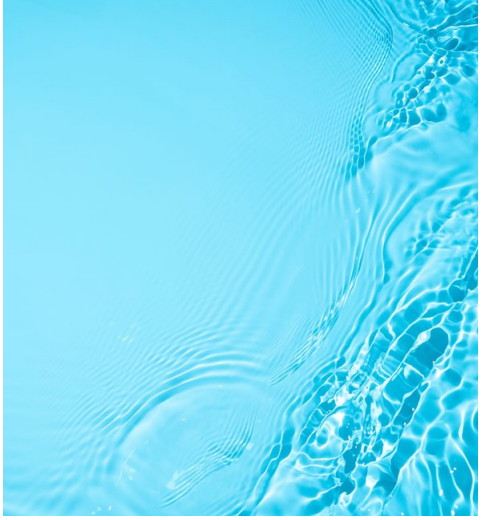


ANNUAL WATER QUALITY REPORT

Reporting Year 2023

Presented By

Livermore Municipal Water

LIVERMORE
CALIFORNIA

PWS ID#: CA01-10-011

Our Commitment

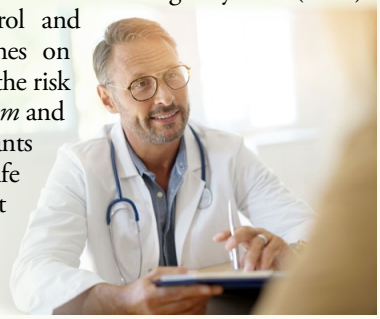
We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

Where Does My Water Come From?

Since its inception, Livermore Municipal Water has received 100 percent of its wholesale water from the Zone 7 Water Agency, which treats water from the State Water Project in the Sacramento-San Joaquin Delta and groundwater wells in Pleasanton. Zone 7 is the wholesale water agency in the valley responsible for managing the potable water sources and providing either disinfected potable surface water or disinfected potable well water for the valley retail water agencies. Livermore Municipal Water receives most of its water from Zone 7's two water treatment plants (Del Valle and Patterson Pass), but during 2023, 7 percent of the total water received was from the Zone 7 wells in Pleasanton.

Important Health Information

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. The U.S. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (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 (800) 426-4791 or water.epa.gov/drink/hotline.



What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air-conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection. For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

Community Participation

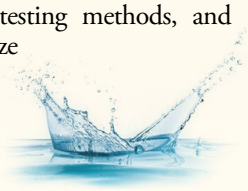
You are invited to participate in our public forum and voice your concerns about your drinking water. The Livermore City Council meets twice a month at 7:00 p.m. at the Civic Center Meeting Hall, 1016 South Livermore Avenue. Contact the city clerk at (925) 960-4200 or visit livermoreca.gov for exact meeting dates.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call David Lennier, Water Distribution Operations Manager, at (925) 960-8100.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 two minutes before using water for drinking or cooking. (If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) If you are concerned about lead in your 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 (800) 426-4791 or epa.gov/safewater/lead.



Source Water Assessment

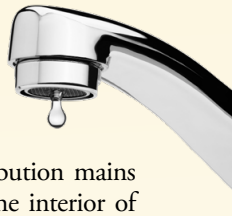
A Source Water Assessment Plan (SWAP) is now available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the SWAP, our water system had a medium susceptibility rating. If you would like to review the SWAP, please feel free to contact Zone 7 Water Agency at (925) 454-5000 during regular office hours.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Water Main Flushing



Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through them.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water to prevent sediment accumulation in your hot water tank. Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

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.

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Water Resources Control Board (SWRCB) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include: Microbial Contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; Inorganic Contaminants, such as salts and metals that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; Pesticides and Herbicides that 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 by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems; Radioactive Contaminants that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

				Livermore Municipal Water		Zone 7 Water Wholesaler			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2023	1	2	NA	NA	ND	ND–0.261	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Bromate (ppb)	2023	10	0.1	NA	NA	ND	ND–7	No	By-product of drinking water disinfection
Chloramines (ppm)	2023	[4.0 (as Cl2)]	[4 (as Cl2)]	2.47	1.98–2.89	2.8	2.4–3.2	No	Drinking water disinfectant added for treatment
Chromium, Total (ppb)	2022	50	(100)	NA	NA	ND	ND–10	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2023	2.0	1	NA	NA	ND	ND–0.1	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2023	15	(0)	NA	NA	3	ND–5	No	Erosion of natural deposits
HAA5 [sum of 5 haloacetic acids]–Stage 2 (ppb)	2023	60	NA	25.75	19–33	38	9–42	No	By-product of drinking water disinfection
Nitrate [as nitrogen] (ppm)	2023	10	10	NA	NA	3	ND–3.9	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium (ppb)	2023	50	30	NA	NA	ND	ND–7	No	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2023	80	NA	49.93	29–66	50	14–49	No	By-product of drinking water disinfection
Turbidity[1] (NTU)	2023	TT	NA	NA	NA	0.1	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2023	TT = 95% of samples meet the limit	NA	NA	NA	95	NA	No	Soil runoff
Uranium (pCi/L)	2023	20	0.43	NA	NA	ND	ND–4	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

				Livermore Municipal Water		Zone 7 Water Wholesaler			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.3	0.3	0.101	0/30	0.063[2]	0/12[2]	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2022	15	0.2	ND	0/30	7[2]	0/12[2]	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	Livermore Municipal Water AMOUNT DETECTED	Livermore Municipal Water RANGE LOW-HIGH	Zone 7 Water Wholesaler AMOUNT DETECTED	Zone 7 Water Wholesaler RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2023	500	NS	NA	NA	60	8–126	No	Runoff/leaching from natural deposits; seawater influence
Color (units)	2023	15	NS	NA	NA	ND	ND–2.5	No	Soil runoff
Foaming Agents [MBAS] (ppb)	2023	500	NS	NA	NA	ND	ND–100	No	Soil runoff
Manganese (ppb)	2023	50	NS	NA	NA	ND	ND–22	No	Soil runoff
Specific Conductance (µS/cm)	2023	1,600	NS	NA	NA	562	137–1,054	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2023	500	NS	NA	NA	46	15–97	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2023	1,000	NS	NA	NA	680	75–718	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2023	5	NS	0.126	0.0187–0.206	ND	ND–0.16	No	Soil runoff

UNREGULATED SUBSTANCES [3]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Livermore Municipal Water AMOUNT DETECTED	Livermore Municipal Water RANGE LOW-HIGH	Zone 7 Water Wholesaler AMOUNT DETECTED	Zone 7 Water Wholesaler RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	2023	NA	NA	57	18–102	Runoff/leaching from natural deposits
Total Hardness [as CaCO3] (ppm)	2023	NA	NA	187	29–473	Erosion of natural deposits

January-December 2023 Water Quality Data - Contaminants Detected in Treated Water Supply

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) GUIDANCE LEVELS, ESTABLISHED BY THE STATE WATER BOARD

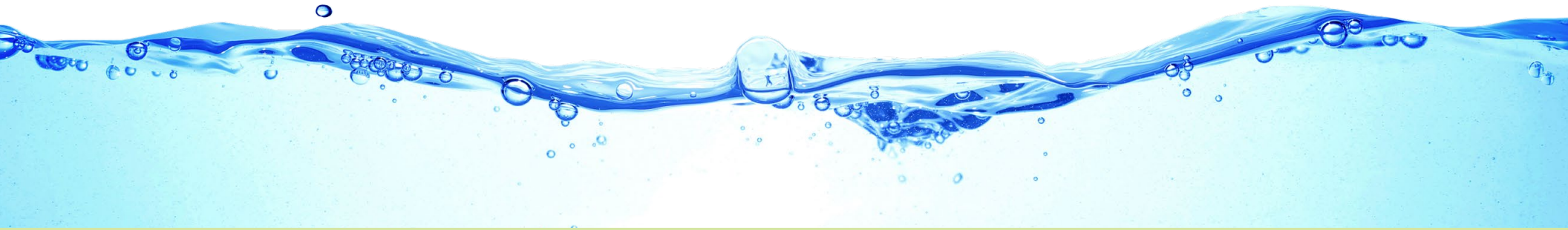
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)	RESPONSE LEVEL	NOTIFICATION LEVEL	CCRDL	SURFACE WATER AVERAGE	SURFACE WATER RANGE	GROUNDWATER AVERAGE	GROUNDWATER RANGE	MAJOR SOURCES IN DRINKING WATER
Perfluorobutanesulfonic Acid (PFBS), ng/L	5000*	500	3	ND	NA	ND	ND–5	Various man-made sources
Perfluoroctane Sulfonic Acid (PFOS), ng/L	40**	6.5	4	ND	NA	6	ND–27	Various man-made sources
Perfluoroctanoic Acid (PFOA), ng/L	10**	5.1	4	ND	NA	ND	NA	Various man-made sources
Perfluorohexane Sulfonic Acid (PFHXS), ng/L	20*	3	3	ND	NA	5	ND– 21***	Various man-made sources
Perfluorohexanoic Acid (PFHXA), ng/L	NA	NA	3	ND	NA	ND	ND–4	Various man-made sources

[1] Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

[2] Sampled in 2021.

[3] Unregulated contaminant monitoring helps U.S. EPA and the SWRCB determine where certain contaminants occur and whether the contaminants need to be regulated.

Abbreviations/Units: CCRDL = Consumer Confience Report Detection Level (State Water Board established)
ng/L = Nanograms per liter, NA = Not Applicable, ND = Monitored for but not detected at or above CCRDL.
*Response level for PFBS and PFHxS are based on a single sample result.
**Response level for PFOA and PFOS are based on running annual average values.
***A sample at the Mocho Groundwater Demineralization Plant (MGDP) exceeded the PFHxS response level due to a brief flow surge during well startup on Feb 2, 2023. Operational procedures were modified to prevent future incidents. Subsequent samples were all below the response level.



Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

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

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.

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.

NA: Not applicable.

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

NS: No standard.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

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

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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

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