



2022 CITY OF LEMOORE WATER QUALITY CONSUMER CONFIDENCE REPORT

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse City of Lemoore a 711 W Cinnamon Drive, Lemoore CA 93245 o (559) 924-6744 ext 744 para asistirlo en español.

We are pleased to provide you with the City of Lemoore's 2022 Consumer Confidence Report (CCR). We want to keep you informed about the water quality and services we have delivered to you over the past year. This report shows the results for drinking water monitoring conducted between January 1, 2022 through December 31, 2022. The State allows us to monitor some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, is more than one year old.

The City of Lemoore Water Division routinely monitors your drinking water for approximately 120 drinking water constituents. Only the constituents that were detected are shown in this report. Constituents that were monitored for but not detected are not listed. The tables in this report show the results compared to the allowable levels in drinking water, as well as typical sources of constituents and pertinent information about water system compliance with drinking water standards.

Definitions and Terms

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.

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.

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.

MicroSiemens per centimeter ($\mu\text{S}/\text{cm}$) – a unit of measure for electrical conductivity.



Nephelometric Turbidity Unit (NTU) or (units) – nephelometric turbidity units is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Not Applicable (NA) – Does not apply or is not required to be tested.

Non-Detect (ND) – Laboratory analysis indicates that the constituent is not present above the reporting level.

Parts per million (ppm) or Milligrams per liter (mg/l) – one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (ug/l) – one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) – picocuries per liter is a measure of the radioactivity in water.

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

Public Health Goal (PHG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. PHG's 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 which a water system must follow.

Secondary Maximum Contaminant Level (SMCL) – The highest level of a secondary constituent that is allowed in drinking water. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Water Sources

Water for the City of Lemoore is produced from nine groundwater wells, three in the well field north of town (Wells N-4, N-5, N-6), and six located within the city (Wells 7,10,11,12,13, and 14). There is also one emergency standby Well N-2. All wells draw from the San Joaquin Valley – Tulare Lake aquifer subbasin (5-022.12)

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It is important to remember that the presence of these constituents does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline 1-800-426-4791.

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, can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which 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 that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.
- Iron, which is a secondary standard in that it affects taste but does not have any health effects.

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 Water Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Water Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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 providers. USEPA/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).

Lead

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 Lemoore is responsible for providing high quality drinking water, but cannot control the variety of materials used in the 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 drinking 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/safewater/lead>.

Arsenic

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 costs 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.

Violation Reporting

Total Trihalomethanes

Our water system recently failed to reach a drinking water standard for total trihalomethanes (TTHMs) in 2022. Although **this is not an emergency**, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

What should I do?

You do not need to use an alternative (e.g., bottled) water supply. This is not an immediate risk. If it had been, you would have been notified immediately. However, 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.

What was done?

2022 TTHM monitoring shows that our water system's locational running annual average¹ (LRAA) exceeded the MCL level of 80 µg/L at four sample sites with annual running averages ranging from 33.5µg/L to 157.5µg/L. A Compliance Order has been issued and construction of a water treatment plant is underway. The City of Lemoore will continue to update a quarterly corrective action plan for TTHMs until the water treatment plant starts operation.

Nitrate

The City of Lemoore is required to sample all active wells for nitrate on an annual basis. The City of Lemoore failed to collect nitrate samples from Well 4 and Well 13 during 2022. All other active wells were sampled in 2022. No nitrate detections were reported.

¹ Per the Stage 2 Disinfection and Disinfectants Byproducts Rule (DBPR) effective October 2013, compliance with the DBPR is based on a locational running annual average (LRAA) for each disinfection byproduct monitoring point.



Aluminum

The average concentration of aluminum in the City of Lemoore’s drinking water supply was above the secondary maximum contaminant level of 200 parts per billion (ppb). The concentration of aluminum did not exceed the primary maximum contaminant level of 1,000 parts per billion (or 1 milligram per liter). Exceedances of secondary maximum contaminants does not pose a health threat. Rather, Secondary maximum contaminant levels are set to protect the odor, taste, and appearance of drinking water. The City of Lemoore plans to conduct quarterly aluminum sampling for affected wells starting in 2023.

How to Read the Tables

The column named “Constituent & reporting units” indicates the constituent that was monitored for and detected in the water system. The “Year(s) tested” column indicates the year(s) in which samples were taken. You may notice some constituents were monitored over a range of years. This is because the active wells are monitored at a staggering frequency resulting in an overall average detection covering a range of years. The column “MCL” and “SMCL” denote the regulatory limit set by the State Water Resources Control Board. The column “PHG” denotes the public health goal for the constituent. The “Typical Source” column describes the likely origin of the constituent. To understand the table, compare the average detection with the MCL or SMCL. If the City is in compliance with state and federal laws, the average detection will be less than the MCL or SMCL. If the average detection is above the MCL or SMCL, there will be a note describing the drinking water violation.

Thank you for allowing us to continue providing you with quality drinking water this year. We, in the City of Lemoore, work around the clock to provide good quality and an uninterrupted supply of water to every residence and business. We ask that all our customers help us protect our precious water resources, which are the heart of our community. If you have a complaint regarding water quality, please call the Water Division at (559) 924-6744. The City Council for the City of Lemoore meets on the first and third Tuesdays of each month starting at 7:30 p.m.

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days.

- **SCHOOLS:** Must notify school employees, students, and parents (if the students are minors).
- **RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS (including nursing homes and care facilities):** Must notify tenants.



Table 1: Primary Drinking Water Standards

| Constituent & reporting units | Year(s) tested | MCL | PHG (MCLG) [MRDL] | Average Detection | Range of Detections | Typical Source |
|---------------------------------------|----------------|-----|-------------------|-------------------|---------------------|--|
| Aluminum (ppm) | 2019-2022 | 1 | 0.6 | 0.4 | 0.2 – 0.9 | Erosion of natural deposits; residue from some surface water treatment processes |
| Arsenic (ppb) | 2022 | 10 | 0.004 | 6.1 | ND – 17.5 | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Fluoride (ppm) | 2019-2022 | 2 | 1 | 1.1 | 0.4 – 1.9 | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |
| Gross Alpha Particle Activity (pCi/L) | 2020-2022 | 15 | (0) | 5.0 | 2.2 – 19.5 | Erosion of natural deposits |

Table 2: Secondary Drinking Water Standards

| Constituent & reporting units | Year(s) tested | SMCL | Average Detection | Range of Detections | Typical Source |
|-------------------------------|------------------|------------|-------------------|---------------------|--|
| Aluminum (ppb)* | 2019-2022 | 200 | 421.3 | 150 – 1,134 | Erosion of natural deposits; residual from some surface water treatment processes |
| Color | 2022 | 15 | 6.8 | ND – 16.3 | Naturally occurring organic materials |
| Iron (ppb) | 2021-2022 | 300 | 210 | ND - 470 | Leaching from natural deposits; industrial wastes |
| Manganese (ppb) | 2021-2022 | 50 | 8.9 | ND - 39 | Leaching from natural deposits |
| Odor (TON) | 2016-2022 | 3 | 0.1 | ND – 1.2 | Naturally occurring organic materials |
| Turbidity (NTU) | 2019-2022 | 5 | 2.8 | 1.3 -7.0 | Soil runoff |
| Total Dissolved Solids (ppm) | 2021-2022 | 1,000 | 356 | 170 - 480 | Runoff/leaching from natural deposits |
| Specific Conductance (µS/cm) | 2019-2022 | 1,600 | 576 | 250 - 770 | Substances that form ions when in water; seawater influence |
| Chloride (ppm) | 2021-2022 | 500 | 49.4 | 3.4 - 92 | Runoff/leaching from natural deposits; seawater influence |
| Sulfate (ppm) | 2021-2022 | 500 | 2.5 | ND – 9.6 | Runoff/leaching from natural deposits; industrial wastes |
| Sodium (ppm) | 2021-2022 | NA | 128 | 50 – 170 | Salt present in the water and is generally naturally occurring |
| Hardness (ppm) | 2019-2022 | NA | 3.4 | 1.3 – 5.4 | Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring |

* The average concentration of aluminum in the City of Lemoore’s drinking water supply was above the secondary maximum contaminant level of 200ppb. The City of Lemoore plans to conduct quarterly aluminum sampling for affected wells starting in 2023.



Table 3: Bacteriological Monitoring

| Constituent | # of Detections in 2022 | Number of months in violation | MCL | Typical Source |
|-------------|-------------------------|-------------------------------|-----|------------------------|
| E. coli | 0 | 0 | (a) | Human and animal waste |

Table 4: Lead and Copper Monitoring

| Constituent | Year Collected | Number of samples collected | Action Level | PHG | 90 th percentile | # of sites exceeding AL | Number of schools requesting sampling | Typical Source |
|--------------|----------------|-----------------------------|--------------|-----|-----------------------------|-------------------------|---------------------------------------|---|
| Lead (ppb) | 2022 | 30 | 15 | 0.2 | ND | 0 | 0 | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |
| Copper (ppm) | | | 1.3 | 0.3 | ND | 0 | NA | |

Table 5: Distribution System Monitoring

| Constituent & reporting units | Year tested | MCL [MRDL] | PHG [MRDLG] | Highest LRAA (Average Detection) | Range of Detections | Typical Source |
|--|-------------|---------------------------|---------------------------|----------------------------------|---------------------|---|
| Total Trihalomethanes (TTHMs) (ppb) | 2022 | 80 | NA | 157.5* | 23 – 170 | Byproduct of drinking water disinfection |
| Total Haloacetic Acids (HAA5) (ppb) | 2022 | 60 | NA | 38.0 | 10 – 42 | Byproduct of drinking water disinfection |
| Chlorine (ppm) | 2022 | [4 (as Cl ₂)] | [4 (as Cl ₂)] | 0.76 | 0.40 – 1.05 | Drinking water disinfectant added for treatment |

*The City of Lemoore exceeded the MCL for TTHMs in 2022. A compliance order has been issued and a water treatment plant is under construction to reduce TTHMs from the water supply. Quarterly reports are sent to customers summarizing the progress of this project.

Table 6: General Minerals

| Constituent & reporting units | Year(s) tested | Average Detection | Range of Detections |
|-------------------------------|----------------|-------------------|---------------------|
| Alkalinity Bicarbonate (ppm) | 2021-2022 | 207 | 84 – 340 |
| Alkalinity Carbonate (ppm) | 2021-2022 | 16.5 | ND – 29 |
| Calcium (ppm) | 2021-2022 | 1.3 | 0.5 – 1.8 |
| Magnesium (ppm) | 2021-2022 | 0.1 | ND – 0.2 |
| pH (std units) | 2019 -2022 | 8.7 | 8.2 – 9.0 |