

2020 Consumer Confidence Report

Water System Name: **City of Livingston**

Report Date: 06/04/21

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2020 and may include earlier monitoring data.

**Este informe contiene información muy importante sobre su agua para beber.
Favor de comunicarse City of Livingston (209) 394-8044 para asistirlo en español.**

Type of water source(s) in use: Groundwater Wells

Name & general location of source(s): Well #8, #9, #11, #12, #13, #14, #15, #16, and #17

Drinking Water Source Assessment information: Completed in September of 2002 - see last page

Time and place of regularly scheduled board meetings for public participation:

First and third Tuesday of each month at 7:00pm at 1416 C st. Livingston, CA

For more information, contact: Department of Public Works

(209) 394-8044

TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): 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.

Maximum Contaminant Level Goal (MCLG): 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 (USEPA).

Public Health Goal (PHG): 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.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

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

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

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

Variations and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter ($\mu\text{g/L}$)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

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, 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 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, that are by-products of industrial and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

- *Radioactive contaminants*, that 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 U.S. EPA and the State Water Resources Control Board (State Water 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.

Tables 1, 2, 3, 4, 5, and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Water Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

**Any violation of an MCL, MRDL, AL, or TT is asterisked. Additional information regarding the violation is provided later in this report.*

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA						
Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG		Typical Source of Bacteria
Total Coliform Bacteria (State Total Coliform Rule)	(In a mo.) 0	0	1 positive monthly sample (a)	0		Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (State Total Coliform Rule)	(In the year) 0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	None		Human and animal fecal waste
<i>E. coli</i> (Federal Revised Total Coliform Rule)	(In the year) 0	0	(b)	0		Human and animal fecal waste

(a) Two or more positive monthly samples is a violation of the MCL.
 (b) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER								
Lead and Copper (and reporting units)	Sample Date	No. of Samples Collected	90 th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	2019	30	< 5	0	15	0.2	4	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	2019	30	0.06	0	1.3	0.3	0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	2019-2020	61	31 - 90	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2019-2020	99	47 - 248	None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Nitrate as Nitrogen (ppm)	2020	3	0.6 - 9	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Gross Alpha (pCi/l)	2018	2	< 1 - 6	15	(0)	Erosion of natural deposits
Uranium (pCi/l)	2017	6	4 - 9	20	0.4	Erosion of natural deposits
Arsenic (ppb) - At theWells	2019-2020	12*	4 - 39*	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Arsenic (ppb) - After Treatment	2020	4	< 2 - 10	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2019-2020	< 0.1	< 0.1 - 0.1	1	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (ppm)	2019-2020	0.1	0.1 - 0.2	2	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Dibromochloro - propane [DBCP] (ppt)	2019-2020	13	< 10 - 80	200	1.7	Banned nematocide that may still be present in soils due to leaching from former crop use
1,2,3-Trichloropropane (ppb) - At all of the Wells	2020	0.19*	0.01* - 0.59*	0.005	0.0007	Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites; used as cleaning and maintenance solvent, paint and varnish remover, and cleaning and degreasing agent; byproduct during the production of other compounds and pesticides.
1,2,3-Trichloropropane (ppb) - At Well #8	2020	0.21*	0.19* - 0.24*	0.005	0.0007	Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites; used as cleaning and maintenance solvent, paint and varnish remover, and cleaning and degreasing agent; byproduct during the production of other compounds and pesticides.
1,2,3-Trichloropropane (ppb) - At Well #8 - After Treatment	2020	< 0.005	< 0.005 - < 0.005	0.005	0.0007	Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites; used as cleaning and maintenance solvent, paint and varnish remover, and cleaning and degreasing agent; byproduct during the production of other compounds and pesticides.

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	SMCL	PHG (MCLG)	Typical Source of Contaminant
Total Dissolved Solids (ppm)	2019-2020	310	220 - 610	1000	N/A	Runoff/leaching from natural deposits
Specific Conductance (umho/cm)	2019-2020	422	290 - 510	1600	N/A	Substances that form ions when in water; seawater influence
Chloride (ppm)	2019-2020	45	7 - 81	500	N/A	Runoff/leaching from natural deposits; seawater influence

Sulfate (ppm)	2019-2020	30	9 - 100	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Color (unit)	2019-2020	< 5	< 5 - 35*	15	N/A	Naturally-occurring organic materials
Turbidity (NTU)	2020	0.3	0.2 - 0.5	5	N/A	Soil runoff
Manganese (ppb) - At all of the Wells	2019-2020	37	< 20 - 57*	50	N/A	Leaching from natural deposits
Manganese (ppb) - At Well #17	2020	54*	51* - 57*	50	N/A	Leaching from natural deposits
Manganese (ppb) - At Well #17 - After Treatment	2020	< 20	< 20 - < 20	50	N/A	Leaching from natural deposits

TABLE 6 - DETECTION OF ADDITIONAL CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Range of Detections	MCL (MRDL)	Health Effects Language
Distribution System Total Trihalomethanes (ppb)	2020	2 - 3	80	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.
Distribution System Chlorine Residual (ppm)	2020	0.2 - 2.0	(4)	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

Additional General Information on Drinking Water

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 health care providers. U.S. EPA/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.

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. The City of Livingston 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 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 or at <http://www.epa.gov/lead>.

Nitrate as Nitrogen in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate-N levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Summary Information for Violation of an MCL, MRDL, AL, TT, or Monitoring and Reporting Requirements

In 2020, arsenic in the drinking water from well #13, well #16, and well #17 exceeded the maximum allowable limit of 10 parts per billion (ppb). The arsenic standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and other circulatory problems. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

The City of Livingston operates water treatment at well #13, well #16, and well #17. Water testing after the treatment at these wells confirms that the arsenic is effectively being lowered to within acceptable levels.

In 2020, 1,2,3-Trichloropropane (1,2,3-TCP) was detected in the drinking water from all nine wells above the 0.005 parts per billion (ppb) maximum allowable limit (MCL). 1,2,3-TCP is an organic chemical found in various industrial and pesticide uses. Additional testing is required to determine what corrective action will be required if it continues to be detected above the MCL. Some people who drink water containing 1,2,3-TCP in excess of the MCL over many years may have an increased risk of getting cancer, based on studies in laboratory animals.

The City of Livingston operates water treatment at well #8. Water testing after the treatment at well #8 confirms that 1,2,3-TCP is effectively being lowered to within acceptable levels.

In 2020 the City started the Well #14 & Well #16 Arsenic and TCP Renovation project. The Project consisted of adding a fourth vessel to remove Arsenic and installing eight granular activated carbon vessels to remove TCP from Well #14 and Well #16. The Arsenic renovation is complete and the TCP project will be on online by August 2021

In 2020, manganese was detected at well #17 above the allowable limit. In 2019, color was detected at well #15 above the allowable limit. The State has established the maximum allowable limits for manganese and color as secondary limits, not as primary limits. These secondary MCLs are set to protect you from unpleasant aesthetic affects such as color, taste, odor, and the staining of plumbing fixtures (e.g., tubs and sinks), and clothing while washing. A violation of these MCLs do not pose a risk to public health.

The City of Livingston operates water treatment at well #17. Water testing after the treatment at well #17 confirms that manganese is effectively being lowered to within acceptable levels.

Vulnerability Assessment Summary

A Drinking Water Source Assessment was completed for the City of Livingston wells by the California Department of Public Health - Merced District in September 2002. The City's sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: parks, chemical/petroleum pipelines, lagoons/liquid wastes, machine shops, wastewater treatment plants, hardware/lumber/parts stores, crops, irrigated (berries, hops, mint, orchards, sod, greenhouses), fertilizer/pesticide/herbicide application, housing - high density (>1 house/0.5 acres), septic systems - high density (>1/acre), apartments and condominiums, crops, non-irrigated (e.g., Christmas trees, grains, grass seeds, hay), sewer collection systems, automobile - body shops, automobile - repair shops, fleet/truck/bus terminals, RV/mini storage, and schools.

The sources are also considered most vulnerable to the following activities not associated with any detected contaminants: automobiles - gas stations, historic gas stations, dry cleaners, injection wells/dry wells/sumps, septic systems - low density (<1/acre), wells - agricultural/ irrigation, agricultural drainage.

A copy of the Drinking Water Source Assessment is 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.

If you would like to review the Drinking Water Source Assessment, contact our office at 1416 "C" Street, Livingston, California 95334, or by phone at : (209) 394-8044 during regular business hours.