



LAVWMA

QUARTERLY REPORT OF OPERATIONS

FY 2022-2023, 2nd Quarter



Prepared by



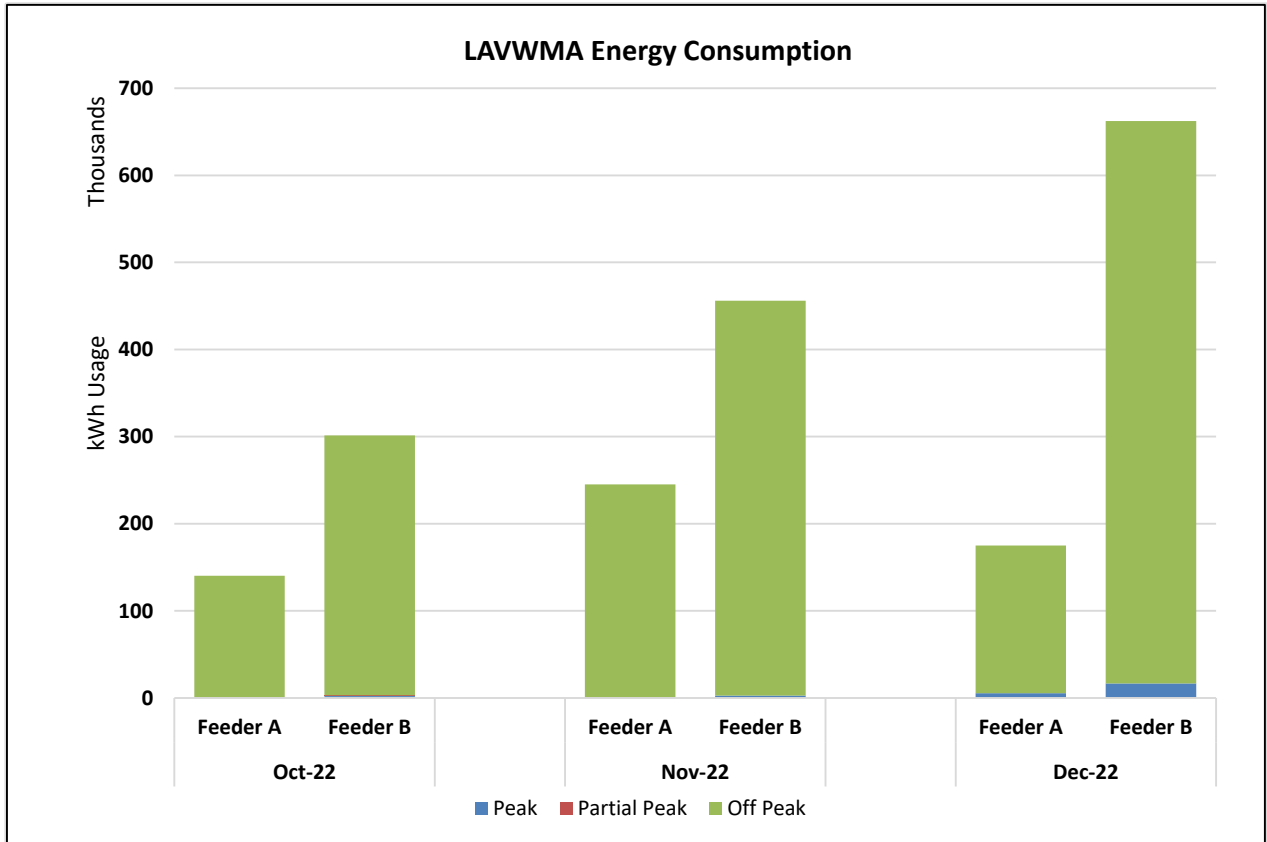
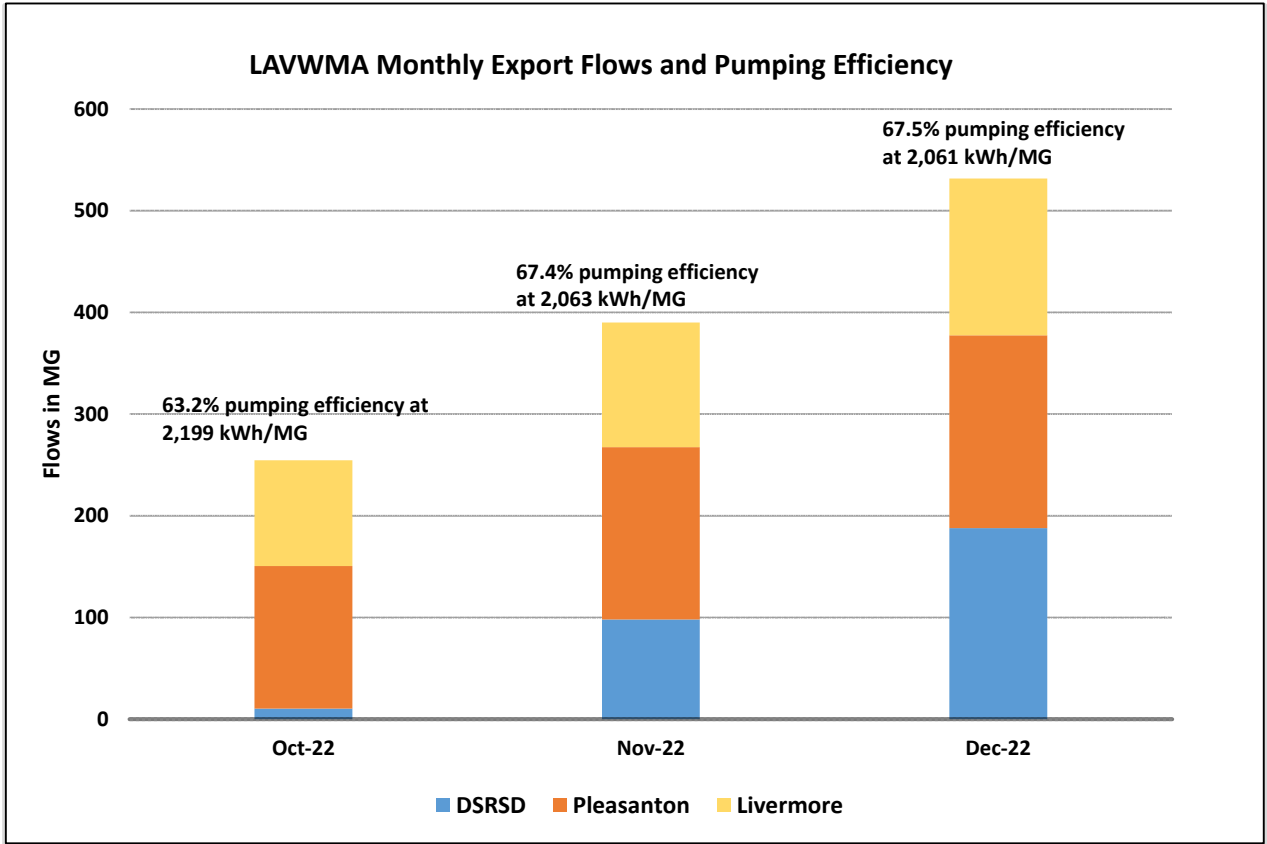
**Dublin San Ramon
Services District**

Water, wastewater, recycled water

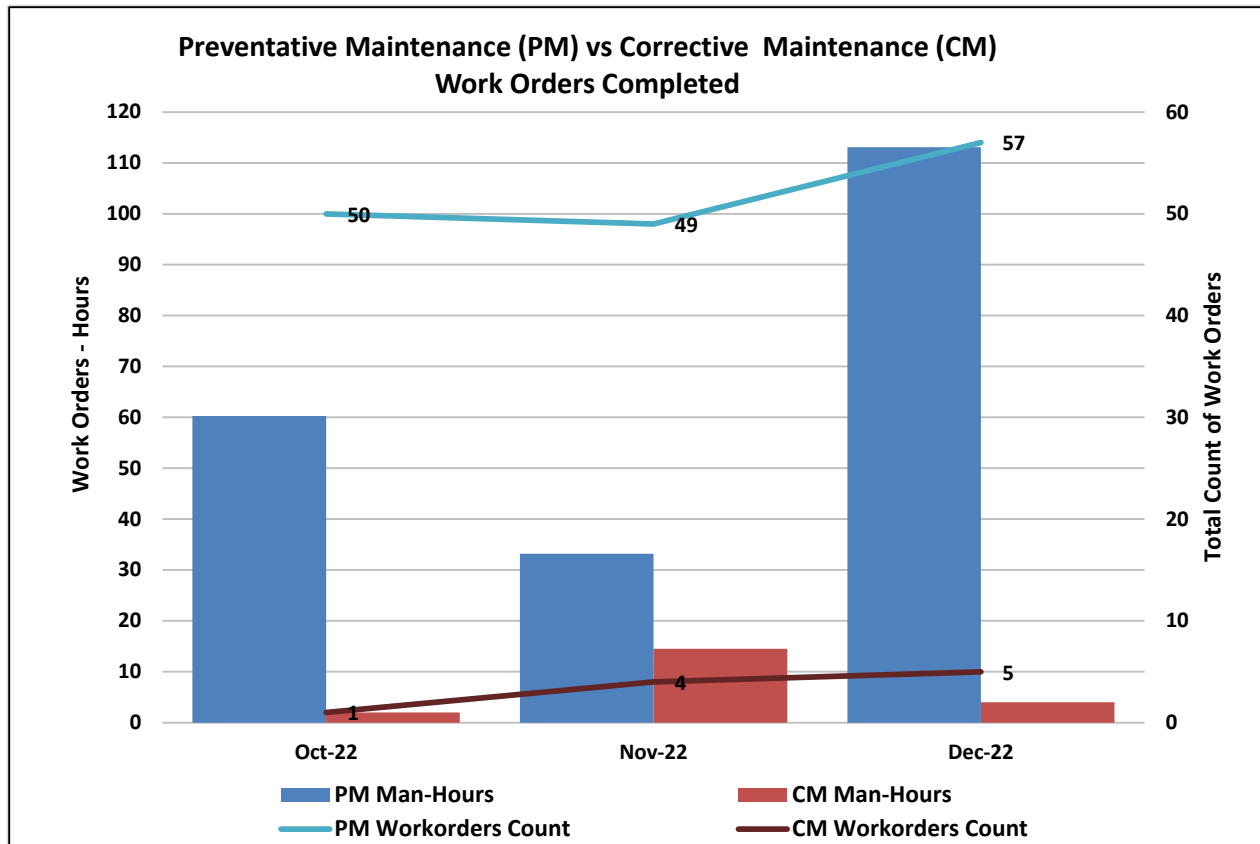
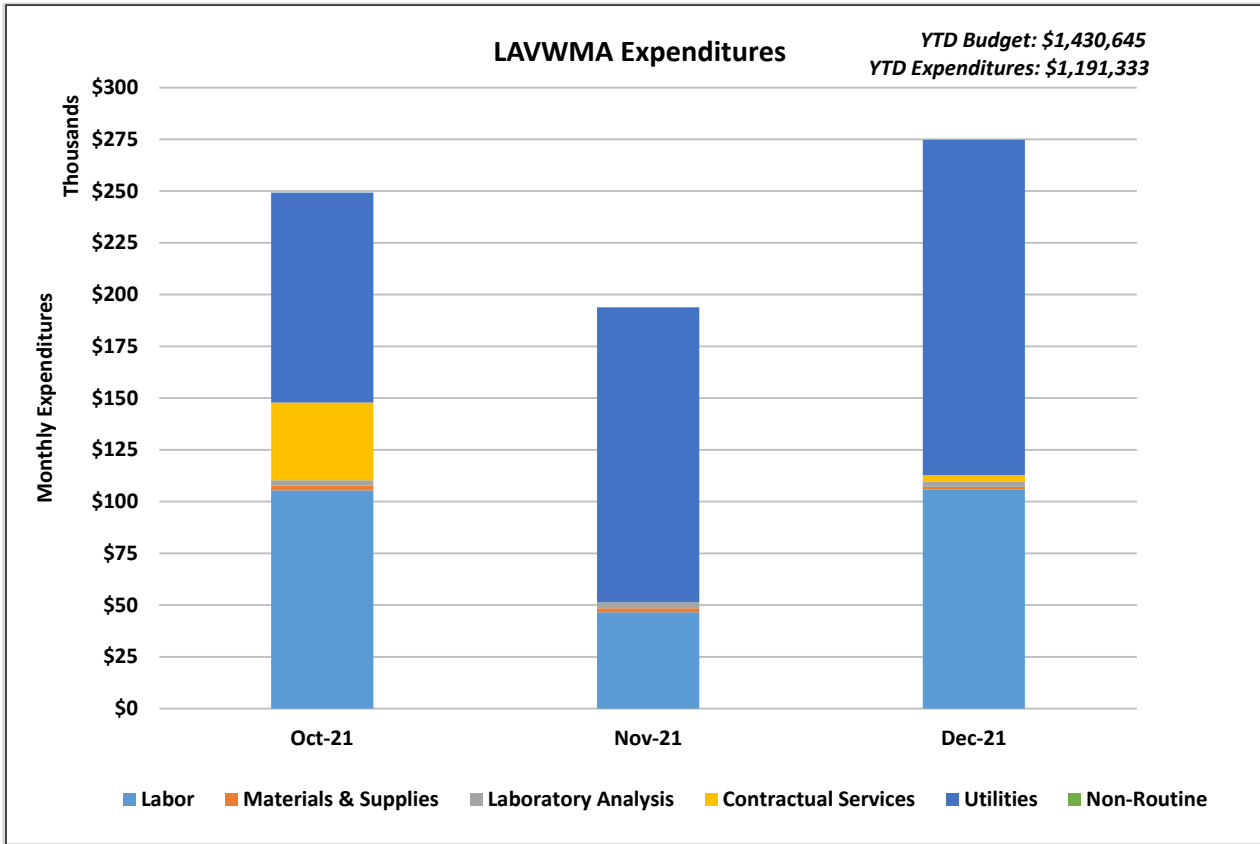
QUARTERLY REPORT OF OPERATIONS
LAVWMA PUMPING AND CONVEYANCE SYSTEM
2nd Quarter FY 2022-2023: October to December 2022

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LAVWMA FYE 2023 SECOND QUARTER AT A GLANCE



LAVWMA FYE 2023 SECOND QUARTER AT A GLANCE



QUARTERLY REPORT OF OPERATIONS
LAVWMA PUMPING AND CONVEYANCE SYSTEM
2nd Quarter FY 2022-2023: October to December 2022

1. EXECUTIVE SUMMARY

The Livermore-Amador Valley Water Management Agency (LAVWMA) pumping and effluent conveyance system operated near peak pumping design capacity during a historical rainfall event during the second quarter of Fiscal Year 2022-2023. During the quarter, a total of 1,176.22 million gallons of fully treated secondary effluent were pumped to San Francisco Bay via the East Bay Dischargers Authority (EBDA) outfall diffuser and San Leandro Sample Station (SLSS); the overall efficiency of the pumping system averaged 66.0%, with an average electrical cost of \$440 per million gallons, or \$143 per acre-foot.

Total year-to-date operations and maintenance (O&M) expense is \$1,191,333 or 42% of the O&M annual budget amount of \$2,861,290 and the overall cost of operation is \$717 per million gallons pumped or \$234 per acre-foot.

2. OPERATIONS

Of the 1,176.22 million gallons of effluent conveyed through the LAVWMA system, approximately 381 million gallons was from the City of Livermore, 499 million gallons from City of Pleasanton and 296 million gallons from DSRSD. Monthly export flow summary is shown on Table 4. Monthly reports sent to EBDA which detail daily export flows and monitoring analysis of the treated effluent during the quarter are shown on Table 9.

LAVWMA's emergency preparedness includes the permitted Wet Weather Operations Strategy. Beginning December 26, atmospheric rivers pushed through northern California, bringing substantial amounts of rain. On December 31, 2022, the 10-hour period from 5:00 AM to 3:00 PM equated to an approximate 100-year storm event.

Some minor flooding occurred near the end of the LAVWMA pipeline in the San Leandro Sample Station building and impacted the PLC cabinet, making the PC inoperable; staff was able to relocate the electrical equipment to the center desk to protect against water intrusion.

Currently PG&E implements a rate plan – broken down into peak, partial peak, off peak, and seasonal super off peak periods – that increases rates for energy used during certain periods of the day, based on energy demand across the energy grid. Throughout the reporting period, staff utilized an enhanced Operations Strategy, implementing an efficient pumping plan and avoided pumping during partial peak and peak PG&E energy demand periods where feasible. During the peak of the storm events, the LAVWMA pump station energy pumping program operated abnormally due to some EBDA pumping restrictions.

Over the past quarter, staff focused on succession planning in the operation and management of the LAVWMA system. Several District staff were trained in several routine operations and preventative maintenance as well as sample collection for laboratory analysis. As a result, there was a slight increase in labor, as is depicted by the LAVWMA Expenditures table on page 3.

3. MAINTENANCE

During the quarter, 207 hours were spent to complete 156 preventative maintenance work orders and 21 hours to complete 10 corrective maintenance work orders on LAVWMA equipment and systems.

The following are some noteworthy maintenance activities during the quarter:

Electrical:

- Responded to power outage at the pump station and reset soft starter fail alarms
- Retrained O&M staff on procedures on how to reset EMR-4000's
- Began preparations for standby generator mobilization

Instrumentation and Controls:

- Corrected issues with chlorine sensors
- Corrected issues with pH sensors
- Replaced basin area lighting with warranty replacement fixtures
- Adjusted working hours schedule configurations in the security system
- Responded to wet well level issues
- Began preparations for LAVWMA DSRSD flow meter at Junction Structure
- Installed wiring for the 24" flow meter for pipeline on the Livermore side of the junction structure
- Responded to pump and motor high temperature alarm caused by RTD connections

Mechanical:

- Replaced the 24" flow meter for pipeline on the Livermore side of the junction structure
- Detected four air valve leaks on Lewelling Boulevard in San Leandro using Smart Detectors technology; completed repairs and prevented spills in all four incidents

4. BUDGET VARIANCE AND EXPENSES

Second quarter labor expenses totaled \$257,841 for 1,315 man-hours of effort, an average of 2.5 full time equivalents (FTEs). O&M expenses for the quarter including labor, supplies, laboratory analysis, contractual services, and utilities totaled \$717,873 for an average cost of \$610 per million gallons pumped or \$199 per acre-foot. The total expense for the Livermore sole use pipeline for the quarter was \$1,334, which was partially offset by receipt of the twice-annual "Small Business Climate Credit" from PG&E for continuously low electric usage.

Operation and maintenance (O&M) expenses and budget utilization details are shown on Tables 5, 6, 7, and 8.

5. ITEMS OF INTEREST

DSRSD is the operator for the LAVWMA export and storage facilities that pump the combined flow from the DSRSD WWTP and Livermore WWTP into EBDA's system for discharge into the San Francisco Bay. Per the 2021 EBDA-LAVWMA Amended and Restated Master Agreement, LAVMWA has rights to pump up to 41.2 MGD to the EBDA system but can be curtailed to 19.72 MGD under certain conditions. On December 31, the total LAVWMA export pumping flow was 25.9 MGD with a peak of 35.1 MGD. Staff had to manage around an 8-hour period when EBDA was restricting the amount of flow that LAVWMA could discharge to the EBDA system due to high tide conditions. During this period, staff diverted to the LAVWMA storage basins. After the restriction was lifted, staff increased the export pumping capacity to approximately 36 MGD to empty the basins to prepare for the next storm event.

LAVWMA's discharge permit allows LAVWMA to utilize two wet weather outfalls, San Lorenzo Creek in San Leandro and Alamo Canal adjacent to the WWTP, under certain wet weather

conditions. DSRSD Operations staff successfully managed wet weather flows during the recent storm events and did not need to discharge to either of the permitted shallow water outfalls.

After the December 31 storm event, LAVWMA and DSRSD moved forward with installing a rental emergency generator for the LAVWMA pump station to provide backup power in the event of a PG&E power outage. The 2000 kW emergency generator arrived onsite and was connected by DSRSD staff on January 12. During the peak of the storm, eight LAVWMA pumps were in operation. On January 19, LAVWMA and DSRSD staff performed a test of the emergency generator as a source of back-up power and successfully ran four small pumps. Staff plans on discussing this item at the upcoming LAVWMA Board Meeting on February 15, 2023.



Photo: LAVWMA Rental Emergency Generator, January 12, 2023

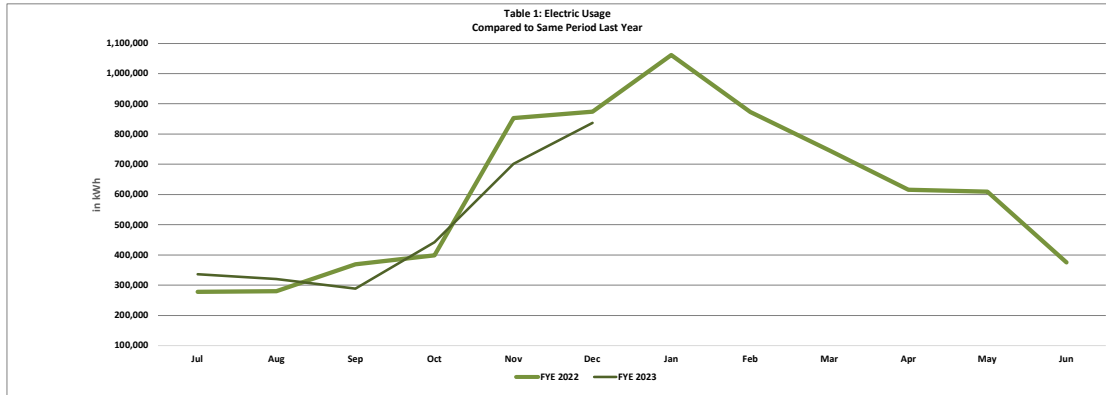
6. CAPITAL PROJECTS

As additional information, Table 11 provides a status summary of the capital projects that are primarily managed by the LAVWMA General Manager. The O&M budget and expenditures discussed in this quarterly report do not include capital projects.

TABLE 1 - Electric Usage, Efficiency and Costs

LAVWMA SYSTEM: Fiscal Year 2022-2023, Quarterly Report

PG&E Service Accounts: Rate Schedule B20 starting March 2021																	Total Export Flow ¹	Pumping			
Month	Acct # 8482061923-1 Service A						Acct # 8440395259-5 Service B						Billing Days	Total				MG	Energy kWh/MG	Cost	
	kWh	Peak	Partial Peak	Off Peak	Super Off Peak	\$	kWh	Peak	Partial Peak	Off Peak	Super Off Peak	\$		kWh	\$/kWh	\$	\$/MG			\$/AF	
Jul-22	0	0	0	0	0	\$1,807	336,556	1,732	1,635	333,189	0	\$72,791	31	336,556	\$0.22	\$74,598	167	2,021	\$448	\$146	68.8%
Aug-22	140,062	0	44	140,018	0	\$30,882	180,226	2,139	1,914	176,173	0	\$40,618	32	320,288	\$0.22	\$71,500	163	1,966	\$439	\$143	70.7%
Sep-22	123,902	0	0	123,902	0	\$28,070	165,391	2,105	1,813	161,473	0	\$37,727	30	289,293	\$0.23	\$65,797	131	2,209	\$502	\$164	62.9%
Oct-22	140,195	0	0	140,195	0	\$34,065	301,346	2,156	997	298,193	0	\$67,784	29	441,541	\$0.23	\$101,849	201	2,199	\$507	\$165	63.2%
Nov-22	245,189	0	0	245,189	0	\$54,210	456,025	2,817	0	453,208	0	\$87,368	32	701,214	\$0.20	\$141,578	340	2,063	\$416	\$136	67.4%
Dec-22	175,006	5,433	0	169,573	0	\$34,895	662,353	16,666	0	645,687	0	\$126,168	29	837,359	\$0.19	\$161,063	406	2,061	\$396	\$129	67.5%
Jan-23																	344	0	\$0	\$0	n/a
Feb-23																	0	n/a	n/a	n/a	n/a
Mar-23																	0	n/a	n/a	n/a	n/a
Apr-23																	0	n/a	n/a	n/a	n/a
May-23																	0	n/a	n/a	n/a	n/a
Jun-23																	0	n/a	n/a	n/a	n/a
Quarter																					
Average	186,797					\$41,057	473,241					\$93,773	30	660,038	\$0.21	\$134,830	316	2,108	\$440	\$143	66.0%
Total	560,390					\$123,170	1,419,724					\$281,320	90	1,980,114		\$404,490	947	6,323			
Minimum	140,195					\$34,065	301,346					\$67,784	29	441,541	\$0.19	\$101,849	201	2,061	\$396	\$129	63.2%
Maximum	245,189					\$54,210	662,353					\$126,168	32	837,359	\$0.23	\$161,063	406	2,199	\$507	\$165	67.5%
YTD																					
Average	137,392					\$30,655	350,316					\$72,076	31	487,709	\$0.22	\$102,731	146	1,789	\$387	\$126	66.7%
Total	824,354					\$183,930	2,101,897					\$432,455	183	2,926,251		\$616,385	1,751	12,520			
Minimum	0					\$1,807	165,391					\$37,727	29	289,293	\$0.19	\$65,797	0	0	\$0	\$0	62.9%
Maximum	245,189					\$54,210	662,353					\$126,168	32	837,359	\$0.23	\$161,063	406	2,209	\$507	\$165	70.7%



NOTES:

- 1) This Table 1 does not reflect what was the actual expenditures paid for the month and may not match what is in Table 8 Expenditures. The primary purpose of Table 1 is to show the electric usage and efficiency for the month it actually occurred.
- 2) To calculate pumping efficiency, read dates, electric usage, and export flows are **matched to PG&E billing periods**: 9/14 - 10/12 for October, 10/13 - 11/13 for November, and 11/14 - 12/12 for December.
- 3) Pumping efficiency is based on continuous average flows and a TDH of 442.8 feet, including static lift of 408.8 feet and piping losses of 34 feet (per Charlie Joyce, B&C, 2/12/07).

TABLE 2 - Pump Run Time Hours

LAVWMA SYSTEM: Fiscal Year 2022-2023, Quarterly Report

Month	Pump	Pump	Pump	Pump	Pump	Pump	Pump	Pump	Pump	Pump	TOTAL	
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	Pump Run Hours	Pump Utilization %
Jul-22	0	14	0	338	0	1	0	1	182	183	719	9.7%
Aug-22	0	1	95	296	0	1	93	1	0	298	784	10.5%
Sep-22	0	79	87	124	118	1	125	23	188	124	869	12.1%
Oct-22	0	207	79	186	128	47	309	109	110	68	1,243	16.7%
Nov-22	0	492	255	7	224	30	296	118	459	10	1,890	26.3%
Dec-22	0	430	320	240	301	105	425	110	521	29	2,483	33.4%
Jan-23											0	0.0%
Feb-23											0	0.0%
Mar-23											0	0.0%
Apr-23											0	0.0%
May-23											0	0.0%
Jun-23											0	0.0%
Quarter												
Average	0	376	218	144	218	61	344	112	363	36	1,872	25.4%
Total	0	1,129	654	433	653	182	1,031	336	1,090	107	5,616	
Minimum	0	207	79	7	128	30	296	109	110	10	1,243	16.7%
Maximum	0	492	320	240	301	105	425	118	521	68	2,483	33.4%
YTD												
Average	0	204	139	199	129	31	208	60	243	119	666	9.1%
Total	0	1,222	836	1,192	771	185	1,249	361	1,461	712	7,989	
Minimum	0	1	0	7	0	1	0	1	0	10	0	0.0%
Maximum	0	492	320	338	301	105	425	118	521	298	2,483	33.4%

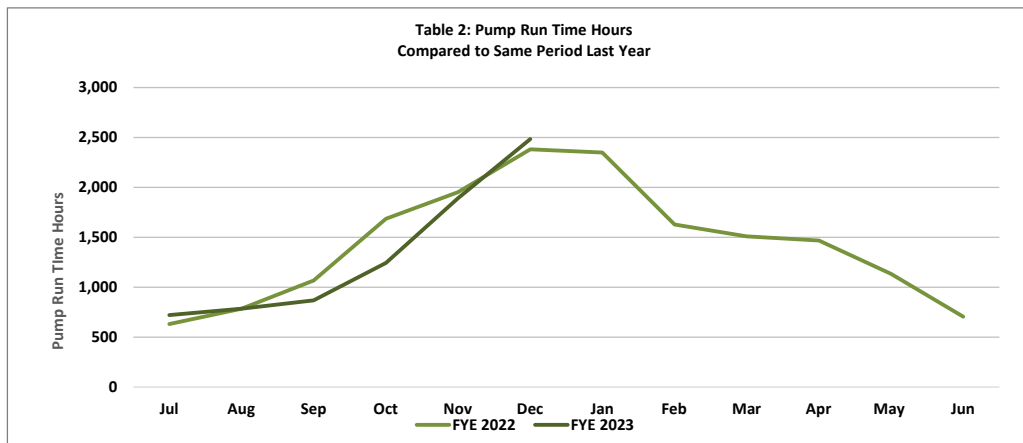
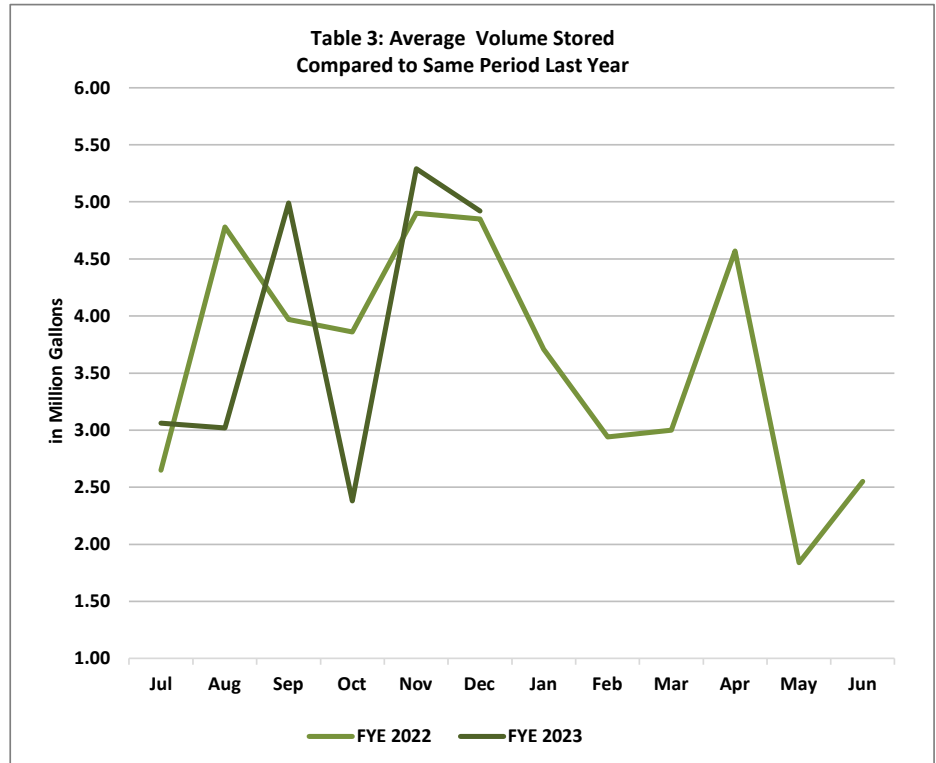


TABLE 3 - Monthly Average Storage Basin Levels and Volume

LAVWMA SYSTEM: Fiscal Year 2022-2023, Quarterly Report

Month	Average Daily Volume			Average Volume Stored MG	Average Storage Available MG	Storage Basin Utilization %
	Basin No. 1	Basin No. 2	Basin No. 3			
	Feet	Feet	Feet			
Jul-22	1.58	0.21	4.24	3.06	18	17.0%
Aug-22	2.17	0.22	3.82	3.02	18	16.8%
Sep-22	3.18	1.52	5.08	4.99	18	27.7%
Oct-22	3.20	0.21	1.77	2.38	18	13.2%
Nov-22	1.48	2.31	6.06	5.29	18	29.4%
Dec-22	4.06	0.25	5.27	4.92	18	27.3%
Jan-23					18	0.0%
Feb-23					18	0.0%
Mar-23					18	0.0%
Apr-23					18	0.0%
May-23					18	0.0%
Jun-23					18	0.0%
Quarter						
Average	2.91	0.92	4.37	4.20		0.23
Minimum	1.48	0.21	1.77	2.38		0.13
Maximum	4.06	2.31	6.06	5.29		0.29
YTD						
Average	2.82	0.90	4.40	3.94		11.0%
Minimum	1.48	0.21	1.77	2.38		0.0%
Maximum	4.06	2.31	6.06	5.29		29.4%



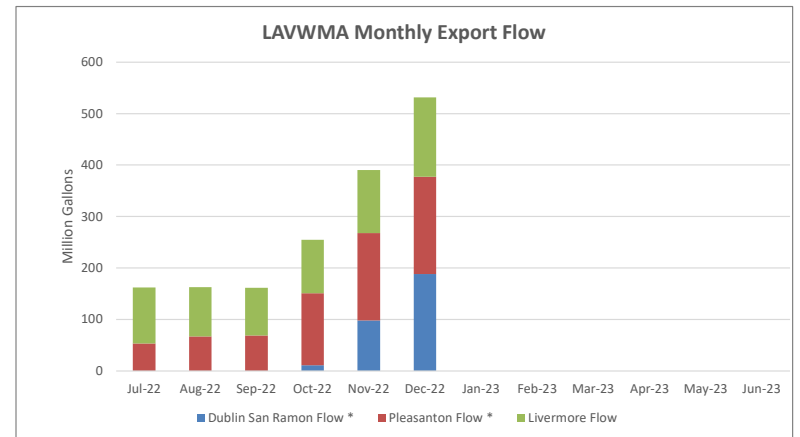
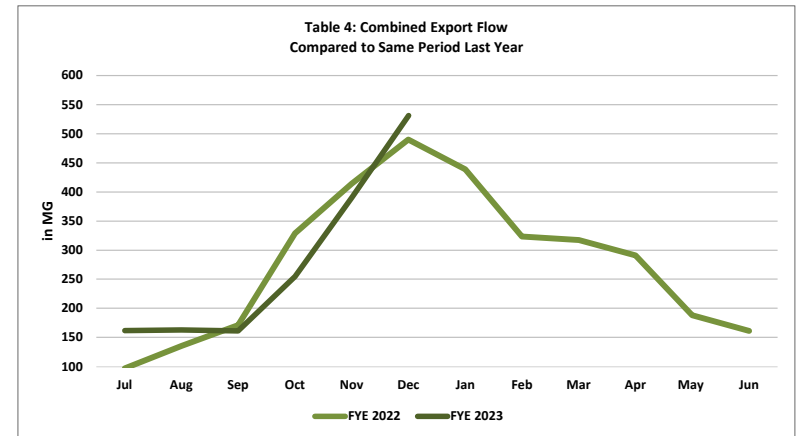
Note: Total available storage volume is 18 million gallons.

TABLE 4 - Monthly Export Flow

LAVWMA SYSTEM: Fiscal Year 2022-2023, Quarterly Report
 Estimated Flow: 3,552 MG

Month	Dublin San Ramon Flow * MG	Pleasanton Flow * MG	Livermore Flow MG	Combined Export Flow MG	Total for Quarter	PGE tab
Jul-22	0.00	52.86	109.08	161.93		161.93
Aug-22	0.00	66.98	95.65	162.62		162.62
Sep-22	0.00	68.48	92.90	161.38	485.94	161.38
Oct-22	10.48	140.14	104.04	254.65		254.65
Nov-22	98.09	169.48	122.41	389.98		389.98
Dec-22	187.90	189.56	154.12	531.58	1,176.22	531.58
Jan-23	0.00	0.00				0.00
Feb-23	0.00	0.00				0.00
Mar-23	0.00	0.00			0.00	0.00
Apr-23	0.00	0.00				0.00
May-23	0.00	0.00				0.00
Jun-23	0.00	0.00			0.00	88.82
Quarter						
Total	296.47	499.18	380.57	1,176.22		
Average	98.82	166.39	126.86	392.07		
Minimum	10.48	140.14	104.04	254.65		
Maximum	187.90	189.56	154.12	531.58		
YTD						
Total	296.47	687.49	678.20	1,662.16		3552
Average	24.71	57.29	113.03	277.03		
Minimum	0.00	0.00	92.90	161.38		
Maximum	187.90	189.56	154.12	531.58		

Budgeted Flow:
3552



* Monthly totals do not include flows diverted for recycling use by DERWA and Pleasanton.

TABLE 5 - Labor Effort, Expenditures, and Budget Utilization

LAVWMA SYSTEM: Fiscal Year 2022-2023, Quarterly Report

FY Labor Budget \$1,161,350

Month	Billed	FTE Equiv	Labor Invoice	YTD	Budget Utilization	Labor	Export Flow	
	Labor Hours			Labor Expense		Budget Remaining	MG	AF
Jul-22	433.0	2.5	\$83,781	\$83,781	7.2%	\$1,077,569	161.93	497
Aug-22	345.0	2.0	\$73,088	\$156,869	13.5%	\$1,004,481	162.62	499
Sep-22	343.0	2.0	\$66,501	\$223,370	19.2%	\$937,980	161.38	495
Oct-22	567.5	3.3	\$105,424	\$328,794	28.3%	\$832,556	254.65	782
Nov-22	215.0	1.2	\$46,528	\$375,322	32.3%	\$786,028	389.98	1,197
Dec-22	532.5	3.1	\$105,889	\$481,211	41.4%	\$680,139	531.58	1,631
Jan-23								
Feb-23								
Mar-23								
Apr-23								
May-23								
Jun-23								
QUARTER								
Total	1,315.0		\$257,841				1,176.22	3,610
Average	438.3	2.5	\$85,947				392.07	1,203
Minimum	215.0	1.2	\$46,528				254.65	782
Maximum	567.5	3.3	\$105,889				531.58	1,631
YTD								
Total YTD	2,436.0		\$481,211		41.4%	\$680,139	1,662.16	5,101
Average YTD	406.0	2.3	\$80,202				277.03	850
Minimum	215.0	1.2	\$46,528				161.38	495
Maximum	567.5	3.3	\$105,889				531.58	1,631

Notes:

TABLE 6 - O&M Expenditures and Budget Utilization

LAVWMA SYSTEM: Fiscal Year 2022-2023, Quarterly Report

Total O&M Budget: **\$2,861,289**

Month	Labor Expenses	A/P Expenses	Total O&M Expenses	YTD O&M Expenses	Budget Utilization	O&M Budget Remaining	Overall O&M Cost		Export Flow	
							\$/MG	\$/AF	MG	AF
Jul-22	\$83,781	\$3,146	\$86,927	\$86,927	3.0%	\$2,774,362	\$537	\$175	161.93	497
Aug-22	\$73,088	\$171,670	\$244,757	\$331,684	11.6%	\$2,529,605	\$1,505	\$490	162.62	499
Sep-22	\$66,501	\$75,275	\$141,776	\$473,460	16.5%	\$2,387,829	\$879	\$286	161.38	495
Oct-22	\$105,424	\$143,851	\$249,275	\$722,735	25.3%	\$2,138,554	\$979	\$319	254.65	782
Nov-22	\$46,528	\$147,294	\$193,823	\$916,558	32.0%	\$1,944,731	\$497	\$162	389.98	1,197
Dec-22	\$105,889	\$168,886	\$274,775	\$1,191,333	41.6%	\$1,669,956	\$517	\$168	531.58	1,631
Jan-23										
Feb-23										
Mar-23										
Apr-23										
May-23										
Jun-23										
<u>QUARTER</u>										
Total	\$257,841	\$460,032	\$717,873				\$610	\$199	1,176.22	3,610
Average	\$85,947	\$153,344	\$239,291						392.07	1,203
Minimum	\$46,528	\$143,851	\$193,823				\$497	\$162	254.65	782
Maximum	\$105,889	\$168,886	\$274,775				\$979	\$319	531.58	1,631
<u>YTD</u>										
Total YTD	\$481,211	\$710,122	\$1,191,333		41.6%	\$1,669,956	\$717	\$234	1,662.16	5,101
Average YTD	\$80,202	\$118,354	\$198,556							
Minimum	\$46,528	\$3,146	\$86,927				\$497	\$162	161.38	495
Maximum	\$105,889	\$171,670	\$274,775				\$1,505	\$490	531.58	1,631

Notes:

TABLE 7 - O&M Expenditures and Budget Utilization for Livermore Sole Use Facilities

LAVWMA SYSTEM: Fiscal Year 2022-2023, Quarterly Report

Livermore Sole Use Facilities			
Month	Labor Expenses	A/P Expenses	Total Expenses
-----	-----	-----	-----
Jul-22	\$0	\$0	\$0
Aug-22	\$0	\$545	\$545
Sep-22	\$0	\$257	\$257
Oct-22	\$0	-\$461	-\$461
Nov-22	\$0	\$550	\$550
Dec-22	\$0	\$1,245	\$1,245
Jan-23	\$0	\$0	\$0
Feb-23	\$0	\$0	\$0
Mar-23	\$0	\$0	\$0
Apr-23	\$0	\$0	\$0
May-23	\$0	\$0	\$0
Jun-23	\$0	\$0	\$0
<u>Quarter</u>			
Total	\$0	\$1,334	\$1,334
Average	\$0	\$445	\$445
Minimum	\$0	-\$461	-\$461
Maximum	\$0	\$1,245	\$1,245
<u>YTD</u>			
YTD Total	\$0	\$2,136	\$2,136
YTD Average	\$0	\$178	\$178
YTD Minimum	\$0	-\$461	-\$461
YTD Maximum	\$0	\$1,245	\$1,245

TABLE 8

LAVWMA
BUDGET COMPARISON TO ACTUAL EXPENSES: GOODS & SERVICES

Current FY Period: 6

ACTUAL EXPENSES BILLED TO LAVWMA FOR REGULAR O&M															
	Budget	July	August	September	October	November	December	January	February	March	April	May	June	YTD	YTD
	FY 2022-2023	2022	2022	2022	2022	2022	2022	2023	2023	2023	2023	2023	2023	TOTAL	Budget
Labor															
Staff	\$1,161,350	\$83,781	\$73,088	\$66,501	\$105,424	\$46,528	\$105,889							\$481,211	\$580,675
Subtotal	\$1,161,350	\$83,781	\$73,088	\$66,501	\$105,424	\$46,528	\$105,889	\$0	\$0	\$0	\$0	\$0	\$0	\$481,211	\$580,675
Materials & Supplies															
Operations Supplies	\$13,650	\$74	\$12	\$12	\$12	\$12	\$14							\$137	\$6,825
Mechanical Supplies	\$27,300	\$432	\$238	\$249		\$1,882	\$1,199							\$4,000	\$13,650
Electrical Supplies	\$48,447	\$19	\$1,188	\$3,675	\$2,274	\$19	\$38							\$7,213	\$24,224
Subtotal	\$89,397	\$526	\$1,438	\$3,936	\$2,286	\$1,913	\$1,251	\$0	\$0	\$0	\$0	\$0	\$0	\$11,350	\$44,699
Laboratory Analysis															
Compliance Testing	\$10,500	\$848	\$1,060	\$848	\$848	\$1,060	\$848							\$5,512	\$5,250
Operational Support Testing	\$4,200	\$392	\$392	\$392	\$392	\$392	\$392							\$2,352	\$2,100
Special Sampling	\$23,100	\$1,380	\$1,490	\$1,380	\$1,380	\$1,490	\$1,380							\$8,500	\$11,550
Subtotal	\$37,800	\$2,620	\$2,942	\$2,620	\$2,620	\$2,942	\$2,620	\$0	\$0	\$0	\$0	\$0	\$0	\$16,364	\$18,900
Contractual Services															
Sub-surface Repairs	\$15,750													\$0	\$7,875
Street Sweeping	\$5,250													\$0	\$2,625
Cathodic Protection Survey & Repairs	\$31,500				\$35,693									\$35,693	\$15,750
Underground Service Alert	\$4,725				\$508									\$508	\$2,363
SCADA software maintenance contract	\$17,850		\$5,052											\$5,052	
Remote monitoring annual service for PS and Rec	\$5,250													\$0	
Med voltage switchgear 3-yr PM (FY22, \$18k)														\$0	
HVAC Maintenance/Repairs	\$788													\$0	\$394
Termite/Pest Control	\$945													\$0	\$473
Landscape/weed maintenance	\$10,500			\$980										\$980	\$5,250
Janitorial Service	\$9,975	paid in July	\$440	\$880			\$1,320							\$2,639	\$4,988
Fire Extinguisher Maintenance	\$210													\$0	\$105
Postage/Shipping Charges	\$0													\$0	\$0
Misc Professional/Contractual Services	\$31,500		\$14,008		\$1,356		\$1,763							\$17,127	\$15,750
Subtotal	\$134,243	\$0	\$19,499	\$1,860	\$37,556	\$0	\$3,083	\$0	\$0	\$0	\$0	\$0	\$0	\$61,998	\$67,122
Utilities															
Electricity (PG&E)	\$1,430,205	paid in Aug	\$147,188	\$66,310	\$101,389	\$142,128	\$161,717							\$618,732	\$715,103
Water & Sewer (Pleasanton)	\$945		\$396	\$327		\$311								\$1,033	\$473
Water (EBMUD)	\$1,050		\$207	\$222			\$215							\$645	\$525
Telephone/communications	\$6,300													\$0	\$3,150
WW Treatment (DSRSD)	\$0													\$0	\$0
Subtotal	\$1,438,500	\$0	\$147,790	\$66,859	\$101,389	\$142,439	\$161,932	\$0	\$0	\$0	\$0	\$0	\$0	\$620,410	\$719,250
Non-Routine															
	\$0													\$0	\$0
Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Monthly Total		\$86,927	\$244,757	\$141,776	\$249,275	\$193,823	\$274,775	\$0	\$0	\$0	\$0	\$0	\$0	\$1,191,333	\$1,430,645
YTD Total	\$2,861,290	\$86,927	\$331,684	\$473,460	\$722,735	\$916,558	\$1,191,333	\$1,191,333	\$1,191,333	\$1,191,333	\$1,191,333	\$1,191,333	\$1,191,333		
Combined Export Flow, mg	3552	162	163	161	256	390	532							1,663	1,776
Pumping Efficiency															
Monthly Cost, \$/mg		\$537	\$1,505	\$879	\$975	\$497	\$517	-	-	-	-	-	-	-	-
YTD Running Cost, \$/mg	\$805	\$537	\$1,022	\$974	\$975	\$810	\$716	-	-	-	-	-	-	\$716	-

Q1 Notes:

PG&E bills for Feeder A and B for July were actually paid in August (processed late due to MUNIS transition issues)
Landscaping: July was paid in Aug and Sep expenditure includes both Aug and Sep invoices

Q2 Notes:

Cathodic Repairs: Four manhole collars replaced with paving, LAV Dublin Canyon

LAVWMA
BUDGET COMPARISON TO ACTUAL EXPENSES: LABOR

Current FY Period: 6

ACTUAL EXPENSES BILLED TO LAVWMA FOR REGULAR O&M														
FY 2022-2023	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023	Jun 2023	YTD TOTAL	YTD Budget
<i>Estimated Personnel Hours</i>														
Division 51 - FOD	40	-	-	-	10.00	-	10.00	-	-	-	-	-	20.00	20.00
Water/Wastewater Sys Lead Op	0												-	-
Water/Wastewater Sys OP IV-On Call	0												-	-
Water/Wastewater Sys OP IV	30												-	15.00
Water/Wastewater Sys OP III	0												-	-
Water/Wastewater Sys OP I/II	10				10.00			10.00					20.00	5.00
Maintenance Worker	0												-	-
Supervisor	0												-	-
Division 52 - WWTP	3,080	133.00	121.50	171.00	284.00	123.00	250.50	-	-	-	-	-	1,083.00	1,540.00
Process Lead Operator IV/V	150		24.00	1.00	10.00	7.00	7.00						49.00	75.00
Senior WWTP Operator III	720	37.00	73.50	79.50	72.00	72.00	62.00						396.00	360.00
Operator In Training	400	59.50	9.00	79.50	148.00	12.00	95.50						403.50	200.00
Operator II	1,700	36.50	15.00	11.00	54.00	32.00	86.00						234.50	850.00
Operator II (SLSS)	0												-	-
Operations Superintendent	110												-	55.00
Division 53 - MECH	1,230	149.50	171.00	138.50	147.50	69.00	207.00	-	-	-	-	-	882.50	615.00
Senior Mechanic-Crane Cert	60	44.00	70.50	69.00	29.50	34.00	77.00						324.00	30.00
Senior Mechanic - USA	80		16.50	29.50	12.50	8.00							66.50	40.00
Maintenance Worker	60				5.00								5.00	30.00
Mechanic I/II	980	20.50	29.00	28.00	17.00	4.00	62.50						161.00	490.00
Mechanic II-Crane Cert	0	68.50	43.00	10.00	43.00	9.00	41.50						215.00	-
Mechanic I/II - USA	0		4.00	2.00	10.00	2.00	24.00						42.00	-
Mechanic II-Crane Cert - USA	0	16.50	8.00		30.50	12.00	2.00						69.00	-
Supervisor	50												-	25.00
Division 54 - ELEC	1,130	136.00	44.00	31.00	119.50	16.00	42.00	-	-	-	-	-	388.50	565.00
Senior Instrument/Controls Tech	30	18.00		1.00		2.00	9.00						30.00	15.00
Instrumentation & Controls Tech I/II	300	55.00	35.00	8.50	63.50	5.00	7.00						174.00	150.00
OPS Control Sys Spec	300												-	150.00
Senior Electrician	30												-	15.00
Electrician I/II	440	63.00	7.00	19.50	53.00	8.00	26.00						176.50	220.00
Principal Eletrical Engineer	30		2.00	2.00	3.00	1.00							8.00	15.00
Division 55 - Laboratory	0	-	-	-	-	-	-	-	-	-	-	-	-	-
EC Inspector II-Pretreatment	0	-											-	-
Laboratory Technician	0	-											-	-
Supervisor	0	-											-	-
Division 26 - SAFETY	60	-	-	-	-	-	-	-	-	-	-	-	-	30.00
Safety Officer	60	-											-	30.00
Division 40 - ENG	260	14.50	8.50	2.50	6.50	7.00	23.00	-	-	-	-	-	62.00	130.00
Senior Engineer-Supervisory	0												-	-
Associate/Senior Civil Engineer-SME	100	14.50	4.50	2.50	6.50	7.00	23.00						58.00	50.00
Construction Inspector I/II	80		4.00										4.00	40.00
Engineering Technician II	40												-	20.00
GIS Analyst	40												-	20.00
<i>Total Estimated Personnel Hours</i>														
	5,800													
<i>FTE</i>														
	2.8													
Total Monthly Hours	433.00	345.00	343.00	567.50	215.00	532.50	-	-	-	-	-	-	2,436.00	2,900.00

TABLE 9

LAVWMA	October	2022
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Parameter	Flow	CBOD	TSS	pH	pH	Total Residual Chlorine	Total Residual Chlorine	Fecal Coliforms	Enterococci
Units	MGD	mg/L	mg/L	SU	SU	mg/L	mg/L	MPN/100mL	MPN/100mL
Test Method	Daily Average (M)	SM 5210 B-2011	SM 2540 D-2011	SM 4500-H+B-2011	SM 4500-H+B-2011	Daily Average (N)	Daily Average	SM 9221 C,E-2006	Enterolert
MDL									
RL		3.0	4.5					2	1
Location	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	SLSS	SLSS	SLSS
10/1/2022	7.72			7.32	7.58	1.52			
10/2/2022	8.76			7.42	7.56	1.70			
10/3/2022	8.19			7.34	7.55	1.97			
10/4/2022	8.97			7.40	7.54	1.49		2	2
10/5/2022	7.18	3.5	7.4	7.06	7.59	1.55			
10/6/2022	7.56			7.18	7.37	2.41			
10/7/2022	5.06			7.13	7.37	3.30			
10/8/2022	4.43			7.11	7.35	2.92			
10/9/2022	7.07			7.10	7.36	4.02			
10/10/2022	4.94			7.15	7.33	3.98			
10/11/2022	9.49			7.13	7.33	3.11		<2	1
10/12/2022	6.99	<3.0	DNQ 3.0	7.06	7.37	3.64			
10/13/2022	6.64			7.13	7.33	3.56			
10/14/2022	8.12			7.13	7.35	3.62			
10/15/2022	8.22			7.13	7.34	4.09			
10/16/2022	9.79			7.17	7.33	4.17			
10/17/2022	11.33			7.16	7.34	4.25			
10/18/2022	11.18			7.13	7.41	3.36		11	1
10/19/2022	11.40	3.3	4.7	7.11	7.33	1.97			
10/20/2022	6.45			7.11	7.83	1.70			
10/21/2022	7.02			7.18	7.39	1.62			
10/22/2022	5.63			7.20	7.34	1.61			
10/23/2022	11.08			7.18	7.35	1.56			
10/24/2022	9.57			7.11	7.41	1.67			
10/25/2022	8.14			7.10	7.35	1.73		<2	<1
10/26/2022	8.57	3.7	4.6	7.06	7.48	1.72			
10/27/2022	8.34			7.08	7.31	1.72			
10/28/2022	8.06			7.11	7.30	1.64			
10/29/2022	5.48			7.15	7.31	1.58			
10/30/2022	11.85			7.16	7.28	1.42			
10/31/2022	11.43			7.10	7.50	1.81			

Note:
 Column E - pH Minimum; online
 Column F - pH Maximum; online

LAVWMA	November		2022
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Parameter	Flow	CBOD Qual	CBOD	TSS Qual	TSS	pH	pH	Total Residual Chlorine	Total Residual Chlorine	Fecal Qual	Fecal Coliforms	Entero Qual	Enterococci
Units	MGD		mg/L		mg/L	SU	SU	mg/L	mg/L		MPN/100mL		MPN/100mL
Test Method	Daily Average (Mean)		SM 5210 B-2011		SM 2540 D-2011	SM 4500-H+B-2011	SM 4500-H+B-2011	Daily Average (N)	Daily Average (Mean)		SM 9221 C,E-2006		Enterolert
MDL													
RL			2.0		4.5						2		1
Location	LAVWMA-EXP		LAVWMA-EXP		LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	SLSS		SLSS		SLSS
11/1/2022	10.41					7.25	7.33	1.59			2	<	1
11/2/2022	11.37		2.9		7.1	7.23	7.35	1.78					
11/3/2022	11.34					7.19	7.38	1.78					
11/4/2022	11.33					7.21	7.32	1.75					
11/5/2022	9.44					7.12	7.29	1.28					
11/6/2022	15.63					7.17	7.29	1.14					
11/7/2022	14.58					7.15	7.28	1.51					
11/8/2022	14.59					7.12	7.28	1.52					4.1
11/9/2022	14.69		4.4		6.2	7.06	7.23	1.52					
11/10/2022	14.71					7.10	7.24	1.41					
11/11/2022	14.17					7.15	7.39	1.41					
11/12/2022	14.72					7.23	7.41	2.23					
11/13/2022	14.71					7.17	7.42	2.77					
11/14/2022	15.10					7.18	7.36	2.61					
11/15/2022	14.59					7.15	7.33	2.59		<	2		16.3
11/16/2022	10.65		4.5		7.8	7.10	7.39	2.49					
11/17/2022	12.38					7.11	7.33	2.98					
11/18/2022	14.06					7.10	7.28	3.47					
11/19/2022	13.88					7.08	7.25	2.93					
11/20/2022	9.51					7.08	7.27	3.54					
11/21/2022	13.95					7.06	7.24	2.59					
11/22/2022	13.27					7.08	7.42	3.14		<	2		6
11/23/2022	12.99		6.3		6.0	7.08	7.32	3.88					
11/24/2022	11.12					7.08	7.28	3.31					
11/25/2022	13.81					7.02	7.23	3.03					
11/26/2022	11.08					7.08	7.28	2.56					
11/27/2022	11.25					7.04	7.25	2.21					
11/28/2022	14.93					7.06	7.20	2.55					
11/29/2022	12.49					7.03	7.23	2.55			17		1
11/30/2022	13.24		6.2		9.0	7.10	7.32	2.66					

Note:
Column E - pH Minimum; online
Column F - pH Maximum; online

LAVWMA	December		2022
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Parameter	Flow	CBOD Qual	CBOD	TSS Qual	TSS	pH	pH	Total Residual Chlorine	Total Residual Chlorine	Fecal Qual	Fecal Coliforms	Entero Qual	Enterococci
Units	MGD		mg/L		mg/L	SU	SU	mg/L	mg/L		MPN/100mL		MPN/100mL
Test Method	Daily Average (Mean)		SM 5210 B-2011		SM 2540 D-2011	SM 4500-H+B-2011	SM 4500-H+B-2011	Daily Average (N)	Daily Average (Mean)		SM 9221 C,E-2006		Enterolert
MDL					1.4								
RL			3.0		4.5						2		1
Location	LAVWMA-EXP		LAVWMA-EXP		LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	SLSS		SLSS		SLSS
12/1/2022	12.99					7.15	7.25	3.13					
12/2/2022	15.93					7.12	7.25	2.39					
12/3/2022	16.04					7.15	7.22	2.78					
12/4/2022	16.78					7.07	7.19	3.47					
12/5/2022	15.17					7.04	7.19	3.68					
12/6/2022	13.98					7.11	7.24	3.42			13		6.2
12/7/2022	15.05		7.6		9.2	7.15	7.30	3.84					
12/8/2022	15.29					7.12	7.25	3.91					
12/9/2022	14.46					7.15	7.25	4.13					
12/10/2022	16.20					7.07	7.22	4.03					
12/11/2022	18.35					7.04	7.19	3.98					
12/12/2022	17.72					7.11	7.19	3.50					
12/13/2022	19.23					7.15	7.24	3.87		<	2	<	10
12/14/2022	20.07		6.4		5.6	7.12	7.30	3.78					
12/15/2022	18.69					7.15	7.08	3.56					
12/16/2022	19.08					7.07	7.19	3.79					
12/17/2022	14.88					7.04	7.19	4.27					
12/18/2022	16.66					7.11	7.24	4.56					
12/19/2022	16.48					7.04	7.30	4.42					
12/20/2022	16.66					7.11	7.25	4.22			4		10
12/21/2022	16.24					7.15	7.25	3.64					
12/22/2022	14.45		12.6		18.0	7.12	7.22	3.54					
12/23/2022	14.29					7.15	7.19	3.50					
12/24/2022	15.49					7.07	7.19	3.64					
12/25/2022	15.68					7.04	7.30	4.67					
12/26/2022	14.71					7.11	7.25	3.84					
12/27/2022	19.23					7.15	7.25	3.60			13	<	10
12/28/2022	20.64					7.12	7.22	4.33					
12/29/2022	19.09		8.8		11.0	7.15	7.19	4.87					
12/30/2022	26.19					7.07	7.19	5.21					
12/31/2022	25.88					7.04	7.30	5.97					

Note:
Column E - pH Minimum; online
Column F - pH Maximum; online

TABLE 10

*DUBLIN SAN RAMON SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY*

LAVWMA - 4th Quarter 2022

Langelier pH Saturation Index

Collection DATE	TDS (mg/L)	Temp (°C)	Ca Hardness (mg/L CaCO ₃)	Alkalinity (mg/L CaCO ₃)	pH (Actual)	pH Saturation	Langlier Index
10/08/22	834	26.1	136	366	7.3	7.1	0.2
11/15/22	774	20.8	152	382	7.6	7.1	0.5
12/06/22	766	18.9	134	340	7.5	7.3	0.2
MAXIMUM	834	26.1	152	382	7.6	7.3	0.5
MINIMUM	766	18.9	134	340	7.3	7.1	0.2
AVERAGE	791	21.9	141	363	7.5	7.2	0.3

*DUBLIN SAN RAMON SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY*

DSRSD - 4th Quarter 2022

Langelier pH Saturation Index

Collection DATE	TDS (mg/L)	Temp (°C)	Ca Hardness (mg/L CaCO ₃)	Alkalinity (mg/L CaCO ₃)	pH (Actual)	pH Saturation	Langlier Index
10/08/22	802	24.6	154	376	7.5	7.1	0.4
11/15/22	764	21.3	164	392	7.4	7.1	0.3
12/06/22	795	20.2	153	348	7.1	7.2	-0.1
MAXIMUM	802	24.6	164	392	7.5	7.2	0.4
MINIMUM	764	20.2	153	348	7.1	7.1	-0.1
AVERAGE	787	22.0	157	372	7.3	7.1	0.2

CITY OF LIVERMORE
LIVERMORE WATER RECLAMATION PLANT

Langelier pH Saturation Index

Collection DATE	TDS (mg/L)	Temp (°C)	Ca Hardness (mg/L CaCO ₃)	Alkalinity (mg/L CaCO ₃)	pH (Actual)	pH Saturation	Langlier Index
10/05/22	573	25.0	75	338	7.6	7.5	0.1
11/02/22	660	22.0	104	322	7.6	7.4	0.2
12/08/22	660	19.0	93	320	7.4	7.5	-0.1
MAXIMUM	660	25.0	104	338	7.6	7.5	0.2
MINIMUM	573	19.0	75	320	7.4	7.4	-0.1
AVERAGE	631	22.0	91	327	7.5	7.5	0.1

TABLE 11

LAVWMA Action Item List

Month: Jan-23

SAG Task	Responsible Party	Due Date	Status	Completion Date
Items for February 2023 LAVWMA Board Meeting.	SAG	NA	Several items this month. Updates on current capital projects, continuing with remote meetings, legal and legislative issues, and the GM report.	
Operations Coordination Committee Task	Responsible Party	Due Date	Status	Completion Date
FYE23 Replacement Projects: See Items Below	Weir/Delight	Various dates	Refer to information below.	
MCC and Soft Starter Replacement Project. Carryover from FYE20 and into FYE21. Estimated design cost \$250,000. Project now includes Electrical Improvements to the Main Switchgear at the Pump Station. Total estimated cost \$2,300,000 - \$2,500,000.	Weir/Atendido	12/31/2021	Project is complete. The Notice of Completion with Alameda County has been filed and final payment has been made. One warranty item was successfully resolved in January 2023, related to the settings to allow the standby generator to operate properly.	11/30/2022
Resealing of all Three Storage Basins. Estimated cost \$200,000	Quinlan	12/31/2020	Project is complete. Some issues due to water getting under some of the seal areas. A few areas are being resealed.	6/30/2021
San Leandro Sample Station Design Improvements. Estimated cost \$1,000,000 plus engineering costs of \$230,000 for a total of \$1,230,000	Weir	12/31/2022	Final plans and specs are nearing completion. Hope to issue bid packet in March 2023. Likely that cost estimate will increase, requiring a budget amendment. Have also needed to increase HydroScience agreement to account for new information, and additional findings for the project.	12/31/2023
Cathodic Protection Projects. Estimated cost \$185,000	Weir/Atendido	12/31/2020	Corrpro has completed most items that did not require any excavation. Permits have been received for three projects needing excavation and were provided to Corrpro. We have heard nothing from Corrpro in several months. Will likely cancel their contract and have another firm do it. Will return to full system inspection this fiscal year.	6/30/2023
PLC Upgrade at the Pump Station. Estimated cost \$300,000	TBD	6/30/2021	Will be included in DSRSD SCADA project, which is design build. Project has begun. Scoping meetings with staff have been held and the project is progressing.	
Pipeline Inspection. Estimated cost \$100,000	TBD	6/30/2021	DSRSD has outlined a plan for an inspection in the Spring 2023 time frame.	
Smart Detectors on High Maintenance Air/Vac and Air Release Valves. Estimated cost \$40,000	Quinlan	6/30/2022	Project is complete for six smart detectors. They have already prevented several spills due to advance notice to DSRSD staff. Anticipate buying and installing several more since they have been so successful.	6/30/2022
Replace three flow meters at the junction structure. Estimated cost is \$250,000.	TBA	6/30/2023	Flowmeters have been purchased and the Livermore flowmeter has been installed. A second flowmeter will be installed in early February 2023.	
Replace 17 valve actuators at the pump station. Estimated cost is \$255,555.	Quinlan	6/30/2023	There are seventeen valves that have electric actuators at the pump station. All of the valves actuators were installed when the pump station was upgraded twenty years ago and they are at the end of their useful lives. The actuators will be replaced with the newest technology and will match the style that are commonly used at DSRSD. The actuators cost approximately \$9,000 each and will be installed by DSRSD staff. The total cost includes staff time for the installation.	
PG&E Reliability and Solar/Battery storage. This is a new project and no cost has yet been identified.	Weir	TBD	Recent PG&E outages during the summer have resulted in concern that the same could occur during wet weather and result in unpermitted discharges. The Board also asked about solar/battery systems to offset demand charges and reduce energy costs. DTN Engineers has prepared a draft report recommending a 1.5MW standby generator that would run at least two large pumps for at least 24 hours during a PG&E outage. Not certain that is adequate. Cost of at least \$4M and three years. Rented a 2 KW generator for one month (\$40k rental plus \$10k mobilization and testing) and determined it will run four small pumps and pump approximately 19.4 MGD. Will use unused funds from agreement with Woodard & Curran to do additional flow modeling (recall EBDA "pick a flow") to assist in determining standby power needs. Having trouble getting solar provided to provide a proposal. Will need to issue an RFP for a PPP project, which could save up to \$500,000 in energy costs per year, but not address wet weather issues. Recommendations to Board likely to be solar project and rental of generator during winter high flow periods. More experience with PG&E may change that, since there have been no outages this winter.	TBD
Other Items				
Wet Weather Issues	Sevilla	10/31/2020	Many storms in January tested all facilities, with no serious issues. This will be discussed at January 30, 2023 Ops meeting.	
Live test of SLSS system	Sevilla/Atendido	TBD	A test was conducted on November 3, 2021. There were no significant issues encountered during the test. The SLSS design engineer was on site and gathered valuable information that will assist in the upgrade design.	
Live test of Alamo Canal discharge during wet weather	Carson/Sevilla	TBD	Planned test during storms in January did not occur due to staffing and safety issues. Looking to test during the next storms.	
Wet Well Isolation Gates	Quinlan	6/30/2023	Gate is in good shape but won't fully close. No date set, perhaps this winter. May be coordinated with replacement of the valve actuators.	
EBDA Enterococcus Issue	Sevilla		No issues at this time.	
YTD O&M Expenses compared to budget	Carson, Weir	Ongoing	No issues at this time. PG&E costs in January were high due to the numerous storms.	

