



Castaic Power Plant

2022

DRINKING WATER QUALITY REPORT

The 2022 Drinking Water Quality Report for Castaic Power Plant (Castaic) was prepared by the Los Angeles Department of Water and Power (LADWP). This annual Drinking Water Quality Report (also known as a Consumer Confidence Report) is required by the California State Water Resources Control Board, Division of Drinking Water (SWRCB-DDW) and is prepared in accordance with their guidelines. The report provides information about drinking water at Castaic Power Plant during the 2022 calendar year (January 1, 2022 to December 31, 2022). Only those constituents that were detected are listed in this report.

SUMMARY

The water provided to Castaic meets all state and federal drinking water requirements. Only the following substances with primary standards were detected at low levels in the water supplied to Castaic: Fluoride, Copper, Lead, Nitrate, Chlorine Residual, Turbidity, Haloacetic Acids, and Trihalomethanes. SWRCB-DDW allows LADWP to monitor for a number of contaminants less than once per year, because the concentrations of these contaminants do not change frequently. Some of the data, though representative, are more than a year old. The data for lead and copper on Table 1 are the results of residential tap monitoring conducted in 2020 as required by the Lead and Copper Rule (LCR). For more information on these contaminants, please refer to Table 1 “Health Based Primary Drinking Water Substances Detected.”

**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, and sodium bicarbonate for pH stabilization. Treatment for color and disinfection by-products (DBP) removal was added in 2017. Treated water is then filtered and chlorinated prior to being available for consumption. All monitoring and analyses of source and treated water are conducted by LADWP personnel.



SOURCE WATER ASSESSMENT

In 2022, Metropolitan Water District completed an assessment of the watersheds that supply the California Aqueduct. These sources are vulnerable to fluctuations in water quality from the delta. Other activities that impact water quality in these watersheds are livestock grazing, wildlife, and unauthorized public use of storage reservoirs. The impact to water quality from these activities is deemed to be minimal.

Regular monitoring for *Cryptosporidium* and *Giardia* indicates that their presence is infrequent and at very low levels.

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 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 organics, that are by-products of industrial processes and petroleum production, and can, also, come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

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

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and SWRCB-DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

WATER QUALITY UPDATE

In October 2021, LADWP replaced a piece of equipment inside the treatment system at Castaic. Following the replacement, Toluene was detected at or near the MCL of 150 µg/L. Once detected, in 2021 the Water Quality Division in partnership with the Water Operations Division developed a flushing program which reduced Toluene levels and ensured that water served to customers met regulatory requirements for Toluene. LADWP has ordered a replacement part for this item and will continue sampling to ensure water quality continues to meet regulatory requirements. The replacement part is expected to be installed in 2023. Sampling will be conducted following the installation to ensure a similar issue is not present with the replacement part.

Health Advisory for People with Weakened Immune Systems

Although LADWP treats its water to meet drinking water standards, 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. U. S. EPA/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).

MONITORING OF REGULATED CONSTITUENTS

There are over 110 regulated constituents (or contaminants). Utilities monitor for each constituent at varying frequencies based on the type of constituent and source water. For example, groundwater sources are generally sampled once every three years. Those constituents that pose acute risk require more frequent monitoring. Nitrate sampling is required annually, and bacteriological sampling is required monthly. Since most constituents are not detected in our water, only those constituents that are detected are listed in the tables.

Turbidity

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites such as *Cryptosporidium* and *Giardia* that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Lead in Drinking Water

LCR sampling was conducted in September of 2020. The 90th percentile values for lead and copper at Castaic were below the Action Levels for both constituents. This data, as well as other water quality data, are shown in tables on the following pages. The next tap water sampling will be conducted in 2023.

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. LADWP 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/lead>.

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.

TERMS USED IN THIS REPORT

AL (Action Level) – Federal: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that 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 and 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 Standard): MCLs, MRDLs, and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting requirements.

SDWS (Secondary Drinking Water Standard): Highest level a constituent allowed in drinking water that may affect the taste, odor or appearance. SDWSs are set by the U.S. EPA.

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

CASTAIC POWER PLANT – 2022 CALENDAR YEAR

Table 1: Health-Based Primary Drinking Water Substances Detected

Constituents	Major Source in Drinking Water	Sampled	Units	MEET PRIMARY STANDARD / ACTION LEVEL?	Primary Standard (MCL)	PHG	Castaic Power Plant Water Quality	
							Range	Average
Aluminum	Erosion of natural deposits	2022	µg/L	YES	1,000	600	57	57
Fluoride	Erosion of natural deposits	2022	µg/L	YES	2,000	1,000	213	213
Copper (at-the-tap) ^a	Internal corrosion of interior water plumbing systems	2020	µg/L	YES	AL=1300	300	number of samples exceeding AL = 0 out of 5	90th Percentile value = 133
Lead (at-the-tap) ^a	Internal corrosion of interior water plumbing systems	2020	µg/L	YES	AL=15	0.2	number of samples exceeding AL = 0 out of 5	90th Percentile value = 5.9
Nitrate (as N)	Runoff and leaching from fertilizer use; erosion of natural deposits	2022	mg/L	YES	10	10	1	1
Nitrate + Nitrite (as N)	Runoff and leaching from fertilizer use; erosion of natural deposits	2022	mg/L	YES	10	10	1	1
Toluene	Discharge from petroleum or chemical factories	2022	µg/L	YES	150	150	0 – 75	22
Total Chlorine Residual (as Cl ₂) ^b	Drinking water disinfectant added for treatment	2022	mg/L	YES	[MRDL = 4.0 (as Cl ₂)]	[MRDL = 4.0 (as Cl ₂)]	1.2 – 3.0	2.1
Haloacetic Acids [HAA5] ^c	Disinfection by-product	2022	µg/L	YES	60	none	ND - 6	2
Total Tri-Halomethanes ^c	Disinfection by-product	2022	µg/L	YES	80	none	ND - 21	9
Turbidity ^d	Soil runoff	2022	NTU	YES	TT	TT	% Readings ≤ 0.3: 100%	Highest: 0.23

Footnotes for Table 1

a. At-the-tap monitoring in 2020 was conducted annually, as required by the Lead and Copper Rule. A system is out of compliance if the 90th percentile value of all samples taken exceeds the Action Level of 15 µg/L and 1300 µg/L of lead and copper, respectively.

Footnotes for Table 1 (continued)

- b. Values reflect Running Annual Average (RAA). RAA is a calculated average of all samples collected within the previous 12-month period, which may include test data from the previous calendar year.
- c. The federal Stage 2 Disinfectants/Disinfection Byproducts Rule (Stage 2 DBPR) requires compliance monitoring and reporting for total trihalomethanes (TTHM) and five haloacetic acids (HAA5) based on Locational Running Annual Averages (LRAAs) of established monitoring locations.
- d. Turbidity is a measure of the cloudiness of the water and is a good indicator of water quality and filtration performance. The Primary Drinking Water Standard for turbidity at the treatment plant is less than or equal to 0.3 NTU in at least 95% of the measurements taken in any month, and must not exceed 1.0 NTU at any time. High turbidity can hinder the effectiveness of disinfectants and can harbor pathogens. The reporting requirement for treatment plant turbidity is to report the highest single measurement in the calendar year and the lowest monthly percentage of measurements less than or equal to 0.3 NTU. Turbidity is monitored at 15-minute intervals all year round.

CASTAIC POWER PLANT – 2022 CALENDAR YEAR

Table 2: Regulated Substances with Secondary Drinking Water Standards Detected

Constituents	Major Source in Drinking Water	Sampled	Units	Secondary MCL	Castaic Power Plant Water Quality
					Level Detected
Aluminum	Erosion of natural deposits	2022	µg/L	200	57
Chloride	Runoff/leaching from natural deposits	2022	mg/L	500	67
Color	Naturally-occurring organic materials	2022	ACU	15	3
Manganese	Leaching from natural deposits	2022	µg/L	50	8
Specific Conductance	Substances that form ions when in water	2022	µS/cm	1600	506 - 651
Sulfate (as SO ₄)	Natural constituent	2022	mg/L	500	66
Total Dissolved Solids (TDS)	Runoff/leaching from natural deposits	2022	mg/L	1000	321
Turbidity	Soil runoff	2022	NTU	5	0.1 – 0.8

Table 3: Unregulated Drinking Water Substances Detected

Constituents	Major Source in Drinking Water	Sampled	Units	Castaic Power Plant Water Quality
				Level Detected
2-Chlorotoluene	Discharge from industrial chemical processes	2022	µg/L	5
Total Alkalinity (as CaCO ₃)	Natural constituent	2022	mg/L	97
Boron	Natural constituent	2022	µg/L	136
Calcium	Natural constituent	2022	mg/L	37
Magnesium	Natural constituent	2022	mg/L	4
pH	Naturally-occurring dissolved gases and minerals	2022	Unit	7.8
Potassium	Natural constituent	2022	mg/L	2
Silica (as SiO ₂)	Erosion of natural deposits	2022	mg/L	16
Sodium	Natural constituent	2022	mg/L	70
Total Hardness (as CaCO ₃)	Natural constituent	2022	mg/L	111
Total Phosphorus (as PO ₄)	Natural constituent	2022	µg/L	10

Abbreviations for Tables

- mg/L = milligrams per Liter (equivalent to parts per million)
- NTU = Nephelometric Turbidity Units
- ND = Not Detected
- µS/cm = microSiemens per centimeter
- µg/L = micrograms per Liter (equivalent to parts per billion)

GENERAL INFORMATION

This annual Drinking Water Quality Report (also known as a Consumer Confidence Report) is required by the California State Water Resources Control Board, Division of Drinking Water and is prepared in accordance with their guidelines. LADWP, the largest municipal utility in the nation, was established more than 100 years ago. The utility provides a reliable and safe water and electric supply to the City’s more than 4 million residents and businesses. LADWP is governed by a five-member Board of Water and Power Commissioners, appointed by the Mayor and confirmed by the City Council. The Board meets regularly on the second and fourth Tuesdays of each month at 10:00 a.m.

Meetings are held at: **Los Angeles Department of Water and Power**
 111 North Hope Street, Room 1555H, Los Angeles, CA 90012-2694

The meeting agenda is available to the public the Thursday prior to the week of the meeting. You can access the Board agenda and view the meetings live online at <http://www.ladwp.com/board>. For questions regarding information in this report or the Source Water Assessment, please contact Michael Mercado via email at michael.mercado@ladwp.com, or at (213) 367-0395, or the Water Quality Hotline at 213-367-3182