

KINNELOA IRRIGATION DISTRICT

Regular Meeting – Board of Directors
1999 Kinclair Drive, Pasadena, CA 91107
Tuesday, December 19, 2023
3:00 P.M.

AGENDA

This meeting will be conducted at the District office in accordance with the Brown Act and AB 2449. Public comment may be made in person or submitted via email to kinneloa@outlook.com prior to the meeting, any information submitted will become part of the official record. The public may participate at the office or via computer or telephone using the following information: <https://us02web.zoom.us/j/85061795151?pwd=QURaWGV5Lzg3dmEvcGx1Ujl6akRHdz09>

Meeting ID: 850 6179 5151

Passcode: 156331

Telephone: 669 900 9128

1. **CALL TO ORDER** – 3:00 P.M.
 - a. Declaration of a quorum
 - b. Review of agenda

2. **PUBLIC COMMENT** – Comments from the Public regarding items on the Agenda or other items within the jurisdiction of the District
In compliance with the Brown Act, the Board cannot discuss or act on items not on the Agenda. However, Board Members or District Staff may acknowledge Public comments, briefly respond to statements or questions posed by the Public, ask a question for clarification, or request Staff to place item on a future Agenda (Government Code section §54954.2)

3. **OATH OF OFFICE** – Division 5, William Opel

4. **PUBLIC HEARING REGARDING PROPOSED 2024 WATER RATES** –
Recommended Action: Open public hearing; receive written and oral comments from the public; close public hearing.

5. **WATER RATES** – Discussion and adoption of 2024 water rates – Resolution 2023-12-19
Recommended Action: Discuss proposed water rates; approve motion to adopt resolution

6. **ELECTION OF KINNELOA IRRIGATION DISTRICT BOARD OFFICERS FOR YEAR 2024** –
Recommended Action: Conduct election per the following procedure per Article 4.03 of the Kinneloa Irrigation District's Rules and Regulations.

BOARD OFFICER ELECTION PROCEDURE - Officers will be nominated and elected individually, not as a "slate." The procedure is as follows:

- a. The Chairman calls for nominations for the office of Chairman.
- b. A candidate is nominated.
- c. The nomination is seconded. If a second is not received, the nomination dies.
- d. The Chairman then asks if there are other nominations.
- e. All other nominations (if any) are received and seconded.
- f. The Chairman then calls for a vote and announces the results.
- g. The same procedure is followed for the office of Treasurer and Secretary.

- 7. REVIEW OF MINUTES** – November 28, 2023, Regular Meeting
Recommended Action: Review and approve motion to file.
- 8. REVIEW OF FINANCIAL REPORTS** – November 2023
Recommended Action: Review and approve motion to file.
- 9. INFORMATION ITEMS**
 - a. **Water Quality Testing Report**
 - b. **Water Planning – Annual Demand, Water Rights and Pumping Activity**
 - c. **Fluoride Variance Expiration and Associated System Changes**
 - d. **Hi-Lo Pressure Tunnel Repair Status and Report to DDW**
 - e. **Los Angeles County Water Plan Adoption** - <https://lacountywaterplan.org/>
 - f. **Customer Outreach/Newsletter**
 - g. **Subeca Reporting**
- 10. AD HOC MASTER PLAN COMMITTEE REPORT** – Information item presented by the Committee Chair.
Discuss Mission Statement Development and establish milestones for 2024.
- 11. GENERAL MANAGERS REPORT** – Information item presented by the General Manager.
Recommended Action: General Manager to summarize the report and respond to questions.
- 12. CLOSED SESSION – PUBLIC EMPLOYEE PERFORMANCE EVALUATION – Government Code §54954.5(e):**
Title: General Manager
- 13. DIRECTOR REPORTS AND/OR COMMENTS –**
In accordance with Government Code §54954.2 Directors may make brief announcements or brief reports on their own activities. Directors may ask a question for clarification, provide a reference to staff or other resources for information, request staff to report back to the Directors at a subsequent meeting, or act to direct staff to place a matter of business on a future agenda.
- 14. CALENDAR** – Upcoming regular meetings: January 16, 2024; February 20, 2024; March 19, 2024
- 15. ADJOURNMENT**

In compliance with the Americans with Disabilities Act, if you are a disabled person and need a disability-related modification or accommodation to participate in this meeting, please contact the District office 48 hours prior to the meeting at 626-797-6295. Each item on the agenda, no matter how described, shall be deemed to include any appropriate motion, whether to adopt a minute motion, resolution, payment of any bill, approval of any matter or action, or any other action. Material related to an item on this agenda submitted after distribution of the agenda packet is available for public review at the District office or online at the District's website <https://kinneloairrigationdistrict.info>.



November 1, 2023

PUBLIC HEARING NOTICE
REGARDING PROPOSED WATER RATE INCREASES FOR 2024

Pursuant to the requirements set forth in Article 13D of the California Constitution, we are notifying you that the Kinneloa Irrigation District's Board of Directors will consider establishing water rates for 2024, as described below, at a public hearing to be held at 3:00 p.m. on Tuesday, December 19, 2023. Information for participating in the meeting will be available by calling the office prior to the meeting and also on the District's website at <https://www.kinneloairrigationdistrict.info/board-meetings>.

These rates will be applicable for water supplied to all parcels within the District's boundaries. The Board will consider oral and written comments from the public at this meeting prior to adopting any change in the District's rates. You may submit a written protest to the proposed rates at the address set forth above either prior to or at the public hearing.

Water sales revenue is the primary source of income to the District and this revenue is needed to provide funding for system improvements, preventative maintenance projects, and general operating costs. Each year, we perform an annual review of operating expenses in preparation of the annual budget. While the District is dedicated to keeping water rates low by maintaining lean staffing and using reserves when necessary, costs continue to rise. Similar to higher costs for most consumer goods, the District is impacted by rising costs to produce and store water, and for energy, fuel, equipment, parts and labor.

The Board of Directors of the Kinneloa Irrigation District approved the budget for the calendar year of 2024 at its special meeting on October 24, 2023, subject to further discussion and approval of water rates for 2024 at the public hearing and board meeting on December 19, 2023, in full compliance with the California Constitution's requirements. At the special meeting on October 24, 2023, the Board also proposed an increase in the District's water usage (commodity) charge from \$4.98 to \$6.20 per unit (one unit equals 100 cubic feet or 748 gallons) and preserving the District's fixed daily service at the current rate of \$2.48. This increase is necessary to meet the District's revenue requirements for ongoing operations, system repairs, debt service and maintenance of adequate reserve funds.

Your billing and usage history are available online by registering your account at the District's website at <https://www.kinneloairrigationdistrict.info> or by mail upon request. The effect of this proposed rate increase on your monthly water bill can be offset by continuing your conservation efforts, by converting your outdoor irrigation and landscaping to California-friendly plants and by applying at <https://www.socalwatersmart.com> for rebates on appliances, weather-based irrigation controllers and other water saving devices.

Your Board of Directors, who are also customers of the District, is committed to keeping your water rates as low as possible and still provide a safe and reliable water supply and a superior emergency response capability. This increase is consistent with those goals.

Sincerely,

Kinneloa Irrigation District Board of Directors

Kinneloa Irrigation District • 1999 Kinclair Drive, Pasadena, California 91107-1017
Phone (626) 797-6295 • Fax (626) 608-3168 • E-mail: kid@kidwater.info
<https://www.kinneloairrigationdistrict.info>

Kinneloa Irrigation District 2024 Budget

Account	Account Description	
4000	Water Sales	2,126,997
4015	Wholesale Water Sales	0
4020	Service Charges	0
4035	Interest-Reserve Fund	39,257
4036	Unrealized Gain(Loss)-Cal TRUST	0
Total Income		2,166,254
5000	Leased Water Rights	0
5005	Electricity	190,859
5010	Maintenance Supplies	25,000
5011	Material and Labor for Installs	0
5012	Safety Equipment	2,000
5015	Operations & Maintenance Labor	275,000
5016	Operations & Maintenance OT	21,000
5020	Stand-by Compensation	10,980
5022	Training/Certification	1,600
5025	Water Treatment/Analysis	12,000
5026	Water Treatment/Supplies	10,000
5030	Maintenance Contractors	128,000
5031	SCADA System Operation and Maintenance	15,000
5034	Equipment Maintenance	7,500
5035	Vehicle Maintenance	12,500
5036	Fuel - All Equipment	20,000
5040	Equipment Rental	500
5045	Insurance-Workers Compensation	16,000
5046	Insurance-Liability	32,065
5048	Insurance-Property	4,746
5049	Insurance-Medical	75,000
6000	Engineering Services	115,000
6005	Watermaster Services	46,795
6015	Administrative Salary	179,220
6017	Administrative Travel	1,800
6020	Board of Directors Compensation	9,000
6021	Administrative & Board Expenses	2,000
6022	Board of Directors Election	0
6024	Customer/Public Information	17,000
6025	PERS - KID	47,000
6030	Social Security - KID	39,000
6031	Medicare - KID	9,500
6035	Office/Computer Supplies	7,000
6036	Postage/Delivery	5,000
6040	Professional Dues	19,910
6045	Legal Services	6,000
6050	Telephone	4,000
6051	Mobile Telephone	2,000
6052	Pagers	500
6053	Internet Service	1,500
6059	Computer/Software Maintenance	13,994
6061	Office Equipment Maintenance	2,500
6065	Accounting Services	7,700
6070	Office & Accounting Labor	172,500
6075	Professional Services	65,000
6076	Contract Services	22,260
6080	FMWD Administrative Fees	13,193
6081	Permits/Fees	15,000
6086	Sales/Use Tax	500
6120	Bank Service Charges	12,000
Total Expenses		1,696,622
NET OPERATING INCOME		469,632

Account	Account Description	
Capital Improvement Projects and Debt Service		
1504	Water Mains/Valves	125,000
1505	Water Tunnels	10,000
1511	Water Treatment Plant	0
1512	Water Meters	20,000
1513	Electrical/Electronic Equipment	25,000
1514	Computer/Office Equipment	2,500
1515	Vehicles/Portable Equipment	0
1516	Water Company Facilities	20,000
1522	Booster Pump Replacement	0
1527	SCADA Equipment	10,000
1530	Tools	3,000
2400	Installment Purchase Agreement	200,202
Total Other Expenditures		415,702
NET CASH FLOW		53,930

***Additional Projects may be considered during the year based on urgency and available funds and presented to the Board of Directors for approval.**

PROPOSED RATES FOR 2024

Daily Service Charge (Charge Per Average Month)	\$2.48 (\$75.43)
Usage Charge	\$6.20 per unit

Water Sales, Units	257,362
Usage Charge Per Unit	\$6.20
Annual Usage (Commodity) Revenue	\$1,595,644
Daily Service Charge	\$2.48
Annual Daily Service Charge Revenue	\$531,352
Annual Water Sales	\$2,126,997
Wholesale Water Sales	\$0
Other Annual Revenue	\$39,257
Total Revenue	\$2,166,254
Total Expenses	\$1,696,622
Net Operating Income	\$469,632
Improvement Projects and Debt Service	\$415,702
Annual Net Cash Flow	\$53,930
Reserve Fund Balance (Beginning)*	\$1,150,000
Reserve Fund Balance (Year End)*	\$1,203,930
Average Monthly Charge for Low Usage (5 units)	\$106
Average Monthly Charge for Low-Medium Usage (20 units)	\$199
Average Monthly Charge for Medium-High Usage (50 units)	\$385
Average Monthly Charge for High Usage (150 units)	\$1,005

*Reserve fund balance includes targets of \$100,000-\$200,000 for operating reserve, \$200,000-\$400,000 for emergency repairs, \$200,000-\$400,000 for replacement of existing facilities equipment and vehicles and \$500,000-\$4,500,000 for future capital improvement projects. The total target reserve fund range is \$1,000,000-\$5,500,000.

Rate History 1993 to 2024

Effective Date	Daily Service Charge (DSC)	DSC Average per Month	Increase in Daily Service Charge	Usage Charge	Increase in Usage Charge	Average Monthly Charge for Low Usage Customer (5 Units)	Average Monthly Charge for Low-Medium Usage Customer (20 Units)	Average Monthly Charge for Medium-High Usage Customer (50 Units)
5/5/93	\$ 0.66	\$ 20.00	0.0%	\$1.60	45.5%	\$28.00	\$52.00	\$100.00
1/1/94	\$ 0.66	\$ 20.00	0.0%	\$1.60	0.0%	\$28.00	\$52.00	\$100.00
1/1/95	\$ 0.66	\$ 20.00	0.0%	\$1.60	0.0%	\$28.00	\$52.00	\$100.00
1/1/96	\$ 0.66	\$ 20.00	0.0%	\$1.60	0.0%	\$28.00	\$52.00	\$100.00
1/1/97	\$ 0.66	\$ 20.00	0.0%	\$1.60	0.0%	\$28.00	\$52.00	\$100.00
1/1/98	\$ 0.66	\$ 20.00	0.0%	\$1.60	0.0%	\$28.00	\$52.00	\$100.00
1/1/99	\$ 0.66	\$ 20.00	0.0%	\$1.60	0.0%	\$28.00	\$52.00	\$100.00
1/1/00	\$ 0.66	\$ 20.00	0.0%	\$1.60	0.0%	\$28.00	\$52.00	\$100.00
4/5/01	\$ 0.99	\$ 30.00	50.0%	\$1.90	18.8%	\$39.50	\$68.00	\$125.00
1/1/02	\$ 0.99	\$ 30.00	0.0%	\$1.90	0.0%	\$39.50	\$68.00	\$125.00
1/6/03	\$ 0.99	\$ 30.00	0.0%	\$1.95	2.6%	\$39.75	\$69.00	\$127.50
1/1/04	\$ 0.99	\$ 30.00	0.0%	\$1.95	0.0%	\$39.75	\$69.00	\$127.50
1/1/05	\$ 0.99	\$ 30.00	0.0%	\$2.05	5.1%	\$40.25	\$71.00	\$132.50
1/1/06	\$ 1.12	\$ 34.00	13.3%	\$2.30	12.2%	\$45.50	\$80.00	\$149.00
1/1/07	\$ 1.18	\$ 36.00	5.9%	\$2.42	5.2%	\$48.10	\$84.40	\$157.00
1/1/08	\$ 1.18	\$ 36.00	0.0%	\$2.42	0.0%	\$48.10	\$84.40	\$157.00
1/1/09	\$ 1.35	\$ 41.00	13.9%	\$2.55	5.4%	\$53.75	\$92.00	\$168.50
1/1/10	\$ 1.61	\$ 49.00	19.5%	\$2.75	7.8%	\$62.75	\$104.00	\$186.50
1/1/11	\$ 1.61	\$ 49.00	0.0%	\$2.95	7.3%	\$63.75	\$108.00	\$196.50
1/1/12	\$ 1.61	\$ 49.00	0.0%	\$2.95	0.0%	\$63.75	\$108.00	\$196.50
1/1/13	\$ 1.68	\$ 51.10	4.3%	\$3.35	13.6%	\$67.85	\$118.10	\$218.60
1/1/14	\$ 1.68	\$ 51.10	0.0%	\$3.35	0.0%	\$67.85	\$118.10	\$218.60
1/1/15	\$ 1.76	\$ 53.53	4.8%	\$3.52	5.1%	\$71.13	\$123.93	\$229.53
1/1/16	\$ 2.02	\$ 61.44	14.8%	\$4.05	15.1%	\$81.69	\$142.44	\$263.94
1/1/17	\$ 2.08	\$ 63.27	3.0%	\$4.17	3.0%	\$84.12	\$146.67	\$271.77
1/1/18	\$ 2.14	\$ 65.09	2.9%	\$4.30	3.1%	\$86.59	\$151.09	\$280.09
1/1/19	\$ 2.20	\$ 66.92	2.8%	\$4.43	3.0%	\$89.07	\$155.52	\$288.42
1/1/20	\$ 2.27	\$ 69.05	3.2%	\$4.56	2.9%	\$91.85	\$160.25	\$297.05
1/1/21	\$ 2.34	\$ 71.18	3.1%	\$4.70	3.1%	\$94.68	\$165.18	\$306.18
1/1/22	\$ 2.34	\$ 71.18	0.0%	\$4.70	0.0%	\$94.68	\$165.18	\$306.18
1/1/23	\$ 2.48	\$ 75.43	6.0%	\$4.98	6.0%	\$100.33	\$175.03	\$324.43
1/4/24	\$ 2.48	\$ 75.43	0.0%	\$6.20	24.5%	\$106.43	\$199.43	\$385.43
Annualized Increase :			4.24%		4.32%			

Rate Comparison 2024

		Kinneloa Irrigation District 2023 (Current)	Kinneloa Irrigation District 2024 (Proposed)	City of Pasadena	La Canada Irrigation District	Crescenta Valley Water District	Rubio Cañon Land & Water Association	Lincoln Avenue Water Company	Las Flores Water Company
				as of 1/1/23	as of 2/1/24	as of 7/1/23	as of 3/1/23	as of 3/1/23	as of 1/1/22
Highest Usage Rate Per Unit		\$ 4.98	\$ 6.20	\$ 6.95	\$ 6.98	\$ 11.69	\$ 4.85	\$ 5.38	\$ 7.18
Monthly Charge for Low Usage (5 units)*	3/4"	\$ 100.33	\$ 106.43	\$ 42.04	\$ 77.78	\$ 72.52	\$ 47.25	\$ 52.55	\$ 56.04
Monthly Charge for Low-Medium Usage (20 units)*	1"	\$ 175.03	\$ 199.43	\$ 138.15	\$ 202.69	\$ 226.56	\$ 118.40	\$ 116.16	\$ 133.04
Monthly Charge for Medium-High Usage (50 units)*	1-1/2"	\$ 324.43	\$ 385.43	\$ 383.94	\$ 465.50	\$ 645.05	\$ 267.60	\$ 266.56	\$ 324.12
Monthly Charge for High Usage (150 units)*	2"	\$ 822.43	\$ 1,005.43	\$ 1,212.66	\$ 1,239.83	\$ 1,895.47	\$ 763.10	\$ 804.56	\$ 1,042.12

*Water agencies that read meters bi-monthly and bill bi-monthly base the charges on two months of usage which usually moves the customer into higher tier rates. For example a customer that uses 10 units per month and 20 units for two months will be billed for the first 10 units at lowest tier rate and 10 units at the next higher tier rate. Some agencies add other taxes and fees to the bill such as capital improvement fees and utility users' tax, an attempt has been made to include represent those accurately but precise comparison of rates is difficult. Crescenta Valley's typical monthly charges have been adjusted to reflect the difference in billing units (1000 gallons vs. ccf) so that the typical charges are uniform for all agencies. Agencies that have a separate property tax assessment in addition to the water bill, those have been assumed in this evaluation. Each user classification has an assumed meter size, Kinneloa does not charge a varying fixed charge based on meter size although many other agencies do and that variable charge is reflected in this evaluation.

RESOLUTION 2023-12-19

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE KINNELOA IRRIGATION DISTRICT ESTABLISHING RATES FOR SERVICE AND USAGE CHARGES EFFECTIVE DECEMBER 27, 2023

WHEREAS, the Board of Directors of this District has the statutory responsibility and authority to set rates and charges at a level adequate to meet the District's operating expenses and reserve requirements; and

WHEREAS, the Board has approved a budget for 2024 after consideration of projected operating and capital expenses and wishes to establish water rates for 2024 as reflected in the budget.

NOW THEREFORE, IT IS RESOLVED that the Board adopts a service charge of \$2.48 per day (\$74.40 per average month); and a commodity charge of \$6.20 per unit (100 cubic feet or 748 gallons) effective for water used on and after DECEMBER 27, 2023, and reflected on bills received in February 2024; and

RESOLVED FURTHER, that the General Manager is directed to update the adjusted rates in the Rules and Regulations and other documents maintained by the District.

PASSED, APPROVED AND ADOPTED THIS NINETEENTH DAY OF DECEMBER 2023.

SIGNED: _____

Chair

ATTEST: _____

Secretary

KINNELOA IRRIGATION DISTRICT

Regular Meeting – Board of Directors
1999 Kinclair Drive, Pasadena, CA 91107
Tuesday, November 28, 2023, 3:00 P.M.

MINUTES

The meeting was conducted in the District Board Room and by teleconference in accordance with the Brown Act and AB 2449. The District offered the public the option to attend the meeting by telephone, videoconference or in-person as stated in the agenda.

DIRECTORS PRESENT: (In-Person): Gordon Johnson, Gerrie Kilburn, Stephen Brown, Timothy Eldridge (arrived at 3:25 pm)

DIRECTORS ABSENT: none

STAFF PRESENT: (In-Person): General Manager, Tom Majich; Martin Aragon, Chris Burt,

PUBLIC PRESENT: none

1. **CALL TO ORDER:**

Chairman Johnson called the meeting to order at 3:00 P.M. and took roll call. A quorum of Board Members was present and reviewed the agenda.

2. **PUBLIC COMMENT:** none

3. **OATH OF OFFICE** – Division 1 Appointee, Gerrie Kilburn

Chairman Gordon Johnson administered the oath of office for Director Gerrie Kilburn, in the presence of Kinneloa Irrigation District Secretary Stephen Brown.

4. **OATH OF OFFICE** – Division 4 Appointee, Timothy Eldridge

Chairman Gordon Johnson administered the oath of office for Director Timothy Eldridge, in the presence of Kinneloa Irrigation District Secretary Stephen Brown.

5. **REVIEW OF MINUTES:**

Director Brown motioned to approve the **October 17, 2023 Regular Meeting** Minutes for filing with revisions as discussed in the meeting and was seconded by Director Kilburn. It was motioned/seconded/carried unanimously – (Brown / Kilburn– 3 Aye/0 Nay/0 Abstain/1 Absent at Time of Action)

6. **REVIEW OF MINUTES:**

Director Kilburn motioned to approve the **October 24, 2023 Special Meeting** Minutes for filing with revisions as discussed in the meeting and was seconded by Director Brown. It was motioned/seconded/carried unanimously – (Kilburn / Brown– 3 Aye/0 Nay/0 Abstain/1 Absent at Time of Action)

7. REVIEW OF FINANCIAL REPORTS:

The General Manager presented the October 2023 financial reports. Director Eldridge motioned to approve the reports for filing and was seconded by Director Kilburn. It was motioned/seconded/carried unanimously – (Eldridge / Kilburn – 4 Aye/0 Nay /0 Abstain/0 Absent)

8. INFORMATION ITEMS:

The General Manager reported that with the expiration of the District’s Fluoride variance on December 13, 2023 the District would be diverting all tunnels to spreading before that time and would be making various system changes, including increase well and booster pumping durations to keep adequate supply in the system.

The Division 5 Board of Directors election is completed with William Opel as the declared winner. The Oath of Office for Director Elect Opel will be on the agenda for the regular December board meeting.

The recently issued Fall newsletter was reviewed. The next customer newsletter will be prepared in late January. The General Manager will add a section to each edition highlighting a particular District facility and discuss its history and importance. Information on available rebates to customers will also be included in the next edition.

9. AD HOC MASTER PLAN COMMITTEE:

Director Brown provided a draft mission statement to the General Manager. The General Manager will circulate a list to all directors prior to the next board meeting with draft phrases and language for consideration. Directors will reply to the General Manager with key words and phrases they believe should be referred to in the Mission Statement.

10. AD HOC 2024 BUDGET AND RATE SETTING COMMITTEE REPORT:

Dissolution of this committee will be held until after the upcoming Rate Hearing on December 19, 2023.

11. GENERAL MANAGER’S REPORT:

The General Manager presented the monthly report on District activities and water supply and production. A year-to-date summary of the Watermaster Year ending June 2024.

12. CLOSED SESSION – PUBLIC EMPLOYEE PERFORMANCE EVALUATION

Chairman Johnson concluded the closed session at 5:15 pm and reported that no action was taken.

13. DIRECTOR REPORTS AND/OR COMMENTS:

NONE

14. CALENDAR: Upcoming regular meetings: Dec. 19, 2023; Jan. 16, 2024; Feb. 20, 2024.

15. ADJOURNMENT:

Chairman Johnson adjourned the meeting at 5:25 P.M.

Prepared and submitted by,

Martin Aragon

Martin Aragon

Office Manager/Board Clerk

DRAFT

Kinneloa Irrigation District
Income Statement Compared with Budget for the Eleven Months Ending November 30, 2023

	Current Month Actual	Current Month Budget	Current Month Variance	Year to Date Actual	Year to Date Budget	Year to Date Variance	Annual Budget
Revenues							
4000 Water Sales	146,170.16	122,000.00	24,170.16	1,386,003.12	1,478,000.00	(91,996.88)	1,600,000.00
4015 Wholesale Water Sales	0.00	0.00	0.00	187,081.40	50,000.00	137,081.40	50,000.00
4020 Service/Installation Charges	388.80	833.33	(444.53)	5,603.58	9,166.63	(3,563.05)	10,000.00
4035 Interest-Reserve Fund	395.77	833.33	(437.56)	43,328.85	9,166.63	34,162.22	10,000.00
4036 Unrealized Gain(Loss)-CalTRU	0.00	2,083.33	(2,083.33)	(8,859.27)	22,916.63	(31,775.90)	25,000.00
4050 Capacity Charge	0.00	0.00	0.00	3,000.00	0.00	3,000.00	0.00
Total Revenues	146,954.73	125,749.99	21,204.74	1,616,157.68	1,569,249.89	46,907.79	1,695,000.00
Expenses							
5000 Leased Water Rights	0.00	0.00	0.00	103,500.00	63,135.00	40,365.00	63,135.00
5005 Electricity	8,493.23	11,000.00	(2,506.77)	152,721.20	159,000.00	(6,278.80)	170,000.00
5010 Maintenance/Repair Supplies	2,821.02	3,500.00	(678.98)	20,563.02	36,500.00	(15,936.98)	40,000.00
5011 Material and Labor for Install	0.00	3,333.33	(3,333.33)	0.00	36,666.63	(36,666.63)	40,000.00
5012 Safety Equipment	1,311.23	166.67	1,144.56	3,724.03	1,833.37	1,890.66	2,000.00
5015 Operations Labor	21,249.90	27,646.67	(6,396.77)	295,386.98	304,113.37	(8,726.39)	331,760.00
5016 Operations OT	2,641.24	1,666.67	974.57	36,346.64	18,333.37	18,013.27	20,000.00
5020 Stand-by Compensation	1,047.24	915.00	132.24	10,865.34	10,065.00	800.34	10,980.00
5022 Training/Certification	130.32	133.33	(3.01)	1,779.69	1,466.63	313.06	1,600.00
5025 Water Treatment/Analysis	1,484.15	2,500.00	(1,015.85)	22,681.90	27,500.00	(4,818.10)	30,000.00
5026 Water Treatment/Analysis Equip	1,203.78	0.00	1,203.78	17,525.96	0.00	17,525.96	0.00
5030 Maintenance/Repair Contractors	6,072.45	11,666.67	(5,594.22)	128,454.75	128,333.37	121.38	140,000.00
5031 SCADA Operating/Maintenance	130.30	833.33	(703.03)	16,628.74	9,166.63	7,462.11	10,000.00
5034 Equipment Maintenance	0.00	2,083.33	(2,083.33)	2,336.38	22,916.63	(20,580.25)	25,000.00
5035 Vehicle Maintenance	171.99	1,333.33	(1,161.34)	10,766.85	14,666.63	(3,899.78)	16,000.00
5036 Fuel	1,371.64	1,833.33	(461.69)	21,739.94	20,166.63	1,573.31	22,000.00
5040 Equipment Rental	0.00	0.00	0.00	0.00	0.00	0.00	500.00
5045 Insurance-Workers Comp.	0.00	0.00	0.00	14,585.75	15,000.00	(414.25)	20,000.00
5046 Insurance-Liability	2,162.39	1,416.67	745.72	24,558.39	15,583.37	8,975.02	17,000.00
5048 Insurance-Property	415.89	208.33	207.56	3,538.92	2,291.63	1,247.29	2,500.00
5049 Insurance-Medical	6,096.72	7,744.58	(1,647.86)	67,097.26	85,190.38	(18,093.12)	92,935.00
6000 Engineering Services	2,267.10	3,958.33	(1,691.23)	16,925.35	43,541.63	(26,616.28)	47,500.00
6005 Watermaster Services	1,310.41	1,416.67	(106.26)	14,460.13	15,583.37	(1,123.24)	17,000.00
6015 Administrative Salary	14,241.68	14,500.00	(258.32)	129,482.80	159,500.00	(30,017.20)	174,000.00
6017 Administrative Travel	514.57	250.00	264.57	1,116.06	2,750.00	(1,633.94)	3,000.00
6020 Board Compensation	450.00	700.00	(250.00)	5,550.00	7,700.00	(2,150.00)	8,400.00
6021 Administrative & Board Exp.	0.00	83.33	(83.33)	227.85	916.63	(688.78)	1,000.00
6022 Board of Directors Election	0.00	0.00	0.00	0.00	0.00	0.00	12,500.00
6024 Customer/Public Info. Prog.	1,103.34	1,250.00	(146.66)	13,853.53	13,750.00	103.53	15,000.00
6025 PERS - KID	4,169.00	4,400.00	(231.00)	45,111.81	48,400.00	(3,288.19)	52,800.00
6030 Social Security - KID	3,508.23	3,300.00	208.23	38,995.64	36,300.00	2,695.64	39,600.00
6031 Medicare - KID	820.48	779.17	41.31	9,120.10	8,570.87	549.23	9,350.00
6035 Office/Computer Supplies	1,131.75	583.33	548.42	6,896.40	6,416.63	479.77	7,000.00
6036 Postage/Delivery	6.66	416.67	(410.01)	2,236.25	4,583.37	(2,347.12)	5,000.00

Kinneloa Irrigation District
Income Statement Compared with Budget for the Eleven Months Ending November 30, 2023

	Current Month Actual	Current Month Budget	Current Month Variance	Year to Date Actual	Year to Date Budget	Year to Date Variance	Annual Budget
6040 Professional Dues	927.57	1,333.33	(405.76)	13,252.61	14,666.63	(1,414.02)	16,000.00
6045 Legal Services	1,329.00	1,250.00	79.00	7,071.24	13,750.00	(6,678.76)	15,000.00
6050 Telephone	159.96	375.00	(215.04)	2,869.50	4,125.00	(1,255.50)	4,500.00
6051 Mobile Communications	142.05	166.67	(24.62)	1,597.01	1,833.37	(236.36)	2,000.00
6052 Pagers	36.39	41.67	(5.28)	451.38	458.37	(6.99)	500.00
6053 Internet Service	114.98	133.33	(18.35)	1,254.78	1,466.63	(211.85)	1,600.00
6059 Computer Software Maintenance	158.40	2,000.00	(1,841.60)	20,638.16	22,000.00	(1,361.84)	24,000.00
6061 Office Equipment Maintenance	0.00	83.33	(83.33)	2,115.13	916.63	1,198.50	1,000.00
6065 Accounting Services	0.00	0.00	0.00	13,700.00	7,000.00	6,700.00	7,000.00
6070 Office & Accounting Labor	17,349.70	12,008.33	5,341.37	156,386.73	132,091.63	24,295.10	144,100.00
6075 Professional Services	1,784.81	7,916.67	(6,131.86)	35,964.56	87,083.37	(51,118.81)	95,000.00
6076 Contract Services	0.00	0.00	0.00	1,371.84	0.00	1,371.84	0.00
6080 Administrative Fees	969.28	1,036.67	(67.39)	10,529.28	11,403.37	(874.09)	12,440.00
6081 Permits/Fees	468.06	1,250.00	(781.94)	12,357.43	13,750.00	(1,392.57)	15,000.00
6086 Taxes - Sales/Use	0.00	41.67	(41.67)	0.00	458.37	(458.37)	500.00
6088 Interest Expense	22,284.14	24,500.00	(2,215.86)	45,955.47	49,000.00	(3,044.53)	49,000.00
6090 Customer Requested Expense	(800.00)	0.00	(800.00)	(430.00)	0.00	(430.00)	0.00
6120 Bank Service Charges	945.34	1,000.00	(54.66)	6,577.42	11,000.00	(4,422.58)	12,000.00
Total Expenses	132,196.39	162,755.41	(30,559.02)	1,570,440.20	1,690,944.51	(120,504.31)	1,847,200.00
Net Income	14,758.34	(37,005.42)	51,763.76	45,717.48	(121,694.62)	167,412.10	(152,200.00)
Other Expenditures							
1505 Water Tunnels	0.00	0.00	0.00	5,509.35	1,000.00	4,509.35	10,000.00
1511 Water Treatment Plant	34,323.42	0.00	34,323.42	54,323.42	0.00	54,323.42	10,000.00
1512 Water Meters	0.00	0.00	0.00	10,533.70	0.00	10,533.70	20,000.00
1513 Electrical/Electronic Equip.	16,970.00	0.00	16,970.00	16,970.00	0.00	16,970.00	5,000.00
1514 Computer/Office Equipment	1,721.97	0.00	1,721.97	10,208.89	0.00	10,208.89	5,000.00
1515 Vehicles & Portable Equipment	0.00	0.00	0.00	0.00	0.00	0.00	45,000.00
1516 Water Company Facilities	1,970.00	0.00	1,970.00	30,868.14	0.00	30,868.14	35,000.00
1522 Eucalyptus Booster Station	0.00	0.00	0.00	0.00	0.00	0.00	45,000.00
1527 SCADA Equipment	0.00	0.00	0.00	14,860.00	0.00	14,860.00	0.00
1530 Tools	0.00	0.00	0.00	1,082.83	0.00	1,082.83	3,000.00
2400 Installment Purchase Agreement	77,816.84	75,601.00	2,215.84	154,246.49	151,202.00	3,044.49	151,202.00
Total Other Expenditures	132,802.23	75,601.00	57,201.23	298,602.82	152,202.00	146,400.82	329,202.00
Total Increase or (Drawdown)	(118,043.89)	(112,606.42)	(5,437.47)	(252,885.34)	(273,896.62)	21,011.28	(481,402.00)

Kinneloa Irrigation District
Check/EFT Register
November 1, 2023 to November 30, 2023

Date	Check #	Payee	Amount	Description
11/14/23	10808	Tony Cummins	522.56	Overpayment Reimbursement
11/15/23	EFT5948	Bernadette C. Allen	680.29	Payroll
11/15/23	EFT5949	Arthur M. Aragon	2,347.33	Payroll
11/15/23	EFT5950	Ramon Jr. Ascencio	2,521.92	Payroll
11/15/23	EFT5951	Christopher A. Burt	4,198.38	Payroll
11/15/23	EFT5952	Felipe Gallegos	413.67	Payroll
11/15/23	EFT5953	Thomas L. Majich	4,698.02	Payroll
11/15/23	EFT5954	Juan R. Tello	1,464.51	Payroll
11/15/23	EFT5955	Melanie E. Timoteo	2,250.75	Payroll
11/15/23	EFT5956	Christopher A. Burt	300.00	Payroll
11/15/23	EFT5957	Juan R. Tello	353.00	Payroll
11/15/23	EFT5958	Automatic Data Processing, Inc.	7,996.18	Payroll Taxes & Withholdings
11/19/23	10809	ACWA-JPIA	6,492.28	KID & Employee Health Benefits Contributions
11/19/23	10810	Applied Technology Group, Inc.	120.00	PWAG Radios
11/19/23	10811	E Engineers	2,267.10	Main Office Electrical Assessment
11/19/23	10812	Foothill Municipal Water District	969.28	Administrative Fee (O & M charge)
11/19/23	10813	Geotab USA, Inc	79.00	Vehicle Maintenance
11/19/23	10814	McMaster Carr	1,250.31	House Tunnel Backflow Valve
11/19/23	10815	National Construction Rentals	196.03	Portable Restroom
11/19/23	10816	Paydirt Printing Services	854.34	Print & Mail Statements
11/19/23	10817	Public Water Agencies Group	289.08	PWAG Monthly Assessment for Emergency Preparedness Program
11/19/23	10818	Ultimate Cleaning Solutions, Inc.	90.00	Janitorial Service
11/19/23	10819	Utility Service Co., Inc.	6,072.45	Tank Maintenance
11/19/23	10820	Ware Disposal	466.12	Trash Pickup Services
11/19/23	10821	Clinical Lab of San Bernardino	630.00	Water Treatment/Analysis
11/19/23	10822	Clinical Lab of San Bernardino	745.00	Water Treatment/Analysis
11/20/23	10824	Mission Paving & Sealing, Inc.	590.45	Net Refund on Deposit
11/28/23	10825	David Stone Electrical Contractors Inc.	16,970.00	K3 Well VFD AC Replacement
11/28/23	10826	Matt Chlor Inc.	34,323.42	DAC Fluoride Controller/Sensor/Pressure Valve
11/28/23	10827	McMaster Carr	252.42	Maintenance Supplies
11/28/23	10828	David Stone Electrical Contractors Inc.	1,970.00	Dedicated Copier Receptacle
11/28/23	10829	Matt Chlor Inc.	901.86	Multifunction Valve
11/30/23	EFT5959	AT&T - SCADA	126.82	SCADA Communication
11/30/23	EFT5960	VeriCheck, Inc.	45.16	Electronic Check Processing
11/30/23	EFT5961	Streamline	249.00	Website Service
11/30/23	EFT5962	CA Public Employees Ret. Sys.	8,962.52	KID & Employee Retirement Contributions
11/30/23	EFT5963	Southern California Edison Co.	8,870.20	Electricity - 12 Sites
11/30/23	EFT5964	Automatic Data Processing, Inc.	115.45	Payroll Processing Fee
11/30/23	EFT5965	Century Business Solutions	15.00	Bank Services
11/30/23	EFT5966	Arco Gaspro Plus	1,371.64	Vehicle Fuel
11/30/23	EFT5967	Nexbillpay	140.85	Bank Services
11/30/23	EFT5968	Pasadena Municipal Services	4,204.08	Electricity - Wilcox
11/30/23	EFT5969	Automatic Data Processing, Inc.	107.22	Payroll Processing Fee
11/30/23	EFT5970	AT&T Mobility	121.96	FirstNet Wireless Service
11/30/23	EFT5971	Spectrum	274.94	Internet / Telephone Services
11/30/23	EFT5972	Citizens Business Bank	100,100.98	Loan Payment
11/30/23	EFT5973	Umpqua Bank	3,732.25	Staff Credit Card
11/30/23	EFT5974	Century Business Solutions	90.55	Bank Services
11/30/23	EFT5975	Bernadette C. Allen	253.41	Payroll
11/30/23	EFT5976	Arthur M. Aragon	2,368.96	Payroll

Kinneloa Irrigation District
Check/EFT Register
November 1, 2023 to November 30, 2023

Date	Check #	Payee	Amount	Description
11/30/23	EFT5977	Ramon Jr. Ascencio	3,050.06	Payroll
11/30/23	EFT5978	Stephen Brown	138.53	Payroll
11/30/23	EFT5979	Christopher A. Burt	3,733.54	Payroll
11/30/23	EFT5980	Timothy J. Eldridge	138.53	Payroll
11/30/23	EFT5981	Felipe Gallegos	1,740.02	Payroll
11/30/23	EFT5982	Gerrie G. Kilburn	138.52	Payroll
11/30/23	EFT5983	Thomas L. Majich	4,743.11	Payroll
11/30/23	EFT5984	Juan R. Tello	1,823.80	Payroll
11/30/23	EFT5985	Melanie E. Timoteo	2,271.18	Payroll
11/30/23	EFT5986	Christopher A. Burt	300.00	Payroll
11/30/23	EFT5987	Juan R. Tello	353.00	Payroll
11/30/23	EFT5988	Automatic Data Processing, Inc.	8,642.44	Payroll Processing Fee
11/30/23	EFT5990	Nexbillpay	653.78	Bank Services
			262,153.25	

* Gap in check sequence:

Voided check #10823 (Bank couldn't match vendor and was rejected)

Replaced with Check #10824

Voided EFT5989

Replaced with EFT5990

Kinneloa Irrigation District
Cash Disbursements Journal
Nov 1, 2023 to Nov 30, 2023

Date	Check #	Name	Line Description	Debit Amount	Account ID	Account Description	Column1
11/1/23	20231101MA-1	Google LLC	Computer Software	158.40	6059	Computer Software Maintenance	
11/2/23	20231102MA-1	Amazon.com Inc	Office Supplies	145.57	6035	Office/Computer Supplies	
11/2/23	20231102MA-2	Amazon.com Inc	Office Supplies	38.70	6035	Office/Computer Supplies	
11/3/23	20231103-TM-1	Cla-Val University	Cla Valve Training	200.00	5022	Training/Certification	
11/3/23	20231103JT-1	Crown City Tire Auto Care	Truck #4 - Tire Patch Kit	40.00	5035	Vehicle Maintenance	
11/3/23	20231103JT-2	Lucky Car Wash	Truck #5 - Car Wash	52.99	5035	Vehicle Maintenance	
11/5/23	20231105MA-1	Amazon.com Inc	Safety Supplies	132.27	5012	Safety Equipment	
11/6/23	20231106TM-1	United States Postal Service	Mail	6.66	6036	Postage/Delivery	
11/7/23	20231107RA-1	Home Depot	Cooler Container	33.33	5026	Water Treatment/Analysis Equip	
11/8/23	20231108CB-1	RS Americas Inc.	Chlorine Generator Relays K3, Wil. & Vos.	268.59	5026	Water Treatment/Analysis Equip	
11/8/23	20231108MA-1	Amazon.com Inc	Label tape and Utensils	33.04	6035	Office/Computer Supplies	
11/9/23	20231109TM-1	Blue Cactus Printing	Safety Gear	988.17	5012	Safety Equipment	
11/10/23	20231110TM-1	Amazon.com Inc	Video to Digital Recorder	175.15	6035	Office/Computer Supplies	
11/15/23	20231115RA-1	Ganahl Lumber Company	Safety Glasses	11.66	5012	Safety Equipment	
11/16/23	20231116MA-1	American Messaging Services	Pager Service	36.39	6052	Pagers	
11/16/23	20231116MA-2	Home Depot	Safety Gear	108.85	5012	Safety Equipment	
11/16/23	20231116TM-1	Sky Blueprint & Supplies Inc.	24" X 36" Prints	18.74	6035	Office/Computer Supplies	
11/18/23	20231118-TM-1	Mission Ace Hardware	Landscaping Equipment	1,251.29	5010	Maintenance/Repair Supplies	
11/19/23	20231119MA-1	Amazon.com Inc	Safety Goggles	21.05	5012	Safety Equipment	
11/20/23	20231120TM-1	Amazon.com Inc	Batteries	13.37	6035	Office/Computer Supplies	
11/21/23	20231121JT-1	Harbor Freight	Broom & Small Supplies	38.54	5010	Maintenance/Repair Supplies	
11/21/23	20231121MA-1	Amazon.com Inc	2 Pack Pager Holster	28.46	5010	Maintenance/Repair Supplies	
11/22/23	20231122FG-1	7 - Eleven	Office Supplies	24.86	6035	Office/Computer Supplies	
11/22/23	20231122MA-1	Amazon.com Inc	Cleaing Supplies	4.91	6035	Office/Computer Supplies	
11/22/23	20231122TM-1	HomeState	Group Training	155.32	5022	Training/Certification	
11/26/23	20231126FG-1	Home Depot	Rain Suit	49.23	5012	Safety Equipment	
11/26/23	20231126MA-1	Staples, Inc.	Scissors, Index Labels & Toner	375.22	6035	Office/Computer Supplies	
11/28/23	20231128MA-1	Staples, Inc.	Toner	302.19	6035	Office/Computer Supplies	
11/3/23	20231103TM-1	Home Depot	Refund	-109.15	5025	Water Treatment/Analysis Equip	
Total				4,603.80			

**WATER SAMPLE RESULTS SUMMARY
NOVEMBER 2023**

SAMPLE DATE	LAB	SOURCE OR DISTRIBUTION	TEST ANALYSIS	DESCRIPTION	SAMPLES #	# TESTS	RESULTS	MAXIMUM CONTAMINANT LEVEL (MCL)
11/7/2023	Clinical	Distribution	Bacteriological	Total Coliform, E.Coli	6	12	ND	1 Positive Sample
11/7/2023	Clinical	Distribution	General Physical	Color, Odor, Turbidity	6	18	< MCL	15 color units, 3 TON, 5 NTU
11/7/2023	Clinical	Source	Bacteriological	Total Coliform, E.Coli	7	14	ND	1 Positive Sample
11/7/2023	Clinical	Distribution	Field	Chlorine Residual	6	6	1.18 - 1.68 mg/L	> 0.5 mg/L
11/21/2023	Clinical	Distribution	Bacteriological	Total Coliform, E.Coli	6	12	*1 Positive	1 Positive Sample
11/21/2023	Clinical	Source	Bacteriological	Total Coliform, E.Coli	7	14	ND	1 Positive Sample
11/23/2023	Clinical	Distribution - Repeat	Bacteriological	Total Coliform, E.Coli	6	12	ND	1 Positive Sample
11/23/2023	Clinical	Distribution - Repeat	HPC	Heterotrophic Plate Count	6	6	1	< 500 CFU/ml
11/23/2023	Clinical	Distribution - Repeat	Field	Chlorine Residual	6	6	1.21-1.34 mg/L	> 0.5 mg/L
11/28/2023	Clinical	Source - Special Inhouse	Bacteriological	Total Coliform, E.Coli	2	4	**2 Positives	1 Positive Sample
11/28/2023	Clinical	Source - Special Inhouse	HPC	Heterotrophic Plate Count	2	2	1	< 500 CFU/ml
Total Samples					60	106		

NOTES:

*The GM received a positive Total Coliform alert from Clinical Labs on 11/22/2023. Upon notification, repeat samples were conducted on 11/23/2023 by the GM. Results from the repeat sampling on 11/23 show ND for all samples.

**These samples were taken from Eucalyptus Tunnel which has been OFFLINE since 4/7/2023 and Hi Pressure Tunnel was has been OFFLINE since 10/18/2023. Repeat samples not required for offline sources.

Color, odor, turbidity are regulated by a secondary standard to maintain aesthetic qualities.

TON = Threshold Odor Number, NTU = Nephelometric Turbidity Units

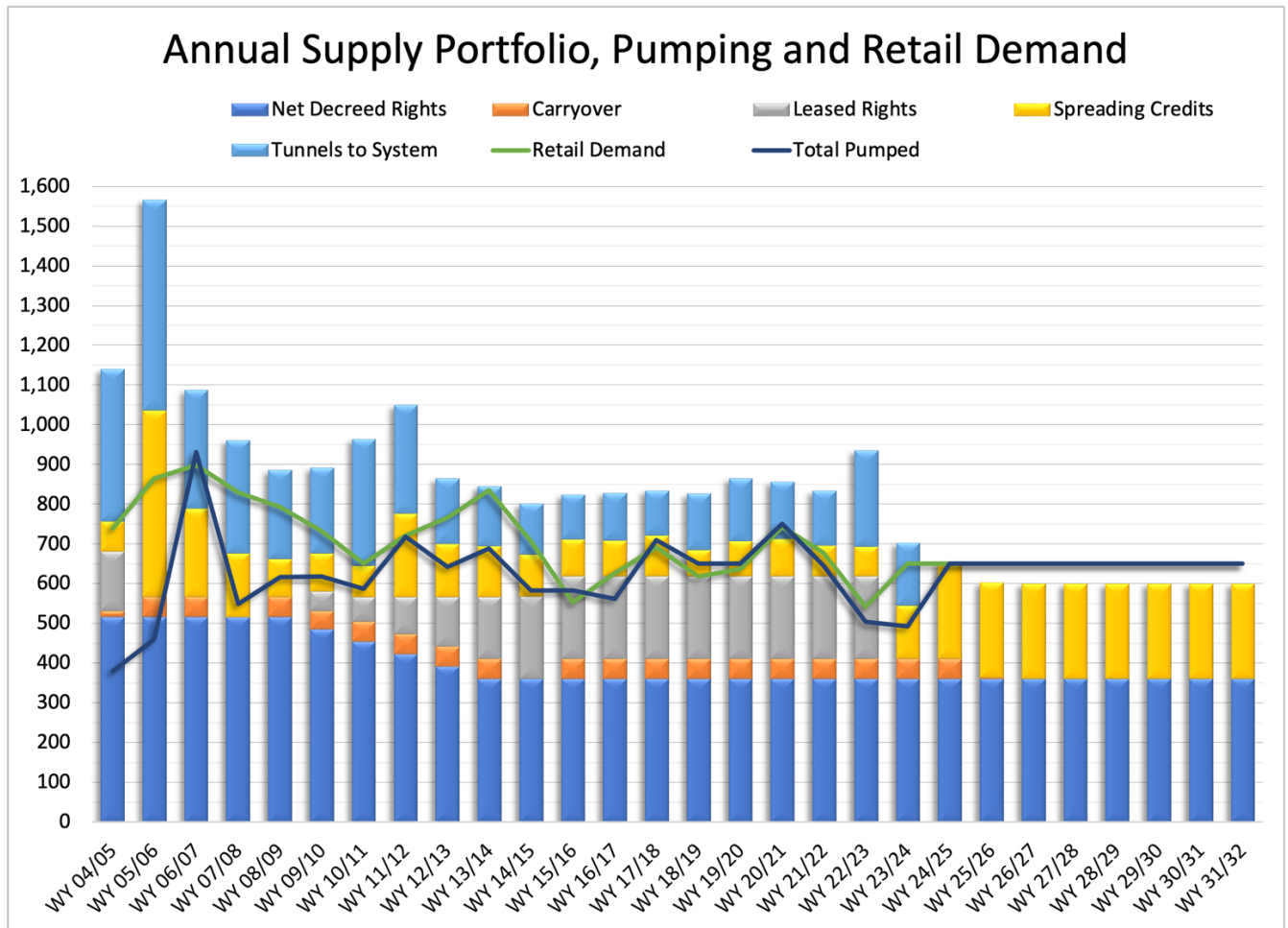
HPC - Heterotrophic Plate Count (CFU/mL - colony forming units per milliliter)

The HPC test is a count of all carbon-consuming bacteria in water, the vast majority of which are harmless. But while HPC tests are not indicators of overall water safety, they can be used to assess the conditions that affect microbial growth in a water source or distribution system (pipes/fittings, pumps, etc.).

Drastic increases in HPC concentrations can indicate a change in the raw water quality, changes in the drinking water treatment, or issues in the distribution system such as stagnation, temperature fluctuations, or low disinfectant residual levels.

ppm = parts per million, < MCL = less than Maximum Contaminant Level, ND = not detected

Annual Supply Portfolio, Pumping and Retail Demand



Includes actual values from Watermaster years 2004/2005 through 2022/2023 as per the Watermaster annual reports.

Future year projections assume:

1. Average annual retail demand of 650 acre-feet based on running annual average most recent 6 years. Assumed demand includes 10% allowance above historical sales to account for system loss.
2. No tunnel to system production due to expiration of Fluoride Variance.
3. Spreading credit forecast is the average of recent 15 years spreading credit + 80% of tunnel diversions to system.

*Short Term Storage Account balance at end of WY 22/23 is 183.4-acre feet



December 11, 2023

Mr. Dmitriy Ginzburg
Division of Drinking Water
State Water Resources Control Board
500 N. Central Ave, Suite 500
Glendale, CA 91203

Sent via electronic mail only

SYSTEM NO. 1910035 – KINNELOA IRRIGATION DISTRICT
Permit Amendment Application for Fluoride Treatment via Blending.

Dear Dmitriy,

The Kinneloa Irrigation District (District) fluoride variance granted in 1993 will expire on December 13, 2023. That impending expiration makes time of the essence with respect to your consideration of the request set forth below.

On July 10, 2023, we submitted to your office a proposed blending plan which has been effectively rejected. Since that time, I have had several phone conversations with you and your staff and have been given new information and directives each time on conditions under which you may consider approval of a treatment via a blending plan. I have considered your various comments, reviewed the history of our system operations, and consulted with various technical and legal advisors on options for proceeding. Attached is an Application for Domestic Water Supply Permit Amendment (Application) that includes a revised blending plan. This blending plan will ensure the District continues to provide safe water to its customers, while providing for protection of the environment and continued affordability of the District's supply.

Since the Fluoride variance was granted in 1993 there have been no MCL violations, nor enforcement actions taken against the District related to Fluoride. The most recent Sanitary Survey completed by your office in July 2019 confirmed that we have complied with the variance of not exceeding fluoride levels of 3.0 mg/L and in a vast majority of instances delivered water to our customers that was below the California established MCL of 2.0 mg/L. The sanitary survey noted that we have been blending high fluoride content tunnel water with lower fluoride content well water; "however, there is no formal blending plan." Even though our blending plan was not "formal," the data proves that it is effective and that the District is able to operate an effective blending program that meets the State MCL. Exhibit C to the Application is the source fluoride levels and distribution system fluoride levels from the quarterly compliance samples for the most recent 6-year period. You will see that many of our sources exceed 2.0 mg/L but our blending program is an effective treatment method in that 98.5% of samples shows that we

were delivering water below the 2.0 mg/L limit. We are confident that our blending program as further described in Exhibit A to the Application will continue compliance with the established MCL and we request your re-consideration of our proposal.

The District produces its own groundwater from two active wells and five active tunnels. The two wells are in the adjudicated Raymond Basin, and the tunnels are in the canyons north of the District's service area. On one of our recent calls, it was suggested by DDW personnel that we purchase imported water from another agency as a replacement for our tunnel sources. The District has no source from which to purchase imported water on a non-emergency basis. The District maintains multiple interconnections with the City of Pasadena for emergency use only. This, procuring non-emergency imported water is not only physically and legally impossible at the current time but is also counter to public policy discouraging use of water imported from the Sacramento-San Joaquin Delta and instead encouraging reliance on local, renewable resources. The Raymond Basin is one of the most effectively managed groundwater basins in the State of California with basin levels and pumping activity closely monitored and managed. Our tunnels have served as a reliable and renewable supplemental source of clean and safe drinking water for our customers for over 100 years. In addition, with that water being delivered via gravity to our system it avoids the need for additional consumption of electricity to pump the groundwater and distribute it through the system.

Requiring the District to abandon our tunnels as a source of potable water supply when we have proven that we can effectively treat for fluoride levels via blending and meet the associated public health requirements is counter to public policy around fossil fuel consumption that drives climate change, drought resilience, wildfire emergency preparedness and ensuring communities have access to safe, clean, affordable and reliable water.

We appreciate your thoughtful consideration of our proposal. In the event that this proposal is not approved, we request that you provide us in writing with specific citations to any statutes or regulations on which that denial is based.

Respectfully,



Tom L. Majich
General Manager

Cc: Kurtis Lee, Division of Drinking Water - kurtis.lee@waterboards.ca.gov
Jeff Densmore, Division of Drinking Water - jeff.densmore@waterboards.ca.gov
Kurt Souza, SWRCB – Branch Chief, - kurt.souza@waterboards.ca.gov
William F. Kruse, Esq., Lagerlof, LLP - wfkruse@lagerlof.com

STATE OF CALIFORNIA
APPLICATION
FOR
DOMESTIC WATER SUPPLY PERMIT AMENDMENT
FROM

Applicant: Kinneloa Irrigation District
(Enter the name of legal owner, person(s) or organization)

Address: 1999 Kinclair Drive, Pasadena, CA 91107

System Name: Kinneloa Irrigation District

System Number: 1910035

TO: Dmitriy Ginzburg
District Engineer, District 07 - Hollywood
State Water Resources Control Board
Division of Drinking Water
500 N. Central Ave., Suite 500
Glendale, CA 91203



Pursuant and subject to the requirements of the California Health and Safety Code, Division 104, Part 12, Chapter 4 (California Safe Drinking Water Act), Article 7, Section 116550, relating to changes requiring an amended permit, application is hereby made to amend an

existing water supply permit to **Provide treatment for fluoride via blending for the following active sources: Wilcox Well (PS Code 1910035-015), Eucalyptus Tunnel (PS Code 1910035-003), Far Mesa Tunnel (PS Code 1910035-005) and Delores Tunnel (PS Code 1910035-002).**

Change the following currently active sources to standby: House Tunnel (PS Code 1910035-008) and High/Low Pressure Tunnel (PS Code 1910035-007).

FOR OFFICIAL USE

Date Received:

I (We) declare under penalty of perjury that the statements on this application and on the accompanying attachments are correct to my (our) knowledge and that I (we) are acting under authority and direction of the responsible legal entity under whose name this application is made.

Signed By: 

Title: **Tom Majich, General Manager**

Address: **1999 Kinclair Drive**
Pasadena, CA 91107

Telephone: **(626) 797-6295**

Dated: **December 11, 2023**

DDW: 12/2017



EXHIBIT A – FLUORIDE COMPLIANCE PLAN

SYSTEM NO. 1910035 – KINNELOA IRRIGATION DISTRICT

The following table indicates the sources, their current status and the proposed status by the District under this permit amendment application:

SOURCE NAME	PS CODE	CURRENT STATUS	PROPOSED STATUS	CAPACITY (GPM)	FLUORIDE CONTENT (mg/L)
K-3 Well	1910035-009	Active	Active	750	0.9 - 1.1
Wilcox Well	1910035-015	Active	Active w/ Treatment	250	1.2 - 2.2
Eucalyptus Tunnel	1910035-003	Active	Active w/ Treatment	50	1.9 - 2.1
Far Mesa Tunnel	1910035-005	Active	Active w/ Treatment	35	2.5 - 3.0
High/Low Pressure Tunnel	1910035-007	Active	Standby	45	2.2 - 2.6
House Tunnel	1910035-008	Active	Standby	15	3.1 - 3.4
Delores Tunnel	1910035-002	Active	Active w/ Treatment	65	2.2 - 2.6

SUMMARY OF REQUEST:

The District has been operating under a fluoride variance granted by DDW which expires on December 13, 2023. Since the granting of the variance the District has been blending high fluoride content tunnel water with lower fluoride content well water and has always complied with the terms of the variance. With the expiration of the variance the District wishes to continue using certain sources that, untreated, have at times exceeded or currently exceed the State of California established MCL for Fluoride which is currently 2.0 mg/L. The District proposes to continue treatment via blending and requests DDW’s formal approval of the treatment plan and the issuance of a permit amendment memorializing the details of the proposed operations.

STANDBY SOURCES:

Certain sources exceed the fluoride MCL, and the District does not have current capabilities to treat those sources via blending or fluoride removal. The District requests that the following sources be assigned “Standby” status: High/Low Pressure Tunnel (PS Code 1910035-007) and House Tunnel (PS Code 1910035-008). The District will continue monthly raw water sampling of these sources and maintain standby disinfection facilities if their use is required due to system emergencies.

COMPLIANCE MONITORING:

Compliance monitoring for fluoride is currently performed quarterly through sampling performed by Stetson Engineers, Inc. with lab analysis performed by Weck Laboratories, Inc. The District proposes increased fluoride compliance monitoring to be performed monthly as a condition of approval of this permit amendment. District staff will collect the samples with analysis performed by a state certified lab. Quarterly sampling per Title 22 will continue as-is by Stetson Engineers and Weck Laboratories.

RESPONSE ACTION PLAN:

The District uses a SCADA system for monitoring, automation of certain functions and for alarm notification to staff when necessary. The alarm notification is made through the Win-911 Notifications program. The SCADA system polls all radios in the system continuously. If an alarm is triggered a notification is sent out through the Win-911 program. The District has an on-call operator always assigned and that function is rotated weekly. The alarm notifier first tries to contact the on-call operator via phone, then text and finally email; informing them there is an alarm, the operator would then login to the SCADA system to review the details of the alarm, acknowledge the alarm and take whatever action is necessary. If the alarm notification is not acknowledged by the on-call operator the alarm notifier will then send out a phone call, then text, and finally email to the Chief Operator. If the alarm is still not acknowledged the notifying program will send out a phone call, then text, and finally email to the General Manager. The alarm notifier program will continue this cycle until the alarm is acknowledged by an operator.

The workstation that hosts the SCADA program is in the District's main office. If the operator is out of the District, they may log in remotely from any internet connected device or phone using multi-factor authentication to review the system status and alarm details.

The District has an operator assigned to on-call duty 24 hours a day, 7 days a week. Each operator maintains at least a D2 level of water distribution operator certification. The on-call operator must respond to the District within 60 minutes of being called per District policy. The District's Chief Operator lives less than 3 miles from the District and maintains D3/T2 level certification. The General Manager lives within the District and maintains D2/T2 level certification.

DAILY DEMAND CALCULATIONS

The District maintains two (2) groundwater well pump stations and five (5) distribution system booster stations to transport water to the six (6) pressure zones throughout the District. The following table indicates the demand by pressure zone, averaged over the calendar years 2018-2022. The Average Day Demand (ADD) is used to then calculate the Maximum Day Demand (MDD) at twice the average day demand and the Minimum Month Day Demand (MMDD) at 40% of the average day demand. The blending plan for each facility uses these demand values to calculate daily reservoir recharge requirements.

Daily Demand by Pressure Zone (gal), average of calendar years 2018-2022)

		Average Daily Demand (ADD)	Maximum Daily Demand (MDD)	Minimum Month Daily Demand (MMDD)
<u>Zone #</u>	<u>Zone Name</u>		<i>2x ADD</i>	<i>0.4x ADD</i>
Zone 1	Eucalyptus	38,100	76,200	15,240
Zone 2	Brown/Glen	63,300	126,600	25,320
Zone 3	Vosburg	153,400	306,800	61,360
Zone 4	Holly/Sage	173,000	346,000	69,200
Zone 5	East	92,100	184,200	36,840
Zone 6	West	29,900	59,800	11,960
	TOTAL	549,800	1,099,600	219,920

DESCRIPTION OF PROPOSED BLENDING OPERATION:

The District proposes to treat three active sources via blending at the following facilities:

A. Wilcox Well Blending at Wilcox Reservoir:

The Wilcox Reservoir is a 1.125 million gallon, partially buried concrete reservoir built in 1924, covered with a composite roof on a wood framed structure. This reservoir is a forebay to the Wilcox Well and the K-3 Well. The reservoir is restricted as it does not serve any part of the system by gravity. There are two booster pumps onsite that deliver water to the Brown and Glen Reservoirs. The booster pumps are located on a pump stand at the eastern side of the reservoir. The well water is delivered to the reservoir “over the rim” on the western side of the reservoir. The Wilcox Reservoir will overflow at 20.4 feet. There is about 72,000 gallons of capacity per foot of reservoir elevation in the upper half of the reservoir.

The Wilcox Reservoir primarily receives water from the K-3 Well; however, in high demand months it is required that we supplement with water from the Wilcox Well. Since the Wilcox Well is a lower capacity well producing at approximately 250 gpm, the District prefers operationally to run the K-3 Well at 750 gpm when it can sufficiently meet demand.

DDW staff has referred to the potential for a high fluoride content level “slug” of water to enter the reservoir and make its way directly to the pump without blending as a concern. The well water is delivered “over the rim” on the west side of the reservoir, the water is pulled from the reservoir via pumps at the bottom of the reservoir on the eastern side. The District believes that sufficient mixing is provided via the physical delivery of the water into the tank and its movement to the pump intake. Furthermore, the water is pumped through more than 4,800 lineal feet of pipe, gaining over 360 feet of elevation, before it enters the destination reservoirs allowing for further mixing in the pipeline. The District believes that the mechanics of how the water enters and exits the reservoir, the fact that the reservoir is restricted for this blending operation and not part of the distribution system and the ability for further blending through the pumping operation will adequately blend the Wilcox Well source.

To facilitate District blending operations, we will install an online fluoride analyzer manufactured by Prominent (see Exhibit D for product data) at the Wilcox Reservoir drawing water from the pump inlet location. The online analyzer will be connected to the District’s SCADA system providing real time fluoride levels to the system and the operator. The District currently has online chlorine analyzers at all reservoirs and tanks that perform a similar function.

Pumps and control valves are controlled via the SCADA system programming and are called to run, or called to stop, by set points on reservoir levels and time clocks as constraints. The Wilcox Well will have a constraint added to only run when the fluoride level in the reservoir, as reported by the online analyzer, is less than 1.3 mg/L. If the Fluoride level exceeds 1.5 mg/L, then the Wilcox Well will not start and the K-3 Well will deliver water to the reservoir as needed until blending reduces the fluoride content level.

The Wilcox Well pump control will also include a PUMP OFF set point of 1.5 mg/L fluoride in the Wilcox Reservoir so that if it starts running when levels are below 1.3 mg/L, but then increase and exceed 1.5 mg/L the Wilcox Well pump will turn off. A fluoride high level alarm of 1.6 will be added to the SCADA alarm list so that if this happened the operations staff would be notified and be able to make a manual intervention if necessary.

In the case of Wilcox Well not turning off and continuing to pump into the Reservoir at a starting concentration of 1.6 mg/L fluoride it would take over 80 hours of no intervention for the blended solution of the reservoir to reach the MCL, if the Wilcox Well were producing at its highest recorded fluoride level of 2.2 mg/L.

The District uses its SCADA system to automate pump and valve control throughout the system and has been doing so successfully for many years. Programming the Wilcox Well pump to run only when fluoride levels in the destination reservoir are in an acceptable range is well within the capabilities of the system.

B. Eucalyptus Tunnel Blending at Eucalyptus Reservoir:

The Eucalyptus Reservoir is a rectangular, reinforced concrete reservoir built in 1960 and added to in 1989 with capacity of 01.85 MG. The reservoir has a single inlet/out that receives water from the K-3 well and distributes to the Eucalyptus Pressure Zone. The Eucalyptus Reservoir site also contains the Eucalyptus Booster Station which consists of three (3) booster pumps of 375 gpm capacity. This booster station pumps water to the Holly/Sage Zone to satisfy the demands of the Holly/Sage Zone customers, the demands of the West Zone customers via the Sage Booster Station and the demands of Vosburg Reservoir in above average demand periods via the Holly Transfer Valve.

The Eucalyptus Tunnel is a gravity well that runs continuously at a historical maximum of 50 gpm. Prior to entering the reservoir, chlorine is injected by a metering pump. The only other source that supplies the Eucalyptus Reservoir is the K-3 Well.

The District has developed blending scenarios for Average Day Demand, Maximum Day Demand (calculated at 2 times average day demand) and Minimum Month Day Demand (calculated at 0.4 times average day demand). The following tables indicate the anticipated blend of the Eucalyptus Reservoir at ADD, MDD and MMDD.

Table B.1 – Assumed Fluoride Level of Eucalyptus Tunnel for Blending Calculations

<u>Fluoride Levels for Most Recent 6 Year Period</u>	
Highest Quarterly Fluoride Level	2.30
Highest Running Annual Average	2.08
Current Running Annual Average (as of Q423)	1.98
<i>Assumed Fluoride Level for Blending Plan</i>	<i>2.08</i>

Table B.2 – Assumed Daily Blended Fluoride Level of Eucalyptus Reservoir at ADD

<u>Average Day Demand Scenario - accept full tunnel flow</u>					
		Volume (gal)	Flow (gpm)	Hours On	Fluoride (mg/L)
	<i>Average Day Demand (ADD)</i>	<i>241,000</i>			<i>1.39</i>
Source 1	K-3 Well (on demand)	169,000	750	3.76	1.10
Source 2	Eucalyptus Tunnel (continuous 24/7)	72,000	50	24.00	2.08
Source 3	Balance of Tank	-			
	DAILY BLEND	241,000			1.39

Table B.3 – Assumed Daily Blended Fluoride Level of Eucalyptus Reservoir at MDD

Maximum Day Demand Scenario - accept full tunnel flow

		Volume (gal)	Flow (gpm)	Hours On	Fluoride (mg/L)
	<i>Maximum Day Demand (2x ADD)</i>	659,000			1.21
Source 1	K-3 Well (on demand)	587,000	750	13.04	1.10
Source 2	Eucalyptus Tunnel (continuous 24/7)	72,000	50	24.00	2.08
Source 3	Balance of Tank	-			
	DAILY BLEND	659,000			1.21

Table B.4 – Assumed Daily Blended Fluoride Level of Eucalyptus Reservoir at MMDD

Minimum Month Day Demand Scenario - accept full tunnel flow

		Volume (gal)	Flow (gpm)	Hours On	Fluoride (mg/L)
	<i>Minimum Month Day Demand (0.4 ADD)</i>	96,400			1.83
Source 1	K-3 Well (on demand)	24,400	750	0.54	1.10
Source 2	Eucalyptus Tunnel (continuous 24/7)	72,000	50	24.00	2.08
Source 3	Balance of Tank	83,600			1.83
	DAILY BLEND	180,000			1.83

Given the high turnover of the Eucalyptus Reservoir, the need for K-3 Well water is significant, allowing for frequent infusion of low fluoride concentration water to the reservoir. In the average day demand and maximum day demand scenarios the expected blend of the distribution system water is 1.39 mg/L fluoride or below. In the minimum month day demand scenario at full tunnel flow the fluoride level could reach as high as 1.83 mg/L. In the case of absolute zero customer demand and continuous tunnel flow the reservoir would eventually overflow to waste. The Eucalyptus reservoir overflow is at the top of the tank, the Eucalyptus tunnel water is delivered at the top of the tank so in the case of a full reservoir with extremely low demand the incoming tunnel water is largely diverted to overflow.

The District will install an online fluoride analyzer (see Exhibit D for product data) at the outlet location at the Eucalyptus Reservoir. This will be connected to the District’s SCADA system reporting real time fluoride levels. If the fluoride analyzer reads greater than 1.9 mg/L a system alarm will be generated alerting staff to the elevated, but still MCL compliant fluoride level. The operator will visit the site and manually operate the tunnel dump valve to waste. Eventually demand on the reservoir will call the K-3 well to run, refilling the reservoir. Once the fluoride analyzer reads less than 1.3 mg/L the operator may operate the valve returning the tunnel flow to the system.

Table B.5 shows the extreme case of no demand on the reservoir and the duration for which the tank fluoride level would exceed the MCL following a SCADA generated alarm of 1.90 mg/L fluoride levels. In this scenario District staff would have up to 45 hours in which to visit the site and divert the tunnel to waste to prevent the reservoir concentration to exceed the MCL.

Table B.5 – Eucalyptus Reservoir Solution by Duration

Hours 13 through 36 removed from table for presentation purpose only.

	Tunnel Source	Tunnel Source	Tunnel Source	Starting Tank Blend	Starting Tank Blend	Final Tank Blend	Final Tank Blend
Hour	Inflow (gpm)	Added to Tank	Flouride Level	Volume of Tank	Flouride Level	Volume of Tank	Flouride Blend of Tank
0	50	-				180,000	1.90
1	50	3,000	2.08	177,000	1.90	180,000	1.90
2	50	3,000	2.08	177,000	1.90	180,000	1.91
3	50	3,000	2.08	177,000	1.91	180,000	1.91
4	50	3,000	2.08	177,000	1.91	180,000	1.91
5	50	3,000	2.08	177,000	1.91	180,000	1.91
6	50	3,000	2.08	177,000	1.91	180,000	1.92
7	50	3,000	2.08	177,000	1.92	180,000	1.92
8	50	3,000	2.08	177,000	1.92	180,000	1.92
9	50	3,000	2.08	177,000	1.92	180,000	1.93
10	50	3,000	2.08	177,000	1.93	180,000	1.93
11	50	3,000	2.08	177,000	1.93	180,000	1.93
12	50	3,000	2.08	177,000	1.93	180,000	1.93
36	50	3,000	2.08	177,000	1.98	180,000	1.98
37	50	3,000	2.08	177,000	1.98	180,000	1.98
38	50	3,000	2.08	177,000	1.98	180,000	1.98
39	50	3,000	2.08	177,000	1.98	180,000	1.99
40	50	3,000	2.08	177,000	1.99	180,000	1.99
41	50	3,000	2.08	177,000	1.99	180,000	1.99
42	50	3,000	2.08	177,000	1.99	180,000	1.99
43	50	3,000	2.08	177,000	1.99	180,000	1.99
44	50	3,000	2.08	177,000	1.99	180,000	1.99
45	50	3,000	2.08	177,000	1.99	180,000	2.00

C. Far Mesa Tunnel Blending at Glen Reservoir:

The Glen Reservoir is a 0.125 MG, rectangular shaped, mostly below ground reservoir with concrete walls and floor, a composite roof, and a wooden frame. The Glen Reservoir is identical to the Brown Reservoir, and both combine to serve the Brown/Glen Pressure Zone. The reservoir has a single inlet/out that receives water from the Wilcox Reservoir Boosters. The Glen Reservoir site contains a booster pump of 395 gpm capacity that delivers water to the Vosburg Reservoir on demand.

The Far Mesa Tunnel is a gravity well that runs continuously at a historical maximum of 35 gpm. Prior to entering the reservoir, chlorine is injected by a metering pump. The other source of water to the Glen Reservoir is from the Wilcox Reservoir via the Wilcox Booster Station.

The District has developed blending scenarios for Average Day Demand, Maximum Day Demand (calculated at 2 times average day demand) and Minimum Month Day Demand (calculated at 0.4 times average day demand). The following tables indicate the anticipated blend of the Glen Reservoir at ADD, MDD and MMDD.

Table C.1 – Assumed Fluoride Level of Far Mesa Tunnel for Blending Calculations

<u>Fluoride Levels for Most Recent 6 Year Period</u>	
Highest Quarterly Fluoride Level	3.00
Highest Running Annual Average	2.83
Current Running Annual Average (as of Q423)	2.68
<i>Assumed Fluoride Level for Blending Plan</i>	<i>2.83</i>

Table C.2 – Assumed Daily Blended Fluoride Level of Reservoir at ADD

<u>Average Day Demand Scenario - accept full tunnel flow</u>					
		Volume (gal)	Flow (gpm)	Hours On	Fluoride (mg/L)
	<i>Average Day Demand (ADD)</i>	<i>241,150</i>			<i>1.78</i>
Source 1	Wilcox Reservoir Booster (on demand)	190,750	475	6.69	1.50
Source 2	Far Mesa Tunnel (continuous 24/7)	50,400	35	24.00	2.83
Source 3	Balance of Tank	-			1.78
	DAILY DEMAND BLENDED	241,150			1.78

Table C.3 – Assumed Daily Blended Fluoride Level of Reservoir at MDD

Maximum Day Demand Scenario - accept full tunnel flow

		Volume (gal)	Flow (gpm)	Hours On	Fluoride (mg/L)
	<i>Maximum Day Demand (2x ADD)</i>	341,300			1.70
Source 1	Wilcox Reservoir Booster (on demand)	290,900	475	10.21	1.50
Source 2	Far Mesa Tunnel (continuous 24/7)	50,400	35	24.00	2.83
Source 3	Balance of Tank	-			1.70
	DAILY DEMAND BLENDED	341,300	295		1.70

Table C.4 – Assumed Daily Blended Fluoride Level of Reservoir at MMDD

Minimum Month Day Demand Scenario - divert tunnel to waste

		Volume (gal)	Flow (gpm)	Hours On	Fluoride (mg/L)
	<i>Minimum Month Day Demand (0.4 ADD)</i>	74,860			1.50
Source 1	Wilcox Reservoir Booster (on demand)	74,860	475	2.63	1.50
Source 2	Far Mesa Tunnel (continuous 24/7)	-	0	24.00	2.83
Source 3	Balance of Tank	50,140	395		1.50
	DAILY DEMAND BLENDED	125,000	25		1.50

It is expected in both ADD and MDD scenarios the fluoride level of the Glen Reservoir will be at or below 1.78 mg/L. In below average demand scenarios, the fluoride concentration of the reservoir will elevate and at some point, require diversion of the tunnel by District staff.

The District will install an online fluoride analyzer (see Exhibit D for product data) at the outlet location of the Glen Reservoir. This will be connected to the District’s SCADA system reporting real time fluoride levels. If the fluoride analyzer reaches 1.8 mg/L a system alarm will be generated alerting staff to the elevated, but still MCL compliant fluoride level. The operator will visit the site and manually operate the tunnel dump valve to waste. Table C.5 shows the duration from the time a high fluoride level alarm of 1.80 mg/L is generated that the reservoir will reach the MCL based on zero customer demand and historical maximum tunnel flow.

When demand returns to the system and draws down the reservoir, the Wilcox Reservoir Boosters will be called to run, refilling the reservoir. Once the fluoride analyzer reads less than 1.6 mg/L the operator may manually operate the valve returning the tunnel flow to the system.

Table C.5 – Glen Reservoir Solution by Duration

	Tunnel Source	Tunnel Source	Tunnel Source	Starting Tank Blend	Starting Tank Blend	Final Tank Blend	Final Tank Blend
Hour	Inflow (gpm)	Added to Tank	Flouride Level	Volume of Tank	Flouride Level	Volume of Tank	Flouride Blend of Tank
0	35	-				125,000	1.80
1	35	2,100	2.83	122,900	1.80	125,000	1.82
2	35	2,100	2.83	122,900	1.82	125,000	1.83
3	35	2,100	2.83	122,900	1.83	125,000	1.85
4	35	2,100	2.83	122,900	1.85	125,000	1.87
5	35	2,100	2.83	122,900	1.87	125,000	1.88
6	35	2,100	2.83	122,900	1.88	125,000	1.90
7	35	2,100	2.83	122,900	1.90	125,000	1.92
8	35	2,100	2.83	122,900	1.92	125,000	1.93
9	35	2,100	2.83	122,900	1.93	125,000	1.95
10	35	2,100	2.83	122,900	1.95	125,000	1.96
11	35	2,100	2.83	122,900	1.96	125,000	1.98
12	35	2,100	2.83	122,900	1.98	125,000	1.99
13	35	2,100	2.83	122,900	1.99	125,000	2.00

D. Delores Tunnel Blending at Vosburg Reservoir:

The Vosburg Reservoir is an oval shaped, 1.25 million gallons, partially buried concrete reservoir built in 1920 with a wooden roof frame and composite roof that was built in 1997. The reservoir has a single inlet/outlet on the south end of the reservoir and receives Delores Tunnel water over the rim on the north end of the reservoir. The Vosburg Reservoir receives water from the Glen Reservoir which is a blend of Far Mesa Tunnel water and Wilcox Reservoir water. In above average demand periods to relieve demands of the Glen Booster the Vosburg Reservoir receives water from the Holly Tanks via gravity through a transfer valve set to deliver at 295 gpm. The Vosburg Reservoir distributes to the Vosburg Zone (Pressure Zone 3) and has an onsite booster station that supplies the East Tank (Pressure Zone 6).

The Delores Tunnel is a gravity well that runs continuously at a historic maximum of 65 gpm. Prior to entering the reservoir, chlorine is injected by a metering pump. The proposed blending operation will restrict tunnel flow to 25 gpm. This will be achieved via installation of a Cla-Val Model 43.01 Rate of Flow Controller and Solenoid Shut-Off Valve, or similar (see Exhibit E for product data). This type of valve is typically installed where water supply to a system must be limited to a pre-set maximum flow rate in certain instances. The valve is easily set to maintain the maximum allowable flow rate and is to open or close on an electrical signal. This is a commonly used hydraulic control valve in many treatment facilities, the District currently has a valve of this type elsewhere in the system. The control valve will be connected to the District SCADA system and be directed to open or closed based on fluoride levels reported by the online analyzers.

The District has developed blending scenarios for Average Day Demand, Maximum Day Demand (calculated at 2 times average day demand) and Minimum Month Day Demand (calculated at 0.4 times average day demand). The following tables indicate the anticipated blend of the Vosburg Reservoir at ADD, MDD and MMDD.

Table D.1 – Assumed Fluoride Level of Delores Tunnel for Blending Calculations

<u>Fluoride Levels for Most Recent 6 Year Period</u>	
Highest Quarterly Fluoride Level	2.60
Highest Running Annual Average	2.48
Current Running Annual Average (as of Q423)	2.13
<i>Assumed Fluoride Level for Blending Plan</i>	2.48

Table D.2 – Assumed Daily Blended Fluoride Level of Reservoir at ADD

Average Day Demand Scenario - accept throttled tunnel flow

		Volume (gal)	Flow (gpm)	Hours On	Fluoride (mg/L)
	<i>Average Day Demand (ADD)</i>	245,500			1.88
Source 1	Glen Reservoir Booster (on demand)	209,500	395	8.84	1.78
Source 2	Delores Tunnel (continuous 24/7)	36,000	25	24.00	2.48
Source 3	Holly Tanks (on Demand via Transfer Valve)	-	295	-	1.39
Source 4	Balance of Reservoir	1,004,500			1.88
	DAILY BLEND	1,250,000			1.88

Table D.3 – Assumed Daily Blended Fluoride Level of Reservoir at MDD

Maximum Day Demand Scenario - accept throttled tunnel flow

		Volume (gal)	Flow (gpm)	Hours On	Fluoride (mg/L)
	<i>Maximum Day Demand (2x ADD)</i>	491,000			1.58
Source 1	Glen Reservoir Booster (on demand)	278,000	395	11.73	1.70
Source 2	Delores Tunnel (continuous 24/7)	36,000	25	24.00	2.48
Source 3	Holly Tanks (on Demand via Transfer Valve)	177,000	295	10.00	1.21
Source 4	Balance of Reservoir	936,000			1.58
	DAILY BLEND	1,250,000			1.63

Table D.4 – Assumed Daily Blended Fluoride Level of Reservoir at MMDD

Minimum Month Day Demand Scenario - accept throttled tunnel flow

		Volume (gal)	Flow (gpm)	Hours On	Fluoride (mg/L)
	<i>Minimum Month Day Demand (0.4 ADD)</i>	98,200			1.86
Source 1	Glen Reservoir Booster (on demand)	62,200	395	2.62	1.50
Source 2	Delores Tunnel (continuous 24/7)	36,000	25	24.00	2.48
Source 3	Holly Tanks (on Demand via Transfer Valve)	-	295	-	1.83
Source 3	Balance of Reservoir	1,151,800			1.86
	DAILY BLEND	1,250,000			1.86

The District will install an online fluoride analyzer (see Exhibit D for product data) at the outlet location at the Vosburg Reservoir. This will be connected to the District’s SCADA system reporting real time fluoride levels.

Table D.5 shows the extreme case of no demand on the reservoir with tunnel delivery ongoing and overflow of the reservoir and the duration for which the tank fluoride level would exceed the MCL following it reaching a level of 1.9 mg/L. The SCADA system will be programmed to generate an alarm at 1.90 mg/L fluoride levels. In this scenario District staff would have up to 149 hours in which to visit the site and divert the tunnel to entirely to waste to prevent the reservoir concentration to exceed the MCL. As this reservoir will be equipped with an electronic flow control valve the District will program the SCADA system to close the valve completely at a fluoride concentration level of 1.95 mg/L. All water not delivered to the reservoir will be diverted to the dump line without the requirement of manual intervention under non-emergency system operations.

Table D.5 – Vosburg Reservoir Solution by Duration

Hours 13 through 137 removed from table for presentation purpose only.

	Tunnel Source	Tunnel Source	Tunnel Source	Starting Tank Blend	Starting Tank Blend	Final Tank Blend	Final Tank Blend
Hour	Inflow (gpm)	Added to Tank	Flouride Level	Volume of Tank	Flouride Level	Volume of Tank	Flouride Blend of Tank
0	25	-				1,250,000	1.90
1	25	1,500	2.48	1,248,500	1.90	1,250,000	1.90
2	25	1,500	2.48	1,248,500	1.90	1,250,000	1.90
3	25	1,500	2.48	1,248,500	1.90	1,250,000	1.90
4	25	1,500	2.48	1,248,500	1.90	1,250,000	1.90
5	25	1,500	2.48	1,248,500	1.90	1,250,000	1.90
6	25	1,500	2.48	1,248,500	1.90	1,250,000	1.90
7	25	1,500	2.48	1,248,500	1.90	1,250,000	1.90
8	25	1,500	2.48	1,248,500	1.90	1,250,000	1.91
9	25	1,500	2.48	1,248,500	1.91	1,250,000	1.91
10	25	1,500	2.48	1,248,500	1.91	1,250,000	1.91
11	25	1,500	2.48	1,248,500	1.91	1,250,000	1.91
12	25	1,500	2.48	1,248,500	1.91	1,250,000	1.91
138	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
139	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
140	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
141	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
142	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
143	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
144	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
145	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
146	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
147	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
148	25	1,500	2.48	1,248,500	1.99	1,250,000	1.99
149	25	1,500	2.48	1,248,500	1.99	1,250,000	2.00



EXHIBIT B – HISTORIC FLUORIDE LEVELS, most recent six (6) years, by Quarter

Table B.1: Source Fluoride Levels

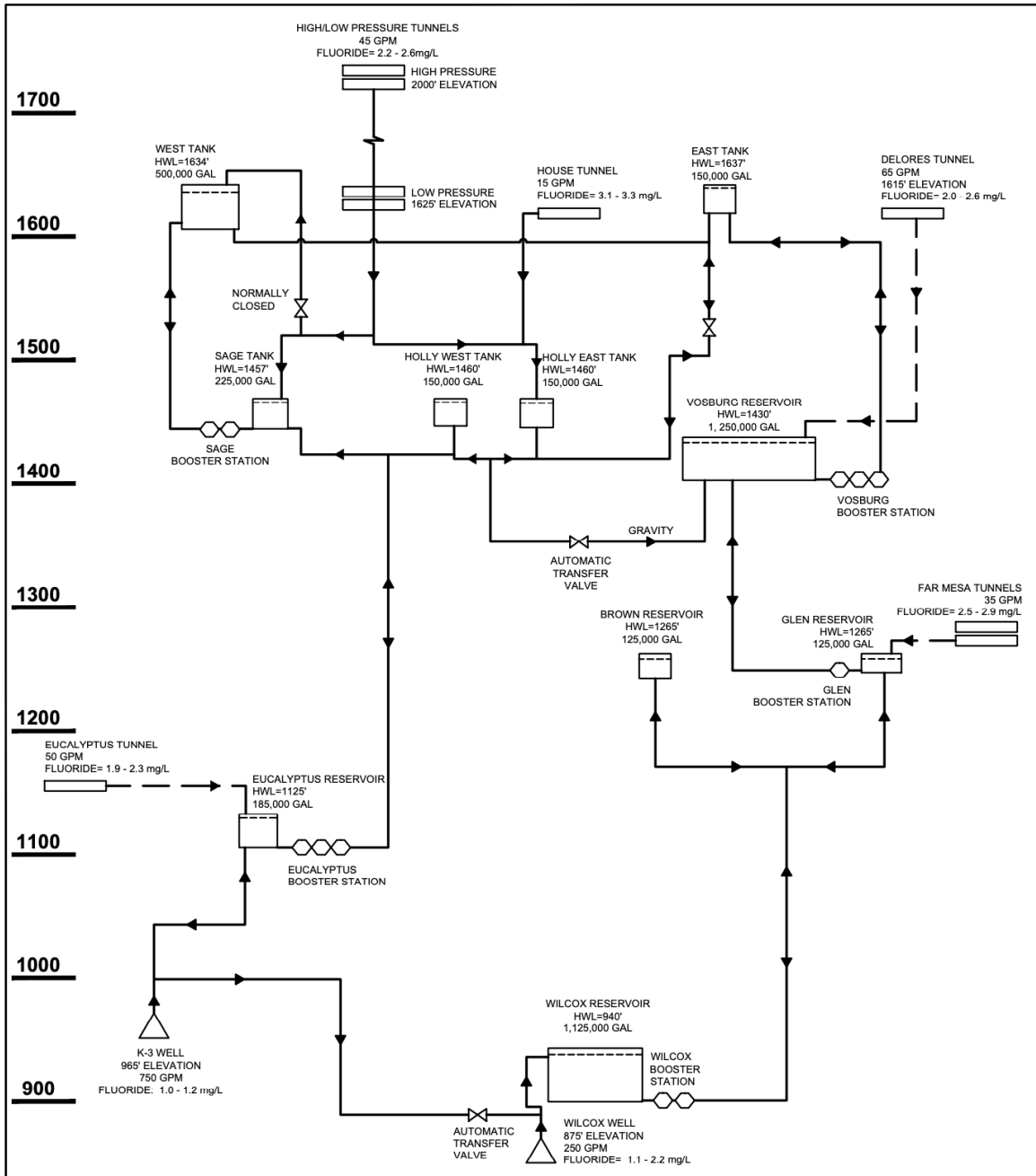
	K3 Well		Wilcox Well		Eucalyptus Tunnel		Hi-Lo Tunnels		Delores Tunnel		Far Mesa Tunnel		House Tunnel	
	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.
4Q23	0.89	1.05	2.00	2.00	1.90	1.98	2.40	2.38	2.20	2.13	2.70	2.68	3.20	3.25
3Q23	1.10	1.10	2.10	2.00	2.00	2.00	2.40	2.38	2.20	2.23	2.60	2.68	3.30	3.30
2Q23	1.10	1.04	1.80	2.03	2.00	2.00	2.30	2.40	2.00	2.30	2.70	2.73	3.30	3.33
1Q23	1.10	1.04	2.10	2.13	2.00	2.03	2.40	2.45	2.10	2.45	2.70	2.78	3.20	3.35
4Q22	1.10	1.01	2.00	2.05	2.00	2.00	2.40	2.43	2.60	2.48	2.70	2.75	3.40	3.35
3Q22	0.86	0.99	2.20	2.05	2.00	1.98	2.50	2.38	2.50	2.43	2.80	2.73	3.40	3.28
2Q22	1.10	1.02	2.20	2.00	2.10	1.93	2.50	2.30	2.60	2.38	2.90	2.65	3.40	3.25
1Q22	0.99	1.02	1.80	1.85	1.90	1.90	2.30	2.25	2.20	2.33	2.60	2.60	3.20	3.23
4Q21	1.00	1.02	2.00	1.75	1.90	1.95	2.20	2.30	2.40	2.43	2.60	2.68	3.10	
3Q21	0.98	1.05	2.00	1.53	1.80	1.98	2.20	2.35	2.30	2.43	2.50	2.70	3.30	
2Q21	1.10	1.05	1.60	1.33	2.00	2.00	2.30	2.35	2.40	2.38	2.70	2.70	3.30	
1Q21	1.00	1.08	1.40	1.23	2.10	1.98	2.50	2.33	2.60	2.33	2.90	2.70		
4Q20	1.10	1.10	1.10	1.20	2.00	1.95	2.40	2.28	2.40	2.25	2.70	2.65		
3Q20	1.00	1.10	1.20	1.23	1.90	1.95	2.20	2.28	2.10	2.20	2.50	2.68		
2Q20	1.20	1.13	1.20	1.23	1.90	1.98	2.20	2.33	2.20	2.25	2.70	2.75		
1Q20	1.10	1.13	1.30	1.30	2.00	2.08	2.30	2.43	2.30	2.33	2.70	2.83		
4Q19	1.10	1.13	1.20	1.25	2.00	2.05	2.40	2.43	2.20	2.33	2.80	2.83		
3Q19	1.10	1.10	1.20	1.33	2.00	2.05	2.40	2.40	2.30	2.40	2.80	2.78		
2Q19	1.20	1.10	1.50	1.40	2.30	2.05	2.60	2.40	2.50	2.45	3.00	2.78		
1Q19	1.10	1.10	1.10	1.35	1.90	1.98	2.30	2.33	2.30	2.45	2.70	2.73		
4Q18	1.00	1.10	1.50	1.48	2.00	2.00	2.30	2.35	2.50	2.50	2.60	2.75		
3Q18	1.10		1.50		2.00		2.40		2.50		2.80			
2Q18	1.20		1.30		2.00		2.30		2.50		2.80			
1Q18	1.10		1.60		2.00		2.40		2.50		2.80			

Table B.2: Distribution System Fluoride Levels

	Zone 1 DST_021		Zone 2 DST_020		Zone 3 DST_019		Zone 4 DST_018		Zone 5 DST_022		Zone 6 DST_017	
	2764 Eaton Canyon Rd.		3315 Villa Knolls Dr.		3338 Barhite St.		1939 Kinneloa Cyn. Rd.		2351 Kinclair Dr		2014 Windover Rd.	
	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.	Fluoride Level	Running 4Q Av.
4Q23	1.00	1.18	1.90	1.68	2.20	1.83	2.20	1.73	1.80	1.63	1.90	1.78
3Q23	1.00	1.23	1.70	1.50	2.00	1.65	1.40	1.48	1.70	1.48	1.90	1.68
2Q23	1.50	1.25	1.40	1.35	1.40	1.48	1.90	1.43	1.70	1.35	1.70	1.55
1Q23	1.20	1.15	1.70	1.38	1.70	1.55	1.40	1.28	1.30	1.25	1.60	1.53
4Q22	1.20	1.28	1.20	1.35	1.50	1.58	1.20	1.38	1.20	1.23	1.50	1.55
3Q22	1.10	1.28	1.10	1.43	1.30	1.63	1.20	1.35	1.20	1.23	1.40	1.53
2Q22	1.10	1.25	1.50	1.43	1.70	1.60	1.30	1.33	1.30	1.20	1.60	1.45
1Q22	1.70	1.28	1.60	1.35	1.80	1.53	1.80	1.30	1.20	1.20	1.70	1.40
4Q21	1.20	1.15	1.50	1.23	1.70	1.43	1.10	1.15	1.20	1.23	1.40	1.33
3Q21	1.00	1.13	1.10	1.13	1.20	1.28	1.10	1.18	1.10	1.23	1.10	1.30
2Q21	1.20	1.15	1.20	1.15	1.40	1.35	1.20	1.20	1.30	1.25	1.40	1.40
1Q21	1.20	1.15	1.10	1.20	1.40	1.43	1.20	1.23	1.30	1.30	1.40	1.43
4Q20	1.10	1.15	1.10	1.25	1.10	1.50	1.20	1.23	1.20	1.33	1.30	1.50
3Q20	1.10	1.13	1.20	1.23	1.50	1.55	1.20	1.20	1.20	1.30	1.50	1.53
2Q20	1.20	1.15	1.40	1.20	1.70	1.53	1.30	1.23	1.50	1.33	1.50	1.50
1Q20	1.20	1.15	1.30	1.13	1.70	1.45	1.20	1.20	1.40	1.35	1.70	1.55
4Q19	1.00	1.10	1.00	1.08	1.30	1.38	1.10	1.20	1.10	1.30	1.40	1.45
3Q19	1.20	1.15	1.10	1.13	1.40	1.40	1.30	1.25	1.30	1.35	1.40	1.45
2Q19	1.20	1.15	1.10	1.15	1.40	1.38	1.20	1.25	1.60	1.33	1.70	1.45
1Q19	1.00	1.18	1.10	1.18	1.40	1.35	1.20	1.28	1.20	1.33	1.30	1.43
4Q18	1.20	1.30	1.20	1.20	1.40	1.45	1.30	1.35	1.30	1.33	1.40	1.45
3Q18	1.20		1.20		1.30		1.30		1.20		1.40	
2Q18	1.30		1.20		1.30		1.30		1.60		1.60	
1Q18	1.50		1.20		1.80		1.50		1.20		1.40	



EXHIBIT C – SYSTEM SCHEMATIC PLAN



REVISIONS	DATE	INITIAL

SA ASSOCIATES
 CONSULTING ENGINEERS
 1661 N. Raymond Ave
 Suite 100
 Anaheim, CA 92801

KINNELOA SYSTEM SCHEMATIC - FLUORIDE
Source Fluoride Levels (mg/l) 2018 - 2023
KINNELOA IRRIGATION DISTRICT



EXHIBIT D – FLUORIDE ANALYZER PRODUCT DATA

ProMinent® Reagent-Free Analyzers

Complete Disinfection Packages



Free Chlorine Package



Fluoride/Total Chlorine Package

ProMinent® analyzers and controllers provide precise monitoring and control of process variables for potable water and wastewater applications. Our **Reagent-Free** amperometric sensor technology utilizes an on-line measurement of disinfection chemicals while using no colorimetric reagents or photometric equipment.

Our analyzer packages cover a wide range of measurements for Free Chlorine, Total Chlorine, Fluoride, Peracetic Acid and Hydrogen Peroxide. One part number covers the entire package which includes the DAC analyzer, sensor, flow cell, back panel, plumbing and wiring components.

Features & Benefits

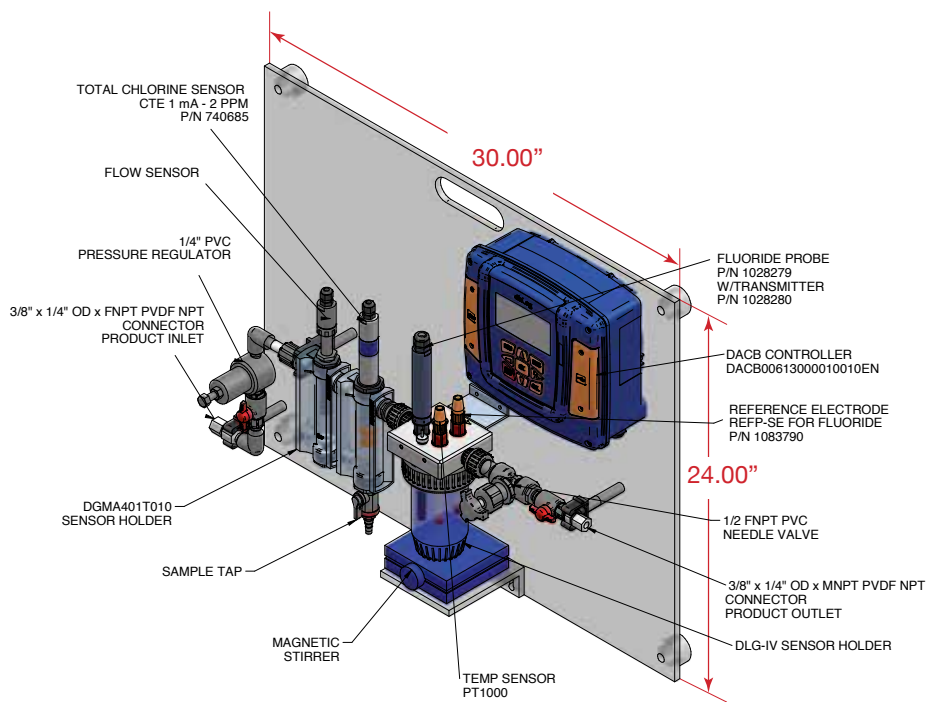
- Reagent free sensor technology
- Monitors and Controls
- Controls up to 3 variables
- Pre-plumbed, wired and mounted
- EPA method 334.0 compliant for Cl
- 3 mA outputs
- Plug & Play design
- No service contract required
- Real time process control
- Data logger and SD card
- Modbus RTU

ProMinent® Reagent-Free Analyzers

Analyzer Packages

Part Number	Package Type	Part Number	Package Type
Chlorine			
1055407	2 PPM Total Chlorine	1083297	5 PPM Total/Total Chlorine
1055408	2 PPM Free Chlorine/pH	1093232	5 PPM Free/Total Chlorine/pH
1080700	2 PPM Total Chlorine/pH	1049062	10 PPM Total Chlorine
1083296	2 PPM Total/Total Chlorine	1049063	10 PPM Free Chlorine/pH
1093231	2 PPM Free/Total Chlorine/pH	1080702	10 PPM Total Chlorine/pH
1079048	5 PPM Total Chlorine	1083298	10 PPM Total/Total Chlorine
1079050	5 PPM Free Chlorine/pH	1093233	10 PPM Free/Total Chlorine/pH
1080701	5 PPM Total Chlorine/pH	1081716	20 PPM Total Chlorine/pH
Fluoride			
1058259	10 PPM Fluoride/ 2 PPM Total Chlorine		
1093227	10 PPM Fluoride		
Hydrogen Peroxide (H₂O₂)			
1082570	2,000 PPM Hydrogen Peroxide		
Peracetic Acid (PAA)			
1093229	200 PPM Peracetic Acid		
1093230	2,000 PPM Peracetic Acid		

Drawing - Chlorine/Fluoride package detail shown



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DULCOTEST sensors for fluoride

Reliable online measurement of fluoride – with DULCOTEST sensors



Accurate measurement of fluoride with DULCOTEST sensors in the monitoring of potable water and wastewater, suitable for pH values up to 9.5.

Technical Details

- pH value: 5.5...9.5
- Temperature: 1...35 °C
- Pressure: max. 6 bar, 3 bar (30 °C)

Item 9c - Page 23



DULCOTEST sensors for fluoride

Reliable online measurement of fluoride – with DULCOTEST sensors

Fluoride Sensor FLEP 010-SE / FLEP 0100-SE

Highly selective, online fluoride sensor, for the fluoridation of potable water and monitoring of industrial wastewater in the semiconductor industry and electroplating with a pH of up to 9.5

Your Benefits

- Highly selective measurement of fluoride by LaF₃ single crystal silicon
- Unique pH range of up to pH 9.5 by optimisation of the electrolyte
- Two measuring ranges available: 0.05 -10 ppm for potable water; 0.5 -100 ppm for wastewater. Higher measuring ranges on request

Measured variable	Fluoride ion concentration
Reference method	Photometrically (Photometer DT2C)
Measuring range	With transmitter FPV1: 0.05...10 mg/l With transmitter FP100V1: 0.5...100 mg/l
pH-range	5.5...9.5
Temperature	1...35 °C
Max. pressure	7.0 bar (no pressure surges)
Min. conductivity	100 µS/cm
Shaft diameter	12.0 mm
Installation length	120 mm
Thread	PG 13.5
Electrical Connection	SN6 plug-in head
Enclosure rating	IP 65
Process integration	Bypass: open outlet or return of the sample water into the process line, inline: direct installation into the pipework; fixed or replaceable (replaceable fitting), tank, channel: Immersion in the immersion tube
Flow	10...200 l/h
Intake flow (recommended)	20 l/h
Response time T95 (open)	30 s (for conc. > 0.5 ppm)
Shelf life	6 months
Sensor fitting	Bypass fitting DLG IV
Controllers	D1C, DAC, DULCOMARIN
Typical applications	Monitoring the fluoridation of potable water in waterworks, industrial wastewater in the semiconductor industry and electroplating.
Resistance to	Disinfectant, solids content (turbid types of water)
Measuring principle, technology	Direct potentiometric measurement, 2 electrodes, gel electrolyte, ceramic diaphragm, separate temperature measurement needed for temperature compensation. Low pH values of < 5 reduce the concentration of free fluoride ions by forming undissociated hydrofluoric acid (HF). High pH values > 9.5 influence the signal and the slope at concentrations in the lower ppm range. The calibration line flattens off there (gentler slope) and the fluoride sensor is outside its linear range.

Order no.

FLEP 010-SE / FLEP 0100-SE	1028279
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Notes: A 4-20 mA transmitter, a reference electrode and sensor for temperature compensation are needed in addition to the fluoride electrode. Measuring ranges from 5 ... 1,000 mg/l and 50 ... 10,000 mg/l available on request.

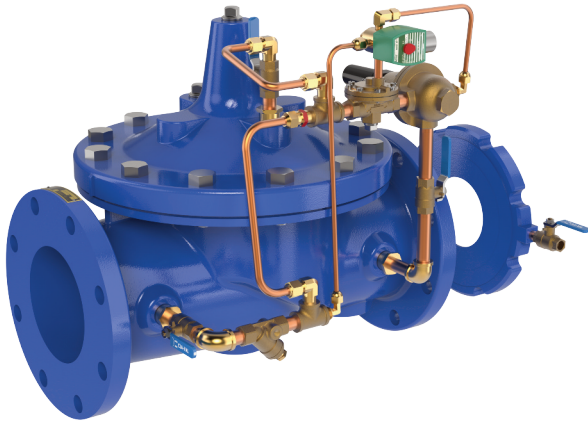


EXHIBIT E – HYDRAULIC FLOW CONTROL VALVE PRODUCT DATA



— MODEL — **43-01**

Combination Rate of Flow Controller & Solenoid Shut-Off Valve



- Multi-functional Capability
- Includes Orifice Plate with Holder
- Optional Check Feature
- Easily Adjusted
- Every Valve Factory Tested

The Cla-Val Model 43-01 Combination Rate of Flow Controller and Solenoid Shut-Off Valve limits the maximum flow rate, regardless of changing line pressure. It is a hydraulically operated, pilot controlled, diaphragm valve. The pilot control is actuated by the differential pressure produced across an orifice plate installed downstream of the valve. Accurate control is assured as very small changes in the controlling differential pressure produce immediate corrective action of the main valve. A solenoid control is provided to intercept the operation of the differential control and close the main valve.

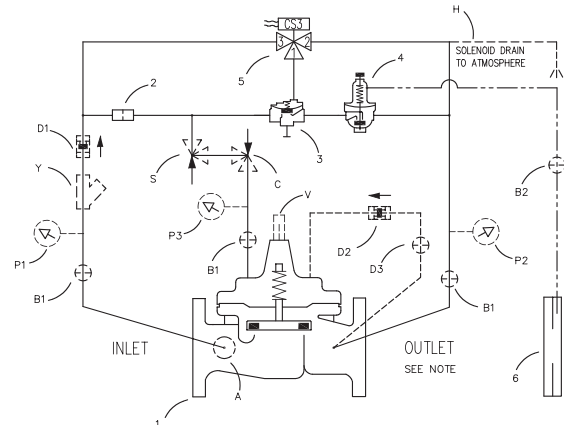
Schematic Diagram

Item	Description
1	100-01 Hytrol Main Valve (full port)
2	X58C Restriction Fitting
3	100-01 Hytrol (Reverse Flow)
4	CDHS18 Differential Control
5	CS3 Solenoid Control
6	X52E Orifice Plate Assembly

The Model 43-01 includes a orifice plate with a holder that should be installed one to five pipe diameters downstream of the main valve. If the check feature option is added and a pressure reversal occurs, the downstream pressure is admitted into the main valve cover chamber and the valve closes to prevent return flow.

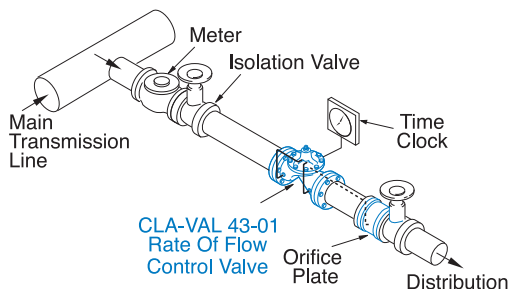
Optional Features

Item	Description
A	X46A Flow Clean Strainer
B	CK2 (Isolation Valve)
C	CV Flow Control (Closing)
D	Check Valves with Isolation Valve
H	Solenoid Drain to Atmosphere
P	X141 Pressure Gauge
S	CV Speed Control (Opening)
V	X101 Valve Position Indicator
Y	X43 "Y" Strainer

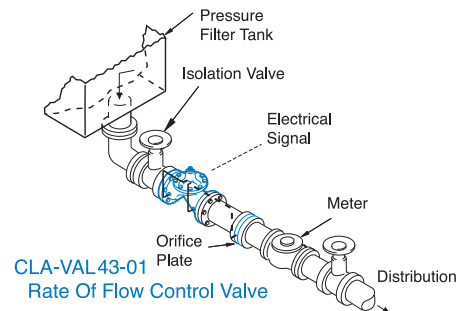


The "D" feature on a vertically installed 6" and larger valves must be horizontally installed.

Typical Applications



The 43-01 is typically installed where water supply to a system must be limited to a pre-set maximum flow rate at certain times of day. The valve is easily set to maintain the maximum allowable flow rate and is to open or close on an electrical signal.



The 43-01 is typically installed as a pressure type filter effluent control valve where a constant flow rate is maintained as head loss through the filter varies. The valve opens or closes on an electrical signal.

Model 43-01 (Uses the 100-01 Hytrol Main Valve)

Pressure Ratings (Recommended Maximum Pressure - psi)

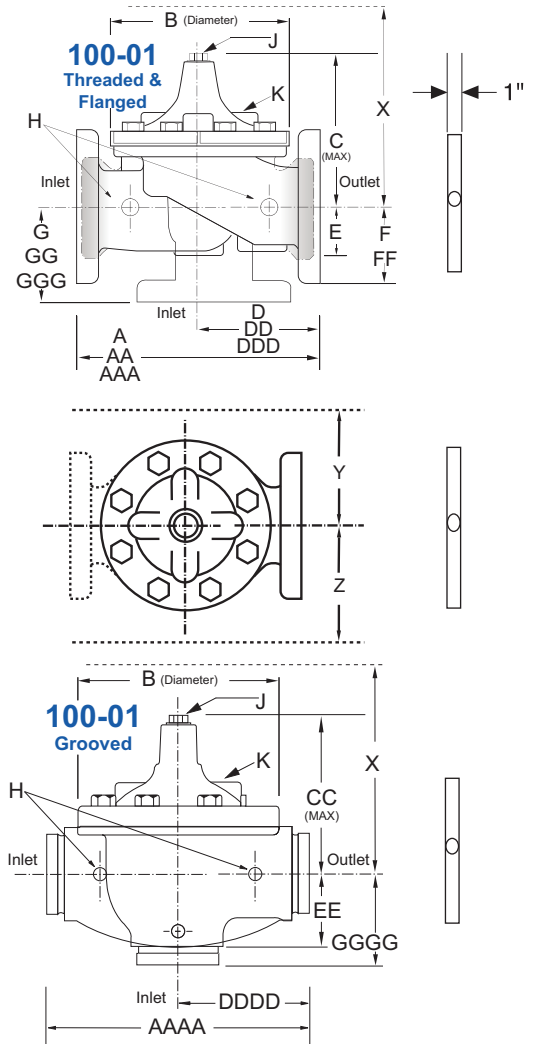
Valve Body & Cover		Pressure Class				
		Flanged			Grooved	Threaded
Grade	Material	ANSI Standards*	150 Class	300 Class	300 Class	End† Details
ASTM A536	Ductile Iron	B16.42	250	400	400	400
ASTM A216-WCB	Cast Steel	B16.5	285	400	400	400
UNS 87850	Bronze	B16.24	225	400	400	400

Note: * ANSI standards are for flange dimensions only.
 Flanged valves are available faced but not drilled.
 † End Details machined to ANSI B2.1 specifications.
Valves for higher pressure are available; consult factory for details

Materials

Component	Standard Material Combinations		
Body & Cover	Ductile Iron	Cast Steel	Bronze
Available Sizes	1-1/2" - 36"	1-1/2" - 16"	1-1/2" - 16"
Disc Retainer & Diaphragm Washer	Cast Iron	Cast Steel	Bronze
Trim: Disc Guide, Seat & Cover Bearing	Bronze is Standard Stainless Steel is Optional		
Disc	Buna-N® Rubber		
Diaphragm	Nylon Reinforced Buna-N® Rubber		
Stem, Nut & Spring	Stainless Steel		

For material options not listed, consult factory.
 Cla-Val manufactures valves in more than 50 different alloys.

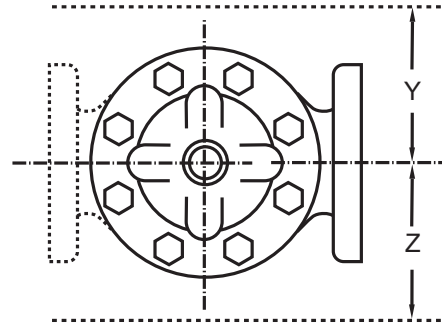
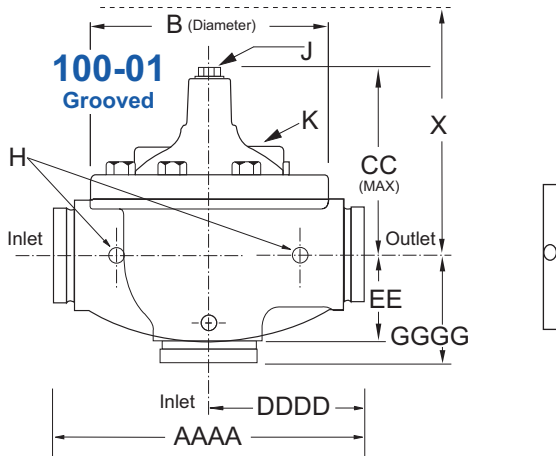
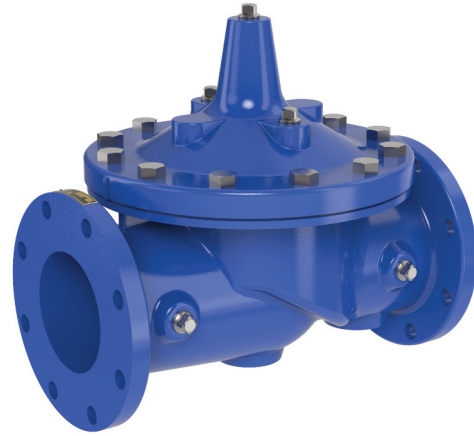
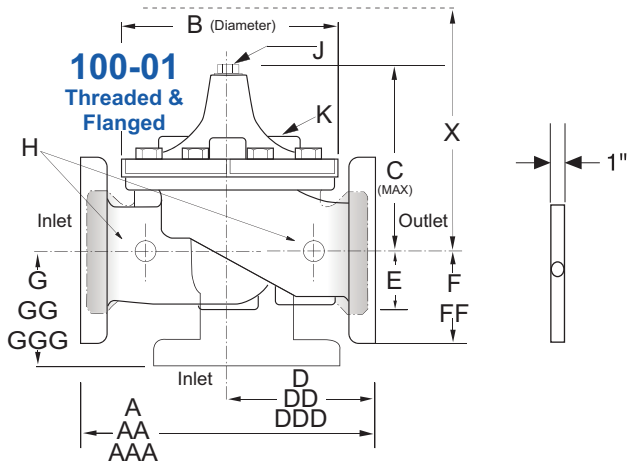


Model 43-01 Dimensions (In Inches)

Valve Size (Inches)	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	30	36
A Threaded	7.25	9.38	11.00	12.50	—	—	—	—	—	—	—	—	—	—	—	—
AA 150 ANSI	8.50	9.38	11.00	12.00	15.00	20.00	25.38	29.75	34.00	39.00	41.38	46.00	52.00	61.50	63.00	72.75
AAA 300 ANSI	9.00	10.00	11.62	13.25	15.62	21.00	26.38	31.12	35.50	40.50	43.50	47.64	53.62	63.24	64.50	74.75
AAAA Grooved End	8.50	9.00	11.00	12.50	15.00	20.00	25.38	—	—	—	—	—	—	—	—	—
B Diameter	5.62	6.62	8.00	9.12	11.50	15.75	20.00	23.62	28.00	32.75	35.50	41.50	45.00	53.16	56.00	66.00
C Maximum	5.50	6.50	7.56	8.19	10.62	13.38	16.00	17.12	20.88	24.19	25.00	39.06	41.90	43.93	54.60	59.00
CC Maximum Grooved End	4.75	5.75	6.88	7.25	9.31	12.12	14.62	—	—	—	—	—	—	—	—	—
D Threaded	3.25	4.75	5.50	6.25	—	—	—	—	—	—	—	—	—	—	—	—
DD 150 ANSI	4.00	4.75	5.50	6.00	7.50	10.00	12.69	14.88	17.00	19.50	20.81	—	—	30.75	—	—
DDD 300 ANSI	4.25	5.00	5.88	6.38	7.88	10.50	13.25	15.56	17.75	20.25	21.62	—	—	31.62	—	—
DDDD Grooved End	—	4.75	—	6.00	7.50	—	—	—	—	—	—	—	—	—	—	—
E	1.12	1.50	1.69	2.06	3.19	4.31	5.31	9.25	10.75	12.62	15.50	12.95	15.00	17.75	21.31	24.56
EE Grooved End	2.00	2.50	2.88	3.12	4.25	6.00	7.56	—	—	—	—	—	—	—	—	—
F 150 ANSI	2.50	3.00	3.50	3.75	4.50	5.50	6.75	8.00	9.50	10.50	11.75	15.00	16.50	19.25	22.50	28.50
FF 300 ANSI	3.06	3.25	3.75	4.13	5.00	6.25	7.50	8.75	10.25	11.50	12.75	15.00	16.50	19.25	24.00	30.00
G Threaded	1.88	3.25	4.00	4.50	—	—	—	—	—	—	—	—	—	—	—	—
GG 150 ANSI	4.00	3.25	4.00	4.00	5.00	6.00	8.00	8.62	13.75	14.88	15.69	—	—	22.06	—	—
GGG 300 ANSI	4.25	3.50	4.31	4.38	5.31	6.50	8.50	9.31	14.50	15.62	16.50	—	—	22.90	—	—
GGGG Grooved End	—	3.25	—	4.25	5.00	—	—	—	—	—	—	—	—	—	—	—
H NPT Body Tapping	0.375	0.375	0.50	0.50	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
J NPT Cover Center Plug	0.25	0.50	0.50	0.50	0.75	0.75	1.00	1.00	1.25	1.50	2.00	1.00	1.00	1.00	2.00	2.00
K NPT Cover Tapping	0.375	0.375	0.50	0.50	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Stem Travel	0.40	0.60	0.70	0.80	1.10	1.70	2.30	2.80	3.40	4.00	4.50	5.10	5.63	6.75	7.50	8.50
Approx. Ship Weight (lbs)	15	35	50	70	140	285	500	780	1165	1600	2265	2982	3900	6200	7703	11720
Approx. X Pilot System	11	13	14	15	17	29	31	33	36	40	40	43	47	68	79	85
Approx. Y Pilot System	9	9	10	11	12	20	22	24	26	29	30	32	34	39	40	45
Approx. Z Pilot System	9	9	10	11	12	20	22	24	26	29	30	32	34	39	42	47

Note: The top two flange holes on valve size 36 are threaded to 1 1/2"-6 UNC. *For Sizes 16 and smaller use X52E **For Sizes 18 and larger use X52A-1

Model 43-01 Metric Dimensions (Uses the 100-01 Hytrol Main Valve)



Model 43-01 Dimensions (mm)

Valve Size (mm)	40	50	65	80	100	150	200	250	300	350	400	450	500	600	750	900
A Threaded	184	238	279	318	—	—	—	—	—	—	—	—	—	—	—	—
AA 150 ANSI	216	238	279	305	381	508	645	756	864	991	1051	1168	1321	1562	1600	1848
AAA 300 ANSI	229	254	295	337	397	533	670	790	902	1029	1105	1210	1326	1606	1638	1899
AAAA Grooved End	216	228	279	318	381	508	645	—	—	—	—	—	—	—	—	—
B Diameter	143	168	203	232	292	400	508	600	711	832	902	1054	1143	1350	1422	1676
C Maximum	140	165	192	208	270	340	406	435	530	614	635	992	1064	1116	1387	1499
CC Maximum Grooved End	120	146	175	184	236	308	371	—	—	—	—	—	—	—	—	—
D Threaded	83	121	140	159	—	—	—	—	—	—	—	—	—	—	—	—
DD 150 ANSI	102	121	140	152	191	254	322	378	432	495	528	—	—	781	—	—
DDD 300 ANSI	108	127	149	162	200	267	337	395	451	514	549	—	—	803	—	—
DDDD Grooved End	—	121	—	152	191	—	—	—	—	—	—	—	—	—	—	—
E	29	38	43	52	81	110	135	235	273	321	394	329	381	451	541	624
EE Grooved End	52	64	73	79	108	152	192	—	—	—	—	—	—	—	—	—
F 150 ANSI	64	76	89	95	114	140	171	203	241	267	298	381	419	489	572	724
FF 300 ANSI	78	83	95	105	127	159	191	222	260	292	324	381	419	489	610	762
G Threaded	48	83	102	114	—	—	—	—	—	—	—	—	—	—	—	—
GG 150 ANSI	102	83	102	102	127	152	203	219	349	378	399	—	—	560	—	—
GGG 300 ANSI	102	89	110	111	135	165	216	236	368	397	419	—	—	582	—	—
GGGG Grooved End	—	83	—	108	127	—	—	—	—	—	—	—	—	—	—	—
H NPT Body Tapping	0.375	0.375	0.50	0.50	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
J NPT Cover Center Plug	0.25	0.50	0.50	0.50	0.75	0.75	1.00	1.00	1.25	1.50	2.00	1.00	1.00	1.00	2.00	2.00
K NPT Cover Tapping	0.375	0.375	0.50	0.50	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Stem Travel	10	15	18	20	28	43	58	71	86	102	114	130	143	171	190	216
Approx. Ship Weight (kgs)	7	16	23	32	64	129	227	354	528	726	1027	1353	1769	2812	3494	5316
Approx. X Pilot System	280	331	356	381	432	737	788	839	915	1016	1016	1093	1194	1728	2007	2159
Approx. Y Pilot System	229	229	254	280	305	508	559	610	661	737	762	813	864	991	1016	1143
Approx. Z Pilot System	229	229	254	280	305	508	559	610	661	737	762	813	864	991	1067	1194

The top two flange holes on valve sizes 36 thru 48 are threaded to 1 1/2"-6 UNC.

*For Sizes 16 and smaller use X52E.

**For Sizes 18 and larger use X52A-1

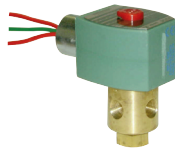
43-01 Valve Selection	100-01 Pattern: Globe (G), Angle (A), End Connections: Threaded (T), Grooved (GR), Flanged (F) Indicate Available Sizes																
	Inches	1½	2	2½	3	4	6	8	10	12	14	16	18	20	24	30	36
	mm	40	50	65	80	100	150	200	250	300	350	400	450	500	600	750	900
Main Valve 100-01	Pattern	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G	G	G, A	G	G
	End Detail	T, F, Gr*	T, F, Gr	T, F, Gr*	T, F, Gr	F, Gr	F, Gr*	F, Gr*	F	F	F	F	F	F	F	F	F
Suggested Flow (gpm)	Maximum	125	210	300	460	800	1800	3100	4900	7000	8400	11000	14000	17000	25000	42000	50000
	Maximum Intermittent	160	260	370	580	990	2250	3900	6150	8720	10540	13700	17500	21700	31300	48000	62500
	Minimum	1	1	2	2	4	10	15	35	50	70	95	120	150	275	450	650
Suggested Flow (Liters/Sec)	Maximum	8	13	19	29	50	113	195	309	442	530	694	883	1073	1577	2650	3150
	Maximum Intermittent	10	16	23	37	62	142	246	387	549	664	863	1104	1369	1972	3028	3940
	Minimum	.03	.06	.09	0.13	0.25	0.63	0.95	2.2	3.2	4.4	6.0	7.6	9.5	17.4	28.4	41.0

100-01 Series is the full internal port Hytrol.

For Lower Flows Consult Factory

*Globe Grooved Only

Pilot System Specifications



Adjustment Range

Low flow equals one-fourth maximum flow.

Temperature Range

Water: to 180°F

CS3 Solenoid Electrical Ratings

24, 48, 120, 240, 480 - 60 Hz AC
6, 12, 24, 120, 240 DC

Materials

Standard Pilot System Materials

Pilot Control: Low Lead Bronze

Trim: Stainless Steel 303

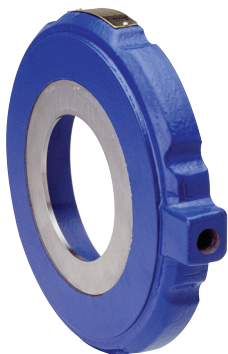
Orifice Plate: Stainless Steel 303

Rubber: Buna-N® Synthetic Rubber

Optional Pilot System Materials

Pilot systems are available with optional Aluminum, Stainless Steel or Monel materials.

X52E Orifice Plate Assembly Data



- Wafer Design
- Fits ANSI 125, 150, 250, 300
- Orifice Plate portion of assembly is made of 302 Stainless Steel
- Optional Materials Available
- See X52E Engineering Data Sheet for Bore Sizing Selections Chart (E-X52E)

Note: Orifice plate assembly (X52E) may be attached to the main valve outlet flange, however, better control is obtained if it is located one to five pipe diameters downstream. Orifice plate sensing connection should be located in the pipeline on the side of the orifice plate assembly. The orifice plate assembly should not be mounted directly to a butterfly valve. See E-X52E Data Sheet for Orifice Bore adjustment range.

When Ordering, Please Specify

1. Catalog No. 43-01
2. Valve Size
3. Pattern - Globe or Angle
4. Pressure Class
5. Threaded or Flanged
6. Trim Material
7. Adjustment Range/Orifice Bore
8. Energized or De-Energized to Open
9. Desired Options
10. When Vertically Installed



1999 KINCLAIR DRIVE, PASADENA, CALIFORNIA 91107-1017
TELEPHONE (626) 797-6295 • FAX (626) 794-5552
WEBSITE: kinneloairrigationdistrict.info

November 16, 2023

State Water Resources Control Board
Division of Drinking Water
Attn: Kurtis Lee, Water Resource Control Engineer
500 North Central Avenue, Suite 500
Glendale, CA 91203

SENT VIA EMAIL ONLY TO Kurtis.Lee@waterboards.ca.gov and Dmitriy.Ginzburg@waterboards.ca.gov

Re: Investigative Report on E. coli positive Raw Water sample from October 17, 2023

Mr. Lee,

Per your request, the following is our investigative report regarding the E. coli positive raw water sample taken on October 17, 2023, for the "Hi Pressure Tunnel" source:

TIMELINE OF SAMPLING AND NOTIFICATION

On October 17, 2023, our regular 3rd week distribution system samples and monthly raw water samples were taken by operator Ray Ascencio. On October 18, 2023, at approximately 14:35 Clinical Laboratory of San Bernardino, Inc. called General Manager Tom Majich informing him that the sample tested positive for total coliform and E. coli. General Manager Majich and Senior Facilities Operator Chris Burt were offsite at a meeting for the Raymond Basin Management Board at the time but returned to the District to take that raw water source offline and divert it to the storm drain system, that was accomplished around 17:00 on that same day.

The following day on October 19, 2023, District staff notified DDW staff via email of the E. coli positive raw water sample and noted that all routine distribution system samples taken as required by the Total Coliform Rule resulted in non-detect for total coliform. General Manager Majich received several phone calls from DDW staff the evening of 10/19 to discuss required next actions.

On Friday, 10/20/23 the District took special samples of all routine distribution sampling sites as well as special distribution system samples from both Holly Tank East and Holly Tank West and distribution system samples from the first residential service from both Holly Tank East and Holly Tank West - all of these samples resulted in non-detect for Total Coliform. On Saturday, 10/21/23 the District again took special samples of all routine distribution sampling sites as well as special distribution system samples from both Holly Tank East and Holly

Tank West and distribution system samples from the first residential service from both Holly Tank East and Holly Tank West - all of these samples resulted in non-detect for Total Coliform.

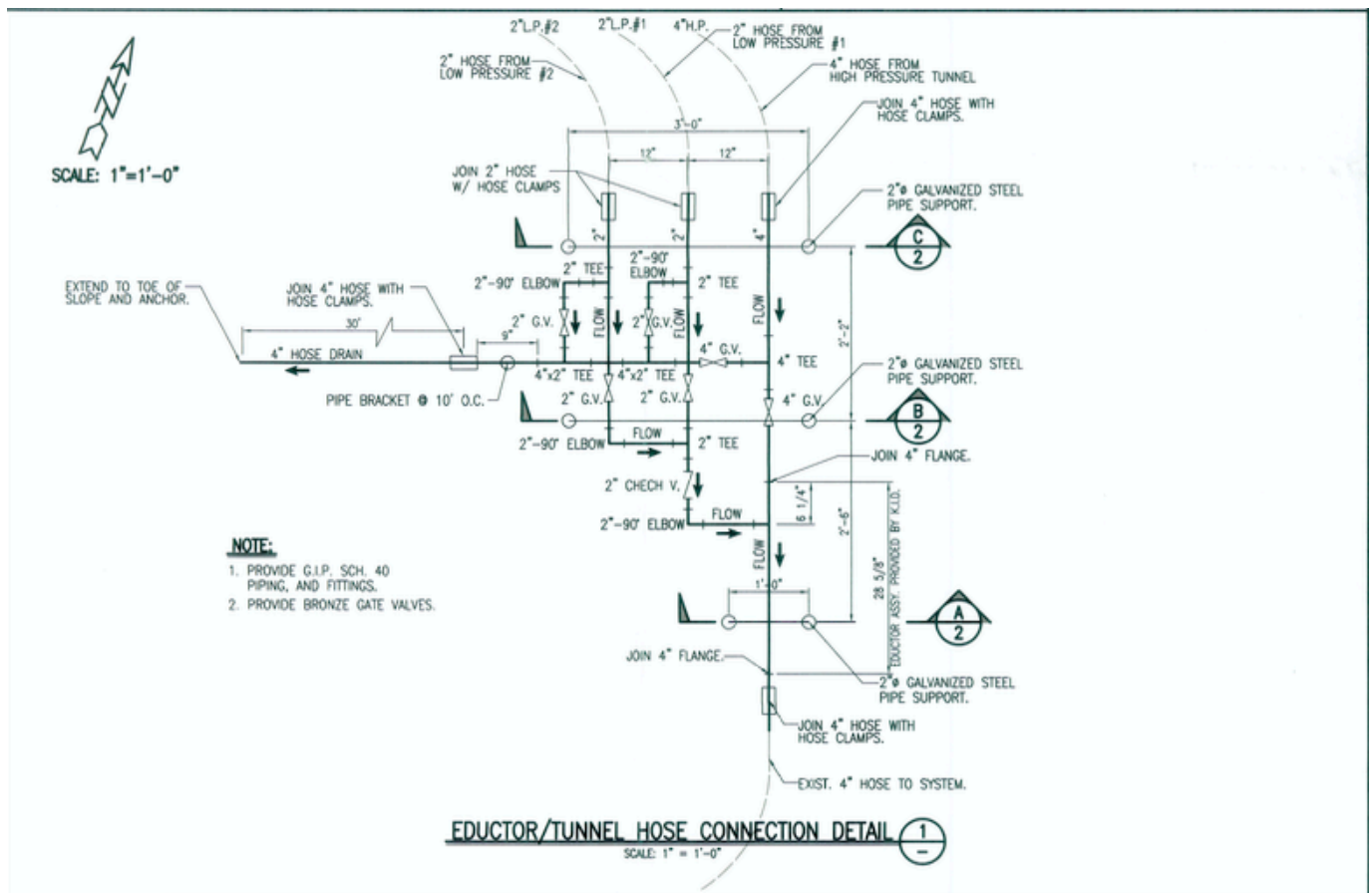
On Friday, 10/20/23 the District took special samples of the Hi Pressure Tunnel raw water source, two samples were taken and each tested positive for total coliform and E. coli. On Saturday, 10/21/23 the District again took special samples of the Hi Pressure Tunnel raw water source and each tested positive for total coliform and E. coli.

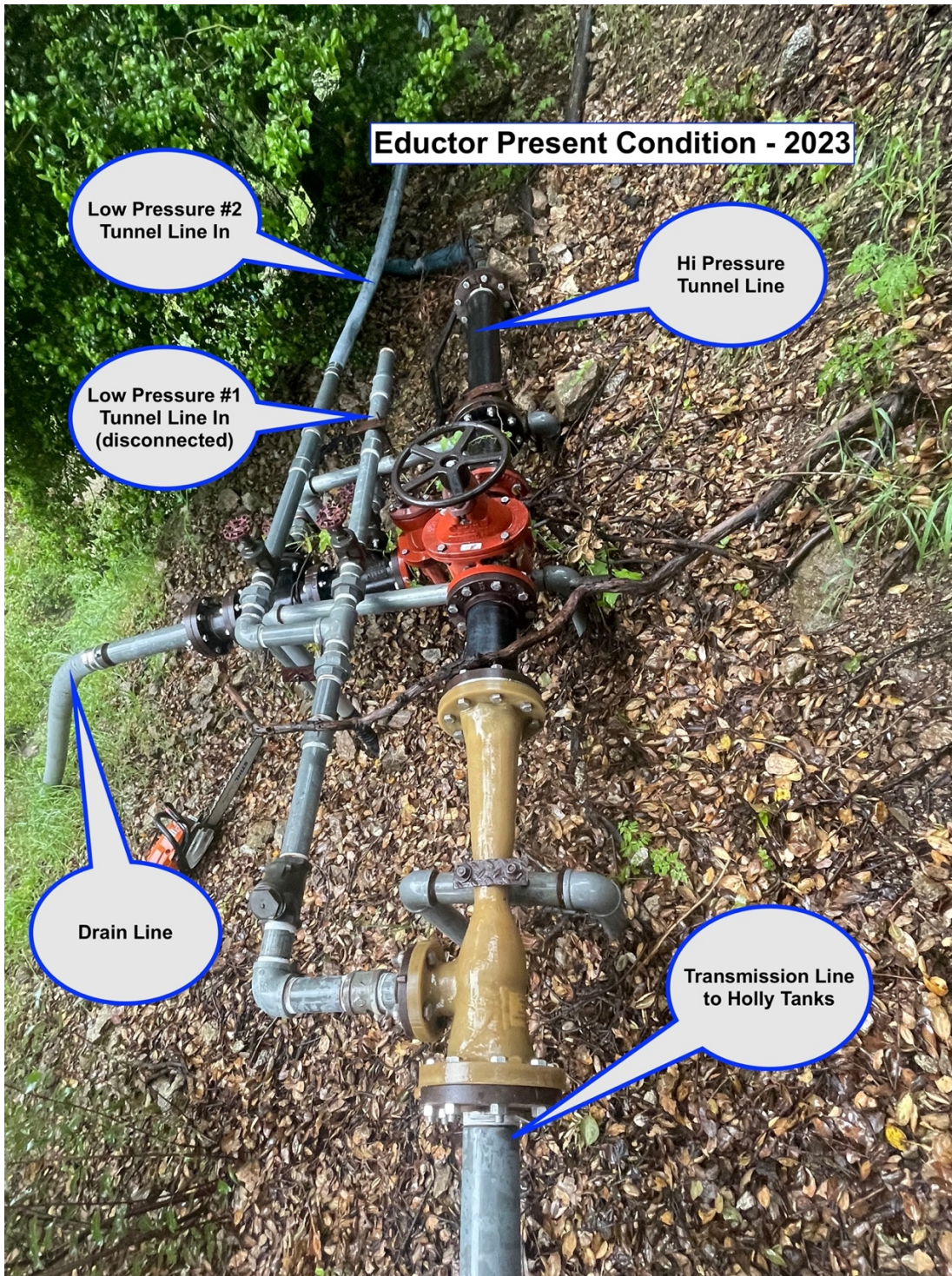
District staff provided a preliminary report to DDW via email on 10/20/23 which is included as an attachment to this report. District staff informed DDW staff of the results of the special 10/20/23 and 10/21/23 sampling and lab reports were provided immediately upon receipt. All referenced lab reports are included as an attachment to this report.

SOURCE LOCATION AND CONDITION ASSESSMENT

The Hi/Lo Pressure Tunnel source is from several tunnels in the West Kinneloa Canyon. Hi Pressure Tunnel 1 is a 189-foot-deep tunnel with water collected in a bulkhead 88 feet inside from the tunnel face and then transported via a 2" pipe to a collection box where it joins with a pipeline from Hi Pressure Tunnel 2. Hi Pressure Tunnel 2 is a 218-foot-deep tunnel with water collected at a bulkhead 22 feet inside from the tunnel face. From the collection box raw water is transmitted via a 4" hose to a combiner/eductor where it combines with water from Lo Pressure Tunnel 2 for transmission to the Holly Tanks site for disinfection.

After severe winter storms in 2005 the Hi Pressure and Lo Pressure Tunnel pipelines were reconstructed with funding assistance from FEMA and CalOES. A new eductor/tunnel hose connection system was constructed in 2006 and is in service today. A diagram of that system is included here.





The Hi/Lo Tunnel line then leaves the canyon at the Kinneloa Canyon West Debris Basin where it is underground in 4" AC or PVC piping until it arrives at the Holly Tanks site where it is combined with the House Tunnel source line, disinfected via chlorination, and enters the Holly Tanks.

The source tunnels are deep in a remote canyon where access is difficult. When construction of the current system was completed in 2006 most materials had to be delivered via helicopter. District staff made a visit to the source locations on 10/25/23. Initial Findings were:

1. Lo Pressure Tunnel 2 entrance is compromised by recent landslide and excessive vegetation growth, evidence of animal activity was evident outside tunnel face. This is a possible source of contamination for the Lo Pressure #2 source.



2. The 4" hose line downstream of the eductor is damaged and leaking, this is a possible source of contamination; however, the hose is spanning the canyon supported by an aerial support so there is no obvious path for animal access or contamination here.



During the 10/23/23 site visit, District Staff suspected that raw water from Lo Pressure #2 was the cause of contamination given the integrity of the tunnel sanitary seal, the Lo Pressure #2 valve was closed at the eductor which drains all of that source water to the canyon drainage. Following that action special samples were taken on 10/30/23 for the raw water source which would have been only Hi Pressure Tunnel water at that time, two samples were taken from the Hi/Lo Pressure Tunnel raw water sample tap at the Holly Tanks site, and both resulted in non-detect for total coliform. Another sample was taken during the routine monthly raw water source sampling on 11/7/23 which resulted in a Total Coliform density result of 12 and 1.0 for E. coli. This test result indicates that there is still a point of contamination and excluding Lo Pressure #2 water does not solve the problem.

The District needs to replace the section of 4" hose that is currently leaking and a potential point of contamination. The winter storms of 2023 inflicted damage to our access points to this pipeline system to safely perform repairs. The District is developing a plan to replace the 4" hose line from the eductor to the underground section, this work will likely commence after the 2024 storm season based on safe working conditions.


The Hi/Lo Pressure Tunnel source remains offline at the present time due to the unknown source of contamination and the expiration of the District's Fluoride Variance on December 13, 2023. The Hi/Lo Pressure Tunnel source exceeds the California MCL for Fluoride content and at the present time the District has no plans to treat this source for fluoride removal or compliance blending. That in combination with the pipeline damage and unknown point of contamination, require that we keep this source offline at this time.

I am available to provide any further information on this matter as you require.

Respectfully,

A handwritten signature in black ink, appearing to read 'Tom L. Majich', written in a cursive style.

Tom L. Majich
General Manager

From: Tom Majich tm@kidwater.info 
Subject: Re: 1910035 - Kinneloa - High Pressure Tunnel
Date: October 20, 2023 at 9:01 PM
To: Dmitriy Ginzburg Dmitriy.Ginzburg@waterboards.ca.gov
Cc: Kurtis Lee Kurtis.Lee@Waterboards.ca.gov, Melanie Timoteo mt@kidwater.info



The following are my initial comments, I have received no formal reports from Clinical Labs yet and was going to wait until I had them but here is where things stand at the moment:

A. Current Operating Procedures that are or could potentially be related to increase in bacterial count: None currently identified or suspected. The sample with an increase in bacterial count was in a raw ground water source not a routine distribution sample. The groundwater well itself is not physically accessible at this time. The sample tap location for this raw ground water sample is underneath tree canopy that has grown this season, it is a possibility that the location of the sample tap could be compromised by the tree canopy. It is also possible that the sampler did not take proper sanitary precautions while performing the sampling on 10/17 but that is not confirmed. If subsequent testing in progress indicates that this positive was not due to improper sampling techniques then we will assume that the source itself may be contaminated and given the location of the source that could not have been prevented by current operating procedures. Well source is located 3,700 feet away from the tank site in a remote canyon not easily accessible by humans and behind secured gates controlled by the Los Angeles County Department of Public Works.

B. Any interruptions in the treatment process: There are no known interruptions in the treatment process, a review of our SCADA system records and treatment system operations indicate that all is functioning normally and has been for the recent 4 week period examined in detail.

C. System Pressure Loss to less than 5 psi: None indicated. This groundwater source is a gravity well, not a groundwater well pump delivering with any pressure.

D. Vandalism and/or unauthorized access to facilities: None apparent from initial investigation.

E. Evidence indicating bacteriological contamination of facilities: None indicated at this time, additional samples were taken on 10/20/23, lab results pending. Routine distribution samples also taken on 10/17/23 had non-detect for coliform which supports our supposition that there is no bacteriological contamination of facilities other than the Hi Pressure Tunnel source.

F. Analytical results of any additional samples collected: Additional samples were taken on 10/20/23, lab results pending. Chlorine residuals taken in field at all samples were in the 1.4-1.5 mg/L range.

G. Community illness suspected of being waterborne: none indicated at this time

H. Records of the investigation and any action taken:

-Hi Pressure Tunnel well taken offline as of 5pm on 10/18/23.

-Routine distribution samples taken on 10/17/23 were non detect for total coliform per verbal report from Clinical Labs, formal report pending.

-Tunnel transmission line is only visible for about 500 feet of the total 3,700 lineal feet, visual observation made on 10/20/23 with nothing observed. Remainder of line is in remote canyon, last accessed in 2006 by District Staff with materials delivered via helicopter. A plan for access and inspection of the entire line is still to be developed.

-Actions Taken were (1) turn off source immediately upon notification of positive test result (2) confirm that distribution system samples were non-detect (3) flush distribution lines via hydrants in the impacted area to bring Holly Tank level down (4) fill tank with water from the K-3 groundwater well (5) take multiple samples on 10/20/23 as directed by DDW staff and (6) intend to take additional samples on 10/21/23 as directed by DDW.

Tom Majich, General Manager
Kinneloa Irrigation District
O (626) 797-6295 M (626) 833-0210
1999 Kinclair Dr
Pasadena , CA 91107-1017
<https://www.kinneloa Irrigation District.info/>



LOS ANGELES COUNTY
WATER PLAN

2023 Edition | Water Supply Resilience

Item 9e - Page 1

equity
sustainability
opportunity

local
water
resources
collaboration
relationships
regional
resilience



LA COUNTY WATER PLAN EXECUTIVE SUMMARY

OUR ROUTE TO RESILIENCE, TOGETHER

Climate change is establishing a “new normal” of more frequent and intense droughts, as well as less frequent and more torrential rains. Recognizing a new climate reality and the need to be thoughtful stewards of future water supplies, the Los Angeles County Board of Supervisors envisioned the development of a countywide water plan focused on collaborative management of Los Angeles County’s water resources. Los Angeles County Public Works (Public Works) developed this Los Angeles County Water Plan (CWP), together with water resources organizations, and an array of diverse stakeholders, to secure Los Angeles County’s water future and achieve our collective vision of equitable and sustainable water resources for everyone. The CWP builds upon the 2019 OurCounty Sustainability Plan, establishing the path to realizing our vision that is rooted in cross-sector collaboration and coalition building.

VISION

The CWP articulates a shared, inclusive, regional path forward to sustainably and equitably achieve safe, clean, and reliable water resources for Los Angeles County.

SHARED OPPORTUNITIES FOR WATER RESILIENCE

THE CWP FOCUSES ON ACHIEVING REGIONAL WATER RESILIENCE THROUGH COLLABORATIVE STRATEGIES. Over 200 agencies in Los Angeles County manage a complex network of water systems to meet the needs of our communities and environment. To achieve sustainability, resilience, and equity, cross-sector teamwork and a holistic approach to best leverage natural systems and infrastructure are essential. This plan is a living document. The targets, strategies, and actions are a starting point in this effort.

The CWP is not intended to address every water-related issue in Los Angeles County. Instead, it builds upon and complements the many existing local and regional water planning efforts by focusing on four key focal areas where new or additional regional collaboration can add value. These four key focal areas were established through a gaps analysis, which included a review of local and regional planning documents, along with initial stakeholder discussions encompassing a variety of perspectives. For each of the four key focal areas, the CWP describes shared desired outcomes, identified by Public Works through discussions with numerous groups and individuals. During our gaps analysis, Public Works evaluated disparities in water resilience throughout the County and specifically selected a focal area to address a pressing need. The CWP provides an approach for achieving these desired outcomes through collaboration and a platform for measuring progress.

CWP Four Key Focal Areas



REGIONAL WATER SUPPLY RELIABILITY

Improving regional water supply reliability by better leveraging our collective local and imported water resources and infrastructure.



GROUNDWATER MANAGEMENT AND QUALITY

Realizing our shared groundwater management opportunities by sharing expertise and resources to overcome challenges.



SMALL, AT-RISK SYSTEM RESILIENCE AND DRINKING WATER EQUITY

Ensuring a consistently high standard of water service for everyone in Los Angeles County by providing regional support for small systems, with focused attention to under-resourced communities.



WATERSHED SEDIMENT MANAGEMENT

Mitigating the impacts of wildfire on our water supplies through coordinated efforts between land and water managers.

REGIONAL STRATEGIES, REGIONAL BENEFITS

The CWP is organized around a framework of targets and strategies, which are supported by specific actions. Targets measure collective progress toward the shared desired outcomes for the key focal areas of the CWP. These targets are intended to help Los Angeles County achieve regional water resilience by 2045. See Chapter 2 for more on targets. Public Works will publish an interactive dashboard to track progress toward these targets. Strategies provide the overarching approaches to achieving the targets. Actions support the strategies and include specific steps to drive results, along with timing, responsible agencies, and potential participants.

Strategies for a Resilient Water Future



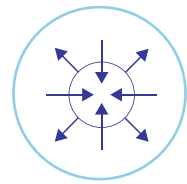
STRATEGY 1

Achieving the most efficient water use possible countywide



STRATEGY 2

Collaborating on consistent drought preparedness and response messaging



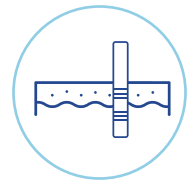
STRATEGY 3

Coupling local supply development with regional conveyance



STRATEGY 4

Managing salt and concentrate regionally



STRATEGY 5

Leveraging regional groundwater storage potential



STRATEGY 6

Collaborating on water quality needs and treatment technologies



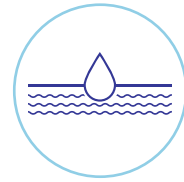
STRATEGY 7

Enhancing cost-effectiveness of pumping and treating impaired groundwater



STRATEGY 8

Protecting coastal groundwater basins from seawater intrusion



STRATEGY 9

Facilitating regional groundwater recharge understanding and initiatives



STRATEGY 10

Facilitating natural infiltration of precipitation



STRATEGY 11

Providing regional support for small, at-risk water systems



STRATEGY 12

Mitigating wildfire effects on water supply and quality



STRATEGY 13

Managing invasive species in riparian areas



STRATEGY 14

Facilitating sediment management and debris removal from flood control facilities

VALUES GUIDING FUTURE ACTION

At the onset of CWP development, Public Works proactively reached out to a diverse group of stakeholders to understand what matters to them. We identified several broad, overarching values for the CWP through these conversations. Some of these values provided core tenets to our overall process for preparing the CWP. Others guided us in establishing targets, strategies, and actions. Other values, while not directly addressed through the actions in the CWP, will continue to inform how water resource management is approached to achieve sustainable and equitable outcomes. Each of these values will guide future iterations of the plan, as well as steps taken throughout CWP implementation.

These values are aligned with LA County's Anti-Racism, Diversity, and Inclusion (ARDI) Initiative, which aims to guide the County by offering training and capacity building; technical assistance and planning; policy analysis and development; data collection; analysis and reporting; community, tribal, and other stakeholder engagement; and equity-infused resourcing and programming to help reach its goals.

CWP VALUES

- Strive for equitable benefits and impacts of water resource management decisions
- Ensure inclusive, diverse, multigenerational, and sustained tribal and community engagement
- Use data to inform policies, priorities, and practices
- Encourage multi-benefit projects and green infrastructure
- Promote capacity building of a local, skilled workforce
- Incorporate tribal knowledge into water management
- Integrate the knowledge and experiences of local communities in water planning
- Ensure CWP is actionable and adaptable
- Address climate resiliency
- Establish clear communications (outline priorities, listen, incorporate feedback, maintain dialogue)
- Implement vegetated/nature-based solutions



The CWP outlines a path to achieve a resilient water future for all Los Angeles County residents. Everyone has a role in successfully realizing the CWP. By working across County departments and with other partners, actively engaging Tribes and other stakeholders, seeking funding to support CWP implementation, and tracking and reporting on progress, we are committed to facilitating the ongoing collaboration that is core to making the CWP successful.

CENTRAL THEMES FOR A PATH AHEAD

To lead the way on regional initiatives, the CWP was developed with resilience, equity, sustainability, and engagement as central themes. These themes will guide CWP implementation and its future iterations to create reliable water resources for all communities in Los Angeles County.

RESILIENCE

Water resilience refers to the capacity of communities and the environment to adapt to changes in the availability of water resources resulting from extreme and shifting weather patterns, as well as other stressors.

EQUITY

Water equity entails ensuring that all people and communities can depend on water management institutions and infrastructure to provide equal access to clean, safe, high-quality, and affordable water.

SUSTAINABILITY

Sustainable water management involves using water resources in a manner that fulfills current ecological, social, and economic needs without compromising the ability to meet those needs in the future.

ENGAGEMENT

Engagement means actively reaching out to and collaborating with a diverse and representative range of stakeholders to develop and implement water management policies and programs.

A FORWARD-LOOKING LIVING DOCUMENT

THE CWP IS A LIVING DOCUMENT. This inaugural 2023 Edition of the CWP marks the first iteration for this regional planning effort and focuses on water supply resilience. As a living document, future iterations of the CWP are intended to evolve and adapt to meet Los Angeles County’s changing water resources needs.

WHAT IS IT? The CWP is a forward-looking strategic plan that crafts a vision for the region’s water resources management. The CWP articulates strategies to align efforts both small and large in order to launch Los Angeles County on a successful path towards water supply resilience.

WHO IS IT FOR? Water knows no city or county boundaries. The CWP is a plan for the County region as a whole, not a single locality or governing body. The CWP was developed to serve – collaboratively with local agencies and stakeholders – the people and communities of Los Angeles County.

THE CWP FILLS CURRENT GAPS TO ENHANCE THE REGION’S WATER RESILIENCE. Recognizing that there are so many ambitious efforts already underway in Los Angeles County, the CWP takes a bird’s-eye view on what else can be done to optimize, leverage, and align programs and processes. While the CWP does not attempt to reinvent the wheel or address every water-related issue, it complements existing efforts and fills in the gaps for matters not currently being addressed at a regional level. The CWP does not address activities best managed at the Federal, State, or local levels, nor does it recommend specific projects subject to environmental analysis or duplicate other ongoing efforts. As a strategic plan, the CWP does not supersede land use plans that have been adopted by the Board of Supervisors.

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resilience

Prepared by LA County Public Works with support from Woodard & Curran | December 2023



General Manager's Report for the Board of Directors Meeting on December 19, 2023

I. Customer Account Information

A. Customer Accounts –

Active accounts: 591
 Delinquent accounts receiving late charges: 32.
 Accounts shut off for non-payment: 0

Aged Receivables –

Month	Current	30 days	60 days	90 days or greater	Total
November 2022	\$20,997.03	\$5,621.74	\$2,148.38	\$362.14	\$29,129.29
December 2022	\$21,306.67	\$2,502.76	\$330.18	\$418.02	\$24,557.63
January 2023	\$22,653.06	\$2,307.71	\$72.16	\$0.00	\$25,032.93
February 2023	\$18,189.83	\$4,318.89	\$75.79	\$0.00	\$22,584.51
March 2023	\$35,127.70	\$1,920.64	\$879.11	\$0.00	\$37,927.45
April 2023	\$66,896.69	\$2,115.94	\$442.92	\$746.62	\$70,202.17
May 2023	\$12,468.11	\$1,150.61	\$0.00	\$0.00	\$70,202.17
June 2023	\$3,814.55	\$2,532.17	\$0.00	\$0.00	\$6,674.75
July 2023	\$19,782.26	\$4,981.87	\$0.00	\$0.00	\$24,764.13
August 2023	\$28,384.80	\$2,329.14	\$79.36	\$0.00	\$30,793.30
September 2023	\$22,157.30	\$1,983.49	\$78.91	\$0.00	\$30,793.30
October 2023	\$26,703.85	\$1,809.97	\$116.35	\$0.00	\$28,630.17
November 2023	\$45,028.39	\$2,257.29	\$0.00	\$0.00	\$47,285.68

II. General Manager's Projects and Activities

A. Meetings/Outreach/Key Contacts

1. Pasadena Glen Top to Bottom Descent on 12/1/23
2. FMWD Manager Meeting on 12/13/23
3. FEMA Coordinator Status Meeting on 12/13/23

B. Grant Funding Opportunities

1. Small Community Drought Relief Program: Application for the Brown-Glen Fire Flow Project Phase I was submitted on 1/13/23, there are 69 applications ahead of KID's and funding is exhausted presently for this program.
2. SB-470: "This bill codifies the Urban Water Community Drought Relief program and the Small Community Drought Relief program at the Department of Water Resources (DWR). Further, this bill authorizes these programs, upon appropriation, to fund projects that provide benefits in addition to drought relief, including projects that reduce the risk of wildfires for communities through water delivery system improvements for fire suppression purposes in high- and very high-fire hazard severity zones, among other things." – This bill was amended in the assembly, passed, and ordered to the Senate as of 9/7/2 but vetoed by Governor Newsom on 10/8/23.
3. ACWA-JPIA Risk Control Grant: Grant opportunity for up to \$10,000. Submittal period is between 10/2/23 and 12/1/23, work to be complete between 10/2/23 and 9/30/24, JPIA approval by 3/1/24. JPIA noted that Arc-Flash Hazard Study not acceptable due to being a regulatory requirement.

4. Hazard Mitigation Grants: KID staff is monitoring EPA BRIC (Building Resilient Infrastructure and Communities) grant opportunities to apply once the PWAG Multi-Agency Hazard Mitigation Plan is complete and approved.
5. FEMA Grants: FEMA and CalOES have approved KID grants requests for East Tank Earthwork Removal and Wilcox Reservoir Road site improvements in association with DR-4699 CA "California Severe Winter Storms" disaster.

C. Office Staff Updates

1. Ampstun billing system went live on 10/6/23. Training of all KID office staff is underway.
2. IT Upgrade Project: All work including new Fire Wall Complete. Larger UPS installed in server closet to solve network down issues due to power surges.

D. System Project Updates

1. **Eucalyptus Booster Pump #3 installed with new pump and motor; project complete.**
2. **Holly Tanks (both East and West) exterior painting is underway.**
3. **Tunnels turned to Spreading on 12/1/23**
4. **East Tank Earthwork Removal Project (FEMA Grant) underway as of 12/11/23**
5. **Office Power Issues solved by SCE, HVAC system still down pending replacement part.**
6. Holly Booster Station Electrical decommissioning has begun to remove electrical components and safe-off site for future Holly Transfer Valve project.
7. Tree Trimming District Wide/Brush Clearance is underway. All brush/tree remediation is expected to be complete by the end of the year.
8. Various meters that have been removed from service have been sent out to Golden Meter for testing, results are pending.
9. Valve Exercising has begun under a Mutual Aid Agreement with Rubio Canyon Land and Water Company whereby they furnish a valve operating truck and operator one day per week, for supporting KID staff in a system wide valve exercising initiative. This was last done system wide in 2014 and at the time the intent was to subsequently exercise 50% of system valves each year. At the current rate it is expect that we should be complete with a system wide exercising in about 6 months. After that we anticipate one day per month of regular valve exercising which would put all system valves on a 3-year exercising schedule.
10. Seismic Valve Operation and Training: Quarterly testing of the seismic valves and system operations was done the first week of September. The Vosburg Reservoir seismic valve is non-operational, initial cost estimate to replace is ~\$50,000. KID staff is researching other options. In the interim field staff are aware of the issue and if there is a seismic event the valve may need to be closed manually.
11. Hi-Lo Tunnel Pipeline at canyon exit fused and ready for final installation using HDPE on canyon bottom.
12. Brown-Glen Fire Flow Project Phase I – Project design is complete. Current cost estimate for the project based on updated engineers estimate and contractor opinion is \$1.75m as of August 2023. No funding is currently allocated for this project in 2023.
13. Brown-Glen Fire Flow Improvement Project Phase II – This would extend the project from the corner of Sierra Madre Villa/Villa Knolls out to Hartwood Point. This project is not designed. This project would serve 7 customers and improve fire flow to 3 hydrants on a private street. Estimated project cost is \$1m-1.25m.
14. Vosburg Reservoir Rehab – scope of work to be developed and budgeted following dive inspection.
15. Wilcox Reservoir Road –Road is passable, no immediate work is planned. FEMA Request for Public Assistance submitted.

E. Regulatory Compliance and Reporting

1. **Water Sampling Clinic with all staff held on Monday 12/4/23.**
2. **New Clearinghouse Annual Inventory Report (CAIR) reporting obligation will take effect on January 1, 2024. All info is already in the EAR so additional reporting requirement only.**
3. **Fluoride Variance – KID fluoride variance expires on 12/13/23. Compliance Plan submitted to DDW on 7/10/23. Revised permit application and blending plan submitted to DDW on 12/12/23.**
4. **Federal Lead and Copper Rule Revisions: Notice received from SWRCB on 2/14/23. All public water systems to develop and submit a service line material inventory to the SWRCB, DDW by 10/16/24. This inventory includes service line material on both District side of meter, and customer side of meter. On 12/6/23 the EPA published the proposed Lead and Copper Rule Improvements (LCRI), comments are due no later than 2/5/24. KID is monitoring recommendations from AWWA and other advocacy groups on how best to proceed in 2024.**
5. Monthly Water Quality Reporting – Monthly reporting due by the 10th of each month.
6. Water Quality Emergency Notification Plan – annual requirement, filed timely in April 2023
7. Electronic Annual Report for 2022 (eAR) – released 3/13/23, due by 5/13/23. Draft submittal made to DWR staff for their review on 4/24/23. DDW staff reviewed and approved for final filing on 6/28/23.
8. Drought and Conservation Report – required per Order No. DDW_HQ_Drought2023-001 issued on 1/1/23. New requirement for monthly data due quarterly. Q2 report was filed timely on 7/5/23. Q3 report is due by the end of October.
9. 2022 Consumer Confidence Report was issued to all customers on 6/19/23 and included final public notice for Citation 22C_007 and Citation 23C-003.
10. PFOA, PFOS and PFAS Chemicals: Impacts of regulations are being monitored through trade groups that KID is affiliated with and Raymond Basin monitoring.
11. SB 552 – status of compliance, must meet Fire Flow requirements by January 2032. Costs to be considered in Master Planning.
12. SB 1020 – Clean Energy, Jobs, and Affordability Act of 2022 – requires 100% of all state agency electricity consumption to be from renewable and carbon neutral sources by 2035.

*** Acronyms:**

ACWA – Association of California Water Agencies
 ACWA JPIA – Association of California Water Agencies Joint Powers Insurance Authority
 CSDA – California Special Districts Association
 CUEA – California Utilities Emergency Association
 DDW – Dept. of Drinking Water
 DWR – Dept. of Water Resources
 FMWD – Foothill Municipal Water District
 KID – Kinneloa Irrigation District
 LAFCO – Local Agency Formation Commission of Los Angeles County
 PWAG – Public Water Agencies Group
 RBMB – Raymond Basin Management Board
 SWRCB – State Water Resources Control Board
 LCRR – Lead and Copper Rule Revisions

III. Incident Reports

Customer Leaks	System Leaks	Water Waste	Water Quality	Customer Service*	Comments
0	0	0	0	5	none

* Customer service includes requests for water shutoff to facilitate customer plumbing repairs, inquiries about water bills, requests for leak checks and general questions.

IV. Water Supply Summary as of November for the Watermaster Year 2023-2024

Raymond Basin Groundwater (Acre Feet)		Kinneloa Irrigation District Water Tunnels (Acre Feet)	
Water Rights	516	Holly High-Low	34.0
Less Temporary 30% Reduction in Water Rights	-154.8	Eucalyptus	0.0
Net Decreed Right	361.2		
Prior Year Carryover	51.6	Far Mesa	20.7
Leases/Exchanges	0	House	10.0
Prior Year Spreading	133.7	Delores	69.5
Short Term Storage	183.4		
Total Allowable Extractions	729.9		
Less Water Extracted YTD This Watermaster Year	-156.4	Year to Date Tunnel Production	134.2
Remaining Allowable Groundwater Extractions through June 2024	573.5	Remaining Estimated Tunnel Production through June 2024*	0.0
Total Available Water Supply (Remaining Allowable Groundwater + Remaining Estimated Tunnel Production through June 2024)		573.5 Acre Feet	
Less Remaining Forecasted Retail Water Sales through June 2024		-250.0 Acre Feet	
Estimated Surplus Water through June 2024**		323.5 Acre Feet	

Total Retail Water Sales for Watermaster Year 2022-2023 = 492.8 Acre Feet

* Assumes 50% of total Tunnel Production will be diverted to spreading due to Fluoride Blending program implementation

** This is the forecasted surplus water available for sale in the current year and/or carryover to the next Watermaster year which starts on July 1 subject to the carryover limits established by the Raymond Basin Management Board. Regarding the available surplus water, we will maximize the carryover to the next year and deliver the balance of the forecasted surplus water (if any) to the City of Pasadena. *Current Agreement with City of Pasadena for sale of excess groundwater expires June 30, 2025.*

In the 2022-2023 year, 238.5 Acre-Feet were sold to the City of Pasadena, 51.6 Acre-Feet were carried over to 2022-2023 and 183.4 Acre-Feet were put into our short-term storage account. Although we may lease additional pumping rights from another agency with surplus pumping rights, this is not considered a guaranteed source of supply since it is subject to negotiation from another Raymond Basin member.

East Tank Earthwork Removal Project Underway as of 12/13/23



Holly Tanks Exterior Recoating Project Underway



Old Eucalyptus Booster #3 Being Removed on 11/20/23



New Eucalyptus Booster #3 Pump and Motor Installed on 11/29/23

