City of Live Oak 2018 Consumer Confidence Report

Water System Name: **City of Live Oak 5110001** Report Date: **May 24, 2019**

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, 2018 and includes earlier monitoring data.

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

ਇਹ ਸੂਚਨਾ ਮਹਤੱਵਪੂਰਣ ਹੈ।
ਕ੍ਰਿਪਾ ਕਰਕੇ ਕਿਸੀ ਤੋ ਇਸ ਦਾ ਅਨੁਵਾਦ ਕਰਾਉ।

A source assessment has been completed for the well sites. Drinking Water Source Assessment information:

The City of Live Oak wells are located within the Sacramento Valley Groundwater Basin, East Butte Subbasin.

Name and location of sources:

Well 1A/2A: 10046 O Street. Well Three 2455 Walker Way. Well Four 2658 Apricot Street.

Serving the City of Live Oak, Wells 1A/2A and Well #3: Existing and historic gas station, underground storage tanks Well #4: Agricultural drainage, chemical/petroleum pipelines, sewer collection system, existing/historic gas station, chemical/petroleum processing /storage and underground storage tanks.

The time and place of regularly scheduled board meetings for public participation:

City Hall, 9955 Live Oak Blvd: First and third Wednesday of every month at 7 PM

For more information, contact: City Hall 530-695-2112

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.

Variances and Exemptions: Department 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 (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)

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 Department 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.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	**Highest No. of Detections**	**No. of months in violation**	**MCL**	**MCLG**	**Typical Source of Bacteria**
Total Coliform Bacteria	0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	**No. of samples collected**	**90th percentile level detected**	**No. sites exceeding AL**	**AL**	**PHG**	**Typical Source of Contaminant**
Lead (ppb) August 2017	**20**	**1.31 ppb**	**0**	**15 ppb**	**0.2 ppb**	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm) August 2017	**20**	**0.37 ppm**	**0**	**1.3 ppm**	**0.3 ppm**	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**			**Typical Source of Contaminant**
Sodium (mg/L)	**2014**	**24 mg/L**	**21-24 mg/L**	**N/A**	**N/A**	Salt present in the water and is generally naturally occurring
Hardness (ppm)	**2014**	**223 ppm**	**160-280 ppm**	**N/A**	**N/A**	*"Hardness" is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.*

Table 4 Radioactive Contaminants

Gross Alpha (PCi/L)	**2018**	**3.245 PCi/L**	**2.03 to 4.02 PCi/L**	**MCL 15 PCi/L**	**DLR 3.00 PCi/L**	*Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.*

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

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

Inorganic Contaminants

Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Arsenic Treated drinking water (ug/L)	**2018**	**5.3 ug/L**	**3.2 to 9.2 ug/L**	**10 ug/L**	**0.004 ug/L**	Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.
Barium (ug/L)	**2012**	**135 ug/L**	**130.0 to 140.0 ug/L**	**1,000 ug/L**	**2,000 ug/L**	Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.
Hexavalent Chromium (ug/L)	**2016**	**9.87 ug/L**	**8.5-11 ug/L**	**10 ug/L**	**0.02 ug/L**	Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.
Chromium Total, (ug/L)	**2018**	**5.7 ug/L**	**5.7-5.9 ug/L**	**50 ug/L**	**100 ug/L**	Some people who use water containing chromium in excess of the MCL over many years may experience allergic dermatitis
Dibromochloropropane (DBCP), ug/L	**2012**	**0.0240 ug/L**	**MCL 0.200 ug/L**	**DLR 0.010 ug/L**	**0.0017 ug/L**	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.
Nitrate as N03 (ug/L)	**2018**	**4.92 ug/L**	**1.58 to 10.10 ug/L**	**45 ug/L**	**45 ug/L**	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Total Trialomethanes (ug/L)	**2018**	**3.1 ug/L**	**3.1 ug/L**	**80 ug/L**	**N/A**	Byproduct of drinking water disinfection. Some people who use water containing trialomethanes 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.
Atrazine (ug/L)	**2018**	**< 0.5 ug/L**	**<0.5 ug/L**	**3 ug/L**	**3 ug/L**	Runoff from herbicide used on row crops.
Carbofuran (ug/L)	**2018**	**< 5.0 ug/L**	**<5.0 ug/L**	**40 ug/L**	**40 ug/L**	Leaching of soil fumigant used on rice and alfalfa.
2-4-D (ug/L)	**2018**	**< 10 ug/L**	**<10 ug/L**	**70 ug/L**	**70 ug/L**	Runoff from herbicide used on row crops
Diquat (ug/L)	**2018**	**< 4 ug/L**	**<4 ug/L**	**20 ug/L**	**20 ug/L**	Runoff from herbicide use.
Endothall (ug/L)	**2018**	**< 45 ug/L**	**< 45 ug/L**	**100 ug/L**	**100 ug/L**	Runoff from herbicide use.
Ethylene dibromide (ug/L)	**2018**	**< 0.02 ug/L**	**< 0.02 ug/L**	**0.05 ug/L**	**0.05 ug/L**	Discharge from petroleum refineries.

Fluoride (mg/L)	**2014**	**0.1943 mg/L**	**0.222 to 0.176 mg/L**	**2 mg/L**	**1mg/L**	Please read paragraph below.
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. *For a Public Notice:* This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2.0 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). Dental fluorosis may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water. Drinking water containing more than 4 mg/L of fluoride can increase your risk of developing bone disease. For more information, please call City of Live Oak. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call the California Department of Public Health's Water Treatment Device Unit at (916) 449-5600.						
TABLE 6 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent	**Sample Date**	**Range of Detection**	**MCL**	**DLR**		**Typical Source of Contaminant**
Manganese (ug/L)	**2014**	**46-940 ug/L**	**50.0 ug/L**	**20.0 ug/L**		**Leaching from natural deposits**
Iron (ug/L)	**2014**	**280 ug/L**	**300 ug/L**	**100 ug/L**		**Leaching from natural deposits**

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 USEPA'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. 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-Specific Language for Community Water Systems: 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 Live Oak 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 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 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 that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water 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 USEPA and the California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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 a 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 certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

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.

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

TABLE 7-VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
None				

For Water Systems Providing Ground Water as a Source of Drinking Water

Summary Information for Fecal Indicator-Positive Ground Water Source Samples, Uncorrected Significant Deficiencies, or Ground Water TT

SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLE				
None				
SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES				
None				
VIOLATION OF GROUND WATER TT				
TT Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
None				