (MCLG)**	**Range of Detection for MWD**	**Average Level for MWD**	**Range of Detection for LU Sources**	**Average Level for LU Sources**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Alkalinity as $CaCO_3$ (ppm)	N/A	N/A	N/A	66 - 102	84	280	280	2023	Runoff/leaching of natural deposits; carbonate, bicarbonate, hydroxide, and occasionally borate, silicate, and phosphate
Calcium (ppm)	N/A	N/A	N/A	25 - 52	38	120	120	2023	Runoff or leaching from natural deposits

OTHER CONSTITUENTS (CONTINUED)									
	Violation? (Yes/No)	**Notification Level**	**PHG (MCLG)**	**Range of Detection for MWD**	**Average Level for MWD**	**Range of Detection for LU Sources**	**Average Level for LU Sources**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Hardness [as $CaCO_3$] (ppm)	N/A	N/A	N/A	99 - 220	160	390	390	2023	Runoff/leaching from natural deposits; sum of polyvalent cations, generally magnesium and calcium present in the water
Hardness [as $CaCO_3$] (grains/gallon)	N/A	N/A	N/A	5.8 - 12.9	9.4	22.8	22.8	2023	
Magnesium (ppm)	N/A	N/A	N/A	9.6 - 21	15	22	22	2023	Runoff or leaching from natural deposits
pH (pH units)	N/A	N/A	N/A	8.5	8.5	8	8	2023	Hydrogen ion concentration
Potassium (ppm)	N/A	N/A	N/A	2.6 - 4.3	3.4	4.6	4.6	2023	Runoff or leaching from natural deposits
Sodium (ppm)	N/A	N/A	N/A	47 - 91	69	57	57	2023	Salt present in the water; naturally occurring
UNREGULATED CHEMICAL MONITORING									
	Violation? (Yes/No)	**Notification Level**	**PHG (MCLG)**	**Range of Detection for MWD**	**Average Level for MWD**	**Range of Detection for LU Sources**	**Average Level for LU Sources**	**Most Recent Sampling Date**	**Typical Source of Constituent**
1,4-Dioxane (ppb)	N/A	1	N/A	N/A	N/A	2	2	2023	Used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Boron (ppb)	N/A	1000	N/A	130	130	N/A	N/A	2023	Runoff/leaching from natural deposits; industrial wastes
Chlorate (ppb)	N/A	800	N/A	19	19	N/A	N/A	2023	Byproduct of drinking water chlorination; industrial processes
Lithium (ppb)	N/A	N/A	N/A	ND - 30	15	ND - 51.2	16.9	2023	Naturally-occurring; used in electrochemical cells, batteries, and organic syntheses and pharmaceuticals
Perfluorooctanesulfonate Acid (PFOS) (ppt)	N/A	6.5	N/A	ND	ND	24 - 28	26	2023	Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes.
Perfluorooctanoic Acid (PFOA) (ppt)	N/A	5.1	N/A	ND	ND	ND - 2.6	1.9	2023	
Perfluorohexanoic Acid (PFHxA) (ppt)	N/A	N/A	N/A	ND	ND	ND - 6	1.2	2023	
Perfluorohexanesulfonic Acid (PFHxS) (ppt)	N/A	3	N/A	ND	ND	ND - 6.6	5.1	2023	

UNREGULATED CHEMICAL MONITORING (CONTINUED)									
	Violation? (Yes/No)	**Notification Level**	**PHG (MCLG)**	**Range of Detection for MWD**	**Average Level for MWD**	**Range of Detection for LU Sources**	**Average Level for LU Sources**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Perfluoro-N-Butanoic acid (PFBA) (ppt)	N/A	N/A	N/A	ND	ND	ND - 4.3	3	2023	Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes.
Perfluorononanoic Acid (PFNA) (ppt)	N/A	N/A	N/A	ND	ND	ND - 2	ND	2023	
Vanadium (ppb)	N/A	50	N/A	3.1	3.1	N/A	N/A	2023	Natural-occurring; industrial waste discharge

(a) = Compliance is based on the running annual arithmetic average of quarterly averages of all samples collected during 2023.
(b) = Turbidity is a measure of the cloudiness of the water and is a good indicator of water quality and filtration performance.

Definitions, Terms and Abbreviations

AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

HAA5: Haloacetic Acids (mono-, di- and tri-chloracetic acid, and mono- and di- bromoacetic acid) as a group.

LRAA: Locational Running Annual Average, or the locational average of sample analytical results for samples taken during the previous four calendar quarters.

MCLG: Maximum Contaminant Level Goal is 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. Environmental Protection Agency.

MCL: Maximum Contaminant Level is 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 are set to protect the odor, taste, and appearance of drinking water.

MCL: Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MRDL: Maximum Residual Disinfectant Level is 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.

MRDLG: Maximum Residual Disinfectant Level Goal, is 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.

N/A: not applicable.

ND: not detectable at testing limits.

NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.

pCi/L: picocuries per liter, a measure of radioactivity.

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

ppb: parts per billion or micrograms per liter.

ppm: parts per million or milligrams per liter.

ppt: parts per trillion or nanograms per liter.

PHG: Public Health Goal is 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 Environmental Protection Agency.

RAA: Running Annual Average, or the average of sample analytical results for samples taken during the previous

four calendar quarters.

Range of Results: Shows the lowest and highest levels found during a testing period, if only one sample was taken, then this number equals the Highest Test Result or Highest Value.

SMCL: Secondary Maximum Contaminant Level, or the secondary standards that are non-enforceable guidelines for contaminants and may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply

TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

TTHM: Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.

Conservation Tips for Consumers

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- ✓ Take short showers – a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- ✓ Shut off water while brushing your teeth, washing your hair, and shaving and save up to 500 gallons a month.
- ✓ Use a water-efficient showerhead. They are inexpensive, easy to install, and can save you up to 750 gallons a month.
- ✓ Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- ✓ Water plants only when necessary.
- ✓ Fix leaking toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- ✓ Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- ✓ Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- ✓ Visit https://www.epa.gov/watersense for more information.

Contact Information

For information about this report or your water quality in general, please contact Liberty's office at 1-800-727-5987 or Vanessa Lumley, Water Quality Manager, at (562) 805-2066.

APPENDIX A: TABLE OF REGULATED CONTAMINANTS WITH MAXIMUM CONTAMINANT LEVELS AND PUBLIC HEALTH GOALS OR MAXIMUM CONTAMINANT LEVEL GOALS

MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants

Updated November 2024

The following tables include California's maximum contaminant levels (MCLs), detection limits for purposes of reporting (DLRs), public health goals (PHGs) from the Office of Environmental Health Hazard Assessment (OEHHA). For comparison, Federal MCLs and Maximum Contaminant Level Goals (MCLGs) from the U.S. EPA are also displayed. Previous MCLs that are no longer effective are shown in *italics*. Regulatory citations refer to Title 22 of the California Code of Regulations (22 CCR) and Title 40 of the Code of Federal Regulations (40 CFR).

This document refers to several units of measurement commonly used in assessing water quality. Concentrations of substances in drinking water are typically expressed in milligrams per liter (mg/L), micrograms per liter (µg/L), nanograms per liter (ng/L), and picocuries per liter (pCi/L). These units help quantify the presence of various chemicals, metals, or radioactive materials. For reference, 1 mg/L equals 1,000 µg/L, and 1 µg/L equals 1,000 ng/L, providing a clear scale for understanding the quantities discussed. Picocuries per liter (pCi/L) measure radioactive material, where 1 pCi/L represents a trillionth of a curie, a standard unit for radioactivity.

Inorganic Chemicals

The information in the following table can be found in 22 CCR §64431 (California MCLs), 22 CCR §64432 (California DLRs), OEHHA's website (California PHGs), 40 CFR §141.23 (U.S. EPA MCLs), and 40 CFR §141.51 (U.S. EPA MCLGs). The values in this table are in **units of micrograms per liter (µg/L)** unless otherwise stated.

Inorganic Chemicals	California					U.S. EPA		
	MCL	MCL Effective Date	DLR	PHG	PHG Date	MCL	MCL Effective Date	MCLG
Aluminum	1,000	1989-02-25	50	600	2001	--	--	--
Antimony	6	1994-09-08	6	1	2016	6	1994-01-17	6
Arsenic	10 *50*	2008-11-28 *1977*	2	0.004	2004	10 *50*	2006-01-23 *1977-06-24*	zero
Asbestos[1]	7	1994-09-08	0.2	7	2003	7	1992-07-30	7

[1] Asbestos units are in million fibers per liter (MFL); for fibers >10 microns long.

Inorganic Chemicals	California					U.S. EPA		
	MCL	MCL Effective Date	DLR	PHG	PHG Date	MCL	MCL Effective Date	MCLG
Barium	1,000	1977	100	2,000	2003	2,000 *1,000*	1992-07-30 *1977-06-24*	2000
Beryllium	4	1994-09-08	1	1	2003	4	1994-01-17	4
Cadmium	5 *10*	1994-09-08 *1977*	1	0.04	2006	5 *10*	1992-07-30 *1977-06-24*	5
Chromium, Hexavalent	10	2024-10-01	0.1	0.02	2011	--	--	--
Chromium, Total	50	1977	10	none[2]	--	100 *50*	1992-07-30 *1997-06-24*	100
Cyanide	150 *200*	2003-06-12 *1994-09-08*	100	150	1997	200	1994-01-17	200
Fluoride	2,000	1998-04	100	1,000	1997	4,000	1987-10-02	4000
Mercury (inorganic)	2	1977	1	1.2	1999	2	1977-06-24	2
Nickel	100	1994-09-08	10	12	2001	--	Remanded	--
Nitrate (as nitrogen, N)	10,000 as N	1977	400	10,000 as N[3]	2018	10,000	1977-06-24	10 mg/L
Nitrite (as N)	1,000 as N	1994-09-08	400	1,000 as N	2018	1,000	1992-07-30	1 mg/L
Nitrate + Nitrite (as N)	10,000 as N	1994-09-08	--	10,000 as N	2018	10,000	1992-07-30	10,000
Perchlorate	6	2007-10-18	1	1	2015	--	--	--
Selenium	50 *10*	1994-09-08 *1977*	5	30	2010	50 *10*	1992-07-30 *1977-06-24*	50
Thallium	2	1994-09-08	1	0.1	1999	2	1994-01-17	0.5

[2] In November 2001, OEHHA withdrew the 0.0025 mg/L PHG adopted in 1999.

[3] The PHG for nitrate can also be expressed as 45 mg/L as NO_3.

Volatile Organic Chemicals (VOCs)

The information in the following table can be found in 22 CCR §64444 (California MCLs), 22 CCR §64445.1 (California DLRs), OEHHA's website (California PHGs), 40 CFR §141.61 (U.S. EPA MCLs), and 40 CFR §141.50 (U.S. EPA MCLGs). The values in this table are in **units of micrograms per liter (µg/L)**.

Volatile Organic Chemicals (VOCs)	California					U.S. EPA		
	MCL	MCL Effective Date	DLR	PHG	PHG Date	MCL	MCL Effective Date	MCLG
Benzene	1	1989-02-25	0.5	0.15	2001	5	1989-01-09	zero
Carbon tetrachloride	0.5	1989-04-05	0.5	0.1	2000	5	1989-01-09	zero
1,2-Dichlorobenzene	600	1994-09-08	0.5	600	1997	600	1992-07-30	600
1,4-Dichlorobenzene (p-DCB)	5	1989-04-05	0.5	6	1997	75	1989-01-09	75
1,1-Dichloroethane (1,1-DCA)	5	1990-06-24	0.5	3	2003	--	--	--
1,2-Dichloroethane (1,2-DCA)	0.5	1989-04-05	0.5	0.4	1999	5	1989-01-09	zero
1,1-Dichloroethylene (1,1-DCE)	6	1989-02-25	0.5	10	1999	7	1989-01-09	7
cis-1,2-Dichloroethylene	6	1994-09-08	0.5	13	2018	70	1992-07-30	70
trans-1,2-Dichloroethylene	10	1994-09-08	0.5	50	2018	100	1992-07-30	100
Dichloromethane (Methylene chloride)	5	1994-09-08	0.5	4	2000	5	1994-01-17	zero
1,2-Dichloropropane	5	1990-06-24	0.5	0.5	1999	5	1992-07-30	zero
1,3-Dichloropropene	0.5	1989-02-25	0.5	0.2	1999	--	--	--
Ethylbenzene	300 *700* *680*	2003-06-12 *1994-09-08* *1989-02-25*	0.5	300	1997	700	1992-07-30	700
Methyl tertiary butyl ether (MTBE)	13	2000-05-17	3	13	1999	--	--	--
Monochlorobenzene	70 *30*	1994-09-08 *1989-02-25*	0.5	70	2014	100	1992-07-30	100
Styrene	100	1994-09-08	0.5	0.5	2010	100	1992-07-30	100
1,1,2,2-Tetrachloroethane	1	1989-02-25	0.5	0.1	2003	--	--	--
Tetrachloroethylene (PCE)	5	1989-05	0.5	0.06	2001	5	1992-07-30	zero
Toluene	150	1994-09-08	0.5	150	1999	1,000	1992-07-30	1,000

Volatile Organic Chemicals (VOCs)	California					U.S. EPA		
	MCL	MCL Effective Date	DLR	PHG	PHG Date	MCL	MCL Effective Date	MCLG
1,2,4-Trichlorobenzene	5 *70*	2003-06-12 *1994-09-08*	0.5	5	1999	70	1994-01-17	70
1,1,1-Trichloroethane (1,1,1-TCA)	200	1989-02-25	0.5	1000	2006	200	1989-01-09	200
1,1,2-Trichloroethane (1,1,2-TCA)	5 *32*	1994-09-08 *1989-04-05*	0.5	0.3	2006	5	1994-01-17	3
Trichloroethylene (TCE)	5	1989-02-25	0.5	1.7	2009	5	1989-01-09	zero
Trichlorofluoromethane (Freon 11)	150	1990-06-24	5	1,300	2014	--	--	--
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1,200	1990-06-24	10	4,000	1997	--	--	--
Vinyl chloride	0.5	1989-04-05	0.5	0.05	2000	2	1989-01-09	zero
Xylenes	1,750	1989-02-25	0.5	1,800	1997	10,000	1992-07-30	10,000

Synthetic Organic Chemicals (SOCs)

The information in the following table can be found in 22 CCR §64444 (California MCLs), 22 CCR §64445.1 (California DLRs), OEHHA's website (California PHGs), 40 CFR §141.61 (U.S. EPA MCLs), and 40 CFR §141.50 (U.S. EPA MCLGs). The values in this table are in **units of micrograms per liter (µg/L)**.

Synthetic Organic Chemicals (SOCs)	California					U.S. EPA		
	MCL	MCL Effective Date	DLR	PHG	PHG Date	MCL	MCL Effective Date	MCLG
Alachlor	2	1994-09-08	1	4	1997	2	1992-07-30	zero
Atrazine	1 *3*	2003-06-12 *1989-04-05*	0.5	0.15	1999	3	1992-07-30	3
Bentazon	18	1989-04-05	2	200	1999	--	--	--
Benzo(a)pyrene	0.2	1994-09-08	0.1	0.007	2010	0.2	1994-01-17	zero
Carbofuran	18	1990-06-24	5	0.7	2016	40	1992-07-30	40
Chlordane	0.1	1990-06-24	0.1	0.03	1997	2	1992-07-30	zero

Synthetic Organic Chemicals (SOCs)	California					U.S. EPA		
	MCL	MCL Effective Date	DLR	PHG	PHG Date	MCL	MCL Effective Date	MCLG
Dalapon	200	1994-09-08	10	790	1997	200	1994-01-17	200
1,2-Dibromo-3-chloropropane (DBCP)	0.2 *0.1*	1991-05-03 *1989-07-26*	0.01	0.003	2020	0.2	1992-07-30	zero
2,4-Dichlorophenoxyacetic acid (2,4-D)	70 *100*	1994-09-08 *1977*	10	20	2009	70 *100*	1992-07-30 *1977-06-24*	70
Di(2-ethylhexyl)adipate	400	1994-09-08	5	200	2003	400	1994-01-17	400
Di(2-ethylhexyl)phthalate (DEHP)	4	1990-06-24	3	12	1997	6	1994-01-17	zero
Dinoseb	7	1994-09-08	2	14	1997	7	1994-01-17	7
Diquat	20	1994-09-08	4	6	2016	20	1994-01-17	20
Endothal	100	1994-09-08	45	94	2014	100	1994-01-17	100
Endrin	2 *0.2*	1994-09-08 *1977*	0.1	0.3	2016	2 *0.2*	1994-01-17 *1977-06-24*	2
Ethylene dibromide (EDB)	0.05 *0.02*	1994-09-08 *1989-02-25*	0.02	0.01	2003	0.05	1992-07-30	zero
Glyphosate	700	1990-06-24	25	900	2007	700	1994-01-17	700
Heptachlor	0.01	1990-06-24	0.01	0.008	1999	0.4	1992-07-30	zero
Heptachlor epoxide	0.01	1990-06-24	0.01	0.006	1999	0.2	1992-07-30	zero
Hexachlorobenzene	1	1994-09-08	0.5	0.03	2003	1	1994-01-17	zero
Hexachlorocyclopentadiene	50	1994-09-08	1	2	2014	50	1994-01-17	50
Lindane	0.2 *4*	1994-09-08 *1977*	0.2	0.032	1999	0.2 4	1992-07-30 1977	0.2
Methoxychlor	30 *40* *100*	2003-06-12 *1994-09-08* *1977*	10	0.09	2010	40 *100*	1992-07-30 *1977-06-24*	40
Molinate	20	1989-04-05	2	1	2008	--	--	--
Oxamyl	50 *200*	2003-06-12 *1994-09-08*	20	26	2009	200	1994-01-17	200

Synthetic Organic Chemicals (SOCs)	California					U.S. EPA		
	MCL	MCL Effective Date	DLR	PHG	PHG Date	MCL	MCL Effective Date	MCLG
Pentachlorophenol	1	1994-09-08	0.2	0.3	2009	1	1992-07-30	zero
Picloram	500	1994-09-08	1	166	2016	500	1994-01-17	500
Polychlorinated biphenyls (PCBs)	0.5	1994-09-08	0.5	0.09	2007	0.5	1992-07-30	zero
Simazine	4 *10*	1994-09-08 *1989-04-05*	1	4	2001	4	1994-01-17	4
Thiobencarb	70	1989-04-05	1	42	2016	--	--	--
Toxaphene	3 *5*	1994-09-08 *1977*	1	0.03	2003	3 *5*	1992-07-30 *1977-06-24*	zero
1,2,3-Trichloropropane	0.005	2017-12-14	0.005	0.0007	2009	--	--	--
2,3,7,8-TCDD (dioxin)	0.00003	1994-09-08	5×10^{-6}	5×10^{-8}	2010	0.00003	1994-01-17	zero
2,4,5-TP (Silvex)	50 *10*	1994-09-08 *1977*	1	3	2014	50 *10*	1992-07-30 *1977-06-24*	50

Disinfectant Residuals

Standards for disinfectant residuals are called “Maximum Residual Disinfectant Levels” (MRDLs) instead of MCLs. Similarly, goals are called “Maximum Residual Disinfectant Level Goals” (MRDLGs). The information in the following table can be found in 22 CCR §64533.5 (California MRDLs), 40 CFR §141.65 (U.S. EPA MRDLs), and 40 CFR §141.54 (U.S. EPA MRDLGs). The values in this table are in **units of milligrams per liter (mg/L)**.

Disinfectant Residuals	California					U.S. EPA		
	MRDL	MRDL Effective Date	DLR	PHG	PHG Date	MRDL	MRDL Effective Date	MRDLG
Chlorine	4.0 (as Cl_2)	2006-06-17	--	--	--	4.0	1999-02-16	4
Chloramines	4.0 (as Cl_2)	2006-06-17	--	--	--	4.0	1999-02-16	4
Chlorine dioxide	0.8 (as ClO_2)	2006-06-17	--	--	--	0.8	1999-02-16	0.8

Disinfection Byproducts

The information in the following table can be found in 22 CCR §64533 (California MCLs and DLRs), OEHHA's website (California PHGs), 40 CFR §141.64 (U.S. EPA MCLs), and 40 CFR §141.53 (U.S. EPA MCLGs). The values in this table are in **units of micrograms per liter (µg/L)**.

Disinfection Byproducts	California					U.S. EPA		
	MCL	MCL Effective Date	DLR	PHG	PHG Date	MCL	MCL Effective Date	MCLG
Total Trihalomethanes	80 *100*	2006-06-17 *1983-03-14*	--	--	--	80 *100*	2002-01-01 *1983-11-29*	--
Bromodichloromethane	--	--	1	0.06	2020	--	--	zero
Bromoform	--	--	1	0.5	2020	--	--	zero
Chloroform	--	--	1	0.4	2020	--	--	70
Dibromochloromethane	--	--	1	0.1	2020	--	--	60
Haloacetic Acids (five) (HAA5)	60	2006-06-17	--	--	--	60	2002-01-01	--
Monochloroacetic Acid	--	--	2	53	2022	--	--	70
Dichloroacetic Acid	--	--	1	0.2	2022	--	--	zero
Trichloroacetic Acid	--	--	1	0.1	2022	--	--	20
Monobromoacetic Acid	--	--	1	25	2022	--	--	--
Dibromoacetic Acid	--	--	1	0.03	2022	--	--	--
Bromate	10	2006-06-17	5[4]	0.1	2009	10	2002-01-01	zero
Chlorite	1000	2006-06-17	20	50	2009	1000	2002-01-01	800

Radionuclides

The information in the following table can be found in 22 CCR §64442 (California MCLs and DLRs), 22 CCR §64443 (California MCLs and DLRs), OEHHA's website (California PHGs), 40 CFR §141.66 (U.S. EPA MCLs), and 40 CFR §141.55 (U.S. EPA MCLGs). The values in this table are in **units of picocuries per liter (pCi/L)** unless otherwise stated.

[4] The DLR for bromate is 0.0010 mg/L for analysis performed using EPA Methods 317.0 Revision 2.0, 321.8, or 326.0.

Radionuclides	California					U.S. EPA		
	MCL	MCL Effective Date	DLR	PHG	PHG Date	MCL	MCL Effective Date	MCLG
Gross alpha particle activity[5]	15[6] *15*	2006-06-11 *1977*	3	none[7]	--	15	1977-06-24	zero
Beta/photon emitters[8]	4 mrem/yr *50*	2006-06-11 *1977*	4	none[7]	--	4 mrem/yr	1977-06-24	zero
Radium-226	--	--	1	0.05	2006	--	--	--
Radium-228	--	--	1	0.019	2006	--	--	--
Radium-226 + Radium-228	5[6] *5*	2006-06-11 *1977*	--	--	--	5	1977-06-24	zero
Strontium-90	8[9] *8*	2006-06-11 *1977*	2	0.35	2006	4 mrem/yr[10] *8*	2003-12-08 *1977-06-24*	--
Tritium	20,000[9] *20,000*	2006-06-11 *1977*	1,000	400	2006	4 mrem/yr[10] *20,000*	2003-12-08 *1977-06-24*	--
Uranium	20[6] *20*	2006-06-11 *1989-01-01*	1	0.43	2001	30 µg/L[11]	2003-12-08	zero

[5] Excludes alpha particle activity from radon and uranium.
[6] Revised MCL applies to both community (CWS) and nontransient noncommunity water systems (NTNCWS); previous MCL applied only to CWS.
[7] OEHHA concluded in 2003 that it would not be practical to develop a PHG (for gross alpha particle activity, for gross beta particle/photon emitters).
[8] Beta/photon emitters MCLs are in units of millirems per year (mrem/yr) annual dose equivalent to the total body or any internal organ. The DLR is in units of pCi/L of gross beta particle activity.
[9] Revised MCL applies to all CWS and NTNCWS; previous MCL applied only to water systems with at least 30,000 service connections that used surface water.
[10] U.S. EPA does not have specific MCLs for strontium-90 or tritium; both are regulated under the beta/photon emitters MCL.
[11] U.S. EPA MCL of 30 µg/L is equivalent to 20.1 pCi/L (unit conversion using natural uranium specific activity of 0.67 pCi/µg).

Copper and Lead

Standards for lead and copper are called “Action Levels” instead of MCLs. If a system exceeds an Action Level, it must take certain actions such as additional monitoring, corrosion control studies and treatment, and for lead, a public education program. The information in the following table can be found in 22 CCR §64678 (California Action Levels and DLRs), OEHHA’s website (California PHGs), 40 CFR §141.80 (U.S. EPA Action Levels), and 40 CFR §141.51 (U.S. EPA MCLGs). The values in this table are in **units of micrograms per liter (µg/L)**.

Contaminants	California					U.S. EPA		
	Action Level	Action Level Effective Date	DLR	PHG	PHG Date	Action Level	Action Level Effective Date	MCLG
Copper	1,300	1995-12-11	50	300	2008	1,300	1991-11-06	1,300
Lead	15 *50*	1995-12-11 *1977*	5	0.2	2009	15 *50*	1991-11-06 *1977-06-24*	zero

Treatment Techniques

A treatment technique is a required process intended to reduce contaminant levels in drinking water, safeguarding public health. Rather than setting specific limits on contaminant concentrations, the treatment techniques below focus on the processes used to ensure protection from contaminants:

- **Coliform**: If a water system finds coliform bacteria (which indicate the presence of harmful microorganisms), they must assess and fix any issues in actions called Level 1 and Level 2 assessments.
- **Viruses**: Systems must treat groundwater to remove or inactivate at least 99.99% of viruses using methods like disinfection. They must monitor and correct any issues within hours if they fail to meet these standards.
- **Cryptosporidium**: For surface water or groundwater influenced by surface water, system must treat to remove or inactivate a parasite called Cryptosporidium, which involves special filtration and disinfection processes.
- **Disinfection Byproducts**: Systems have several options for treatment techniques to reduce the levels of disinfection byproducts (total trihalomethanes (TTHMs), haloacetic acids (HAA5), bromate, and chlorite).
- **Acrylamide and Epichlorohydrin**: Water systems that use certain chemicals in the treatment process must certify that the chemical levels are kept below safe limits.

Secondary Standards

Secondary Maximum Contaminant Levels (SMCLs) provide water quality standards related to aesthetic aspects of drinking water, such as taste, odor, and appearance. Though not directly linked to health risks, SMCLs play a crucial role in maintaining

consumer confidence and satisfaction. The information in the following two tables can be found in 22 CCR §64449 (California SMCLs) and 40 CFR §143.3 (U.S. EPA SMCLs). The values in this table are in **units of micrograms per liter (µg/L)** unless otherwise stated.

Chemical	California				U.S. EPA	
	SMCL			SMCL Effective Date	SMCL	SMCL Effective Date
Aluminum	200			1994-09-08	50 to 200	1992-07-30
Color	15 Units			1977	15 Units	1981-01-19
Copper	1,000			1977	1,000[12] 1,000	1992-07-30 1981-01-19
Corrosivity	--			Removed	Non-corrosive	1981-01-19
Fluoride	See 22 CCR §64433.2			1998-04-22	2,000	1986-05-02
Foaming Agents (MBAS)	500			1977	500	1981-01-19
Iron	300			1977	300	1981-01-19
Manganese	50			1977	50	1981-01-19
Methyl-*tert*-butyl ether (MTBE)	5			1999-01-07	--	--
Odor -Threshold	3 Units			1977	3 Units	1981-01-19
pH	--			--	6.5 to 8.5	1981-01-19
Silver	100			--	100	1992-07-30
Thiobencarb	1			1989-04-05	--	--
Turbidity	5 Units			1977	--	--
Zinc	5,000			1977	5,000	1981-01-19
	Recommended	**Upper**	**Short Term**			
Total Dissolved Solids (mg/L) *or* Specific Conductance (µS/cm[9])	500	1,000	1,500	--	500	1981-01-19
	900	1,600	2,200	--	--	--
Chloride (mg/L)	250	500	600	--	250	1981-01-19
Sulfate (mg/L)	250	500	600	--	250	1981-01-19

[12] The updated SMCL for copper increased the number of significant figures from 1 to 2.

Chemicals soon to be regulated in drinking water in California

The information in the following table can be found in OEHHA's website (California PHGs), 40 CFR §141.61 (U.S. EPA MCLs), and 40 CFR §141.50 (U.S. EPA MCLGs). The values in this table are in **units of nanograms per liter (ng/L)** unless otherwise stated.

Chemicals	California				U.S. EPA		
	MCL	DLR	PHG	PHG Date	MCL	MCL Effective Date	MCLG
N-Nitrosodimethylamine (NDMA)	--	--	3	2006	--	--	--
Perfluorooctanoic acid (PFOA)	--	--	0.007	2024	4.0	2029-04-26	zero
Perfluorooctane sulfonic acid (PFOS)	--	--	1	2024	4.0	2029-04-26	zero
Perfluorohexane sulfonic acid (PFHxS)	--	--	--	--	10.0	2029-04-26	10
Perfluorononanoate (PFNA)	--	--	--	--	10.0	2029-04-26	10
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoate (HFPO-DA or GenX Chemicals)	--	--	--	--	10.0	2029-04-26	10
PFAS Hazard Index[13] (includes HFPO-DA, PFBS[14], PFHxS, and PFNA)	--	--	--	--	1 (unitless)	2029-04-26	1 (unitless)

[13] PFAS Hazard Index = ([HFPO-DA$_{water}$ ng/L]/[10 ng/L]) + ([PFBS$_{water}$ ng/L]/[2000 ng/L]) + ([PFNA$_{water}$ ng/L]/[10 ng/L]) + ([PFHxS$_{water}$ ng/L]/[10 ng/L])

[14] Perfluorobutane sulfonate (PFBS)