

*Annual*  
**WATER**  
**QUALITY**  
**REPORT**  
*Reporting Year 2012*



*Presented By*  
*Los Osos Community Services*  
*District*

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PWS ID#: 4010016

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

## Providing High Standards with Basin to Bay Stewardship

Once again the LOCSD is pleased to present the following Water Quality Report for your water service area. This report covers all testing performed between January 1, 2012, and December 31, 2012. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of our water users. Thank you for allowing us to continue providing you and your family with quality drinking water.

## Important Health Information

Nitrate in drinking water at levels above 45 ppm 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 an infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 ppm 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

## Substances That Could Be in Water

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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) 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 must provide the same protection for public health. 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 water poses a health risk.

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 can 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, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

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

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Where Does My Water Come From?

The Los Osos CSD water system uses five source wells. Water delivered to the LOCSO customers is groundwater that originates from the Los Osos Valley Basin. The five water well sites are known as the 8th Street Well, 3rd Street Well, 10th Street Well, Palisades Well, and South Bay Well. The groundwater basin is a collection of local drainage basins, streams, creeks, and natural percolation from rain, agricultural, and domestic use. Water is cleaned through a natural filtration process as it trickles down through the ground. During this process, water may also pick up contaminants found in the soil, either naturally occurring minerals, substances resulting from the presence of animals, or from human activity. Groundwater is normally very clean and is simply disinfected to help minimize the chance of any viral and bacterial contamination.

Each well is equipped with on-line devices for operation and monitoring purposes. An alarm system is integrated in the monitoring process to notify operators if there is a problem at any well site or facility. The South Bay and 8th Street wells have additional filtration equipment designed to remove iron and manganese found in these two wells to aesthetically acceptable levels.

Utilities Department operators are responsible for treatment of the five groundwater supply wells. Crews are also responsible for water quality monitoring, sampling, distribution system repair and maintenance, meter reading, and regulatory reporting compliance. The delivery of water to the District's water customers is conveyed through a network of over 25 miles of water mainlines connected through approximately 2,750 water service lines and meters serving residences and commercial business. Included in the domestic water service infrastructure are three water storage tanks, 162 fire hydrants with some 558 valves that require periodic maintenance and inspection. These services provided by Utilities Department personnel not only assure delivery of pure, wholesome potable drinking water, but also provide the water essential for fire fighting.

## Public Meetings

The public is welcome to participate in our Board of Directors meetings and voice concerns about your drinking water. We meet the first Thursday of each month, beginning at 7 p.m., at the South Bay Community Center, 2180 Palisades Ave., Los Osos, CA.

## Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Margaret Falkner, Interim General Manager, at (805) 528-9370.

## Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our office. This plan is an assessment of the area around our potable water wells through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources.

## General Water System Statistics for Calendar Year 2012

- Total Water Production in 2012: 245.95 (MG)
- Average Daily Demand in 2012: 673,836 gallons
- Month of Maximum Usage in 2012: July
- Amount of Water Usage in July 2012: 25.60 (MG)
- Total Well Capacity: 1,760 gallons per minute
- Total Storage Capacity: 1.3 MG

## 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 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Information on the Internet

The U.S. EPA Office of Water ([www.epa.gov/watrhome](http://www.epa.gov/watrhome)) and the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Division of Drinking Water and Environmental Management has a Web site ([www.cdph.ca.gov/certlic/drinkingwater/Pages/default.aspx](http://www.cdph.ca.gov/certlic/drinkingwater/Pages/default.aspx)) that provides complete and current information on water issues in California, including valuable information about our watershed.

# Fact *or* Fiction

Water treatment began as a way to remove disease-causing agents. *(Fiction: It was only in the 1950s that scientists began to suspect that water might carry diseases. Although earlier treatment of water could make the water safer, it was mainly done merely to improve the taste, smell, or appearance of the water.)*

About half of the world's water supply is available for drinking. *(Fiction: If all the world's water were fit into a gallon jug, the fresh water available for us to use would equal only about one tablespoon.)*

Due to its unique nature, water boils at the same temperature anywhere on the planet. *(Fiction: At sea level, water boils at 212 degrees Fahrenheit, but on top of Mt. Everest, water boils at 154 degrees.)*

Water regulates the temperature of the Earth. *(Fact: As in the human body, the water in our oceans, lakes, and streams plays a major role in regulating planetary temperatures.)*

The Mississippi River is longer than the Amazon River. *(Fiction: At 3,902 miles the Mississippi River is not as long as the Amazon River, which flows for 4,000 miles.)*

Forty trillion gallons of water a day are carried in the atmosphere across the United States. *(Fact: Forty percent of the atmosphere's moisture content falls as precipitation each day.)*

## Sampling Results

During the past year, we have taken water samples in order to determine the presence of any biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state allows us to monitor for certain substances less 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.

### REGULATED SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE)  | YEAR SAMPLED | MCL [MRDL]                             | PHG (MCLG) [MRDLG] | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE   |
|--|--------------|--|--------------------|-----------------|----------------|-----------|--|
| Fluoride (ppm)   | 2011         | 2.0                                    | 1                  | 0.117           | 0.083–0.156    | No        | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |
| Gross Alpha Particle Activity (pCi/L)                              | 2004         | 15                                     | (0)                | 0.73            | 0.05–1.61      | No        | Erosion of natural deposits  |
| Nitrate [as nitrate] (ppm)   | 2012         | 45                                     | 45                 | 13.55           | ND–34.7        | No        | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits              |
| Nitrite [as nitrogen] (ppm)  | 2011         | 1                                      | 1                  | ND              | NA             | No        | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits              |
| Radium 228 (pCi/L)   | 2004         | 5                                      | 0.019              | ND              | NA             | No        | Erosion of natural deposits  |
| TTHMs [Total Trihalomethanes] (ppb)                                | 2011         | 80                                     | NA                 | ND              | ND–4.5         | No        | By-product of drinking water disinfection  |
| Total Coliform Bacteria [Total Coliform Rule] (# positive samples) | 2012         | No more than 1 positive monthly sample | (0)                | 0               | NA             | No        | Naturally present in the environment   |

### Tap water samples were collected for lead and copper analyses from sample sites throughout the community

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AL  | PHG (MCLG) | AMOUNT DETECTED (90TH%TILE) | SITES ABOVE AL/ TOTAL SITES | VIOLATION | TYPICAL SOURCE  |
|-----------------------------|--------------|-----|------------|-----------------------------|-----------------------------|-----------|---|
| Copper (ppm)                | 2010         | 1.3 | 0.3        | 0.86                        | 0/20                        | No        | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives               |
| Lead (ppb)                  | 2010         | 15  | 0.2        | 5                           | 1/20                        | No        | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |

### SECONDARY SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE)  | YEAR SAMPLED | SMCL  | PHG (MCLG) | AMOUNT DETECTED | RANGE LOW-HIGH | EXCEEDANCE | TYPICAL SOURCE  |
|------------------------------|--------------|-------|------------|-----------------|----------------|------------|---|
| Chloride (ppm)               | 2011         | 500   | NS         | 141             | 35–398         | No         | Runoff/leaching from natural deposits; seawater influence   |
| Iron (ppb)                   | 2012         | 300   | NS         | 56.68           | ND–170         | No         | Leaching from natural deposits; industrial wastes           |
| Manganese (ppb)              | 2012         | 50    | NS         | ND              | ND–75          | No         | Leaching from natural deposits                              |
| Odor–Threshold (TON)         | 2011         | 3     | NS         | 1.2             | 1–1.7          | No         | Naturally occurring organic materials                       |
| Specific Conductance (µS/cm) | 2011         | 1,600 | NS         | 884             | 453–1,730      | No         | Substances that form ions when in water; seawater influence |
| Total Dissolved Solids (ppm) | 2011         | 1,000 | NS         | 470             | 250–890        | No         | Runoff/leaching from natural deposits                       |
| Turbidity (NTU)              | 2011         | 5     | NS         | 0.0875          | 0.05–0.15      | No         | Soil runoff   |
| Zinc (ppb)                   | 2011         | 500   | NS         | ND              | ND–91          | No         | Runoff/leaching from natural deposits; industrial wastes    |

### OTHER SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE)         | YEAR SAMPLED | MCL [MRDL] | PHG (MCLG) [MRDL] | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE                 |
|-------------------------------------|--------------|------------|-------------------|-----------------|----------------|-----------|--------------------------------|
| Hardness as CaCO <sub>3</sub> (ppm) | 2012         | NS         | NS                | 348             | 76–910         | No        | Leaching from natural deposits |

## Definitions

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

**µS/cm (microsiemens per centimeter):** A unit expressing the amount of electrical conductivity of a solution.

**MCL (Maximum Contaminant Level):** 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 (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

**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 are set by the U.S. EPA.

**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.

**NA:** Not applicable.

**ND (Not Detected):** Indicates that the substance was not found by laboratory analysis.

**NS:** No standard.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

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

**PHG (Public Health Goal):** 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 EPA.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**TON (Threshold Odor Number):** A measure of odor in water.