

EL OSO WATER SUPPLY CORPORATION 2017 Annual Water Quality Report

PWS ID # TX1280007



Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al telefono (830) 583-3543.

Annual Water Quality Report

This report is a summary of the quality of water El Oso Water Supply Corporation provides its customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in this report. We hope this information helps you become knowledgeable about what is in your drinking water. Our annual water quality report covers the period of January 1 to December 31, 2017. Our staff continues to work hard every day – at any hour to deliver quality drinking water. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach, new treatment technologies, and system upgrades and training, the payoff will be reliable, quality tap water delivered to you and your family.

Important Health Information

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised person such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

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. We are responsible for providing high quality drinking water, but we 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 (800) 426-4791 or at www.epa.gov/safewater/lead.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amount of some contaminants. The presence of

these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban storm water runoff, and septic systems.

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor or color of drinking water, please contact our business office at (830) 583-3543. For more information about contaminants and potential health effects, call EPS's Safe Drinking Water Hotline at (800) 426-4791.

Protecting Your Water

Bacteria are a natural and important part of our world. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern, however, because it indicates that the water may be contaminated with other organisms that can cause disease.

In 2016, the EPA passed a new regulation called the Revised Total Coliform Rule, which requires additional steps that water systems must take in order to ensure the integrity of the drinking water distribution system by monitoring for the presence of bacteria like total coliform and *E. coli*. The rule requires more stringent standards than the previous regulation, and it requires water systems that may be

vulnerable to contamination to have in place procedure that will minimize the incidence of contamination. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment of their system and correct any problems quickly. The EPA anticipates greater public health protection under the new regulation due to its more preventive approach to identifying and fixing problems that may affect public health.

Our goal is to eliminate all potential pathways of contamination into our distribution system, and this new rule helps us to accomplish that goal.

Chlorination Benefits

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far the most common method of disinfection in North America is chlorination.

Drinking water chlorination and filtration has helped virtually to eliminate diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

Flushing Water Mains

Distribution mains (pipes) convey water to homes and businesses. The water entering distribution mains is a very high quality; however, water quality can deteriorate in areas of the distribution main over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganism with distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels, and an acceptable taste and smell.

During flushing operations in your area, some short term deterioration of water quality, though uncommon, is possible. Allow your cold water to run for a few minutes at full velocity before use, and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Where Does My Water Come From?

El Oso Water Supply Corporation provides service to approximately 1900 active meters. Our drinking water is obtained from groundwater sources through the Carrizo Aquifer located in Wilson County and from the Catahoula Aquifer located in Karnes County.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water at our monthly Board of Directors meetings. These meetings are held the 2nd Tuesday of each month at 4:00 p.m. at the corporation office.

Water Loss Audit

In the water loss audit submitted to the Texas Water Development Board during the year covered by this report, our system lost an estimated 149,276,394 gallons of water. The amount lost includes required line flushing, leaks, main breaks, theft, etc.

Source Water Assessment

The Texas Commission on Environmental Quality (TCEQ) completed an assessment of your source water, and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your source water system are based on this susceptibility and on previous data. Any detection of these contaminants will be reported in this Consumer Confidence Report. More information about your source water assessment and protection can be found at www.epa.gov/safewater/protect.



Test Results

Our water is monitored for many different kinds of contaminants on a sampling schedule. The information below represents only those substances that were detected; our goal is to keep all detects below their respective maximum allowed levels. The State recommends monitoring for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

DISINFECTANT DATA

Chemical	Year	Average Level	Range of Levels Detected	Maximum Residual Disinfectant Goal (MRDL*)	Maximum Residual Disinfectant Goal (MRDLG)	The unit of measure	Source in Drinking Water
Chlorine (<i>Free</i>)	2017	1.57	0.8 - 3.4	4.00	4.00	Milligrams per Liter (mg/L)	Water additive used to control microbes

*The MRDL of free chlorine in the water within the distribution system is 4.0 mg/L based on a running annual average.

COLIFORM BACTERIA

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly samples	1	0	0	N	Naturally present in the environment

LEAD AND COPPER

Constituent	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	Number of Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	07/20/2016	1.3	1.3	0.254	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	07/20/2016	0	15	3.5	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits

DISINFECTANTS AND DISINFECTION BY-PRODUCTS

Constituent	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2017	18	7.1 – 19.9	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	84	28.9 – 91.4	No goal for the total	80	ppb	Y	By-product of drinking water disinfection.

*The value in the Highest Level or Average Detected column is the highest average of all sample results collect at a location over a year.

INORGANIC CONTAMINANTS

Constituent	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2017	0.076	0.0723 – 0.076	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2017	0.99	0.98 – 0.99	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	2017	2	0.11 – 1.81	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Arsenic*	2017	9	0 – 9.3	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Selenium	2017	3.5	0 – 3.5	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

*While your drinking water meets EPA standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA 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.

RADIOACTIVE CONTAMINANTS

Constituent	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	03/07/2016	10.3	5.7 – 10.3	0	4	mrem/yr	N	Decay of natural and man-made deposits
Gross alpha excluding radon and uranium	03/07/2016	5	0 – 5	0	15	pCi/L	N	Erosion of natural deposits
Uranium	03/07/2016	5.2	0 – 5.2	0	30	ug/l	N	Erosion of natural deposits

*EPA considers 50 pCi/L to be the level of concern for beta particles.

VIOLATIONS

E. coli

Violation Type	Violation Begin	Violation End	Violation Explanation
Monitor GWR Triggered/Additional, Major	10/01/2017	10/31/2017	We failed to collect follow-up samples within 24 hrs. of leaning of the total coliform-positive sample. These needed to be tested for fecal indicators from all sources that were being used at the time the positive sample was collected.

Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Total Trihalomethanes (TTHM)

Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	04/01/2017	06/30/2017	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated
MCL, LRAA	07/01/2017	09/30/2017	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated
MCL, LRAA	10/01/2017	12/31/2017	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

DEFINITIONS

AL (Action Level) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

ALG (Action Level Goal) – The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

MCL (Maximum Contaminant Level) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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.

MRDL (Maximum Residual Disinfectant Level) – 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.

MRDLG (Maximum Residual Disinfectant Level Goal) – 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.

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.

Avg – Regulatory compliance with some MCLs are based on running annual average of monthly samples.

MFL – Million fibers per liter (a measure of asbestos)

mrem – millirems per year (a measure of radiation absorbed by the body)

NA: Not applicable

NTU: Nephelometric Turbidity Units (a measure of turbidity)

pCi/L – Picocuries per liter (a measure of radioactivity)

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 picograms per liter (pg/L)

Treatment Technique or TT – A required process intended to reduce the level of a contaminant in drinking water.

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