ANTELOPE VALLEY – EAST KERN WATER AGENCY

2024 ANNUAL WATER QUALITY REPORT

LOS ANGELES COUNTY SYSTEM

ANTELOPE VALLEY - EAST KERN WATER AGENCY
AVEK
ESTABLISHED 1959

A PUBLIC AGENCY

March 13, 2025

Dear General Manager:

This is the 2024 Annual Water Quality Report from the Antelope Valley-East Kern Water Agency (AVEK). Since the water you obtain from AVEK represents one of your sources of water, we have included a summary of results for all analyses completed in 2024 for your convenience. If you find that you need copies of individual monitoring reports please feel free to contact me and I will be happy to provide those for you.

In accordance with the Consumer Confidence Report (CCR) guidance manuals issued by the State Water Resources Control Board and the United States Environmental Protection Agency, we are herein providing you with the monitoring data and other information you will need to produce your CCR.

AVEK provides some treated water to our customers in Acton by way of an intertie with Palmdale Water District (PWD). AVEK monitors the treated water quality provided by PWD at our Acton Water Treatment Plant before it reaches our first customer. The results of this monitoring have been included in this report. If you have specific questions regarding the quality of the raw water treated by Palmdale Water District, please contact them directly.

If you have any questions or need additional information, please call me at 661-943-3201. However, please do not designate AVEK or this office as your contact in your CCR. According to the State Board and EPA guidelines, the designated contact person should be someone from your system. While we are always happy to answer questions about AVEK water, we do not have the specific information necessary to answer questions about your water, blending practices or distribution systems.

Respectfully,

Jordan Wray
Laboratory Director

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The mission of AVEK is to deliver reliable, sustainable and high quality supplemental water to the region in a cost-effective and efficient manner.

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The Antelope Valley-East Kern Water Agency provides treated surface water as a source of drinking water.
Treatment technique: Conventional
EPA Turbidity Performance Standards: Turbidity of the filtered water must:

1. Be less than or equal to 0.30 NTU in 95% of measurements in a month.
2. Not exceed 1 NTU at any time.

Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1: **100%**
Highest single turbidity measurement during the year: **0.15**
Percentage of samples < 0.30 NTU: **100%**
The number of violations of any surface water treatment requirements: **NONE**
Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

The Antelope Valley-East Kern Water Agency also provides groundwater as a source of drinking water.
Treatment technique: Chlorination

EPA Groundwater Rule: AVEK meets the requirements of the Groundwater Rule by providing a minimum of 4-log reduction of viruses by continously providing a minimum free chlorine residual of 0.5 mg/L leaving the clearwell.
Lowest single free chlorine residual measurement during the year: **0.87**
Number of violations of the Groundwater Rule: **NONE**

MICROBIOLOGICAL CONTAMINANTS

Type of Sample(s)	Parameter	Sampling Frequency	MCL	No. of Months in Violation	System Results Range	System Results Average
Distribution	Total Coliform Bacteria	152-193 / mo	5% positive	None	0%-0.5%	0%
Distribution	Fecal Coliform/*E. coli*	152-193 / mo	1 pos. with 2 TC pos.	None	0%	0%

INORGANIC CONTAMINANTS

RESULTS

Parameter	Units	MCL	DLR	PHG or (MCLG)	Acton Plant Effluent (CWR) Range	Acton Plant Effluent (CWR) Average	Eastside Plant Effluent (CWR) Range	Eastside Plant Effluent (CWR) Average	Quartz Hill Plant Effluent (CWR) Range	Quartz Hill Plant Effluent (CWR) Average	Raw Influent (State Water Project) Range	Raw Influent (State Water Project) Average	Water Bank Effluent (CWR) Range	Water Bank Effluent (CWR) Average	Water Bank Wells Range	Water Bank Wells Average
Aluminum	µg/L	1000	50	600		ND	ND	ND	ND	ND		ND			ND	ND
Antimony	µg/L	6	6	1		ND		ND		ND		ND			ND	ND
Arsenic	µg/L	10	2	0.004		ND		ND		ND	ND	ND	3.4-5.6	4.5	ND-12	4.2
Asbestos	MFL	7	0.2									ND				
Barium	µg/L	1000	100	2000		ND		28		22		ND			ND-110	ND
Beryllium	µg/L	4	1	1		ND		ND		ND		ND			ND	ND
Cadmium	µg/L	5	1	0.04		ND		ND		ND		ND			ND	ND
Chromium (Total)	µg/L	50	10			ND		ND		ND		ND			ND	ND
Cyanide	µg/L	150	100	150		ND		ND		ND		ND			ND	ND
Fluoride	mg/L	2	0.1	1		0.11		ND		ND		ND			0.12-0.36	0.19
Mercury	µg/L	2	1	1.2		ND		ND		ND		ND			ND	ND
Nickel	µg/L	100	10	12		ND		ND		ND		ND			ND	ND
Nitrate (as N)	mg/L	10	0.4	10		ND		0.44		ND		ND			ND-5.1	2.8
Nitrite (as N)	mg/L	1	0.4	1		ND		ND		ND		ND			ND	ND
Perchlorate	µg/L	6	1	1		ND		ND		ND		ND			ND-1.5	0.25
Selenium	µg/L	50	5	30		ND		ND		ND		ND			ND-10	1.6
Thallium	µg/L	2	1	0.1		ND		ND		ND		ND			ND	ND

GENERAL PHYSICAL AND SECONDARY STANDARDS

RESULTS

Parameter	Units	MCL	DLR	Acton Plant Effluent (CWR) Range	Acton Plant Effluent (CWR) Average	Eastside Plant Effluent (CWR) Range	Eastside Plant Effluent (CWR) Average	Quartz Hill Plant Effluent (CWR) Range	Quartz Hill Plant Effluent (CWR) Average	Raw Influent (State Water Project) Range	Raw Influent (State Water Project) Average	Water Bank Wells Range	Water Bank Wells Average
Aluminum	µg/L	1000	50		ND	ND	ND	ND	ND		ND	ND	ND
Calcium	mg/L	no standard			22		29		15		15	44-100	68
Chloride	mg/L	250			82		54		48		47	42-110	68

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Parameter	Units	MCL	DLR	Acton Plant Effluent (CWR) Range	Acton Plant Effluent (CWR) Average	Eastside Plant Effluent (CWR) Range	Eastside Plant Effluent (CWR) Average	Quartz Hill Plant Effluent (CWR) Range	Quartz Hill Plant Effluent (CWR) Average	Raw Influent (State Water Project) Range	Raw Influent (State Water Project) Average	Water Bank Wells Range	Water Bank Wells Average
Color	Units	15		<5	<5	<5	<5	<5	<5		10	<5	<5
Copper	µg/L	1000	50		ND		ND		ND		ND	ND	ND
Foaming Agents (MBAS)	mg/L	0.5			ND		ND		ND		ND	ND	ND
Hardness (Total) as CaCO3	mg/L	no standard			94		100		75		73	130-310	200
Iron	µg/L	300	100		ND		ND		ND		59	ND	ND
Magnesium	mg/L	no standard			9.4		7.0		8.9		8.7	4.0-13	7.8
Manganese	µg/L	50	20		ND		ND		ND		ND	ND	ND
Odor @ 60 C	Units	3	1	<1	<1	<1	<1		<1		<1	<1	<1
pH	Units	no standard		7.1-7.7	7.5	6.1-8.6	7.0	6.8-7.3	7.0	7.4-9.3	8.3	7.6-8.2	8.0
Silver	µg/L	100	10		ND		ND		ND		ND	ND	ND
Sodium	mg/L	no standard			47		35		ND		32	33-56	40
Specific Conductance	µmhos	1600			450		390		34	240-660	370	560-870	670
Sulfate	mg/L	250	0.5		21		41		340		18	41-91	56
Thiobencarb (Bolero)	µg/L	1	1		ND		ND		ND			ND	ND
Methyl tert-Butyl Ether (MTBE)	µg/L	5	3		ND		ND		ND		ND	ND	ND
Total Dissolved Solids	mg/L	1000			230		220		180		170	280-550	380
Turbidity	Units	5		0.05-0.15	0.10	ND-0.15	0.05	0.05-0.15	0.10	0.35-21	2.9	0.05-1.5	0.40
Zinc	µg/L	5000	50		380		360		610		ND	ND	ND
Total Alkalinity (as CaCO3)	mg/L	no standard			66		62		45	55-82	69	ND	ND
Bicarbonate Alkalinity(as HCO3)	mg/L	no standard			66		62		45		64	89-190	150
Carbonate (as CO3)	mg/L	no standard			ND		ND		ND		ND	ND	ND
Hydroxide (as OH)	mg/L	no standard			ND		ND		ND		ND	ND	ND

RADIOLOGICAL CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS Raw Influent (State Water Project)		RESULTS Water Bank Wells Range	RESULTS Water Bank Wells Average
Gross Alpha	pCi/L	15	3				5.4-9.5	7.0
Gross Beta	pCi/L	50	4					
Strontium 90	pCi/L	8	2	0.35		ND		
Tritium	pCi/L	20,000	1,000	400		ND		
Uranium	pCi/L	20	1	0.43		ND	ND-8.4	5.4
Radium 228	pCi/L		1	0.019	ND	ND	ND	ND
Radium 226	pCi/L		1	0.05			ND	ND

VOLATILE ORGANIC CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS State Water Project Average	RESULTS Water Bank Wells Range	RESULTS Water Bank Wells Average
1,1,1-Trichlorethane (1,1,1-TCA)	µg/L	200	0.5	1000	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/L	1	0.5	0.1	ND	ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	µg/L	5	0.5	0.3	ND	ND	ND
1,1-Dichloroethane (1,1-DCA)	µg/L	5	0.5	3	ND	ND	ND
1,1-Dichloroethylene (1,1-DCE)	µg/L	6	0.5	10	ND	ND	ND
1,2,4-Trichlorobenzene	µg/L	5	0.5	5	ND	ND	ND
1,2-Dichlorobenzene (o-DCB)	µg/L	600	0.5	600	ND	ND	ND
1,2-Dichloroethane (1,2-DCA)	µg/L	0.5	0.5	0.4	ND	ND	ND
1,2-Dichloropropane	µg/L	5	0.5	0.5	ND	ND	ND
1,3-Dichloropropene (Total)	µg/L	0.5	0.5	0.2	ND	ND	ND
1,4-Dichlorobenzene (p-DCB)	µg/L	5	0.5	6	ND	ND	ND
Benzene	µg/L	1	0.5	0.15	ND	ND	ND
Carbon tetrachloride	µg/L	0.5	0.5	0.1	ND	ND	ND
cis-1,2-Dichloroethylene (c-1,2-DCE)	µg/L	6	0.5	100	ND	ND	ND
cis-1,3-Dichloropropene	µg/L				ND	ND	ND
Dichloromethane (Methylene Chloride)	µg/L	5	0.5	4	ND	ND	ND
Ethylbenzene	µg/L	300	0.5	300	ND	ND	ND
Methyl-tert-butyl ether (MTBE)	µg/L	13	3	13	ND	ND	ND
Monochlorobenzene (Chlorobenzene)	µg/L	70	0.5	70	ND	ND	ND
Styrene	µg/L	100	0.5	0.5	ND	ND	ND

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Parameter	Units	MCL	DLR	PHG	State Water Project Average	Water Bank Wells Range	Water Bank Wells Average
Tetrachloroethylene (PCE)	µg/L	5	0.5	0.06	ND	ND	ND
Toluene	µg/L	150	0.5	150	ND	ND	ND
trans-1,2-Dichloroethylene (t-1,2-DCE)	µg/L	10	0.5	60	ND	ND	ND
trans-1,3-Dichloropropene	µg/L				ND	ND	ND
Trichloroethylene (TCE)	µg/L	5	0.5	1.7	ND	ND	ND
Trichlorofluromethane (Freon11)	µg/L	150	5	1300	ND	ND	ND
Trichlorotrifluoroethane (Freon 113)	µg/L	1200	10	4000	ND	ND	ND
Vinyl Chloride (VC)	µg/L	0.5	0.5	0.05	ND	ND	ND
Xylenes (Total)	µg/L	1750	0.5	1800	ND	ND	ND

SYNTHETIC ORGANIC CHEMICALS

RESULTS

Parameter	Units	MCL	DLR (DL)	PHG	State Water Project Range	State Water Project Average	Water Bank Wells Range	Water Bank Wells Average
Alachlor	µg/L	2	1	4	ND	ND	ND	ND
Atrazine	µg/L	1	0.5	0.15	ND	ND	ND	ND
Bentazon	µg/L	18	2	200	ND	ND	ND	ND
Benzo(a)pyrene	µg/L	0.2	0.1	0.007	ND	ND	ND	ND
Carbofuran	µg/L	18	5	0.7	ND	ND	ND	ND
Chlordane	µg/L	0.1	0.1	0.03	ND	ND	ND	ND
2,4-D	µg/L	70	10	20	ND	ND	ND	ND
Dalapon	µg/L	200	10	790	ND	ND	ND	ND
Dibromochloropropane (DBCP)	µg/L	0.2	0.01	0.0017	ND	ND	ND	ND
Di(2-ethylhexyl)adipate	µg/L	400	5	200	ND	ND	ND	ND
Di(2-ethylhexyl)phthalate	µg/L	4	3	12	ND	ND	ND	ND
Dinoseb	µg/L	7	2	14	ND	ND	ND	ND
Diquat	µg/L	20	4	6	ND	ND	ND	ND
Endothall	µg/L	100	45	94	ND	ND	ND	ND
Endrin	µg/L	2	0.1	0.3	ND	ND	ND	ND
Ethylene Dibromide (EDB)	µg/L	0.05	0.02	0.01	ND	ND	ND	ND
Glyphosate	µg/L	700	25	900	ND	ND	ND	ND
Heptachlor	µg/L	0.01	0.01	0.008	ND	ND	ND	ND
Heptachlor Epoxide	µg/L	0.01	0.01	0.006	ND	ND	ND	ND
Hexachlorobenzene	µg/L	1	0.5	0.03	ND	ND	ND	ND
Hexachlorocyclopentadiene	µg/L	50	1	2	ND	ND	ND	ND
Lindane	µg/L	0.2	0.2	0.032	ND	ND	ND	ND
Methoxychlor	µg/L	30	10	0.09	ND	ND	ND	ND
Molinate	µg/L	20	2	1	ND	ND	ND	ND
Oxamyl	µg/L	50	20	26	ND	ND	ND	ND
Pentachlorophenol	µg/L	1	0.2	0.3	ND	ND	ND	ND
Picloram	µg/L	500	1	166	ND	ND	ND	ND
Polychlorinated Biphenyls	µg/L	0.5	0.5	0.09	ND	ND	ND	ND
Simazine	µg/L	4	1	4	ND	ND	ND	ND
Thiobencarb (Bolero)	µg/L	70	1	42	ND	ND	ND	ND
Toxaphene	µg/L	3	1	0.03	ND	ND	ND	ND
2,3,7,8-TCDD (Dioxin)	pg/L	30	5	0.05	ND	ND	ND	ND
2,4,5-TP (Silvex)	µg/L	50	1	3	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/L	0.005	0.005	0.0007	ND	ND	ND	ND

DISINFECTION RESIDUAL, PRECURSORS, and BYPRODUCTS

Type of Sample(s)	Parameter	Units	MCL/MRDL	DLR	MRDLG	RESULTS Range	RESULTS Average
Distribution	Chlorine (as total Cl2)	mg/L	4.0		4	0.18 - 2.19	1.15
Treated Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3		1.4-3.3	2.1
State Water Project	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3		2.1-5.2	3.2
Distribution	Stage 2 D/DBP Rule Total Trihalomethanes	µg/L	80**	0.5		15-63	49 #
Distribution	Stage 2 D/DBP Rule Total Haloacetic Acids	µg/L	60**	0.5		ND - 24	14 #
Treated Water	Bromate	µg/L	10^{+}	1.0			

** Stage 2 D/DBP Rule Total THMs and Total HAAs compliance is based upon Locational Running Annual Averages.

Location with the highest TTHM average

$^{+}$ Compliance is based on the running annual average computed quarterly, of monthly samples, collected at the entrance to the distribution system.

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DEFINITIONS and FOOTNOTES:

Plant Effluent, CWR, is finished, treated drinking water.
Raw Water is the Source Water, the California Aqueduct or wells, prior to treatment.
Units: mg/L = milligrams per liter, parts per million (ppm)
µg/L = micrograms per liter, parts per billion (ppb)
pg/L = picograms per liter, parts per quadrillion (ppq)
µmhos = micromhos, a measure of specific conductance
pCi/L = pico Curies per liter
< = less than
> = greater than
ND = none detected above the DLR
NTU = nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
MCL: Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are set by the US Environmental Protection Agency or the State Water Resources Control Board as close to the PHGs and MCLGs as is economically or technologically feasible.
MRDL: Maximum Residual Disinfectant Level. The level of a disinfectant added for water treatment that may not exceeded at the consumer's tap.
DLR: Detection Limit for purposes of Reporting.
(DL): Detection limit determined by the Laboratory when no DLR has been established.
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.
MRDLG: Maximum Residual Disinfectant Level Goal. The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the US Environmental Protection Agency.
PHG: Public Health Goal. 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 Office of Environmental Health Hazard
Primary Drinking Water Standard: Primary MCLs, specific treatment techniques adopted in lieu of primary MCLs, and monitoring and reporting requirements for MCLs that are specified in regulations.
Assessment.
Secondary Standards: Aesthetic standards established by the State Water Resources Control Board.
All analyses performed by ELAP certified laboratories: AVEK Water Agency, Eurofins Eaton Analytical Laboratories, or Eurofins subcontract lab.