

2022 Consumer Confidence Report

Water System Information

Water System Name: CITY OF LIVINGSTON

Report Date: 6/15/2022

Type of Water Source(s) in Use: GROUND WATER WELLS

Name and General Location of Source(s): WELLS #8, #9, #11, #12, #13, #14, #15, #17,

Drinking Water Source Assessment Information: COMPLETED SEPTEMBER 2002

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 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 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 phone at (209) 394-8044 during regular business hours.

Time and Place of Regularly Scheduled Board Meetings for Public Participation: First and Third Tuesday of every month at 7:00 pm at 1416 C Street, Livingston Ca. 95334

For More Information, Contact: Department of Public Works at 209-394-8044

About This Report

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 to December 31, 2022 and may include earlier monitoring data.

Importance of This Report Statement in Non-English Languages

Language in Spanish: Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse City of Livingston a 209-394-8041 para asistirlo en español.

Language in Punjabi: ਇਸ ਰਿਪੋਰਟ ਵਿੱਚ ਤੁਹਾਡੇ ਪੀਣ ਵਾਲੇ ਪਾਣੀ ਬਾਰੇ ਬਹੁਤ ਮਹੱਤਵਪੂਰਨ ਜਾਣਕਾਰੀ ਹੈ। ਪੰਜਾਬੀ ਵਿੱਚ ਤੁਹਾਡੀ ਮਦਦ ਕਰਨ ਲਈ ਕਿਰਪਾ ਕਰਕੇ ਸਿਟੀ ਆਫ਼ ਲਿਵਿੰਗਸਟਨ ਨੂੰ 209-394-8041 'ਤੇ ਸੰਪਰਕ ਕਰੋ

Terms Used in This Report

Term	Definition
Level 1 Assessment	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Level 2 Assessment	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an <i>E. coli</i> MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
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 (U.S. EPA).
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.
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.
Regulatory Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
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.
Variations and Exemptions	Permissions from the State Water Resources Control Board (State Board) to exceed an MCL or not comply with a treatment technique under certain conditions.

Term	Definition
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)

Sources of Drinking Water and Contaminants that May Be Present in Source 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, 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 byproducts of industrial processes 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.

Regulation of Drinking Water and Bottled Water Quality

In order to ensure that tap water is safe to drink, the U.S. EPA and the 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.

About Your Drinking Water Quality

Drinking Water Contaminants Detected

Tables 1, 2, 3, 4, 5, 6, and 8 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 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 AL, MCL, MRDL, 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

Complete if bacteria are detected.

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
<i>E. coli</i> (federal revised total coliform rule)	(0)	[0]	(b)	0	Human and animal fecal waste
Total Coliform Bacteria (state total coliform rule)	(0)	(0)	1 Positive monthly sample (a)	0	Naturally present in the environment
Fecal Coliform or <i>E. Coli</i> (state total coliform rule)	(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

(a) 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*.

(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

Complete if lead or copper is detected in the last sample set.

Lead and Copper	Sample Date	No. of Samples Collected	90 th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	10/12/2022	40	2.36	1	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	10/12/2022	40	0.065	0	1.3	0.3	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	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	2020-2023	53.5	34-76	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2020-2023	67.55	47-100	None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

Table 4. Detection of Contaminants with a Primary Drinking Water Standard

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Arsenic (ppb) - At the Wells Raw	2022	12.9	6.9 - *24	10	.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Arsenic (ppb) – after treatment. (Wells 13,16,17)	2022	3.9	0 – 8.3	10	.004	
Barium (ppm)	2022	.137	0 - .152	1	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Nitrate as Nitrogen (ppm)	2022	4.29	0 – 8.7	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

Gross Alpha (pCi/l)	2022	7.15	4.03 – 11.9	15	0	Erosion of natural deposits
Fluoride (mg/L)	2020-2022	.087	.11 - .19	2	1	Some people who drink water containing fluoride in excess of the federal MCL of 4 mg/L over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2 mg/L may get mottled teeth.
1,2,3-Trichloropropane (ppb) - At all of the Wells Raw	2022	*0.18	*.041 - *.440	.005	.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 After treatment						
Well 8	2022	0	0 – 0	.005	0.0007	
Well 14/16 blended	2022	*.05	*0 - *.19			
Turbidity (NTU)	2020-2022	.20	0.1 – 0.42	5	N/A	Soil runoff
Dibromochloro - propane [DBCP] (ppb)	2020-2022	.04	.01 - .02	200	1.7	Banned nematocide that may still be present in soils due to leaching from former crop use
Chlorine (mg/L)	2022	1	0.25 – 2.0	4	4.0	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.
TTHMs (Total Trihalomethanes) (ppb)	2022	4.9	3.10 – 4.90	80	N/A	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer
HAA5 (Sum of 5 Haloacetic Acids) (ppb)	2022	4.2	0 – 4.2	60	N/A	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.

Table 5. Detection of Contaminants with a Secondary Drinking Water Standard

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	SMCL	PHG (MCLG)	Typical Source of Contaminant
Manganese ppb all wells (raw)	2020-2022	30.7	4.97-38	50	N/A	Leaching from natural deposits
Manganese well 17 (treated)	2022	0	0	50	N/A	
Odor (units)	2020-2022	1	1	3	N/A	Naturally-occurring organic materials
Total Dissolved Solids (mg/L)	2020-2022	262.5	220-350	1000	N/A	Runoff/leaching from natural deposits
Chloride (mg/L)	2020-2022	36.23	7.59-66	500	N/A	Runoff/leaching from natural deposits; seawater influence
Sulfate (mg/L)	2020-2022	25.8	9.9-49	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Specific Conductance (US/M)	2020-2022	413.75	330-570	1600	N/A	Substances that form ions when in water; seawater influence

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 (1-800-426-4791).

Arsenic-Specific Language: While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. 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 circulatory problems.

Lead-Specific Language: 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. [Enter Water System's Name] 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. [Optional: 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 (1-800-426-4791) or at <http://www.epa.gov/lead>.

Nitrate-Specific Language: Nitrate 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 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.

State Revised Total Coliform Rule (RTCR): [Enter Additional Information Described in Instructions for SWS CCR Document]

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

In 2022, 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.. 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 2021 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 was online by August 2021. Well 14/16 treated water was non-detect of TCP except for the month of October and November 2022 when it exceeded the TCP MCL.