

# LOS ALAMOS COMMUNITY SERVICES DISTRICT

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## ANNUAL WATER QUALITY REPORT—2017

### Required Sampling

The Los Alamos CSD conducted tests for drinking water contaminants during our latest sampling round in March 2016. Most of these contaminants, including the General Mineral, General Physical and Inorganic Chemicals, are only required to be sampled every 3 years. Radiological samples whether they are regulated or unregulated, are required to be sampled every six years. Synthetic Organic Chemicals (SOC's) if found negative, are waived for 9 years. All other SOC's are once every 6 years. All of the contaminants that were tested in March 2016 were below maximum contaminant levels (MCL's) or non-detectable. **There were no violations.** In 2017 the LACSD took three nitrate samples that are required yearly. Bacteriological samples were taken every other week in the water distribution system (24 for the year) and quarterly raw water samples at our 3 water wells (12 for the year). **There were no positive samples or violations.** This report reflects the quality of water that we provided last year. Included are details about where your water comes from, what it contains and how it compares to state standards. We are committed to providing you with information to educate and make you aware of the quality of water that is provided. For more information about your water, call 344-4195 and ask for General Manager Kevin Barnard.

**Contaminants that may be present** in source water before we treat it include:

- \* *Microbial contaminants*, such as viruses and bacteria which 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 result from urban storm water runoff, industrial or domestic waste water discharges, oil and gas production, mining or farming.
- \* *Pesticides and herbicides*, which may come from a variety of sources such as agriculture and residential uses
- \* *Radioactive contaminants*, which are naturally occurring
- \* *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

**In order to insure that tap water is safe to drink**, the Environmental Protection Agency (EPA) and the California Department of Public Health (CDPH) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA and CDPH 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, some elderly, and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines are an appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA Safe Drinking Water Hotline (800-426-4791).

**The source 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 human activity.

**Your water comes from 3 district wells** from an underground source of water called the San Antonio Groundwater Basin. **The district has 3 wells called Well #3A, Well #4, and Well #5. Wells #1 and #2 were abandoned in previous years.** For a site visit of our wells please call General Manager, Kevin Barnard at 344-4195 for an appointment. The LACSD owns the land around these wells and restricts any activity that could contaminate them. After the water comes out of the wells, we add sodium hypochlorite a chlorine disinfectant to protect you against microbial contaminants. We also treat the water with sodium hydroxide to provide for corrosion control, within the distribution system and your household plumbing. **The CDPH completed a water vulnerability assessment of our source water April 2013.** No contaminants have been detected in the water supply, however our source is considered vulnerable to the following activities: High Density Housing, R.V. Parks, Vineyards, Fertilizers, Historic Gas Stations, State Highways, Roads, Streams, Well Water Supplies and Surface Water. A copy of the assessment may be viewed at our office.

**Drinking water, including bottled water** may reasonably be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health risks can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

**Our Board of Directors and Staff meet** on the fourth Wednesday of each month at 6:30 p.m. at the Los Alamos Community Services Districts' board room, located at 82 North St. Joseph Street in Los Alamos. We encourage everyone to come and participate in these meetings as they can be very informative about your town and the finer details of the district's operations.

# WATER QUALITY DATA

*The following are some definitions of some of the terms in this report*

**Primary Drinking Water Standards:** Includes MCLs for contaminants that affect health, surface water, treatment requirements, and the monitoring and reporting requirements for required constituents

**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 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 technological-ly. Secondary MCLs are set to protect the odor, taste, and appearance in 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

**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

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

**n/a:** not applicable \* **nd:** not detectable at testing limit \* **ppb:** parts per billion of micrograms per liter \* **ppm/mg/l:** parts per million or milligrams per liter \* **pCi/l:** Picocuries per liter (a measure of radiation) **ug/l:** micrograms per liter

## Distribution System Microbiological Quality of the Water

*Monitoring for bacteriological constituents in the distribution system is required. This monitoring is done every month to verify that the system is free from coliform bacteria. This is a summary.*

Minimum number of tests for the presence of coliform bacteria per year: 24

Number of tests for the presence of coliform bacteria conducted during the last year: 24

Number of samples which were found to contain coliform bacteria during the year: 0

***Residential monitoring of individual taps from selected homes within the water distribution system are sampled for lead & copper. This monitoring is done to verify that the delivered water to your home does not contain lead or copper amounts that exceed the States action***

The Los Alamos Community Services District (LACSD) provides liquid sodium hydroxide to raise the pH in our well water supply for the corrosion control treatment, to comply with the lead and copper rule. The LACSD currently has our wells equipped to provide this treatment. The LACSD is permitted to operate in a pH range of 6.8 for a low and 7.5 for a high with an optimum pH setting of 7.1 for the water entering the distribution system, to ensure the corrosivity of well water supply is diminished. The LACSD samples and records the pH at two distribution system sample stations weekly in conjunction with their regularly scheduled bacteriological samples and submits the results in a monthly operational report by the tenth of each month to the California Department of Public Health (CDPH).

Samples	Date of most recent samples	Number of samples collected	Number of samples required	Level of Detected 90th Percentile	Number of Sites Above the Action Level	Action Level
Lead	9/27/16	10	10	0.8	0	15 ppb
Copper	9/27/16	10	10	698	0	1300 ppb

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 Alamos CSD 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>.

**Next sample for Lead and Copper is due September 2019.**

The following tables on the next pages summarizes the most recent monitoring for these constituents and list all the drinking water contaminants that were tested during March 2016. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State requires the District to monitor for certain contaminants less than once per year because the concentration of these contaminants are not expected to vary significantly from year to year.

### Inorganic Chemical Water Quality

These values are expressed in parts per billion (ppb), parts per million (ppm) The letters “ND” means that not detectable level of this chemical was found in the samples taken.

Inorganic Chemical	Date of Test	Level Detected	Average	MCL	PHG	Major Sources in Drinking Water
Arsenic	3/23/16	3-4 ppb	3.5 ppb	10 ppb	0.004 ppb	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium	3/23/16	0.0203-0.0307 ppm	0.0255 ppm	1 ppm	2 ppm	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Cadmium	3/23/16	0.9 - 1.2 ppb	1.05 ppb	5 ppb	0.04 ppb	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories, and metal refineries; runoff from waste batteries and paints
Nickel	3/23/16	2 ppb	2 ppb	100 ppb	12 ppb	Erosion of natural deposits; discharge from metal factories
Nitrate as N	4/19/17	1.9-4.2 ppm	2.8 ppm	45 ppm	45 ppm	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium	3/23/16	3-5 ppb	4 ppb	50 ppb	30 ppb	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)

### Radiological Water Quality

Results of water sample analyses performed to measure radiological constituents. Water system is in compliance if the level does not exceed 4 picoCuries per liter (pCi/l). Note: picoCuries is the unit used for measurement of radiological activity.

**Results of most recent test for Radiological constituents:** 0.195-2.28 pCi/L Date: 9-5-12

If this box is checked, radiological monitoring not required for this type of water system.

Next sampling due September 2021 for Gross Alpha Only.

### General Mineral and Physical Water Quality

The following constituents are not considered a health hazard but are monitored to determine aesthetic quality:

Name of Constituent	Date of Test	Level Detected	Average	MCL	Major Sources in Drinking Water
Color	3/23/16	ND	ND	15 units	Naturally-occurring organic materials
Copper	3/23/16	ND-.060	0.03	1.0 ppm	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Iron	3/23/16	ND-40	20	300 ug/l	Leaching from natural deposits; industrial wastes
Manganese	3/23/16	ND	ND	50 ug/l	Leaching from natural deposits
Odor-Threshold	3/23/16	ND	ND	3 Units	Naturally-occurring organic materials
MBAS (foaming agents)	3/23/16	ND	ND	500 ug/l	Municipal and industrial waste discharges
Turbidity	3/23/16	0.5-1.1	0.8	5 Units	Soil runoff
Zinc	3/23/16	ND	ND	5.0 mg/l	Runoff/leaching from natural deposits; industrial wastes

Name of Constituent	Date of Test	Level Detected	Average	MCL	Typical Source of Contaminant
Total Dissolved Solids	3/23/16	450-560	505 mg/l	1000 mg/l	Runoff/leaching from natural deposits
Specific Conductance	3/23/16	678-890	784 umhos/cm	1,600 umhos/cm	Substances that form ions when in water; seawater influence
Chloride	3/23/16	69-77	73 mg/l	500 mg/l	Runoff/leaching from natural deposits; seawater influence
Sulfate	3/23/16	120-160	140 mg/l	500 mg/l	Runoff/leaching from natural deposits; industrial wastes

Name of Constituent	Date of Test	Level Detected	Average	MCL [MRDL]	PHG [MRDLG]	Major Sources in Drinking Water
TTHM	10/23/17	8 ppb	8 ppb	80 ppb	n/a	Byproduct of drinking water disinfection
HAA5	10/23/17	2 ppb	2 ppb	60 ppb	n/a	Byproduct of drinking water disinfection
Chlorine Free Residual ppm	Jan-Dec 2017	0.28 - 0.34 ppm	0.31 ppm	[4]	[4]	Drinking water disinfectant added for treatment

**Organic Chemical Water Quality** Results of the most recent water sample analyses performed to determine the presence of organic chemical contamination in the water supply were taken in March 2016 As mandated by the State, all VOC's (volatile organic chemical compounds) were tested at Well #3A, Well #4 and Well #5 **For clarification or more information**, please contact Kevin Barnard/ General Manager @344-4195. VOC's are due again in 2022.

**Is our water system meeting other rules that govern our operations?** The State requires us to test our water on a regular basis to ensure its safety. In 2017 the LACSD took all the required samples and sent the results in our monthly reports to the state in a timely manner.

**MTBE:** Methyl Tertiary-Butyl Ether or M.T.B.E. is a gasoline additive that was used to help cleanup the air by reducing emissions from vehicles. However by doing so, M.T.B.E. is now polluting the nations' ground water supplies. The LACSD sampled Well #3A, Well #4 and Well #5 and M.T.B.E. was found to be non-detected in the well water. M.T.B.E. is considered a volatile organic chemical and along with our V.O.C.'s, the sampling frequency is every six years.

The Los Alamos water system operated efficiently during the 2017 calendar year and has stayed in compliance with all state rules and regulations.