



# CASTAIC POWER PLANT WATER QUALITY REPORT 2014

The 2014 Water Quality Report for Castaic Power Plant was prepared by the Los Angeles Department of Water and Power (LADWP). The report is required by the State Water Resources Control Board Division of Drinking Water (DDW) and was prepared in accordance with DDW guidelines. The report gives information about drinking water supplied to Castaic Power Plant during the 2014 calendar year (January 1, 2014 to December 31, 2014). The data are compared to the current State and Federal Standards. The tables contained in this report list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. Several required constituents were not sampled in 2014; therefore Castaic Lake data from the Metropolitan Water District (MWD) of Southern California was used as a supplement. MWD's odor threshold was above the secondary standard.

**The Castaic Water System Remains under a Boil Water Advisory**

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

## WHERE DOES MY WATER COME FROM?

The term “source water” describes where LADWP obtains the water you drink. All drinking water, tap or bottled, comes from either surface water or groundwater sources. Surface water sources include rivers, lakes, streams, ponds, or reservoirs. Groundwater sources are springs or wells.

The Castaic Power Plant receives raw water from the State Water Project (California Aqueduct) via Pyramid Lake and the Elderberry Forebay. The California Aqueduct is operated by the California Department of Water Resources. The water served at Castaic is treated with polymer and ferric chloride for coagulation, sodium bicarbonate for pH stabilization, then filtered and chlorinated. All monitoring and analyses of source and treated water are conducted by LADWP personnel.



## WHY IS DRINKING WATER MONITORED AND TREATED?

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.

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 EPA’s Safe Drinking Water Hotline (800-426-4791).

In order to ensure that tap water is safe to drink, the USEPA and the DDW prescribe regulations that limit the

amount of certain contaminants in water provided by public water systems. DDW regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Contaminants that may be present in source waters include

Microbial contaminants such as viruses and bacteria, which may 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 run-off, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water run-off, and residential uses.

Organic chemicals, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water run-off, and septic systems.

Radioactive contaminants, which can be naturally occurring or be a result of oil and gas production and mining activities.

## MONITORING OF REGULATED CONTAMINANTS /CONSTITUENTS

There are over 110 constituents and contaminants required for monitoring. Utilities monitor for each contaminant at varying frequencies based on the type of contaminant and the type of source water.

## SPECIAL NOTICE TO IMMUNO-COMPROMISED CONSUMERS

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/Center 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 (800) 426-4791.

## TERMS USED IN THIS REPORT

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

DLR (Detection Limit for Reporting Purposes): The DLR is the lowest level at which all DDW certified laboratories can accurately and reliably detect a compound. The DLR provides a standardized basis for reporting purposes.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the PHGs and MCLGs (see below) as economically or technologically feasible. For certain contaminants, compliance with the MCL is based on the average of all samples taken throughout the year.

MCLG (Maximum Contaminant Level Goal) - Federal: 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.

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.

NL (Notification Levels) - State: Health-based advisory levels established by DDW for chemicals in drinking water that lack maximum contaminant levels (MCLs). When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply.

PHG (Public Health Goal) - State: 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.

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

SDWS (Secondary Drinking Water Standards): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWS do not affect the health at the MCL levels.

TT (Treatment Technique): A required treatment process, which will reduce the level of a contaminant in drinking water.

## MONITORING OF UNREGULATED CONSTITUENTS

There are contaminants/constituents found in drinking water that are not yet regulated. Some of these “unregulated contaminants/constituents” are monitored because they could be candidates for future regulations or are of interest to our consumers.

## WATER QUALITY UPDATE

In the past, the CPP water treatment system did not provide adequate filtration, which resulted in a violation of the turbidity performance standard. 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. LADWP is working to improve the turbidity performance by upgrading the water treatment system and by optimizing coagulant dosages.

In August 2010, Castaic management gave their approval to implement a new water treatment design, which includes the addition of a 10,000 gallon finished water storage tank. The new treatment plant is completed.

The Castaic Power Plant Domestic Water Treatment System is in commissioning mode. However, state regulations require a new water treatment system to be fully permitted before serving water to customers. LADWP has submitted a domestic water supply permit application to DDW for review. Until the DDW water permit is approved and issued, the Castaic Domestic Water System remains under a **boil water advisory**. Bottled water will be available until the system is fully permitted.

For more information regarding this report, please call Ms. Cherylee Sevilla at (213) 367-4009.

**CASTAIC POWER PLANT – 2014 CALENDAR YEAR  
HEALTH-BASED PRIMARY DRINKING WATER CONSTITUENTS DETECTED IN TREATED WATER**

Contaminants /Constituents	Units	Castaic Power Plant Water Quality		State Primary Standard (MCL) [MRDL]	MEET PRIMARY STANDARD?	State PHG (Fed. MCLG) [MRDLG]	Major Sources in Drinking water
		Range	Average				
<b>Fluoride</b>	mg/L	0.18	0.18	2	<b>YES</b>	1	Erosion of natural deposits
<b>Gross Beta Particle Activity*</b>	pCi/L	4.7	4.7	50	<b>YES</b>	(0)	Decay of natural and man-made deposits
<b>Nitrate (as NO<sub>3</sub>)</b>	mg/L	3.89	3.89	45	<b>YES</b>	45	Runoff and leaching from fertilizer use; erosion of natural deposits
<b>Radium 226 &amp; 228 (Combined)*</b>	pCi/L	2.13	2.13	5	<b>YES</b>	(0)	Erosion of natural deposits
<b>Uranium*</b>	pCi/L	2.14	2.14	20	<b>YES</b>	0.43	Erosion of natural deposits
<b>Distribution System</b>							
<b>Copper (at-the-tap) (a)</b>	µg/L	number of samples exceeding AL = 0 out of 5	90 <sup>th</sup> Percentile value = 298	AL=1300	<b>YES</b>	300	Internal corrosion of interior water plumbing systems
<b>Lead (at-the-tap) (a)</b>	µg/L	number of samples exceeding AL = 0 out of 5	90 <sup>th</sup> Percentile value = 6.4	AL=15	<b>YES</b>	0.2	Internal corrosion of interior water plumbing systems
<b>Chlorine Residual, Total (as Cl<sub>2</sub>)</b>	mg/L	0.40-2.32	1.12	[4]	<b>YES</b>	[4]	Disinfectant
<b>Haloacetic Acids [HAA5]</b>	µg/L	12.53-23.32	17.74	60	<b>YES</b>	none	Disinfection by-product
<b>Trihalomethanes, Total [TTHM]</b>	µg/L	49.17-74.96	63.14	80	<b>YES</b>	none	Disinfection by-product

**Footnotes for Tables**

(a) = At-the-tap monitoring was conducted in 2014 as required by the Lead and Copper Rule. Castaic Power Plant was in compliance.

(b) = Metropolitan Water District of Southern California - Castaic Lake Water Quality Data (average based on monthly values)

\*Samples were collected in February 2012

**CASTAIC POWER PLANT – 2014 CALENDAR YEAR**  
**AESTHETIC-BASED SECONDARY DRINKING WATER CONSTITUENTS DETECTED IN TREATED WATER**

Contaminants /Constituents	Units	Castaic Power Plant Water Quality	Federal & State Secondary Standard (SMCL)	Meet Secondary Standard?	Major Source in Drinking Water
		<b>Level Detected</b>			
<b>Chloride</b>	mg/L	90.0	500	<b>YES</b>	Runoff/leaching from natural deposits
<b>Color (b)</b>	ACU	(5)	15	<b>YES</b>	Naturally-occurring organic materials
<b>Copper</b>	µg/L	39	1000	<b>YES</b>	Internal corrosion of household plumbing systems; treatment for algal control
<b>Odor-Threshold (b)</b>	TON	5	3	<b>NO</b>	Naturally-occurring organic materials; algae
<b>pH, field</b>	Units	7.37	6.5 - 8.5	<b>YES</b>	Substances that form ions when in water
<b>Specific Conductance, field</b>	µS/cm	627	1600	<b>YES</b>	Substances that form ions when in water
<b>Sulfate</b>	mg/L	61.7	500	<b>YES</b>	Runoff/leaching from natural deposits
<b>Total Dissolved Solids [TDS] (b)</b>	mg/L	(339)	1000	<b>YES</b>	Runoff/leaching from natural deposits
<b>Turbidity, field</b>	NTU	0.19	5	<b>YES</b>	Soil runoff

**Abbreviations for Tables**

**ACU** = Apparent Color Unit

**NL** = Notification Level

**NTU** = Nephelometric Turbidity Units. Turbidity is a measure of cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

**TON** = Threshold Odor Number

**ND** = Not Detected

**TT** = Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.

**mg/L** = milligrams per Liter (equivalent to parts per million)

**pCi/L** = picoCuries per Liter (a unit of radioactivity)

**µg/L** = micrograms per Liter (equivalent to parts per billion)

**µS/cm** = micro Siemens per centimeter

**CASTAIC POWER PLANT – 2014 CALENDAR YEAR  
UNREGULATED DRINKING WATER CONSTITUENTS DETECTED IN TREATED WATER**

Contaminants /Constituents	Units	Castaic Power Plant Water Quality		
		Level Detected	Notification Level	Major Source in Drinking Water
<b>Alkalinity (b)</b>	mg/L	(87)		Natural constituent
<b>Boron</b>	µg/L	205	1000	Erosion of natural deposits
<b>Calcium</b>	mg/L	31.2		Natural constituent
<b>Magnesium</b>	mg/L	8.42		Natural constituent
<b>Potassium</b>	mg/L	2.18		Natural constituent
<b>Sodium</b>	mg/L	83.1		Natural constituent
<b>Total Organic Carbon [TOC] (b)</b>	mg/L	(2.2)		Natural constituent
<b>Total Hardness [as Ca CO<sub>3</sub>] (b)</b>	mg/L	(129)		Natural constituent
<b>Vanadium</b>	µg/L	ND	50	Erosion of natural deposits