

# **ANTELOPE VALLEY – EAST KERN WATER AGENCY**

---

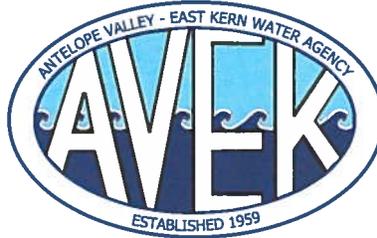
**2014 ANNUAL WATER QUALITY REPORT**

***KERN COUNTY SYSTEM***

OFFICERS

DAN FLORY  
General Manager

HOLLY H. HUGHES  
Secretary-Treasurer



A PUBLIC AGENCY

BOARD OF DIRECTORS

KEITH DYAS  
Division 2  
President

GEORGE M. LANE  
Division 4  
Vice President

SHELLEY SORSABAL  
Division 1

FRANK S. DONATO  
Division 3

ROBERT A. PARRIS  
Division 5

MARLON BARNES  
Division 6

NEAL A. WEISENBERGER  
Division 7

March 4, 2015

Dear General Manager:

This is the 2014 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 2014 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.

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 clarify questions about AVEK water, we do not have the specific information necessary to answer questions about your water, blending practices or distribution systems.

Respectfully,

Justin Livesay  
Laboratory Director

# ***Antelope Valley-East Kern Water Agency***

## **2014 Annual Water Quality Report**

We are very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water we have delivered to you over the past year. Our goal is, and always has been, to provide to you a safe supply of drinking water.

Our main water source is the State Water Project, California Aqueduct. The State Water Resources Control Board (State Board) has assessed the vulnerability of the State Water Project as to possible contaminating activities. The assessment's description and discussion of vulnerability is as follows:

“The California Aqueduct originates at the Sacramento-San Joaquin Delta at Clifton Court Forebay. Water in the Delta originates in the Sacramento River watershed, the San Joaquin watershed, and the watershed drainage from the Mokelumne River, Stanislaus River, Merced River and several smaller rivers that drain the eastern slopes of the Sierra Nevadas. Located in these drainage areas are a broad variety of potential sources of contamination including municipal, industrial and agricultural activities. Also influencing the quality of water pumped from the Delta is the impact of the estuarial nature of the Delta and the naturally occurring salt-water intrusion which is dependent to a large extent on the inflow from the contributing rivers.

The possible contaminating activities present within the California Aqueduct watershed are described in the State Water Project Watershed Sanitary Survey conducted by the California Department of Water Resources and their consultants in 1986 and updated in 2011.”

Our alternative water source is State Water Project water which has been stored in the aquifer at various underground storage facilities (i.e. “water banks”) and is extracted as local groundwater for water quality purposes or supply purposes during times of drought. The vulnerability of the facilities was assessed in 2014 as follows:

“The wells are most vulnerable to contaminants from activities such as herbicide use along transportation corridors or road right-of-ways; agricultural/irrigation wells; irrigated crops; application of fertilizer, pesticides, and herbicides; agricultural drainage; and the raw State Water Project surface water used to recharge the groundwater basins. Other potential contaminating activities include the potential presence of certain unknown activities such as unregistered underground storage tanks.”

A copy of these assessments may be viewed at, Antelope Valley-East Kern Water Agency, 6500 West Avenue N, Palmdale, CA 93551.

If you have any questions about this report or the Antelope Valley-East Kern Water Agency, please contact Justin Livesay, Laboratory Director at 661-943-3201. We want our valued customers to be informed about our Water Agency. If you want to learn more, please attend any of our regularly scheduled Board meetings. They are held on the second and fourth Tuesday of every month, 6:30 PM, at the Antelope Valley-East Kern Water Agency Office, 6500 West Avenue N, Palmdale, CA, 93551.

Antelope Valley-East Kern Water Agency routinely monitors for contaminants in our drinking water according to Federal and State laws. The table in this report, "2014 Annual Water Quality Report", shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2014.

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

We have learned through our monitoring and testing that some contaminants have been detected, however, we are proud to report that our drinking water meets or exceeds all State and Federal requirements.

**Total Coliform:** Water systems are required to meet a strict standard for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If the standard is exceeded, the water supplier must notify the public by newspaper, television or radio.

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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

**Antelope Valley-East Kern Water Agency  
2014 Annual Water Quality Report - Kern County System**

The Antelope Valley-East Kern Water Agency provides treated surface water and treated groundwater as our sources 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: **0.19 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.

The Antelope Valley-East Kern Water Agency also provides chlorinated groundwater as an alternative 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 continuously providing a minimum free chlorine residual of 0.5 mg/L leaving the clearwell.

Lowest single free chlorine residual measurement during the year: **0.58**

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	Average
Distribution System	Total Coliform Bacteria	52 - 83 / mo	5% positive	None	0%	0%
	E. coli	52 - 83 / mo	1 pos. with 2 TC pos.	None	0%	0%

**INORGANIC CONTAMINANTS**

Parameter	Units	MCL	DLR	PHG	<b>RESULTS</b>							
					Rosamond Plant				Water Bank			
					Plant Effluent (CWR)		Raw Influent (Sources)		Effluent (CWR)		Wells	
					Range	Average	Range	Average	Range	Average		
Aluminum	mg/L	1	0.05	0.6	ND-0.12	0.07	ND	ND	ND	ND	ND	
Antimony	µg/L	6	6	20	ND	ND	ND	ND	ND	ND	ND	
Arsenic	µg/L	10	2	0.004	3.9-5.4	4.5	6.2	3.3-6.5	5.1	2.9-12	5.2	
Barium	mg/L	1	0.1	2	ND	ND	ND	ND	ND	0.028-0.084	0.059	
Beryllium	µg/L	4	1	1	ND	ND	ND	ND	ND	ND	ND	
Cadmium	µg/L	5	1	0.04	ND	ND	ND	ND	ND	ND	ND	
Chromium (Total)	µg/L	50	10		ND-4.9	3.2	ND	ND	ND	2-3.3	2.9	
Chromium (Hexavalent)	µg/L	10	1	0.02	2.9-5.0	3.9	1.2	ND	ND	2-3.4	2.9	
Cyanide	µg/L	150	100	150	ND	ND	ND	ND	ND	ND	ND	
Fluoride	mg/L	2	0.1	1	0.17-0.26	0.22	0.16	ND	ND	ND-0.24	0.14	
Mercury	µg/L	2	1	1.2	ND	ND	ND	ND	ND	ND	ND	
Nickel	µg/L	100	10	12	ND-1.8	1.1	ND	ND	ND	ND-2.3	0.9	
Nitrate (as NO3)	mg/L	45	2	45	12-14	13	2.7-4.6	3.6	ND	2.6-18	13	
Nitrite (as N)	mg/L	1	0.4	1	ND	ND	ND	ND	ND	ND	ND	
Nitrate+Nitrite (as N)	mg/L	10		10	2.7-3.3	2.9	1.1	ND	ND	2.4-4.0	3.1	
Perchlorate	µg/L	6	4	6	ND	ND	ND	ND	ND	ND	ND	
Selenium	µg/L	50	5	30	ND-2.0	1.3	ND	ND	ND	1-3.4	2.1	
Thallium	µg/L	2	1	0.1	ND	ND	ND	ND	ND	ND	ND	
Asbestos	MFL	7	0.2	7						ND	ND	

**Antelope Valley-East Kern Water Agency  
2014 Annual Water Quality Report - Kern County System**

**GENERAL PHYSICAL AND SECONDARY STANDARDS**

Parameter	Units	MCL	DLR	RESULTS					
				Rosamond Plant		Raw Influent (Sources)		Water Bank Wells	
				Plant Effluent (CWR)	Average	Range	Average	Range	Average
Aluminum	µg/L	200	50	ND-120	70	ND	ND	ND-15	4.4
Calcium	mg/L	no standard		46.5-64.5	53.3	30.4	30.4	42.5-105	67.0
Chloride	mg/L	250		28-57	43	99	99	17-110	53
Color	Units	15		<5	<5			<5	<5
Copper	µg/L	1000	50	ND-0.64	0.30	ND	ND	ND-4.9	1.1
Foaming Agents (MBAS)	mg/L	0.5		ND-0.068	0.017	ND	ND	ND-0.09	0.02
Hardness (Total) as CaCO <sub>3</sub>	mg/L	no standard		140-192	162	106	106	120-316	197
Iron	µg/L	300	100	ND	ND	ND	ND	ND	ND
Magnesium	mg/L	no standard		5.74-7.80	7.00	7.25	7.25	3.6-13	7.3
Manganese	µg/L	50	20	ND	ND	ND	ND	ND	ND
Odor @ 60 C	Units	3	1	<1	<1			<1	<1
pH	Units	no standard		6.9-8.4	7.4	7.3-8.9	7.89	7.3-8.0	7.62
Silver	µg/L	100	10	ND	ND	ND	ND	ND	ND
Sodium	mg/L	no standard		40-43	42	85	85	34-58	41
Specific Conductance	µmhos	900		432-520	476	425-675	540	412-808	540
Sulfate	mg/L	250	0.5	40-57	49	94	94	29-74	46
Thiobencarb (Bolero)	µg/L	1	1	ND	ND			ND	ND
Methyl tert-Butyl Ether (MTBE)	µg/L	5	3	ND	ND			ND	ND
Total Dissolved Solids	mg/L	500		280-340	310	360	360	250-570	365
Turbidity	Units	5		0.01-0.19	0.03	0.02-2.65	0.33	0.01-0.16	0.02
Zinc	mg/L	5.0	0.050	0.03-0.46	0.263	ND	ND	ND-0.006	ND
Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	no standard		140-160	150	83-154	131	150-220	173
Bicarbonate Alkalinity(HCO <sub>3</sub> )	mg/L	no standard		170-200	180			180-270	211
Carbonate Alkalinity	mg/L	no standard		ND	ND			ND	ND
Hydroxide Alkalinity	mg/L	no standard		ND	ND			ND	ND

**RADIOLOGICAL CONTAMINANTS**

Parameter	Units	MCL	DLR	PHG	RESULTS			
					Rosamond Plant		Water Bank Wells	
					Raw Influent Sources	Average	Range	Average
Gross Alpha	pCi/L	15	3		3.1-9.8	5.2	3.3-14	5.9
Gross Beta	pCi/L	50			2.2-5.2	3.2	2.1-6.2	3.4
Strontium 90	pCi/L	8	2	0.35	ND-0.212	0.106	ND-1.0	0.4
Tritium	pCi/L	20,000	1,000	400	ND	ND	ND-312	93
Uranium	pCi/L	20	1	0.43	3.7-6.0	4.8	4.0-9.1	5.8
Radium 228	pCi/L		1	0.019	ND-0.304	0.168	ND-1.0	0.2
Radium 226	pCi/L		1	0.05	ND-0.166	0.074	ND-0.9	0.1

**VOLATILE ORGANIC CONTAMINANTS**

Parameter	Units	MCL	DLR	PHG	RESULTS			
					Rosamond Plant		Water Bank Wells	
					Raw Influent (Sources)	Average	Range	Average
1,1,1-Trichloroethane (1,1,1-TCA)	µg/L	200	0.5	1000	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/L	1	0.5	0.1	ND	ND	ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	µg/L	5	0.5	0.3	ND	ND	ND	ND
1,1-Dichloroethane (1,1-DCA)	µg/L	5	0.5	3	ND	ND	ND	ND
1,1-Dichloroethylene (1,1-DCE)	µg/L	6	0.5	10	ND	ND	ND	ND
1,2,4-Trichlorobenzene	µg/L	5	0.5	5	ND	ND	ND	ND
1,2-Dichlorobenzene (o-DCB)	µg/L	600	0.5	600	ND	ND	ND	ND

**Antelope Valley-East Kern Water Agency  
2014 Annual Water Quality Report - Kern County System**

1,2-Dichloroethane (1,2-DCA)	µg/L	0.5	0.5	0.4	ND	ND	ND	ND
1,2-Dichloropropane	µg/L	5	0.5	0.5	ND	ND	ND	ND
1,3-Dichloropropene (Total)	µg/L	0.5	0.5	0.2	ND	ND	ND	ND
1,4-Dichlorobenzene (p-DCB)	µg/L	5	0.5	6	ND	ND	ND	ND
Benzene	µg/L	1	0.5	0.15	ND	ND	ND	ND
Carbon tetrachloride	µg/L	0.5	0.5	0.1	ND	ND	ND	ND
cis-1,2-Dichloroethylene (c-1,2-DCE)	µg/L	6	0.5	100	ND	ND	ND	ND
cis-1,3-Dichloropropene	µg/L				ND	ND	ND	ND
Dichloromethane (Methylene Chloride)	µg/L	5	0.5	4	ND	ND	ND	ND
Ethylbenzene	µg/L	300	0.5	300	ND	ND	ND	ND
Methyl-tert-butyl ether (MTBE)	µg/L	13	3	13	ND	ND	ND	ND
Monochlorobenzene (Chlorobenzene)	µg/L	70	0.5	70	ND	ND	ND	ND
Styrene	µg/L	100	0.5	0.5	ND	ND	ND	ND
Tetrachloroethylene (PCE)	µg/L	5	0.5	0.06	ND	ND	ND	ND
Toluene	µg/L	150	0.5	150	ND	ND	ND	ND
trans-1,2-Dichloroethylene (t-1,2-DCE)	µg/L	10	0.5	60	ND	ND	ND	ND
trans-1,3-Dichloropropene	µg/L				ND	ND	ND	ND
Trichloroethylene (TCE)	µg/L	5	0.5	1.7	ND	ND	ND	ND
Trichlorofluoromethane (Freon11)	µg/L	150	5	1300	ND	ND	ND	ND
Trichlorotrifluoroethane (Freon 113)	µg/L	1200	10	4000	ND	ND	ND	ND
Vinyl Chloride (VC)	µg/L	0.5	0.5	0.05	ND	ND	ND	ND
Xylenes (Total)	µg/L	1750	0.5	1800	ND	ND	ND	ND

**SYNTHETIC ORGANIC CHEMICALS**

Parameter	Units	MCL	DLR (DL)	PHG	RESULTS			
					Raw Influent (Sources)		Water Bank Wells	
					Range	Average	Range	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	1.7	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	15	ND	ND	ND	ND
Endothall	µg/L	100	45	94	ND	ND	ND	ND
Endrin	µg/L	2	0.1	1.8	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	500	ND	ND	ND	ND
Polychlorinated Biphenyls	µg/L	0.5	0.5	0.09	ND	ND	ND	ND

**Antelope Valley-East Kern Water Agency  
2014 Annual Water Quality Report - Kern County System**

Simazine	µg/L	4	1	4	ND	ND	ND	ND
Thiobencarb (Bolero)	µg/L	70	1	70	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

**DISINFECTION RESIDUAL, PRECURSORS, and BYPRODUCTS**

Type of Sample(s)	Parameter	Units	MCL/MRDL	DLR	MRDLG	RESULTS	
						Range	Average
Distribution Treated Water	Chlorine (as total Cl <sub>2</sub> )	mg/L	4.0**		4	ND-1.63	0.86
Source Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3		ND-0.9	0.3
Distribution Treated Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3		ND-1.0	0.3
Distribution Treated Water	Stage 2 D/DBP Rule Total Trihalomethanes	µg/L	80**	0.5		10-42	24 #
Distribution Treated Water	Stage 2 D/DBP Rule Total Haloacetic Acids	µg/L	60**	1		1.7 - 7.0	4.8 #
Distribution Treated Water	Bromate	µg/L	10 <sup>+</sup>	5		ND-3.4	5.6

\*\* Running Annual Average of distribution system samples. The MCLs are based upon Running Annual Averages.  
 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.

**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

**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 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 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 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 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 State Water Resources Control Board.

**AL:** Action Level. There is no MCL, if this level is exceeded, action is required by the State Water Resources Control Board.

All analyses performed by ELAP certified laboratories: AVEK Water Agency, Weck Analytical Laboratories, or Weck subcontract lab.





**Quarterly Bromate Report for Disinfection Byproducts Compliance (in µg/L or ppb)**

System Name: Antelope Valley-East Kern Water Agency System No.: 1510053 Year: 2014 Quarter: 4th

Sample Date (month/date):	2013				1st Qtr.				2nd Qtr.				3rd Qtr.				4th Qtr.			
	1st Q	2nd Q	3rd Q	4th Q	1/8	2/11	3/12	Quarterly Average	4/9	5/14	6/11	Quarterly Average	7/9	8/13	9/10	Quarterly Average	10/8	11/12	12/11	Quarterly Average
Site 1 - Bromate	3.3	7.6	8.3	5.5	3.4	ND	OFF	1.1	OFF	OFF	3.3	1.1	ND	ND	ND	0.0	ND	ND	ND	0.0

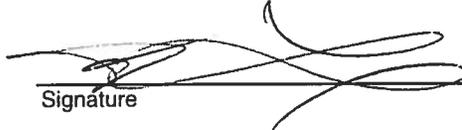
<b>Running Annual Average</b>				6.2				5.6				4.0				1.9				0.6
-------------------------------	--	--	--	-----	--	--	--	-----	--	--	--	-----	--	--	--	-----	--	--	--	-----

Meets Standard?*								Yes <input checked="" type="checkbox"/>												
(check box)								No <input type="checkbox"/>												

Identify the sample locations in the table below.

Site	Sample Location
1	Rosamond Clear Well Reservoir

Comments:

  
Signature

1/5/15  
Date

\*If, during the first year of monitoring, any individual quarter's average will cause the running annual average of that system to exceed the standard, then the system is out of compliance at the end of that quarter.

**Quarterly Report for Disinfectant Residuals Compliance  
For Systems Using Chlorine or Chloramines**

System Name: Antelope Valley-East Kern Water Agency System No.: 1510053

Calendar Year: 2014 Quarter: 4th

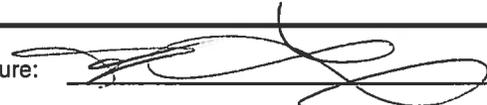
1st Quarter			
Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)	
Previous Year	April	0.74	
	May	0.79	
	June	0.78	
	July	0.70	
	August	0.73	
	September	0.72	
	October	0.88	
	November	0.94	
	December	0.71	
	Current Year	January	83
		February	68
		March	52
Running Annual Average (RAA):		0.78	
Meets standard? (i.e. RAA < MRDL of 4.0 mg/L as Cl <sub>2</sub> )		YES	

2nd Quarter			
Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)	
Previous Year	July	0.70	
	August	0.73	
	September	0.72	
	October	0.88	
	November	0.94	
	December	0.71	
	Current Year	January	0.77
		February	0.73
		March	0.81
		April	62
		May	56
		June	78
Running Annual Average (RAA):		0.82	
Meets standard? (i.e. RAA < MRDL of 4.0 mg/L as Cl <sub>2</sub> )		YES	

3rd Quarter		
Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)
Previous Yr	October	0.88
	November	0.94
	December	0.71
Current Year	January	0.77
	February	0.73
	March	0.81
	April	0.86
	May	0.85
	June	1.08
	July	70
	August	56
	September	70
Running Annual Average (RAA):		0.86
Meets standard? (i.e. RAA < MRDL of 4.0 mg/L as Cl <sub>2</sub> )		YES

4th Quarter		
Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)
Current Year	January	0.77
	February	0.73
	March	0.81
	April	0.86
	May	0.85
	June	1.08
	July	0.99
	August	0.90
	September	0.85
	October	56
	November	56
	December	69
Running Annual Average (RAA):		0.86
Meets standard? (i.e. RAA < MRDL of 4.0 mg/L as Cl <sub>2</sub> )		YES

Comments:

Signature: 

Date: 1/5/15

Antelope Valley-East Kern Water Agency  
**Kern System No. 1510053**  
**TOC Removal Running Annual Average**

Sample Date	Plant	Alkalinity mgCaCO3/L	Raw TOC mg/L	Treated TOC mg/L	Actual % TOC reduction	Required % TOC reduction	"TOC Removal Ratio" actual % /required %
1/8/2014	RWTP	83.3	0.91	0.82	9.9	25	1.0
2/11/2014	RWTP	83.9	0.95	0.87	8.4	25	1.0
3/1/2014	RWTP	plant off					
4/9/2014	RWTP	plant off					
5/14/2014	RWTP	plant off					
6/11/2014	RWTP	153	0.43	0.46	-7.0	25	1.0
7/9/2014	RWTP	140	0.25	0.25	0.0	25	1.0
8/13/2014	RWTP	140	ND	ND	0.0	25	1.0
9/10/2014	RWTP	132	ND	ND	0.0	25	1.0
10/8/2014	RWTP	146	ND	0.38	0.0	25	1.0
11/12/2014	RWTP	154	ND	0.28	0.0	25	1.0
12/11/2014	RWTP	150	ND	ND	0.0	25	1.0

Minimum	83.3	ND	ND	-7.0
Maximum	154.0	1.0	0.9	9.9
RAA	131.4	0.3	0.3	1.3

**Running Annual Average (RAA)      1.0**

**Title 22 California Code of Regulations Article 5:**

Required percent TOC reduction\*\*

**Table 64536.2-A**      Source Water Alkalinity

Raw TOC	0-60	<60 - 120	>120
>2.0 - 4.0	35.0 %	25.0 %	15.0 %
>4.0 - 8.0	45.0 %	35.0 %	25.0 %
>8.0	50.0 %	40.0 %	30.0 %

\*\*If one or more of the section 64536.4(b) 1-6 conditions are met, the system may assign a monthly value of 1 for the TOC removal ratio in lieu of the calculated value.

List condition when used: 1

1. The system's source water TOC level, prior to any treatment is less than or equal to 2.0 mg/L
2. The system's treated water TOC level is less than or equal to 2.0 mg/L
3. The system's source water SUVA, prior to any treatment, is less than or equal to 2.0 L/mg-m
4. The system's finished water SUVA is less than or equal to 2.0 L/mg-m
5. A system practicing softening removes at least 10 mg/L of magnesium hardness (as CaCO3)
6. A system practicing enhanced softening lowers alkalinity below 60 mg/L (as CaCO3)