



POWER PLANTS

1 AND 2

2019

DRINKING WATER QUALITY REPORT

The 2019 Annual Water Quality Report for San Francisquito Power Plant 1 (PP1) and Power Plant 2 (PP2) 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 gives information about drinking water supplied to PP1 and PP2 during the 2019 calendar year. Only those constituents that were detected are listed.

SUMMARY

The following substances which have primary standards were detected at low levels in the treated water supplied to PP1 and PP2: chlorine residual, copper, lead, fluoride, gross alpha particle activity, haloacetic acids, trihalomethanes, turbidity and uranium. Results of all tested substances were below the established maximum contaminant levels (MCLs) or action levels (AL) set by the United States Environmental Protection Agency (EPA) and notification levels (NL) set by SWRCB-DDW.

For more information on these substances, please refer to Table 1. The presence of these constituents in the water does not indicate the water poses a health risk. The SWRCB-DDW allows us 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. See table footnotes for details.

**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.

PP1 and PP2 receive surface water from the Los Angeles Aqueduct (LAA). Prior to entering the distribution system, the water is treated at filtration units for each power plant and then disinfected by chlorination. In addition, each of the homes and power plants is equipped with point-of-entry filters to further treat the water prior to usage.

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 constituents 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, USEPA and DDW prescribe regulations that limit the amount of certain contaminants in water provided by a public water system. 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 can 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.

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 constituents 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 individuals 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 USEPA at www.epa.gov/safewater.

TERMS USED IN THIS REPORT

Regulatory AL (Action Level) - Federal: The concentration of a contaminant which, if exceeded, will trigger treatment or other requirements a water system must follow.

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 or technologically feasible. Secondary MLCs 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).

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.

Notification Levels (NL) - State: Health-based advisory levels established by CDPH 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.

Public Health Goal (PHG) - 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.

Primary Drinking Water Standard (PDWS): MCLs and MRDL 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.

MONITORING OF REGULATED CONSTITUENTS

There are over 110 constituents and contaminants required for monitoring. Utilities monitor for each constituent at varying frequencies based on the type of constituent and the type of source water. For example, groundwater sources are generally sampled once every three years. Constituents that pose acute risks 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.

LEAD IN DRINKING WATER

Sampling and testing for lead and copper was conducted in August and September 2019. The 90th percentile values for lead and copper at PP1 and at PP2 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. Residential tap water sampling, as required by the Lead and Copper Rule (LCR), will be conducted in 2020. 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 premise plumbing. LADWP is responsible for providing high quality drinking water, and can make the necessary changes to improve water quality. When your water has been unused for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds 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 at 800-426-4791, or at <https://www.epa.gov/lead>.

MONITORING OF UNREGULATED CONSTITUENTS

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

WATER QUALITY UPDATE

Operations, treatment and monitoring in PP1 and PP2 are regularly performed. All samples from both plants were in compliance with water quality regulations that include maximum contaminant levels (MCLs), notification levels (NLs), bacteriological, turbidity, and disinfection by-products requirements.

SOURCE WATER ASSESSMENT

In 2015, LADWP completed an assessment of the Owens Valley and Mono Basin watersheds that supply the Los Angeles Aqueduct. These sources are most vulnerable to geothermal activities that release naturally occurring arsenic into creeks that feed the Owens River. 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.

POWER PLANTS 1 and 2 - 2019 CALENDAR YEAR

TABLE 1: Health-based Primary Drinking Water Substances Detected in Treated Water

NOTE: Both PP1 and PP2 draw water from the LAA system and are essentially the same water. Any slight differences in concentrations are due to each treatment plant's efficiency and the allowed variability in analytical methods.

Constituents / Contaminants	Major Source in Drinking Water	Units	Primary Standards Met?	State or Federal Primary Standard (MCL) or [MRDL]	State PHG or Federal MCLG or MRDLG	Water Quality	
Power Plant 1						Range	Average
Chlorine Residual, Total	Disinfectant	mg/L	YES	4.0	4.0	1.22-2.96	1.95
Copper (at the tap) ^a	Internal corrosion of household water plumbing systems	µg/L	YES	AL = 1300	300	Number of samples exceeding AL = 0 in 5	90 th percentile value = 228
Fluoride	Erosion of natural deposits	mg/L	YES	2	1	0.35	0.35
Gross Alpha Particle Activity ^b	Erosion of natural deposits	pCi/L	YES	15	(0)	ND-7.0	3.5
Haloacetic Acids, Total (HAA5)	Disinfection by-product	µg/L	YES	60	(0)	13.7-29.1	21.62
Lead (at the tap) ^a	Internal corrosion of household water plumbing systems	µg/L	YES	AL = 15	0.2	Number of samples exceeding AL = 0 in 5	90 th percentile value = 3.2
Trihalomethanes, Total (TTHM)	Disinfection by-product	µg/L	YES	80	(0)	22.2-54.8	38.48
Turbidity ^c	Soil runoff	NTU	YES	(0.3) TT	none	100%	0.05
Uranium	Erosion of natural deposits	pCi/L	YES	20	0.43	0.34	0.34
Power Plant 2						Range	Average
Chlorine Residual, Total	Disinfectant	mg/L	YES	4.0	4.0	1.09-2.57	2.0
Copper (at the tap) ^a	Internal corrosion of household water plumbing systems	µg/L	YES	AL = 1300	300	Number of samples exceeding AL = 0 in 5	90 th percentile value = 92
Fluoride	Erosion of natural deposits	mg/L	YES	2	1	0.35	0.35
Gross Alpha Particle Activity ^b	Erosion of natural deposits	pCi/L	YES	15	(0)	ND-7.0	3.5
Haloacetic Acids, Total (HAA5)	Disinfection by-product	µg/L	YES	60	(0)	11.4-23.4	15.58
Lead (at the tap) ^a	Internal corrosion of household water plumbing systems	µg/L	YES	AL = 15	0.2	Number of samples exceeding AL = 1 in 5	90 th percentile value = 5.4
Trihalomethanes, Total (TTHMS)	Disinfection by-product		YES	80	(0)	18.1-43.6	26.6
Turbidity ^c	Soil runoff	NTU	YES	(0.3) TT		100%	0.06
Uranium	Erosion of natural deposits	pCi/L	YES	20	20	ND	ND

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TABLE 2: Aesthetics-based Secondary Drinking Water Substances Detected in Treated Water

Constituents/Contaminants	Major Source in Drinking Water	Units	MEET SECONDARY STANDARD?	Federal & State Secondary Standard [SMCL]	Level Detected	
					Power Plant 1	Power Plant 2
Chloride	Runoff/leaching from natural deposits	mg/L	YES	500	22.4	18.1
Color	Naturally-occurring organic materials	ACU	YES	15	4	4
Specific Conductance, field	Substances that form ions when in water	uS/cm	YES	1600	198	199
Sulfate	Runoff/leaching from natural deposits	mg/L	YES	500	11.4	11.6
Total Dissolved Solids [TDS]	Runoff/leaching from natural deposits	mg/L	YES	1000	121	109
Turbidity	Soil runoff	NTU	YES	5	.25	ND

Footnotes:

- a. At-the-tap monitoring in 2019 was conducted, 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.
- b. Gross Alpha was analyzed from samples collected in 2015 from Power Plants 1 and 2 raw water samples. Radionuclides are collected on a 6-year frequency cycle, as determined by the DDW.
- c. 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.

Abbreviations for Tables

mg/L milligrams per Liter, equivalent to parts per million (ppm)
pCi/L picoCuries per Liter (a unit of radioactivity)
NTU Nephelometric Turbidity Units
ND None detected
TON Threshold odor number

µg/L micrograms per Liter, equivalent to parts per billion (ppb)
µS/cm micro Siemens per centimeter
ACU apparent color unit
AL action level

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TABLE 3: *Unregulated Drinking Water Substances Detected in Treated Water*

Constituents/Contaminants	Major Source in Drinking Water	Units	Notification Level	Level Detected	
				Power Plant 1	Power Plant 2
Alkalinity, Total (as CaCO₃)	Natural hot springs; erosion of natural deposits	mg/L		48.9	56.1
Bicarbonate	Erosion of natural deposits	mg/L		59.6	68.4
Boron	Erosion of natural deposits	µg/L	1000	220	201
Calcium	Natural constituent	mg/L		15.7	16.1
Chloride	Natural constituent	mg/L		22.4	18.1
Magnesium	Natural constituent	mg/L		2.91	2.86
pH, field	Naturally-occurring gases and minerals	Units		7.28	7.92
Potassium	Natural constituent	mg/L		2.36	2.45
Silica	Erosion of natural deposits	mg/L		14.0	14.3
Sodium	Natural constituent	mg/L		18.8	19
Total Hardness (as CaCO₃)	Natural constituent	mg/L		51	52

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 is available online at www.ladwp.com/waterqualityreport. Copies may be requested by calling (213) 367-3182

LADWP, the largest municipal utility in the nation, was established more than 100 years ago and provides a safe, reliable water and power 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 on the Thursday prior to the week of the meeting. You can access the Board agenda at www.ladwp.com/board or by calling (213) 367-1351. For general information about LADWP, call (800) 342-5397 or visit www.ladwp.com.

For more information regarding this report or the Source Water Assessment, please contact Michael Mercado at (213) 367-0395, or via email at michael.mercado@ladwp.com.