

**Antelope Valley-East Kern Water Agency
2010 Annual Water Quality Report - Los Angeles County System**

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: **0.20 NTU**

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.

MICROBIOLOGICAL CONTAMINANTS						
Type of Sample(s)	Parameter	Sampling Frequency	MCL	No. of Months in Violation	System Results	
					Range	Average
Distribution	Total Coliform Bacteria	116 - 153 / mo	5% positive	None	0.0-0.6%	0%
Distribution	Fecal Coliform/ <i>E. coli</i>	116 - 153 / mo	1 pos. with 2 TC pos.	None	0%	0%

INORGANIC CONTAMINANTS												
Parameter	Units	MCL	DLR	PHG or (MCLG)	Acton Plant Effluent (CWR)		Eastside Plant Effluent (CWR)		Quartz Hill Plant Effluent (CWR)		Raw Influent (Source)	
					Range	Average	Range	Average	Range	Average	Range	Average
Aluminum	mg/L	1	0.05	0.6	ND	ND	ND	ND	ND	ND	ND	ND
Antimony	µg/L	6	6.0	20	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	µg/L	10	2.0	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Barium	mg/L	1	0.1	2	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	µg/L	4	1.0	1	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	µg/L	5	1.0	0.04	ND	ND	ND	ND	ND	ND	ND	ND
Chromium (Total)	µg/L	50	10	10	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide	µg/L	150	100	150	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	2	0.1	1	0.12	0.12	ND	ND	0.12	0.12	ND	ND
Lead	µg/L	5	5.0	0.2	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	µg/L	2	1.0	1.2	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	µg/L	100	10	12	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate (as NO3)	mg/L	45	2.0	45	ND	2.2	2.2	2.5	2.5	2.5	ND-3.1	2.1
Nitrite (as N)	mg/L	1	0.4	1	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate+Nitrite (as N)	mg/L	10	0.4	10	ND	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Perchlorate	µg/L	6	4.0	6	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	µg/L	50	5.0	30	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	µg/L	2	1.0	0.1	ND	ND	ND	ND	ND	ND	ND	ND

RADIOLOGICAL CONTAMINANTS					RESULTS
Parameter	Units	MCL	DLR	PHG	Raw Influent (Source)
Uranium	pCi/L	20	1.0	0.43	1.1

SYNTHETIC ORGANIC CHEMICALS					RESULTS
Parameter	Units	MCL	DLR	PHG	Raw Influent (Source)
Silvex	µg/L	50	1.0	10	ND
2,4-D	µg/L	70	10	10	ND
Alachlor	µg/L	2	1.0	1.0	ND
Atrazine	µg/L	1	0.5	0.5	ND
Benlazon	µg/L	18	2.0	2.0	ND
Benzo(a)pyrene	µg/L	0.2	0.1	0.1	ND
Carbofuran	µg/L	18	5.0	5.0	ND
Chlordane	µg/L	0.1	0.1	0.1	ND
Dalapon	µg/L	200	10	10	ND
Di(2-ethylhexyl)adipate	µg/L	400	5.0	5.0	ND
Di(2-ethylhexyl)phthalate	µg/L	4	3.0	3.0	ND
Dibromochloropropane (DBCP)	µg/L	0.2	0.01	0.01	ND
Dinoseb	µg/L	7	2.0	2.0	ND
Endrin	µg/L	2	0.1	0.1	ND
Ethylene Dibromide (EDB)	µg/L	0.05	0.02	0.02	ND
Glyphosate	µg/L	700	25	25	ND
Heptachlor	µg/L	0.01	0.01	0.01	ND
Heptachlor Epoxide	µg/L	0.01	0.01	0.01	ND
Hexachlorobenzene	µg/L	1	0.5	0.5	ND
Hexachlorocyclopentadiene	µg/L	50	1.0	1.0	ND
Lindane	µg/L	2	0.2	0.2	ND
Methoxychlor	µg/L	30	10	10	ND
Molinate	µg/L	20	2.0	2.0	ND
Oxamyl	µg/L	50	20	20	ND
Pentachlorophenol	µg/L	1	0.2	0.2	ND
Picloram	µg/L	500	1.0	1.0	ND
Polychlorinated Biphenyls	µg/L	0.5	0.5	0.5	ND
Simazine	µg/L	4	1.0	1.0	ND
Thiobencarb (Bolero)	µg/L	70	1.0	1.0	ND
Toxaphene	µg/L	3	1.0	1.0	ND

VOLATILE ORGANIC CONTAMINANTS					RESULTS
Parameter	Units	MCL	DLR	PHG	Raw Influent (Source)
1,1,1-Trichloroethane (1,1,1-TCA)	µg/L	200	0.5	100	ND
1,1,2,2-Tetrachloroethane	µg/L	1	0.5	0.1	ND
1,1,2-Trichloroethane (1,1,2-TCA)	µg/L	5	0.5	0.3	ND
1,1-Dichloroethane (1,1-DCA)	µg/L	5	0.5	3	ND
1,1-Dichloroethylene (1,1-DCE)	µg/L	6	0.5	10	ND
1,2,4-Trichlorobenzene	µg/L	5	0.5	5	ND
1,2-Dichlorobenzene (o-DCB)	µg/L	600	0.5	600	ND
1,2-Dichloroethane (1,2-DCA)	µg/L	0.5	0.5	0.4	ND

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1,2-Dichloropropane	µg/L	5	0.5	0.5								ND
1,3-Dichloropropene (Total)	µg/L	0.5	0.5	0.2								ND
1,4-Dichlorobenzene (p-DCB)	µg/L	5	0.5	6								ND
Benzene	µg/L	1	0.5	0.15								ND
Carbon tetrachloride	µg/L	0.5	0.5	0.1								ND
cis-1,2-Dichloroethylene (c-1,2-DCE)	µg/L	6	0.5	100								ND
Dichloromethane (Methylene Chloride)	µg/L	5	0.5	4								ND
Ethylbenzene	µg/L	300	0.5	300								ND
Methyl-tert-butyl ether (MTBE)	µg/L	5	3.0	13								ND
Monochlorobenzene (Chlorobenzene)	µg/L	70	0.5	200								ND
Styrene	µg/L	100	0.5	0.5								ND
Tetrachloroethylene (PCE)	µg/L	5	0.5	0.06								ND
Toluene	µg/L	150	0.5	150								ND
trans-1,2-Dichloroethylene (t-1,2-DCE)	µg/L	10	0.5	60								ND
Trichloroethylene (TCE)	µg/L	5	0.5	1.7								ND
Trichlorofluoromethane (Freon11)	µg/L	150	5.0	700								ND
Trichlorotrifluoroethane (Freon 113)	µg/L	1200	10	4000								ND
Vinyl Chloride (VC)	µg/L	0.5	0.5	0.05								ND
Xylenes (Total)	µg/L	1750	0.5	1800								<0.50

GENERAL PHYSICAL AND SECONDARY STANDARDS

Parameter	Units	MCL	DLR	RESULTS								
				Acton Plant Effluent (CWR)		Eastside Plant Effluent (CWR)		Quartz Hill Plant Effluent (CWR)		Raw Influent (Source)		
				Range	Average	Range	Average	Range	Average	Range	Average	
Aluminum	µg/L	200	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	mg/L	no standard			18		18		18		18	20
Chloride	mg/L	250			91		89		86		82	
Color	Units	15		<1-<5	<5	<1-<5	<5	<1-<5	<5			
Copper	µg/L	1000	50		ND		ND		ND		ND	ND
Foaming Agents (MBAS)	mg/L	0.5			<0.050		<0.050		<0.050		<0.050	<0.050
Hardness (Total) as CaCO3	mg/L	no standard			98		98		96		100	100
Iron	µg/L	300	100		ND		ND		ND		ND	ND
Magnesium	mg/L	no standard			13		13		12		13	13
Manganese	µg/L	50	20		ND		ND		ND		ND	ND
Odor @ 60 C	Units	3	1	<1	<1	<1	<1	<1	<1			
pH	Units	no standard		6.1-7.5	6.7	6.3-7.2	6.7	6.5-7.2	6.8	6.8-9.4	7.9	
Potassium	mg/L	no standard			2.9		2.8		2.7		2.9	
Silver	µg/L	100	10		ND		ND		ND		ND	ND
Sodium	mg/L	no standard			60		58		57		59	
Specific Conductance	µmhos	900			500		490	330 - 644	455		460	
Sulfate	mg/L	250	0.5		47		50		48		29	
Thiobencarb (Bolero)	µg/L	1	1.0		ND		ND		ND		ND	ND
Total Dissolved Solids	mg/L	500			260		250		260		350	
Turbidity	Units	5		0.01-0.20	0.05	0.01-0.08	0.04	0.01-0.18	0.04			
Zinc	mg/L	5.0	0.05		0.100		0.590		0.440		ND	
Total Alkalinity (as CaCO3)	mg/L	no standard			61		57		60	55-84	69	
Bicarbonate Alkalinity(HCO3)	mg/L	no standard			75		70		74			
Carbonate Alkalinity	mg/L	no standard			<1.8		<1.8		<1.8			
Hydroxide Alkalinity	mg/L	no standard			<1.0		<1.0		<1.0			

DISINFECTION RESIDUAL, PRECURSORS, and BYPRODUCTS

Type of Sample(s)	Parameter	Units	MCL/MRDL	DLR	MRDLG	RESULTS	
						Range	Average
Distribution	Chlorine (as total Cl2)	mg/L	4.0**		4	0.10 - 1.60	0.87
Treated Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3		0.6 - 2.7	1.7
Source Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3		0.8 - 4.3	2.7
Distribution	Total Trihalomethanes	µg/L	80**	0.5	None	18 - 24	21 #
Distribution	Total Haloacetic Acids (5)	µg/L	60**	2		7.0 - 9.3	8.5 #

** Running Annual Average of distribution system samples. The MCLs are based upon Running Annual Averages.
This average is a system-wide value, please see the attached summaries for site specific averages.

DEFINITIONS and FOOTNOTES:

Plant Effluent, CWR, is finished, treated drinking water.
Raw Water is the Source Water, the California Aqueduct, prior to treatment.
Units: mg/L = milligrams per liter, parts per million (ppm)
µg/L = micrograms per liter, parts per billion (ppb)
µmhos = micromhos, a measure of specific conductance
MFL = million fibers per liter
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 U.S. Environmental Protection Agency or the California Department of Public Health 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 be 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 U.S. 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 Assessment.
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.
Secondary Standards: Aesthetic standards established by the California Department of Public Health.
AL: Action Level. There is no MCL, if this level is exceeded, action is required by the California Department of Public Health.
This average is a system-wide value, please see the attached summary for site specific averages.
** Total Trihalomethanes and Haloacetic Acids(5) MCLs an annual running average of distribution system samples.
*** A corrosion inhibitor is added to the treated water before entry into the distribution system
All analyses performed by the ELAP certified laboratories: AVEK Water Agency, BSK Analytical Laboratories, or BSK subcontract lab.