

LAVWMA

QUARTERLY REPORT OF OPERATIONS

FY 2021-2022, 2nd Quarter



Prepared by



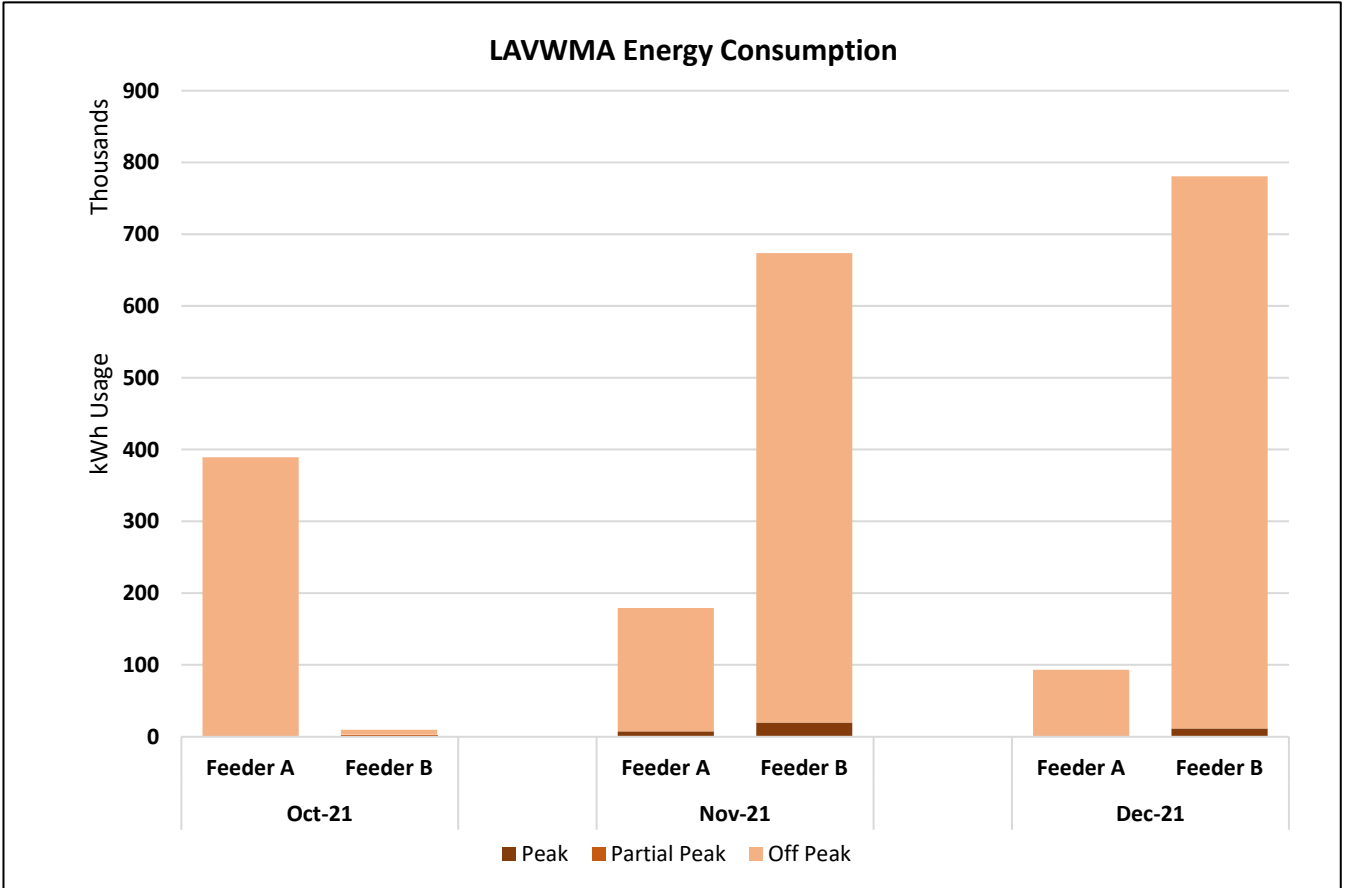
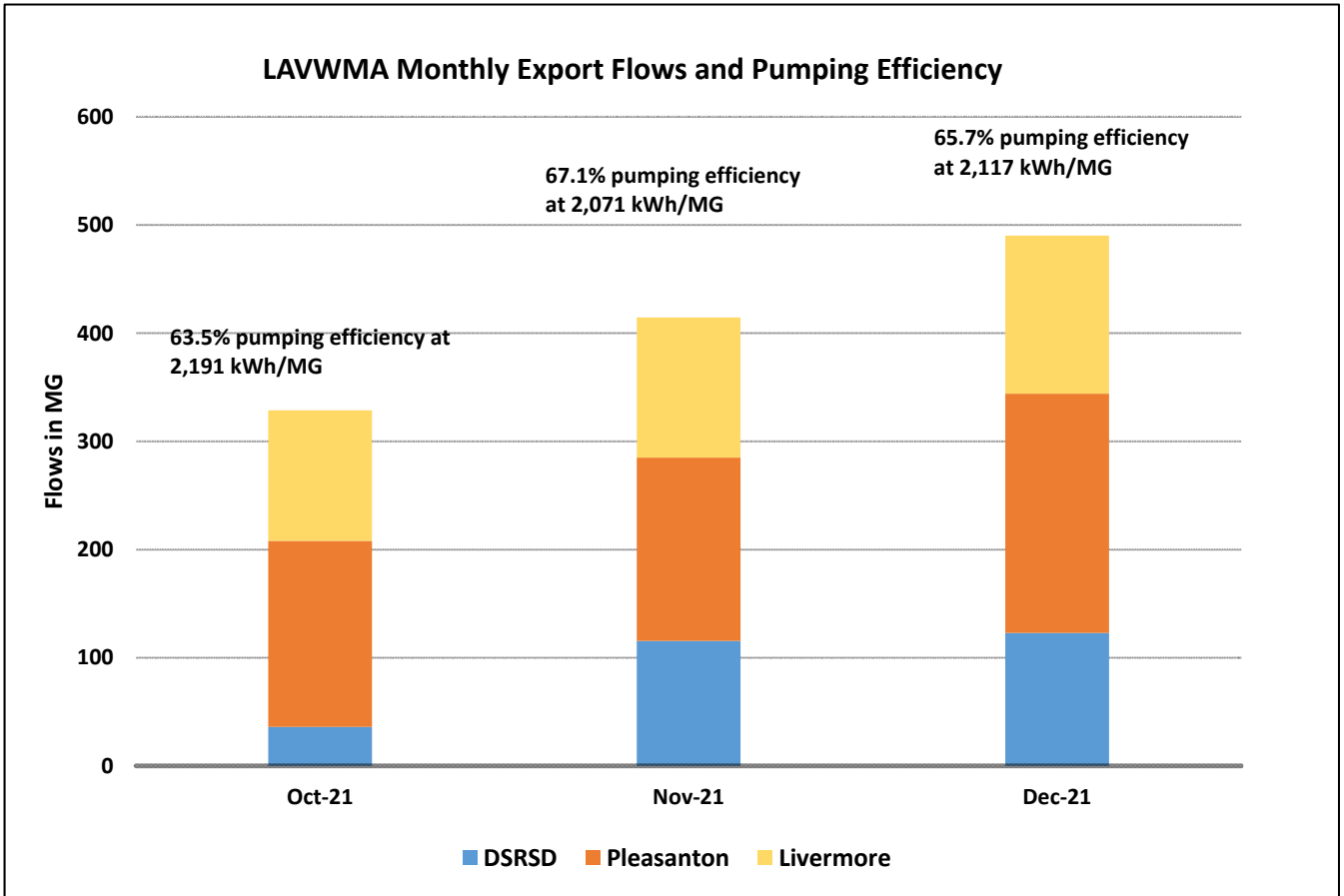
**Dublin San Ramon
Services District**

Water, wastewater, recycled water

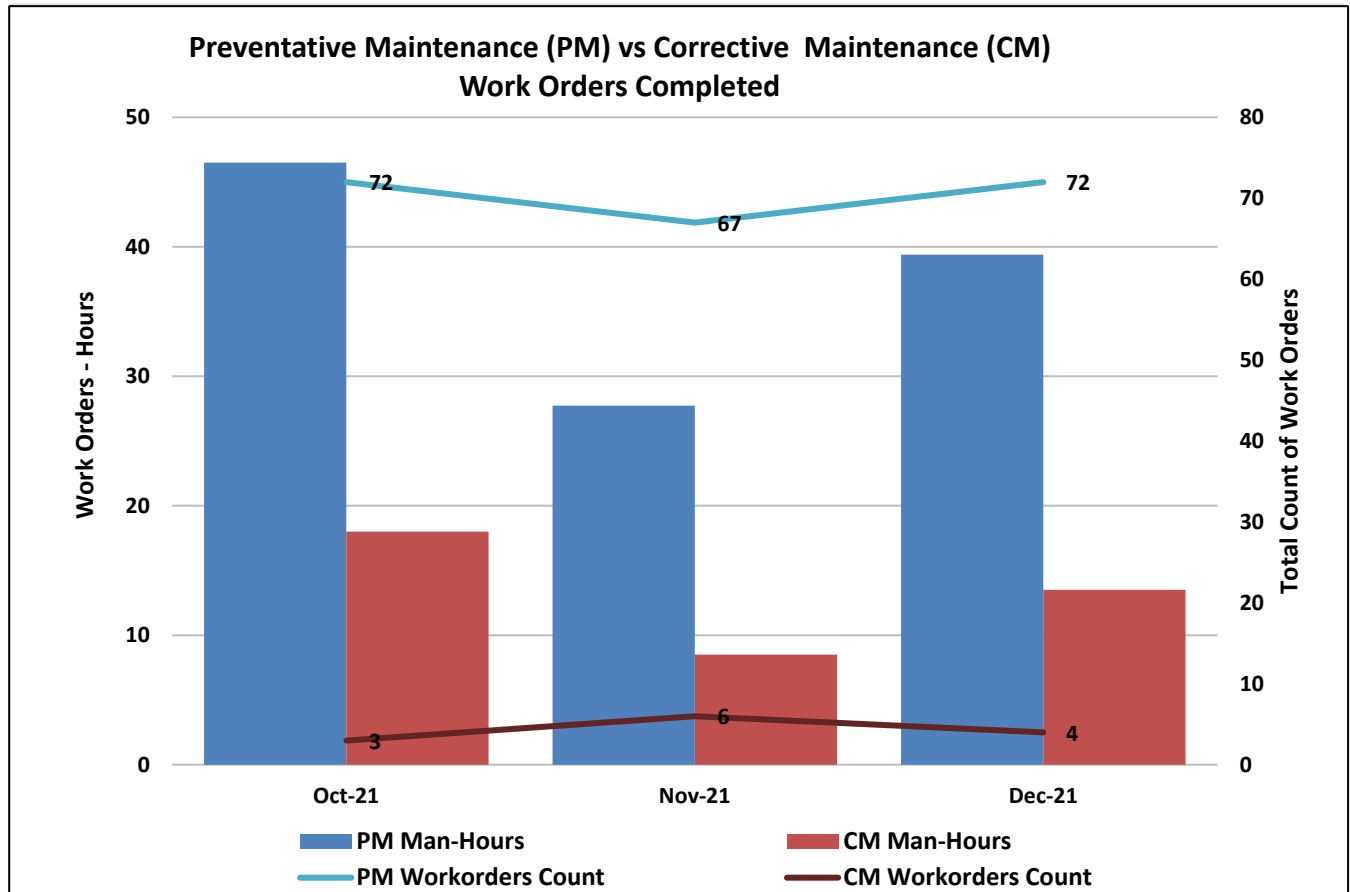
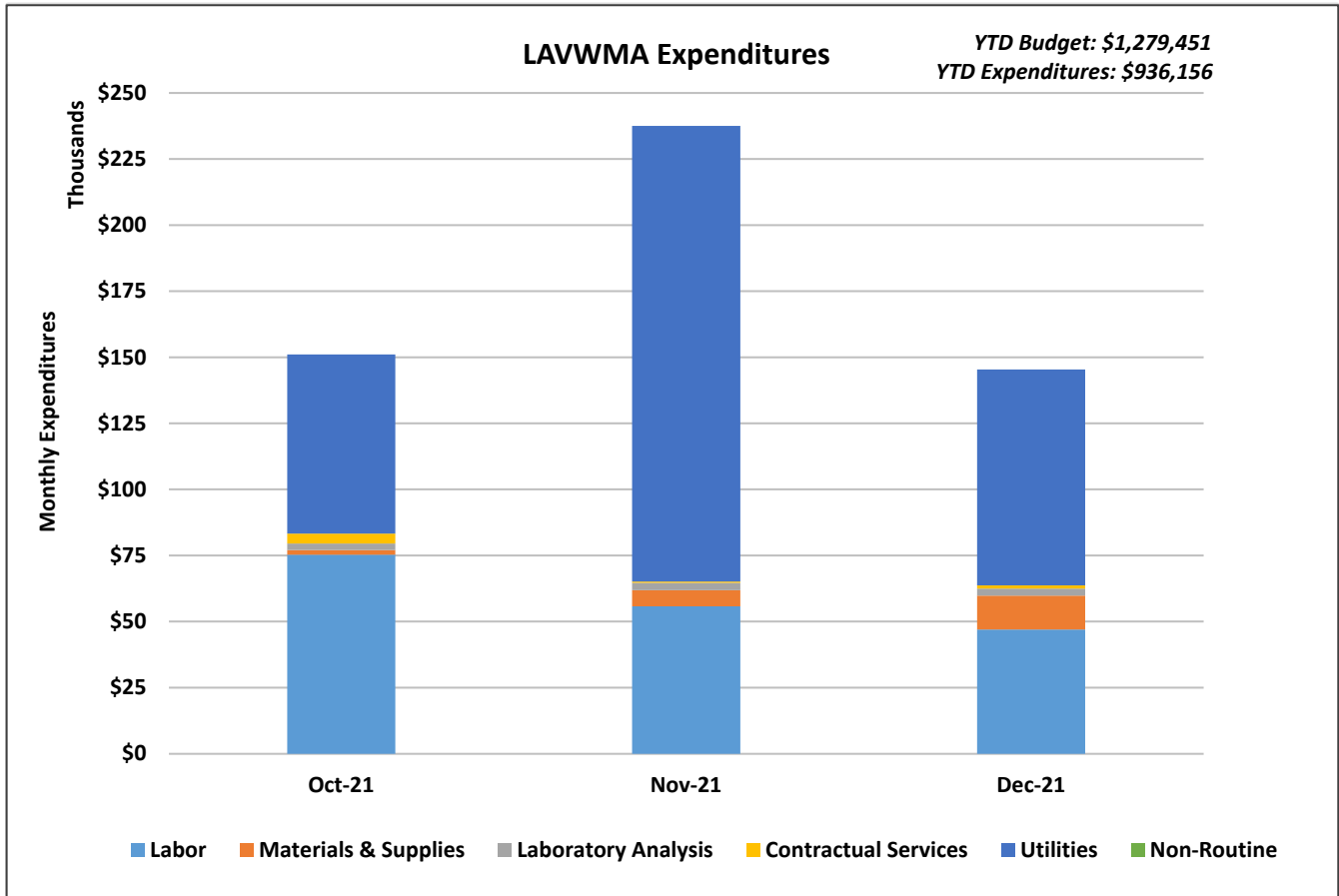
QUARTERLY REPORT OF OPERATIONS
LAVWMA PUMPING AND CONVEYANCE SYSTEM
2nd Quarter FY 2021-2022: October to December 2021

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LAVWMA FYE 2022 SECOND QUARTER AT A GLANCE



LAVWMA FYE 2022 SECOND QUARTER AT A GLANCE



QUARTERLY REPORT OF OPERATIONS
LAVWMA PUMPING AND CONVEYANCE SYSTEM
2nd Quarter FY 2021-2022: October to December 2022

1. EXECUTIVE SUMMARY

The Livermore-Amador Valley Water Management Agency (LAVWMA) pumping and effluent conveyance system operated normally during the second quarter of FY 2021-2022. During the quarter, a total of 1,233.19 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 65%, with an average electrical cost of \$408 per million gallons, or \$133 per acre-foot.

Total year-to-date operations and maintenance (O&M) expense is \$936,156 or 36.6% of the O&M annual budget amount of \$2,558,901 and the overall cost of operation is \$572 per million gallons pumped or \$186 per acre-foot.

2. OPERATIONS

Of the 1,233.19 million gallons of effluent conveyed through the LAVWMA system, approximately 396 million gallons was from the City of Livermore, 563 million gallons from City of Pleasanton and 274 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.

During the months of May 2020 through August 2020, PG&E inexplicably reverted to the old schedule for Feeder B. PG&E corrected this error and credited the account \$89,058.20 in October and November, which is reflected in the PG&E cost data shown in Table 1.

On November 3, staff conducted an annual San Lorenzo Creek Flapper gate wet weather discharge exercise in accordance with the NPDES permit. Approximately 75,000 gallons of fully treated dechlorinated secondary effluent was discharged into San Lorenzo Creek. The function and operation of the flapper gate, outfall equipment and the Supervisory Control and Data Acquisition (SCADA) system were tested and they performed as designed. Even though the system operated as designed, the design is not optimal and requires significant staff resources to function as designed. There is a capital project to redesign the San Leandro Sample Station to make operation more efficient. The effluent water quality data and the receiving water site observations indicated the fully treated effluent posed no actual or potential harm to the aquatic environment or applicable beneficial uses in and around San Lorenzo Creek.

3. MAINTENANCE

During the quarter, 114 hours were spent to complete 211 preventative maintenance work orders and 41 hours to complete 13 corrective maintenance work orders on LAVWMA equipment and systems.

The following are some noteworthy maintenance activities during the quarter:

Electrical:

- LAVWMA PS MCC Replacement construction support
- LAVWMA SLSS Rehab design support
- Scoped out replacement pump station gate actuators and acquired quotes for spares

Instrumentation and Controls:

- LAVWMA PS MCC Replacement construction support
- LAVWMA SLSS Rehab design support
- Continued planning and design to upgrade remote monitoring devices for all remote rectifier panels. The new system is to replace Samsara. The input/output (I/O) driver was configured and tested. Currently waiting for backordered gateway hardware to arrive
- Continued planning and design of a web interface to allow third party agencies to see LAVWMA PS data remotely. The new system is to replace Samsara. A kick-off meeting took place with the consultant who will be implementing the integration
- Started an in-house project to upgrade vibration sensors to bring signals in via Modbus, which is similar to the new RTD sensors that were installed during the MCC upgrade CIP
- Assisted with flapper gate test
 - Replaced a faulty line pressure instrument
 - Bypassed mechanical flow switches for Thiosulfate pumps
- Troubleshoot pump station wet well level instruments
- Transferred program data to EBDA PLC to share data for pump station export flows

Mechanical:

- The Smart Cover picked up a leak at the Greenview Drive air relief vault. Staff corrected the issue before a spill developed. This is the first benefit observed from the SmartCover technology. Additional Smart Covers have been ordered and will be installed at the most vulnerable locations

4. BUDGET VARIANCE AND EXPENSES

Second quarter labor expenses totaled \$178,050 for 1,033 man-hours of effort, an average of 2.0 full time equivalents (FTEs). O&M expenses for the quarter including labor, supplies, laboratory analysis, contractual services, and utilities totaled \$533,985 for an average cost of \$433 per million gallons pumped or \$141 per acre-foot. The total expense for the Livermore sole use pipeline for the quarter was \$550.

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

5. ITEMS OF INTEREST

The atmospheric river on October 24-25 drenched the Bay Area and delivered much needed rain. Staff kept the LAVWMA facilities operational during the powerful storms in coordination with the City of Livermore and EBDA. EBDA requested that LAVWMA staff shut off pumps during the storms as part of EBDA's pilot wet weather coordination test, which may have contributed to the lower pumping efficiency observed in October 2021 (see LAVWMA Monthly Export Flows and Pumping Efficiency chart).

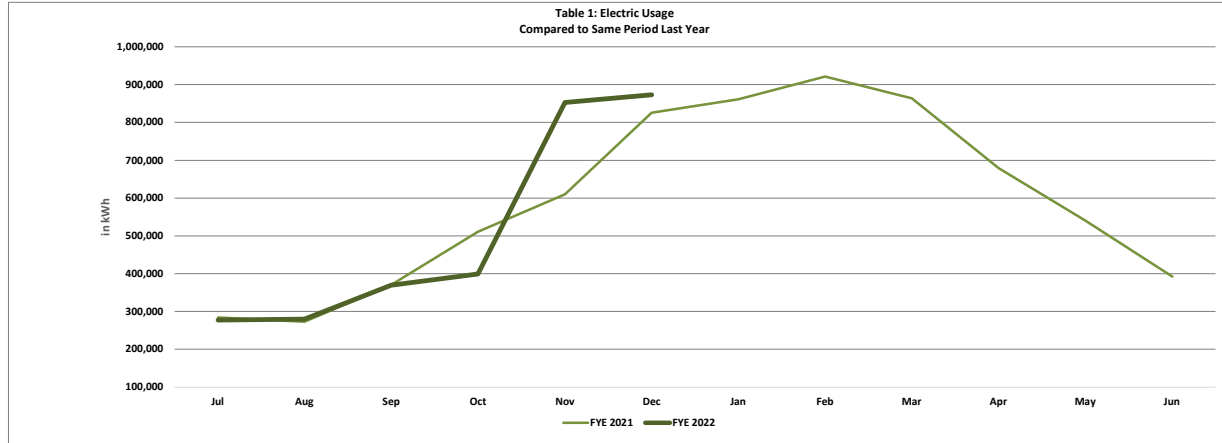
6. CAPITAL PROJECTS

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 2021-2022, Quarterly Report

PG&E Service Accounts: Rate Schedule B20 starting March 2021														Total	Pumping				
Month	Acct # 8482061923-1 Service A				Acct # 8440395259-5 Service B					Billing Days	Total			Export Flow ¹ MG	Energy kWh/MG	Cost		Efficiency %	
	kWh	Peak	Partial Peak	Off Peak	\$	kWh	Peak	Partial Peak	Off Peak		\$	kWh	\$/kWh			\$	\$/MG		\$/AF
Jul-21	121,614	0	0	121,614	\$30,679	156,361	9,910	19,424	127,027	\$43,366	30	277,975	\$0.27	\$74,045	108	2,565	\$683	\$223	54.2%
Aug-21	121,695	0	52	121,643	\$26,843	158,567	10,283	22,241	126,043	\$43,175	32	280,262	\$0.25	\$70,019	105	2,667	\$666	\$217	52.1%
Sep-21	300,902	0	300	300,602	\$60,010	68,264	6,492	12,791	48,981	\$31,359	30	369,166	\$0.25	\$91,368	160	2,312	\$572	\$186	60.1%
Oct-21	389,192	0	0	389,192	\$67,279	9,593	1,768	828	6,997	\$8,793	29	398,785	\$0.19	\$76,072	182	2,191	\$418	\$136	63.5%
Nov-21	179,241	7,458	0	171,783	\$55,673	673,504	19,663	0	653,841	\$115,688	30	852,745	\$0.20	\$171,361	412	2,071	\$416	\$136	67.1%
Dec-21	93,222	0	0	93,222	\$36,104	780,566	11,465	0	769,101	\$125,342	31	873,788	\$0.18	\$161,446	413	2,117	\$391	\$127	65.7%
Jan-22																			
Feb-22																			
Mar-22																			
Apr-22																			
May-22																			
Jun-22																			
Quarter																			
Average	220,552				\$53,019	487,888				\$83,274	30	708,439	\$0.19	\$136,293	336	2,126	\$408	\$133	65.4%
Total	661,655				\$159,056	1,463,663				\$249,823	90	2,125,318		\$408,879	1,007	6,378			
Minimum	93,222				\$36,104	9,593				\$8,793	29	398,785	\$0.18	\$76,072	182	2,071	\$391	\$127	63.5%
Maximum	389,192				\$67,279	780,566				\$125,342	31	873,788	\$0.20	\$171,361	413	2,191	\$418	\$136	67.1%
YTD																			
Average	200,978				\$46,098	307,809				\$61,287	30	508,787	\$0.22	\$107,385	230	2,321	\$525	\$171	60.5%
Total	1,205,866				\$276,588	1,846,855				\$367,723	182	3,052,721		\$644,311	1,380	13,923			
Minimum	93,222				\$26,843	9,593				\$8,793	29	277,975	\$0.18	\$70,019	105	2,071	\$391	\$127	52.1%
Maximum	389,192				\$67,279	780,566				\$125,342	32	873,788	\$0.27	\$171,361	413	2,667	\$683	\$223	67.1%



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**: 9/15 - 10/13 for October, 10/14 - 11/12 for November, and 11/13 - 12/13 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 2021-2022, 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-21	0	29	87	204	0	0	0	200	84	26	631	8.5%
Aug-21	0	220	81	1	91	62	0	29	81	219	783	10.5%
Sep-21	0	2	110	3	359	240	1	352	1	0	1,067	14.8%
Oct-21	0	184	47	161	333	245	163	359	192	0	1,685	22.7%
Nov-21	0	481	90	367	37	55	481	38	369	32	1,951	27.1%
Dec-21	0	522	97	551	0	0	551	113	546	0	2,380	32.0%
Jan-22											0	0.0%
Feb-22											0	0.0%
Mar-22											0	0.0%
Apr-22											0	0.0%
May-22											0	0.0%
Jun-22											0	0.0%
Quarter												
Average	0	396	78	359	123	100	398	170	369	11	2,006	27.2%
Total	0	1,187	235	1,078	370	301	1,195	511	1,107	32	6,017	
Minimum	0	184	47	161	0	0	163	38	192	0	1,685	22.7%
Maximum	0	522	97	551	333	245	551	359	546	32	2,380	32.0%
YTD												
Average	0	240	86	214	137	100	199	182	212	46	708	9.6%
Total	0	1,439	513	1,286	820	603	1,197	1,091	1,272	277	8,498	
Minimum	0	2	47	1	0	0	0	29	1	0	0	0.0%
Maximum	0	522	110	551	359	245	551	359	546	219	2,380	32.0%

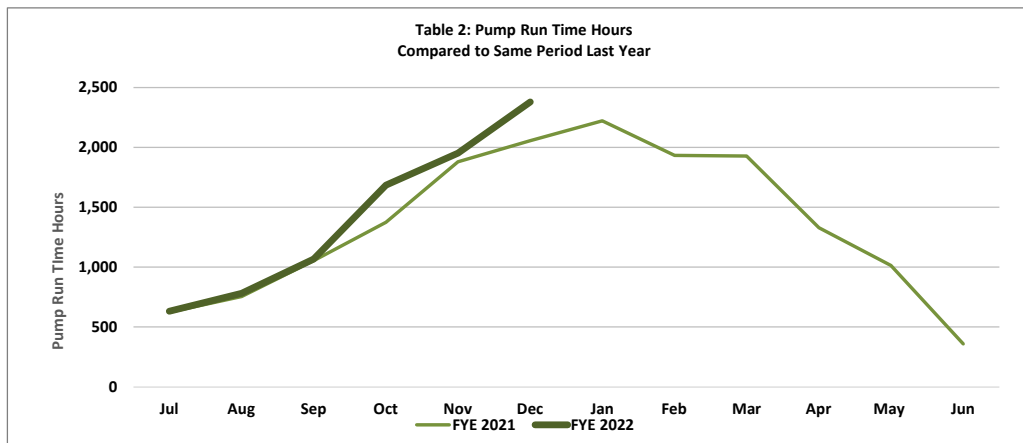
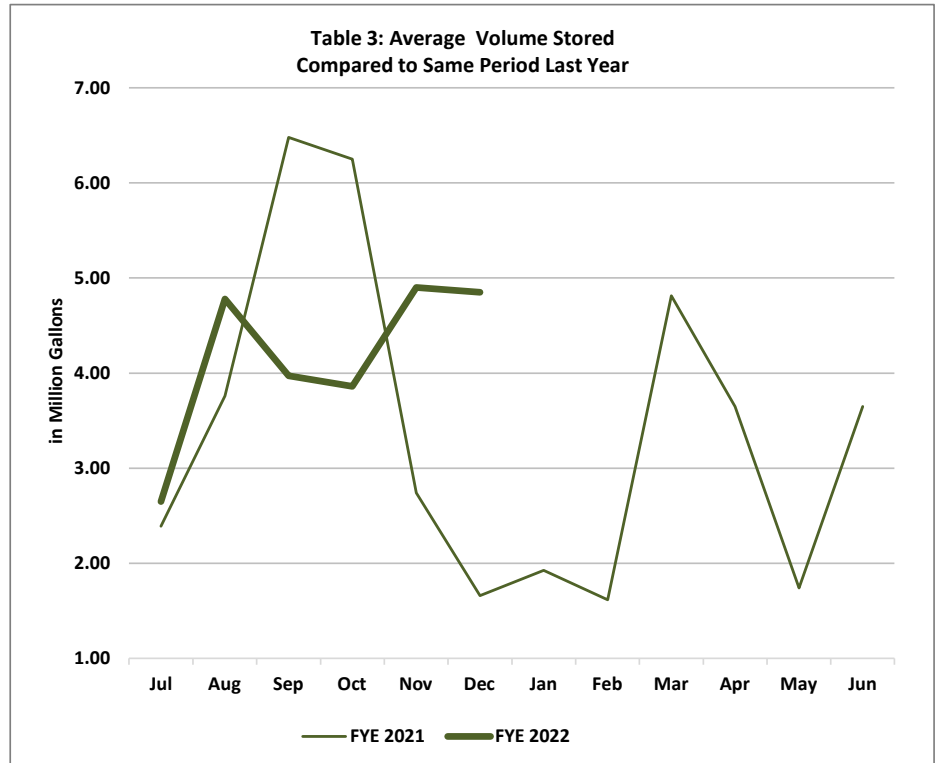


TABLE 3 - Monthly Average Storage Basin Levels and Volume

LAVWMA SYSTEM: Fiscal Year 2021-2022, 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-21	2.17	0.22	3.19	2.65	18	14.7%
Aug-21	4.97	3.44	0.53	4.78	18	26.6%
Sep-21	4.19	2.35	1.08	3.97	18	22.1%
Oct-21	3.09	1.98	2.96	3.86	18	21.4%
Nov-21	1.56	1.78	5.97	4.90	18	27.2%
Dec-21	3.89	1.49	4.24	4.85	18	26.9%
Jan-22					18	0.0%
Feb-22					18	0.0%
Mar-22					18	0.0%
Apr-22					18	0.0%
May-22					18	0.0%
Jun-22					18	0.0%
Quarter						
Average	2.85	1.75	4.39	4.54		0.25
Minimum	1.56	1.49	2.96	3.86		0.21
Maximum	3.89	1.98	5.97	4.90		0.27
YTD						
Average	3.31	1.88	3.00	4.17		11.6%
Minimum	1.56	0.22	0.53	2.65		0.0%
Maximum	4.97	3.44	5.97	4.90		27.2%

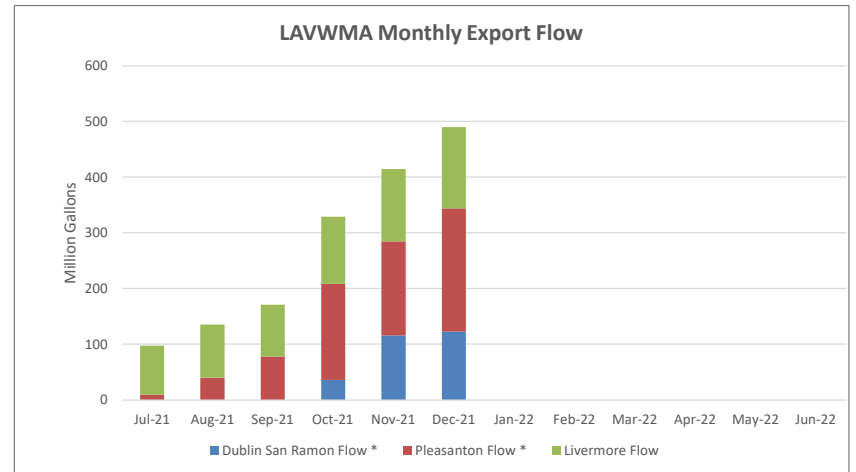
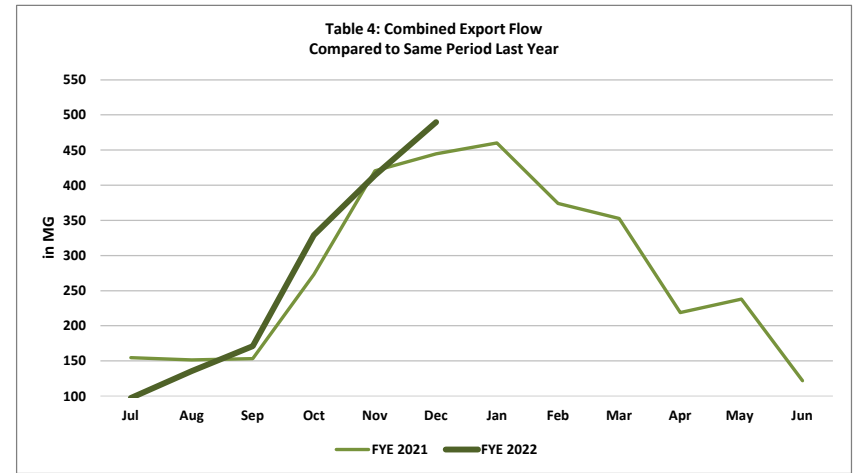


Note: Total available storage volume is 18 million gallons.

TABLE 4 - Monthly Export Flow

LAVWMA SYSTEM: Fiscal Year 2021-2022, Quarterly Report
 Estimated Flow: 3,358 MG

Month	Dublin San Ramon	Pleasanton	Livermore	Combined Export	Total for Quarter
	Flow * MG	Flow * MG	Flow MG	Flow MG	
Jul-21	0.00	9.24	88.11	97.35	403.69
Aug-21	0.00	39.90	95.49	135.39	
Sep-21	0.00	77.99	92.97	170.96	
Oct-21	35.96	172.01	120.69	328.65	1,233.19
Nov-21	115.46	169.49	129.52	414.47	
Dec-21	122.90	221.07	146.09	490.06	
Jan-22	0.00	0.00			0.00
Feb-22	0.00	0.00			
Mar-22	0.00	0.00			
Apr-22	0.00	0.00			0.00
May-22	0.00	0.00			
Jun-22	0.00	0.00			
Quarter					
Total	274.32	562.57	396.30	1,233.19	
Average	91.44	187.52	132.10	411.06	
Minimum	35.96	169.49	120.69	328.65	
Maximum	122.90	221.07	146.09	490.06	
YTD					
Total	274.32	689.70	672.87	1,636.88	Budgeted Flow: 3,358 MG
Average	22.86	57.47	112.14	272.81	
Minimum	0.00	0.00	88.11	97.35	
Maximum	122.90	221.07	146.09	490.06	



* 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 2021-2022, Quarterly Report

FY Labor Budget \$968,151

Month	Billed	FTE Equiv	Labor Invoice	YTD	Budget Utilization	Labor	Export Flow	
	Labor Hours			Labor Expense		Budget Remaining	MG	AF
Jul-21	353.5	2.0	\$59,266	\$59,266	6.1%	\$908,885	97.35	299
Aug-21	279.5	1.6	\$48,140	\$107,406	11.1%	\$860,745	135.39	416
Sep-21	256.2	1.5	\$43,940	\$151,346	15.6%	\$816,805	170.96	525
Oct-21	436.0	2.5	\$75,273	\$226,619	23.4%	\$741,532	328.65	1,009
Nov-21	323.5	1.9	\$55,760	\$282,379	29.2%	\$685,772	414.47	1,272
Dec-21	273.0	1.6	\$47,017	\$329,396	34.0%	\$638,755	490.06	1,504
Jan-22								
Feb-22								
Mar-22								
Apr-22								
May-22								
Jun-22								
QUARTER								
Total	1,032.5		\$178,050				1,233.19	3,785
Average	344.2	2.0	\$59,350				411.06	1,262
Minimum	273.0	1.6	\$47,017				328.65	1,009
Maximum	436.0	2.5	\$75,273				490.06	1,504
YTD								
Total YTD	1,921.7		\$329,396		34.0%	\$638,755	1,636.88	5,024
Average YTD	320.3	1.8	\$54,899				272.81	837
Minimum	256.2	1.5	\$43,940				97.35	299
Maximum	436.0	2.5	\$75,273				490.06	1,504

Notes:

TABLE 6 - O&M Expenditures and Budget Utilization

LAVWMA SYSTEM: Fiscal Year 2021-2022, Quarterly Report

Total O&M Budget: **\$2,558,901**

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-21	\$59,266	\$51,654	\$110,921	\$110,921	4.3%	\$2,447,980	\$1,139	\$371	97.35	299
Aug-21	\$48,140	\$102,505	\$150,645	\$261,566	10.2%	\$2,297,335	\$1,113	\$363	135.39	416
Sep-21	\$43,940	\$96,666	\$140,606	\$402,171	15.7%	\$2,156,730	\$822	\$268	170.96	525
Oct-21	\$75,273	\$75,803	\$151,076	\$553,247	21.6%	\$2,005,654	\$460	\$150	328.65	1,009
Nov-21	\$55,760	\$181,762	\$237,522	\$790,769	30.9%	\$1,768,132	\$573	\$187	414.47	1,272
Dec-21	\$47,017	\$98,370	\$145,388	\$936,156	36.6%	\$1,622,745	\$297	\$97	490.06	1,504
Jan-22										
Feb-22										
Mar-22										
Apr-22										
May-22										
Jun-22										
<u>QUARTER</u>										
Total	\$178,050	\$355,936	\$533,985				\$433	\$141	1,233.19	3,785
Average	\$59,350	\$118,645	\$177,995						411.06	1,262
Minimum	\$47,017	\$75,803	\$145,388				\$297	\$97	328.65	1,009
Maximum	\$75,273	\$181,762	\$237,522				\$573	\$187	490.06	1,504
<u>YTD</u>										
Total YTD	\$329,396	\$606,760	\$936,156		36.6%	\$1,622,745	\$572	\$186	1,636.88	5,024
Average YTD	\$54,899	\$101,127	\$156,026							
Minimum	\$43,940	\$51,654	\$110,921				\$297	\$97	97.35	299
Maximum	\$75,273	\$181,762	\$237,522				\$1,139	\$371	490.06	1,504

Notes:

a) A/P expenses dipped in December due to applied credit of \$89,058.20 to PG&E bill.

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

LAVWMA SYSTEM: Fiscal Year 2021-2022, Quarterly Report

Livermore Sole Use Facilities			
Month	Labor Expenses	A/P Expenses	Total Expenses
Jul-21	\$0	\$167	\$167
Aug-21	\$0	\$151	\$151
Sep-21	\$0	\$166	\$166
Oct-21	\$0	\$196	\$196
Nov-21	\$0	\$168	\$168
Dec-21	\$0	\$186	\$186
Jan-22			
Feb-22			
Mar-22			
Apr-22			
May-22			
Jun-22			
<u>Quarter</u>			
Total	\$0	\$550	\$550
Average	\$0	\$183	\$183
Minimum	\$0	\$168	\$168
Maximum	\$0	\$196	\$196
<u>YTD</u>			
YTD Total	\$0	\$1,034	\$1,034
YTD Average	\$0	\$172	\$172
YTD Minimum	\$0	\$151	\$151
YTD Maximum	\$0	\$196	\$196

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 2021-2022	2021	2021	2021	2021	2021	2021	2022	2022	2022	2022	2022	2022	TOTAL	Budget
Labor															
Staff	\$968,151	\$59,266	\$48,140	\$43,940	\$75,273	\$55,760	\$47,017							\$329,396	\$484,076
Subtotal	\$968,151	\$59,266	\$48,140	\$43,940	\$75,273	\$55,760	\$47,017	\$0	\$0	\$0	\$0	\$0	\$0	\$329,396	\$484,076
Materials & Supplies															
Operations Supplies	\$13,000	\$10	\$47	\$10	\$7	\$10	\$0							\$84	\$6,500
Mechanical Supplies	\$25,000		\$1,039			\$3,723	\$724							\$5,486	\$12,500
Electrical Supplies	\$59,400		\$3,177	\$540	\$1,776	\$2,398	\$12,097							\$19,988	\$29,700
Subtotal	\$97,400	\$10	\$4,263	\$550	\$1,783	\$6,131	\$12,821	\$0	\$0	\$0	\$0	\$0	\$0	\$25,558	\$48,700
Laboratory Analysis															
Compliance Testing	\$10,000	\$792	\$792	\$990	\$792	\$792	\$990							\$5,148	\$5,000
Operational Support Testing	\$4,000	\$366	\$366	\$366	\$366	\$366	\$366							\$2,196	\$2,000
Special Sampling	\$22,000	\$1,288	\$1,610	\$1,288	\$1,288	\$1,610	\$1,288							\$8,372	\$11,000
Subtotal	\$36,000	\$2,446	\$2,768	\$2,644	\$2,446	\$2,768	\$2,644	\$0	\$0	\$0	\$0	\$0	\$0	\$15,716	\$18,000
Contractual Services															
Sub-surface Repairs	\$15,000													\$0	\$7,500
Street Sweeping	\$5,000		\$500	\$400	\$400	\$500	\$300							\$2,100	\$2,500
Cathodic Protection Survey & Repairs	\$30,000													\$0	\$15,000
Underground Service Alert	\$4,500		\$896											\$896	\$2,250
SCADA software maintenance contract	\$17,000	\$5,029													
Remote monitoring annual service for PS and Rec	\$5,000														
Med voltage switchgear 3-yr PM (FY22, \$18k)	\$20,000														
HVAC Maintenance/Repairs	\$750													\$0	\$375
Termite/Pest Control	\$900													\$0	\$450
Landscape/weed maintenance	\$10,000				\$2,941									\$2,941	\$5,000
Janitorial Service	\$9,500		\$1,220		\$425									\$1,645	\$4,750
Fire Extinguisher Maintenance	\$200													\$0	\$100
Postage/Shipping Charges	\$0													\$0	\$0
Professional Services, misc	\$30,000			\$876			\$922							\$1,799	\$15,000
Subtotal	\$147,850	\$5,029	\$2,616	\$1,276	\$3,766	\$500	\$1,222	\$0	\$0	\$0	\$0	\$0	\$0	\$14,409	\$73,925
Utilities															
Electricity (PG&E)	\$1,301,600	\$43,818	\$92,858	\$91,816	\$67,808	\$171,817	\$81,683							\$549,799	\$650,800
Water & Sewer (Pleasanton)	\$900	\$154		\$163		\$341								\$657	\$450
Water (EBMUD)	\$1,000	\$197		\$217		\$206								\$620	\$500
Telephone/communications	\$6,000													\$0	\$3,000
WW Treatment (DSRSD)	\$0													\$0	\$0
Subtotal	\$1,309,500	\$44,169	\$92,858	\$92,196	\$67,808	\$172,363	\$81,683	\$0	\$0	\$0	\$0	\$0	\$0	\$551,077	\$654,750
Non-Routine															
	\$0													\$0	\$0
Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Monthly Total		\$110,921	\$150,645	\$140,606	\$151,076	\$237,522	\$145,388	\$0	\$0	\$0	\$0	\$0	\$0	\$936,156	\$1,279,451
YTD Total	\$2,558,901	\$110,921	\$261,566	\$402,171	\$553,247	\$790,769	\$936,156	\$936,156	\$936,156	\$936,156	\$936,156	\$936,156	\$936,156	\$936,156	\$1,279,451
Combined Export Flow, mg	3358	97	135	171	329	414	490							1,637	1,679
Pumping Efficiency		54.2%	52.1%	60.1%	63.5%	67.1%	65.7%								
Monthly Cost, \$/mg		\$1,139	\$1,113	\$822	\$460	\$351	\$485								
YTD Running Cost, \$/mg	\$762													\$572	

Q2 Notes:

a) December PG&E bill for Feeder B includes \$89,058.20 credit

LAVWMA
BUDGET COMPARISON TO ACTUAL EXPENSES: LABOR

Current FY Period: 6

ACTUAL EXPENSES BILLED TO LAVWMA FOR REGULAR O&M														
FY 2021-2022	Jul 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	YTD TOTAL	YTD Budget
<i>Estimated Personnel Hours</i>														
Division 50 - Ops Admin	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Division 51 - FOD	40	-	-	-	-	-	-	-	-	-	-	-	-	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 II	10													5.00
Maintenance Worker	0													
Supervisor	0													
Division 52 - WWTP	3,080	180.50	123.50	127.19	283.00	144.50	93.50	-	-	-	-	-	952.19	1,540.00
Process Lead Operator IV/V	150				2.50								2.50	75.00
Senior WWTP Operator III	720	22.50	22.00	23.00	126.00	39.00	29.50						262.00	360.00
Operator In Training	400													200.00
Operator II	1,700	158.00	101.50	104.19	154.50	105.50	64.00						687.69	850.00
Operator II (SLSS)	0													
Operations Superintendent	110													55.00
Division 53 - MECH	1,230	129.50	126.50	95.50	124.00	142.50	113.00	-	-	-	-	-	731.00	615.00
Senior Mechanic-Crane Cert	60	43.50	47.50	32.00	28.00	42.00	23.00						216.00	30.00
Senior Mechanic - USA	80	1.50		1.00	7.00		7.50						17.00	40.00
Maintenance Worker	60													30.00
Mechanic I/II	980	18.00			12.00	23.00	11.00						64.00	490.00
Mechanic II-Crane Cert	0	44.50	50.00	48.50	54.00	57.50	45.50						300.00	
Mechanic I/II - USA	0													
Mechanic II-Crane Cert - USA	0	22.00	29.00	14.00	23.00	20.00	26.00						134.00	
Supervisor	50													25.00
Division 54 - ELEC	1,130	43.50	28.00	31.00	24.50	34.00	57.00	-	-	-	-	-	218.00	565.00
Senior Instrument/Controls Tech	30						15.00						15.00	15.00
Instrumentation & Controls Tech I/II	300	2.50	28.00	20.00	24.50	32.00	42.00						149.00	150.00
OPS Control Sys Spec	300													150.00
Senior Electrician	30	13.00		4.00									17.00	15.00
Electrician I/II	440	27.00		5.00		2.00							34.00	220.00
Principal Electrical Engineer	30	1.00		2.00									3.00	15.00
Division 26 - SAFETY	60	-	-	-	-	-	-	-	-	-	-	-	-	30.00
Safety Officer	60	-	-	-	-	-	-	-	-	-	-	-	-	30.00
Division 40 - ENG	260	-	1.50	2.50	4.50	2.50	9.50	-	-	-	-	-	20.50	130.00
Senior Engineer-Supervisory	0													
Associate/Senior Civil Engineer-SME	100		1.50	2.50	4.50	2.50	9.50						20.50	50.00
Construction Inspector I	80													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	353.50	279.50	256.19	436.00	323.50	273.00	-	-	-	-	-	-	1,921.69	2,900.00

Notes: Senior Mechanic position is missing under Division 53. Hours charged to this position are entered under Senior Mechanic-Crane Cert

LAVWMA	October	2021							
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	Daily Average	SM 9221 C,E-2006	Enterolert
MDL									
RL		3.0	2.5					2	10
Location	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	SLSS	SLSS	SLSS
10/1/2021	6.08			7.42	7.52	0.688	0.001		
10/2/2021	6.68			7.45	7.53	0.540	0.001		
10/3/2021	6.22			7.44	7.52	0.593	0.001		
10/4/2021	6.11			7.44	7.52	0.550	0.001		
10/5/2021	6.95			7.47	7.53	0.372	0.001		
10/6/2021	6.82	3.7	7.9	7.53	7.56	0.421	0.001		
10/7/2021	9.17			7.51	7.58	0.264	0.001	8	10
10/8/2021	8.33			7.49	7.59	0.214	0.001		
10/9/2021	7.17			7.47	7.58	0.270	0.001		
10/10/2021	8.13			7.42	7.54	0.278	0.001		
10/11/2021	7.06			7.45	7.59	0.378	0.001		
10/12/2021	6.93			7.44	7.64	0.282	0.001	<2	<10
10/13/2021	6.05	4.6	9.2	7.44	7.55	0.422	0.001		
10/14/2021	7.40			7.42	7.53	4.092	0.001		
10/15/2021	7.35			7.43	7.57	3.612	0.001		
10/16/2021	8.81			7.39	7.57	1.645	0.001		
10/17/2021	7.41			7.45	7.61	1.161	0.001		
10/18/2021	9.23			7.49	7.58	1.019	0.001		
10/19/2021	9.64			7.51	7.56	1.424	0.001	11	<10
10/20/2021	10.20	6.4	9.2	7.49	7.55	1.480	0.001		
10/21/2021	11.33			7.46	7.53	0.938	0.001		
10/22/2021	13.55			7.46	7.56	0.535	0.001		
10/23/2021	16.61			7.46	7.54	0.530	0.001		
10/24/2021	24.15			7.43	7.59	0.436	0.001		
10/25/2021	21.69			7.20	7.43	0.301	0.001		
10/26/2021	15.98			7.27	7.39	0.803	0.001	<2	<10
10/27/2021	12.50	3.8	7.7	7.34	7.45	1.242	0.001		
10/28/2021	16.44			7.42	7.49	0.954	0.001		
10/29/2021	15.49			7.42	7.51	0.614	0.001		
10/30/2021	15.49			7.47	7.54	0.377	0.001		
10/31/2021	13.72			7.47	7.56	0.869	0.001		

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

LAVWMA	November	2021							
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	Daily Average	SM 9221 C,E-2006	Enterolert
MDL									
RL		3.0	2.5					2	10
Location	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	SLSS	SLSS	SLSS
11/1/2021	14.51			7.44	7.53	0.814	0.001		
11/2/2021	13.75			7.47	8.29	0.739	0.016	<2	<10
11/3/2021	14.36	6.0	12.8	7.46	7.55	0.836	0.053		
11/4/2021	15.34			7.45	7.52	1.173	0.013		
11/5/2021	14.88			7.44	7.51	0.912	0.005		
11/6/2021	13.33			7.45	7.51	0.878	0.001		
11/7/2021	14.90			7.46	7.52	0.770	0.001		
11/8/2021	13.46			7.46	7.52	0.538	0.001		
11/9/2021	15.15			7.43	7.55	0.694	0.001	22	<10
11/10/2021	15.27	6.6	19.6	7.44	7.50	1.033	0.001		
11/11/2021	15.26			7.45	7.55	0.933	0.001		
11/12/2021	14.65			7.44	7.56	1.353	0.001		
11/13/2021	14.30			7.39	7.51	0.778	0.001		
11/14/2021	12.97			7.42	7.52	0.688	0.001		
11/15/2021	12.09			7.42	7.55	1.311	0.001		
11/16/2021	11.55			7.46	7.55	1.048	0.001	4	20
11/17/2021	13.11	3.7	7.7	7.47	7.55	0.545	0.001		
11/18/2021	13.29			7.50	7.68	0.326	0.001		
11/19/2021	15.07			7.49	7.60	0.550	0.001		
11/20/2021	14.52			7.45	7.56	0.601	0.001		
11/21/2021	12.98			7.43	7.55	0.483	0.001		
11/22/2021	13.81			7.42	7.52	1.097	0.001		
11/23/2021	12.89	6.3	12.9	7.44	7.55	1.516	0.001	2	<10
11/24/2021	13.02			7.47	7.58	1.619	0.001		
11/25/2021	14.21			7.42	7.60	1.654	0.001		
11/26/2021	12.40			7.40	7.49	1.709	0.001		
11/27/2021	13.54			7.39	7.49	1.795	0.001		
11/28/2021	13.25			7.44	7.51	1.691	0.001		
11/29/2021	13.12			7.44	7.60	1.640	0.001		
11/30/2021	13.50			7.46	7.56	2.636	0.004	<2	<10

← SELECT FIRST

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

LAVWMA	December	2021							
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	Daily Average	SM 9221 C,E-2006	Enterolert
MDL									
RL		3.0	2.5					2	10
Location	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	LAVWMA-EXP	SLSS	SLSS	SLSS
12/1/2021	12.68	7.1	11.3	7.44	7.76	4.766	0.005		
12/2/2021	12.55			7.47	7.60	4.515	0.002		
12/3/2021	12.97			7.49	7.66	4.011	0.001		
12/4/2021	12.33			7.47	7.56	3.146	0.001		
12/5/2021	12.57			7.49	7.57	4.295	0.001		
12/6/2021	11.71			7.47	7.57	3.359	0.001		
12/7/2021	12.83			7.46	7.55	4.820	0.001	2	<10
12/8/2021	12.53	5	9.8	7.28	7.67	5.480	0.001		
12/9/2021	13.68			7.50	7.59	5.960	0.001		
12/10/2021	14.07			7.51	7.60	5.833	0.001		
12/11/2021	13.69			7.47	7.57	6.525	0.001		
12/12/2021	17.28			7.45	7.57	7.076	0.001		
12/13/2021	14.22			7.44	7.58	7.876	0.001		
12/14/2021	17.45			7.28	7.45	8.086	0.001	13	<10
12/15/2021	16.99	6.2	8.4	7.41	7.52	9.393	0.001		
12/16/2021	14.54			7.45	7.55	9.496	0.001		
12/17/2021	17.15			7.46	7.56	9.881	0.001		
12/18/2021	15.73			7.49	7.56	9.904	0.001		
12/19/2021	15.94			7.47	7.57	9.939	0.001		
12/20/2021	15.42			7.44	7.56	8.715	0.001		
12/21/2021	17.44	7.3	9.7	7.46	7.60	7.616	0.001	<2	<10
12/22/2021	17.01			7.46	7.57	8.042	0.001		
12/23/2021	19.20			7.37	7.49	9.796	0.001		
12/24/2021	20.14			7.38	7.44	9.869	0.001		
12/25/2021	18.14			7.41	7.46	9.596	0.001		
12/26/2021	18.99			7.37	7.47	8.127	0.001		
12/27/2021	19.66			7.32	7.47	8.930	0.001		
12/28/2021	17.26	9	8.9	7.38	7.44	7.685	0.001	<2	<10
12/29/2021	21.01			7.43	7.48	7.405	0.001		
12/30/2021	17.23			7.43	7.50	8.902	0.001		
12/31/2021	17.64			7.46	7.55	9.378	0.001		

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

*DUBLIN SAN RAMON SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY*

LAVWMA - 4th Quarter 2021

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
10/19/21	768	24.5	118	360	7.4	7.2	0.2
11/09/21	742	21.8	114	344	7.4	7.3	0.1
12/06/21	731	20.0	108	326	7.4	7.4	0.1
MAXIMUM	768	24.5	118	360	7.4	7.4	0.2
MINIMUM	731	20.0	108	326	7.4	7.2	0.1
AVERAGE	747	22.1	113	343	7.4	7.3	0.1

**DUBLIN SAN RAMON SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY**

DSRSD - 4th Quarter 2021

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
10/19/21	848	23.8	140	396	7.5	7.1	0.4
11/09/21	815	22.5	124	339	7.5	7.3	0.2
12/06/21	790	22.0	122	326	7.1	7.3	-0.1
MAXIMUM	848	23.8	140	396	7.5	7.3	0.4
MINIMUM	790	22.0	122	326	7.1	7.1	-0.1
AVERAGE	818	22.8	129	354	7.4	7.2	0.2

TABLE 10

**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
10/06/21	610	24.0	73	318	7.4	7.5	-0.1
11/08/21	648	21.0	68	329	7.6	7.6	-0.1
12/01/21	644	21.0	73	313	7.5	7.6	-0.1
MAXIMUM	648	24.0	73	329	7.6	7.6	-0.1
MINIMUM	610	21.0	68	313	7.4	7.5	-0.1
AVERAGE	634	22.0	71	320	7.5	7.6	-0.1

LAVWMA Action Item List

Month: Nov-21

SAG Task	Responsible Party	Due Date	Status	Completion Date
Items for February 16, 2022 LAVWMA Board Meeting.	SAG	NA	Primary activity since the last Board meeting has been management of capital projects. SAG to be updated on projects prior to Board meeting.	
Operations Coordination Committee Task	Responsible Party	Due Date	Status	Completion Date
FYE21 Replacement Projects: See Items Below	Weir/Zavadil/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 nearly complete. All submittals and RFIs have been addressed. Royal Electric moved on site July 6, 2021. The schedule has extended to December 11, 2021 to account for having to demo and pour a new concrete pad for MCC-P1. Both MCCs have been completed and are in service. There have been four contract change orders issued at a cost of \$34,738 or 1.68% of the contract price. Remaining items are all punch list related and include some programming of instrumentation and controls.	Expected by 2/28/22
Purchase Three New Pumps and Rebuild Two Associated Motors. Estimated cost has increased to \$460,000	Weir/Quinlan	6/30/2022	Bid packet was posted and distributed on July 6, 2021. A mandatory prebid meeting was held on July 15, 2021 and was attended by four pump vendors. Addendum No. 1 was issued on August 2, 2021. Four bids were received by the deadline of August 5, 2021. Bids ranged from \$357,057 to \$941,200. Trillium submitted the low bid. References have been contacted and have been positive. Budget Modification No. 1 to increase the project cost was approved by the Board August 18, 2021. The Board had two special meetings in September to provide direction. All bids were rejected and the GM and General Counsel were directed to negotiate the best deal with the low bidder Trillium. The contract was fully executed with Trillium on December 9, 2021 at the original bid price. There are still minor issues being resolved with the insurance documentation, but the project is proceeding. Trillium's Pump Submittal Package was received on January 21, 2022. LAVWMA's design engineer is currently reviewing and will have a response the week of February 7, 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. Area has been cleaned and all three basins are in service and will be fine through the winter. Solutions will be reevaluated after wet weather.	5/1/2021
San Leandro Sample Station Design Improvements. Estimated cost \$670,000	Weir	6/30/2022	RFP for engineering services was posted to the website on June 28, 2021. A non-mandatory site visit is scheduled for June 13, 2021. Proposals were due 5:00 p.m. Monday, July 26, 2021. HydroScience (HS) was the only one to submit a bid. SAG members reviewed and rated the proposal; average score of 81.5 out of 90. HS was awarded the contract at a total of \$185,000. HS has held a kickoff meeting and has been to the site several times taking measurements, talking to DSRSD staff, and taking pictures. A 30% design memo should be received this week. Due to COVID-related issues, including inflation and supply chain issues, the engineer's estimated cost of the project has increased approximately 40% from the original estimate. The total project cost will likely need to be increased to at least \$900,000. Since the construction will take carry over into the next fiscal year, increasing the project cost can occur during the next budget approval process. DSRSD staff has reviewed the new estimated costs and has found it reasonable. The 90% design is nearing completion.	
Road Drainage Improvements at the Pump Station. Estimated cost \$35,000	TBD	12/31/2020	To be combined with similar projects at DSRSD.	
Cathodic Protection Projects. Estimated cost \$185,000	Weir/Atendido	12/31/2020	Corpro has completed most items that did not require any excavation. Permits have been received for three projects needing excavation and were provided to Corpro. They are in the process of scheduling their work. Corpro had planned to begin the week of November 1, but had to cancel due to the inability to get certain equipment for excavation to the site.	
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 still in development.	
Pipeline Inspection. Estimated cost \$100,000	TBD	6/30/2021	Scope will be based on the results and recommendations of the HydroScience (National Plant Services) inspection project. Inspection site selection will begin soon. A planning meeting with DSRSD staff was held in early November. The project will likely occur after the rainy season.	
Smart Detectors on High Maintenance Air/Vac and Air Release Valves. Estimated cost \$40,000	TBD	6/30/2021	The smart detectors are intended to help prevent leaks from the valves along the forcemain system. Three have been installed for testing and have proven to be beneficial. Three additional units were ordered to be used in areas that could cause problems if there were leaks.	
Rewiring the actuators on the pump deck. Estimated cost \$50,000.	Atendido	12/31/2021	Royal Electric provided a change order estimate of \$10,500, which has been issued.	
Other Items				
Wet Weather Issues	Sevilla	10/31/2020	DSRSD Operations successfully managed the storm on October 24 and 25, 2021. The basins were emptied in advance of the storm. Both MCCs happened to be available. A maximum of seven pumps were run to send flow to EBDA. Operations has indicated that had MCC-P1 not been available they still would have been able to manage the storm through a combination of pumping and storage.	
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	Test postponed due to COVID-19. Was planning on this winter, but will likely be delayed until 2022 due to COVID-19.	
Wet Well Isolation Gates	Quinlan	6/30/2019	Gate is in good shape but won't fully close. No date set, perhaps this winter.	
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 switched Feeder B back to the old rate schedule and overcharged \$89,000, which has been credited back to LAVWMA.	

