KINNELOA IRRIGATION DISTRICT
SPECIAL DISTRICT • PUBLIC WATER AGENCY

2019 Consumer Confidence Report

Kinneloa Irrigation District • 1999 Kinclair Drive, Pasadena, California 91107-1017
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We test the drinking water quality for many constituents as required by state and federal regulations. This report prepared in June 2020 shows the results of our monitoring for the period of January 1 - December 31, 2019, and prior years.

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

Kinneloa Irrigation District (KID) is pleased to provide you with this Consumer Confidence Report (CCR), which contains information about the quality of drinking water that is delivered to you. This report meets the California requirements for reporting water quality information to customers of public water systems and addresses frequently asked questions!

Other educational information in this report informs you about drinking water safety and, hopefully, helps you to understand the challenges of delivering a safe and protected supply of drinking water.

In 2019, KID distributed approximately 544 acre feet of water to its customers. This is equivalent to 177 million gallons. One acre foot is enough water to cover one acre of land, one foot deep with water, or 325,851 gallons. Your tap water was delivered from two vertical wells and five horizontal wells. The vertical wells pump from the Raymond Basin down to 244/443 feet below the ground surface. The horizontal wells are tunnels in the mountainside that collect water via gravity. The tunnels and wells feed reservoirs where the waters can be mixed. Chlorine disinfectant is added to prevent bacterial growth in the reservoirs and the distribution pipeline. KID has emergency interconnections with the City of Pasadena.

Frequently Asked Questions

- *Where does our water come from?*
- *What are the possible sources of contaminants in tap water?*
- *How is our drinking water treated?*
- *What, if any, contaminants have been detected in our drinking water?*
- *Is there reason for concern about radon and nitrate in our water?*
- *Are certain people more vulnerable to the effects of some contaminants in drinking water?*
- *What is the status of our fluoride variance?*
- *Were there any violations of drinking water regulations?*
- *What are the definitions for all those regulatory and technical terms in the report?*
- *Who can I contact for more information and when does the Board of Directors meet?*

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. 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: 1) microbial contaminants, such as virus and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; **2) 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; **3) pesticides and herbicides,** that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; **4) organic chemical contaminants,** including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems; **5) radioactive contaminants,** that can be naturally-occurring or be the result of oil and gas production and mining activities.

As in past years, the Water Quality Chart compares the quality of your tap water to state drinking water standards. More than 100 regulated contaminants have been tested that were not detected in drinking water delivered by KID; the list of non-detected contaminants is not included in the chart. With the exception of nitrate, each contaminant detected in our groundwater sources occurs in your drinking water from erosion of natural deposits in soils. Fluoride is the only chemical in your water that exceeded the maximum allowable level set by the State Water Resources Control Board (State Board). KID has a fluoride variance from the State Board which gives us permission to exceed the fluoride standard. The conditions of the variance are described in detail on page four of this report.

The Kinneloa Irrigation District serves approximately 1,940 people in 555 households, a school, nursery, church and fire station in the north-central part of Los Angeles County with the city limits of Pasadena on the west, south and east and the Angeles National Forest to the north. The service area covers 500 acres and additionally encompasses 500 acres of watershed area. The General Manager reports to a five member Board of Directors. The Board meets the third Tuesday every month at the KID office located at 1999 Kinclair Drive, Pasadena and the public is invited. For more information, you may contact the office at (626) 797-6295.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Board 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).

The water quality charts list all the regulated drinking water contaminants and unregulated contaminants requiring monitoring. Certain regulated chemicals are monitored less frequently than once each year. The results from the most recent testing done in accordance with the monitoring regulations and the respective sampling year are noted in each table. Some of the data, although more than one year old, are representative of the current drinking water quality.

KINNELOA IRRIGATION DISTRICT GROUNDWATER QUALITY

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Source of Contaminant
Radiologicals							
Gross Alpha Radiation (pCi/L)	15	(0)	5.5	ND - 9.43	No	2018	Erosion of Natural Deposits
Radium 228 (pCi/L)	5***	0.019	0.14	0 - 0.28	No	2015	Erosion of Natural Deposits
Uranium (pCi/L)	20	0.43	5.47	1.4 - 14	No	2019	Erosion of Natural Deposits
Inorganic Chemicals							
Nitrate (ppm as N)	10	10	3.49	0.8 - 4.4	No	2019	Fertilizers, Septic Tanks
Arsenic (ppb)	10	0.004	1.55	ND - 6.8	No	2019	Erosion of Natural Deposits
Fluoride (ppm)*	3	1	2.1	1.1 - 3	No	2019	Erosion of Natural Deposits
Hexavalent Chromium (ppb)	--	0.02	1.07	ND - 4	No	2019	Discharge from Steel and Pulp Mills; Chrome Plating; Runoff/ Leaching from Natural Deposits
Secondary Standards**							
Aluminum (ppb)	200**	n/a	11.2	ND - 67	No	2019	Erosion of Natural Deposits
Chloride (ppm)	500**	n/a	23.5	8.1 - 39	No	2019	Runoff/Leaching from Natural Deposits
Iron (ppb)	300**	n/a	46.7	ND - 280	No	2019	Leaching from Natural Deposits
Odor—Threshold (Units)	3**	n/a	1	1	No	2019	Naturally-occurring organic materials
Specific Conductance (µS/cm)	1,600**	n/a	483	350 - 650	No	2019	Erosion of Natural Deposits; Substances That Form Ions When in Water
Sulfate (ppm)	500**	n/a	46	18 - 80	No	2019	Runoff/Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1000**	n/a	258	180 - 360	No	2019	Runoff/Leaching from Natural Deposits
Turbidity (Units)	5**	n/a	0.18	ND - 1.1	No	2019	Soil Runoff
Unregulated Constituents of Interest							
Boron (ppb)	Not Regulated	n/a	880	880	n/a	2015	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	19	12 - 30	n/a	2019	Erosion of Natural Deposits
Hardness (ppm)	Not Regulated	n/a	202	152 - 287	n/a	2019	Erosion of Natural Deposits

ppb = parts-per-billion; **ppm** = parts-per-million; **pCi/L** = picocuries per liter; **ntu** = nephelometric turbidity units; **ND** = not detected; **MCL** = Maximum Contaminant Level; **MCLG** = Maximum Contaminant Level Goal; **PHG** = California Public Health Goal; **n/a** = not applicable. * See Fluoride note on page 4.
** Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color). *** Radium 226 + 228 = MCL5 (pCi/L).

Definitions of terms used in the water quality charts:

Public Health Goal (PHG): 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.

Maximum Contaminant Level Goal (MCLG): 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.

Maximum Contaminant Level (MCL): 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.

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

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

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

Maximum Residual Disinfectant Level (MRDL): The highest level of 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.

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

ND: Not detectable at testing limit.

ppm: Parts per million or milligrams per liter (mg/L).

ppb: Parts per billion or micrograms per liter (µg/L).

ppt: Parts per trillion or nanograms per liter (ng/L).

pCi/L: Picocuries per liter (a measure of radiation).

Lead: 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. Kinneloa Irrigation District 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 www.epa.gov/lead.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the U.S. EPA Safe Drinking Water Hotline (1-800-426-4791).

KINNELOA IRRIGATION DISTRICT DISTRIBUTION SYSTEM WATER QUALITY

	MCL	PHG	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Source of Contaminant
Chlorine residual (ppm)	4	4	1.2	0.5 - 1.8	No	2019	Drinking Water Disinfectant
Fluoride (ppm)	3*	1	1.3	1.0 - 1.7	No	2019	Naturally Present in Groundwater
Total Trihalomethanes (ppb)	80	n/a	11	4 - 11	No	2019	Byproduct of Drinking Water Disinfection
Turbidity (ntu)	5**	n/a	0.04	ND - 0.5	No	2019	Soil Runoff
Odor (ton)	3**	n/a	1.04	1 - 2	No	2019	Naturally Present in Groundwater

Six distribution system locations are tested for fluoride quarterly at the request of the State Board.
* See Fluoride note on page 4.
** Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

LEAD AND COPPER ACTION LEVELS AT RESIDENTIAL TAPS

	Action Level (AL)	MCLG (PHG)	90th Percentile Value	Sites Exceeding AL/ Number of Sites	AL Violation?	No. of Schools Requesting Lead Sampling	Most Recent Sampling Date	Typical Source of Contaminant
Copper (ppm)	1.3	0.3	0.26	1 / 10	No	n/a	2019	Corrosion of Household Plumbing
Lead (ppb)	15	0.2	5	1 / 10	No	0	2019	Corrosion of Household Plumbing

In July 2019, 10 residences were tested for copper and lead at the tap. Copper was detected in 7 samples. Lead was detected in 2 samples. See Lead note on this page. One site exceeded regulatory action level for both copper and lead. In August 2019, site was resampled at alternate tap. Results were below regulatory action level: copper 0.1 ppm and lead ND. No schools requested lead sampling.

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Nitrate: None of KID's groundwater sources exceed one-half of the MCL. Nitrate (as nitrogen) in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. Testing in 2019 showed detectable nitrate in KID's groundwater sources at levels well below the action level of concern.

Fluoride occurs naturally at levels exceeding the state MCL of 2 milligrams-per-liter (mg/L) in two of KID groundwater sources. Even though these sources mix with groundwater from other lower fluoride sources before being delivered to residences, it is not always possible to dilute the fluoride below the MCL, especially in the rainy season when tunnel water provides most of the supply. On November 19, 1993, the State Board issued KID a variance from the State's fluoride drinking water standard. This variance expires on December 13, 2023. The variance is State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions. The variance allows KID to exceed 2 mg/L but not exceed 3 mg/L in the distribution system. On July 7, 2009, the State Board approved KID's request to reduce fluoride source and distribution system monitoring from monthly to quarterly and discontinue public notification letters of fluoride in the distribution system above 2 mg/L but below 3 mg/L and instead notify the customers of distribution system fluoride level through their water bills. If, at any time after a variance has been granted, substantial community concerns arise concerning the level of fluoride present in the water supplied by Kinneloa Irrigation District, Kinneloa Irrigation District shall notify the State Board, conduct a public hearing on the concerns expressed by the community, determine the fluoride level that is acceptable to the community, and apply to the State Board for an amendment to the variance which reflects that determination.

Groundwater is protected from many infectious organisms, such as the parasite cryptosporidium, by the natural filtration action of water percolating through soils. There is no indication that *Cryptosporidium* has breached this natural soil filter and entered the KID water supply. However, 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).

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your state radon program (1-800-745-7236), the EPA's Safe Drinking Water Act Hotline (1-800-426-4791) or the National Safety Council Radon Hotline (1-800-767-7236). KID voluntarily tested for radon in seven of its groundwater sources in 2005 and levels in these seven sources ranged between 261 - 1370 picocuries-per-liter and averaged 622 picocuries-per-liter.

Arsenic: While your drinking water meets the current state and federal standards 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.

An assessment of the drinking water sources for Kinneloa Irrigation District was completed in August 2002. The assessment concluded that KID's sources are considered most vulnerable to nitrate contamination. A copy of the complete assessment is available at KID's office located at 1999 Kinclair Drive, Pasadena, California. You may request to review the assessment by contacting (626) 797-6295.

La NOTA: Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.