

# ANNUAL WATER QUALITY REPORT

Reporting Year 2022

*Presented By*  
**Livermore Municipal  
Water**



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

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## Our Mission Continues

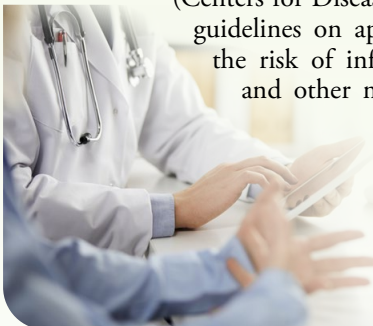
We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please remember that we are always available should you ever have any questions or concerns about your water.

## Where Does My Water Come From?

Since its inception, Livermore Municipal Water has received 100 percent of its 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 potable water sources and providing disinfected potable surface or 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 2022, 20 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. EPA/CDC (Centers for Disease Control and Prevention) 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 <http://water.epa.gov/drink/hotline>.



“Thousands have lived without love, not one without water.”

—W.H. Auden

## 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, Livermore. Call the city clerk at (925) 960-4200 for exact meeting dates, or visit the city's website, [www.cityoflivermore.net](http://www.cityoflivermore.net).



## 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 susceptibility rating of medium. 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.

**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.



## 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. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) 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.

## 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 at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Water Conservation Tips

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.



## 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 Agency			
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)	2022	1	2	NA	NA	0.133	ND–0.299	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Bromate (ppb)	2022	10	0.1	NA	NA	ND	ND–6	No	By-product of drinking water disinfection
Chloramines (ppm)	2022	[4.0 (as Cl <sub>2</sub> )]	[4 (as Cl <sub>2</sub> )]	1.84	0.15–2.20	2.6	2.4–2.9	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)	2022	2.0	1	NA	NA	ND	ND–0.2	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2022	15	(0)	NA	NA	4	ND–6	No	Erosion of natural deposits
HAA5 [sum of 5 haloacetic acids]–Stage 2 (ppb)	2022	60	NA	14.8	7–23	22	ND–47	No	By-product of drinking water disinfection
Nitrate [as nitrogen] (ppm)	2022	10	10	NA	NA	3	ND–4	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium (ppb)	2022	50	30	NA	NA	ND	ND–6	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)	2022	80	NA	40	19–56	46	ND–56	No	By-product of drinking water disinfection
Turbidity <sup>1</sup> (NTU)	2022	TT	NA	NA	NA	0.2	ND–0.2	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2022	TT = 95% of samples meet the limit	NA	NA	NA	95	NA	No	Soil runoff
Uranium (pCi/L)	2022	20	0.43	NA	NA	1	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 Agency			
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 <sup>2</sup>	0/12 <sup>2</sup>	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 <sup>2</sup>	0/12 <sup>2</sup>	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES									
				Livermore Municipal Water		Zone 7 Water Agency			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2022	500	NS	NA	NA	96	57–132	No	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	2022	300	NS	NA	NA	ND	NA	No	Leaching from natural deposits; industrial wastes
Specific Conductance (µS/cm)	2022	1,600	NS	NA	NA	768	495–1,090	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2022	500	NS	NA	NA	57.5	37–92	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2022	1,000	NS	NA	NA	449	263–680	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2022	5	NS	0.184	0.011–0.410	ND	ND–0.2	No	Soil runoff

UNREGULATED SUBSTANCES <sup>3</sup>						
		Livermore Municipal Water		Zone 7 Water Agency		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	2022	NA	NA	76.5	59–106	Runoff/leaching from natural deposits
Total Hardness [as CaCO <sub>3</sub> ] (ppm)	2022	NA	NA	235	89–460	Erosion of natural deposits

<sup>1</sup> Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

<sup>2</sup> Sampled in 2021.

<sup>3</sup> Unregulated contaminant monitoring helps U.S. EPA and the State Board determine where certain contaminants occur and whether the contaminants need to be regulated.

JANUARY-DECEMBER 2022 WATER QUALITY DATA - CONTAMINANTS DETECTED IN TREATED WATER SUPPLY								
Per- and Polyfluoroalkyl Substances (PFAS) Drinking Water Standards Established by the State Water Board								
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)	RESPONSE LEVEL	NOTIFICATION LEVEL	CCRDL	SURFACE WATER AVERAGE	WATER RANGE	GROUNDWATER AVERAGE	RANGE	MAJOR SOURCES IN DRINKING WATER
Perfluorobutanesulfonic Acid (PFBS), ng/L	5000	500	4	ND	NA	5	ND–7	Various man-made sources
Perfluorooctane Sulfonic Acid (PFOS), ng/L	40	6.5	4	ND	NA	20	ND–32	Various man-made sources
Perfluorooctanoic Acid (PFOA), ng/L	10	5.1	4	ND	NA	ND	ND–4	Various man-made sources
Perfluorohexane Sulfonic Acid (PFHxS), ng/L	NA	NA	4	ND	NA	19	ND–28	Various man-made sources
Perfluorohexanoic Acid (PFHxA), ng/L	NA	NA	4	ND	NA	4	ND–5	Various man-made sources
Abbreviations/Units: CCRDL = Consumer Confidence 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.								

## 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.