2017 Consumer Confidence Report

Water System Name: **Los Osos Community Services District** Report Date: **March 22, 2018**

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, 2017 and may include earlier monitoring data.

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

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

Name & general location of source(s): **Los Osos CSD uses six source wells: 8th Street Well, 3rd Street Well, South Bay Lower Aquifer Well, South Bay Upper Aquifer Well, 10th Street Well, and Palisades Well.**

Drinking Water Source Assessment information: **A source assessment was completed in June 2001. Wells are considered most vulnerable to activities associated with high-density housing, septic systems, storm water drainage, and agricultural activities. A complete copy of the source assessment is available at the Los Osos CSD office at 2122 9th Street, Suite 102, Los Osos, CA 93402 or by contacting the office at (805) 528-9312.**

Time and place of regularly scheduled board meetings for public participation: **Public meetings are held at the Los Osos CSD office at 2122 9th Street, Suite 106 on the first Thursday of each month at 7pm.**

For more information, contact: **Los Osos Community Services District** Phone: **(805) 528-9312**

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 (U.S. EPA).

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: 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.

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)

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.

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations 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 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

Microbiological Contaminants (complete if bacteria detected)	**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	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or *E. coli* (state Total Coliform Rule)	(In the year)	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or *E. coli* positive	0	Human and animal fecal waste
E. coli (federal Revised Total Coliform Rule)	(In the year)	0	(a)	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*.

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)	**Sample Date**	**No. of Samples Collected**	**90th Percentile Level Detected**	**No. Sites Exceeding AL**	**AL**	**PHG**	**No. of Schools Requesting Lead Sampling**	**Typical Source of Contaminant**
Lead (ppb)	2016	21	ND	0	15	0.2	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	2016	21	0.98	1	1.3	0.3	Not applicable	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)	5/1/17 5/22/17	35.5	23 – 55	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2017 (various)	155.13	93 – 292	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**
Barium (ppm) (Raw Well)	5/1/17 11/6/17	0.89	N/A	1	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Chlorine (ppm) (Raw Well)	2017 (various)	0.03	ND – 0.12	[4.0 (as Cl_2)]	[4 (as Cl_2)]	Drinking water disinfectant added for treatment
Chlorine (ppm) (Distribution)	2017 (various)	0.760	0.37 – 2.2	[4.0 (as Cl_2)]	[4 (as Cl_2)]	Drinking water disinfectant added for treatment
Chlorine (ppm) (Well After Treatment)	2017 (various)	0.702	0.2 – 1.21	[4.0 (as Cl_2)]	[4 (as Cl_2)]	Drinking water disinfectant added for treatment
Chromium (ppb) (Raw Well)	5/1/17 11/6/17	3.4	3.2 – 3.6	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Copper (ppb) (Raw Well)	5/1/17 5/22/17	0.07	ND – 0.24	(AL=1.3)	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (ppm) (Raw Well)	5/1/17 5/22/17	0.157	0.136 – 0.204	2.0	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids (ppb) (Distribution)	9/5/17	1.7	N/A	60	N/A	Byproduct of drinking water disinfection
Lead (ppb) (Raw Well)	5/1/17 11/6/17	1.55	0.79 – 2.3	(AL=15)	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Nitrate as Nitrogen, N (ppm) (Raw Well)*	**2017 (various)**	**6.74**	**ND – 14.68**	**10**	**10**	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate as Nitrogen, N (ppm) (Well After Treatment)*	**2017 (various)**	**7.05**	**5.18 – 16.8**	**10**	**10**	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Reactive Phosphates (ppm) (Well After Treatment)	2017 (various)	0.61	0.22 – 1.07	N/A	N/A	Corrosion Control
Reactive Phosphates (ppm) (Distribution)	2017 (various)	0.64	0.26 – 1.14	N/A	N/A	Corrosion Control
TTHMs – Total Trihalomethanes (ppb) (Distribution)	9/5/17	7.6	N/A	80	N/A	Byproduct of drinking water disinfection

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Chloride (ppm) (Raw Well)	2017 (various)	55.06	31 – 93.2	500	N/A	Runoff/leaching from natural deposits; seawater influence
Iron (ppb) (Raw Well)*	**2017 (various)**	**136.96**	**4.7 – 2500**	**300**	**N/A**	Leaching from natural deposits; industrial wastes
Iron (ppb) (Well After Treatment)	2017 (various)	6	2.7 – 50	300	N/A	Leaching from natural deposits; industrial wastes
Manganese (ppb) (Raw Well)*	**2017 (various)**	**18.73**	**1.1 – 79**	**50**	**N/A**	Leaching from natural deposits
Odor – Threshold (units) (Raw Well)	5/1/17 5/22/17	0.96	ND – 2.5	3	N/A	Naturally-occurring organic materials
Specific Conductance (µS/cm) (Raw Well)	2017 (Various)	425.8	292 – 820	1600	N/A	Substances that form ions when in water; seawater influence
Sulfate (ppm) (Raw Well)	5/1/17 5/22/17	21.75	8.33 – 47.6	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids – TDS (ppm) (Raw Well)*	**2017 (various)**	**3015.17**	**140 – 11000**	**1000**	**N/A**	Runoff/leaching from natural deposits
Turbidity (Units) (Raw Well)	5/1/17 5/22/17	0.16	0.07 – 0.24	5	N/A	Soil runoff
Zinc (ppm) (Raw Well)	5/1/17 5/22/17	0.02616	ND – 0.068	5.0	N/A	Runoff/leaching from natural deposits; industrial wastes

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS					
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**Notification Level**	**Health Effects Language**
Hexavalent Chromium (ppb) (Raw Well)	2017 (various)	4.8	1.2 – 8.5	[1]	Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.

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

[1] There is currently no MCL for hexavalent chromium. The previous MCL of 0.010 mg/L was withdrawn on September 11, 2017.

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).

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. Los Osos Community Services District 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 (1-800-426-4701) or at http://www.epa.gov/lead.

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.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Iron, Manganese, and Total Dissolved Solids were found at levels that exceeded the secondary MCL (Maximum Contaminant Level) standards. (Results from Iron and Manganese samples collected from the distribution system after treatment were below the secondary MCL.) Secondary MCLs were established to protect you against unpleasant aesthetic effects (e.g., color, taste, and odor) and the staining of plumbing fixtures (e.g., tubs and sinks) and clothing while washing. The high levels are most likely due to the leaching of natural deposits and industrial wastes. High levels of manganese in people have been shown affect the nervous system. The notification level for manganese is 500 ppb.

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

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
Nitrate as Nitrogen, N	**Due to well and aquifer conditions beyond our control and suspected pollution from septic systems, groundwater nitrate levels periodically exceeded the MCL during 2017.**	**Results from samples collected within the distribution system during 2017 were below the MCL, with the exception of one sample collected in July 2017, which was due to an analyzer malfunction. Results from samples collected at one well prior to treatment exceeded the MCL for most samples collected between February – December 2017.**	**Los Osos CSD's Board of Directors have approved a proposed rate increase designed to provide funding for new wells and a nitrate removal facility. The new Los Osos wastewater treatment system has also diverted the community from reliance on septic systems, which are believed to have contributed to the pollution of the groundwater basin.**	**Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.**