

# LAVWMA

QUARTERLY REPORT OF OPERATIONS

3rd Quarter, FY 2020-2021



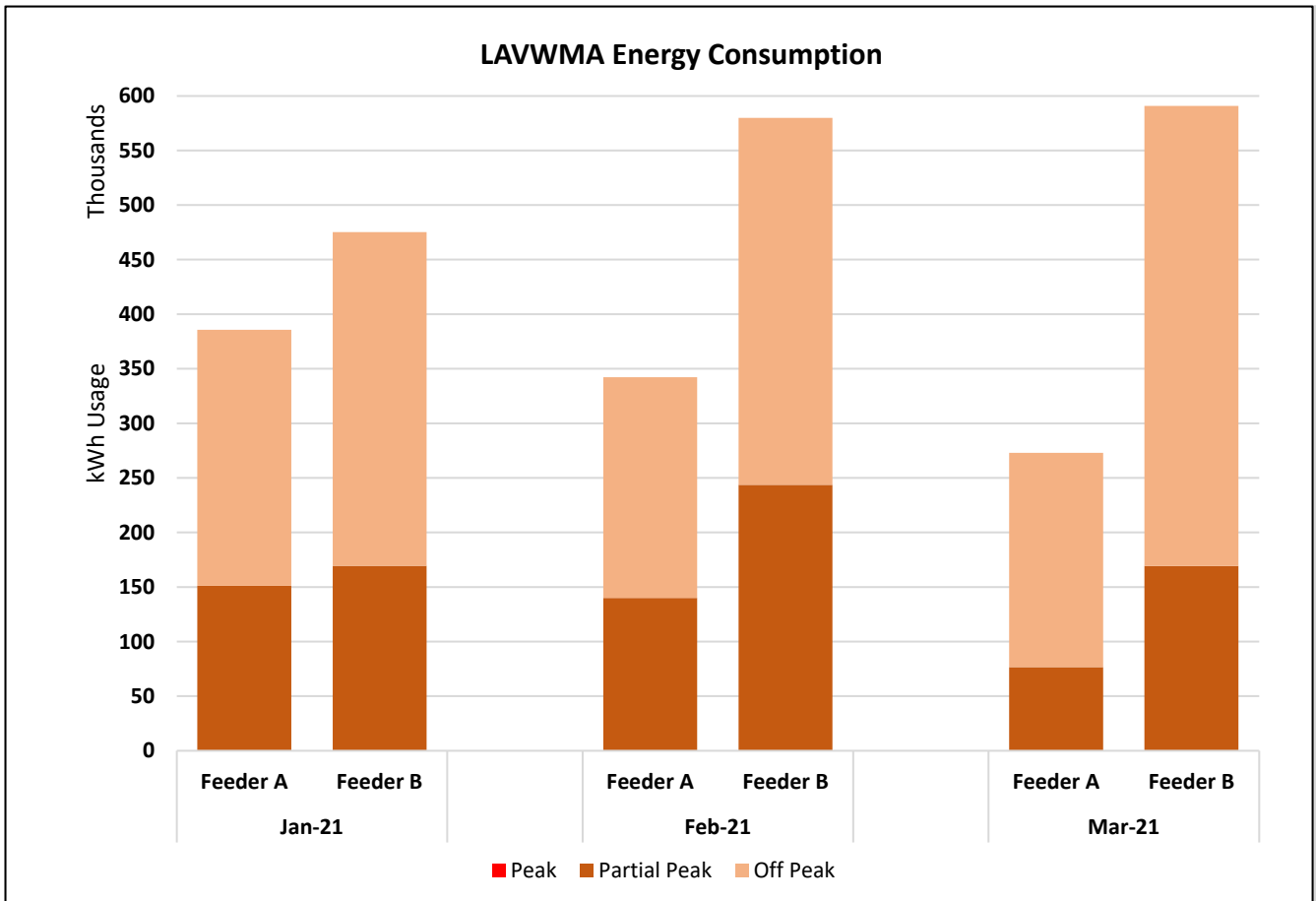
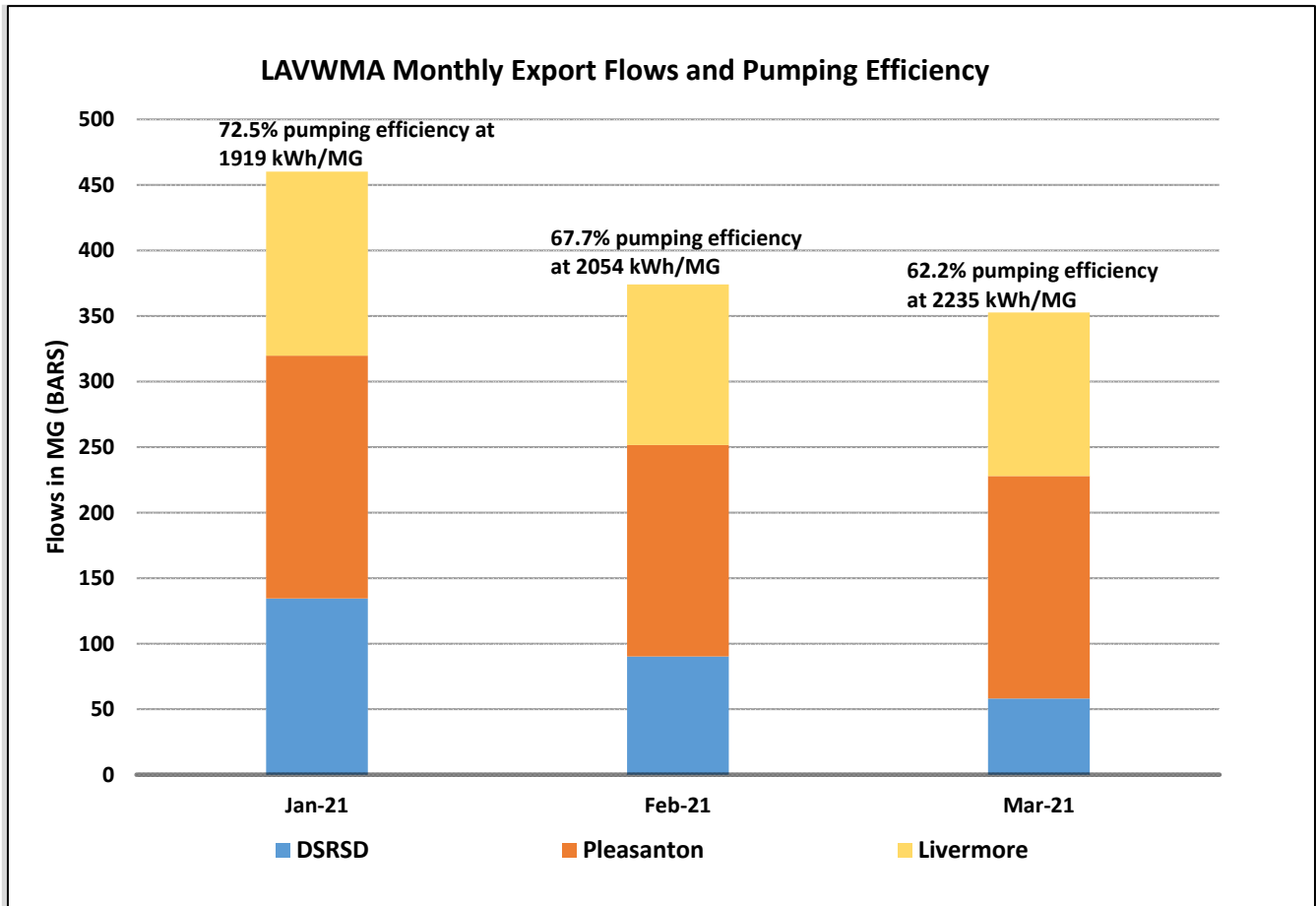
**Dublin San Ramon  
Services District**

*Water, wastewater, recycled water*

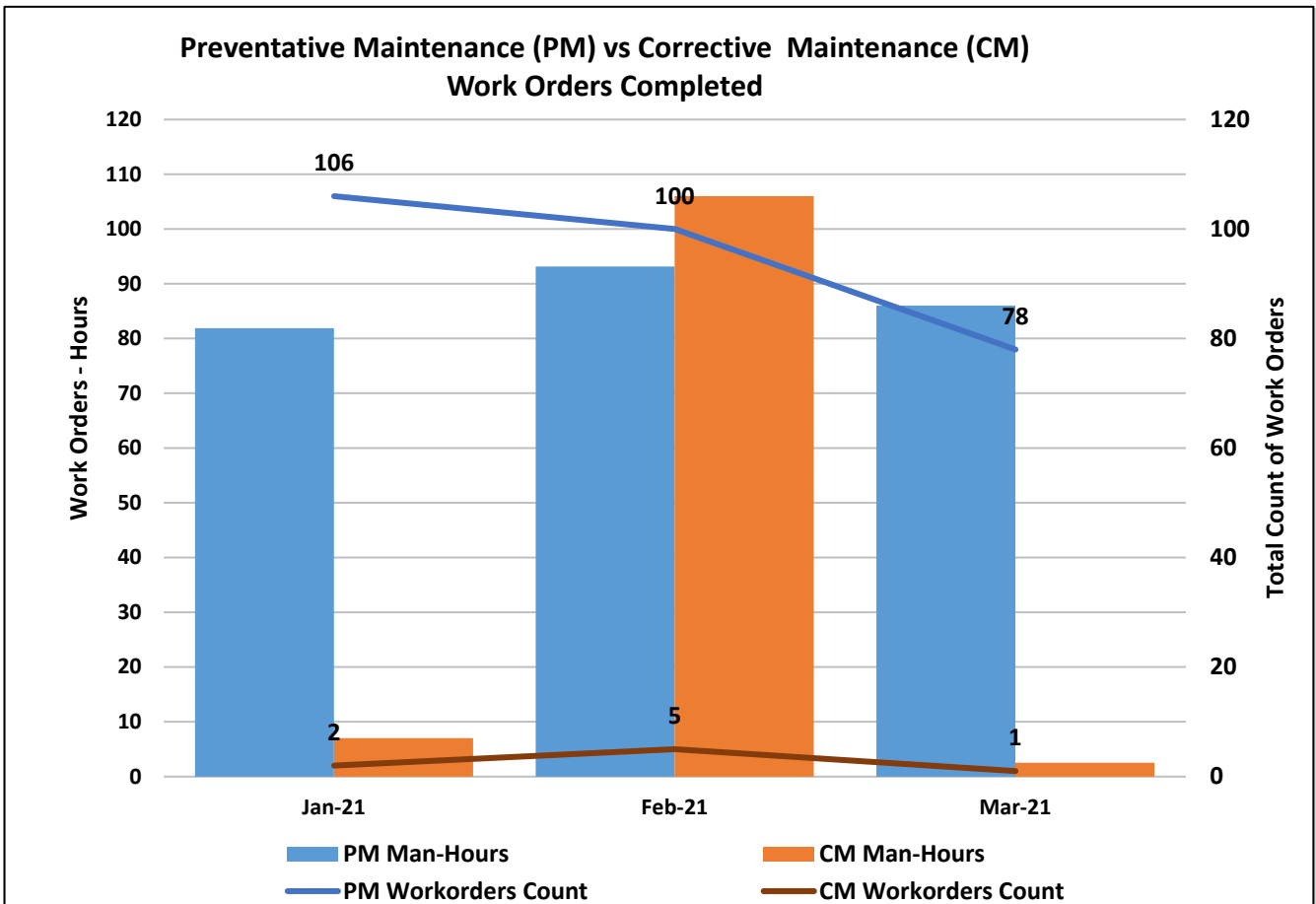
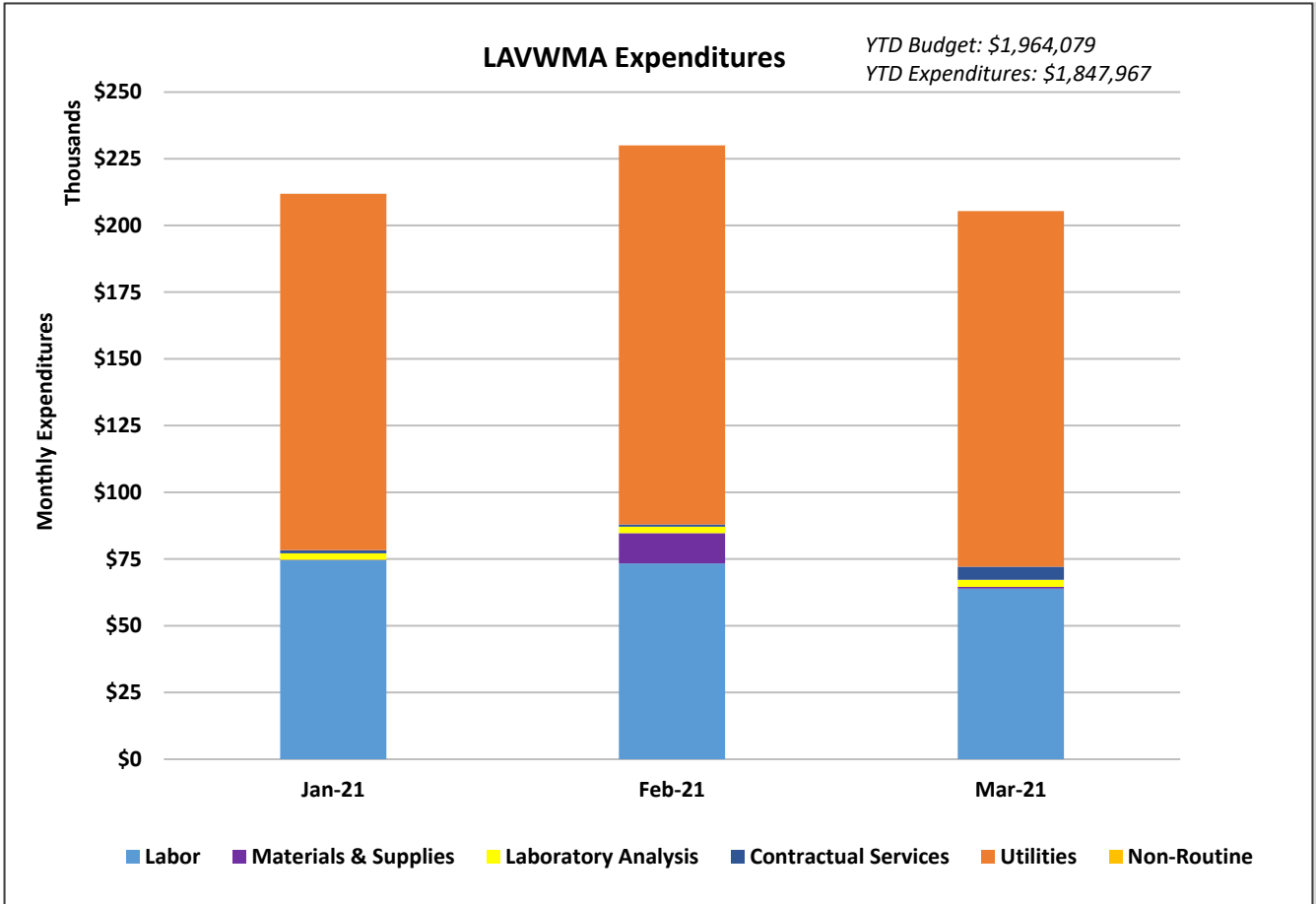
**QUARTERLY REPORT OF OPERATIONS  
LAVWMA PUMPING AND CONVEYANCE SYSTEM  
3rd Quarter FY 2020-2021: January to March 2021**

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LAVWMA FYE 2021 THIRD QUARTER AT A GLANCE



LAVWMA FYE 2021 THIRD QUARTER AT A GLANCE



**QUARTERLY REPORT OF OPERATIONS**  
**LAVWMA PUMPING AND CONVEYANCE SYSTEM**  
**3rd Quarter FY 2020-2021: January to March 2021**

**1. EXECUTIVE SUMMARY**

The Livermore-Amador Valley Water Management Agency (LAVWMA) pumping and effluent conveyance system operated normally during the third quarter of FY 2020-2021. During the quarter, a total of 1,187 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 67.4%, with an average electrical cost of \$317 per million gallons, or \$103 per acre-foot.

Total year-to-date operations and maintenance (O&M) expense is \$1,847,967 or 70.6% of the O&M annual budget amount of \$2,618,772 and the overall cost of operation is \$664 per million gallons pumped or \$216 per acre-foot.

**2. OPERATIONS**

Of the total 1,187 million gallons of effluent conveyed through the LAVWMA system, approximately 388 million gallons was from the City of Livermore and 516 million gallons from City of Pleasanton, and 283 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.

The following are some noteworthy operations activities during the quarter:

- All three holding basins were sealed by the contractor.
- New pumping schedule with the new PG&E Time-of-Use schedule was implemented and operators are monitoring.
- Due to California drought, there were no wet weather events this wet weather season that required use of wet weather outfall.
- Laboratory staff is working on getting accredited by ELAP to analyze E.coli in preparation for the LAVWMA permit requirement.
- In preparation to come into compliance with TNI, the laboratory is in the process of engaging a consultant to help the laboratory create the required quality control system.

**3. MAINTENANCE**

During the quarter, 261 hours were spent to complete 284 preventative maintenance (PM) work orders and 116 hours to complete 8 corrective maintenance (CM) work orders on LAVWMA equipment and systems. The following are some noteworthy maintenance activities during the quarter:

Electrical:

- Completed work on the new vibration sensors.
- Replaced junction structure exhaust fan.
- Troubleshoot and repair the actuators for the wet well.
- Assist with troubleshooting the “jam” fault that showed up on Pump #4.
- Assist with specifying the new motor for pump #1

#### Instrumentation and Controls:

- Completed the re-programming of the control system for the new PG&E Time of Use schedule that took effect March 1, 2021.
- Upgraded the SCADA client computer to Windows 10 and iFIX v5.9 to match the other District SCADA computers.
- Researching possible replacements to the Samsara cloud remote monitoring system for the 14 rectifier panels and the Pump Station for wet weather remote monitoring.
- Rebuilt CL2 analyzer sensors at the junction structure.
- Repaired faulty pressure gauge at the pump station.
- Added kWhrs to GE iFIX SCADA from the Foreseer power monitoring system for real time monitoring and historical trending.

#### Mechanical:

- Other than the regular preventive maintenance work orders, there was a particular corrective maintenance activity during February related to the work on the basin sump drain line that was plugged. The basin sealing project had extra debris that plugged the drains to the plant. Staff jetted the basin sump drain line then returned it to service.

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

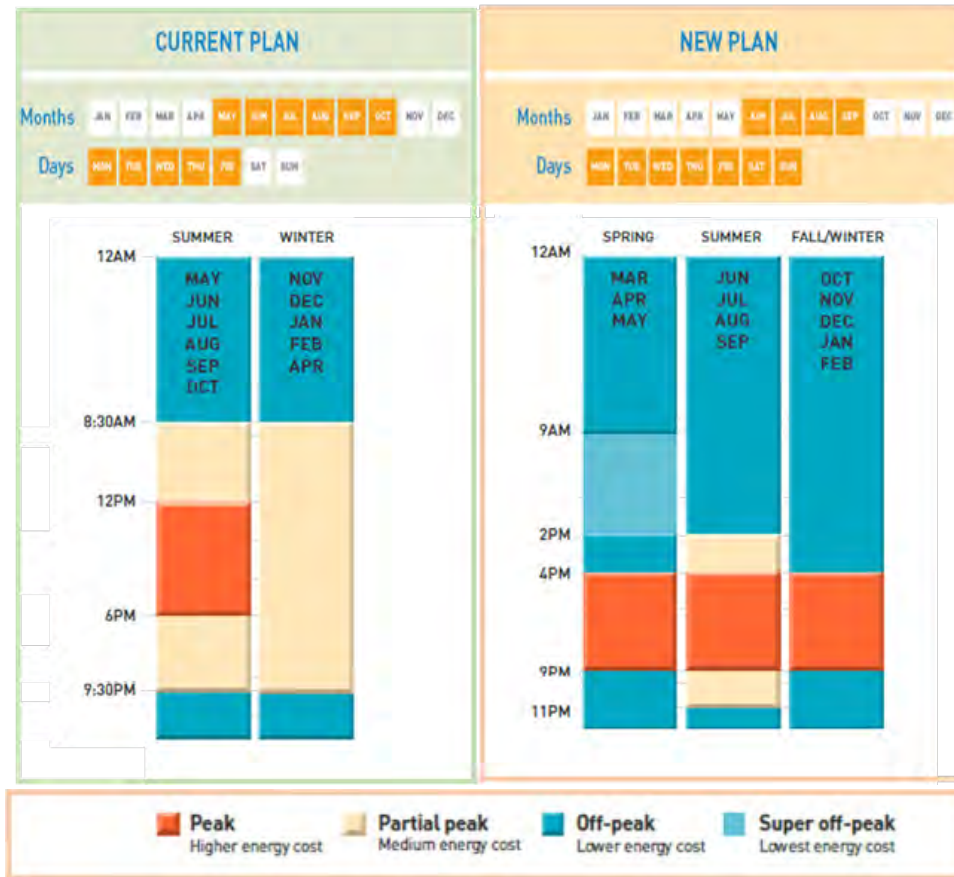
First quarter labor expenses totaled \$211,779 for 1,252 man-hours of effort, an average of 2.4 full time equivalents (FTEs). O&M expenses for the quarter including labor, supplies, laboratory analysis, contractual services, and utilities totaled \$647,262, for an average cost of \$545 per million gallons pumped or \$178 per acre-foot. The total expense for the Livermore sole use pipeline for the quarter was \$4,987.

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

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

New PG& E Time of Use (TOU) schedule changes started on March 1, 2021. District staff modified the control system programming to shift the hours of pumping to align with the new PG&E Time-of Use (TOU) schedules following this operating concept: Continue the practice of running the pumps during off-peak hours year-round observing new TOU by avoiding running the pumps from 4pm to 9pm for Spring and Fall/Winter unless faced with required high flows due to extreme wet weather conditions. Also avoid running pumps between 2pm and 11pm in Summer (June, July, August and September.)

The old (E-20 Plan) and new (B-20 Plan) TOU periods are shown below.



For comparison, below are the pump station kW and kWhrs for January/February under the old E-20 schedule and March under the new B-20 schedule.

January 2021 for E-20	Off Peak	Partial Peak	Peak
Maximum kW:	2,102	2,103	-
kWHrs:	559,383	354,567	-

February 2021 for E-20	Off Peak	Partial Peak	Peak
Maximum kW:	1,727	1,727	-
kWHrs:	500,601	325,899	-

March 2021 for B-20	Off Peak	Partial Peak	Peak	Super Off Peak
Maximum kW:	760	-	365	760
kWHrs:	2,310,849	-	13,842	843,386

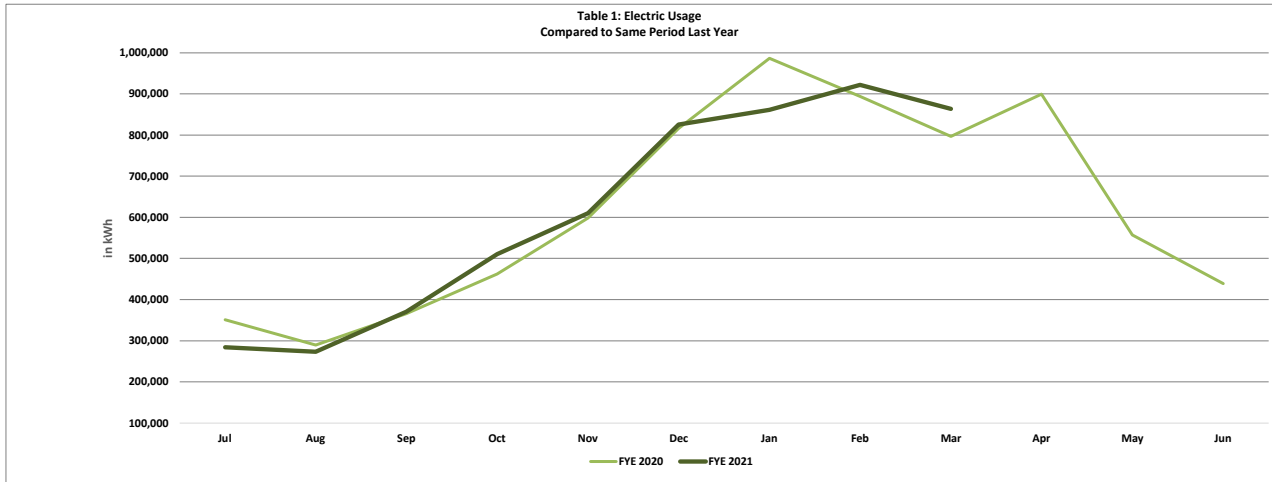
## 6. CAPITAL PROJECTS

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 2020-2021, 3rd Quarter

Month	PG&E Service Accounts: Rate Schedule E20S													Total Export Flow <sup>1</sup>	Pumping						
	Acct # 8482061923-1					Acct # 8440395259-5					Billing Days	Total			MG	Energy		Cost		Efficiency %	
	Service A		Service B			kWh	Peak	Partial Peak	Off Peak	\$		kWh	Peak			Partial Peak	Off Peak	\$	\$/kWh		\$
Jul-20	857	0	0	857	\$9,287						282,971			1,659	1,992					279,320	
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%		
Oct-20	214,120	5,517	11,933	196,670	\$61,606	296,646	10,944	18,465	267,237	\$80,824	30	510,766	\$0.28	\$142,430	206	2,475	\$690	\$225	56.2%		
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%		
<b>Jan-21</b>	<b>385,680</b>	<b>0</b>	<b>151,049</b>	<b>234,631</b>	<b>\$56,707</b>	<b>475,245</b>	<b>0</b>	<b>169,374</b>	<b>305,871</b>	<b>\$75,072</b>	<b>30</b>	<b>860,925</b>	<b>\$0.15</b>	<b>\$131,779</b>	<b>449</b>	<b>1,919</b>	<b>\$294</b>	<b>\$96</b>	<b>72.5%</b>		
<b>Feb-21</b>	<b>342,192</b>	<b>0</b>	<b>139,961</b>	<b>202,231</b>	<b>\$51,596</b>	<b>579,793</b>	<b>0</b>	<b>243,637</b>	<b>336,156</b>	<b>\$88,770</b>	<b>30</b>	<b>921,985</b>	<b>\$0.15</b>	<b>\$140,366</b>	<b>449</b>	<b>2,054</b>	<b>\$313</b>	<b>\$102</b>	<b>67.7%</b>		
<b>Mar-21</b>	<b>272,999</b>	<b>0</b>	<b>76,652</b>	<b>196,347</b>	<b>\$46,031</b>	<b>590,744</b>	<b>0</b>	<b>169,340</b>	<b>421,404</b>	<b>\$86,561</b>	<b>32</b>	<b>863,743</b>	<b>\$0.15</b>	<b>\$132,592</b>	<b>386</b>	<b>2,235</b>	<b>\$343</b>	<b>\$112</b>	<b>62.2%</b>		
Apr-21																					
May-21																					
Jun-21																					
<b>Quarter</b>																					
Average	333,624				\$51,445	548,594				\$83,468	31	882,218	\$0.15	\$134,912	428	2,069	\$317	\$103	67.4%		
Total	1,000,871				\$154,335	1,645,782				\$250,403	92	2,646,653		\$404,737	1,284	6,208					
Minimum	272,999				\$46,031	475,245				\$75,072	30	860,925	\$0.15	\$131,779	386	1,919	\$294	\$96	62.2%		
Maximum	385,680				\$56,707	590,744				\$88,770	32	921,985	\$0.15	\$140,366	449	2,235	\$343	\$112	72.5%		
<b>YTD</b>																					
Average	230,513				\$43,513	382,890				\$65,684	30	613,403	\$0.19	\$109,197	295	2,139	\$411	\$134	65.5%		
Total	2,074,617				\$391,613	3,446,006				\$591,158	274	5,520,623		\$982,771	2,651	19,251					
Minimum	857				\$9,287	177,763				\$34,043	29	273,430	\$0.15	\$58,159	129	1,893	\$294	\$96	56.2%		
Maximum	385,680				\$61,606	590,744				\$88,770	32	921,985	\$0.28	\$142,430	449	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**: 12/14/20 - 1/12/21 for January; 1/13/21 - 2/11/21 for February; 2/12/21 - 3/15/21 for March.

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).

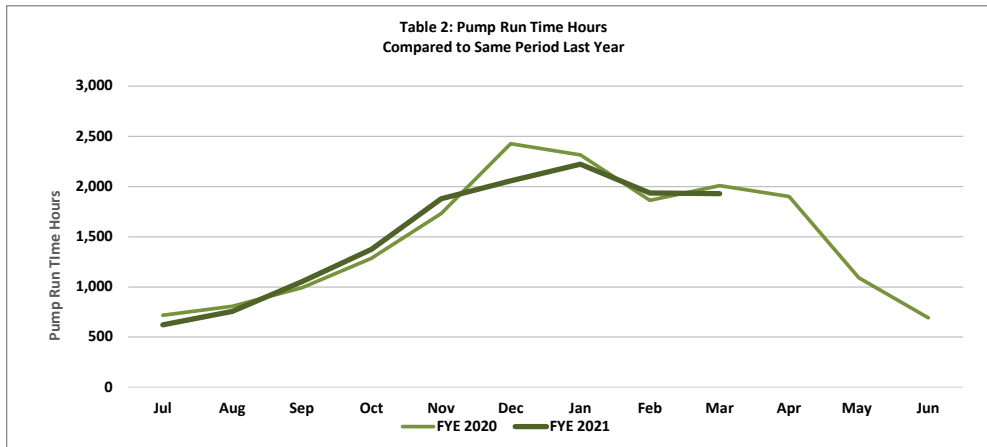
3) Low pumping efficiency in October is related to the pipeline inspection when the system was pumping at odd times and also repumping water due to the need to drain the lines to allow inspection.



## TABLE 2 - Pump Run Time Hours

LAVWMA SYSTEM: Fiscal Year 2020-2021, 3rd Quarter

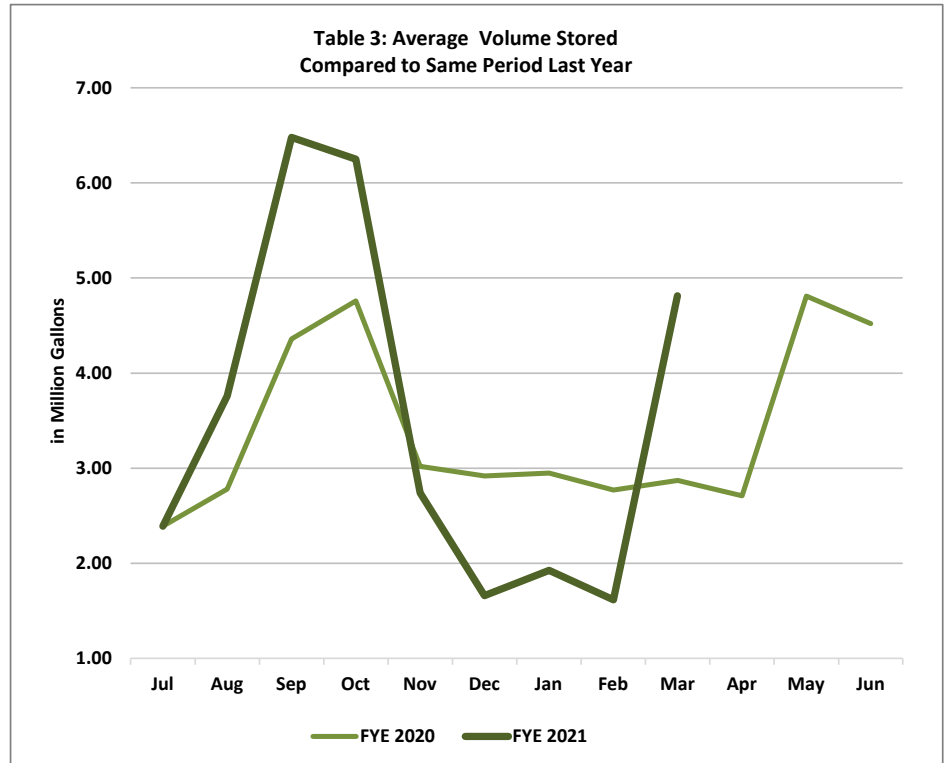
Month	Pump	Pump	Pump	Pump	Pump	Pump	Pump	Pump	Pump	Pump	TOTAL	
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	Run	Utilization
Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	%
Jul-20	1	165	71	0	1	8	329	37	0	11	623	8.4%
Aug-20	112	1	230	1	0	1	312	0	97	1	755	10.1%
Sep-20	48	1	256	96	0	181	99	78	229	66	1,054	14.6%
Oct-20	129	14	127	282	0	90	280	24	273	154	1,374	18.5%
Nov-20	0	8	404	435	0	131	360	324	213	4	1,879	26.1%
Dec-20	0	0	496	383	0	60	314	381	329	91	2,056	27.6%
<b>Jan-21</b>	<b>0</b>	<b>0</b>	<b>581</b>	<b>527</b>	<b>0</b>	<b>0</b>	<b>532</b>	<b>197</b>	<b>59</b>	<b>326</b>	2,221	29.9%
<b>Feb-21</b>	<b>0</b>	<b>312</b>	<b>149</b>	<b>123</b>	<b>303</b>	<b>14</b>	<b>482</b>	<b>5</b>	<b>486</b>	<b>60</b>	1,934	28.8%
<b>Mar-21</b>	<b>0</b>	<b>167</b>	<b>269</b>	<b>382</b>	<b>135</b>	<b>92</b>	<b>244</b>	<b>326</b>	<b>169</b>	<b>143</b>	1,927	25.9%
Apr-21												
May-21												
Jun-21												
<b>Quarter</b>												
Average	0	160	333	344	146	35	419	176	238	176	2,028	28.2%
Total	0	479	999	1,033	438	106	1,258	528	713	528	6,083	
Minimum	0	0	149	123	0	0	244	5	59	60	1,927	25.9%
Maximum	0	312	581	527	303	92	532	326	486	326	2,221	29.9%
<b>YTD</b>												
Average	32	74	287	248	49	64	328	152	206	95	1,536	21.1%
Total	289	668	2,583	2,230	438	579	2,953	1,372	1,856	855	13,823	
Minimum	0	0	71	0	0	0	99	0	0	1	623	8.4%
Maximum	129	312	581	527	303	181	532	381	486	326	2,221	29.9%



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

LAVWMA SYSTEM: Fiscal Year 2020-2021, 3rd 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%
Oct-20	3.36	0.87	7.40	6.25	18	34.7%
Nov-20	4.86	0.22	0.69	2.74	18	15.2%
Dec-20	0.36	1.20	2.02	1.66	18	9.2%
<b>Jan-21</b>	<b>1.88</b>	<b>1.97</b>	<b>0.07</b>	<b>1.93</b>	<b>18</b>	<b>10.7%</b>
<b>Feb-21</b>	<b>1.83</b>	<b>0.96</b>	<b>0.72</b>	<b>1.62</b>	<b>18</b>	<b>9.0%</b>
<b>Mar-21</b>	<b>2.93</b>	<b>2.47</b>	<b>3.75</b>	<b>4.81</b>	<b>18</b>	<b>26.7%</b>
Apr-21						
May-21						
Jun-21						
<b>Quarter</b>						
Average	2.22	1.80	1.51	2.78		0.15
Minimum	1.83	0.96	0.07	1.62		0.09
Maximum	2.93	2.47	3.75	4.81		0.27
<b>YTD</b>						
Average	2.88	1.01	3.11	3.51		19.5%
Minimum	0.36	0.07	0.07	1.62		9.0%
Maximum	4.86	2.47	7.40	6.48		36.0%

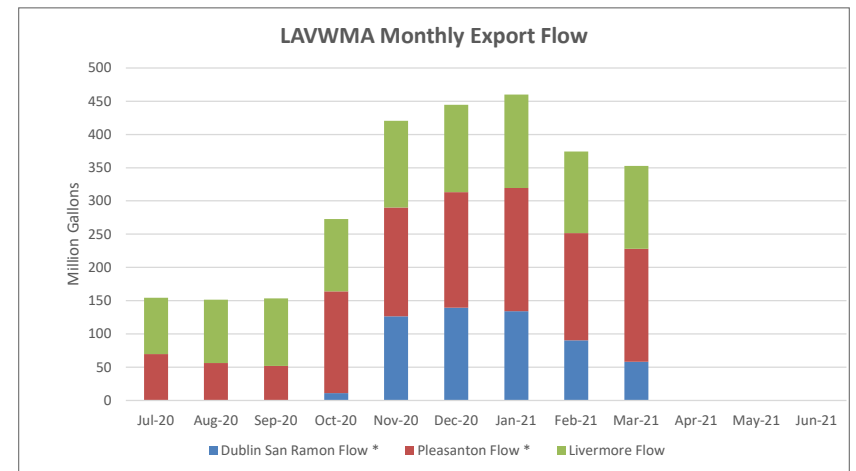
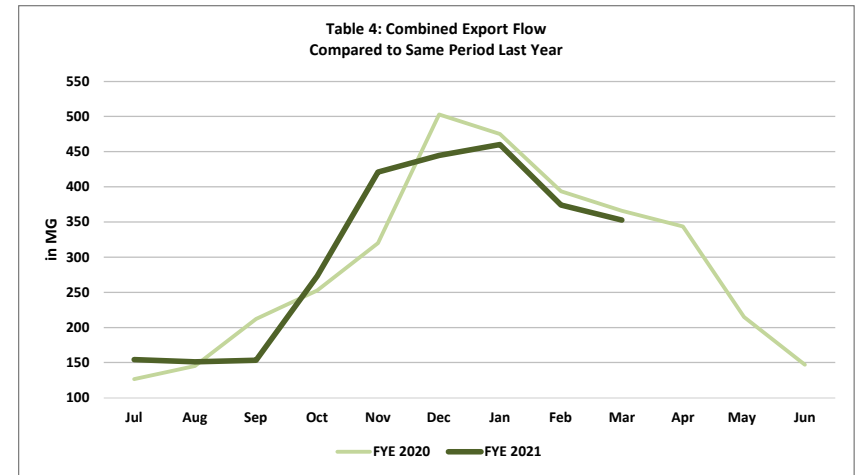


**Note:** Total available storage volume is 18 million gallons.

## TABLE 4 - Monthly Export Flow

LAVWMA SYSTEM: Fiscal Year 2020-2021, 3rd 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	
Oct-20	10.97	152.95	108.95	272.87	1,138.17
Nov-20	126.72	163.35	130.65	420.72	
Dec-20	139.31	173.70	131.57	444.58	
<b>Jan-21</b>	<b>134.42</b>	<b>185.25</b>	<b>140.49</b>	<b>460.16</b>	<b>1,186.93</b>
<b>Feb-21</b>	<b>90.27</b>	<b>161.26</b>	<b>122.56</b>	<b>374.09</b>	
<b>Mar-21</b>	<b>58.15</b>	<b>169.70</b>	<b>124.84</b>	<b>352.69</b>	
Apr-21					0.00
May-21					
Jun-21					
<b>Quarter</b>					
Total	282.84	516.20	387.89	1,186.93	
Average	94.28	172.07	129.30	395.64	
Minimum	58.15	161.26	122.56	352.69	
Maximum	134.42	185.25	140.49	460.16	
<b>YTD</b>					
Total	559.84	1,184.09	1,040.34	2,784.27	
Average	62.20	131.57	115.59	309.36	
Minimum	0.00	51.96	84.98	151.43	
Maximum	139.31	185.25	140.49	460.16	



\* 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, 3rd 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
Oct-20	788.3	4.5	\$129,096	\$274,900	27.2%	\$668,730	272.87	837
Nov-20	684.5	3.9	\$99,804	\$337,133	33.4%	\$568,926	420.72	1,291
Dec-20	396.0	2.3	\$64,670	\$399,366	39.5%	\$504,256	444.58	1,364
<b>Jan-21</b>	<b>445.0</b>	<b>2.6</b>	<b>\$74,538</b>	<b>\$461,599</b>	<b>45.7%</b>	<b>\$429,718</b>	<b>460.16</b>	<b>1,412</b>
<b>Feb-21</b>	<b>431.0</b>	<b>2.5</b>	<b>\$73,341</b>	<b>\$523,832</b>	<b>51.8%</b>	<b>\$356,378</b>	<b>374.09</b>	<b>1,148</b>
<b>Mar-21</b>	<b>376.5</b>	<b>2.2</b>	<b>\$63,901</b>	<b>\$586,065</b>	<b>58.0%</b>	<b>\$292,476</b>	<b>352.69</b>	<b>1,082</b>
Apr-21								
May-21								
Jun-21								
<b>QUARTER</b>								
Total	<b>1,252.5</b>		<b>\$211,779</b>				1,186.93	3,643
Average	417.5	<b>2.4</b>	\$70,593				395.64	1,214
Minimum	376.5	2.2	\$63,901				352.69	1,082
Maximum	445.0	2.6	\$74,538				460.16	1,412
<b>YTD</b>								
Total YTD	4,506.3		\$718,016		<b>71.1%</b>	\$292,476	2,784.27	8,545
Average YTD	500.7	2.9	\$79,780				309.36	949
Minimum	376.5	2.2	\$62,233				151.43	465
Maximum	788.3	4.5	\$129,096				460.16	1,412

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, 3rd 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
Oct-20	\$129,096	\$60,246	\$189,341	\$614,353	23.5%	\$2,004,419	\$694	\$226	272.87	837
Nov-20	\$99,804	\$207,370	\$307,174	\$921,527	35.2%	\$1,697,245	\$730	\$238	420.72	1,291
Dec-20	\$64,670	\$214,508	\$279,178	\$1,200,705	45.8%	\$1,418,067	\$628	\$205	444.58	1,364
<b>Jan-21</b>	<b>\$74,538</b>	<b>\$137,351</b>	<b>\$211,888</b>	<b>\$1,412,593</b>	<b>53.9%</b>	<b>\$1,206,179</b>	<b>\$460</b>	<b>\$150</b>	<b>460.16</b>	<b>1,412</b>
<b>Feb-21</b>	<b>\$73,341</b>	<b>\$156,659</b>	<b>\$230,000</b>	<b>\$1,642,593</b>	<b>62.7%</b>	<b>\$976,179</b>	<b>\$615</b>	<b>\$200</b>	<b>374.09</b>	<b>1,148</b>
<b>Mar-21</b>	<b>\$63,901</b>	<b>\$141,473</b>	<b>\$205,375</b>	<b>\$1,847,967</b>	<b>70.6%</b>	<b>\$770,805</b>	<b>\$582</b>	<b>\$190</b>	<b>352.69</b>	<b>1,082</b>
Apr-21										
May-21										
Jun-21										
<b><u>QUARTER</u></b>										
Total	\$211,779	\$435,483	<b>\$647,262</b>				<b>\$545</b>	<b>\$178</b>	1,186.93	3,643
Average	\$70,593	\$145,161	\$215,754						395.64	1,214
Minimum	\$63,901	\$137,351	\$205,375				\$460	\$150	352.69	1,082
Maximum	\$74,538	\$156,659	\$230,000				\$615	\$200	460.16	1,412
<b><u>YTD</u></b>										
Total YTD	\$718,016	\$1,129,952	<b>\$1,847,967</b>				<b>\$664</b>	<b>\$216</b>	2,784.27	8,545
Average YTD	\$79,780	\$125,550	\$205,330							
Minimum	\$62,233	\$43,140	\$116,475				\$460	\$150	151.43	465
Maximum	\$129,096	\$214,508	\$307,174				\$1,213	\$395	460.16	1,412

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, 3rd 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
Oct-20	\$2,527	\$0	\$2,527
Nov-20	\$389	\$163	\$552
Dec-20	\$0	\$274	\$274
<b>Jan-21</b>	<b>\$0</b>	<b>\$244</b>	<b>\$244</b>
<b>Feb-21</b>	<b>\$1,849</b>	<b>\$403</b>	<b>\$2,252</b>
<b>Mar-21</b>	<b>\$2,297</b>	<b>\$194</b>	<b>\$2,491</b>
Apr-21			
May-21			
Jun-21			
<b><u>Quarter</u></b>			
Total	\$4,146	\$841	\$4,987
Average	\$1,382	\$280	\$1,662
Minimum	\$0	\$194	\$244
Maximum	\$2,297	\$403	\$2,491
<b><u>YTD</u></b>			
YTD Total	\$7,256	\$1,791	\$9,047
YTD Average	\$806	\$199	\$1,005
YTD Minimum	\$0	\$0	\$0
YTD Maximum	\$2,527	\$403	\$2,527

LAVWMA  
BUDGET COMPARISON TO ACTUAL EXPENSES: GOODS & SERVICES

Current FY Period: 9

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	\$74,538	\$73,341	\$63,901				\$718,016	\$757,869
Subtotal	\$1,010,492	\$62,233	\$77,098	\$73,335	\$129,096	\$99,804	\$64,670	\$74,538	\$73,341	\$63,901	\$0	\$0	\$0	\$718,016	\$757,869
<b>Materials &amp; Supplies</b>															
Operations Supplies	\$12,200		\$300	\$9	\$115	\$13,533	\$134	\$153	\$9	\$94				\$14,347	\$9,150
Mechanical Supplies	\$25,000	\$132	\$2,977	\$393	\$16,885	\$17	\$407		\$11,222					\$32,032	\$18,750
Electrical Supplies	\$25,500		\$31,159	\$110	\$12	\$340	\$15	\$116	\$572					\$32,325	\$19,125
Subtotal	\$62,700	\$132	\$34,436	\$402	\$17,110	\$13,562	\$881	\$168	\$11,347	\$666	\$0	\$0	\$0	\$78,704	\$47,025
<b>Laboratory Analysis</b>															
Compliance Testing	\$11,300	\$965	\$772	\$965	\$772	\$772	\$965	\$792	\$792	\$990				\$7,785	\$8,475
Operational Support Testing	\$4,000	\$356	\$356	\$356	\$356	\$356	\$356	\$366	\$366	\$366				\$3,234	\$3,000
Special Sampling	\$15,000	\$1,570	\$1,256	\$1,256	\$1,570	\$1,256	\$1,570	\$1,288	\$1,288	\$1,288				\$12,342	\$11,250
Subtotal	\$30,300	\$2,891	\$2,384	\$2,577	\$2,698	\$2,384	\$2,891	\$2,446	\$2,446	\$2,644	\$0	\$0	\$0	\$23,361	\$22,725
<b>Contractual Services</b>															
Sub-surface Repairs	\$5,000													\$0	\$3,750
Street Sweeping	\$5,000		\$493	\$394	\$400	\$500	\$400	\$400		\$800				\$3,387	\$3,750
Cathodic Protection Survey & Repairs	\$30,000													\$0	\$22,500
Underground Service Alert	\$3,800		\$3,517											\$3,517	\$2,850
SCADA software maintenance contract	\$10,000		\$4,673											\$4,673	\$7,500
HVAC Maintenance/Repairs	\$750													\$0	\$563
Termite/Pest Control	\$900													\$0	\$675
Landscape/weed maintenance	\$8,000			\$980	\$1,561		\$1,960			\$2,941				\$7,443	\$6,000
Janitorial Service	\$3,000	\$495	\$495	\$795	\$795	\$795	\$795	\$795	\$795	\$795				\$6,555	\$2,250
Fire Extinguisher Maintenance	\$200													\$0	\$150
Postage/Shipping Charges	\$250													\$0	\$188
Professional Services, misc	\$10,000		\$59				\$6,884			\$356				\$7,299	\$7,500
Subtotal	\$76,900	\$495	\$9,236	\$2,169	\$2,756	\$1,295	\$10,040	\$1,195	\$795	\$4,892	\$0	\$0	\$0	\$32,873	\$57,675
<b>Utilities</b>															
Electricity (PG&E)	\$1,420,300	\$58,803	\$59,710	\$37,629	\$37,682	\$187,477	\$199,944	\$132,438	\$140,929	\$133,272				\$987,885	\$1,065,225
Water & Sewer (Pleasanton)	\$1,000	\$157		\$166		\$162		\$154						\$639	\$750
Water (EBMUD)	\$880	\$186		\$197		\$250		\$197						\$830	\$660
Telephone/communications	\$4,500		\$775			\$2,239	\$752	\$753	\$1,142					\$5,661	\$3,375
WW Treatment (DSRSD)	\$2,500													\$0	\$1,875
Subtotal	\$1,429,180	\$59,146	\$60,485	\$37,992	\$37,682	\$190,129	\$200,696	\$133,542	\$142,071	\$133,272	\$0	\$0	\$0	\$995,014	\$1,071,885
<b>Non-Routine</b>															
Corrosion Studies/ Inspections	\$500													\$0	\$375
Time delay switches for electrical switchgear	\$8,000													\$0	\$6,000
Subtotal	\$8,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,375
<b>Monthly Total</b>		\$124,897	\$183,640	\$116,475	\$189,341	\$307,174	\$279,178	\$211,888	\$230,000	\$205,375	\$0	\$0	\$0	\$1,847,967	\$1,963,554
<b>YTD Total</b>	\$2,618,072	\$124,897	\$308,537	\$425,012	\$614,353	\$921,527	\$1,200,705	\$1,412,593	\$1,642,593	\$1,847,967					
<b>Combined Export Flow, mg</b>	3,524	154	151	153	273	421	445	460	374	353				2,784	2,643
<b>Pumping Efficiency</b>															
<b>Monthly Cost, \$/mg</b>		\$809	\$1,213	\$760	\$694	\$730	\$628	\$460	\$615	\$582					
<b>YTD Running Cost, \$/mg</b>	\$743	\$809	\$1,009	\$926	\$839	\$799	\$752	\$687	\$676	\$664					

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: 9

ACTUAL EXPENSES BILLED TO LAVWMA FOR REGULAR O&M														
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	YTD TOTAL	YTD Budget
<i>Estimated Personnel Hours</i>														
<b>Division 50 - Ops Admin</b>	0	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Division 51 - FOD</b>	72	-	-	18.00	-	-	4.00	5.50	-	-	-	-	27.50	54.00
Water/Wastewater Sys Lead Op	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Water/Wastewater Sys OP IV-On Call	0	-	-	7.25	-	-	2.00	-	-	-	-	-	9.25	-
Water/Wastewater Sys OP IV	64	-	-	-	-	-	-	-	-	-	-	-	-	48.00
Water/Wastewater Sys OP III	0	-	-	10.75	-	-	2.00	5.50	-	-	-	-	18.25	-
Water/Wastewater Sys OP II	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Maintenance Worker	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Supervisor	8	-	-	-	-	-	-	-	-	-	-	-	-	6.00
<b>Division 52 - WWTP</b>	2,996	207.50	225.00	204.00	254.25	280.50	164.00	195.00	171.00	174.00	-	-	1,875.25	2,247.00
Process Lead Operator IV/V	200	1.00	4.00	15.00	9.00	7.00	7.00	6.00	6.00	5.00	-	-	60.00	150.00
Senior WWTP Operator III	2,746	41.50	45.00	29.00	38.50	74.50	43.00	30.00	27.00	37.00	-	-	365.50	2,059.50
Operator In Training	0	160.00	90.00	50.00	12.00	4.00	10.00	10.00	10.00	10.00	-	-	356.00	-
Operator II	0	-	80.00	102.00	190.75	181.00	96.00	142.00	117.00	114.00	-	-	1,022.75	-
Operator II (SLSS)	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Operations Superintendent	50	5.00	6.00	8.00	4.00	14.00	8.00	7.00	11.00	8.00	-	-	71.00	37.50
<b>Division 53 - MECH</b>	1,741	120.00	228.00	183.00	459.50	226.50	115.00	122.50	115.00	139.50	-	-	1,709.00	1,305.75
Senior Mechanic-Crane Cert	380	-	-	-	-	1.00	14.00	33.50	35.00	22.00	-	-	105.50	285.00
<b>Senior Mechanic - USA</b>	82	-	-	-	-	-	19.00	20.00	20.00	25.00	-	-	84.00	61.50
Maintenance Worker	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Mechanic I/II	1,229	34.00	90.00	67.00	284.50	30.00	4.00	-	9.00	-	-	-	518.50	921.75
Mechanic II-Crane Cert	0	46.50	103.50	71.00	152.50	127.00	69.50	51.50	49.50	70.50	-	-	741.50	-
<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	13.50	10.50	13.00	-	-	143.00	-
Supervisor	50	-	-	-	-	-	-	-	-	-	-	-	-	37.50
<b>Division 54 - ELEC</b>	924	86.00	32.00	76.50	40.50	171.50	102.00	118.50	124.00	31.00	-	-	782.00	693.00
Senior Instrument/Controls Tech	12	-	-	-	-	-	-	-	-	-	-	-	-	9.00
Instrument Tech	480	29.00	25.00	55.50	9.50	44.50	14.50	13.00	1.00	-	-	-	192.00	360.00
OPS Control Sys Spec	144	1.00	-	2.00	-	69.00	87.00	62.00	52.00	-	-	-	273.00	108.00
Senior Electrician	36	-	-	-	-	-	-	1.00	-	-	-	-	1.00	27.00
Electrician I/II	240	50.00	7.00	17.00	31.00	54.00	15.00	41.00	53.00	26.00	-	-	294.00	180.00
Senior Electrical Engineer-Supervisory	12	6.00	-	2.00	-	4.00	1.00	5.00	4.00	-	-	-	22.00	9.00
<b>Division 26 - SAFETY</b>	48	-	-	-	-	-	-	-	-	-	-	-	-	36.00
Safety Officer	48	-	-	-	-	-	-	-	-	-	-	-	-	36.00
<b>Division 40 - ENG</b>	100	6.50	13.50	3.00	16.00	6.00	15.00	5.00	15.50	32.00	-	-	112.50	75.00
Senior Engineer-Supervisory	-	-	-	-	-	-	-	-	3.00	-	-	-	-	-
Associate/Senior Civil Engineer-SME	100	6.50	13.50	3.00	16.00	6.00	8.00	4.50	12.50	32.00	-	-	102.00	75.00
Construction Inspector I	-	-	-	-	-	-	7.00	0.50	-	-	-	-	7.50	-
<i>Total Estimated Personnel Hours</i>														
	5,881													
<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>445.00</b>	<b>431.00</b>	<b>376.50</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4,506.25</b>	<b>4,410.75</b>



LAVWMA January 2021

Date	Parameter Units Location	Flow MGD INF-002A	CBOD mg/L INF-002A	TSS mg/L INF-002A	Flow MGD LAVWMA	CBOD mg/L LAVWMA	TSS mg/L LAVWMA	Fecal Coliform MPN/100ml SLSS	Enterococcus MPN/100ml SLSS	Total Chlorine Residual mg/L SLSS
1/1/2021					14.76					0.001
1/2/2021					15.57					0.001
1/3/2021					16.38					0.001
1/4/2021					10.28					0.001
1/5/2021					10.28					0.001
1/6/2021					14.45	4.4	7.0			0.001
1/7/2021					13.94			<2	<10	0.001
1/8/2021					14.94					0.001
1/9/2021					15.94					0.001
1/10/2021					13.94					0.001
1/11/2021					15.69					0.001
1/12/2021					15.69					0.001
1/13/2021					16.69	7.7	12.5			0.001
1/14/2021					13.98			<2	<10	0.001
1/15/2021					14.98					0.001
1/16/2021					14.98					0.001
1/17/2021					14.98					0.001
1/18/2021					14.10					0.001
1/19/2021					14.99					0.001
1/20/2021					15.07					0.001
1/21/2021					13.55	4.4	8.6	<2	<10	0.002
1/22/2021					14.20					0.001
1/23/2021					15.76					0.001
1/24/2021					15.11					0.001
1/25/2021					17.11					0.001
1/26/2021					15.11					0.019
1/27/2021					15.11	5.1	9.4			0.005
1/28/2021					16.43			<2	<10	0.002
1/29/2021					15.38					0.001
1/30/2021					15.38					0.001
1/31/2021					15.38					0.001

Note:

Flow, CBOD, TSS from LAVWMA Export Pump Station

Fecal Coliform, Enterococcus, Total Residual Chlorine from San Leandro Sampling Station (SLSS)

Date	Parameter Units Location	Flow MGD INF-002A	CBOD mg/L INF-002A	TSS mg/L INF-002A	Flow MGD LAVWMA	CBOD mg/L LAVWMA	TSS mg/L LAVWMA	Fecal Coliform MPN/100ml SLSS	Enterococcus MPN/100ml SLSS	Total Chlorine Residual mg/L SLSS
2/1/2021					15.06					0.001
2/2/2021					15.41					0.003
2/3/2021					14.59	6.0	9.7			0.047
2/4/2021					15.16			4	<10	0.013
2/5/2021					15.62					0.001
2/6/2021					14.70					0.001
2/7/2021					14.32					0.001
2/8/2021					14.85					0.001
2/9/2021					13.76					0.008
2/10/2021					12.00	8.9	15.4			0.001
2/11/2021					15.00			23	<10	0.001
2/12/2021					14.70					0.001
2/13/2021					14.39					0.001
2/14/2021					14.17					0.001
2/15/2021					13.02					0.001
2/16/2021					13.05					0.001
2/17/2021					13.46	27.3	14.2			0.002
2/18/2021					9.89			4	<10	0.007
2/19/2021					14.46					0.001
2/20/2021					9.46					0.001
2/21/2021					14.78					0.001
2/22/2021					13.17					0.001
2/23/2021					10.45					0.001
2/24/2021					13.18	6.7	9.1			0.001
2/25/2021					9.98			2	<10	0.001
2/26/2021					10.13					0.001
2/27/2021					11.63					0.004
2/28/2021					13.71					0.004

Note:

Flow, CBOD, TSS from LAVWMA Export Pump Station

Fecal Coliform, Enterococcus, Total Residual Chlorine from San Leandro Sampling Station (SLSS)

On 2/16 to 2/17/21, the basin sealing project was on going. As a result, DSRSD was unable to perform routine basin cleaning and rotation which possibly caused the elevated CBOD.

Date	Parameter Units Location	Flow MGD INF-002A	CBOD mg/L INF-002A	TSS mg/L INF-002A	Flow MGD LAVWMA	CBOD mg/L LAVWMA	TSS mg/L LAVWMA	Fecal Coliform MPN/100ml SLSS	Enterococcus MPN/100ml SLSS	Total Chlorine Residual mg/L SLSS
3/1/2021					9.47					0.001
3/2/2021					7.47					0.002
3/3/2021					9.08					0.002
3/4/2021					9.69	5.2	10.3	<2	10	0.001
3/5/2021					14.57					0.001
3/6/2021					12.64					0.001
3/7/2021					10.74					0.001
3/8/2021					10.33					0.001
3/9/2021					11.18					0.013
3/10/2021					14.14	3.5	6.9			0.001
3/11/2021					9.79			<2	<10	0.001
3/12/2021					11.22					0.001
3/13/2021					14.36					0.001
3/14/2021					14.64					0.001
3/15/2021					13.51					0.001
3/16/2021					10.84					0.001
3/17/2021					10.50	4.9	9.7			0.001
3/18/2021					15.41			<2	<10	0.001
3/19/2021					13.29					0.001
3/20/2021					12.24					0.001
3/21/2021					9.86					0.001
3/22/2021					15.23					0.001
3/23/2021					11.32					0.001
3/24/2021					11.32	5.4	9.6			0.001
3/25/2021					8.78			<2	<10	0.001
3/26/2021					9.78					0.001
3/27/2021					9.78					0.001
3/28/2021					13.59					0.001
3/29/2021					9.78					0.001
3/30/2021					8.91					0.001
3/31/2021					9.21	4.0	10.1			0.001

Note:

Flow, CBOD, TSS from LAVWMA Export Pump Station

Fecal Coliform, Enterococcus, Total Residual Chlorine from San Leandro Sampling Station (SLSS)

TABLE 10

*DUBLIN SAN RAMON SERVICES DISTRICT  
WASTEWATER TREATMENT FACILITY*

LAVWMA - 1st Quarter 2021

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
01/13/21	788	20.7	148	408	7.2	7.1	0.1
02/09/21	806	20.2	152	384	7.8	7.1	0.6
03/16/21	824	18.8	124	368	7.6	7.3	0.4
MAXIMUM	824	20.7	152	408	7.8	7.3	0.6
MINIMUM	788	18.8	124	368	7.2	7.1	0.1
AVERAGE	806	19.9	141	387	7.5	7.2	0.4

TABLE 10

*DUBLIN SAN RAMON SERVICES DISTRICT  
WASTEWATER TREATMENT FACILITY*

DSRSD - 1st Quarter 2021

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
01/13/21	840	21.4	170	428	7.3	7.0	0.3
02/09/21	826	21.1	166	388	7.6	7.1	0.5
03/16/21	828	20.8	154	404	7.5	7.1	0.4
MAXIMUM	840	21.4	170	428	7.6	7.1	0.5
MINIMUM	826	20.8	154	388	7.3	7.0	0.3
AVERAGE	831	21.1	163	407	7.5	7.1	0.4

**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 <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	pH (Actual)	pH Saturation	Langlier Index
01/07/21	700	20.0	87	325	7.6	7.5	0.1
02/05/21	730	20.0	90	368	7.6	7.5	12.1
03/03/21	760	19.0	92	360	7.7	7.5	0.2
MAXIMUM	760	20.0	92	368	7.7	7.5	12.1
MINIMUM	700	19.0	87	325	7.6	7.5	0.1
AVERAGE	730	19.7	90	351	7.6	7.5	4.1

**TABLE 11**

**LAVVMA FYE21 Capital Projects  
Modified 4/30/2021**

Project	Estimated Cost	Estimated Completion Date	Priority (High, Medium, Low)	Complexity (High, Medium, Low)	Lead/Co-Lead/Others	Coordination Issues (Engineering/Operations/Mechanical/Instrumentation, Controls, & Electrical)	Schedule Issues	Status and other notes
Pump Station Risk Analysis and Forcemain Inspection and Evaluation. Carryover from FYE20.	\$250,000	3/31/2021	High, project complete	Medium for pump station issues. High for pipeline inspection. Medium for SLSS upgrade recommendations	Weir/Quinlan		Project went nine months beyond anticipated completion date due to issues with EBDA agreement, and pipeline inspection.	Project complete. Modeling has been completed and all files received. Pipeline inspection has been completed. SLSS upgrade recommendations completed. Files and final reports received for all items.
MCC and Soft Starter Replacement Project. Carryover from FYE20 and into FYE21. Electrical Improvements to the Main Switchgear at the Pump Station.	Design cost \$250,000. Construction cost \$2,300,000 - \$2,500,000.	12/31/2021	High, design complete. Construction High - need to complete before winter 2021/22	Medium for design. High for construction due to weather and need for phasing.	Weir/Atendido		Some issues with submittals from subcontractor Eaton, but they are committed to meet deadlines.	Design phase complete. Royal Electric is the contractor. Submittals have all been received. Full response from Eaton not received, but they have been authorized to begin fabrication in order to meet schedule requirements.
Rebuild Three Pumps and Their Associated Mortors.	\$216,000. Decided not to order a fourth pump as a spare as storage would be a problem.	12/31/2021	High	Medium. Will replace the remaining three 500 HP pumps. Need to order seals too. Check valves also being rebuilt.	Quinlan		Spec development delayed due to misplaced purchase order at West Yost.	Project now includes three pumps and motors. Pump technical spec nearing completion. A draft was sent to prospective manufacturers and vendors. Their feedback has been useful in improving the spec. The front end specs are completed but need a few minor modifications to comply with the technical spec. Anticipate issuing the bid packet in May.
Resealing of all Three Storage Basins.	\$200,000	3/15/2021	High, DSRSD handled project in coordination with their own storage basins.	Medium.	Quinlan			Project has been completed. Costs were slightly over budget due to the need to seal several cracks that were discovered.
San Leandro Sample Station Design Improvements.	\$670,000	6/30/2021	High		Weir/DSRSD staff			Final report received from HydroScience. Draft RFP for engineering services has been prepared and is under review by General Counsel.
Road Drainage Improvements at the Pump Station.	\$35,000	12/31/2020			TBD			To be combined with similar projects at DSRSD.
Cathodic Protection Projects.	\$185,000	12/31/2020	High.	Medium for some parts, high for others that require traffic control.	Weir/Atendido			Corpro was only bidder and work is underway. All minor items have been completed. Three subprojects require excavation, permits, and traffic control and are in development.
PLC Upgrade at the Pump Station.	\$300,000	6/30/2021		Medium	Jason Ching			Project to be combined with DSRSD SCADA project. Scoping meetings have been scheduled to determine needs from operations and maintenance staffs.
Pipeline Inspection	\$100,000	6/30/2021			Weir/Quinlan			Final Report and recommendations have been received from HydroScience / National Plant Services. Recommendation is to spend \$100,000 per year on inspections. That would allow the entire system to be inspected on about a ten year basis.
Smart Detectors on High Maintenance Air/Vac and Air Release Valves.	\$40,000	6/30/2021			Quinlan			The smart detectors are intended to help prevent leaks from the valves along the forcemain system.

