



**ANTELOPE VALLEY-EAST KERN WATER AGENCY
 ANTELOPE VALLEY-EAST KERN WATER AGENCY FINANCING AUTHORITY
REGULAR BOARD MEETING AGENDA
TUESDAY, APRIL 11, 2023, AT 5:30 PM
6450 WEST AVENUE "N," PALMDALE, CA 93551**

Teleconference: (669) 900-6833; ID No. 894 3572 7657#; PASSCODE: 0

Video Conference: <https://us02web.zoom.us/j/89435727657?pwd=ak1XbmprdfBUQnRZOWszWU91VHdyUT09>

****Please mute audio at all times unless speaking****

1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL: Division 7 – **Gary Van Dam** _____; Division 6 – **Audrey T. Miller** _____; Division 5 – **Robert Parris** _____; Division 2 – **Keith Dyas** _____; Division 1 – **Shelley Sorsabal** _____; Division 3 – **Frank Donato** _____; Division 4 – **George M. Lane** _____

OFFICERS: General Manager – **Matthew Knudson**; Attorney – **Jim Markman/Tilden Kim**; Board Secretary/Treasurer – **Holly Hughes**

4. VOLUNTARY PUBLIC ROLL-CALL – If any member of the public wishes to introduce themselves, please feel free to do so now.

5. PUBLIC COMMENTS AND PERIOD OPEN TO THE PUBLIC – If anyone wishes to address the board on any item, not on the agenda, please feel free to do so now.

6. ADOPTION OF AGENDA

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6(a-1)	Adoption of Agenda for Regular Board Meeting of April 11, 2023	Board Order 6(a-1)	5
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7. CONSENT CALENDAR – ACTION ITEMS – The public and board shall have an opportunity to comment on any action item(s) on the Consent Calendar as the Consent Calendar is considered collectively by the Board of Directors prior to action being taken.

Page

7(a-1)	Approve Minutes of the Regular Board Meeting of February 28, 2023	Board Order 7(a-1)	6
7(a-2)	Accept and file the Check Register Lists from March 16, 2023, through March 29, 2023 (Finance Committee Review – 04/06/23)	Board Order 7(a-2)	11

8. ITEM(S) FOR CONSIDERATION AND POSSIBLE ACTION

a. Finance Committee (FD/KD/GL) 04/06/23

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8(a-1)	Consideration and possible action to approve a purchase order/proposal with R&B Automation for the replacement of two 18” Filter Effluent Valves at the Eastside Treatment Plant in the amount of \$49,189.02 (Operations Manager Bozigian)	Board Order 8(a-1)	17
8(a-2)	Consideration and possible action on Water Supply Plan for 2023 (General Manager Knudson)	Board Order 8(a-2)	21
8(a-3)	Update on the prepayment of Certificates of Participation Series 2008A-2 (General Manager Knudson)	Information Only	n/a

b. High Desert Water Bank and Water Banking Committee (FD/KD/GV) 03/30/23

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8(b-1)	Monthly update on the High Desert Water Bank (HDWB) Project (Engineering Manager Livesay)		23
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c. New Business

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8(c-1)	Accept and File the 2022 Annual Water Quality Reports for Los Angeles County and Kern County (Presentation by Laboratory Manager Wray)	Board Order 8(c-1)	45
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9. GENERAL MANAGER’S REPORT ON WATER SUPPLY, PROJECTS, AND PROGRAM

10. DIRECTORS REPORTS

11. ATTORNEY REPORT

12. REQUEST FOR FUTURE AGENDA ITEMS

13. CLOSED SESSION

- a. *(Possible)* Closed Session – Conference with Legal Counsel – Existing Litigation, to which the local Agency is a party pursuant to Government Code Section §54956.9(d)(1), one case, *CV Communities, LLC v. Antelope Valley-East Kern Water Agency*, Los Angeles County Superior Court Case No. 20STCV10953
- b. *(Possible)* Closed Session – Conference with Legal Counsel – Existing Litigation (Paragraph (1) of subdivision (d) of Government Code Section 54956.9)
Name of case: *Roberts v. Coachella Valley Water District*, County of Riverside Superior Court, Case RIC182310 MF

14. CLOSED SESSION ANNOUNCEMENTS

15. ADJOURN TO A REGULAR BOARD MEETING SCHEDULED FOR TUESDAY, APRIL 25, 2023, AT 5:30 P.M.

Note: The Board reserves the right to discuss and/or act on all the above agenda items.

NOTICES

Any person may make a request for a disability-related modification or accommodation needed for that person to be able to participate in the public meeting by telephoning (661) 943-3201 or writing to Antelope Valley-East Kern Water Agency at 6450 West Avenue N, Palmdale, CA 93551. Requests must specify the nature of the disability and the type of accommodation requested. A telephone number or other contact information should be included so that Agency staff may discuss appropriate arrangements. Persons requesting disability-related accommodation should make the request with adequate time before the meeting for the Agency to provide the requested accommodation.

A complete agenda packet containing all accompanying reports for this agenda is available by contacting the Board Secretary-Treasurer at hhughes@avek.org or (661) 943-3201, or at the Antelope Valley-East Kern Water Agency, 6450 West Avenue N, Palmdale, CA 93551. Board meetings are subject to audio recording.

Posted: April 7, 2023, at 4:30 p.m. by Holly Hughes, Board Secretary-Treasurer

RECOMMENDED BOARD ORDER 6(a-1)

To the Board of Directors

FOR BOARD ACTION

ADOPTION OF THE CURRENT AGENDA FOR APRIL 11, 2023

The Board of Directors adopted the following Board Order on April 11,
2023:

To adopt the Current Agenda for April 11, 2023, as presented.

Motion by _____

Second by _____

Carried _____

BOARD ORDER 6(a-1)

04-11-23

RECOMMENDED BOARD ORDER 7(a-1)

To the Board of Directors

FOR BOARD ACTION

**APPROVE MINUTES OF THE REGULAR BOARD MEETING
OF FEBRUARY 28, 2023**

The Board of Directors adopted the following board order on
April 11, 2023:

That the Minutes of the Regular Board Meeting of February 28, 2023,
be approved as presented.

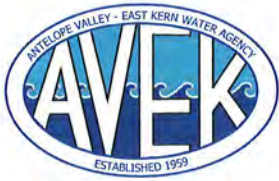
Motion by _____

Second by _____

Carried _____

BOARD ORDER 7(a-1)

04-11-23



Antelope Valley-East Kern Water Agency Antelope Valley-East Kern Financing Authority

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

MINUTES

Regular Board Meeting of February 28, 2023

DRAFT

1. Call to Order: Date: Tuesday, February 28, 2023 Time: 5:30 p.m. Location: 6450 W Ave N, Palmdale, CA 93551 -and- Zoom Telephone: (669) 900-6833; ID No: 894 3572 7657; Passcode: 0 Zoom Link: https://us02web.zoom.us/j/89435727657?pwd=ak1XbmprdfBUQnRZOWszWU91VHdyUT09	The regular meeting of the Board of Directors of the Antelope Valley-East Kern Water Agency and the Antelope Valley-East Kern Water Agency Financing Authority met in-person and via teleconference and video conference. The meeting was called to order by President Lane at 5:30 p.m.
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2. Pledge of Allegiance	Led by: Teresa Yates – AVEK Finance & Administration Manager
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3. Roll Call: Board Members		Present: 6 Not Present: 1
Division 7, Gary Van Dam [present in-person]	Division 6, Audrey Miller [present via ZOOM]	
Division 5, Robert Parris – NOT PRESENT	Division 2, Keith Dyas [present via ZOOM]	
Division 1, Shelley Sorsabal [present via ZOOM]	Division 3, Frank Donato (Vice President) [present in-person]	
Division 4, George Lane (President) [present in-person]		

Board Officers	Present: 3 Not Present: 0
General Manager-Matthew Knudson	
General Counsel/Attorney: James Markman , Richards Watson Gershon Law (RWG) [Present via ZOOM]	
Board Secretary-Treasurer: Holly Hughes	

NOTES: ALL VOTES CAST WERE TAKEN VIA ROLL CALL due to teleconference

Staff Present: In-person: Jon **Bozigan**, Operations Manager; Teresa **Yates**, Finance & Administration Manager; Justin **Livesay**, Engineering Manager [present via ZOOM]; and Dwayne **Chisam**, Director of Special Projects.

Others Present in-person: Byron **Glennan**; and others.

Others Present via Teleconference: AVEK (Host); AVEK iPad (co-Host); Audrey **Miller**; Shelley **Sorsabal**; Keith **Dyas**; Jack's iPad(2); J **Long**; Joyce Media Inc.; NERD Aerotech News-Alisha; Tim **Leo**; Jim; Belal **Tabannaj**; Benjamin **Stewart**; JM-Zoom User; (661) 272-0015; (661) 433-1487; and others. As many as 17 participants were logged into the Zoom meeting and that number fluctuated throughout the session.

4. Voluntary Public Roll Call
John Ukkestad , AV Mutual Group; Vincent Dino , Palmdale Water District; John Joyce , Rosamond News; Jack Seefus , White Fence Farms 3

5. Public Comments and Period Open to the Public
There were no public comments.

6. Adoption of Agenda:	1 Item
BOARD ORDER 6(a-1): Adoption of Agenda for Board Meeting of February 28, 2023	

6(a-1):	MOTION: Dyas	SECOND: Miller	ROLL CALL: AYE = 6; NAY= 0; ABSTAIN = 0; ABSENT = 1; Parris not present; Carried.	PASSED
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7. New Business	0 Items
None	

8. Consent Calendar	2 Items
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- 8(a-1)** Approve Minutes of the Regular Board Meeting of January 24, 2023
- 8(a-2)** Accept and file the Check Register Lists from February 2, 2023, through February 15, 2023 (Finance Committee Review – 02/23/23)



BOARD ORDERS 8(a-1) to 8(a-2) Approval of two (2) Items on the Consent Calendar as presented.

8(a-1) to 8(a-2)	<u>MOTION</u> : Dyas	<u>SECOND</u> : Donato	ROLL CALL: AYE = 6; NAY= 0; ABSTAIN = 0; ABSENT = 1; Parris not present; Carried.	PASSED
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9. Items for Consideration and Possible Action 4 Items

a. Finance Committee (FD/KD/GL) 02/23/23

9(a-1) Consideration and possible action to Accept and File the Treasurer’s Report for the Month Ending January 31, 2023 (Finance Manager Yates)

BOARD ORDERS 9(a-1) Accept and file the Treasurer’s Report for the month ending January 31, 2023

9(a-1)	<u>MOTION</u> : Donato	<u>SECOND</u> : Van Dam	ROLL CALL: AYE = 6; NAY= 0; ABSTAIN = 0; ABSENT = 1; Parris not present; Carried.	PASSED
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b. High Desert Water Bank & Water Bank Resources Committee (FD/KD/GV) 02/24/23

9(b-1) Consideration and possible action on Pilot Water Banking Agreement between AVEK and Santa Clara Valley Water District (General Manager Knudson)

BOARD ORDERS 9(b-1) To approve the Pilot Water Banking Storage Agreement with Santa Clara Valley Water District and authorize the general manager to execute said Agreement and implement the program with Santa Clara Valley Water District, as presented and recommended.

9(b-1)	<u>MOTION</u> : Donato	<u>SECOND</u> : Sorsabal	ROLL CALL: AYE = 6; NAY= 0; ABSTAIN = 0; ABSENT = 1; Parris not present; Carried.	PASSED
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c. New Business

9(c-1) Consideration and possible action on Letter of Support for Palmdale Water District’s WaterSmart Water Recycling and Desalination Grant Application (General Manager Knudson)

BOARD ORDERS 9(c-1) To approve the letter of support for Palmdale Water District’s Pure Water Antelope Valley Project; and authorize the Board President to sign the letter of support as presented and recommended.

9(c-1)	<u>MOTION</u> : Dyas	<u>SECOND</u> : Miller	ROLL CALL: AYE = 6; NAY= 0; ABSTAIN = 0; ABSENT = 1; Parris not present. Carried.	PASSED
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9(c-2) Consideration and possible action on appointment of AVEK’s alternate representative on the Antelope Valley Watermaster Board due to the upcoming retirement of Mr. Dwayne Chisam (President Lane)

BOARD ORDERS 9(c-2) To appoint AVEK’s General Manager Matt Knudson as the alternate representative to the AV Watermaster Board, as presented and recommended.

9(c-2)	<u>MOTION</u> : Van Dam	<u>SECOND</u> : Donato	ROLL CALL: AYE = 6; NAY= 0; ABSTAIN = 0; ABSENT = 1; Parris not present. Carried.	PASSED
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10. General Manager’s Report on Water Supply, Projects, and Program

The Northern California precipitation was reported by General Manager Knudson.

The Agency’s State Water Project Reservoir levels were reported; Lake Oroville at 116% of historical average and San Luis at 94% of historical average.

Director of Special Projects, Dwayne Chisam, reported that Article 21 water does not count against our allocation and is available at the variable cost only and can be used to fill our water banks.

An update was provided on AVEK Operations and Maintenance. An update was provided on the High Desert Water Bank project.

Upcoming Events and Schedule were reported as follows: ACWA DC Conference 2/28/23 through 3/2/23. AV Watermaster Board Meeting on 3/22/23.

11. Director Reports

There were no reports provided by any of the directors.

12. Attorney Report

Attorney **Markman** stated that he had nothing new to report.

13. Request for Future Agenda Items

There were no requests for future agenda items.

14. Old Business/Closed Session

General Manager **Knudson** stated that there was no reason to go into closed session for Item No. 14(a).

- a. **(NO)** Closed Session – Conference with Legal Counsel – Existing Litigation, to which the local agency is a party pursuant to Government Code Section 54956.9(d)(1), one case, *CV Communities, LLC v. Antelope Valley-East Kern Water Agency*, Los Angeles County Superior Court Case No. 20STCV10953

15. Closed Session Announcement(s)

There was no closed session and thus, no announcements.

16. Adjourn to a Regular Board Meeting Scheduled for Tuesday, March 14, 2023, at 5:30 p.m.

BOARD ORDER 16: The meeting was adjourned at 6:19 p.m.

16	MOTION: Sorsabal	SECOND: Van Dam	ROLL CALL: AYE = 6; NAY= 0; ABSTAIN = 0; ABSENT = 1; Parris not present; Carried.	PASSED
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Approval:



Holly Hughes, Board Secretary-Treasurer

Board of Directors:

President or Vice-President's Signature Date

RECOMMENDED BOARD ORDER 7(a-2)

To the Board of Directors

FOR BOARD ACTION

CHECK REGISTER LISTS

The Board of Directors adopted the following board order on April 11, 2023:

That the check register lists for the period of March 16, 2023, through March 29, 2023, be approved and accepted for filing as presented.

Motion by _____

Second by _____

Carried _____

BOARD ORDER 7(a-2)

04-11-23

AVEK Water Agency
Check List
For the Period From Mar 16, 2023 to Mar 29, 2023

REVIEWED
4/3/23
m.x

Check #	Payee	Explanation	Approved By:	Amount	
<u>DWR CONTRACT & WATER DELIVERIES</u>					
1	83734	Department of Water Resources	O.M.P.&R./Off-Aqueduct/Conservation Charges/Variable O.M.P.&R	Monthly - GM Approved	\$ 1,721,960.00
<u>MONTHLY</u>					
2	83720	AnSer formerly: All Access Message Center	Answering Service	Monthly - GM Approved	\$ 98.00
3	83721	AT&T	Landline SCADA Alarm - AWTP	Monthly - GM Approved	\$ 308.25
4	83725	The Bank of New York Mellon	Custody Services Fees - February 2023	Monthly - GM Approved	\$ 250.00
5	83727	Broadvoice Business	VOIP Phones - All Sites	Monthly - GM Approved	\$ 1,261.28
6	83728	California Tool & Welding Supply	Welding Gases - RWTP	Monthly - GM Approved	\$ 133.53
7	83729	Canon Financial Services, Inc.	Copier Charges	Monthly - GM Approved	\$ 726.47
8	83731	Cintas	Uniforms - All Sites	Monthly - GM Approved	\$ 794.73
9	83735	Frontier	Landline SCADA Alarm - WWB	Monthly - GM Approved	\$ 86.50
10	83749	PFM Asset Management LLC	Managed Account Fees - February 2023	Monthly - GM Approved	\$ 2,001.20
11	83750	Pitney Bowes Bank Inc. Purchase Power	Postage Machine - 03/30/2023 to 06/29/2023	Quarterly - GM Approved	\$ 404.99
12	83754	Southern CA Edison	Electricity/Pumping - QHWTP/QH Decant/AWTP HLPS/EWTP/LV Tank/LVPS/Willow PS/RWTP/RG4/RG5/RG9/RG6/EW3/EW4/EW5/EW6/EW15/EW16/EW17/CF/SNIP PS/Boron PS/MPS/MTF/C8/C9	Monthly - GM Approved	\$ 131,402.86
13	83756	Sparkletts	Supplies - Lab	Monthly - GM Approved	\$ 349.26
14	83758	T-Mobile	Director Communication Device	Monthly - GM Approved	\$ 33.00
15	83762	TPx Communications	Fiber Internet Service	Monthly - GM Approved	\$ 1,318.07
16	83765	Waste Management of Antelope Valley	Waste Disposal - AWTP	Monthly - GM Approved	\$ 88.61
17	83766	Waste Management - Kern County	Waste Disposal - RWTP	Monthly - GM Approved	\$ 203.52
18	83767	Waste Management of Antelope Valley	Waste Disposal - WWB	Monthly - GM Approved	\$ 144.82
19	83768	Waste Management of Antelope Valley	Waste Disposal - EWTP	Monthly - GM Approved	\$ 209.46
20	83769	Waste Management of Antelope Valley	Waste Disposal - QHWTP	Monthly - GM Approved	\$ 374.73

AVEK Water Agency
Check List
For the Period From Mar 16, 2023 to Mar 29, 2023

Check #	Payee	Explanation	Approved By:	Amount	
MONTHLY cont.					
21	83770	WEX Bank - Enterprise Fleet Management	Gasoline/Diesel - All Sites	Monthly - GM Approved	\$ 8,865.47
BOARD APPROVED					
22	83713	Brownstein Hyatt Farber Schreck, LLP	Professional Services through February 2023 - AVEK and CV Communities Dispute	Finance Committee 3/27/2023	\$ 15,874.34
23	83714	Palmdale Water District	Payment for PWD Treatment Cost for Acton Service Area	Finance Committee 3/27/2023	\$ 17,255.99
24	83715	Richards, Watson & Gershon	Legal Services - Through February 2023	Finance Committee 3/27/2023	\$ 24,666.76
25	83717	CB&T/ACWA-JPIA	Employee/Director Medical Insurance	Monthly - BoD Approved Agreement	\$ 94,278.73
26	83719	Alisha L. Semchuck	Public Information Consultant - March 2023	BoD Approved Contract	\$ 1,500.00
27	83733	Computershare Trust Company/Wells Fargo Bank	Trustee Fee - 2017 CREBS	Annually - BoD Approved Agreement	\$ 4,000.00
28	83741	JCI Jones Chemicals, Inc	Chemicals - Sodium Hypochlorite	BoD Approved Chemical Budget	\$ 10,197.00
29	83746	MC Engineering, Inc.	LACWD 60th & L-12 Inspector - reimbursed by LACWD	BoD Approved Agreement	\$ 4,982.04
30	83752	Registrar-Recorder/County Clerk	Costs for 11/8/22 General Election	BOD Election	\$ 91,530.12
GM APPROVED					
Administration					
31	83726	Bohns Printing	Printing - Business Cards	GM Approved	\$ 137.26
32	83748	Diana Mills	Mileage Reimbursement - Admin	GM Approved	\$ 17.50
Lab					
33	83716	Absolute Standards Inc.	Chemicals - Lab	P.O. #23-0055 - GM Approved	\$ 195.00
34	83738	Hach Company	Supplies - Lab	P.O. #23-0045 - GM Approved	\$ 671.16
35	83738	Hach Company	Chemicals - Lab	P.O. #22-0062/23-0052 - GM Approved	\$ 1,137.64
36	83759	Thomas Scientific	Chemicals - Lab	P.O. #23-0051 - GM Approved	\$ 137.21
37	83764	VWR International	Chemicals - Lab	P.O. #23-0042 - GM Approved	\$ 1,953.31

AVEK Water Agency
Check List
For the Period From Mar 16, 2023 to Mar 29, 2023

	Check #	Payee	Explanation	Approved By:	Amount
GM APPROVED cont.					
Operations & Maintenance					
38	83712	KJS Health and Safety	Safety Training	GM Approved	\$ 3,225.00
39	83718	Airgas USA, LLC	Supplies - Maintenance Dept.	GM Approved	\$ 516.60
40	83722	Authorized Parts, Inc.	Equipment Maintenance - RWTP/EWTP	P.O. #23-0061 - GM Approved	\$ 2,592.50
41	83723	AutoZone	Equipment & Vehicle Maint. - WWB/Maint.	GM Approved	\$ 58.61
42	83724	AV Battery Mart	Equipment Maintenance - QHWTP	GM Approved	\$ 110.23
43	83730	CED - Orange/LA	Equipment Maintenance - QHWTP/RWTP/EWTP/WWB/SNIP PS	GM Approved	\$ 1,093.00
44	83732	Coastline Equipment	JD Tractor Maintenance - WWB	GM Approved	\$ 65.65
45	83736	Grainger	HVAC Maintenance - Admin	GM Approved	\$ 47.71
46	83737	Grease Monkey 1066	Vehicle Maintenance - #4 & #19 - Admin	GM Approved	\$ 132.98
47	83739	Core & Main LP	Equipment Maintenance - WS PS	P.O. #23-0059 - GM Approved	\$ 463.01
48	83740	Johnstone Supply	HVAC Maintenance - Admin	GM Approved	\$ 3,758.87
49	83742	Erik Kane	Mileage Reimbursement - RWTP	GM Approved	\$ 46.25
50	83743	Karls Hardware, Inc.	Equipment Maintenance - SNIP PS	GM Approved	\$ 296.35
51	83744	Karl's Hardware Mojave	Supplies - RWTP	GM Approved	\$ 58.94
52	83745	KJS Health and Safety	Safety Training	GM Approved	\$ 1,300.00
53	83747	McMaster-Carr Supply Company	Equipment Maintenance - EWTP	P.O. #20-0057 - GM Approved	\$ 445.86
54	83751	Powerflo Products Inc.	Equipment Maintenance - RWTP/EWTP	P.O. #22-0053 - GM Approved	\$ 6,361.15
55	83753	Rosemount Inc.	Equipment Maintenance - QHWTP/RWTP/EWTP/WWB	P.O. #23-0001 - GM Approved	\$ 3,717.82
56	83757	Sunbelt Rentals, Inc.	Equipment Rental - WWB	P.O. #23-0037 - GM Approved	\$ 2,956.07
57	83760	The Tire Store	Vehicle Maintenance - #10 - Maintenance Dept.	GM Approved	\$ 386.30
58	83761	Tire Xpress	Vehicle Maintenance - #18 - QHWTP	GM Approved	\$ 18.00
59	83763	United Rentals Northwest, Inc.	Equipment Rental - QHWTP	GM Approved	\$ 2,093.21

AVEK Water Agency
 Check List
 For the Period From Mar 16, 2023 to Mar 29, 2023

	Check #	Payee	Explanation	Approved By:	Amount
VOID					
60	83755	VOID	Second Page of Check 83754 - Needed for Printing of Payment Details on Check Stub	n/a	
	Total				\$ 2,169,292.92

Check List
 For the Period From March 16, 2023 to March 29, 2023
 High Desert Water Bank Capital Program Account - MET

REVIEWED
 4/3/23
 M.X.

Check #	Payee	Explanation	Approved By:	Amount
1263	Antelope Valley Watermaster	Application for Storage Agreement	GM Approved	\$ 15,000.00
1264	Atkinson-Baker, a Veritext Co.	Fees related to HDWB Eminent Domain Trial	GM Approved	\$ 2,102.50
1265	Kern County Water Agency	Cofferdam Lease - December 17, 2022 thru March 16, 2023 - to be reimbursed by Blois Construction	BoD Approved Agreement	\$ 37,500.00
1266	Nicholas Construction, Inc	Progress Payment #8 - Gravity Recharge Conveyance	BoD Approved Agreement	\$ 1,622,600.00
1267	Stantec Consulting Services Inc.	HDWB Professional Services - December 2022	BoD Approved Agreement	\$ 159,834.09
Total				\$ 1,837,036.59

Checking account balance before above checks \$ 3,623,992.71

Outstanding Invoices to Metropolitan Water District at 3/31/23

Invoice No. 022123-18 \$ 1,647,144.21
 Invoice No. 033123-19 \$ 2,259,331.37

RECOMMENDED BOARD ORDER 8(a-1)

To the Board of Directors

FOR BOARD ACTION

**APPROVE PURCHASE ORDER/PROPOSAL
WITH R&B AUTOMATION FOR 2 – 18’ FILTER
EFFLUENT VALVES AT EWTP**

The Board of Directors adopted the following board order on
April 11, 2023:

To approve a purchase order/proposal with R&B Automation for the
replacement of two 18” filter effluent valves at the Eastside Water Treatment
Plant in the amount of \$49,189.02, as presented and recommended by the
Finance Committee.

Motion by _____

Second by _____

Carried _____

BOARD ORDER 8(a-1)

04-11-23



STAFF REPORT

To: Board of Directors	Date: March 21, 2023
From: Matt Knudson, General Manager <i>M.K.</i>	Prepared By: Jon Bozigian, Operations Manager Reviewed By: Matthew Knudson, GM
Subject: Replacement of two 18" Filter Influent Valves at the Eastside Treatment Plant	
Meeting Dates: April 6, 2023 (Finance) April 11, 2023 (Board) Attachment(s): <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

Recommendation:

Staff is requesting that the Board approve the proposal submitted by R&B Automation for replacement of two 18" Filter Effluent valves at the Eastside Treatment Plant in the amount of \$49,189.02. The Agency has utilized R&B Automation for valve and actuator replacement for the past 25 years with excellent results.

Background:

Staff was hoping to include replacement of these valves in the 2023/2024 Asset Replacement budget but, in order to take advantage of increased DWR allocation, the plant will be run at higher than anticipated flows. In order to achieve this, these 40 year-old valves will need to be replaced right away. Upgrading these valves requires machining and fabrication of stainless-steel adapter hubs to utilize existing valve actuators. Additionally, these elevated valves are located in an area that is difficult to access. Scaffolding and ceiling mounted lifting apparatus will be necessary. R&B Automation has these valves in stock and has the ability to machine the stainless-steel adapter hubs in-house.

Budget Breakdown:

This \$49,189.02 expense will be applied to the Eastside Treatment Plant equipment maintenance budget.

Supporting Documents

- R&B Automation proposal



R&B Automation, Inc.
 PO Box 892470
 Temecula, CA 92589-2470
 CSLB: 958126
 Phone: 951-693-0170
 E-mail: Quotes@r-bautomation.com

Estimate

<u>Date</u>	<u>Quote Number</u>
3/20/2023	8073
<u>Terms</u>	<u>RBA Project No.</u>
Net 30	_AVEK Quotes
<u>FOB</u>	<u>Delivery</u>
Temecula	3 - 4 Weeks

BILL TO

Antelope Valley-East Kern Water Agency
 Quartz Hill Treatment Plant
 Effluent Valves

Description	Qty	Cost	Total
Attention: Jon Bozigian Project: Filter # 3 & 4 Influent Valve Location: Eastside Plant Estimated Lead Times: 3 - 4 Weeks			
18" BFV 150# with gaskets and bolt kits SS 316	2	9,553.50	19,107.00T
Prevailing Wage Field Service to install a (2) 18" BFV and assemblies.	1	18,620.00	18,620.00
Auma GS100 Gearbox and fabricated mounting hardware	2	4,310.00	8,620.00T
Please Note: 1) Due to current shortage and prior sales on materials lead times are Estimates Only and Beyond R&B's Control 2) Quote is for Material & Installation. 3) Cancellation Fees may apply to any material or parts ordered 4) Any additional Unforeseen Costs / Visit / Time / Delays Due to Customer / Parts / Material not quoted will be billed additionally.			
		Subtotal	\$46,347.00
		Sales Tax (10.25%)	\$2,842.02
		Total	\$49,189.02

We are pleased to submit our quotation covering the items above. Please contact us if you have any questions or concerns. *** This quote is valid for 30 days ***

RECOMMENDED BOARD ORDER 8(a-2)

To the Board of Directors

FOR BOARD ACTION

**APPROVE WATER SUPPLY PLAN
FOR 2023**

The Board of Directors adopted the following board order on
April 11, 2023:

To approve the 2023 Water Supply Plan, as presented by General;
Manager Knudson and recommended by the Finance Committee.

Motion by _____

Second by _____

Carried _____

BOARD ORDER 8(a-2)

04-11-23



STAFF REPORT

To: Board of Directors	Date: April 7, 2023
From: Matt Knudson, General Manager <i>M.K.</i>	Prepared By: Peter Thompson, Assistant General Manager
Subject: 2023 Water Supply Plan	
Meeting Dates: April 11, 2023 (Board) Attachment(s): <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

Background:

The State Water Project allocation of 75% coupled with the availability of Article 21 water has substantially increased AVEK’s available water supply. Consequently, staff has been engaged in planning for managing this increased supply. This plan is being proposed for board review and consideration. The plans key elements are as follows:

- Meeting customer demands with increased deliveries of surface water produced at AVEK Water Treatment Plants
- Repayment of previous transfer obligations.
- Maximization of banking at Westside and Eastside water banks as well as Upper Amargosa Creek Joint Groundwater Recharge Project.
- Retention of 20,000 acre-feet of carryover supply in San Luis Reservoir for use in 2024.
- Exchange/Transfer or further banking of remaining excess supply

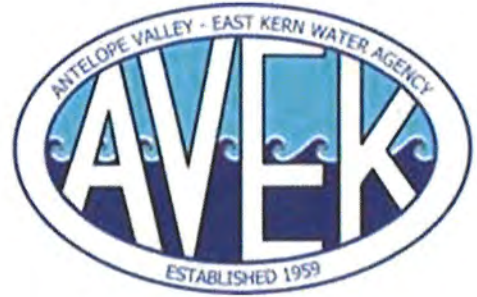
Strategic Plan Component:

Goal 2: Water Reliability

Goal 4: Financial Integrity

Budget:

Estimated \$12.6 million cost to reserves budget for transportation costs of banked water.



Antelope Valley – East Kern Water Agency
High Desert Water Bank Project
Construction Management Monthly Report No. 10
March 2023



Prepared by:



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Section 1: Executive Summary

1.1 Project Summary – Aqueduct Turnout/Turn-in Contract

Project Summary			
General Contractor		Blois Construction	
Contract Value			
Contract Bid Amount (not-to-exceed)		\$4,805,517.00	
Change Orders Issued to Date		1	
Total Change Order Cost	\$541,336.00	% of Bid Amount	11.3%
Current Contract Value		\$5,346,853.00	
Open/ Pending Contract Change Orders (CCO)		\$0.00	
Contract Time			
Notice to Proceed (NTP)		March 11, 2022	
Original Contract Time		300 Calendar Days	
Calendar Days Elapsed (thru Mar. 31, 2023)		386 Calendar Days	
Weather Days: Accepted to Date		0 Calendar Days	
Contract Change Order(s) Time Extension		43 Calendar Days	
Current Contract Time		343 Calendar Days	
Current Contract Completion Date		February 17, 2023	
Contract Progress Summary			
Total Project Time Expended (incl. change orders)		112.5% (through end of Mar. 2023)	
Total Project Cost Expended (incl. change orders)		62.4% (through Mar. Pay Application)	
Total Retainage		\$166,854.79 (through Mar. Pay Application)	

1.2 Project Summary – Well Drilling Package 2 Contract

Project Summary			
General Contractor		Zim Industries, Inc. dba Bakersfield Well and Pump	
Contract Value			
Contract Bid Amount (not-to-exceed)		\$9,627,820.00	
Change Orders Issued to Date		2	
Total Change Order Cost	\$527,395	% of Bid Amount	5.48%
Current Contract Value		\$10,155,215.00	
Open/ Pending Contract Change Orders (CCO)		\$0.00	
Contract Time			
Notice to Proceed (NTP)		March 21, 2022	
Original Contract Time		260 Calendar Days	
Calendar Days Elapsed (thru Dec. 6, 2022)		260 Calendar Days	
Weather Days: Accepted to Date		0 Calendar Days	
Contract Change Order(s) Time Extension		0 Calendar Days	
Current Contract Completion Date		December 6, 2022	
Contract Progress Summary			
Total Project Time Expended		100% (through Dec. 6, 2022)	
Total Project Cost Expended (incl. change orders)		100% (through Nov. Pay Application)	
Total Retainage		\$597,760.75 (paid)	

Notes:

1.3 Project Summary – Stage 1 and Stage 2 Recharge System Improvements Contract

Project Summary			
General Contractor		Nicholas Construction, Inc.	
Contract Value			
Contract Bid Amount (not-to-exceed)		\$33,337,110.00	
Change Orders Issued to Date		0	
Total Change Order Cost	\$0	% of Bid Amount	0%
Current Contract Value		\$33,337,110.00	
Open/ Pending Contract Change Orders (CCO)		0 (estimated \$0 increase)	
Contract Time			
Notice to Proceed (NTP)		June 13, 2022	
Original Contract Time		525 Working Days	
Working Days Elapsed (thru Mar. 31, 2023)		202 Working Days	
Weather Days: Accepted to Date		0 Calendar Days	
Contract Change Order(s) Time Extension		0 Calendar Days	
Current Contract Completion Date		July 26, 2024	
Contract Progress Summary			
Total Project Time Expended		38.5% (through end of Mar. 2023)	
Total Project Cost Expended (incl. change orders)		30.3% (through Feb. 2023 Pay Application)	
Total Retainage		\$505,386.45 (through Feb. 2023 Pay Application)	

Section 2: Work Performed This Month – March 2023

2.1 General

March was a cold and wet month. Rain and snow affected both the Turnout and Recharge System projects work progress during the month.

Aqueduct Turnout/Turn-in: Blois Construction (Blois) made progress on turnout structure, meter vault, aqueduct liner concrete placement, pipe installation, and Control Building electrical panel installations as further described below in Section 2.3.

Well Drilling Package 2: Project completed.

Stage 1 and Stage 2 Recharge System Improvements: Nicholas Construction, Inc. (NCI) made progress on pipe trench excavation, pipe installation, and berm excavation & backfill as further described below in Section 2.5

2.1.1 Project Meetings

Aqueduct Turnout/Turn-in: Kennedy Jenks Consultants (KJ) conducted 5 weekly progress meetings, four schedule review meetings, two cofferdam removal meetings, one cofferdam removal backup plan meeting, one stoplog pump watch and liner integrity meeting, one Blois field resources/cofferdam return meeting, five stoplog meetings, one safety barrier bulkhead meeting per RFI 058, one temporary bulkhead meeting per RFI 060, two start-up commissioning and backup power meetings, one pipe testing meeting, and two control building submittal review meetings during March.

Well Drilling Package 2: Project completed.

Stage 1 and Stage 2 Recharge Improvements System: KJ conducted 4 weekly progress meetings, three irrigation pipe removal meetings, one pipeline trench cleanup from storms meeting, and one schedule review meeting during March.

2.1.2 Critical Path Method (CPM) Schedule

Aqueduct Turnout/Turn-in: Blois submitted required February (optimized schedule) schedule update and several meetings and resubmittal drafts per KJ's comments during March. See Section 6 for construction schedule summary.

Well Drilling Package 2: Project completed.

Stage 1 and Stage 2 Recharge Improvements System: NCI submitted required February schedule update during March. See Section 6 for construction schedule summary.

2.1.3 RFIs and Submittals

Aqueduct Turnout/Turn-in: 5 Requests for Information (RFIs) and 16 submittals were received from Blois for processing by KJ during March.

Well Drilling Package 2: Project completed.

Stage 1 and Stage 2 Recharge Improvements System: Three RFIs and eight submittals were received from NCI for processing by KJ during March.

2.2 Site Work

Aqueduct Turnout/Turn-in: Blois continued maintaining required stormwater best management practices (BMPs), dust control, and construction debris cleanup.

Well Drilling Package 2: Project completed.

Stage 1 and Stage 2 Recharge System Improvements: NCI and their earthwork subcontractor, Wood Bros, provided dust control as needed within the pipe excavation and Stage 1 and Stage 2 basin areas.

2.3 Aqueduct Turnout/Turn-in

Blois' electrical subcontractor, Leed Electric, installed electrical panels within the control building and Blois roofing subcontractor started roof framing installation.

Blois installed the remaining 84" steel pipe from the meter vault north to the terminus, installed the stoplogs, trash racks and a safety barrier steel bulkhead at the turnout structure, performed the cofferdam removal and returned the leased cofferdam on March 31, 2023 to Kern County Water Agency (KCWA). Blois also placed CLSM backfill around the 84" steel pipe and then completed earth structural backfill to rough grade over the 84" steel pipe.

Scheduled activities for next month (April) include: Installation of the turnout structure slide gates and actuators, and rebar, forming and concrete pouring the remaining portion of the turnout structure concrete deck. Rebar, forming and concrete pouring the meter vault concrete pipe cradle, and installation of the two vault access ladders, ladder access hatches, mechanical piping, sump pumps, exhaust fan and steel cover plate. Also, installation of the sidewalk, curb and gutter and bollards for the meter vault. Completion of the Control Building interior and roof framing, insulation, roofing, doors, metal gutter and downspouts and stoop pads, installing the HVAC, sealing and painting the building, installing the fire extinguisher, and installation of the curb and gutter and sidewalk. In April, joint testing the pipeline and installing the timber bulkhead and completing the final backfill of the terminus portion the 84" steel pipe. Significant electrical work will be performed in April including excavating and installing the ductbanks and handholes, setting conduits and appurtenances, installing grounding and pulling wires and terminating for the turnout structure, meter vault and control building facilities. Also installing the two site light poles will be performed in April. In addition, the 7,000 feet of fiber optic system will be trenched, 2" conduit installed, slurry encased and backfilled, and pull boxes and wiring pulled and terminated in April.

2.4 Recovery Wells

BWP completed all contract work activities and provided all documentation required for closeout.

2.5 Recharge System Improvements

Wood Bros continued excavation and backfill of Stage 2 area basins and keyway berms.

Wood Bros completed pipe trench mass excavation work along 290th Street between

Turnout site and Ave A8.

NCI performed pipe trenching to subgrade, placement of pipe bedding, and 96" steel pipe installation work along 290th street and installed approximately 600 feet of piping.

NCI performed a CLSM batch test.

Scheduled activities for next month: excavation and backfill of Stage 2 area basins and keyway berms and 96" steel pipe installation along 290th street.

Section 3: Project Issues

Aqueduct Turnout/Turn-in: Significant rain and snow numerous days in March caused wet and unsafe conditions and caused unanticipated loss of production days. A request for weather days was requested from Blois with their March schedule update. Blois was not able to perform construction activities due to snow and/or rain and site too muddy on 3/1, 3/2, 3/3, 3/14, 3/15, 3/21 thru 3/26, and 3/29 and 3/30.

Well Drilling Package 2: Project completed.

Stage 1 and Stage 2 Recharge System: NCI and Wood Brothers were not able to perform construction activities from on 3/1 thru 3/3 due to rain and muddy and site access. NCI and Wood Brothers were onsite during the week of 3/6 thru 3/10 only for restoring access and restoring pipe trench and mud removal from the keyways. NCI and Wood Brothers did not work on 3/21, 3/22 and 3/29 due to rain.

Section 4: RFI and Submittals Review Summary - Totals

	Turnout/Turn-in Rec'd in Mar.	Turnout/Turn-in Closed in Mar.
RFIs	4	5
Submittals	21	17

	Well Drilling Rec'd in Mar.	Well Drilling Closed in Mar.
RFIs	0	0
Submittals	0	0

	Recharge System Rec'd in Mar.	Recharge System Closed in Mar.
--	----------------------------------	-----------------------------------

RFIs	3	2
Submittals	7	4

Section 5: Change Order Summary

No Field Orders (FO) were issued. FOs are generated for differing site conditions, owner-requested changes, and design changes. Extra costs for FOs are received as Potential Change Orders (PCOs). When pricing is approved, a group of PCOs will be packaged into a Change Order for execution by AVEK.

Aqueduct Turnout/Turn-in:

	Generated to Date	Open Pending Quote/Approval	Generated in Mar	Total Cost Approved
Field Orders (FO)	0	0	1	\$0
Potential Change Orders (PCOs)	1	0	0	\$541,336
Change Orders (1)	1	0	0	\$541,336

Notes: (1) Change Order #1 includes a 43-calendar day extension to the project completion date. See Section 6.1 for additional schedule details.

Well Drilling Package 2:

	Generated to Date	Open Pending Quote/Approval	Generated in Mar	Total Cost Approved
Field Orders (FO)	0	0	0	\$0
Potential Change Orders (PCOs)	2	0	0	\$527,395
Change Orders (1)	2	0	0	\$527,395

Notes: (1) Change Order #2 includes all remaining contract quantity increases/decreases

Stage 1 and Stage 2 Recharge System:

	Generated to Date	Open Pending Quote/Approval	Generated in Mar	Total Cost Approved
Field Orders (FO)	0	0	0	\$0
Potential Change Orders (PCOs) (1)	0	2	0	\$0
Change Orders	0	0	0	\$0

Notes: (1) NCI is preparing a request for change order proposal to address additional requirements related to Engineer's Supplemental Information (ESIs) for piping and grading changes due to upcoming groundwater treatment requirements. (2) NCI submitted request for change order for the removal of existing irrigation pipelines.

Section 6: Project Schedule and Budget

6.1 Construction Schedule

Aqueduct Turnout/Turn-in: The February update schedule, which includes CO #1 work activities shows project completion on 5/22/23 which is 66 working days past contract completion on February 17, 2023. Blois indicated the cause of delay was weather, DWR delayed of issuing encroachment permit, and installation of cofferdam. However, we also noticed the delivery of slide gate and actuator been delayed from February 10 to April 7. Several schedule meetings with Blois and AVEK took place in March to discuss schedule review comments and for the purposes to receive a revised and optimized and realistic field activities sequencing construction milestone schedule to bring this project to a completion date. Thus, a revised and realistic schedule was formalized to bring the project to completion based on actual anticipated sequencing of milestone completion activities.

The project critical path per the March update schedule is as follows:
Removal of cofferdam → Pipe backfill → Electrical installations → Paving and fencing installation → Final completion.

Well Drilling Package 2: Project completed.

Stage 1 and Stage 2 Recharge System: The January update schedule shows project completion on 10/30/24 (603) working days which is 78 working days past the 525-day contract duration. The January update also indicated Stage 1 will be substantially completed by July 10, 2023. This is because NCI has included Design Engineer's ESI nos. 1 through 4 in the project schedule.

The project critical path per the January update schedule is as follows:
Steel pipe fabrication and delivery → Steel pipe installation → Irrigation outlet piping and check valve installation → Gate/delineators/fencing installation → Painting → Final completion.

6.2 Construction Budget and Pay Applications

Aqueduct Turnout/Turn-in: Payment Application No. 12 for work performed through the end of February 2023 was received from Blois on March 21 and under review by KJ.

Well Drilling Package 2: Payment Application for release of retention was received from BWP and approved by KJ for payment of \$507,760,75.

Stage 1 and Stage 2 Recharge System: Payment Application No. 8 for work performed through the end of February 2023 was received from NCI and approved by KJ in March 2023. Progress Payment Application No. 8 has been forwarded to AVEK with recommendation for payment of \$1,622,600.00. Balance to finish is \$23,734,767.45.

6.3 CM Budget Status

The CM budget status is as follows:

Description	Budget	Spent		Remaining	
Task Order No. 1 Aqueduct Turnout/Turn-in	\$345,788	98%	\$338,664	2%	\$7,124
Task Order No. 2 Well Drilling Package 2	\$121,444	76%	\$92,489	24%	\$34,774
Task Order No. 3 Stage 1 & Stage 2 Recharge System Improvements	\$2,195,206	26%	\$558,869	74%	\$1,636,337

Appendix A: Photos

Turnout/Turn-in – Cofferdam Removal



Turnout/Turn-in – 84” CLSM Backfill Operation



Turnout/Turn-in – Site Aerial



Turnout/Turn-in – 84” Steel Pipe Backfilled



Turnout/Turn-in – Site Aerial



Turnout/Turn-in – Cofferdam Hauled Back to KCWA



Recharge System – Stage 1 Area Basins Construction



Recharge System – Valves Onsite



Recharge System – 96” Steel Pipe Installation



RECOMMENDED BOARD ORDER 8(c-1)

To the Board of Directors

FOR BOARD ACTION

**ACCEPT AND FILE 2022 ANNUAL
WATER QUALITY REPORTS FOR THE COUNTIES OF
LOS ANGELES AND KERN**

The Board of Directors adopted the following board order on April 11, 2023:

To accept and file the 2022 Annual Water Quality Reports for Los Angeles County and Kern County, in compliance with the Safe Drinking Water Act Amendments of 1996, and recommended by staff.

Motion by _____

Second by _____

Carried _____

BOARD ORDER 8(c-1)

04-11-23



STAFF REPORT

To: Board of Directors

Date: April 7, 2023

From: Matthew Knudson, General Manager *M.K.*

Prepared By: Jordan Wray, Laboratory Manager *[Signature]*
Justin Livesay, Engineering Manager

Subject: 2022 Annual Water Quality Report for Los Angeles and Kern Counties

Meeting Date: Board of Directors: April 11, 2023

Agenda Item(s):

Attachment(s): YES NO

Staff Recommendation:

Accept and file the 2022 Los Angeles and Kern County Annual Water Quality Reports

Summary:

The Agency is required to prepare an Annual Water Quality Report (AWQR) and distribute said reports annually to our customers for compliance with the Safe Drinking Water Act Amendments of 1996. These reports are required to be delivered to retail agencies by their wholesaler by April 1st of each year so they may complete their Consumer Confidence Reports to their customers by July 1st. The specific water quality constituents and the frequency with which they are to be analyzed for our Agency are determined by the Vulnerability Assessment and Monitoring Frequency Guidelines for each water source and are developed by the State Water Resources Control Board.

In 2022 AVEK successfully conducted all required monitoring of our raw and finished treated water supplies. The AWQR summarizes this monitoring and demonstrates that AVEK's water supplies met all state and federal requirements for regulated contaminants in 2022. All primary and secondary standards were below the established Maximum Contaminant Levels (MCLs) and all Volatile Organic Compounds (VOCs) and Synthetic Organic Compounds (SOCs) were non-detect for all locations sampled in 2022.

AVEK's management of water through the treatment process and in the distribution system ensured compliance with the Stage 2 Disinfectants and Disinfection Byproducts Rule by keeping total trihalomethanes (THMs) in the distribution system low. The highest running annual average observed for any location within the system was 72 µg/L and the Kern County and Los Angeles County systems ended with running annual averages of 20 µg/L and 36 µg/L, respectively. The MCL for THMs is 80 µg/L.

In 2022, AVEK once again met the mission of providing high quality water to our customers.

Supporting Documents

- 2022 Kern County Annual Water Quality Report
- 2022 Los Angeles County Annual Water Quality Report

ANTELOPE VALLEY – EAST KERN WATER AGENCY

2022 ANNUAL WATER QUALITY REPORT

LOS ANGELES COUNTY SYSTEM

OFFICERS

MATTHEW KNUDSON
General Manager

HOLLY H. HUGHES
Secretary-Treasurer



A PUBLIC AGENCY

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Division 7

March 29, 2023

Dear General Manager:

This is the 2022 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 2022 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

6500 WEST AVENUE N • PALMDALE, CALIFORNIA 93551
(661) 943-3201 • www.avek.org • info@avek.org

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

Antelope Valley-East Kern Water Agency

2022 Annual Water Quality Report

We are 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 1990 and updated in 2016."

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 recovered 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, 6450 West Avenue N, Palmdale, CA 93551.

If you have any questions about this report or the Antelope Valley-East Kern Water Agency, please contact Jordan Wray, 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, 5:30 PM, at the Antelope Valley-East Kern Water Agency Office, 6450 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, "2022 Annual Water Quality Report", shows the results of our monitoring for the period of January 1st to December 31st, 2022.

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 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
2022 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: **0.18 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 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 continuously providing a minimum free chlorine residual of 0.5 mg/L leaving the clearwell.

Lowest single free chlorine residual measurement during the year: **0.86**

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	Total Coliform Bacteria	120 - 190 / mo	5% positive	None	0%	0%
Distribution	Fecal Coliform/ <i>E. coli</i>	120 - 190 / mo	1 pos. with 2 TC pos.	None	0%	0%

INORGANIC CONTAMINANTS

Parameter	Units	MCL	DLR	PHG or (MCLG)	RESULTS																		
					Acton Plant Effluent (CWR)		Eastside Plant Effluent (CWR)		Quartz Hill Plant Effluent (CWR)		Raw Influent (State Water Project)		Water Bank										
					Range	Average	Range	Average	Range	Average	Range	Average	Range	Average									
Aluminum	µg/L	1000	50	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Antimony	µg/L	6	6	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Arsenic	µg/L	10	2	0.004	ND	ND	ND	ND	ND	5.2-7.5	6.2	2.5-7.3	5.5	2.2-12	5.3	ND	ND	ND	ND	ND	ND	ND	
Barium	µg/L	1000	100	2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Beryllium	µg/L	4	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Cadmium	µg/L	5	1	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chromium (Total)	µg/L	50	10		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chromium (Hexavalent)	µg/L	*	1	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Cyanide	µg/L	150	100	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Fluoride	mg/L	2	0.1	1	0.21	0.13	1	0.12	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	
Mercury	µg/L	2	1	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	µg/L	100	10	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate (as N)	mg/L	10	0.4	10	ND	0.73	10	0.63	0.72	0.72	0.72	0.72	0.72	1.2-7.6	3.6	ND	ND	ND	ND	ND	ND	ND	
Nitrite (as N)	mg/L	1	0.4	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate+Nitrite (as N)	mg/L	10		10	ND	0.73	ND	0.63	0.72	0.72	0.72	0.72	0.72	1.5-6.2	3.4	ND	ND	ND	ND	ND	ND	ND	
Perchlorate	µg/L	6	2	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	µg/L	50	5	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	µg/L	2	1	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*There is currently no MCL for hexavalent chromium. The previous MCL of 0.010 mg/L was withdrawn on September 11, 2017.

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 (State Water Project)		Water Bank Wells										
				Range	Average	Range	Average	Range	Average	Range	Average	Range	Average									
Aluminum	µg/L	1000	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	mg/L	no standard		32	30	24	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Chloride	mg/L	250		120	82	89	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83

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Parameter	Units	MCL	DLR	Acton Plant Effluent (CWR)		Eastside Plant Effluent (CWR)		Quartz Hill Plant Effluent (CWR)		Raw Influent (State Water Project)		Water Bank Wells	
				Range	Average	Range	Average	Range	Average	Range	Average	Range	Average
Color	Units	15		<5	<5	<5	<5	<5	<5		<5		
Copper	µg/L	1000	50								ND		
Foaming Agents (MBAS)	mg/L	0.5			ND		ND		ND		ND		
Hardness (Total) as CaCO3	mg/L	no standard			120		94		80		86		
Iron	µg/L	300	100		ND		ND		ND		ND		
Magnesium	mg/L	no standard			9.0		4.6		4.8		5.0		
Manganese	µg/L	50	20		ND		ND		ND		ND		
Odor @ 60 C	Units	3	1	<1	<1	<1	<1	<1	<1		<1		
pH	Units	no standard		6.9-8.5	7.3	7.0-8.1	7.6	6.9-7.4	7.1	8.1-9.8	8.9		
Silver	µg/L	100	10								ND		
Sodium	mg/L	no standard			71		65		66		69		
Specific Conductance	µmhos	1600		600	600	510-530	520	440-540	490	380-680	490		
Sulfate	mg/L	250	0.5		59		80		86		61		
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			320		310		320		300		
Turbidity	Units	5		0.05-0.20	0.10	0.05-0.10	0.05	0.05-0.15	0.05	0.30-25	3.5		
Zinc	µg/L	5000	50		340		520		450		ND		
Total Alkalinity (as CaCO3)	mg/L	no standard			69		56		62	61-84	71		
Bicarbonate Alkalinity(as HCO3)	mg/L	no standard			69		56		62		68		
Carbonate (as CO3)	mg/L	no standard			ND		ND		ND		ND		
Hydroxide (as OH)	mg/L	no standard			ND		ND		ND		ND		

RADIOLOGICAL CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS		
					Raw Influent (State Water Project)	Water Bank Wells	
					Range	Average	
Gross Alpha	pCi/L	15	3			5.7	5.6
Gross Beta	pCi/L	50	4		ND	ND	
Strontium 90	pCi/L	8	2	0.35			
Tritium	pCi/L	20,000	1,000	400			
Uranium	pCi/L	20	1	0.43		3.5	4.7
Radium 228	pCi/L	1	1	0.019		5.2	
Radium 226	pCi/L	1	1	0.05		ND	

VOLATILE ORGANIC CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS		
					State Water Project	Water Bank Wells	
					Average	Range	Average
1,1,1-Trichloroethane (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		Water Bank Wells	
					Average	Range	Range	Average
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			
					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	Average
Distribution	Chlorine (as total Cl2)	mg/L	4.0		4	0.37 - 1.95	1.15
Treated Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3		0.70 - 2.9	1.4
State Water Project	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3		0.90 - 4.4	2.1
Distribution	Stage 2 D/DBP Rule Total Trihalomethanes	µg/L	80**			3.0 - 72	36 #
Distribution	Stage 2 D/DBP Rule Total Haloacetic Acids	µg/L	60**			ND - 28	11 #
Treated Water	Bromate	µg/L	10*	1.0		ND - 11	1.3

** 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.

Antelope Valley-East Kern Water Agency
2022 Annual Water Quality Report - Los Angeles County 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

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.

ANTELOPE VALLEY – EAST KERN WATER AGENCY

2022 ANNUAL WATER QUALITY REPORT

KERN COUNTY SYSTEM

OFFICERS

MATTHEW KNUDSON
General Manager

HOLLY H. HUGHES
Secretary-Treasurer



A PUBLIC AGENCY

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Division 6

GARY VAN DAM
Division 7

March 29, 2023

Dear General Manager:

This is the 2022 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 2022 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.

The AVEK Rosamond Water Treatment Plant was operating the majority of 2022. While the treatment plant was offline, water from our Westside Water Bank well field was delivered to our Kern County customers.

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,

Jordan Wray
Laboratory Director

6500 WEST AVENUE N • PALMDALE, CALIFORNIA 93551
(661) 943-3201 • www.avek.org • info@avek.org

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

Antelope Valley-East Kern Water Agency

2022 Annual Water Quality Report

We are 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 1990 and updated in 2016."

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 recovered 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, 6450 West Avenue N, Palmdale, CA 93551.

If you have any questions about this report or the Antelope Valley-East Kern Water Agency, please contact Jordan Wray, 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, 5:30 PM, at the Antelope Valley-East Kern Water Agency Office, 6450 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, "2022 Annual Water Quality Report", shows the results of our monitoring for the period of January 1st to December 31st, 2022.

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 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
2022 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: **0.89**

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	Total Coliform Bacteria	56 - 70 / mo	5% positive	None	0%	0%
Distribution	E. coli	56 - 70 / mo	1 pos. with 2 TC pos.	None	0%	0%

INORGANIC CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS							
					Rosamond Plant				Water Bank			
					Plant Effluent (CWR)		Raw Influent (Sources)		Effluent (CWR)		Wells	
Range	Average	Range	Average	Range	Average	Range	Average					
Aluminum	µg/L	1000	50	600	93-250	130	ND	ND				
Antimony	µg/L	6	6	1		ND	ND	ND				
Arsenic	µg/L	10	2	0.004		3.6	3.2-8.1	5.0	2.5-7.3	5.5	2.2-12	5.2
Barium	µg/L	1000	100	2000		58	30-58	44				
Beryllium	µg/L	4	1	1		ND	ND	ND				
Cadmium	µg/L	5	1	0.04		ND	ND	ND				
Chromium (Total)	µg/L	50	10			5.1	5.1-15	11				
Chromium (Hexavalent)	µg/L	*	1	0.02		5.8	5.4-14	8.6				
Cyanide	µg/L	150	100	150		ND	ND	ND				
Fluoride	mg/L	2	0.1	1		0.28	0.29-0.36	0.32				
Mercury	µg/L	2	1	1.2		ND	ND	ND				
Nickel	µg/L	100	10	12		ND	ND	ND				
Nitrate (as N)	mg/L	10	0.4	10		2.5	1.2-2.5	1.9			1.2-4.5	2.5
Nitrite (as N)	mg/L	1	0.4	1		ND	ND	ND			ND	ND
Nitrate+Nitrite (as N)	mg/L	10		10		2.5	ND-2.5	0.83			1.5-3.4	2.2
Perchlorate	µg/L	6	2	1		ND	ND	ND			ND	ND
Selenium	µg/L	50	5	30		ND	ND	ND				
Thallium	µg/L	2	1	0.1		ND	ND	ND				

*There is currently no MCL for hexavalent chromium. The previous MCL of 0.010 mg/L was withdrawn on September 11, 2017.

**Antelope Valley-East Kern Water Agency
2022 Annual Water Quality Report - Kern County System**

GENERAL PHYSICAL AND SECONDARY STANDARDS

Parameter	Units	MCL	DLR	RESULTS							
				Rosamond Plant				Water Bank			
				Plant Effluent (CWR)		Raw Influent (Sources)		Effluent (CWR)		Wells	
Range	Average	Range	Average	Range	Average	Range	Average				
Aluminum	µg/L	1000	50	93-250	140	ND	ND				
Calcium	mg/L	no standard			63	63-97	74				
Chloride	mg/L	250			54	40-53	47				
Color	Units	15		<5	<5	<5	<5				
Copper	µg/L	1000	50		ND	ND	ND				
Foaming Agents (MBAS)	mg/L	0.5			ND	ND	ND				
Hardness (Total) as CaCO3	mg/L	no standard			200	91-200	140				
Iron	µg/L	300	100		ND	ND	ND				
Magnesium	mg/L	no standard			9.7	5.7-9.7	8.3				
Manganese	µg/L	50	20		ND	ND	ND				
Odor @ 60 C	Units	3	1	<1	<1	<1	<1				
pH	Units	no standard		7.3-7.9	7.6	7.7-8.6	8.0				
Silver	µg/L	100	10			ND	ND				
Sodium	mg/L	no standard			46	ND-44	15				
Specific Conductance	µmhos	900			580	420-580	500				
Sulfate	mg/L	250	0.5		60	47-58	53				
Thiobencarb (Bolero)	µg/L	1	1		ND	ND	ND				
Methyl tert-Butyl Ether (MTBE)	µg/L	5	3		ND	ND	ND				
Total Dissolved Solids	mg/L	500			330	240-320	290				
Turbidity	Units	5		0.01-0.20	0.05	0.02-1.1	0.10				
Zinc	µg/L	5000	50		450	ND	ND				
Total Alkalinity (as CaCO3)	mg/L	no standard			140	120-150	140				
Bicarbonate Alkalinity(as HCO3)	mg/L	no standard			140	ND-150	50				
Carbonate (as CO3)	mg/L	no standard			ND	ND	ND				
Hydroxide (as OH)	mg/L	no standard			ND	ND	ND				

RADIOLOGICAL CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS			
					Rosamond Plant		Water Bank	
					Raw Influent Sources		Wells	
Range	Average	Range	Average					
Gross Alpha	pCi/L	15	3					
Gross Beta	pCi/L	50	4		ND			
Strontium 90	pCi/L	8	2	0.35				
Tritium	pCi/L	20,000	1,000	400				
Uranium	pCi/L	20	1	0.43	3.5			
Radium 228	pCi/L		1	0.019	ND			
Radium 226	pCi/L		1	0.05	ND			

VOLATILE ORGANIC CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS			
					Rosamond Plant		Water Bank	
					Raw Influent (Sources)		Wells	
Range	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

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Parameter	Units	MCL	DLR	PHG	Rosamond Plant Raw Influent (Sources)		Water Bank Wells	
					Range	Average	Range	Average
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-Dichloropropane (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-Dichloropropane	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-Dichloropropane	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

RESULTS

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

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Parameter	Units	MCL	DLR (DL)	PHG	Raw Influent (Sources)		Water Bank Wells	
					Range	Average	Range	Average
Polychlorinated Biphenyls	µg/L	0.5	0.5	0.09	ND	ND		
Simazine	µg/L	4	1	4	ND	ND		
Thiobencarb (Bolero)	µg/L	70	1	42	ND	ND		
Toxaphene	µg/L	3	1	0.03	ND	ND		
2,3,7,8-TCDD (Dioxin)	pg/L	30	5	0.05	ND	ND		
2,4,5-TP (Silvex)	µg/L	50	1	3	ND	ND		
1,2,3-Trichloropropane	µg/L	0.005	0.005	0.0007	ND	ND		

DISINFECTION RESIDUAL, PRECURSORS, and BYPRODUCTS

Type of Sample(s)	Parameter	Units	MCL/MRDL	DLR	MRDLG	RESULTS	
						Range	Average
Distribution	Chlorine (as total Cl ₂)	mg/L	4.0**		4	0.26-1.48	1.07
Treated Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3		0.4-0.9	0.6
Source Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3		0.5-0.9	0.6
Distribution	Stage 2 D/DBP Rule Total Trihalomethanes	µg/L	80**			14-25	20 #
Distribution	Stage 2 D/DBP Rule Total Haloacetic Acids	µg/L	60**			2.2-7.2	2.1 #
Treated Water	Bromate	µg/L	10 ⁷	1.0		ND	ND

** 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

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.