KEELER YARD

WATER QUALITY REPORT

2017

The 2017 Water Quality Report for Keeler Yard system was prepared by the Los Angeles Department of Water and Power (LADWP). The report gives information about drinking water at the Keeler Yard during the 2017 calendar year. We test drinking water for many constituents as required by the Water Resources Control Board of the State of California (State Board) and this report was prepared in accordance with the Division of Drinking Water (DDW) guidelines. This report shows the results of our monitoring for the period of January 1 - December 31, 2017 and may include earlier monitoring data.

THE BOTTOM LINE

The following substances with primary standards were detected at low levels in the water supplied to Keeler Yard system: arsenic and fluoride. The levels of these substances were below the established maximum contaminant levels (MCLs), which are the health protective standards set by the United States Environmental Protection Agency (USEPA) and the DDW. Results of all the other 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 the Division of Drinking Water (DDW).

For more information on these constituents, please refer to the Table 1: Primary Drinking Water Constituents Found in the Water. The presence of these constituents in the water does not indicate that the water poses a health risk. The State Board 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 water quality, are more than one year old.

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 and the Lower Owens River. The water from these sources is treated, filtered, and disinfected with chlorine before distribution to the facilities within Keeler Yard.

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.

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 at 800-426-4791.

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water system. State Board regulations also establish limits for contaminants in bottled water that 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, 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 storm water run-off, and residential uses.
- Organic chemicals contaminants including synthetic and volatile organics that are by-products of industrial processes and petroleum production, and can come from gas stations, urban storm water run-off, agricultural application, and septic systems.
- Radioactive contaminants which can be naturally occurring or be a result of oil and gas production and mining activities.

TERMS USED IN THIS REPORT

AL (Regulatory 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) – State: The DLR is the lowest level at which all DWW 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. 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 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 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.

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 MRDLs 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.

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

Variances and Exemptions: State Board permission to exceed and MCL or not comply with a treatment technique under certain conditions.

MONITORING OF REGULATED CONSTITUENTS

There are over 110 regulated constituents (or contaminants). We 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 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.

Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5)

Total trihalomethanes and haloacetic acids are byproducts of the disinfection process. In 2017, some of the monthly samples taken for TTHM and HAA5 analysis exceeded MCL for these contaminants. While the Running Annual Average (RAA) for this contaminant was not exceeded, sampling and monitoring frequencies were increased in order to monitor THM and HAA5 removal to determine optimal filter media replacement schedules and to minimize the possibility of future exceedances. The most recent analytical results show that levels of both contaminants are well below their respective MCLs.

Some people who drink water containing haloacetic acids and/or trihalomethanes in excess of the MCL over many years may have an increased risk of getting cancer. Liver, kidney, or central nervous system problems may also be experienced with long term consumption of water containing trihalomethanes in excess of the MCL.

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. A high Arsenic reading was observed in March 2017, due to operator error in maintenance scheduling. The exceedance was corrected on the day of the exceedance and subsequent samples were measured to be below the Arsenic standards. The running annual average (RAA) was not exceeded, and the annual average of arsenic was 7.4 ppb in 2017.

Lead in Drinking Water

In 2018 we will again be asking for your assistance in the residential tap water sampling, as required by the Lead and Copper Rule (LCR).

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 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 at 800-426-4791, 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.

Unregulated Constituents

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

BACKFLOW ISSUES RELATED TO OWENS LAKE MITIGATION PROGRAM

There are multiple unprotected cross-connections along the zonal mainline that can have a negative impact on the quality of the source water for the Keeler Yard domestic water system. Possible types of contaminants include brine water and chemical fertilizers. The existing water treatment facility is not designed to remove these contaminants. Water Quality and Water Operations Divisions are currently working on long-term solutions to ensure the water served to employees at the Keeler Yard meets all health-based drinking water standards.

Additionally, backflow from the zonal mainline to the Los Angeles Aqueduct at Cartago Gate may have a negative impact on the water that flows to the City of Los Angeles because it disrupts the chemical treatment applied at the Cottonwood Treatment Plant (CTP). Pre-treatment at the CTP is instrumental in meeting arsenic and turbidity regulations at the inlet to the Los Angeles Aqueduct Filtration Plant.

KEELER YARD – 2017 CALENDAR YEAR

TABLE 1 - Health-based Primary Drinking Water Contaminants Detected

Constituents/ Contaminants	Units	Keeler Yard Water Quality		State Primary Standard (MCL) or [MRDL]	MEET PRIMARY STANDARD?	State PHG or Federal [MRDLG] or (MCLG)	Major Source in Drinking Water
		Range	Average				
Alpha Emitters[a]	pCi/L	--	3.0	15	YES	(0)	Erosion of natural deposits
Arsenic	µg/L	<2 – 60.9	7.4	10	YES	0.004	Natural hot springs; erosion of natural deposits
Beta Emitters[a]	pCi/L	--	5.88	50	YES	(0)	Decay of natural deposits
Fluoride	mg/L	--	0..77	2	YES	1	Erosion of natural deposits
Chlorine Residual	mg/L	1.6 – 2.4	2.1	[4]	YES	[4]	Disinfectant
Copper (at the tap)[b]	µg/L	Number of samples exceeding AL= 0 in 5	90th Percentile value= 245	AL=1300	YES	300	Internal corrosion of household water plumbing systems
Haloacetic Acids [HAA5]*	µg/L	--	31.5	60	YES	none	Byproduct of drinking water disinfection, compliance based a running annual average
Lead (at the tap)[b]	µg/L	Number of samples exceeding AL= 0 in 5	90th Percentile value= 5.5	AL=15	YES	0.2	Internal corrosion of household water plumbing systems
Total Trihalomethane [TTHM]	µg/L	--	62.4	80	YES	none	Byproduct of drinking water disinfection, compliance based a running annual average
Turbidity[c]	NTU	99%	0.05	TT	YES	TT	Soil runoff
Uranium[a]	pCi/L	--	1.34	20	YES	0.43	Erosion of natural deposits

Abbreviations for Tables

mg/L millgrams per liter or parts per million (ppm)

µg/L micrograms per liter or parts per billion (ppb)

NTU Nephelometric Turbidity Units: Turbidity is a measure of the cloudiness of the water. It is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

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

µS/cm micro Siemens per centimeter

ND Not detectable at testing limit

TABLE 2 - Aesthetic-Based Secondary Drinking Water Contaminants Detected[d]

Constituents/ Contaminants	Units	Keeler Yard Water Quality		Secondary MCL	MEETS SECONDARY STANDARD?	Major Source in Drinking Water
		Range	Average			
Chloride	mg/L	--	67.8	500	YES	Runoff/leaching from natural deposits
Color	Units	--	3	15	YES	Naturally-occurring organic materials
Odor	Units	--	ND	3	YES	Naturally-occurring organic materials
pH	Units	7.0 - 8.8	7.54	6.5 - 8.5	YES	Natural constituents
Specific Conductance	µS/cm	--	725	1600	YES	Natural constituents
Total Dissolved Solids (TDS)	mg/L	--	406	1000	YES	Runoff/leaching from natural deposits
Turbidity	NTU	--	0.35	5	YES	Soil runoff

TABLE 3 - Unregulated Drinking Water Constituents Detected[e]

Constituents/Contaminants	Units	Keeler Yard Water Quality	Major Source in Drinking Water
		Average	
Alkalinity, Bicarbonate	mg/L	212	Natural constituent
Boron NL = 1000	µg/L	782	Erosion of natural deposit
Calcium	mg/L	41.4	Natural constituent
Magnesium	mg/L	9.9	Natural constituent
Potassium	mg/L	6.3	Natural constituent
Silica	mg/L	27.2	Erosion of natural deposit
Sodium	mg/L	73.2	Natural constituent

Footnotes:

a. Groundwater is tested for radioactivity once every six years, last tested in 2012.

b. At-the-tap monitoring was conducted September 2015 as required by the Lead and Copper Rule. Keeler Yard in compliance since the 90th percentile concentration was below the action levels for each contaminant.

c. Turbidity is monitored as an indicator of filtration performance. Systems must report the highest single measurement and the lowest monthly percentage of samples meeting the requirements specified for that technology.

d. Secondary contaminants were due once, last tested in 2012.

e. Data shown are average of readings from samples taken between 2014 and 2015.

For more information regarding this report, please call Mr. Michael Mercado of the Water Quality Division at (213) 367-0395.