


**LAKE ARROWHEAD COMMUNITY SERVICES DISTRICT**

**MEMORANDUM**

**DATE:** APRIL 23, 2019

**TO:** BOARD OF DIRECTORS  
Lake Arrowhead Community Services District

**FROM:**   
MATT BROOKS, Operations Manager

**SUBJECT:** OPERATIONS MANAGER'S REPORT

**A. RECOMMENDATION**

This is an information item.

**B. REASON FOR RECOMMENDATION**

This is an information item.

**C. BACKGROUND INFORMATION**

This report is to give an update on water delivered in 2019.

**D. FISCAL INFORMATION**

This is an information item.

**E. ENVIRONMENTAL IMPACT**

This is an information item.

**F. ATTACHMENTS**

- 2019 Monthly Report
- 2018 Monthly Report
- March 2019 Water Delivered Quarterly Analysis
- Operations Department photos

**ARROWHEAD WOODS MONTHLY DATA  
ACRE FEET**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
2019 MONTH	TRANSFER TO G/LAKE	WELLS TO SYSTEM	BERNINA PLANT	CEDAR GLEN PLANT	COMBINED PLANT	COMBINED PLANT BACKWASH	BERNINA RECYCLE	CLAWA PURCHASE (a)	CLAWA PURCHASE (a)	BRENTWOOD CLAWA PURCHASE (a)	COMBINED PURCHASE (a)	LAKE DRAW (b)	DELIVERED TO DISTRIBUTION (c)	METERED WATER	STORAGE VOLUME (e)	STORAGE VOLUME CHANGE +/-	UN-METERED WATER (d)
JANUARY	0.00	13.17	0.00	60.63	60.63	4.33	0.00	0.00	0.00	0.00	0.00	60.63	69.47	56.45	23.82	0.80	12.22
FEBRUARY	0.00	15.90	1.38	55.11	56.49	4.54	0.00	0.00	0.00	0.00	0.00	56.49	67.85	53.02	24.62	2.09	12.74
MARCH	0.00	18.62	11.93	34.18	46.11	3.84	0.29	0.00	0.00	0.00	0.00	46.11	61.18	50.91	26.71	-0.28	10.55
1ST QUARTER	0.00	47.69	13.31	149.92	163.23	12.71	0.29	0.00	0.00	0.00	0.00	163.23	198.50	160.38	75.15	2.61	35.51
APRIL	0.00				0.00					0.00	0.00	0.00			26.43	0.00	0.00
MAY	0.00				0.00					0.00	0.00	0.00				0.00	0.00
JUNE	0.00				0.00					0.00	0.00	0.00				0.00	0.00
2ND QUARTER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.43	0.00	0.00
SEMI-ANNUAL	0.00	47.69	13.31	149.92	163.23	12.71	0.29	0.00	0.00	0.00	0.00	163.23	198.50	160.38	101.58	2.61	35.51
JULY	0.00				0.00					0.00	0.00	0.00				0.00	0.00
AUGUST	0.00				0.00					0.00	0.00	0.00				0.00	0.00
SEPTEMBER	0.00				0.00					0.00	0.00	0.00				0.00	0.00
3RD QUARTER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OCTOBER	0.00				0.00					0.00	0.00	0.00				0.00	0.00
NOVEMBER	0.00				0.00					0.00	0.00	0.00				0.00	0.00
DECEMBER	0.00				0.00					0.00	0.00	0.00				0.00	0.00
4TH QUARTER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ANNUAL TOTAL	0.00	47.69	13.31	149.92	163.23	12.71	0.29	0.00	0.00	0.00	0.00	163.23	198.50	160.38	101.58	2.61	35.51

(a) CLAWA consumption numbers are based upon monthly billing statements provided by CLAWA. CLAWA reads these meters on or near the 24th of each month, so the numbers may not be an actual representation of water consumed for said calendar month.

(b) Lake Draw = (1) + (5)

(c) Delivered to Distribution = (2) + (5) - (6) + (7) + (10)

(d) Un-Metered Water = ((12) - (13)) - (15)

(e) Storage Volume calculated 8:00 am the 1st of every month.

**ARROWHEAD WOODS MONTHLY DATA  
ACRE FEET**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
2018 MONTH	TRANSFER TO GV LAKE	WELLS TO SYSTEM	BERNINA PLANT	CEDAR GLEN PLANT	COMBINED PLANT	COMBINED PLANT BACKWASH	BERNINA RECYCLE	CLAWA PURCHASE (a)	CLAWA PURCHASE (a)	BRENTWOOD CLAWA PURCHASE (a)	COMBINED PURCHASE (a)	LAKE DRAW (b)	DELIVERED TO DISTRIBUTION (c)	METERED WATER	STORAGE VOLUME (e)	STORAGE VOLUME CHANGE +/-	UN-METERED WATER (d)
JANUARY	0.00	11.57	0.00	32.93	32.93	1.57	0.00	19.68	0.00	19.68	32.93	62.61	51.30	27.73	-1.69	13.00	
FEBRUARY	0.00	10.12	0.00	52.02	52.02	2.43	0.00	0.00	0.00	0.00	52.02	59.71	48.50	26.04	1.26	9.95	
MARCH	0.00	11.29	0.00	49.63	49.63	1.69	0.00	0.00	0.00	0.00	49.63	59.23	48.48	27.30	-0.22	10.97	
1ST QUARTER	0.00	32.98	0.00	134.58	134.58	5.69	0.00	19.68	0.00	19.68	134.58	181.55	148.28	81.07	-0.65	33.92	
APRIL	0.00	11.74	0.00	53.17	53.17	3.35	0.00	0.00	5.56	5.56	53.17	67.12	58.56	27.08	-0.84	9.40	
MAY	0.00	10.66	0.00	88.24	88.24	5.38	0.00	0.00	26.83	26.83	88.24	120.35	107.30	26.24	-0.90	13.95	
JUNE	0.00	11.78	0.00	92.50	92.50	6.17	0.00	16.61	40.51	57.12	92.50	155.23	142.44	25.34	2.37	10.42	
2ND QUARTER	0.00	34.18	0.00	233.91	233.91	14.90	0.00	16.61	72.90	89.51	233.91	342.70	308.30	78.66	0.63	33.77	
SEMI-ANNUAL	0.00	67.16	0.00	368.49	368.49	20.59	0.00	36.29	72.90	109.19	368.49	524.25	456.58	159.73	-0.02	67.69	
JULY	0.00	11.50	9.40	99.83	109.23	9.96	0.00	55.46	19.89	75.35	109.23	186.12	170.23	27.71	-2.07	17.96	
AUGUST	0.00	13.97	131.55	48.47	180.02	16.04	6.83	1.90	0.07	1.97	180.02	181.94	170.15	25.64	2.25	9.54	
SEPTEMBER	0.00	13.54	9.19	84.19	93.38	8.19	0.54	60.52	0.00	60.52	93.38	159.79	149.19	27.89	-4.66	15.26	
3RD QUARTER	0.00	39.01	150.14	232.49	382.63	34.19	7.37	117.88	19.96	137.84	382.63	527.85	489.57	81.24	-4.48	42.76	
OCTOBER	0.00	13.07	0.00	75.67	75.67	6.96	0.00	31.73	0.00	31.73	75.67	113.51	102.84	23.23	1.00	9.67	
NOVEMBER	0.00	12.56	0.00	72.33	72.33	5.71	0.00	0.00	0.00	0.00	72.33	79.18	65.62	24.23	-0.63	14.19	
DECEMBER	0.00	12.04	0.00	66.31	66.31	4.59	0.00	0.00	0.00	0.00	66.31	73.76	60.03	23.60	0.22	13.51	
4TH QUARTER	0.00	37.67	0.00	214.31	214.31	17.26	0.00	31.73	0.00	31.73	214.31	266.45	228.49	71.06	0.59	37.37	
ANNUAL TOTAL	0.00	143.84	150.14	815.29	965.43	72.04	7.37	185.90	92.86	278.76	965.43	1318.55	1174.64	312.03	-3.91	147.82	

(a) CLAWA consumption numbers are based upon monthly billing statements provided by CLAWA. CLAWA reads these meters on or near the 24th of each month, so the numbers may not be an actual representation of water consumed for said calendar month.

(b) Lake Draw = (1) + (5)

(c) Delivered to Distribution = Bernina System Input Meter + (4) + (8)

(d) Un-Metered Water = ((12) - (13)) - (15)

(e) Storage Volume calculated 8:00 am the 1st of every month.

April 23, 2019

### March 2019 Water Delivered Quarterly Analysis

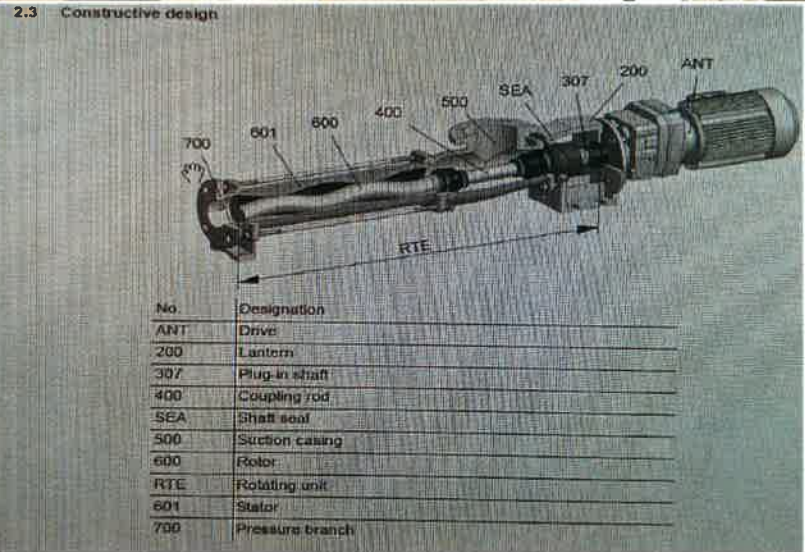
- In March 2019 (61.18 AF), consumption was very similar when compared to March 2018 (59.23 AF). Through the 1<sup>st</sup> Quarter of 2019 (198.50 AF), consumption was 9.3% higher when compared to the 1<sup>st</sup> Quarter of 2018 (181.55 AF). These numbers are based off of column (12) on the Report, and only counts water delivered to the Distribution System.
- March 2019 Lake Draw = 46.11 AF vs March 2018 = 49.63 AF. Through the 1<sup>st</sup> Quarter of 2019 Lake Draw = 163.23 AF vs through the 1<sup>st</sup> Quarter of 2018 = 134.58 AF.
- March 2019 “Wells to System” = 18.62 AF vs March 2018 = 11.29 AF. Through the 1<sup>st</sup> Quarter of 2019 “Wells to System” = 47.69 AF vs through the 1<sup>st</sup> Quarter of 2018 = 32.98 AF.
- Through the 1<sup>st</sup> Quarter of 2019 total CLAWA purchase = 0 AF vs through the 1<sup>st</sup> Quarter of 2018 = 19.68 AF.
- Through the 1<sup>st</sup> Quarter of 2019 total Recycled Water Delivered to the LACC = 0 AF vs through the 1<sup>st</sup> Quarter of 2018 = 0 AF.

Prep work for LS #5A Pump Replacement Project- Custom fabricated spools by the Mechanical Maintenance Department



LS #5A- Mechanical Maintenance Department replaced existing 4' fluorescent lights with more efficient LED lighting

Post-storm surge maintenance. Willow Creek WWTP step screen before and after photos



Grass Valley WWTP Primary sludge pumps re-build. The photo shows worn out “stators” due to the high volume of grit pumped by the primary sludge pumps during the 2019 storm events, along with the new stators (greased). The stator is shown on the diagram as Item # 601. Both the rotor and stators were replaced on both Primary sludge pumps post-2019 storm surge by the Mechanical Maintenance Department.