

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019

LIVERMORE
CALIFORNIA

Presented By
Livermore Municipal Water

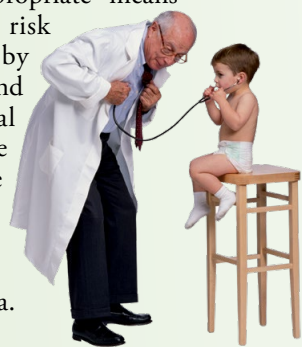
Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2019. 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. For more information about this report, or for any questions related to your drinking water, please call David Lennier, Water Supervisor, at (925) 960-8100.

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>.



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 storm-water 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 storm-water 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 storm-water 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.

Source Water Assessment

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. If you would like to review the Source Water Assessment Plan, please feel free to contact Zone 7 Water Agency at (925) 454-5000 during regular office hours.

ZONE 7 Water Agency Monitoring for PFAS

Per and Polyfluoroalkyl substances (PFAS) are a large group of man-made substances that have been extensively used since the 1940's in common consumer products designed to be waterproof, stain-resistant, or nonstick. In addition, they have been used in fire-retarding foam and various industrial processes. PFAS are unregulated contaminants of emerging concern in drinking water due to a host of health impacts and the tendency of PFAS to accumulate in groundwater.

Perfluorooctanic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) are two of the most widely studied of the more than 6,000 PFAS chemical compounds. California currently has a drinking water notification level of 5.1 parts per trillion (PPT) for PFOA and 6.5 ppt for PFOS (effective August 2019) and a response level of 10 ppt for PFOA and 40 ppt for PFOS, based on a running annual average (RAA) of the last four quarters of results (effective February 2020). These levels are health-based advisory levels established as precautionary measures for contaminants that may be considered candidates to establish drinking water standards, but have not yet undergone or completed the regulatory standard setting process. When a contaminant is found at concentrations greater than its notification level or response level, certain notification requirements and recommendations apply.

At Zone 7 Water Agency, protecting public health and safety is the highest priority. That is why Zone 7 is actively monitoring for PFAS in its groundwater and surface water supplies and has already taken actions to ensure PFOA and PFOS are below response levels in the treated water they provide to all retailers.

In 2019, Zone 7 did not detect any PFOA or PFOS in its treated surface water supplies which made up majority of the total water delivered to its customers. Although Zone 7 did detect PFOA and/or PFOS in some of Zone 7's groundwater sources, they were blended and/or treated below the applicable response level.

Other PFAS were also detected in some of Zone 7's groundwater sources, but at present there are no regulatory guidelines for these contaminants. No PFAS were detected in Zone 7's Hopyard Wells.

WATER SUPPLY SOURCES	PFOS (PPT)		PFOA (PPT)	
	HIGHEST RAA	RANGE OF ALL SAMPLES	HIGHEST RAA	RANGE OF ALL SAMPLES
Chain of Lakes (COL) Wellfield				
COL Well 1, 2 and 5	37	12 - 52*	4	ND - 6
Blended COL Water	25	19 - 31	3	2 - 3
Mocho Wellfield				
Mocho Well 1, 2, 3 and 4	94	4 - 110**	9	3 - 10
Blended/Treated Mocho Water	22	9 - 30	4	3 - 4
Stoneridge Well	8	5 - 12	1	ND - 2
Hopyard Wellfield (Well 6 and 9)	ND	ND	ND	ND
Treated Surface Water	ND	ND	ND	ND

Notes:

ND indicates no detection at or above the analytical reporting limit of 2 ppt.

* Highest concentration from COL Well 5 which was blended with other COL well water whenever it was online.

** Highest concentration from Mocho Well 1 (the lowest priority well that was rarely used) which was blended with other Mocho well water whenever it was online; All Mocho wells can also be treated via reverse osmosis membranes at the Mocho Groundwater Demineralization Plant.

Zone 7 continues to monitor for PFAS in its groundwater supply and is working with the State Water Quality Control Board to investigate the extent and potential sources of PFAS contamination; At this time, there is no indication of a single source for this contamination.

In order to provide a reliable supply of high-quality water, Zone 7 is also conducting a study to assess additional treatment options and costs for reducing PFAS to the lowest levels that are technically and economically feasible. The study is anticipated to be completed in the summer of 2020.

For more details about how Zone 7 is protecting our water supply, visit www.Zone7Water.com/pfas-information.



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.

We participated in the 4th stage of the U.S. EPA’s Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA’s Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

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
Arsenic (ppb)	2019	10	0.004	NA	NA	ND	ND–2	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2019	1	2	NA	NA	0.192	ND–0.39	No	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Chloramines (ppm)	2019	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	1.98	0.92–2.20	NA	NA	No	Drinking water disinfectant added for treatment
Chromium [Total] (ppb)	2019	50	(100)	NA	NA	ND	ND–16	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2019	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
Haloacetic Acids (ppb)	2019	60	NA	12	6.1–20.4	NA	NA	No	By-product of drinking water disinfection
Nitrate [as nitrogen] (ppm)	2019	10	10	NA	NA	0.003	ND–0.0051	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium (ppb)	2019	50	30	NA	NA	ND	ND–10	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] (ppb)	2019	80	NA	19.83	13.9–25.7	NA	NA	No	By-product of drinking water disinfection
Turbidity ¹ (NTU)	2019	TT	NA	NA	NA	0.125	ND–1.1	No	Soil runoff
Uranium (pCi/L)	2019	20	0.43	NA	NA	1.3	ND–3.9	No	Erosion of natural deposits
Tap Water Samples Collected for Copper and Lead Analyses from Sample Sites throughout the Community									
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE		
Copper (ppm)	2019	1.3	0.3	ND	0/34	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives		
Lead (ppb)	2019	15	0.2	ND	0/34	No	Internal corrosion of household water plumbing systems; discharge from industrial manufacturers; erosion of natural deposits		

SECONDARY SUBSTANCES

				Livermore Municipal Water		Zone 7 Water Wholesaler			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2019	500	NS	NA	NA	82.5	29–200	No	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	2019	300	NS	NA	NA	ND	ND–250	No	Leaching from natural deposits; industrial wastes
Specific Conductance (µS/cm)	2019	1,600	NS	NA	NA	648	212–1501	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2019	500	NS	NA	NA	41.5	8–129	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2019	1,000	NS	NA	NA	378	103–940	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2019	5	NS	0.089	0.018–0.324	0.11	ND–1.1	No	Soil runoff
Zinc (ppb)	2019	5.0	NS	NA	NA	ND	ND–50	No	Runoff/leaching from natural deposits; industrial wastes

UNREGULATED SUBSTANCES (ZONE 7 WATER WHOLESALER) ²

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Hardness, Total [as CaCO₃] (ppm)	2019	213	36–572	Naturally occurring
Sodium (ppm)	2019	56	25–140	Runoff/leaching from natural deposits

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 Unregulated contaminant monitoring helps U.S. EPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

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.

Table Talk

Get the most out of the Testing Results data table with this simple suggestion. In less than a minute, you will know all there is to know about your water:

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL, SMCL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

Other Table Information Worth Noting

Verify that there were no violations of the state and/or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. If there is an NA showing, that means only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

If there is sufficient evidence to indicate from where the substance originates, it will be listed under Typical Source.

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 surface potable 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 2019, 15.2 percent of the total water received was from the Zone 7 wells in Pleasanton.

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 2 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.

Community Participation

You are invited to participate in our public forum and share your concerns about drinking water. The Livermore City Council meets on the 2nd and 4th Monday of each month (excluding holidays) beginning at 7 p.m. in the Civic Center Meeting Hall, located at 1016 S. Livermore Avenue, Livermore, CA. When in-person meetings are not possible, such as during the novel coronavirus pandemic, meetings are held through videoconferencing. The City offers a variety of methods for submitting public comment for in person and virtual meetings. Instructions for submitting comments are available on the agenda and the City website. Please call the City Clerk's Office at (925) 960-4200, email cityclerk@cityoflivermore.net, or visit the city's website at www.cityoflivermore.net/agenda for current meeting information. Please note: during the Coronavirus pandemic, meeting participation information is subject to change, and will be noticed pursuant to Governor Newsom's Executive Order N-29-20. Please review the City's website for the most current meeting information.