

Crestline-Lake Arrowhead Water Agency

2006 Water Quality Report



We are pleased to present CLAWA's Annual Water Quality Report for 2006. 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 Health Services (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 2001, DWR published an updated Sanitary Survey Update 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 2006, 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, 2006. 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	.12	.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	.103	.0-.170	mg/l	1	.6	Erosion of natural deposits; residue from some surface water treatment processes
Nitrate (as NO ₃)	N	2.65	0-4	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
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	54.9	41-81	mg/l	NS	NS	Erosion of natural deposits
Total Hardness	N	80	67-100	mg/l	NS	NS	Erosion of natural deposits
Foaming Agents (MBAS)	N	.01	0-.04	mg/l	.5	NS	Municipal and industrial water discharges
Odor - Threshold	N	1	1-1	TON	3	NS	Naturally occurring organic materials
Unregulated Contaminants							
Boron	N	73	0-200	uG/l	1,000	NS	Erosion of natural deposits
Vanadium	N	1.21	0-6.6	uG/l	50	NS	Erosion of natural deposits
pH	N	7.68	7.4-7.8	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.

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).

Water Quantity Issues

The quality of the water supplied by the Agency is outstanding, satisfying all requirements for all possible constituents identified by State and Federal Law. The treatment techniques employed by the Agency provide a high degree of certainty that the Agency will continue to provide water which satisfies each and every health related requirement each year into the future. The quantity of water available for delivery from one year to the next is less certain, however.

The Agency's water supply comes from Northern California, where the Sacramento River and the San Joaquin River converge in the San Francisco Bay Delta. The fresh water then flows through a maze of rivers and rivulets west towards the Bay. The State Water Project pumps fresh water from the south end of the Delta before it flows into the Bay. The quantity of water available for export from the Delta to Central and Southern California is a function of the amount of precipitation and snow melt in Northern California which feed those fresh water supplies. When precipitation and the snow pack are less than anticipated, the State Water Project draws upon its stored water supplies at various locations in the State, and those stored supplies are sufficient to cope with temporary periods of below average precipitation. When dry conditions continue for a longer period of time, however, the total water supply available from the State Water Project is not sufficient to satisfy the desires and needs of those water purveyors which rely upon that imported water supply.

To further complicate the issue, the San Francisco Bay Delta is an environmentally sensitive area which provides habitat for several endangered fish, including the Delta Smelt and a couple of different types of salmon. During dry periods, when the flow of fresh water into the Delta is diminished, the exportation of water from the Delta can affect flow patterns, temperature and salinity in a way which threatens these endangered fish. In order to comply with applicable State and Federal laws, the State Water Project must obtain permits from the State Department of Fish and Game and from the Federal Fish and Wildlife Service in order to operate the pumps, and these permits are issued with conditions that restrict the quantity of water that can be pumped and the conditions under which pumps may be operated. Thus, the permits further diminish the quantity of water available for export.

Recently you may have seen reports on television or in the newspapers indicating a crisis in the Delta which could threaten the State's water supply. The crisis results from dangerously low populations of these endangered fish, especially the Delta Smelt. A number of factors have contributed significantly to the decline in fish populations. For example, other species that feed on the same food supply are proliferating and are simply eating most of the food that the smelt need in order to survive. Furthermore, the smelt themselves are being eaten by larger fish, such as striped bass for example. Operation of the pumps is only a minor factor affecting the smelt population. Nonetheless, it is one contributing factor that human beings can control, and environmental groups have sought recourse from the courts to further limit the exportation of water from the Delta in an effort to protect these endangered fish.

The Agency has been monitoring this situation very carefully and will continue to do so. This year the Department of Water Resources has allocated its available water supply in an amount equal to 60% of each Contractor's contract amount. This 60% allocation is sufficient to satisfy the needs of the Agency's customers this year. In fact, under current conditions the Agency could absorb some further reduction in its allocation and still satisfy current demands. Furthermore, if needed the Agency could also temporarily borrow water which has been purchased from the San Bernardino Valley Municipal Water District for delivery to the Lake Arrowhead area and use that water instead to satisfy the needs of Agency customers. There are additional measures which the Agency will pursue if necessary to acquire additional water supplies during temporary shortage conditions. Still, the unpredictability of the annual precipitation, coupled with the complexity of the environmental dilemma affecting endangered species in the Delta, are problems which will continue to render the quantity of water less certain than the quality of the water which the Agency is able to deliver to its customers.

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.