

Lake Alpine Water Company

2016 Water Quality Report



Since 1964

This report shows the results of water monitoring for the period of January 1 - December 31, 2016.

PO Box 5013 Bear Valley, CA 95223

Office: 209-753-2409

Email: info@lakealpinewater.com

Plant: 209-753-6241

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.

Variations and Exemptions: State Board 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 (ug/L)

ppt: parts per trillion or nanograms per liter (ng/L)

pCi/L: picocuries per liter (a measure of radiation)

In order to ensure that tap water is safe to drink, the USEPA and the State Water Resources Control 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.

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* can be naturally-occurring or be the result of oil and gas production and mining activities.

Tables 1, 2, 3, 4, 5, 6, and 8 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 LAWC 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.

If you have questions about your water quality, service or the information in this report, please call us at 209-753-2409 Mon-Thurs from 9 am to 2 pm.

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. Lake Alpine Water Company 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, call our office to add your home to the sample site list. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

How are your payments distributed?

In addition to the fees we collect to keep the plant operating and the water flowing, there are fees that we collect and pass on to other entities.

CPUC fees are based on 1.44% of the service and metered water fees. These fees were established by the California State Legislature in 1982 to fund the regulation of public utilities by the California Public Utilities Commission. 100% of these surcharges collected by LAWC are paid to the CPUC.

SDWSRF fees are collected to retire the Safe Drinking Water State Loan. This low interest loan was issued to LAWC in 2004 to pay for the new treatment plant and building. 100% of these surcharges collected by LAWC are paid to the fiscal agent for the State Water Resources Control Board.

The service fees and metered water charges are used to pay for all operations and capital improvements to the treatment and distribution system. Here is a breakdown of how the fees are used:

22%	Capital improvements
20%	System operators
13%	Customer service & office management
13%	Consultants, Accountant & Attorney
9%	Government Fees and Taxes
7%	Electricity, fuel and vehicles
6%	Insurance, Dues, Interest
4%	General Supplies
4%	Treatment chemicals and lab testing
1%	Directors fees

Improvements to the Lake Alpine Water System

- **Plant Upgrades and Maintenance** Programmed more SCADA systems for easier operator use and reporting.
- **Bear Lake** At the dam, we installed an oxygen generator which disperses oxygen into the bottom of the lake to control iron, manganese and color. This 'in-source' oxidation has allowed us to decrease the use of chemical oxidants and decrease the amount of mineral related color in the finished water.
- **Distribution System** Repaired a leaking service lateral on Quaking Aspen Road.
- **Water Conservation** Continued to work with the county to decrease water used for ball field irrigation and to eliminate leaks.
- **Water Quality** Installed three sampling stations representative of the system. These stations will allow us to monitor the water quality and discontinue in home sampling that was inconvenient to home owners.
- **Customer Service** Assisted nine customers with chronic leak alerts. Resolved three instances of colored water complaints and enrolled 10 more customers in the ACH payment plan.
- **Looking forward** During 2017, LAWC staff will complete a granulated carbon filter installation to reduce disinfection byproducts. In the field, we will be focused on leak detection and repairing or replacing main lines.

The water source for LAWC is the Bear Lake Reservoir contained by an earthen dam in the town of Bear Valley. A source assessment was completed in October 2000 and is available at the LAWC office for review.

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

TABLES 1, 2, 3 – SAMPLING RESULTS SHOWING THE DETECTION OF CONTAMINANTS

Microbiological Contaminants	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria (state Total Coliform Rule)	1	0	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (state Total Coliform Rule)	0	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive		Human and animal fecal waste
<i>E. coli</i> (federal Revised Total Coliform Rule)	0	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*.

Lead and Copper (and reporting units)	Sample Date	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	August 2016	20	7.4	1	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	August 2016	20	0.250	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	08.04.2016	1.7		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	08.04.2016	14		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
Aluminum (ppm)	08.04.2016	0.052		1	0.6	Erosion of natural deposits; residue from some surface water treatment processes
Haloacetic Acids HAA5 (ppb)*	10.05.2016	79.8	49.8-85.3	60	NA	By-product of drinking water disinfection
Total Trihalomethanes TTHM (ppb)	10.05.2016	46.6	26.2-60.6	80	NA	By-product of drinking water disinfection
Chlorine (ppm)	12.31.2016	0.81	0.20-2.00	4	4	Drinking water disinfectant added for treatment

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
Color (units)	12.07.2016	5	4-20	15		Naturally-occurring organic materials
Total Dissolved Solids (ppm)	8.04.2016	53		1000	NA	Runoff/leaching from natural deposits
Specific Conductance (µS/cm)	8.04.2016	37		1600	NA	Substances that form ions when in water; seawater influence
Manganese (ppm)	12.07.2016	0.024	0.020-0.074	0.050		Leaching from natural deposits

TABLE 6 - UNREGULATED CONTAMINANTS - NONE DETECTED

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

Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
*Exceeded MCL for haloacetic acids	In the third and fourth quarters, the locational running annual averages was over the MCL.	2 quarters	Decrease chlorine dosage and flush distribution system	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES

Treatment Technique ^(a) (Type of approved filtration technology used)	Membrane microfiltration system
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to <u>0.1</u> NTU in 95% of measurements in a month. 2 – Not exceed <u>1.0</u> NTU for more than eight consecutive hours. 3 – Not exceed <u>1.0</u> NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100 % All months met TPS#1
Highest single turbidity measurement during the year	0.097 NTU
Number of violations of any surface water treatment requirements	(1) Chlorine Contact Time Violation in February 2016

(a) A required process intended to reduce the level of a contaminant in drinking water.

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

Summary Information for Violation of a Surface Water TT

VIOLATION OF A SURFACE WATER TT

TT Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
Chlorine Contact Time	On February 4 & 6, the ratio of actual to required contact time was below 1.0	2 days	Chlorine generator was repaired, low chlorine alarms were raised, operator's daily calculations are required	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

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 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).