

LAVWMA

QUARTERLY REPORT OF OPERATIONS

4th Quarter, FY 2019-2020



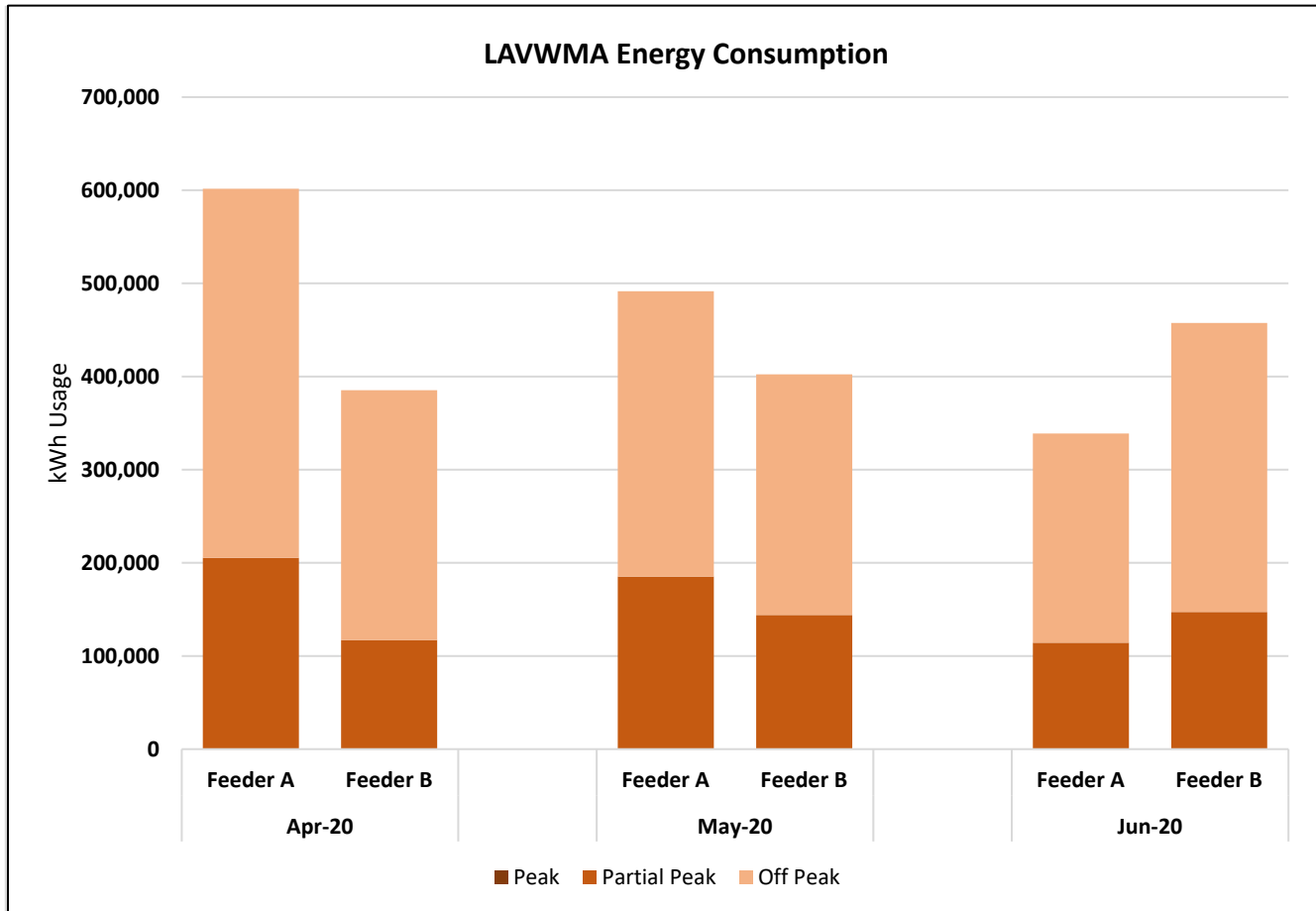
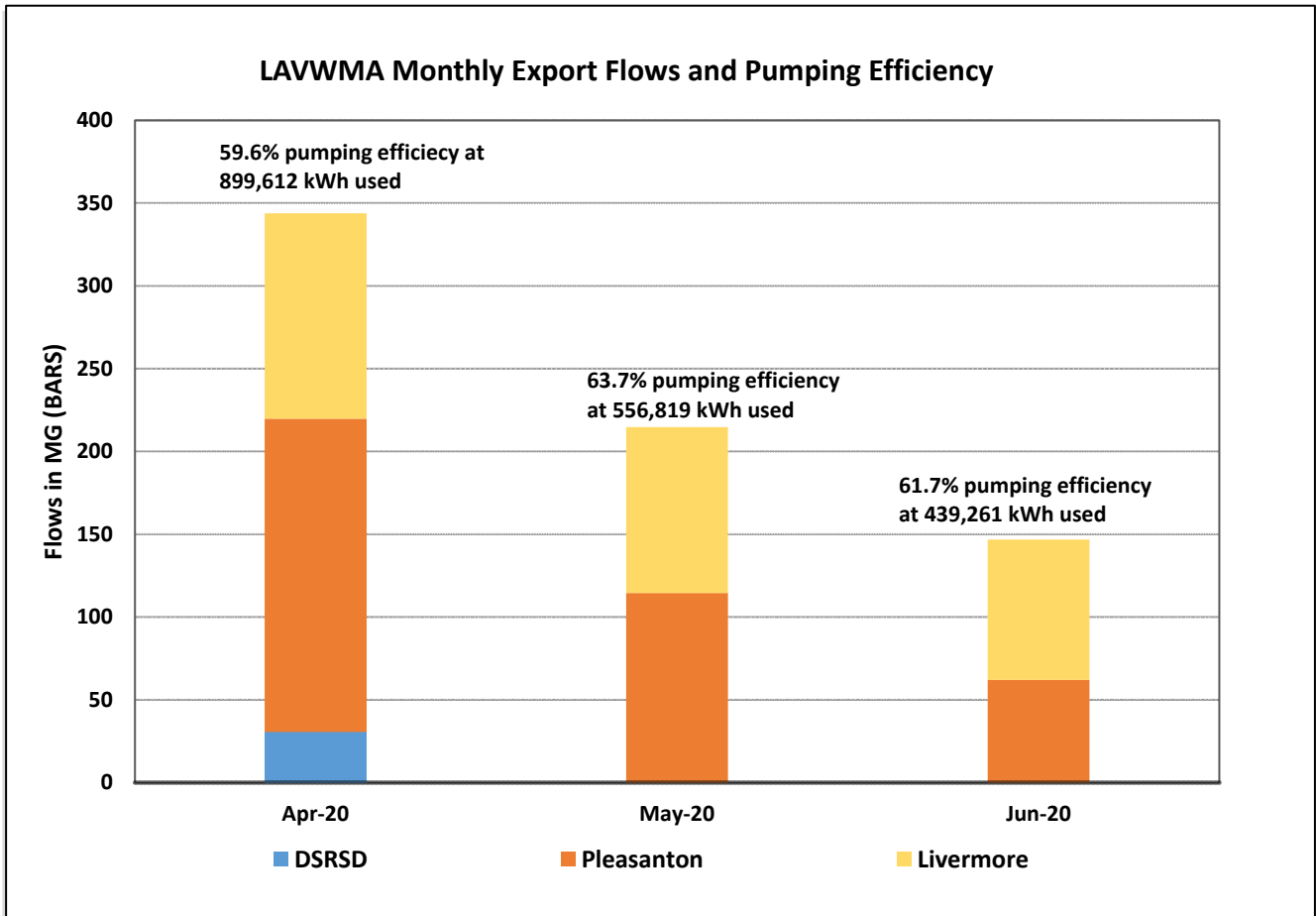
**Dublin San Ramon
Services District**

Water, wastewater, recycled water

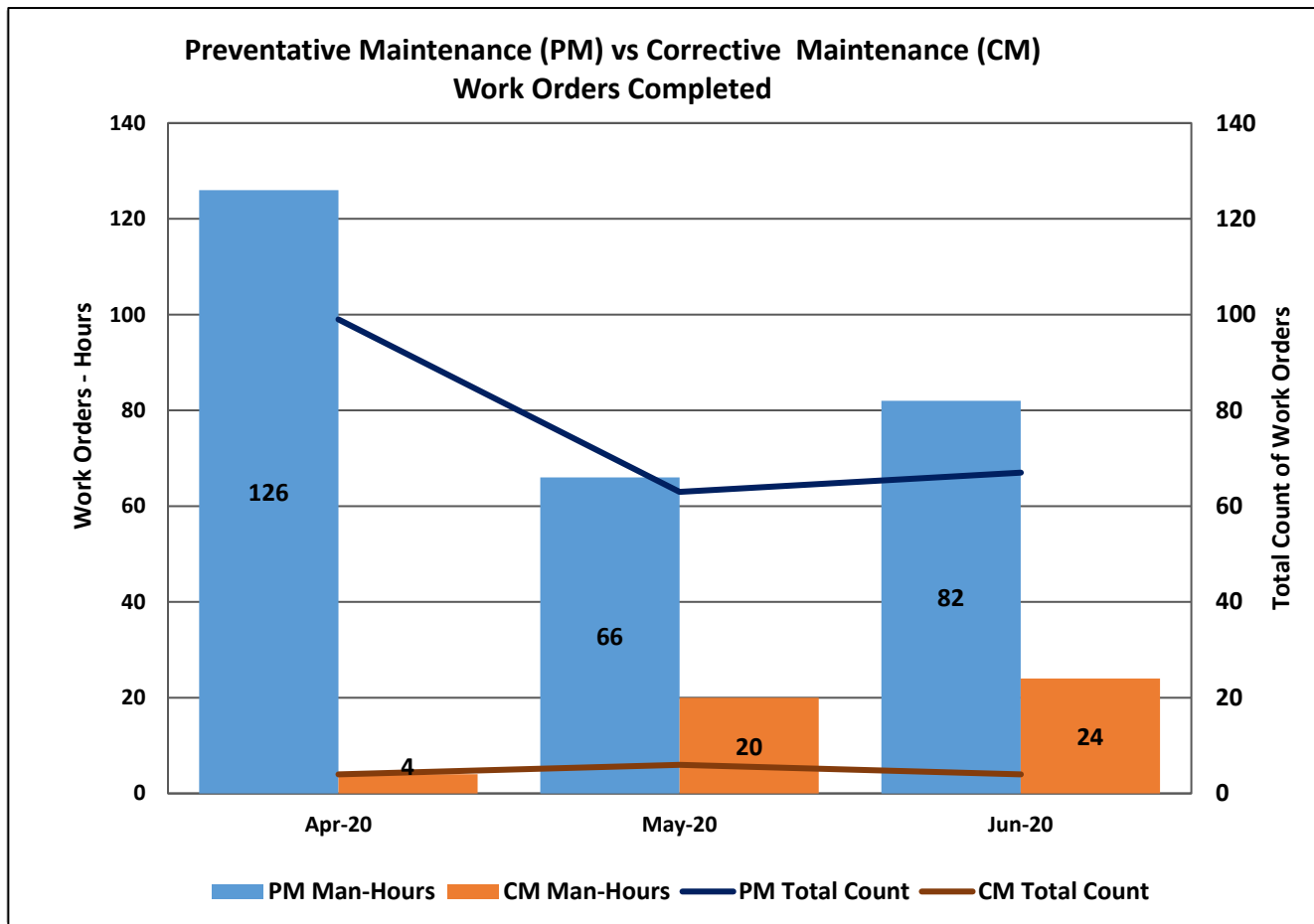
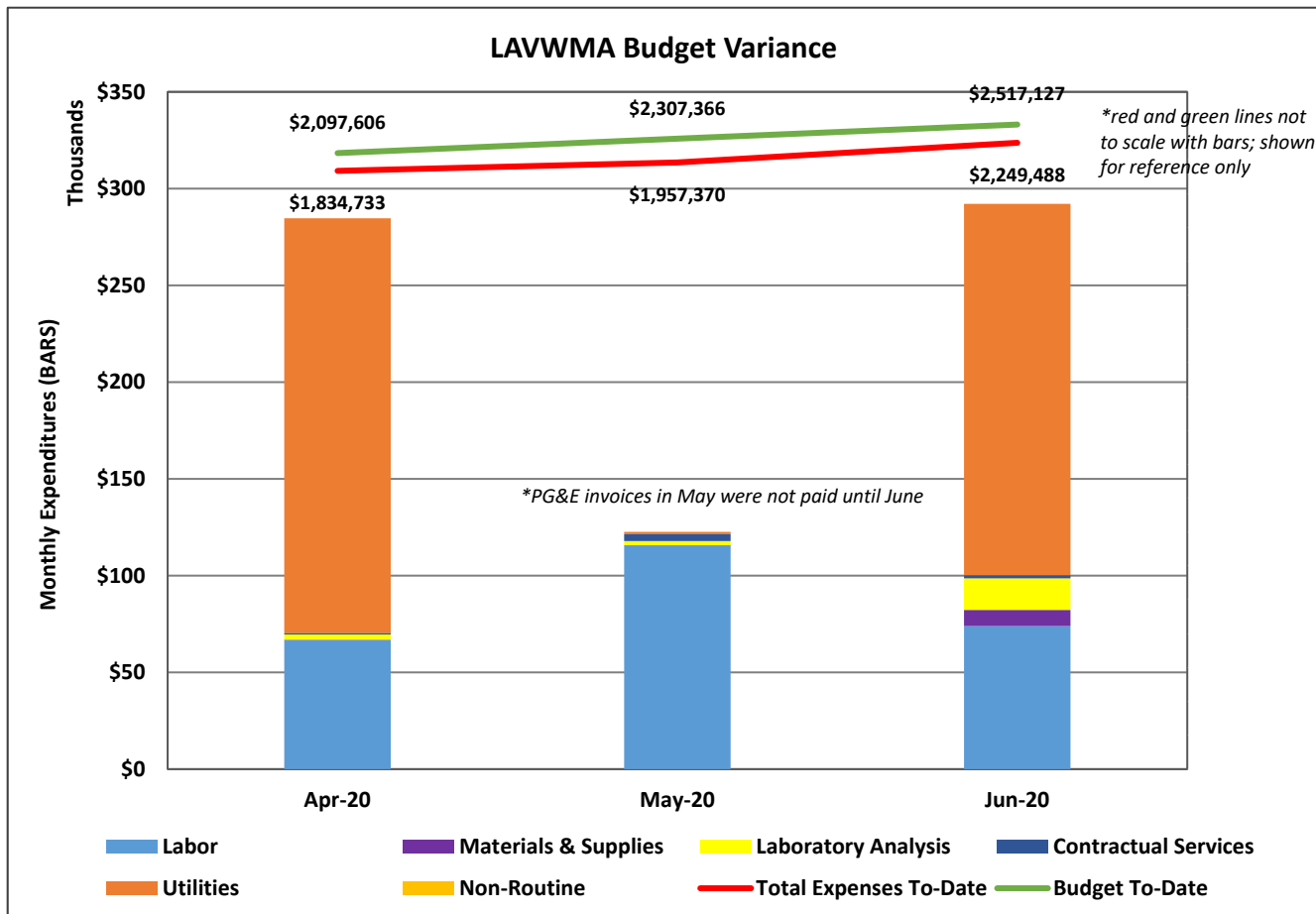
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QUARTERLY REPORT OF OPERATIONS
LAVWMA PUMPING AND CONVEYANCE SYSTEM
4th Quarter FY 2019-2020: April to June 2020

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LAVWMA FYE 2020 FOURTH QUARTER AT A GLANCE



QUARTERLY REPORT OF OPERATIONS
LAVWMA PUMPING AND CONVEYANCE SYSTEM
4th Quarter FY 2019-2020: April to June 2020

1. EXECUTIVE SUMMARY

The Livermore-Amador Valley Water Management Agency (LAVWMA) pumping and effluent conveyance system operated normally during the fourth quarter of FY 2019-2020. During the quarter, a total of 705 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 61.7%, with an average electrical cost of \$406 per million gallons, or \$132 per acre-foot.

Total year-to-date operations and maintenance (O&M) expenses is \$2,249,488 or 89.4% of the O&M annual budget amount of \$2,517,127 and the running overall cost of operation is \$643 per million gallons pumped or \$209 per acre-foot. For the fiscal year, a total of 3,499 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 64.6%, with an average electrical cost of \$373 per million gallons, or \$122 per acre-foot.

2. OPERATIONS

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.

A characterization study for LAVWMA's effluent and receiving waters (San Lorenzo Creek and Alamo Canal) was conducted in May 11 as required by provisions VI.C.2 and VI.C.3 of Order No. R2-2016-0015, NPDES No. CA0038679. Results of the study were included in LAVWMA's Wet Weather Annual Report submitted to the Regional Water Quality Control Board in June 2020. This data will be used for the Reasonable Potential Analysis to determine which, if any, effluents limits will be required in the new NPDES permit.

3. MAINTENANCE

During the quarter, 274 hours were spent on preventative maintenance (PM) work orders and 48 hours on corrective maintenance (CM) work orders on LAVWMA equipment and systems. The following are some noteworthy maintenance activities during the quarter:

- Check valve on export pump #9 failed and staff is planning to replace this in the first quarter of FYE 2021. The quote for the replacement valve is approximately \$9,000.
- In May, staff responded to two leaks: one on Dublin Canyon Road which was concluded to be a private recycled water line leak, and not on the LAVWMA line; another one on Lewelling Blvd which was due to faulty air release valve that was repaired and returned to service the same day.
- Three original pumps #6, #8 and #10 were removed and replaced with new pumps in 2018. The three pumps removed will be rebuilt and used to replace the next three pumps that have the most wear. Staff solicited quotes for rebuild and for high efficiency modification of the three pumps and selected a vendor in June. This process of rebuilding pumps to be used as replacement will continue through FYE 2021 until all pumps have been rebuilt.

- Insurance item: The junction boxes and rectifier panels for the cathodic protection equipment for rectifier panel P-6 and panel P-7 that were damaged by vehicular accident in September 2019 have been received and installed. Insurance has covered the full repair cost except for the deductible of \$500 which may also be covered if the insurance company is successful in collecting damages from the driver's insurance company.
- On April 17, false alarms were reported on the San Leandro SLSS SCADA system. The SLSS alarms that came up were Thiosulfate leak alarm and a discharge flow event alarm. Along with the alarms, the dechlor sequence was started which includes the thiosulfate pump running and dechlor sample pump running. On an unrelated issue, there were some SCADA screen updates performed earlier that day. During the time of the false alarms, the SLSS screen and trend could not be accessed. Operator on duty called the senior instrumentation/controls technician to troubleshoot the access to the SLSS screen and trend who was able to find a work around to give the operators access to the SLSS screen and trend. While still on-site, instrumentation/controls technician found that the secondary pressure instrument at SLSS was registering a high pressure. That high pressure triggered the dechlor sequence and a discharge flow event alarm. Operator shut down all pumps at the LAVWMA pump station and another operator went to SLSS to verify that this was a false event alarm and that there was no discharge to the creek.

SLSS had two pressure instruments reading the LAVWMA pipeline pressure. The PLC program used the secondary pressure instrument as a redundant signal for the primary LAVWMA pipeline pressure. Over the years, the sample piping was reconfigured numerous times and the secondary pressure instrument was repurposed to the sample lines but the PLC program was not updated accordingly. There were no issues detected for years since the sample line pressures were always minimal. However, the latest re-piping efforts added a valve on the sample line to ensure that there is adequate flow to the chlorine analyzer. Keeping a good flow to the analyzer has been an ongoing issue. This new valve caused enough back pressure on the sample line to cause a high pressure alarm. Instrumentation/controls technician modified the PLC program to remove the old secondary pressure signal from triggering the dechlor sequence and the discharge event alarm. Therefore, only the LAVWMA pipeline pressure and the PRV microswitches will trigger the dechlor sequence and the discharge event alarm.

Electrical Supervisor reloaded the original screens and the SCADA screens and trends were confirmed to be working normal once the original screens were reloaded.

- Minor repairs to the remote sensors for some of the LAVWMA pipeline rectifier panels were performed by in-house staff.
- Upgrades to the existing vibration monitoring equipment was started by in-house staff. It is estimated that this work will be completed during the first quarter of FYE 2021.
- Deployed Windows updates and Sophos anti-virus updates on the LAVWMA PS SCADA server.

4. CAPITAL OUTLAY

As part of the power monitoring system upgrade project for DSRSD's wastewater treatment facility and DERWA's water recycling plant, DSRSD electrical staff upgraded the hardware at the LAVWMA pump station and integrated the data into the server software for the treatment facility. This project was substantially completed in the fourth quarter.

5. BUDGET VARIANCE AND EXPENSES

Fourth quarter labor expenses totaled \$256,100 for 1,642 man-hours of effort, an average of 3.2 full time equivalents (FTEs). For the fiscal year, labor expenses totaled \$830,511 or 84.4% of the total annual budgeted labor amount.

For the fourth quarter, the total O&M expenses including labor, supplies, laboratory analysis, contractual services, and utilities totaled \$628,256, for an average cost of \$891 per million gallons pumped or \$290 per acre-foot. The total expense for the Livermore sole use pipeline for the quarter was \$2,429. For the fiscal year, the total O&M expenses including labor, supplies, laboratory analysis, contractual services, and utilities totaled \$2,249,488, for an average cost of \$643 per million gallons pumped or \$209 per acre-foot. The total expense for the Livermore sole use pipeline for the quarter was \$19,499.

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

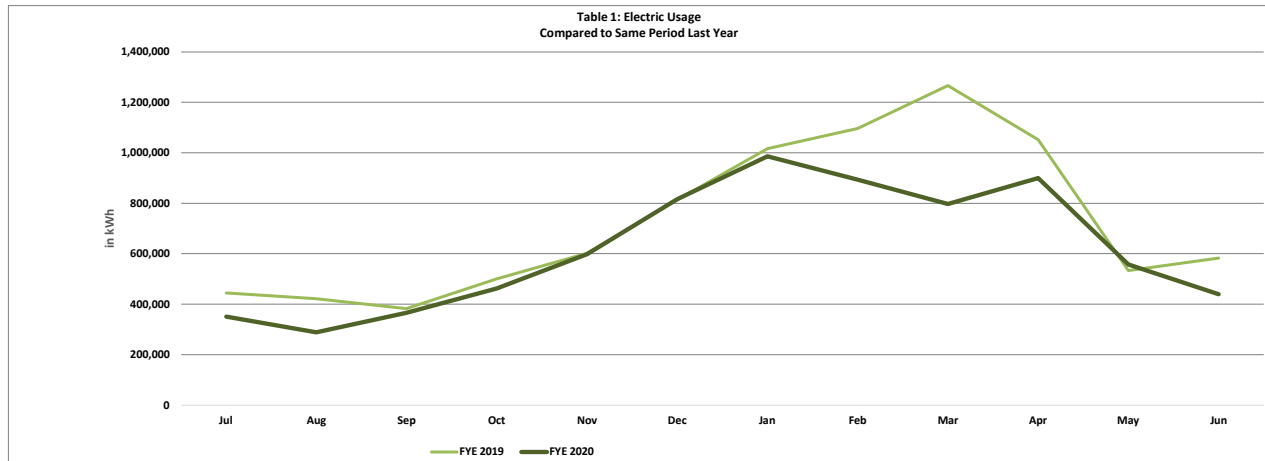
6. ITEMS OF INTEREST

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.

TABLE 1 - Electric Usage, Efficiency and Costs

LAVWMA SYSTEM: Fiscal Year 2019-2020, 4th Quarter

Month	PG&E Service Accounts: Rate Schedule E20S													Total Export Flow ¹	Pumping				
	Acct # 8482061923-1					Acct # 8440395259-5					Billing Days	Total kWh	\$/kWh		\$	Cost			Efficiency %
	Service A		Service B			kWh	Peak	Off Peak	\$	MG						\$/MG	\$/AF		
kWh	Peak	Partial Peak	Off Peak	\$	kWh						Peak	Partial Peak	Off Peak	\$	MG				\$/MG
Jul-19	166,497	0	0	166,497	\$30,462	184,195	1,515	1,798	180,882	\$31,431	32	350,692	\$0.18	\$61,893	168	2,090	\$369	\$120	66.5%
Aug-19	178,837	0	0	178,837	\$31,331	110,904	1,658	2,029	107,217	\$21,515	30	289,741	\$0.18	\$52,846	126	2,304	\$420	\$137	60.3%
Sep-19	193,450	0	0	193,450	\$32,494	172,093	1,738	2,152	168,203	\$27,331	32	365,543	\$0.16	\$59,825	171	2,135	\$349	\$114	65.1%
Oct-19	201,037	0	0	201,037	\$37,264	260,956	1,692	2,228	257,036	\$47,263	29	461,993	\$0.18	\$84,527	228	2,028	\$371	\$121	68.6%
Nov-19	309,348	0	42,986	266,362	\$54,475	288,830	918	46,856	241,056	\$48,621	30	598,178	\$0.17	\$103,096	271	2,205	\$380	\$124	63.1%
Dec-19	559,331	0	195,128	364,203	\$86,709	256,514	0	88,605	167,909	\$51,674	29	815,845	\$0.17	\$138,382	373	2,185	\$371	\$121	63.6%
Jan-20	601,572	0	205,322	396,250	\$88,763	385,248	0	117,125	268,123	\$60,170	32	986,820	\$0.15	\$148,933	474	2,082	\$314	\$102	66.8%
Feb-20	491,518	0	185,217	306,301	\$81,570	402,379	0	144,046	258,333	\$71,130	30	893,897	\$0.17	\$152,700	453	1,975	\$337	\$110	70.4%
Mar-20	338,861	0	114,203	224,658	\$60,536	457,487	0	147,301	310,186	\$73,096	32	796,348	\$0.17	\$133,632	380	2,098	\$352	\$115	66.3%
Apr-20	452,233	0	183,368	268,865	\$70,455	447,379	0	173,890	273,489	\$71,390	30	899,612	\$0.16	\$141,845	386	2,331	\$368	\$120	59.6%
May-20	182,787	0	65,443	94,465	\$39,514	374,032	672	60,525	312,835	\$64,538	29	556,819	\$0.19	\$104,052	255	2,183	\$408	\$133	63.7%
Jun-20	50,957	0	0	50,957	\$19,172	388,304	1,512	1,889	384,903	\$67,031	32	439,261	\$0.20	\$86,203	195	2,254	\$442	\$144	61.7%
Quarter																			
Average	228,659				\$43,047	403,238				\$67,653	30	631,897	\$0.18	\$110,700	279	2,256	\$406	\$132	61.7%
Total	685,977				\$129,141	1,209,715				\$202,959	91	1,895,692		\$332,100	836	6,769			
Minimum	50,957				\$19,172	374,032				\$64,538	29	439,261	\$0.16	\$86,203	195	2,183	\$368	\$120	59.6%
Maximum	452,233				\$70,455	447,379				\$71,390	32	899,612	\$0.20	\$141,845	386	2,331	\$442	\$144	63.7%
YTD																			
Average	310,536				\$52,729	310,693				\$52,932	31	621,229	\$0.17	\$105,661	290	2,156	\$373	\$122	64.6%
Total	3,726,428				\$632,744	3,728,321				\$635,188	367	7,454,749		\$1,267,932	3,479	25,872			
Minimum	50,957				\$19,172	110,904				\$21,515	29	289,741	\$0.15	\$52,846	126	1,975	\$314	\$102	59.6%
Maximum	601,572				\$88,763	457,487				\$73,096	32	986,820	\$0.20	\$152,700	474	2,331	\$442	\$144	70.4%



NOTES:

1) To calculate pumping efficiency, read dates, electric usage, and export flows are **matched to PG&E billing periods**: January 12/13/19 - 1/13/20; February 1/14/20 - 2/12/19; March 2/13/20 - 3/15/20.

2) PG&E statement for Feeder B for February (2/13/20 - 3/15/30) for \$71,129 not received and processed for payment until 4/8/20; this expense will show in April A/P recap (4th quarter) but for the purpose of this report, this amount will be included in February expenses so that it is accurately included in 3rd quarter report as it should be.

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).

TABLE 2 - Pump Run Time Hours

LAVWMA SYSTEM: Fiscal Year 2019-2020, 4th 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 Hours	Utilization %
Jul-19	79	0	0	155	73	135	106	0	32	141	719	9.7%
Aug-19	35	40	111	69	119	135	158	4	30	107	807	10.8%
Sep-19	55	224	44	37	127	37	176	262	1	29	991	13.8%
Oct-19	116	178	147	167	61	102	257	157	2	100	1,287	17.3%
Nov-19	319	7	108	167	260	124	171	20	276	280	1,732	24.1%
Dec-19	352	72	408	146	331	328	160	175	300	156	2,427	32.6%
Jan-20	239	216	105	378	261	200	175	194	188	358	2,314	31.1%
Feb-20	56	325	77	290	77	292	91	275	90	287	1,861	26.7%
Mar-20	215	106	135	422	5	241	275	253	285	70	2,008	27.0%
Apr-20	143	129	3	496	46	234	218	301	3	327	1,899	26.4%
May-20	1	238	1	292	13	4	243	67	118	114	1,091	14.7%
Jun-20	0	356	0	1	0	0	336	0	0	0	693	9.6%
Quarter												
Average	48	241	1	263	20	79	265	123	40	147	1,228	16.9%
Total	144	723	4	790	59	238	796	368	121	441	3,683	
Minimum	0	129	0	1	0	0	218	0	0	0	693	9.6%
Maximum	143	356	3	496	46	234	336	301	118	327	1,899	26.4%
YTD												
Average	134	158	95	218	115	153	197	142	110	164	1,486	20.3%
Total	1,609	1,890	1,139	2,620	1,374	1,831	2,365	1,708	1,324	1,968	17,828	
Minimum	0	0	0	1	0	0	91	0	0	0	693	9.6%
Maximum	352	356	408	496	331	328	336	301	300	358	2,427	32.6%

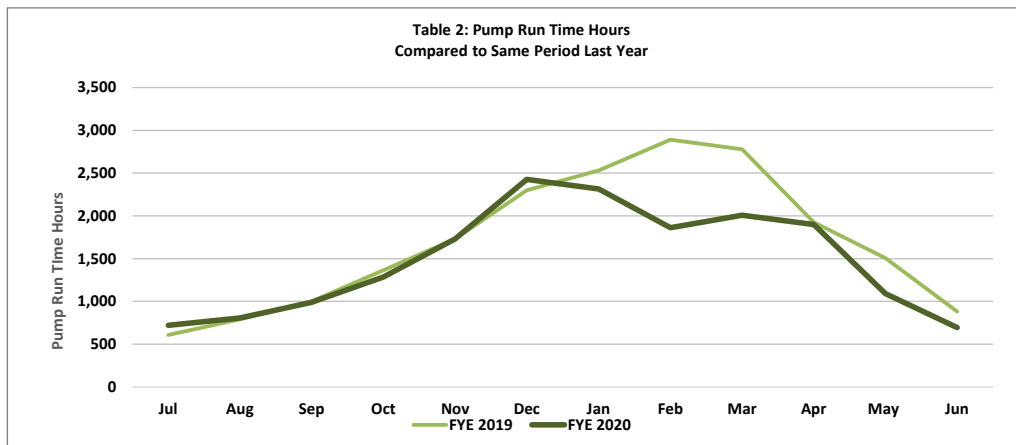
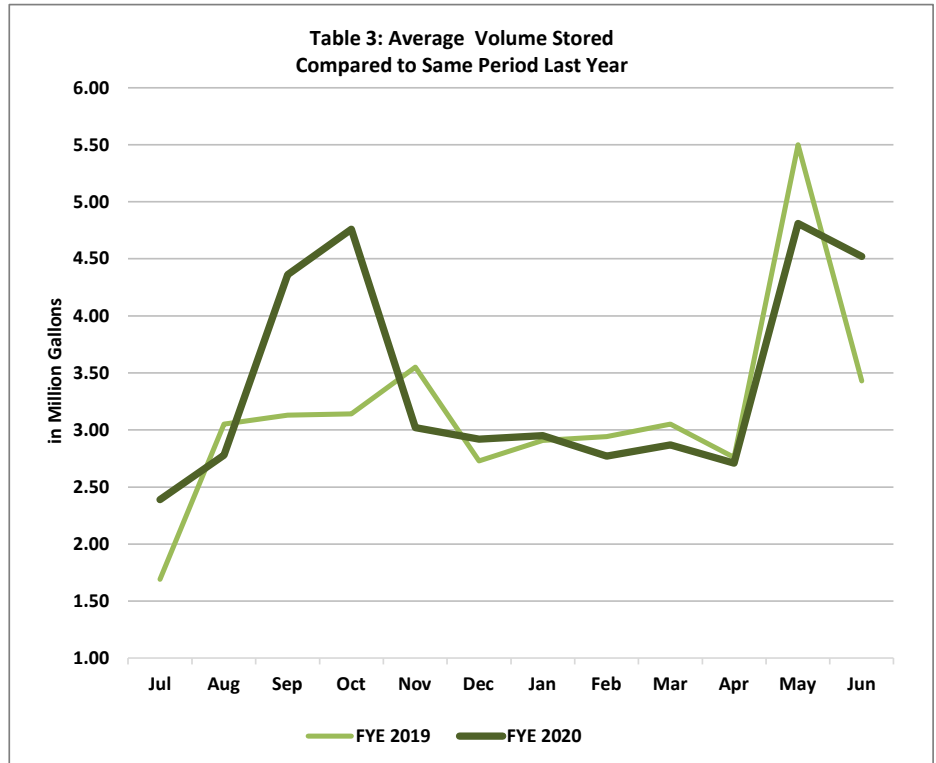


TABLE 3 - Monthly Average Storage Basin Levels and Volume

LAVWMA SYSTEM: Fiscal Year 2019-2020, 4th 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-19	2.51	0.14	2.22	2.39	18	13.3%
Aug-19	2.88	0.06	2.50	2.78	18	15.4%
Sep-19	4.18	0.33	4.03	4.36	18	24.2%
Oct-19	3.50	0.05	5.87	4.76	18	26.4%
Nov-19	1.88	1.07	2.89	3.02	18	16.8%
Dec-19	2.61	1.48	1.70	2.92	18	16.2%
Jan-20	2.54	0.10	3.17	2.95	18	16.4%
Feb-20	2.48	0.06	2.93	2.77	18	15.4%
Mar-20	2.80	0.08	2.93	2.87	18	15.9%
Apr-20	3.25	0.07	2.14	2.71	18	15.1%
May-20	4.36	0.06	4.99	4.81	18	26.7%
Jun-20	3.41	0.06	5.20	4.52	18	25.1%
Quarter						
Average	3.67	0.06	4.11	4.01		0.22
Minimum	3.25	0.06	2.14	2.71		0.15
Maximum	4.36	0.07	5.20	4.81		0.27
YTD						
Average	3.03	0.30	3.38	3.41		18.9%
Minimum	1.88	0.05	1.70	2.39		13.3%
Maximum	4.36	1.48	5.87	4.81		26.7%



Note: Total available storage volume is 18 million gallons.

TABLE 4 - Monthly Export Flow

LAVWMA SYSTEM: Fiscal Year 2019-2020, 4th Quarter

Month	Dublin San Ramon	Pleasanton	Livermore	Combined Export	Total for Quarter
	Flow * MG	Flow * MG	Flow MG	Flow MG	
Jul-19	0	44	83	127	
Aug-19	0	53	92	145	
Sep-19	10	108	94	212	484
Oct-19	25	124	104	253	
Nov-19	41	168	111	320	
Dec-19	149	216	138	503	1,076
Jan-20	135	206	134	475	
Feb-20	107	173	113	394	
Mar-20	34	203	129	366	1,235
Apr-20	31	189	124	344	
May-20	0	115	100	215	
Jun-20	0	62	85	147	705
Quarter					
Total	31	366	309	705	
Average	10	122	103	235	
Minimum	0	62	85	147	
Maximum	31	189	124	344	
YTD					
Total	532	1660	1308	3,499	
Average	44	138	109	292	
Minimum	0	44	83	127	
Maximum	149	216	138	503	

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

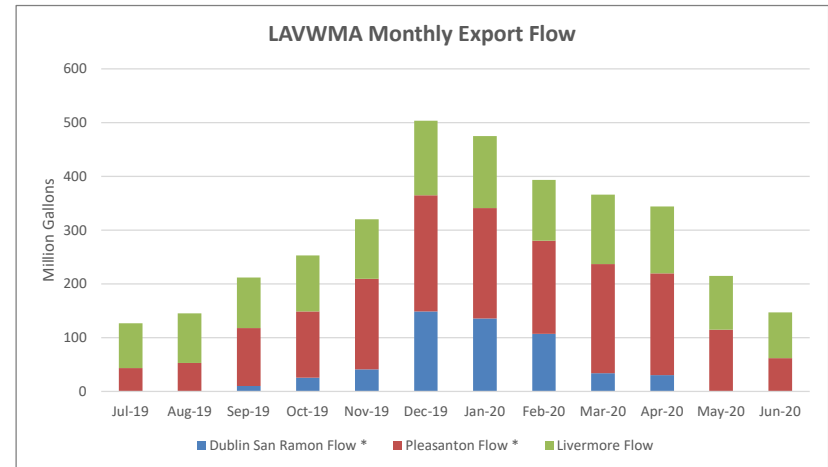
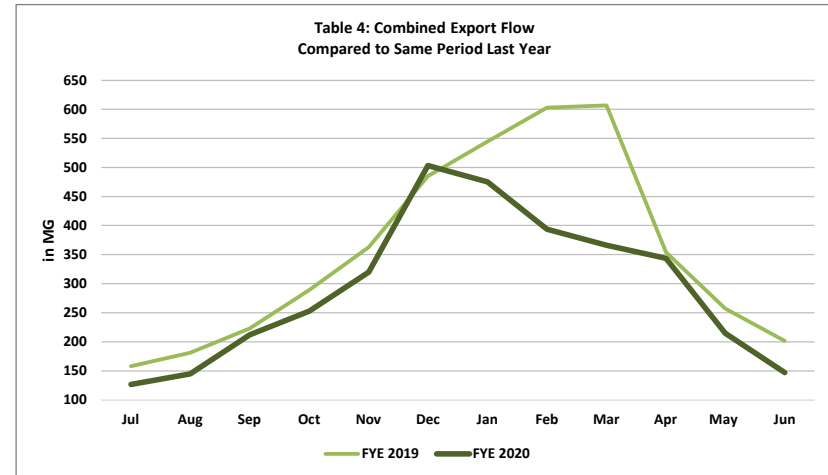


TABLE 5 - Labor Effort, Expenditures, and Budget Utilization

LAVWMA SYSTEM: Fiscal Year 2019-2020, 4th Quarter

FY Labor Budget \$983,447

Month	Billed	FTE Equiv	Labor Invoice	YTD	Budget Utilization	Labor	Export Flow	
	Labor Hours			Labor Budget		Labor Budget Remaining	MG	AF
Jul-19	445.3	2.6	\$75,211	\$81,954	91.8%	\$908,236	127	389
Aug-19	327.8	1.9	\$64,097	\$163,908	85.0%	\$844,139	145	445
Sep-19	381.8	2.2	\$53,857	\$245,862	78.6%	\$790,282	212	650
Oct-19	497.3	2.9	\$79,111	\$327,816	83.1%	\$711,171	253	776
Nov-19	376.5	2.2	\$61,707	\$409,770	81.5%	\$649,465	320	982
Dec-19	322.3	1.9	\$46,667	\$491,724	77.4%	\$602,798	503	1,544
Jan-20	568.0	3.3	\$89,173	\$573,677	81.9%	\$513,625	475	1,458
Feb-20	322.5	1.9	\$51,307	\$655,631	79.5%	\$462,318	394	1,208
Mar-20	348.0	2.0	\$53,282	\$737,585	77.9%	\$409,036	366	1,123
Apr-20	427.5	2.5	\$66,620	\$819,539	78.2%	\$342,416	344	1,055
May-20	735.5	4.2	\$115,568	\$901,493	83.9%	\$226,848	215	659
Jun-20	478.5	2.8	\$73,912	\$983,447	84.4%	\$152,936	147	451
QUARTER								
Total	1,641.5		\$256,100				705	2,165
Average	547.2	3.2	\$85,367				235	722
Minimum	427.5	2.5	\$66,620				147	451
Maximum	735.5	4.2	\$115,568				344	1,055
YTD								
Total YTD	5,230.8		\$830,511		84.4%	\$152,936	3,499	10,740
Average YTD	435.9	2.5	\$69,209				292	895
Minimum	322.3	1.9	\$46,667				127	389
Maximum	735.5	4.2	\$115,568				503	1,544

TABLE 6 - O&M Expenditures and Budget Utilization

LAVWMA SYSTEM: Fiscal Year 2019-2020, 4th Quarter

Total O&M Budget: **\$2,517,127**

Month	Labor Expenses	A/P Expenses	Total O&M Expenses	YTD O&M Budget	Budget Utilization	O&M Budget Remaining	Overall O&M Cost		Export Flow	
							\$/MG	\$/AF	MG	AF
Jul-19	\$75,211	\$80,995	\$156,206	\$209,761	74.5%	\$2,360,921	\$1,233	\$402	127	389
Aug-19	\$64,097	\$63,031	\$127,128	\$419,521	67.5%	\$2,233,793	\$877	\$286	145	445
Sep-19	\$53,857	\$90,398	\$144,255	\$629,282	67.9%	\$2,089,538	\$681	\$222	212	650
Oct-19	\$79,111	\$91,145	\$170,256	\$839,042	71.3%	\$1,919,282	\$674	\$220	253	776
Nov-19	\$61,707	\$112,067	\$173,774	\$1,048,803	73.6%	\$1,745,508	\$543	\$177	320	982
Dec-19	\$46,667	\$144,424	\$191,091	\$1,258,564	76.5%	\$1,554,418	\$380	\$124	503	1,544
Jan-20	\$89,173	\$159,519	\$248,691	\$1,468,324	82.5%	\$1,305,726	\$523	\$171	475	1,458
Feb-20	\$51,307	\$166,597	\$217,904	\$1,678,085	85.2%	\$1,087,822	\$554	\$180	394	1,208
Mar-20	\$53,282	\$138,646	\$191,928	\$1,887,845	85.9%	\$895,894	\$525	\$171	366	1,123
Apr-20	\$66,620	\$146,881	\$213,501	\$2,097,606	87.5%	\$682,394	\$621	\$202	344	1,055
May-20	\$115,568	\$7,069	\$122,637	\$2,307,366	84.8%	\$559,757	\$571	\$186	215	659
Jun-20	\$73,912	\$218,206	\$292,118	\$2,517,127	89.4%	\$267,639	\$1,990	\$648	147	451
QUARTER										
Total	\$256,100	\$372,156	\$628,256				\$891	\$290	705	2,165
Average	\$85,367	\$124,052	\$209,419						235	722
Minimum	\$66,620	\$7,069	\$122,637				\$571	\$186	147	451
Maximum	\$115,568	\$218,206	\$292,118				\$1,990	\$648	344	1,055
YTD										
Total YTD	\$830,511	\$1,418,978	\$2,249,488		89.4%	\$267,639	\$643	\$209	3,499	10,740
Average YTD	\$69,209	\$118,248	\$187,457							
Minimum	\$46,667	\$7,069	\$122,637				\$380	\$124	127	389
Maximum	\$115,568	\$218,206	\$292,118				\$1,990	\$648	503	1,544

Notes: 1) PG&E statement for Feeder B for February (2/13/20 - 3/15/30) for \$71,129 not received and processed for payment until 4/8/20; this expense will show in April A/P recap (4th quarter) but for the purpose of this report, this amount will be included in February expenses so that it is accurately included in 3rd quarter report as it should be. 2) PG&E May invoices totaling \$99,384 was not paid until June and is therefore showing in the June A/P expenses.

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

LAVWMA SYSTEM: Fiscal Year 2019-2020, 4th Quarter

Livermore Sole Use Facilities			
Month	Labor Expenses	A/P Expenses	Total Expenses
-----	-----	-----	-----
Jul-19	\$636	\$195	\$831
Aug-19	\$0	\$227	\$227
Sep-19	\$5,919	\$0	\$5,919
Oct-19	\$0	\$210	\$210
Nov-19	\$0	\$3,118	\$3,118
Dec-19	\$0	\$249	\$249
Jan-20	\$3,820	\$220	\$4,040
Feb-20	\$0	\$1,405	\$1,405
Mar-20	\$875	\$196	\$1,071
Apr-20	\$389	\$211	\$600
May-20	\$1,069	\$0	\$1,069
Jun-20	\$389	\$371	\$760
<u>Quarter</u>			
Total	\$1,847	\$582	\$2,429
Average	\$616	\$194	\$810
Minimum	\$389	\$0	\$600
Maximum	\$1,069	\$371	\$1,069
<u>YTD</u>			
YTD Total	\$13,097	\$6,402	\$19,499
YTD Average	\$1,091	\$534	\$1,625
YTD Minimum	\$0	\$0	\$210
YTD Maximum	\$5,919	\$3,118	\$5,919

TABLE 8

LAVWMA
BUDGET COMPARISON TO ACTUAL EXPENSES

Current FY Period: 12

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 2019-2020	2019	2019	2019	2019	2019	2019	2020	2020	2020	2020	2020	2020	TOTAL	Budget
Labor															
Staff	\$983,447	\$75,211	\$53,857	\$64,097	\$79,111	\$61,707	\$46,667	\$89,173	\$51,307	\$53,282	\$66,620	\$115,568	\$73,912	\$830,511	\$983,447
Subtotal	\$983,447	\$75,211	\$53,857	\$64,097	\$79,111	\$61,707	\$46,667	\$89,173	\$51,307	\$53,282	\$66,620	\$115,568	\$73,912	\$830,511	\$983,447
Materials & Supplies															
Operations Supplies	\$12,200	\$0	\$17	\$9	\$106	\$33	\$147	\$9	\$9	\$9	\$9	\$9	\$1,060	\$1,416	\$12,200
Mechanical Supplies	\$25,000	\$252	\$20	\$1,410	\$837	\$19	\$703	\$1,919	\$0	\$0	\$117	\$144	\$485	\$5,906	\$25,000
Electrical Supplies	\$25,500	\$45	\$287	\$11,754	\$1,181	\$1,503	\$483	\$1,544	\$2,082	\$52	\$144	\$0	\$6,862	\$25,935	\$25,500
Subtotal	\$62,700	\$297	\$324	\$13,172	\$2,124	\$1,555	\$1,332	\$3,472	\$2,091	\$61	\$269	\$153	\$8,407	\$33,257	\$62,700
Laboratory Analysis															
Compliance Testing	\$11,300	\$890	\$712	\$712	\$890	\$712	\$712	\$890	\$712	\$712	\$890	\$712	\$712	\$9,256	\$11,300
Operational Support Testing	\$4,000	\$330	\$330	\$330	\$330	\$330	\$330	\$330	\$330	\$330	\$330	\$330	\$330	\$3,960	\$4,000
Special Sampling	\$15,000	\$1,156	\$1,445	\$1,445	\$1,445	\$1,156	\$1,445	\$1,156	\$1,156	\$1,156	\$1,445	\$1,064	\$15,247	\$29,316	\$15,000
Subtotal	\$30,300	\$2,376	\$2,487	\$2,487	\$2,665	\$2,198	\$2,487	\$2,376	\$2,198	\$2,198	\$2,665	\$2,106	\$16,289	\$42,532	\$30,300
Contractual Services															
Sub-surface Repairs	\$5,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,000
Street Sweeping	\$5,000	\$0	\$788	\$743	\$394	\$394	\$493	\$394	\$493	\$0	\$394	\$394	\$887	\$5,372	\$5,000
Cathodic Protection Survey & Repairs	\$30,000	\$0	\$0	\$0	\$0	\$12,635	\$0	\$0	\$5,415	\$0	\$0	\$0	\$0	\$18,050	\$30,000
Underground Service Alert	\$3,800	\$4,948	\$3,031	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,979	\$3,800
SCADA software maintenance contract	\$10,000	\$0	\$0	\$10,051	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,051	\$10,000
Rectifier monitoring (5 yr contract, FY22 \$40K)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Med voltage switchgear 3-yr PM (FY22, \$18k)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Arc Flash Study 5-yr (FY24, \$20k)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Motor rehab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
HVAC Maintenance/Repairs	\$750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$750
Termite/Pest Control	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$900
Landscape/weed maintenance	\$8,000	\$0	\$980	\$1,960	\$0	\$0	\$0	\$1,960	\$1,960	\$394	\$0	\$2,941	\$0	\$10,196	\$8,000
Janitorial Service	\$3,000	\$0	\$990	\$495	\$495	\$495	\$495	\$495	\$495	\$495	\$495	\$495	\$495	\$5,940	\$3,000
Fire Extinguisher Maintenance	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$170	\$170	\$200
Postage/Shipping Charges	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250
Professional Services, misc	\$10,000	\$0	\$972	\$0	\$0	\$0	\$0	\$0	\$0	\$356	\$0	\$0	\$59	\$1,387	\$10,000
Subtotal	\$76,900	\$4,948	\$6,762	\$13,249	\$889	\$13,524	\$988	\$2,849	\$8,363	\$1,245	\$889	\$3,830	\$1,610	\$59,145	\$76,900
Utilities															
Electricity (PG&E)	\$1,346,400	\$62,419	\$53,459	\$59,825	\$84,889	\$104,009	\$139,617	\$150,822	\$82,149	\$134,162	\$213,544	\$0	\$191,258	\$1,276,152	\$1,346,400
Water & Sewer (Pleasanton)	\$1,000	\$10,287	\$0	\$358	\$0	-\$9,971	\$0	\$0	\$0	\$153	\$0	\$153	\$0	\$980	\$1,000
Water (EBMUD)	\$880	\$180	\$0	\$185	\$0	\$190	\$0	\$0	\$0	\$185	\$0	\$185	\$0	\$924	\$880
Telephone/communications	\$4,500	\$488	\$0	\$1,123	\$577	\$561	\$0	\$0	\$668	\$643	\$642	\$643	\$643	\$5,987	\$4,500
WW Treatment (DSRSD)	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500
Subtotal	\$1,355,280	\$73,374	\$53,459	\$61,490	\$85,467	\$94,790	\$139,617	\$150,822	\$82,816	\$135,142	\$214,186	\$980	\$191,900	\$1,284,043	\$1,355,280
Non-Routine															
Pump Efficiency Testing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Corrosion Studies/ Inspections	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500
Med voltage switchgear 3-yr PM (FY22, \$18k)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Time delay switches for electrical switchgear	\$8,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,000
LAVWMA PS PLC Upgrade (placeholder, \$160k)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$8,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,500
Monthly Total	\$2,517,127	\$156,206	\$116,889	\$154,494	\$170,256	\$173,774	\$191,091	\$248,691	\$146,775	\$191,928	\$284,630	\$122,637	\$292,118	\$2,249,488	\$2,517,127
YTD Total		\$156,206	\$273,095	\$427,589	\$597,845	\$771,619	\$962,709	\$1,211,401	\$1,358,176	\$1,550,104	\$1,834,733	\$1,957,370	\$2,249,488	89% of YTD Budget	
Combined Export Flow, mg	4,094	127	145	212	253	320	503	475	394	366	344	215	147	3,501	4,094
Pumping Efficiency		66.5%	60.3%	65.1%	68.6%	63.1%	63.6%	66.8%	70.4%	66.3%	59.6%	63.7%	61.7%		
Monthly Cost, \$/mg		\$1,233	\$806	\$729	\$673	\$543	\$380	\$524	\$373	\$524	\$827				
YTD Running Cost, \$/mg	\$615	\$1,233	\$1,005	\$884	\$812	\$730	\$617	\$595	\$559	\$555	\$585	\$584	\$643		

TABLE 8

**LAVWMA
BUDGET COMPARISON TO ACTUAL EXPENSES**

Current FY Period: 12

ACTUAL EXPENSES BILLED TO LAVWMA FOR REGULAR O&M															
FY 2019-2020	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	YTD TOTAL	YTD Budget	
<i>Estimated Personnel Hours</i>															
Division 50 - Ops Admin	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Division 51 - FOD	72	-	-	-	-	-	-	2.00	-	-	-	-	2.00	72.00	
Water/Wastewater Sys Lead Op	0	-	-	-	-	-	-	2.00	-	-	-	-	2.00	-	
Water/Wastewater Sys OP IV-On Call	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Water/Wastewater Sys OP IV	64	-	-	-	-	-	-	-	-	-	-	-	-	64.00	
Water/Wastewater Sys OP III	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Water/Wastewater Sys OP II	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Maintenance Worker	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Supervisor	8	-	-	-	-	-	-	-	-	-	-	-	-	8.00	
Division 52 - WWTP	2,996	197.00	156.50	151.00	228.00	153.00	206.50	229.00	165.50	174.50	206.50	366.50	210.00	2,444.00	2,996.00
Process Lead Operator IV/V	200	11.00	9.00	12.00	8.00	6.00	10.00	6.00	4.00	2.50	-	-	-	68.50	200.00
Senior WWTP Operator III	590	183.00	85.50	107.00	122.00	60.00	44.50	101.00	89.50	102.00	113.00	206.50	82.00	1,296.00	590.00
Operator In Training	0	-	-	-	78.00	-	146.00	112.00	50.00	66.00	78.00	144.00	122.00	796.00	-
Operator II	1,000	-	61.00	28.00	16.00	84.00	-	-	19.00	-	10.00	10.00	-	228.00	1,000.00
Operator II (SLSS)	1,156	-	-	-	-	-	-	-	-	-	-	-	-	-	1,156.00
Supervisor	50	3.00	1.00	4.00	4.00	3.00	6.00	10.00	3.00	4.00	5.50	6.00	6.00	55.50	50.00
Division 53 - MECH	1,741	103.75	96.75	160.75	111.75	128.50	55.75	181.50	62.00	123.50	152.50	264.00	186.25	1,627.00	1,741.00
Senior Mechanic-Crane Cert	380	-	1.50	-	-	4.00	-	-	-	-	-	-	-	5.50	380.00
Senior Mechanic - USA	82	-	2.00	-	-	-	-	-	-	-	-	-	-	2.00	82.00
Maintenance Worker	0	-	-	-	2.00	4.00	-	-	8.00	7.50	-	-	-	21.50	-
Mechanic I/II	760	48.00	49.00	72.25	62.75	59.25	15.00	100.50	41.00	47.00	96.00	141.50	101.00	833.25	760.00
Mechanic II-Crane Cert	200	45.50	26.00	67.00	30.50	51.50	28.50	65.50	-	15.00	56.50	114.00	68.00	568.00	200.00
Mechanic I/II - USA	269	5.75	10.75	12.00	12.50	5.25	4.75	5.50	8.00	32.50	-	8.50	13.50	119.00	269.00
Mechanic II-Crane Cert - USA	0	4.50	7.50	9.50	4.00	4.50	7.50	10.00	5.00	21.50	-	-	3.75	77.75	-
Supervisor	50	-	-	-	-	-	-	-	-	-	-	-	-	-	50.00
Division 54 - ELEC	924	138.50	70.00	61.00	149.00	89.50	58.00	149.00	90.00	43.50	58.00	76.00	47.00	1,029.50	924.00
Senior Instrument/Controls Tech	12	-	-	-	-	-	-	-	-	-	-	-	-	-	12.00
Instrument Tech	480	124.50	30.00	12.00	81.00	58.00	1.00	16.00	10.00	5.50	29.00	24.00	5.00	396.00	480.00
OPS Control Sys Spec	144	-	-	20.00	16.00	14.50	15.00	23.50	-	-	4.00	-	12.00	105.00	144.00
Senior Electrician	36	-	-	-	-	-	-	-	-	-	-	-	-	-	36.00
Electrician I/II	240	13.00	40.00	28.00	48.00	17.00	39.00	108.50	79.00	37.00	25.00	48.00	26.00	508.50	240.00
Supervisor	12	1.00	-	1.00	4.00	-	3.00	1.00	1.00	1.00	-	4.00	4.00	20.00	12.00
Division 26 - SAFETY	48	-	-	-	-	-	-	-	-	-	-	-	-	-	48.00
Safety Officer	48	-	-	-	-	-	-	-	-	-	-	-	-	-	48.00
Division 40 - ENG	100	6.00	4.50	9.00	8.50	5.50	2.00	8.50	3.00	6.50	8.50	29.00	6.00	97.00	100.00
Associate/Senior Civil Engineer-SME	100	6.00	4.50	9.00	8.50	5.50	2.00	8.50	3.00	6.50	8.50	29.00	6.00	97.00	100.00
<i>Total Estimated Personnel Hours</i>															
5,881															
<i>FTE</i>															
2.83															
Total Monthly Hours	445.25	327.75	381.75	497.25	376.50	322.25	568.00	322.50	348.00	425.50	735.50	449.25	5,199.50	5,881.00	

TABLE 9

San Leandro Sampling Station Microbiology Results

2nd Quarter 2020

Collection Date	Fecal Coliform MPN/100ml	Enterococcus MPN/100ml
04/02/20	<2	<10
04/09/20	2	<10
04/16/20	2	<10
04/23/20	13	<10
04/30/20	4	<10
05/07/20	2	<10
05/14/20	13	--
05/22/20	8	<10
05/26/20	30	<10
06/04/20	<2	<10
06/12/20	22	<10
06/18/20	27	<10
06/25/20	11	<10
Median	8	<10
Geometric Mean	6.4	10

Note:

Sample collected on 05/14/20 was not analyzed for enterococcus.

TABLE 10

**Monthly Report for LAVWMA -April 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	10.94	3.5	145	8.0	331	7.49	7.55	3.956	0.000
2	10.94					7.45	7.55	3.112	0.000
3	13.13					7.41	7.49	3.123	0.000
4	10.51					7.38	7.43	3.091	0.000
5	13.76					7.27	7.39	2.983	0.000
6	13.76					7.25	7.32	2.987	0.000
7	13.76					7.28	7.33	3.160	0.000
8	13.76	4.7	245	10.8	562	7.30	7.37	3.527	0.000
9	14.94					7.32	7.37	3.673	0.000
10	13.09					7.32	7.37	3.417	0.000
11	14.12					7.33	7.39	3.309	0.000
12	13.11					7.28	7.38	3.190	0.000
13	13.07					7.34	7.52	3.361	0.000
14	12.04					7.32	7.40	3.957	0.034
15	13.23	3.4	170	7.3	366	7.33	7.44	3.850	0.053
16	10.95					7.32	7.39	3.632	0.046
17	10.84					7.36	7.42	3.955	0.051
18	10.66					7.35	7.41	4.759	0.060
19	10.08					7.28	7.36	4.605	0.018
20	10.32					7.33	7.38	4.677	0.001
21	10.32					7.33	7.36	4.660	0.001
22	10.32	3.2	125	7.2	281	7.31	7.37	4.861	0.001
23	10.32					7.32	7.39	4.731	0.001
24	10.32					7.33	7.40	4.485	0.012
25	10.32					7.39	7.43	4.467	0.004
26	8.93					7.39	7.45	3.988	0.001
27	8.35					7.37	7.61	3.956	0.001
28	11.41					7.39	7.49	4.666	0.001
29	8.39	4.2	133	4.8	152	7.37	7.47	4.636	0.001
30	8.08					7.33	7.42	4.653	0.001
MAX.	14.94	4.7	245	10.8	562	7.49	7.61	4.86	0.06
MIN.	8.08	3.2	125	4.8	152	7.25	7.32	2.98	0.00
AVE.	11.46	3.8	164	7.6	339	7.34	7.42	3.91	0.01
TOTAL	343.78								

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: 
Connie Sanchez, Acting Laboratory Supervisor

Date: 7/20/2020

TABLE 10

Monthly Report for LAVWMA - May 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	7.27					7.34	7.39	4.577	0.001
2	7.27					7.33	7.37	3.420	0.001
3	8.18					7.31	7.37	3.649	0.001
4	8.18					7.31	7.50	3.621	0.001
5	9.09					7.42	7.49	3.025	0.001
6	5.16	5.1	100	6.2	121	7.37	7.44	3.558	0.002
7	5.75					7.35	7.43	3.806	0.017
8	6.53					7.33	7.38	3.224	0.019
9	6.53					7.34	7.43	2.878	0.013
10	7.08					7.35	7.44	3.010	0.021
11	7.08					7.36	7.46	3.821	0.001
12	7.60					7.40	7.46	4.218	0.001
13	6.48	6.4	157	7.8	191	7.34	7.41	3.505	0.001
14	7.08					7.34	7.37	3.968	0.001
15	7.08					7.35	7.67	3.875	0.001
16	7.43					7.35	7.73	2.795	0.001
17	9.27					7.37	7.42	3.873	0.001
18	7.84					7.33	7.43	4.930	0.001
19	7.84					7.38	7.43	3.944	0.001
20	7.84	6	178	10.5	312	7.43	7.71	4.396	0.003
21	6.63					7.51	7.59	3.782	0.001
22	7.33					7.52	7.70	3.730	0.001
23	7.34					7.57	7.65	3.370	0.001
24	6.97					7.60	7.64	3.256	0.001
25	6.97					7.44	7.64	3.839	0.001
26	6.33					7.45	7.63	3.029	0.001
27	6.33	5.2	124	14.0	335	7.42	7.52	3.147	0.001
28	6.33					7.43	7.53	2.327	0.001
29	4.62					7.42	7.54	2.129	0.001
30	4.62					7.45	7.56	2.187	0.001
31	4.62					7.38	7.48	3.162	0.001
MAX.	9.27	6.4	178	14.0	335	7.60	7.73	4.93	0.02
MIN.	4.62	5.1	100	6.2	121	7.31	7.37	2.13	0.00
AVE.	6.93	5.7	140	9.6	240	7.40	7.51	3.49	0.00
TOTAL	214.68								

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: 
 Connie Sanchez, Acting Laboratory Supervisor

Date: 7/20/2020

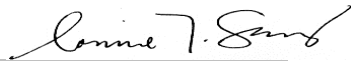
TABLE 10

Monthly Report for LAVWMA -June 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	6.77					7.31	7.42	3.458	0.001
2	6.77					7.36	7.45	2.729	0.001
3	4.23	3.9	62	7.2	115	7.32	7.40	2.038	0.001
4	4.23					7.32	7.53	0.748	0.001
5	4.23					7.47	7.56	0.263	0.001
6	5.50					7.50	7.60	0.057	0.001
7	5.50					7.35	7.51	0.164	0.001
8	5.28					7.27	7.36	1.529	0.001
9	5.28					7.27	7.32	1.109	0.001
10	4.16	5.4	85	10.2	161	7.27	7.33	0.907	0.001
11	4.17					7.28	7.35	0.841	0.001
12	4.14					7.30	7.38	0.314	0.001
13	6.06					7.28	7.37	0.224	0.001
14	6.06					7.23	7.35	0.652	0.001
15	5.56					7.29	7.45	1.000	0.001
16	5.56					7.34	7.42	1.379	0.001
17	4.05	6.4	98	11.5	176	7.30	7.36	0.835	0.001
18	4.03					7.29	7.35	0.386	0.001
19	4.13					7.33	7.40	0.184	0.001
20	4.90					7.26	7.38	0.266	0.001
21	4.90					7.13	7.36	0.034	0.001
22	5.26					7.20	7.36	0.143	0.001
23	5.26					7.24	7.45	0.226	0.001
24	4.07	3.3	51	6.6	102	7.23	7.40	0.699	0.001
25	4.02					7.23	7.35	0.839	0.001
26	4.07					7.23	7.29	2.603	0.001
27	3.70					7.18	7.29	1.496	0.001
28	5.15					7.21	7.36	1.372	0.001
29	4.90					7.21	7.37	2.070	0.001
30	4.90					7.27	7.38	1.635	0.001
MAX.	6.77	6.4	98	11.5	176	7.50	7.60	3.46	0.00
MIN.	3.70	3.3	51	6.6	102	7.13	7.29	0.03	0.00
AVE.	4.89	4.8	74	8.9	138	7.28	7.40	1.01	0.00
TOTAL	146.80								

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:


 Connie Sanchez, Acting Laboratory Supervisor

Date: 7/20/2020

TABLE 11

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 ₃)	Alkalinity (mg/L CaCO ₃)	pH (Actual)	pH Saturation	Langlier Index
04/07/20	652	20.0	108	290	7.2	7.4	-0.2
05/05/20	668	22.0	96	308	7.4	7.4	0.0
06/09/20	614	23.2	91	278	7.0	7.4	-0.4
MAXIMUM	668	23.2	108	308	7.4	7.4	0.0
MINIMUM	614	20.0	91	278	7.0	7.4	-0.4
AVERAGE	645	21.7	98	292	7.2	7.4	-0.2

TABLE 11

DUBLIN SAN RAMON SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY

DSRSD

Langlier 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
04/07/20	704	21.1	136	306	7.4	7.3	0.2
05/05/20	726	22.9	110	312	7.0	7.3	-0.3
06/09/20	713	25.2	92	296	7.3	7.4	-0.1
MAXIMUM	726	25.2	136	312	7.4	7.4	0.2
MINIMUM	704	21.1	92	296	7.0	7.3	-0.3
AVERAGE	714	23.1	113	305	7.3	7.3	-0.1

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 ₃)	Alkalinity (mg/L CaCO ₃)	pH (Actual)	pH Saturation	Langlier Index
04/08/20	590	21.0	83	345	7.5	7.5	0.1
05/06/20	620	23.0	75	306	7.6	7.5	0.0
06/03/20	578	25.0	77	311	7.6	7.5	0.1
MAXIMUM	620	25.0	83	345	7.6	7.5	0.1
MINIMUM	578	21.0	75	306	7.5	7.5	0.0
AVERAGE	596	23.0	78	321	7.6	7.5	0.1

TABLE 12 – LAVWMA Routine and Emergency Contact Information

Agency	Contact	Office
DSRSD	Sue Stephenson, Community Affairs Supervisor	(925) 875-2295
LAVWMA	Chuck Weir, General Manager	(925) 875-2233

The routine, non-emergency contact information is as follows:

Agency	Contact	Office
DSRSD	WWTP Main Office/Control Room Office	(925) 846-4565
DSRSD	Shawn Quinlan, Mechanical Maintenance Supervisor	(925) 875-2358
DSRSD	Levi Fuller, WWTP Operations Supervisor	(925) 875-2300
DSRSD	Jeff Carson, Operations Manager	(925) 875-2345
DSRSD	Fax Machine	(925) 462-0658

The after-hours and emergency contact information is as follows:

Agency	Contact	Cell
DSRSD	24 Hour On Duty Operator	(925) 519-0557
DSRSD	Operator II On Duty	(925) 872-5887
DSRSD	Shawn Quinlan, Mechanical Maintenance Supervisor	(925) 570-7878
DSRSD	Levi Fuller, WWTP Operations Supervisor	(925) 570-8775
DSRSD	Jeff Carson, Operations Manager	(925) 719-2997

The City of Livermore emergency contact information is as follows:

Agency	Contact	Cell
Livermore	24 Hour On Duty Operator	(925) 960-8160
Livermore	Jimmie Truesdell, Water Resources Operations Manager	(925) 525-2016

The City of Pleasanton emergency contact information is as follows:

Agency	Contact	Cell
Pleasanton	24 Hour On Call Operator	(925) 437-3992
Pleasanton	Eric Amaro, Chief Utilities System Operator	(925) 437-3605

