

Crestline-Lake Arrowhead Water Agency

2007 Water Quality Report



We are pleased to present CLAWA's Annual Water Quality Report for 2007. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to protect your water supply. We are committed to ensuring the quality of your water.

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

Drinking Water Contaminants

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, 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 insure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State 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.

CLAWA's Water Supply

All of CLAWA's water supply is surface water from Silverwood Lake, a reservoir of the State Water Project which is operated by the California Department of Water Resources ("DWR"). Silverwood Lake is fed by streams which carry runoff from the local mountains, and also contains imported water which is diverted from the San Francisco Bay Delta and transported to Southern California in man-made canals. Contamination of the imported water supply can occur at any point along its journey to Silverwood Lake, or from sources within the Silverwood Lake watershed itself. In 2007, DWR published an updated Sanitary Survey Report of all watersheds tributary to the State Water Project, including the Silverwood Lake watershed. Copies of that report can be obtained by contacting the State Water Contractors at (916) 447-7375.

CLAWA pumps surface water from Silverwood Lake, treats and disinfects the water at a "multi-barrier" treatment plant located near the south shore of the Lake, then pumps the treated water uphill to CLAWA's storage and pipeline distribution system which extends from Job's Peak, near Cedarpines Park, eastward to Green Valley Lake.

Water Quality Data

CLAWA routinely monitors for contaminants in your drinking water according to State and Federal laws. In 2007, CLAWA monitored the source and treated water continuously and had thousands of analyses performed by State certified laboratories for all regulated and many unregulated constituents. Of the many constituents that can be present in a water supply, CLAWA's test results reveal that only a few were detected in CLAWA's treated water.

Questions If you have any questions regarding the information contained in this report, please contact Jim DeMent at (909) 338-1779. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Board meetings, which are held the first Thursday of every month at 2:00 p.m.

The table below shows the results of our monitoring for the period of January 1 to December 31, 2007. Also please refer to the water quality definitions on the following page.

TEST RESULTS							
Contaminant	Violation Y/N	Average Level Detected	Range of Levels Detected	Units	MCL	PHG	Major Sources in Drinking Water
PRIMARY STANDARDS							
Turbidity	N	.11	.1-.2	NTU	0.3	NS	Soil runoff
The TT requirement is: at least 95% of samples must be less than 0.3 NTU. 100% of our samples were less than 0.3 NTU*							
Total Trihalomethanes	N	39	8-52	uG/l	80	NS	By-product of drinking water chlorination
Haloacetic Acids	N	5	0-5	uG/l	60	NS	By-product of drinking water disinfection
Inorganic Chemicals							
Aluminum	N	.088	.0-.170	mg/l	1	.6	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic	N	.46	0-2.6	uG/l	50	4	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Nitrate (as NO3)	N	2.65	0-4.1	mg/l	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
SECONDARY STANDARDS							
Chloride	N	62	41-100	mg/l	500	NS	Erosion of natural deposits
Iron	N	8.75	0-140	uG/l	300	NS	Leaching from natural deposits; industrial wastes
Manganese	N	6.81	0-28	uG/l	50	NS	Leaching from natural deposits
Sulfate	N	40	29-52	mg/l	500	NS	Erosion of natural deposits
Total Dissolved Solids (TDS)	N	231	180-330	mg/l	1000	NS	Erosion of natural deposits
OTHER CONSTITUENTS							
Sodium	N	65.3	41-81	mg/l	NS	NS	Erosion of natural deposits
Total Hardness	N	101.2	84-120	mg/l	NS	NS	Erosion of natural deposits
Odor - Threshold	N	1	1-1	TON	3	NS	Naturally occurring organic materials
Unregulated Contaminants							
Boron	N	92.5	0-160	uG/l	1,000	NS	Erosion of natural deposits
Vanadium	N	0.96	0-4.6	uG/l	50	NS	Erosion of natural deposits
pH	N	7.8	7.6-8	uG/l	6.5-8.5	NS	
Lead and Copper**							
Lead (uG/l)	N	No. of Samples collected: 10	90 th Percentile Level Detected: 11 uG/l	No. Sites Exceeding AL: 0	AL: 15	MCLG: 2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (uG/l)	N	No. of Samples collected: 10	90 th Percentile Level Detected: 140 uG/l	No. Sites Exceeding AL: 0	AL: 1300	MCLG: 170	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

*Turbidity is monitored continuously because it is a good indicator of the effectiveness of our treatment system. Turbidity measures the cloudiness of water. The Agency uses a conventional treatment process to reduce turbidity.

**The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. The lead and copper data, though representative, is from the 2005 triennial testing. Lead and copper testing is required to be conducted again in 2008. Please see "Additional Information" for more on Lead and Copper.

Water Quality Definitions:

The water quality data table on the preceding page contains several terms and abbreviations which may be unfamiliar to you. To help you better understand these terms we've provided the following definitions:

- **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 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. Environmental Protection Agency (USEPA).
- **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 Environmental Protection Agency.
- **Range:** Lowest to highest
- **mg/l:** Milligrams per liter (parts per million)
- **ug/l:** Micrograms per liter (parts per billion)
- **NTU:** Nephelometric Turbidity Units – a measure of the clarity of water. Turbidity is the measure of particles suspended in water. Higher quality water has low turbidity.
- **NS:** No Standard
- **ND:** Not detectable at testing limit
- **TT:** Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water
- **AL:** Regulatory Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Additional Information

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 also available from the Safe Drinking Water Hotline (1-800-426-4791).

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. The Agency 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>.

A System That Needs To Be Fixed

Two-thirds of California's water supply is located north of the San Francisco Bay Delta, while two-thirds of the State's demand for water comes from south of the Delta. All of the imported water supplied to CLAWA for delivery to its customers flows through the Delta and is diverted from the Delta. And yet the Delta itself is the weakest link in the State's water delivery system, creating a serious risk which requires immediate attention.

The problem is multi-faceted. For one thing, the fresh water channels in the Delta are protected from ocean water intrusion by earthen levees constructed by farmers a century ago. These levees are fragile and can fail, resulting in contamination of the fresh water supply. Studies indicate that in the event of a major earthquake, the fresh water supply could be lost for more than a year while efforts are under way to repair any number of failed levees.

Second, scientists also predict that the sea level will rise rapidly due to global warming. Fresh water is currently pumped from the southern end of the Delta. The pumps in that area are barely above sea level and will have to be relocated in anticipation of sea water intrusion resulting from this expected rise in the sea level.

Third, the Delta is inhabited by a number of endangered or threatened fish which are protected by the State and Federal Endangered Species Acts. Pumping operations can result in the loss of some of these fish and endangerment of their habitat. It is a crime to kill these fish or endanger their habitat without an "incidental take permit" supported by a biological opinion which imposes a number of conditions designed to protect them. These conditions seriously constrain pumping operations and reduce the quantity of imported water that can be taken to supply consumptive demands throughout the State, even during dry cycles when water supplies are already severely diminished.

Recognizing this serious threat to the State's water supply, the Governor has initiated his "Delta Vision" process to develop a solution to these problems in the Delta. He has selected a group of scientists, engineers, university professors and others to study the issue and identify the best approach. One possible solution may involve the construction of alternative facilities to transport a portion of the fresh water supply around the Delta, thus avoiding some of the sensitive problems in the Delta. These efforts will be reported in the news media from time to time, and CLAWA will try to keep you informed as well.

Water Conservation

Water conservation remains a high priority throughout the State. As a minimum, please continue to implement the following measures: (1) Protect against frozen pipes. Install and utilize shut-off valves on your side of the meter, and then drain your on-site water system when you leave. Insulate water pipes outside the structure and in the crawl space beneath the structure. (2) Install low-flow showerheads and toilet tank displacement devices. (3) Repair leaky faucets and valves. A leaky faucet can waste 1,500 gallons per month. (4) Use buckets instead of running hoses to wash vehicles, equipment and structures. (5) Use brooms rather than hoses to clean sidewalks and driveways. (6) Minimize landscape irrigation, especially during hot summer days to prevent evaporation.