2022 Annual Drinking Water Quality Report

CITY OF LINDSAY

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, 2022 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua de beber.
Tradúzcalo ó hable con alguien que lo entienda bien.

We are pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the domestic drinking water and services we have delivered to you over the past year. Our goal is and always has been, to provide you with a safe and dependable supply of drinking water. Our water source comes from surface water via the Friant Kern Canal and three groundwater wells, Well Nos. 11, 14 and 15, although Well No. 11 was not in service during 2022. Well 14 and Well 15 have been used more during times of limited access to Friant-Kern Canal delivered water. Well 14 continues to detect DBCP but remains below the Maximum Contaminant Level (MCL). Chlorination is provided on each well. Surface water treatment is conventional filtration with chlorination.

A source water assessment was conducted for the water supply wells of the City of Lindsay water system in May, 2002. The City uses groundwater as a source of supply to augment the surface water supply during the summer months of high demand and to meet system needs during those winter months when the Friant-Kern Canal is shut down for maintenance and repair. City groundwater sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: fertilizer; pesticide and/or herbicide applications; and landfills and/or dumps. The groundwater sources are considered most vulnerable to the following activities not associated with any detected contaminants: wells (agricultural/irrigation); and waste lagoons (liquid wastes). A sanitary survey report for the Friant-Kern Canal water supply has also been completed. An update to this report was completed in 2019. A copy of the complete assessment and sanitary survey report may be viewed at the City offices. If you would like a summary of the assessment or sanitary survey report sent to you or if you have any questions about this report or concerning your water utility, please contact Neyba Amezcua, City Services and Planning Director, at (559) 562-7102, opt. 4.

We want our customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held the 2nd and 4th Tuesday of each month at 6:00 p.m., in the City Council Chambers located at 251 E. Honolulu in Lindsay.

The following are definitions of some of the 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, MRDLs and treatment techniques (TT) for contaminants that affect health along with their monitoring and reporting 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.

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

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 E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

N/A: Not applicable
ND: not detectable at testing limit
ppm: parts per million or milligrams per liter (mg/L)
ppb: parts per billion or micrograms per liter (µg/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)

In general, sources of drinking water (both tap water and bottled water) may 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.

Constituents that may be present in source water to contamination levels 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 which 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, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U. S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board – Division of Drinking Water (DDW) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Water Resources Control Board – Division of Drinking Water (DDW) regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

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. City of Lindsay 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/safewater/lead.

The Tables below lists all the drinking water constituents that were detected during the most recent samplings for the constituent. The presence of these constituents in the water does not necessarily indicate that the water poses a health risk. The State Water Resources Control Board – Division of Drinking Water (DDW) requires us to monitor for certain constituents less than once per year because the concentrations of these constituents are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, are therefore more than one year old.

Treatment Technique	Turbidity Performance Standards (TPS)	Lowest monthly percentage of samples that met TPS	Number of Months in Violation	Highest single turbidity measurement during the year
Conventional Filtration Treatment with Chlorination	Turbidity of the filtered water must: Be less than or equal to 0.3 NTU in 95% of measurements in a month.	99.72%	0	0.530
Turbidity (measured in NTU) is a measurement of the cloudiness of water and is an indicator of filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.				

SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants			MCL	MCLG	Typical Source of Contamination
Water Supply (Distribution System)	**Highest No. of detections**	**No. of months in violation**			
E. coli	(In the year) 0	0	(a)	0	Human and animal fecal waste
Water Sources (Groundwater Wells)	**Total No. of detections**	**Sample Dates (of Detections)**			
E. coli	(In the year) 0	Not Applicable	0	0	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.

E. Coli/Fecal Coliform: E. coli/Fecal coliforms are bacteria whose presence indicate that water may be contaminated with human or animal wastes.

Total Coliform: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

The City collects 4 samples per week in the water supply (distribution) system. The City collects weekly samples at each water well (water sources) when in use.

TEST RESULTS (A)

Lead and Copper Rule	No. of samples collected	MCLG	Action Level	90th percentile level detected	No. Sites Exceeding Action Level	Number of Schools Requesting Lead Sampling	Typical Source of Contamination
Lead (ppb) December, 4/14/2022	60	2	15	ND	0	8 (completed in (2019)	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm) December, 4/14/2022	60	0.3	1.3	0.13	0	NA	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the U.S. EPA Safe Drinking Water hotline (1-800-426-4791).							

SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	MCL	PHG [MCLG]	Sample Date	Weighted Average Level Detected (B)	Range	Typical Source of Contamination
Hardness (ppm)	None	None	2020/2021/2022	350	12 to 910	Generally found in ground and surface water
Sodium (ppm)	None	None	2020/2021/2022	103	2.6 to 260	Generally found in ground and surface water

RADIOACTIVE CONTAMINANTS						
Chemical or Constituent (and reporting units)	**MCL**	**PHG [MCLG]**	**Sample Date**	**Weighted Average Level Detected (B)**	**Range (C)**	**Typical Source of Contamination**
Gross Alpha Activity (pCi/L)	15	N/A	2016/2020	4.4	2.23 to 7.3	Erosion of natural deposits
Radium 228 (pCi/L)	5 (Combined Radium)	0.019	2009/2011	0.77	0.44 to 1.7	Erosion of natural deposits
Uranium (pCi/L)	20	0.43	2022	1.2	0.7 to 6.8	Erosion of natural deposits

Disinfection Byproducts and Disinfectant Residuals

DETECTION OF VOLATILE ORGANIC CONTAMINANTS						
Chemical or Constituent (and reporting units)	**MCL**	**PHG [MCLG]**	**Sample Date**	**Weighted Average Level Detected (B)**	**Range (C)**	**Typical Source of Contamination**
Tetrachloroethylene (PCE) (ppb)	5	0.06	2021/2022	ND	N/A	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
1,1-Dichloroethane (1.1-DCA) (ppb)	5	1	2021/2022	ND	N/A	Extraction and degreasing solvent; used in manufacture of pharmaceuticals, stone, clay and glass products; fumigant

DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**MCL**	**PHG [MCLG]**	**Sample Date**	**Weighted Average Level Detected (B)**	**Range (C)**	**Typical Source of Contamination**
Arsenic (ppb)	10	0.004	2020/2021/2022	2.1	ND to 2.8	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	1	2	2020/2021/2022	0.271	ND to 0.570	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (ppm)	2	1	2020/2021/2022	0.06	ND to 0.17	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate as N (ppm)	10	10	2021/2022	3.2	ND to 7.5 (D)	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD					
Chemical or Constituent (and reporting units)	**MCL**	**Sample Date**	**Weighted Average Level Detected (B)**	**Range (C)**	**Typical Source of Contamination**
Chloride (ppm)	500	2021/2022	325	2 to **930 (G)**	Runoff/leaching from natural deposits; seawater influence
Color (Units)	15	2020/2021/2022	6	ND to 10	Naturally occurring organic materials
Iron (ppb)	300	2020/2021/2022	70	ND to 100	Leaching from natural deposits; industrial wastes
Specific Conductance (µS/cm)	1600	2021/2022	1200	43 to **3300 (G)**	Substances that form ions when in water; seawater influence
Sulfate (ppm)	500	2020/2021/2022	18.1	1.2 to 42	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS) (ppm)	1000	2021/2022	683	31 to **1900 (G)**	Runoff/leaching from natural deposits

Disinfection Byproduct Precursors

Control of DBP precursors (TOC)	**MCL**	**MCLG**	**Range**	**Major Sources in Drinking Water**
Source Water	TT	N/A	1.4 to 2.2	Various natural and manmade sources
Treated Water	TT	N/A	1.2 to 1.5	Various natural and manmade sources

DETECTION OF SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES & HERBICIDES						
Chemical or Constituent (and reporting units)	**MCL**	**PHG [MCLG]**	**Sample Date**	**Weighted Average Level Detected (B)**	**Range (C)**	**Typical Source of Contamination**
Dibromochloropropane (DBCP) (ppt)	200	1.7	2021/2022	14.1	ND to 53 (E)	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
Trichloropropane (F) (1,2,3-TCP) (ppt)	5	0.7	2021/2022	ND	N/A	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

Disinfection Byproducts and Disinfectant Residuals

Chemical or Constituent (and reporting units)	**MCL [MRDL]**	**MCLG [MRDLG]**	**Sample Date**	**Running Annual Average (9 sites)**	**Range (C)**	**Major Sources in Drinking Water**
TTHM [Total Trihalomethanes] ppb)	80	N/A	2022	6.4 to **98.6 (H)**	5.8 to **134.4 (H)**	Byproduct of drinking water disinfection
HAA5 [Haloacetic Acids](ppb)	60	N/A	2022	6.6 to **65.0 (I)**	6 to **90.7(I)**	Byproduct of drinking water disinfection
Chlorine as Cl_2 (ppm)	[4.0]	[4]	2022	1.0	0.4 to 1.8	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose or stomach discomfort

TTHM/HAA5: The TTHMs and HAA5s were found to be out of compliance during 2022 and studies have been completed and identified the options available to correct the violations. The City is pursuing funding to construct improvements. Quarterly sampling and public notification are in place until the violation is corrected.

Disinfection Byproduct Precursors

(A) Results reported due to regulatory requirement or detection of a constituent.

(B) The weighted average reflects the quantity of water provided from each source of supply, be it groundwater (wells) and/or surface water along with the representative concentration for a particular constituent.

(C) Results reported include amounts that are less than the State Water Resources Control Board – Division of Drinking Water (DDW) required detection level for this constituent.

(D) ABOUT NITRATE: Nitrate in drinking water at levels above 10 mg/L (as N) 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 a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels as N that are 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 certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

(E) ABOUT DBCP: Some people who use water containing DBCP in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer. The State Water Resources Control Board – Division of Drinking Water (DDW) has waived Friant Kern Canal from DBCP testing. The last sample result from testing in 1993 was non-detect (ND).

(F) ABOUT 1,2,3-TCP: Some people who drink water containing 1,2,3-trichloropropane (1,2,3-TCP) in excess of the MCL over many years may have an increased risk of getting cancer. 1,2,3-TCP had a notification level (NL) of 5 ppt until December 14, 2017, when the MCL of 5 ppt became effective. We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards.

(G) ABOUT SECONDARY DRINKING WATER STANDARDS: Chloride, Specific Conductance and Total Dissolved Solids were found at levels exceeding the Secondary MCLs. These MCLs are set to protect you against unpleasant aesthetic affects such as color, taste, odor or appearance of drinking water. The elevated levels are typically due to naturally occurring organic materials.

(H) ABOUT TOTAL TRIHALOMETHANES (TTHMs): Some people who drink water containing Total 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.

(I) ABOUT HALOACETIC ACIDS (HAA5s): Some people who drink water containing Haloacetic Acids in excess of the MCL over many years may have an increased risk of getting cancer.

Additional General Information On Drinking Water

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some constituents. The presence of constituents does not necessarily indicate that the water poses a health risk. More information about constituents, contaminant levels and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1/800/426-4791 or their website https://www.epa.gov/dwreginfo/drinking-water-regulations.

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 and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline 1/800/426-479