

# LAVWMA

QUARTERLY REPORT OF OPERATIONS

2nd Quarter, FY 2020-2021



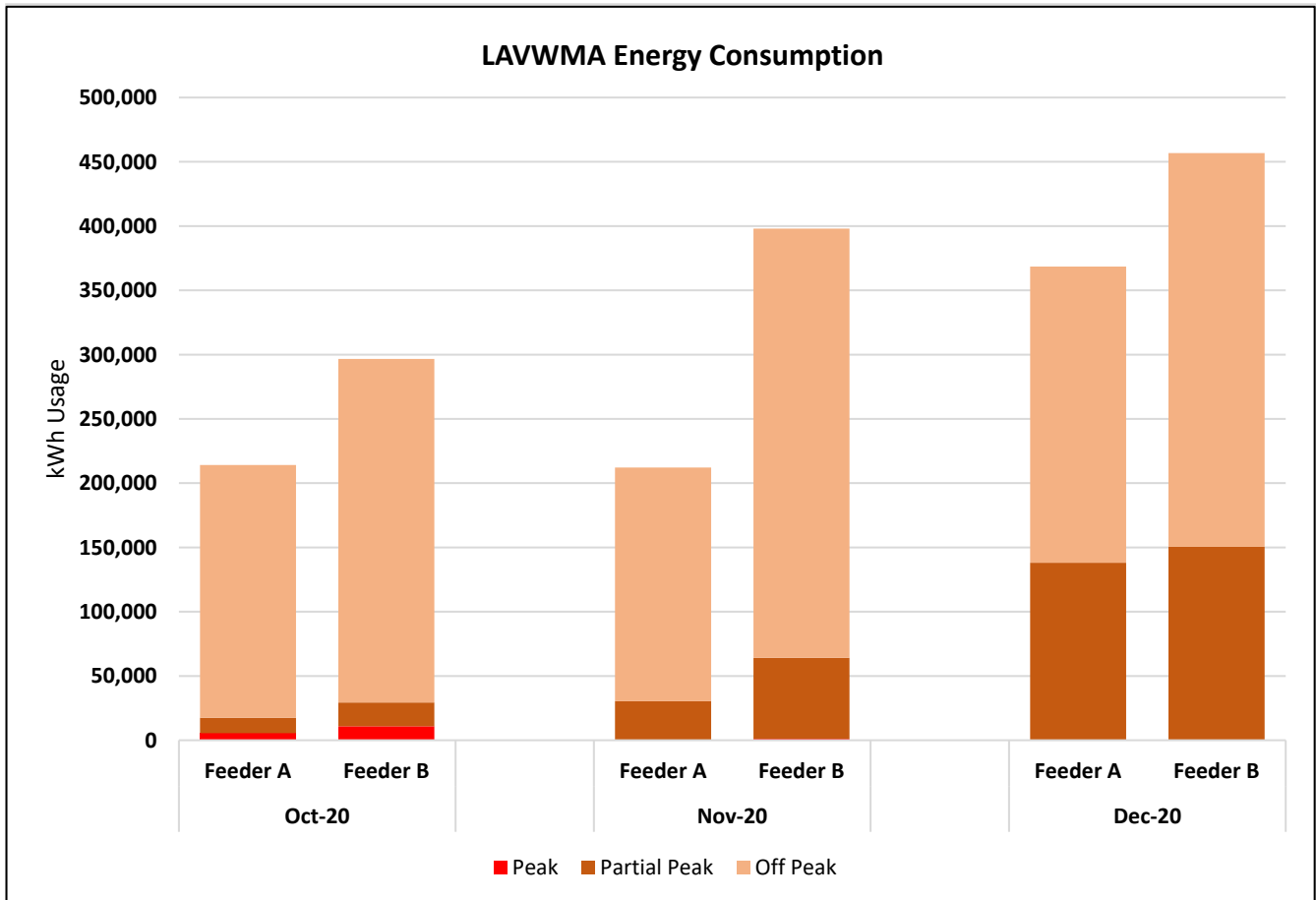
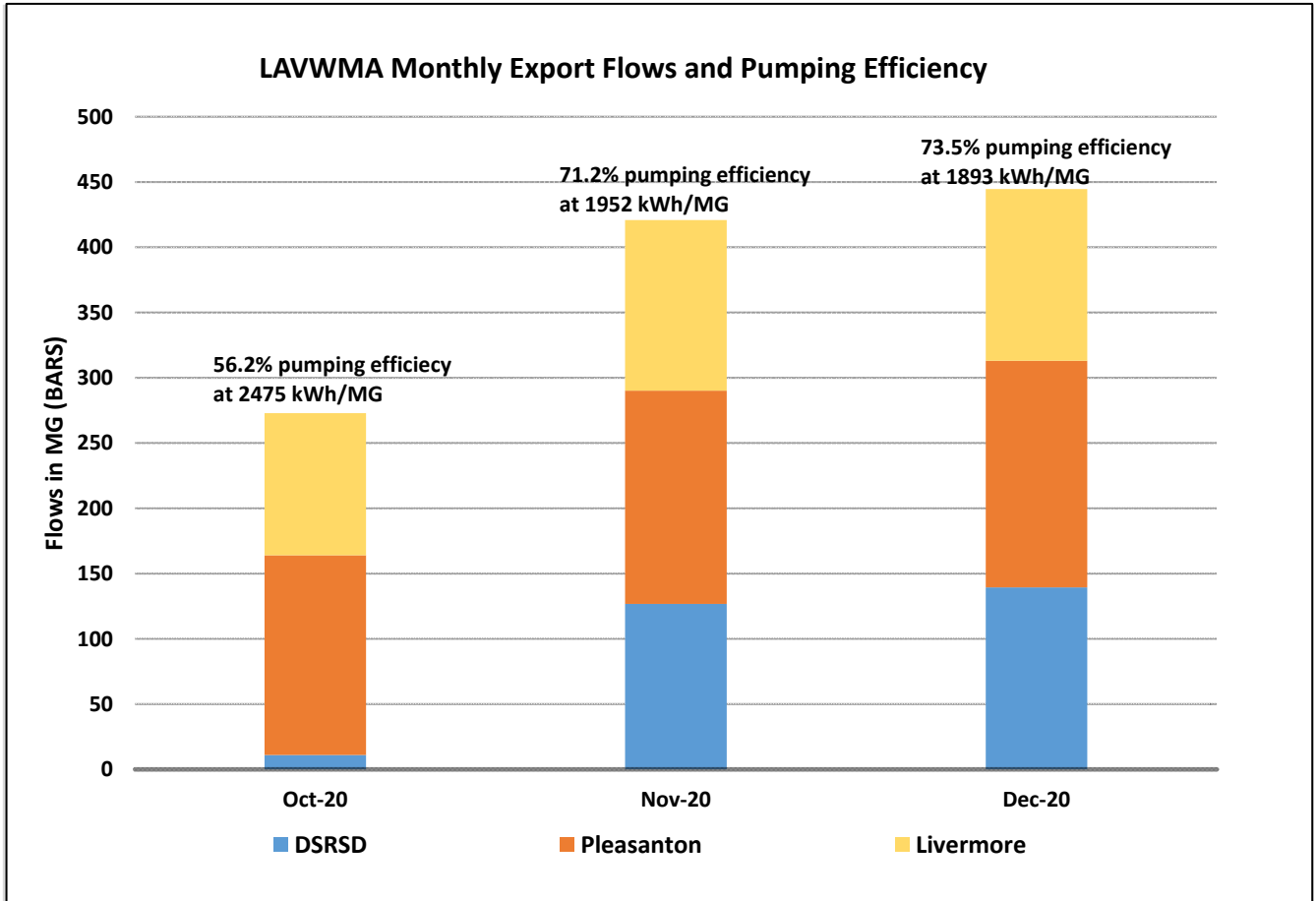
**Dublin San Ramon  
Services District**

*Water, wastewater, recycled water*

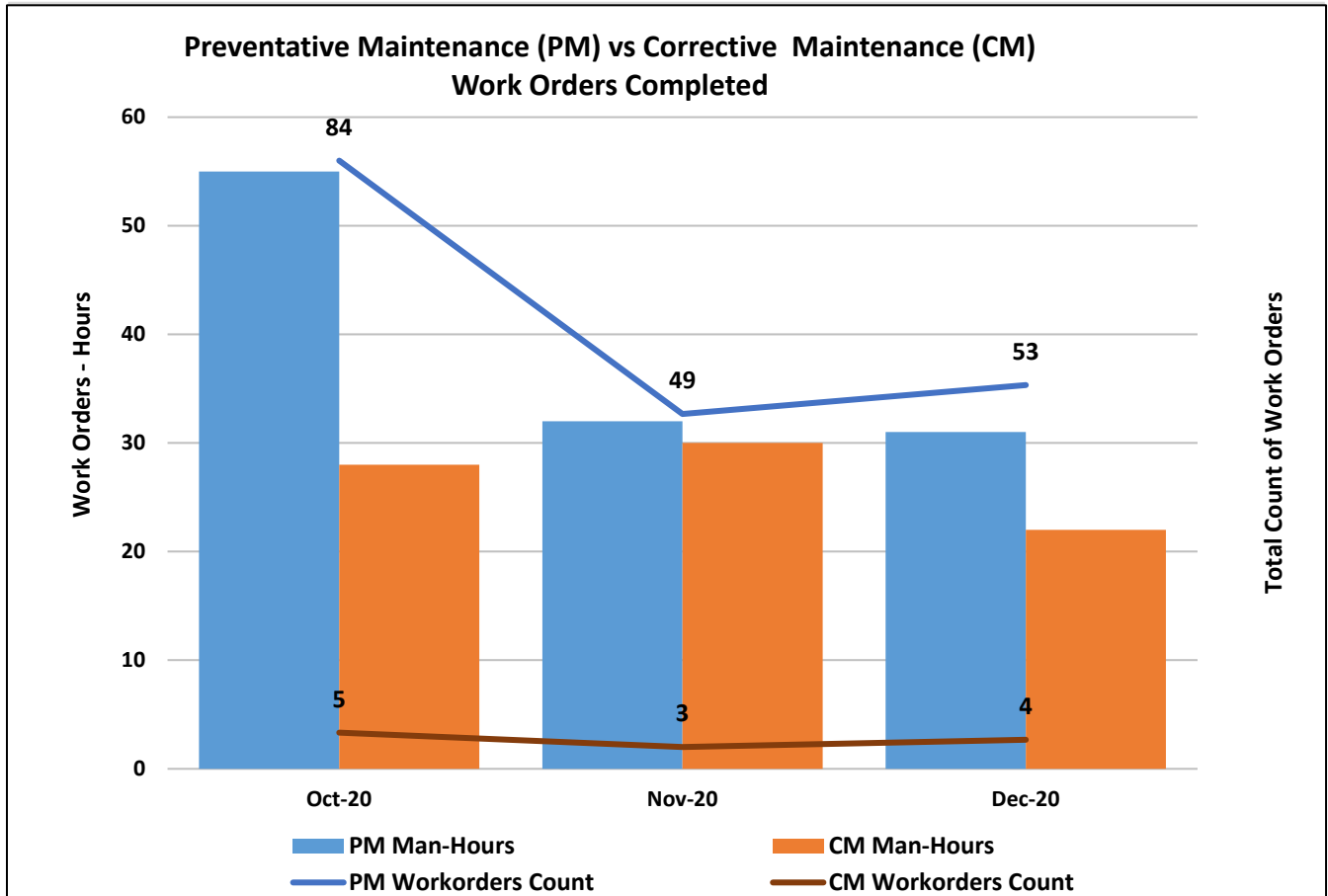
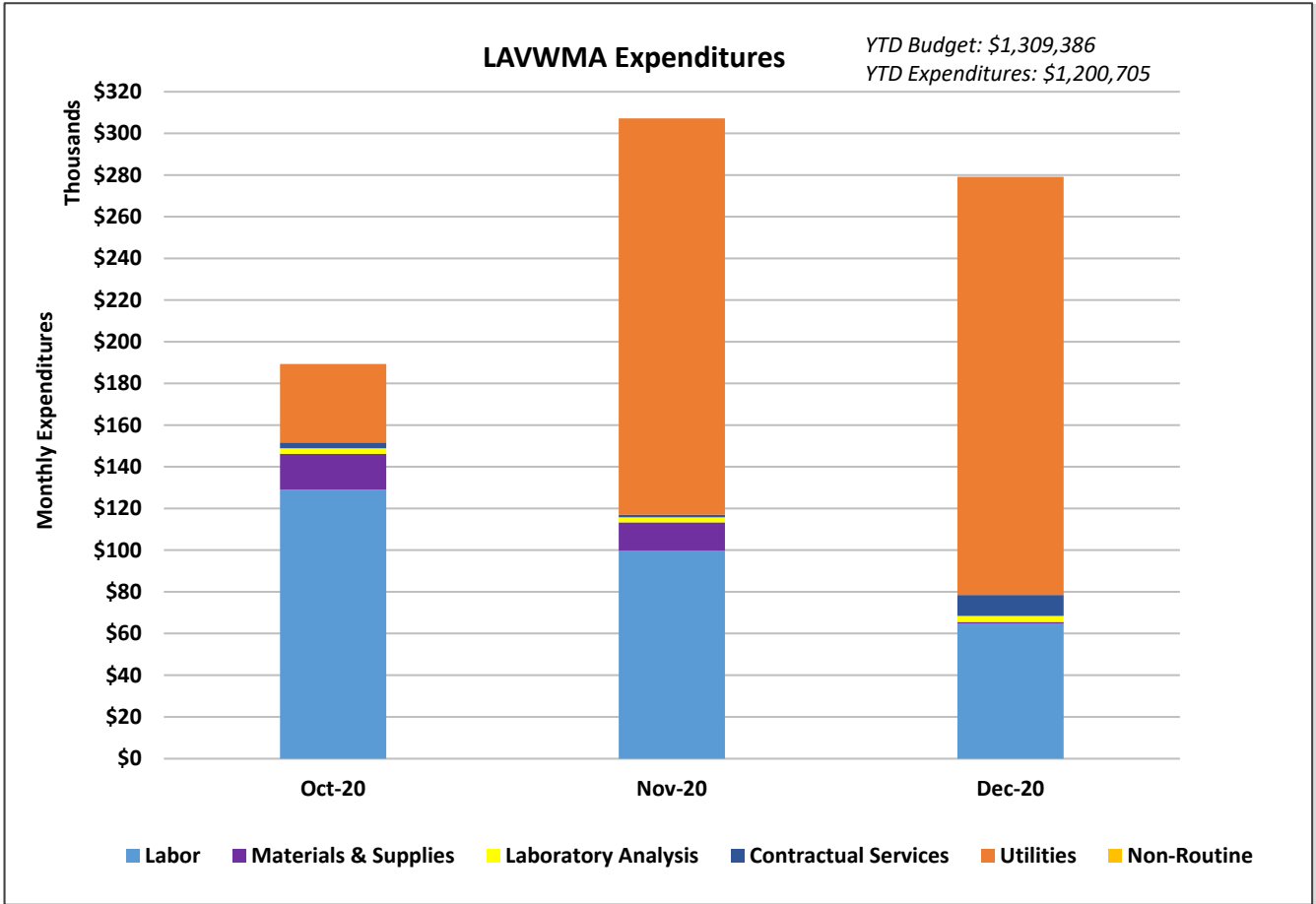
**QUARTERLY REPORT OF OPERATIONS**  
**LAVWMA PUMPING AND CONVEYANCE SYSTEM**  
*2nd Quarter FY 2020-2021: October to December 2020*

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LAVWMA FYE 2021 SECOND QUARTER AT A GLANCE



LAVWMA FYE 2021 SECOND QUARTER AT A GLANCE



**QUARTERLY REPORT OF OPERATIONS**  
**LAVWMA PUMPING AND CONVEYANCE SYSTEM**  
***2nd Quarter FY 2020-2021: October to December 2020***

**1. EXECUTIVE SUMMARY**

The Livermore-Amador Valley Water Management Agency (LAVWMA) pumping and effluent conveyance system operated normally during the second quarter of FY 2020-2021. During the quarter, a total of 1,138 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 67%, with an average electrical cost of \$451 per million gallons, or \$147 per acre-foot.

Total year-to-date operations and maintenance (O&M) expense is \$1,200,705 or 45.8% of the O&M annual budget amount of \$2,618,772 and the overall cost of operation is \$682 per million gallons pumped or \$222 per acre-foot.

**2. OPERATIONS**

Of the total 1,138 million gallons of effluent conveyed through the LAVWMA system, approximately 371 million gallons was from the City of Livermore and 490 MG from City of Pleasanton, and 277 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 Tables 9, 10, and 11.

The following are some noteworthy operations activities during the quarter:

- Operations staff replaced the calcium thiosulfate at the LAVWMA export pump station in Pleasanton and at the San Leandro Sample Station in early October. This involved draining the calcium thiosulfate tanks prior to delivery of new supply and coordinating with the residential Heron Bay HOA adjacent to at the San Leandro sample station location to block off street parking and roundabout before and during delivery of the chemical.
- Responded to “water bandit” alarm at the San Leandro Sample Station on October 17 when a transient person entered the site and turned on the eyewash station.
- Coordinated with City of Livermore for shutdown of effluent pumping on Mondays thru Wednesday for two consecutive weeks in early October to support CCTV inspection of the LAVWMA pipeline.
- Laboratory staff continue on their efforts to prepare the laboratory for the new ELAP State requirements and upcoming NPDES permit renewal changes for analysis. On November 25, 2020, the fecal coliform result was 1,600 MPN, the high value of this test may have been due to the long holding time of water in the LAVWMA basins due to the resealing project.

**3. MAINTENANCE**

During the quarter, 118 hours were spent to complete 186 preventative maintenance (PM) work orders and 80 hours to complete 12 corrective maintenance (CM) work orders on LAVWMA equipment and systems. The following are some noteworthy maintenance activities during the quarter:

- Electrical:
  - Assist with pipeline inspection by locking out all 10 motors.
  - Continue to work on the new vibration sensors.
  - Worked with PG&E to confirm LAVWMA’s and Zone 7’s panels in the field.

- Instrumentation and Controls:
  - Started the re-programming of the control system for the new PG&E Time of Use schedule that takes effect March 1, 2021.
  - Replaced batteries for the remote monitoring equipment at LAVWMA PS and all 14 rectifier panels.
  - Re-programmed the Storm and Power Save Modes for the pump controls system to allow operators to operate any number of pumps at any time of year.
  - Upgraded the SCADA historian which includes LAVWMA PS and SLSS data.
  - Added pump protection to the control system to prevent a pump from running if a discharge pressure is detected; this will prevent a pump from running if the downstream check valve did not seal correctly.
- Mechanical:
  - All export pumps discharge valves were removed and rebuilt; with one replaced with new spare check valve in stock.
  - Export pump #1 suffered catastrophic failure and was sent to pump shop for evaluation.
  - Export pump #1 motor damaged is beyond repair and a replacement is in process.
  - The three export pumps #6, #8 and #10, that were removed and replaced with new pumps, are all at the pump shop for evaluation for possible rebuild and efficiency upgrade.

#### **4. CAPITAL PROJECTS**

- Pump Station Basin Joint Sealing: The notice to proceed was issued and work started. LAVWMA basin number 1 has been fully completed and joints have been resealed. Basin number 2 has been almost completely resealed, however, there was concrete work added to the original scope of work which will address cracking in non-joint areas. This change order was approved by the LAVWMA General Manager and DSRSD's Engineering Services Manager. The completion date for the additional work is anticipated by mid-February, weather permitting.
- Export Pump Station MCC Replacement Project (Project No. LAVWMA-2020-2): this project has been awarded to Royal Electric and notice to proceed was issued and the contractor's project plan was submitted and approved.

#### **5. BUDGET VARIANCE AND EXPENSES**

First quarter labor expenses totaled \$293,570 for 1,869 man-hours of effort, an average of 3.6 full time equivalents (FTEs). O&M expenses for the quarter including labor, supplies, laboratory analysis, contractual services, and utilities totaled \$775,693, for an average cost of \$682 per million gallons pumped or \$222 per acre-foot. The total expense for the Livermore sole use pipeline for the quarter was \$2,916.

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

#### **6. ITEMS OF INTEREST**

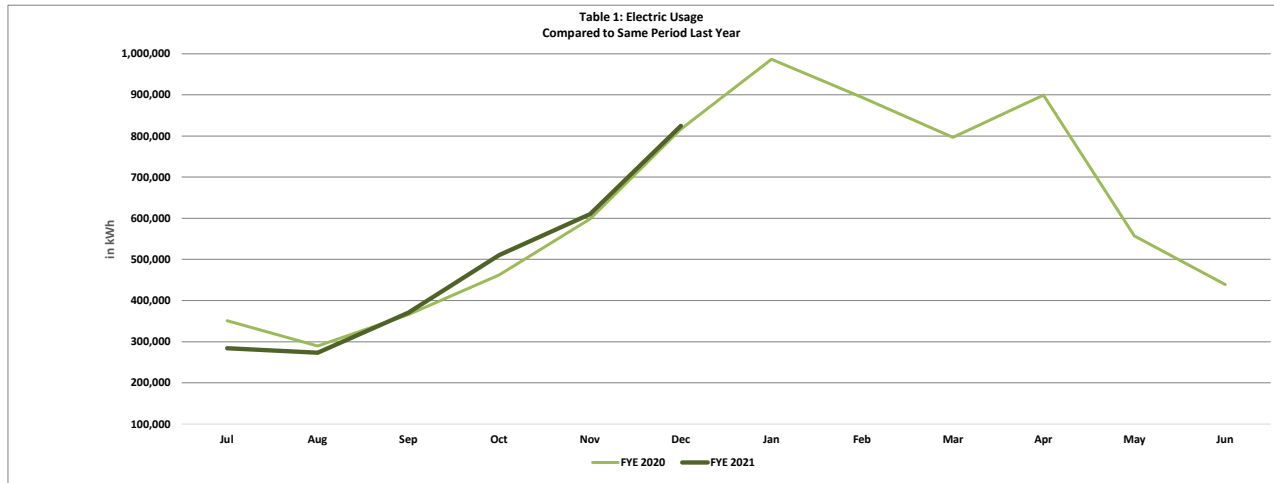
DSRSD continues to run operations for the LAVWMA system under the COVID-19 State and County orders. Staff continues involvement with the current capital project schedules, EBDA-LAVWMA agreement, and upcoming NDPES permit renewal. LAVWMA will be impacted by the new PG&E

Time of Use (TOU) schedule changes starting next quarter on March 1, 2021. Staff is in process of evaluating options to best operate the LAVWMA pump station under the new conditions. Staff has been more involved in the capital projects that in the past and this trend will continue in the coming years. The October electrical costs were due to pumping the stored water held back as part of the LAVWMA pipeline inspection project. The LAVWMA basins high levels during the inspection can be viewed on Table 3 and the flow increase can be viewed on Table 4. The pump down of the full basins during PG&E demand times resulted in peak and demand charges as seen on the LAVWMA energy consumption graph.

**TABLE 1 - Electric Usage, Efficiency and Costs**

LAVWMA SYSTEM: Fiscal Year 2020-2021, 1st Quarter

Month	PG&E Service Accounts: Rate Schedule E20S														Total Export Flow <sup>1</sup> MG	Pumping			
	Acct # 8482061923-1					Acct # 8440395259-5					Billing Days	Total				Energy kWh/MG	Cost		Efficiency %
	Service A			Service B		Service B			kWh	\$/kWh		\$	\$/MG	\$/AF					
kWh	Peak	Partial Peak	Off Peak	\$	kWh	Peak	Partial Peak	Off Peak			\$				Days	kWh	\$/kWh	\$	MG
Jul-20	857	0	0	857	\$9,287	282,971	1,659	1,992	279,320	\$48,872	29	283,828	\$0.20	\$58,159	130	2,179	\$446	\$145	63.8%
Aug-20	95,667	0	0	95,667	\$24,743	177,763	1,638	1,982	174,143	\$34,043	30	273,430	\$0.21	\$58,786	129	2,117	\$455	\$148	65.7%
Sep-20	182,479	0	0	182,479	\$37,167	187,983	1,786	2,220	183,977	\$37,682	32	370,462	\$0.20	\$74,849	153	2,428	\$490	\$160	57.3%
<b>Oct-20</b>	<b>214,120</b>	<b>5,517</b>	<b>11,933</b>	<b>196,670</b>	<b>\$61,606</b>	<b>296,646</b>	<b>10,944</b>	<b>18,465</b>	<b>267,237</b>	<b>\$80,824</b>	<b>30</b>	<b>510,766</b>	<b>\$0.28</b>	<b>\$142,430</b>	<b>206</b>	<b>2,475</b>	<b>\$690</b>	<b>\$225</b>	<b>56.2%</b>
Nov-20	212,107	0	30,325	181,782	\$44,606	398,055	1,101	63,096	333,858	\$71,165	30	610,162	\$0.19	\$115,771	313	1,952	\$370	\$121	71.2%
Dec-20	368,516	0	138,067	230,449	\$59,869	456,806	0	150,494	306,312	\$68,169	31	825,322	\$0.16	\$128,038	436	1,893	\$294	\$96	73.5%
Jan-21																			
Feb-21																			
Mar-21																			
Apr-21																			
May-21																			
Jun-21																			
<b>Quarter</b>																			
Average	264,914				\$55,360	383,836				\$73,386	30	648,750	\$0.21	\$128,747	318	2,106	\$451	\$147	67.0%
Total	794,743				\$166,081	1,151,507				\$220,158	91	1,946,250		\$386,240	955	6,319			
Minimum	212,107				\$44,606	296,646				\$68,169	30	510,766	\$0.16	\$115,771	206	1,893	\$294	\$96	56.2%
Maximum	368,516				\$61,606	456,806				\$80,824	31	825,322	\$0.28	\$142,430	436	2,475	\$690	\$225	73.5%
<b>YTD</b>																			
Average	178,958				\$39,546	300,037				\$56,793	30	478,995	\$0.21	\$96,339	228	2,174	\$458	\$149	64.6%
Total	1,073,746				\$237,278	1,800,224				\$340,755	182	2,873,970		\$578,034	1,367	13,043			
Minimum	857				\$9,287	177,763				\$34,043	29	273,430	\$0.16	\$58,159	129	1,893	\$294	\$96	56.2%
Maximum	368,516				\$61,606	456,806				\$80,824	32	825,322	\$0.28	\$142,430	436	2,475	\$690	\$225	73.5%



**NOTES:**

1) To calculate pumping efficiency, read dates, electric usage, and export flows are **matched to PG&E billing periods**: 9/14/20 - 10/13/20 for October; 10/14/20 - 11/12/20 for November; 11/13/20 - 12/13/20 for December.

2) 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).

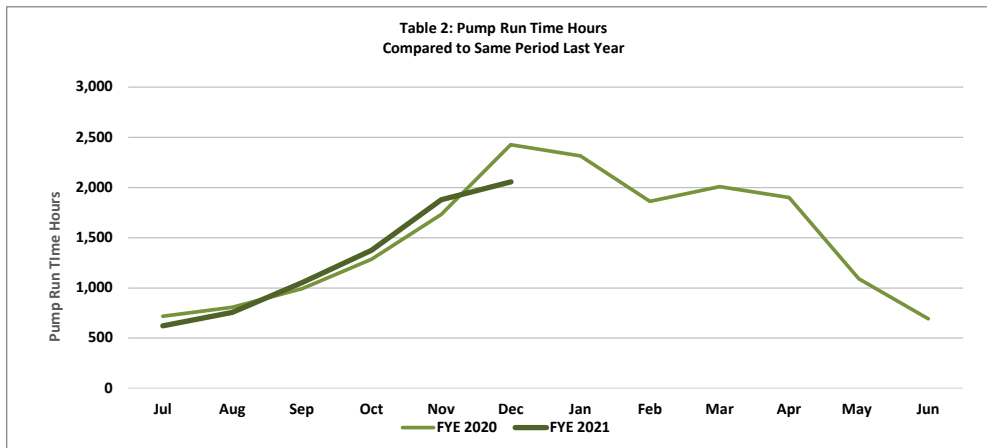
3) Low pumping efficiency in October is related to the pipeline inspection when the system was pumping at odd times and also repumping water due to the need to drain the lines to allow inspection.



## TABLE 2 - Pump Run Time Hours

LAVWMA SYSTEM: Fiscal Year 2020-2021, 1st Quarter

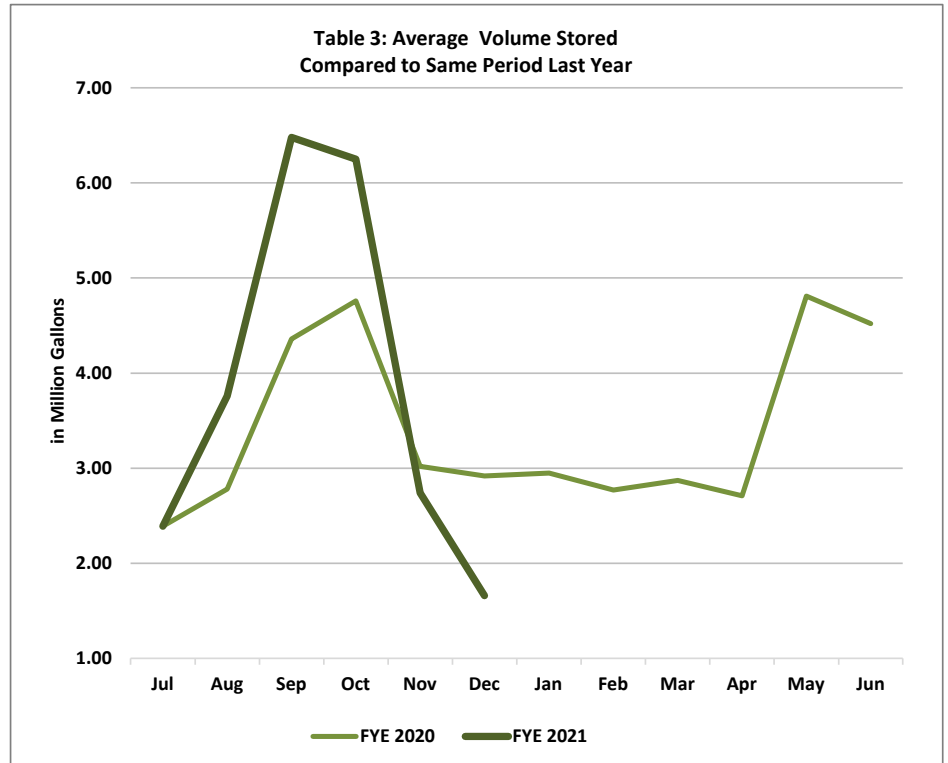
Month	Pump	Pump	Pump	Pump	Pump	Pump	Pump	Pump	Pump	Pump	TOTAL	
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	Run	Utilization
Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	%
Jul-20	1	165	71	0	1	8	329	37	0	11	623	8.4%
Aug-20	112	1	230	1	0	1	312	0	97	1	755	10.1%
Sep-20	48	1	256	96	0	181	99	78	229	66	1,054	14.6%
<b>Oct-20</b>	<b>129</b>	<b>14</b>	<b>127</b>	<b>282</b>	<b>0</b>	<b>90</b>	<b>280</b>	<b>24</b>	<b>273</b>	<b>154</b>	<b>1,374</b>	<b>18.5%</b>
<b>Nov-20</b>	<b>0</b>	<b>8</b>	<b>404</b>	<b>435</b>	<b>0</b>	<b>131</b>	<b>360</b>	<b>324</b>	<b>213</b>	<b>4</b>	<b>1,879</b>	<b>26.1%</b>
<b>Dec-20</b>	<b>0</b>	<b>0</b>	<b>496</b>	<b>383</b>	<b>0</b>	<b>60</b>	<b>314</b>	<b>381</b>	<b>329</b>	<b>91</b>	<b>2,056</b>	<b>27.6%</b>
Jan-21												
Feb-21												
Mar-21												
Apr-21												
May-21												
Jun-21												
<b>Quarter</b>												
Average	43	7	342	367	0	94	318	243	272	83	1,769	24.1%
Total	129	22	1,027	1,100	0	282	955	729	816	249	5,308	
Minimum	0	0	127	282	0	60	280	24	213	4	1,374	18.5%
Maximum	129	14	496	435	0	131	360	381	329	154	2,056	27.6%
<b>YTD</b>												
Average	48	31	264	200	0	79	282	141	190	54	1,290	17.6%
Total	289	189	1,585	1,197	1	473	1,695	844	1,142	327	7,740	
Minimum	0	0	71	0	0	1	99	0	0	1	623	8.4%
Maximum	129	165	496	435	1	181	360	381	329	154	2,056	27.6%



### TABLE 3 - Monthly Average Storage Basin Levels and Volume

LAVWMA SYSTEM: Fiscal Year 2020-2021, 1st Quarter

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-20	2.51	0.14	2.22	2.39	18	13.3%
Aug-20	3.54	0.07	4.11	3.76	18	20.9%
Sep-20	4.68	1.23	6.97	6.48	18	36.0%
<b>Oct-20</b>	<b>3.36</b>	<b>0.87</b>	<b>7.40</b>	<b>6.25</b>	<b>18</b>	<b>34.7%</b>
<b>Nov-20</b>	<b>4.86</b>	<b>0.22</b>	<b>0.69</b>	<b>2.74</b>	<b>18</b>	<b>15.2%</b>
<b>Dec-20</b>	<b>0.36</b>	<b>1.20</b>	<b>2.02</b>	<b>1.66</b>	<b>18</b>	<b>9.2%</b>
Jan-21						
Feb-21						
Mar-21						
Apr-21						
May-21						
Jun-21						
<b>Quarter</b>						
Average	2.86	0.76	3.37	3.55		0.20
Minimum	0.36	0.22	0.69	1.66		0.09
Maximum	4.86	1.20	7.40	6.25		0.35
<b>YTD</b>						
Average	3.22	0.62	3.90	3.88		21.6%
Minimum	0.36	0.07	0.69	1.66		9.2%
Maximum	4.86	1.23	7.40	6.48		36.0%

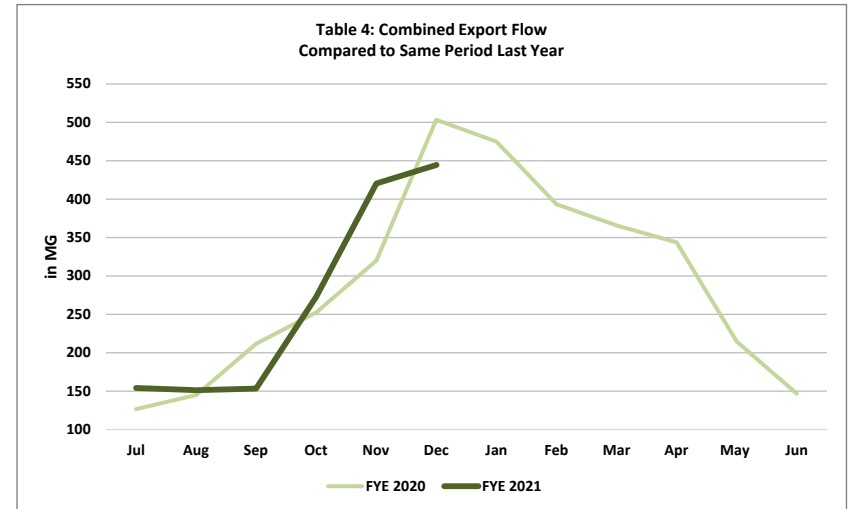


**Note:** Total available storage volume is 18 million gallons.

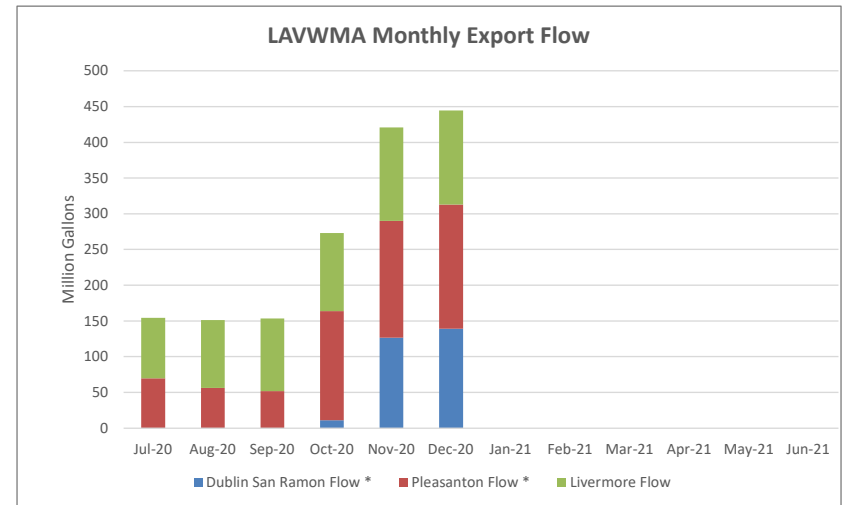
## TABLE 4 - Monthly Export Flow

LAVWMA SYSTEM: Fiscal Year 2020-2021, 1st Quarter

Month	Dublin San Ramon	Pleasanton	Livermore	Combined Export	Total for Quarter
	Flow * MG	Flow * MG	Flow MG	Flow MG	
Jul-20	0.00	69.47	84.98	154.45	459.16
Aug-20	0.00	56.45	94.98	151.43	
Sep-20	0.00	51.96	101.32	153.28	
<b>Oct-20</b>	<b>10.97</b>	<b>152.95</b>	<b>108.95</b>	<b>272.87</b>	<b>1,138.17</b>
<b>Nov-20</b>	<b>126.72</b>	<b>163.35</b>	<b>130.65</b>	<b>420.72</b>	
<b>Dec-20</b>	<b>139.31</b>	<b>173.70</b>	<b>131.57</b>	<b>444.58</b>	
Jan-21					
Feb-21					
Mar-21					
Apr-21					
May-21					
Jun-21					
<b>Quarter</b>					
Total	277.00	490.00	371.17	1,138.17	
Average	92.33	163.33	123.72	379.39	
Minimum	10.97	152.95	108.95	272.87	
Maximum	139.31	173.70	131.57	444.58	
<b>YTD</b>					
Total	277.00	667.88	652.45	1,597.34	
Average	46.17	111.31	108.74	266.22	
Minimum	0.00	51.96	84.98	151.43	
Maximum	139.31	173.70	131.57	444.58	



0.00



0.00

\* 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 2020-2021, 1st Quarter

FY Labor Budget \$1,010,492

Month	Billed	FTE Equiv	Labor Invoice	YTD	Budget Utilization	Labor	Export Flow	
	Labor Hours			Labor Expense		Budget Remaining	MG	AF
Jul-20	420.0	2.4	\$62,233	\$62,233	6.2%	\$948,259	154.45	474
Aug-20	498.5	2.9	\$77,098	\$139,331	13.8%	\$871,161	151.43	465
Sep-20	466.5	2.7	\$73,335	\$212,667	21.0%	\$797,825	153.28	470
<b>Oct-20</b>	<b>788.3</b>	<b>4.5</b>	<b>\$129,096</b>	<b>\$274,900</b>	<b>27.2%</b>	<b>\$668,730</b>	<b>272.87</b>	<b>837</b>
<b>Nov-20</b>	<b>684.5</b>	<b>3.9</b>	<b>\$99,804</b>	<b>\$337,133</b>	<b>33.4%</b>	<b>\$568,926</b>	<b>420.72</b>	<b>1,291</b>
<b>Dec-20</b>	<b>396.0</b>	<b>2.3</b>	<b>\$64,670</b>	<b>\$399,366</b>	<b>39.5%</b>	<b>\$504,256</b>	<b>444.58</b>	<b>1,364</b>
Jan-21								
Feb-21								
Mar-21								
Apr-21								
May-21								
Jun-21								
<b>QUARTER</b>								
Total	<b>1,868.8</b>		<b>\$293,570</b>				1,138.17	3,493
Average	622.9	<b>3.6</b>	\$97,857				379.39	1,164
Minimum	396.0	2.3	\$64,670				272.87	837
Maximum	788.3	4.5	\$129,096				444.58	1,364
<b>YTD</b>								
Total YTD	3,253.8		\$506,236		<b>50.1%</b>	\$504,256	1,597.34	4,902
Average YTD	542.3	3.1	\$84,373				266.22	817
Minimum	396.0	2.3	\$62,233				151.43	465
Maximum	788.3	4.5	\$129,096				444.58	1,364

Notes: October labor is unusually high due to the pipeline inspection project.

DUBLIN SAN RAMON SERVICES DISTRICT

FYE 2020-2021 Report of Operations

**TABLE 6 - O&M Expenditures and Budget Utilization**

LAVWMA SYSTEM: Fiscal Year 2020-2021, 1st Quarter

Total O&M Budget: **\$2,618,772**

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-20	\$62,233	\$62,664	\$124,897	\$124,897	4.8%	\$2,493,875	\$809	\$263	154.45	474
Aug-20	\$77,098	\$106,542	\$183,640	\$308,537	11.8%	\$2,310,235	\$1,213	\$395	151.43	465
Sep-20	\$73,335	\$43,140	\$116,475	\$425,012	16.2%	\$2,193,760	\$760	\$248	153.28	470
<b>Oct-20</b>	<b>\$129,096</b>	<b>\$60,246</b>	<b>\$189,341</b>	<b>\$614,353</b>	<b>23.5%</b>	<b>\$2,004,419</b>	<b>\$694</b>	<b>\$226</b>	<b>272.87</b>	<b>837</b>
<b>Nov-20</b>	<b>\$99,804</b>	<b>\$207,370</b>	<b>\$307,174</b>	<b>\$921,527</b>	<b>35.2%</b>	<b>\$1,697,245</b>	<b>\$730</b>	<b>\$238</b>	<b>420.72</b>	<b>1,291</b>
<b>Dec-20</b>	<b>\$64,670</b>	<b>\$214,508</b>	<b>\$279,178</b>	<b>\$1,200,705</b>	<b>45.8%</b>	<b>\$1,418,067</b>	<b>\$628</b>	<b>\$205</b>	<b>444.58</b>	<b>1,364</b>
Jan-21										
Feb-21										
Mar-21										
Apr-21										
May-21										
Jun-21										
<b><u>QUARTER</u></b>										
Total	\$293,570	\$482,123	<b>\$775,693</b>				<b>\$682</b>	<b>\$222</b>	1,138.17	3,493
Average	\$97,857	\$160,708	\$258,564						379.39	1,164
Minimum	\$64,670	\$60,246	\$189,341				\$628	\$205	272.87	837
Maximum	\$129,096	\$214,508	\$307,174				\$730	\$238	444.58	1,364
<b><u>YTD</u></b>										
Total YTD	\$506,236	\$694,469	<b>\$1,200,705</b>				<b>\$752</b>	<b>\$245</b>	1,597.34	4,902
Average YTD	\$84,373	\$115,745	\$200,117							
Minimum	\$62,233	\$43,140	\$116,475				\$628	\$205	151.43	465
Maximum	\$129,096	\$214,508	\$307,174				\$1,213	\$395	444.58	1,364

Q1 Note: August expenditure of \$31K is for the rectifier repair that will be reimbursed by insurance.

Q2 Notes: a) Landscaping invoices (\$1561) for April and May not paid until October; b) AT&T invoices for Sep, Oct and Nov were all paid in November; c) PG&E invoices for Feeder A and Feeder B (\$142,430) were paid in November

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

LAVWMA SYSTEM: Fiscal Year 2020-2021, 1st Quarter

<b>Livermore Sole Use Facilities</b>			
Month	Labor Expenses	A/P Expenses	Total Expenses
Jul-20	\$0	\$0	\$0
Aug-20	\$194	\$342	\$536
Sep-20	\$0	\$171	\$171
<b>Oct-20</b>	<b>\$2,527</b>	<b>\$0</b>	<b>\$2,527</b>
<b>Nov-20</b>	<b>\$389</b>	<b>\$163</b>	<b>\$552</b>
<b>Dec-20</b>	<b>\$0</b>	<b>\$274</b>	<b>\$274</b>
Jan-21			
Feb-21			
Mar-21			
Apr-21			
May-21			
Jun-21			
<b><u>Quarter</u></b>			
Total	<b>\$2,916</b>	<b>\$437</b>	<b>\$3,353</b>
Average	\$972	\$146	\$1,118
Minimum	\$0	\$0	\$274
Maximum	\$2,527	\$274	\$2,527
<b><u>YTD</u></b>			
YTD Total	\$3,110	\$950	\$4,060
YTD Average	\$518	\$158	\$677
YTD Minimum	\$0	\$0	\$0
YTD Maximum	\$2,527	\$342	\$2,527

LAVWMA BUDGET COMPARISON TO ACTUAL EXPENSES

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 2020-2021	2020	2020	2020	2020	2020	2020	2021	2021	2021	2021	2021	2021	TOTAL	Budget	
<b>Labor</b>																
Staff	\$1,010,492	\$62,233	\$77,098	\$73,335	\$129,096	\$99,804	\$64,670							\$506,236	\$505,246	
<b>Subtotal</b>	<b>\$1,010,492</b>	<b>\$62,233</b>	<b>\$77,098</b>	<b>\$73,335</b>	<b>\$129,096</b>	<b>\$99,804</b>	<b>\$64,670</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$506,236</b>	<b>\$505,246</b>	
<b>Materials &amp; Supplies</b>																
Operations Supplies	\$12,200		\$300	\$9	\$115	\$13,533	\$134							\$14,091	\$6,100	
Mechanical Supplies	\$25,000	\$132	\$2,977	\$393	\$16,885	\$17	\$407							\$20,811	\$12,500	
Electrical Supplies	\$25,500		\$31,159		\$110	\$12	\$340							\$31,621	\$12,750	
<b>Subtotal</b>	<b>\$62,700</b>	<b>\$132</b>	<b>\$34,436</b>	<b>\$402</b>	<b>\$17,110</b>	<b>\$13,562</b>	<b>\$881</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$66,523</b>	<b>\$31,350</b>	
<b>Laboratory Analysis</b>																
Compliance Testing	\$11,300	\$965	\$772	\$965	\$772	\$772	\$965							\$5,211	\$5,650	
Operational Support Testing	\$4,000	\$356	\$356	\$356	\$356	\$356	\$356							\$2,136	\$2,000	
Special Sampling	\$15,000	\$1,570	\$1,256	\$1,256	\$1,570	\$1,256	\$1,570							\$8,478	\$7,500	
<b>Subtotal</b>	<b>\$30,300</b>	<b>\$2,891</b>	<b>\$2,384</b>	<b>\$2,577</b>	<b>\$2,698</b>	<b>\$2,384</b>	<b>\$2,891</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$15,825</b>	<b>\$15,150</b>	
<b>Contractual Services</b>																
Sub-surface Repairs	\$5,000													\$0	\$2,500	
Street Sweeping	\$5,000		\$493	\$394	\$400	\$500	\$400							\$2,187	\$2,500	
Cathodic Protection Survey & Repairs	\$30,000													\$0	\$15,000	
Underground Service Alert	\$3,800		\$3,517											\$3,517	\$1,900	
SCADA software maintenance contract	\$10,000		\$4,673											\$4,673	\$5,000	
HVAC Maintenance/Repairs	\$750													\$0	\$375	
Termite/Pest Control	\$900													\$0	\$450	
Landscape/weed maintenance	\$8,000			\$980	\$1,561		\$1,960							\$4,502	\$4,000	
Janitorial Service	\$3,000	\$495	\$495	\$795	\$795	\$795	\$795							\$4,170	\$1,500	
Fire Extinguisher Maintenance	\$200													\$0	\$100	
Postage/Shipping Charges	\$250													\$0	\$125	
Professional Services, misc	\$10,000		\$59				\$6,884							\$6,943	\$5,000	
<b>Subtotal</b>	<b>\$76,900</b>	<b>\$495</b>	<b>\$9,236</b>	<b>\$2,169</b>	<b>\$2,756</b>	<b>\$1,295</b>	<b>\$10,040</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$25,991</b>	<b>\$38,450</b>	
<b>Utilities</b>																
Electricity (PG&E)	\$1,420,300	\$58,803	\$59,710	\$37,629	\$37,682	\$187,477	\$199,944							\$581,246	\$710,150	
Water & Sewer (Pleasanton)	\$1,000	\$157		\$166		\$162								\$485	\$500	
Water (EBMUD)	\$880	\$186		\$197		\$250								\$633	\$440	
Telephone/communications	\$4,500		\$775			\$2,239	\$752							\$3,766	\$2,250	
WW Treatment (DSRSD)	\$2,500													\$0	\$1,250	
<b>Subtotal</b>	<b>\$1,429,180</b>	<b>\$59,146</b>	<b>\$60,485</b>	<b>\$37,992</b>	<b>\$37,682</b>	<b>\$190,129</b>	<b>\$200,696</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$586,129</b>	<b>\$714,590</b>	
<b>Non-Routine</b>																
Corrosion Studies/ Inspections	\$500													\$0	\$250	
Time delay switches for electrical switchgear	\$8,000													\$0	\$4,000	
<b>Subtotal</b>	<b>\$8,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,250</b>	
<b>Monthly Total</b>		<b>\$124,897</b>	<b>\$183,640</b>	<b>\$116,475</b>	<b>\$189,341</b>	<b>\$307,174</b>	<b>\$279,178</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,200,705</b>	<b>\$1,309,036</b>	
<b>YTD Total</b>	<b>\$2,618,072</b>	<b>\$124,897</b>	<b>\$308,537</b>	<b>\$425,012</b>	<b>\$614,353</b>	<b>\$921,527</b>	<b>\$1,200,705</b>									
<b>Combined Export Flow, mg</b>	<b>3,524</b>	<b>154</b>	<b>151</b>	<b>153</b>	<b>273</b>	<b>421</b>	<b>445</b>							<b>1,597</b>	<b>1,762</b>	
<b>Pumping Efficiency</b>																
<b>Monthly Cost, \$/mg</b>		<b>\$809</b>	<b>\$1,213</b>	<b>\$760</b>	<b>\$694</b>	<b>\$730</b>	<b>\$628</b>									
<b>YTD Running Cost, \$/mg</b>	<b>\$743</b>	<b>\$809</b>	<b>\$1,009</b>	<b>\$926</b>	<b>\$839</b>	<b>\$799</b>	<b>\$752</b>									

Q1 Notes:

Corpro \$31,107 expense under Electrical Supplies is for the rectifier P6/P7 repair and is reimbursable by insurance company  
 September labor has \$7,634.88 which is actually for Workday; a credit issued in Nov

Q2 Notes:

\$1561 landscaping invoices for April and May not paid until October  
 \$7634.88 Workday credit in labor that was erroneously coded to LAVWMA O&M and billed in September  
 AT&T invoices for Sep \$744, Oct \$746, Nov \$749 all paid in Nov  
 PG&E October invoices for Feeder A \$61,606 and Feeder B \$80,824 paid in November (total \$142,430); PG&E November invoice for Feeder B \$71,165 paid in December

LAVWMA  
BUDGET COMPARISON TO ACTUAL EXPENSES: LABOR

Current FY Period: 6

ACTUAL EXPENSES BILLED TO LAVWMA FOR REGULAR O&M														YTD	YTD
FY 2020-2021	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	TOTAL	Budget	
<i>Estimated Personnel Hours</i>															
<b>Division 50 - Ops Admin</b>	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Division 51 - FOD</b>	72	-	-	-	18.00	-	-	-	-	-	-	-	18.00	36.00	
Water/Wastewater Sys Lead Op	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Water/Wastewater Sys OP IV-On Call	0	-	-	-	7.25	-	-	-	-	-	-	-	7.25	-	
Water/Wastewater Sys OP IV	64	-	-	-	-	-	-	-	-	-	-	-	-	32.00	
Water/Wastewater Sys OP III	0	-	-	-	10.75	-	-	-	-	-	-	-	10.75	-	
Water/Wastewater Sys OP II	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Maintenance Worker	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Supervisor	8	-	-	-	-	-	-	-	-	-	-	-	-	4.00	
<b>Division 52 - WWTP</b>	2,996	207.50	225.00	204.00	254.25	280.50	164.00	-	-	-	-	-	1,335.25	1,498.00	
Process Lead Operator IV/V	200	1.00	4.00	15.00	9.00	7.00	7.00	-	-	-	-	-	43.00	100.00	
Senior WWTP Operator III	2,746	41.50	45.00	29.00	38.50	74.50	43.00	-	-	-	-	-	271.50	1,373.00	
Operator In Training	0	160.00	90.00	50.00	12.00	4.00	10.00	-	-	-	-	-	326.00	-	
Operator II	0	-	80.00	102.00	190.75	181.00	96.00	-	-	-	-	-	649.75	-	
Operator II (SLSS)	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Supervisor	50	5.00	6.00	8.00	4.00	14.00	8.00	-	-	-	-	-	45.00	25.00	
<b>Division 53 - MECH</b>	1,741	120.00	228.00	183.00	459.50	226.50	115.00	-	-	-	-	-	1,332.00	870.50	
Senior Mechanic-Crane Cert	380	-	-	-	-	1.00	14.00	-	-	-	-	-	15.00	190.00	
<b>Senior Mechanic - USA</b>	82	-	-	-	-	-	19.00	-	-	-	-	-	19.00	41.00	
Maintenance Worker	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mechanic I/II	1,229	34.00	90.00	67.00	284.50	30.00	-	-	-	-	-	-	505.50	614.50	
Mechanic II-Crane Cert	0	46.50	103.50	71.00	152.50	127.00	69.50	-	-	-	-	-	570.00	-	
<b>Mechanic I/II - USA</b>	0	23.50	25.50	32.00	9.50	26.00	-	-	-	-	-	-	116.50	-	
<b>Mechanic II-Crane Cert - USA</b>	0	16.00	9.00	13.00	13.00	42.50	12.50	-	-	-	-	-	106.00	-	
Supervisor	50	-	-	-	-	-	-	-	-	-	-	-	-	25.00	
<b>Division 54 - ELEC</b>	924	86.00	32.00	76.50	40.50	171.50	102.00	-	-	-	-	-	508.50	462.00	
Senior Instrument/Controls Tech	12	-	-	-	-	-	-	-	-	-	-	-	-	6.00	
Instrument Tech	480	29.00	25.00	55.50	9.50	44.50	-	-	-	-	-	-	163.50	240.00	
OPS Control Sys Spec	144	1.00	-	2.00	-	69.00	87.00	-	-	-	-	-	159.00	72.00	
Senior Electrician	36	-	-	-	-	-	-	-	-	-	-	-	-	18.00	
Electrician I/II	240	50.00	7.00	17.00	31.00	54.00	15.00	-	-	-	-	-	174.00	120.00	
Supervisor	12	6.00	-	2.00	-	4.00	-	-	-	-	-	-	12.00	6.00	
<b>Division 26 - SAFETY</b>	48	-	-	-	-	-	-	-	-	-	-	-	-	24.00	
Safety Officer	48	-	-	-	-	-	-	-	-	-	-	-	-	24.00	
<b>Division 40 - ENG</b>	100	6.50	13.50	3.00	16.00	6.00	15.00	-	-	-	-	-	60.00	50.00	
Associate/Senior Civil Engineer-SME	100	6.50	13.50	3.00	16.00	6.00	8.00	-	-	-	-	-	53.00	50.00	
Construction Inspector I		-	-	-	-	-	7.00	-	-	-	-	-	7.00	-	
<i>Total Estimated Personnel Hours</i>	<b>5,881</b>														
<i>FTE</i>	2.83														
<b>Total Monthly Hours</b>	<b>420.00</b>	<b>498.50</b>	<b>466.50</b>	<b>788.25</b>	<b>684.50</b>	<b>396.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3,253.75</b>	<b>2,940.50</b>	



## San Leandro Sampling Station Microbiology Results

4th Quarter 2020

Collection Date	Fecal Coliform MPN/100ml	Enterococcus MPN/100ml
10/02/20	4	<10
10/09/20	<2	<10
10/15/20	11	<10
10/22/20	2	<10
10/29/20	<2	<10
11/05/20	23	<10
11/12/20	2	<10
11/19/20	4	10
11/25/20	1600	10
12/03/20	13	<10
12/10/20	13	<10
12/17/20	<2	<10
12/24/20	<2	<10
12/31/20	2	<10

Median	3	<10
Geometric Mean	6.2	10

Note:

High fecal coliform on 11/25/20 possibly due to LAVWMA basin #1 that has been in use longer than it should have been and not rotated because of the sealing project.

**Monthly Report for LAVWMA - October 2020**  
**Dublin San Ramon Services District Laboratory**  
**ELAP Certificate # 1272**

DATE	FLOW (MGD)	CBOD (mg/L) (kg/d)		TSS (mg/L) (kg/d)		MINIMUM pH (units)	MAXIMUM pH (units)	CHLORINE RESIDUAL (mg/L)	CHLORINE RESIDUAL (SLS STATION) (mg/L)
1	5.51					7.66	8.90	0.521	0.001
2	9.24					7.81	7.92	0.654	0.001
3	9.24					7.80	8.64	3.014	0.001
4	9.24					7.91	8.03	5.854	0.001
5	9.24					7.87	8.02	5.053	0.001
6	7.24					7.72	7.89	4.810	0.001
7	9.24	2.1	73	4.3	150	7.74	7.85	5.956	0.001
8	6.18					7.72	7.88	5.204	0.001
9	10.18					7.78	7.88	5.566	0.001
10	7.18					7.78	7.83	4.876	0.001
11	10.65					7.77	7.86	4.326	0.001
12	10.65					7.78	8.18	3.968	0.001
13	8.84					7.66	8.54	2.786	0.001
14	7.20	3.1	85	3.5	95	7.66	7.95	2.760	0.001
15	7.34					7.74	7.95	2.618	0.001
16	8.63					7.75	8.17	2.617	0.001
17	8.43					7.71	7.88	3.510	0.001
18	9.43					7.66	7.81	4.029	0.001
19	10.43					7.65	7.76	3.970	0.001
20	8.43					7.61	7.80	3.224	0.001
21	7.98					7.67	7.79	3.357	0.001
22	8.46	3.6	115	4.6	147	7.68	7.75	2.913	0.001
23	7.11					7.67	7.78	2.859	0.001
24	7.11					7.62	7.80	2.707	0.001
25	7.11					7.54	7.70	2.754	0.001
26	9.46					7.69	7.93	2.969	0.001
27	9.44					7.58	7.76	2.576	0.001
28	10.56	4.3	172	4.5	180	7.63	7.73	3.460	0.001
29	11.73					7.66	7.79	2.623	0.001
30	10.73					7.65	7.70	2.400	0.001
31	10.73					7.65	7.74	2.193	0.001
MAX.	11.73	4.3	172	4.6	180	7.91	8.90	5.96	0.001
MIN.	5.51	2.1	73	3.5	95	7.54	7.70	0.52	0.001
AVE.	8.80	3.3	111	4.2	143	7.70	7.94	3.42	0.001
TOTAL	272.87								

Samples collected from LAVWMA Export Pump Station, except for chlorine at the San Leandro Sampling Station as noted.  
 MGD = Millions of gallons per day; mg/L = milligrams per liter; kg/d = kilograms per day

Authorized for release by:   
 Kristy Fournier, Laboratory Supervisor

Date: 01/27/2021

**Monthly Report for LAVWMA - November 2020**  
**Dublin San Ramon Services District Laboratory**  
**ELAP Certificate # 1272**

DATE	FLOW (MGD)	CBOD		TSS		MINIMUM pH (units)	MAXIMUM pH (units)	CHLORINE RESIDUAL (mg/L)	CHLORINE RESIDUAL (SLS STATION) (mg/L)
		(mg/L)	(kg/d)	(mg/L)	(kg/d)				
1	12.82					7.62	7.75	2.141	0.001
2	12.82					7.58	7.87	2.248	0.001
3	12.82					7.68	7.89	3.078	0.001
4	12.82	2.8	136	5.4	262	7.63	7.88	3.250	0.001
5	12.82					7.64	7.80	2.661	0.001
6	11.15					7.66	7.80	2.188	0.001
7	10.39					7.67	7.80	1.986	0.001
8	11.36					7.69	7.86	1.688	0.001
9	14.28					7.77	7.94	2.132	0.001
10	14.17					7.71	7.84	2.469	0.001
11	12.92	7.5	367	10.8	528	7.72	7.89	2.866	0.001
12	14.00					7.63	7.73	2.685	0.001
13	12.65					7.67	7.82	3.152	0.001
14	13.85					7.66	7.76	3.123	0.001
15	15.40					7.63	7.72	3.021	0.001
16	15.40					7.59	7.74	2.836	0.001
17	16.41					7.66	7.82	2.927	0.001
18	12.32	11.5	536	14.2	662	7.64	7.76	2.401	0.001
19	14.08					7.58	7.66	2.717	0.001
20	16.55					7.58	7.67	2.904	0.001
21	15.96					7.60	7.67	3.053	0.001
22	15.96					7.58	7.65	3.438	0.001
23	15.33					7.55	7.77	2.924	0.001
24	16.06					7.67	7.73	2.489	0.001
25	14.51	14.6	802	19.9	1093	7.61	7.76	3.036	0.001
26	13.91					7.63	7.70	3.089	0.001
27	15.80					7.60	7.66	3.009	0.001
28	14.08					7.58	7.65	3.267	0.001
29	15.06					7.53	7.63	3.599	0.001
30	15.06					7.53	7.61	3.800	0.001
MAX.	16.55	14.6	802	19.9	1093	7.77	7.94	3.80	0.001
MIN.	10.39	2.8	136	5.4	262	7.53	7.61	1.69	0.001
AVE.	14.02	9.1	460	12.6	636	7.63	7.76	2.81	0.001
TOTAL	420.72								

Samples collected from LAVWMA Export Pump Station, except for chlorine at the San Leandro Sampling Station as noted.  
 MGD = Millions of gallons per day; mg/L = milligrams per liter; kg/d = kilograms per day

Authorized for release by:   
 Kristy Fournier, Laboratory Supervisor


Date: 01/27/2021

**Monthly Report for LAVWMA - December 2020**  
**Dublin San Ramon Services District Laboratory**  
**ELAP Certificate # 1272**

DATE	FLOW (MGD)	CBOD (mg/L) (kg/d)		TSS (mg/L) (kg/d)		MINIMUM pH (units)	MAXIMUM pH (units)	CHLORINE RESIDUAL (mg/L)	CHLORINE RESIDUAL (SLS STATION) (mg/L)
1	12.04					7.53	7.66	3.837	0.001
2	12.04	12.1	551	14.9	679	7.55	7.65	3.401	0.001
3	12.04					7.60	7.67	3.747	0.001
4	14.62					7.63	7.71	4.072	0.001
5	14.39					7.62	7.71	4.298	0.001
6	14.64					7.53	7.65	3.019	0.001
7	12.89					7.56	7.63	3.187	0.001
8	12.76					7.56	7.67	3.067	0.001
9	12.75	8.7	420	12.6	608	7.58	7.66	2.370	0.001
10	11.80					7.58	7.67	2.046	0.001
11	12.23					7.57	7.68	1.986	0.001
12	10.08					7.58	7.67	2.185	0.001
13	15.45					7.63	7.67	2.370	0.001
14	16.00					7.58	7.66	2.341	0.001
15	14.64					7.58	7.65	3.255	0.001
16	13.59	6.3	324	11.0	566	7.61	7.65	3.280	0.001
17	16.64					7.64	7.73	2.687	0.001
18	17.45					7.60	7.70	2.446	0.001
19	16.55					7.60	7.66	2.593	0.001
20	16.19					7.58	7.66	2.900	0.001
21	14.78					7.56	7.63	2.763	0.001
22	13.16					7.58	7.66	3.121	0.001
23	15.84	7.5	450	10.8	648	7.63	7.71	2.963	0.001
24	15.80					7.63	7.70	3.382	0.001
25	16.52					7.65	7.72	3.039	0.001
26	15.35					7.65	7.72	3.046	0.001
27	14.69					7.66	7.71	2.832	0.001
28	14.69					7.62	7.70	2.911	0.001
29	14.69					7.61	7.67	2.929	0.001
30	14.69	3.8	211	7.4	411	7.65	7.76	3.118	0.001
31	15.57					7.70	7.76	3.318	0.001
MAX.	17.45	12.1	551	14.9	679	7.70	7.76	4.30	0.001
MIN.	10.08	3.8	211	7.4	411	7.53	7.63	1.99	0.001
AVE.	14.34	7.7	391	11.3	582	7.60	7.68	2.98	0.001
TOTAL	444.58								

Samples collected from LAVWMA Export Pump Station, except for chlorine at the San Leandro Sampling Station as noted.  
 MGD = Millions of gallons per day; mg/L = milligrams per liter; kg/d = kilograms per day

Authorized for release by:

  
 \_\_\_\_\_  
 Kristy Fournier, Laboratory Supervisor

Date: 01/27/2021

DUBLIN SAN RAMON SERVICES DISTRICT  
WASTEWATER TREATMENT FACILITY

LAVWMA

Langelier pH Saturation Index

Collection DATE	TDS (mg/L)	Temp (°C)	Ca Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	pH (Actual)	pH Saturation	Langlier Index
10/13/20	1046	23.9	174	450	7.5	7.0	0.5
11/10/20	866	21.3	178	478	7.6	7.0	0.6
12/01/20	754	20.0	110	334	7.2	7.3	-0.1
MAXIMUM	1046	23.9	178	478	7.6	7.3	0.6
MINIMUM	754	20.0	110	334	7.2	7.0	-0.1
AVERAGE	889	21.7	154	421	7.4	7.1	0.3

DUBLIN SAN RAMON SERVICES DISTRICT  
WASTEWATER TREATMENT FACILITY

DSRSD

Langelier pH Saturation Index

Collection DATE	TDS (mg/L)	Temp (°C)	Ca Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	pH (Actual)	pH Saturation	Langlier Index
10/13/20	946	25.8	172	388	7.3	7.0	0.3
11/10/20	764	23.4	156	398	7.5	7.1	0.4
12/01/20	818	22.1	142	362	7.4	7.2	0.3
MAXIMUM	946	25.8	172	398	7.5	7.2	0.4
MINIMUM	764	22.1	142	362	7.3	7.0	0.3
AVERAGE	843	23.8	157	383	7.4	7.1	0.3

TABLE 11

CITY OF LIVERMORE  
LIVERMORE WATER RECLAMATION PLANT

Langelier pH Saturation Index

Collection DATE	TDS (mg/L)	Temp (°C)	Ca Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	pH (Actual)	pH Saturation	Langlier Index
10/07/20	640	24.0	70	297	7.5	7.6	0.0
11/02/20	580	23.0	73	296	7.6	7.6	0.0
12/03/20	630	21.0	79	324	7.7	7.5	0.2
MAXIMUM	640	24.0	79	324	7.7	7.6	0.2
MINIMUM	580	21.0	70	296	7.5	7.5	0.0
AVERAGE	617	22.7	74	306	7.6	7.6	0.1

