



## KEELER YARD

### 2021 DRINKING WATER QUALITY REPORT

The 2021 Drinking Water Quality Report for Keeler Yard 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 (DDW) and is prepared in accordance with their guidelines. The report provides information about drinking water at Keeler Yard during the 2021 calendar year (January 1, 2021 to December 31, 2021). Only those constituents that were detected are listed in this report.

#### SUMMARY

The water provided to the Keeler Yard meets all state and federal drinking water requirements except for **disinfection byproducts and color**. The following substances with primary standards were detected at low levels in the water supplied to Keeler: **Arsenic, chlorine residual, copper, fluoride, lead, nitrate and turbidity**. DDW allows us to monitor for a number of contaminants less than once per year because the concentrations of these contaminants do not change frequently. The data for lead and copper on Table 1 are the results of residential tap monitoring conducted in 2021 as required by the Lead and Copper Rule (LCR). For more information on these contaminants, please refer to the 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.

Keeler Yard is a non-transient, non-community water system that receives water from the Los Angeles Aqueduct System (Lubken Gate and Cartago Gate) and the Lower Owens River. Raw 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

LADWP is required to conduct a source water assessment every five years. In 2020, LADWP conducted 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.

### 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.

### **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](http://www.epa.gov/safewater).

### **WATER QUALITY UPDATE**

There were no violations of drinking water standards and/or any Unsafe Water Alerts at Keeler Yard in 2021.

## **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 the type of 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 quarterly, 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.

### **Disinfection Byproducts (DBPs)**

The DBP samples are collected annually from the Keeler Yard. The samples collected in 2021 showed that the values were above the Maximum contaminant level (MCL). Drinking water regulations require an increased frequency of monitoring when results exceed the MCLs for DBPs. LADWP increased the sampling frequency to quarterly due to high DBP values. See “Table 1: Health-Based Primary Drinking Water Substances Detected” for details. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer whereas haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

### **Color**

The Running annual average of color was 19 mg/L, which is above the secondary maximum contaminant level (MCL) of 15 mg/L. In order to be in compliance, LADWP is sampling raw water quarterly and effluent water monthly. The color MCL is set to protect you against unpleasant aesthetic effects and the staining of plumbing. The high color is due to naturally occurring organic materials.

### **Arsenic**

The current EPA standard for Arsenic in drinking water is 10 ppb. The California Office of Environmental Health Hazard Assessment (OEHHA) adopted a PHG of 0.004 ppb in April 2004. In November 2008, CDPH adopted the U. S. EPA Arsenic standard as the new State drinking water standard for Arsenic. Arsenic compliance is based on a running annual average. The running annual average (RAA) was not exceeded, and the annual average of arsenic was 5.6 ppb in 2021.

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic’s possible health effects against the cost of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

## Lead in Drinking Water

Lead and Copper Rule (LCR) sampling was conducted in August 2021. The 90<sup>th</sup> percentile values for lead and copper at Keeler Yard were 0.0045 mg/L and 0.364 mg/L respectively. Both results are below the action level of lead 0.015 mg/L and copper 1.3 mg/L. This data, as well as other water quality data, are shown in tables on the following pages. Next sampling, as required by the Lead and Copper Rule (LCR), will be conducted in 2024.

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 do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. 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>.

## 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.

## 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 that, if exceeded, triggers 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. 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

**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.

## KEEELER YARD – 2021 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	Water Quality	
							Range	Average
Arsenic	Natural hot springs; erosion of natural deposits	2021	µg/L	YES	10	0.004	1.3 – 14	5.6
Chlorine Residual, Total (as Cl <sub>2</sub> )	Drinking water disinfectant added for treatment	2021	mg/L	YES	[MRDL = 4.0 (as Cl <sub>2</sub> )]	[MRDL = 4.0 (as Cl <sub>2</sub> )]	1.1 – 2.6	2.0
Copper (at-the-tap) <sup>a</sup>	Internal corrosion of interior water plumbing systems	2021	µg/L	YES	AL=1300	300	number of samples exceeding AL = 0 out of 5	90th Percentile value = 364
Fluoride	Erosion of natural deposits	2021	mg/L	YES	2	1	0.87 – 1.2	1.0
Haloacetic Acids [HAA5]	Disinfection by-product	2021	µg/L	NO	60	none	55-113	84
Lead (at-the-tap) <sup>a</sup>	Internal corrosion of interior water plumbing systems	2021	µg/L	YES	AL=15	0.2	number of samples exceeding AL = 0 out of 5	90th Percentile value = 4
Nitrate (as N)	Runoff and leaching from fertilizer use; erosion of natural deposits	2021	mg/L	YES	10	10	ND – 0.11	0.2
Total Tri-Halomethanes	Disinfection by-product	2021	µg/L	NO	80	none	67-111	89
Turbidity <sup>b</sup>	Soil runoff	2021	NTU	YES	TT	TT	99.91%	0.07

**Table 2: Regulated Substances with Secondary Drinking Water Standards Detected**

Constituents	Major Source in Drinking Water	Sampled	Units	Secondary MCL	Keeler Water Quality
					<b>Level Detected</b>
Chloride	Runoff/leaching from natural deposits	2021	mg/L	500	24
Color	Naturally-occurring organic materials	2021	ACU	15	10- 35
Odor	Naturally-occurring organic materials	2021	Units	3	1 - 3
pH	Naturally-occurring dissolved gases and minerals	2021	Unit	6.5 – 8.5	6.8 – 8.1
Specific Conductance	Substances that form ions when in water	2021	µS/cm	1600	500 - 613
Sulfate (as SO <sub>4</sub> )	Natural constituent	2021	mg/L	500	21 – 26
Total Dissolved Solids (TDS)	Runoff/leaching from natural deposits	2021	mg/L	1000	272 - 285
Turbidity	Soil runoff	2021	NTU	5	0.21 – 2.8

**Footnotes for Tables**

- a. At-the-tap monitoring in 2021 was conducted triennially, 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. 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.



**Table 3: Unregulated Drinking Water Substances Detected**

Constituents	Major Source in Drinking Water	Sampled	Units	Water Quality
				Level Detected
Alkalinity	Natural constituent	2021	mg/L	167-211
Boron	Natural constituent	2021	µg/L	579 - 805
Calcium	Natural constituent	2021	mg/L	24 - 28
Magnesium	Natural constituent	2021	mg/L	8.2 – 8.6
Sodium	Natural constituent	2021	mg/L	50 - 61
Total Hardness [as CaCO <sub>3</sub> ]	Natural constituent	2021	mg/L	97 - 104

**Abbreviations for Tables**

mg/L = milligrams per Liter (equivalent to parts per million)  
 µg/L = micrograms per Liter (equivalent to parts per billion)  
 µS/cm = microsiemens per centimeter

ACU = Apprent color unit  
 NTU = Nephelometric Turbidity Units

**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 (SWRCB-DDW) 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 now 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 at [www.ladwp.com/board](http://www.ladwp.com/board) or by calling (213) 367-1351. For general information about LADWP, call (800) 342-5397 or visit [www.ladwp.com](http://www.ladwp.com). For questions regarding information in this report or the Source Water Assessment, please contact Michael Mercado at (213) 367-0395, or via email at [michael.mercado@ladwp.com](mailto:michael.mercado@ladwp.com).