

## MEMO

TO: District Manager

FROM: Director of Operations

SUBJECT: OPERATIONS DEPARTMENT STATUS REPORT  
OCTOBER 2019

DATE: DECEMBER 05, 2019

### RECOMMENDATION:

It is recommended that the District Manager review and file the Operations Department Project Status Report for the month of October 2019.

### BACKGROUND:

#### PG&E PUBLIC SAFETY POWER SHUT-OFF

In October 2019 the District experienced two PG&E shut-offs along with the community. District staff worked diligently and long hours to keep water flowing to our tanks and customers. Operations obtained and deployed 8 rental generators along with the 15 District owned generators. Multiple small suit case generators were deployed as well at communication sites. These small generators have to be fueled every 6-8 hours as they have small capacity fuel tanks.

These PG&E shut-offs are going to be implemented and the District is and has been gearing up and preparing for these instances. District staff did an excellent job in communication and implementing the District's plan for an emergency of this caliber.

#### PROBATION TANK REPLACEMENT

Painting and coating of the new 500,000 gallon Probation tank was completed in the month of October 2019. As this was being done the contractor was working on plumbing and apparatuses of the tank. November 2019 paving, disinfection and filling of the tank were complete with getting approval from the state to put the tank online November 19, 2019. Though the project is not complete, the District has begun use of the newly constructed tank.

The Old 100,000 gallon redwood tank at the probation site was in very poor condition and at the end of its life expectancy. Temporary poly tanks were installed by District staff in the summer of 2018. The system is running on minimal storage through construction. The residents of this area have been cautioned to conserve water during this time.

## PASO WELL #8

The new Paso Well #8 District staff has worked on sampling and completing power runs to the chlorine room. Sampling of the well has gone good and the State is reviewing sample reports and working on completing the permitting process.

Paso Well #8 is a replacement to Paso Well #6 that began splitting in its casing in 2015, which was allowing sand to overcome the pump and motor. Many attempts to fix and seal the casing on the Well were unsuccessful leading to full replacement of the Well.

## FELTON WATER SYSTEM WATER METER REPLACEMENT

Domestic water meters are being replaced as existing meters have reached their life expectancy. Meters are being changed to the new Beacon "Eye on Water" system that will allow customers to monitor their water usage over the internet.

## LOMPICO PRV'S

Construction of the PRV stations was put on hold due to the PG&E shut-offs. District staff did not have the time to work with the contractor with the moving and fueling of generators, and manual checks of the distribution system and all its components due to lack of communications. Construction and installation of the PRV stations began in mid September 2019 and will continue through mid December 2019.

The District is in contract to have the Lompico PRV's replaced as part of the assessment. Having functioning PRV's is important to a system like this with a large span of elevations. Pressures have to be reduced as the water gets lower in elevation from the tanks as they gain pressure the lower the elevation gets. With non-functioning PRV's the pressure gets very high in the lower elevations and causes failure of main lines and service lines.

## MAINTENANCE ISSUES

### System Wide

- Moved service for county drain line on Gushee St. Felton
- 6 inch Main break Hwy 9 in Brookdale
- Replace 20 feet of 4 inch main line in Zayante due to a leak
- Abandoned meter at 380 Brackney Rd. Ben Lomond Service was upgraded
- Abandoned 30 feet of 2 inch dead end main line Boulder Creek
- Abandoned old plumbing at Olympia well 1 old location
- Approximately 23 leaks repaired

James Furtado

Director of Operations

# SAN LORENZO VALLEY WATER DISTRICT

## PRODUCTION COMPARRISON

Source	October-19	September-19	October-13	Difference This Year To 2013
<b>North System</b>				
<b>Surface Water Sources</b>				
Foreman Creek	5,003,481	6,815,583	7,303,000	
Peavine Creek + Hydro	680,913	635,594	1,740,000	
Clear Creek	5,258,164	6,464,294	0	
Sweetwater Creek	3,505,442	4,309,529	0	
<b>Sub-Total (Streams)</b>	<b>14,448,000</b>	<b>18,225,000</b>	<b>9,043,000</b>	59.77%
<b>Wells (North)</b>				
Olympia No. 2	11,387,000	8,623,000	15,339,000	
Olympia No. 3	-	-	4,942,000	
Quail Well No. 4-A	9,046,000	8,310,000	8,358,000	
Quail Well No. 5-A	2,572,100	2,672,000	5,312,000	
<b>Sub Total North Wells</b>	<b>23,005,100</b>	<b>19,605,000</b>	<b>33,951,000</b>	-32.24%
<b>South System Wells</b>				
Pasatiempo 5A	7,396,200	7,049,600	N/A	
Pasatiempo 6	-	-	8,724,000	
Pasatiempo 7	1,406,000	1,515,000	2,713,000	
<b>Sub Total Pasatiempo Wells</b>	<b>8,802,200</b>	<b>8,564,600</b>	<b>11,437,000</b>	-23.04%
<b>North South All Sources Combined</b>	<b>46,255,300</b>	<b>46,394,600</b>	<b>54,431,000</b>	-15.02%
<b>Felton System - Surface Water</b>				
Fall Creek	5,695,400	6,498,224	9,166,410	
Bennett Spring	3,299,428	3,039,872	3,272,500	
Bull 1 & 2	1,171,368	1,008,304	0	
<b>Total Felton System Sources</b>	<b>10,166,196</b>	<b>10,546,400</b>	<b>12,438,910</b>	-18.27%
<b>Manana Woods System</b>				
Well 1	-	-	847,107	
<b>Total Manana Woods Sources</b>	<b>-</b>	<b>-</b>	<b>847,107</b>	
<b>Sub - Total Production</b>				
<b>North / Felton / Manana</b>	<b>56,421,496</b>	<b>56,941,000</b>	<b>67,717,017</b>	-16.68%
<b>Surface</b>	<b>24,614,196</b>	<b>28,771,400</b>	<b>21,481,910</b>	14.58%
<b>Wells</b>	<b>31,807,300</b>	<b>28,169,600</b>	<b>46,235,107</b>	-31.21%
<b>Total Surface Water Percentage</b>	<b>43.63</b>	<b>50.53</b>	<b>31.72</b>	37.52%
<b>Total Wells Percentage</b>	<b>56.37</b>	<b>49.47</b>	<b>68.28</b>	-17.43%

**SAN LORENZO VALLEY WATER DISTRICT  
PRODUCTION BY SYSTEM  
+/- INTERTIES  
October 2019**

North System All Sources	<u>46,255,300</u>
Interties IN +	<u>106</u>
Interties OUT -	<u>2,932,904</u>
<b>TOTAL NORTH SYSTEM</b>	<b><u>43,322,502</u></b>
Felton Water system All Sources	<u>10,166,196</u>
Interties IN +	<u>0</u>
Interties OUT -	<u>0</u>
<b>TOTAL FELTON SYSTEM</b>	<b><u>10,166,196</u></b>
Manana Woods System	
Manana Woods Well 1	<u>0</u>
Interties IN +	<u>0</u>
<b>TOTAL MANANA WOODS</b>	<b><u>0</u></b>

**SAN LORENZO VALLEY WATER DISTRICT**  
**INTERTIE USAGE**  
**October 2019**

**INTERTIE 2**

SLVWD to SVWD 0

SVWD to SLVWD 0

**INTERTIE 3**

SLV SOUTH to SLV NORTH 106

SLV NORTH to SLV SOUTH 771,341

**INTERTIE 4**

SLVWD to MHWD 0

MHWD to SLVWD 0

**INTERTIE 6**

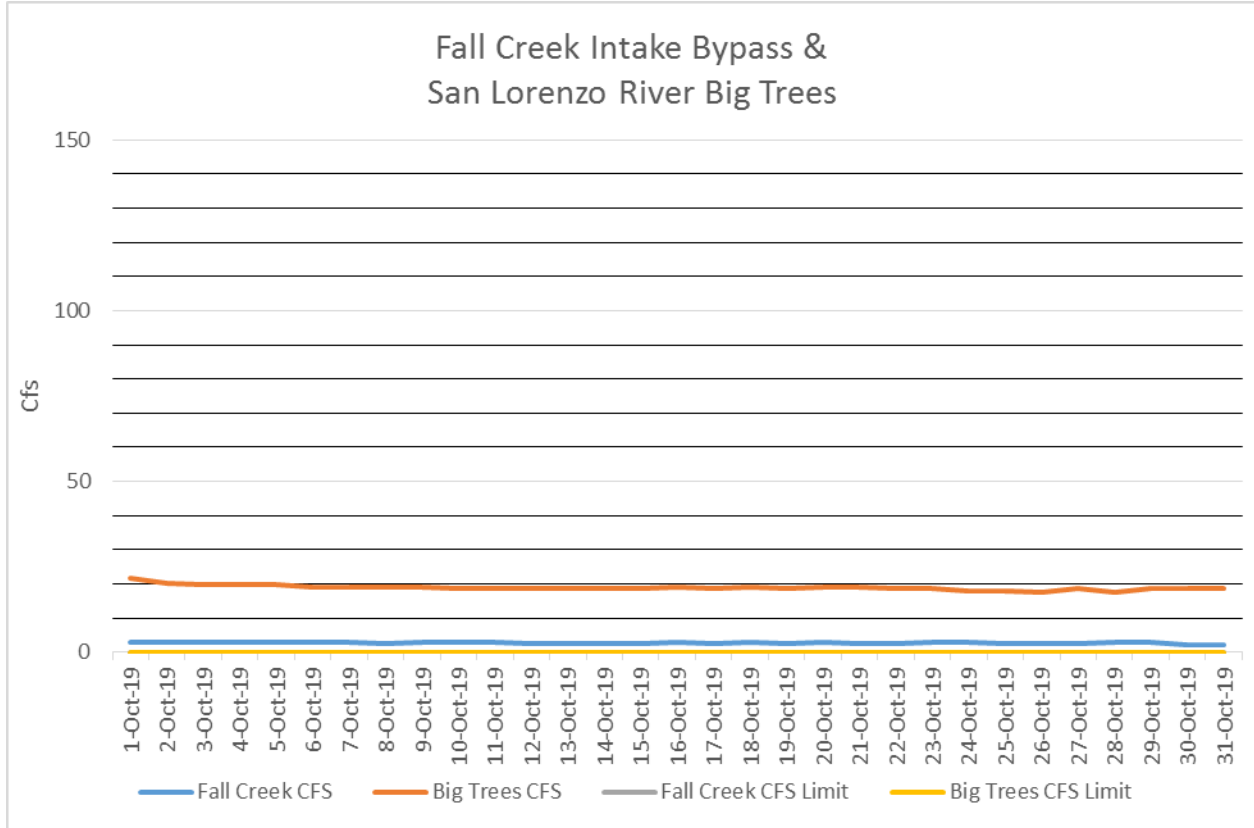
SLV NORTH to SLV FELTON -

SLV FELTON to SLV NORTH -

**LOMPICO INTERTIE**

SLV NORTH to LOMPICO 2,161,563

# Fall Creek Intake October 2019



## Normal Rainfall Fall Creek Intake Bypass Requirements

April 1 through October 31      1.0 cubic feet per second

November 1 through March 31      1.5 cubic feet per second

## Dry Conditions Fall Creek Intake Bypass Requirements

April 1 through October 31      0.5 cubic feet per second

November 1 through March 31      0.75 cubic feet per second

Number of Days in month 0.5 cfs or below, ZERO days

## San Lorenzo River USGS Big Trees Flow Requirements

September 11 cubic feet per second

October 26 cubic feet per second

November 1 through May 31      21 cubic feet per second

June - August No Requirements

## Fall Creek Intake October 2019

For the protection of fish and wildlife, during the period: (a) April 1 through October 31 bypass a minimum of 0.5 cfs; (b) November 1 through March 31 bypass a minimum of 1.5 cfs past the Fall Creek point of diversion. The natural streamflow shall be bypassed whenever it is less than 1.5 cfs; provided, however, that during a dry year, the bypass requirement shall be reduced from 1.5 to 0.75 cfs. A dry year is defined on a monthly basis of cumulative runoff beginning October 1 of each season in the San Lorenzo River at the USGS gage at Big Trees. These runoff figures are based on approximately 50 percent of normal runoff as the dividing level between normal and dry year runoff and are as follows:

- November 1 for the month of October 500 af
- December 1 for October-November, inclusive 1,500 af
- January 1 for October-December, inclusive 5,000 af
- February 1 for October-January, inclusive 12,500 af
- March 1 for October-February, inclusive 26,500 af

Fall Creek Weir Measurement											
	Month:	October		Year:	2019	Big Trees > 26,500 Acre-ft Oct-Feb Normal Year			Big Trees <26,500 Acre-ft Oct-Feb Dry Year		
								<input checked="" type="checkbox"/>			<input type="checkbox"/>
Date	Time	Initials	Pump #	Fall Cr. GPM into Kirby plant	Weir Board Height (inches)	Fall Creek Bypass (CFS)	Big Trees Bypass (CFS)	Rainfall (Felton gauge)	Met Fall Cr, Bypass Requirement: Normal Year April 1 - Oct 31 1.0 cfs; Nov 1 - March 31 1.5 cfs Dry Year April 1 - Oct 31 0.5 cfs Nov. 1 - March 31 0.75 cfs (yes/no)	Met Big Trees Requirement Nov-May 20cfs Sept 10 cfs Oct 25 cfs (yes/no)	Notes
1	0845	SS	2	153	25	2.96	21.7	0	yes	no	
2	0930	SS	1	90	25	3.04	20.3	0	yes	no	
3	0745	JG	1	85	25	3.05	19.8	0	yes	no	
4	0800	JG	1	138	25	2.932	19.8	0	yes	no	
5	0930	JT	1	99	25	2.96	19.8	0	yes	no	
6	0900	JT	1	107	25	2.80	19.2	0	yes	no	
7	0930	JG	1	172	25	2.805	18.9	0	yes	no	
8	0900	JG	1	193	25	2.717	18.9	0	yes	no	
9	0815	JG	1	187	25	2.72	18.9	0	yes	no	
10	*0630	JG	off	off	25	2.99	18.5	0	yes	no	* PSPS
11	0730	JG	2	72	25	2.88	18.5	0	yes	no	
12	0820	SS	2	136	25	2.71	18.5	0	yes	no	
13	0900	SS	2	144	25	2.67	18.5	0	yes	no	
14	0900	SS	2	135	25	2.69	18.5	0	yes	no	
15	0800	JG	2	130	25	2.707	18.5	0	yes	no	
16	0930	JG	2	86	25	2.834	18.9	0	yes	no	
17	0815	JG	2	185	25	2.580	18.5	0	yes	no	
18	0930	JG	2	117	25	2.727	18.9	0	yes	no	
19	1045	JG	2	127	25	2.688	18.5	0	yes	no	
20	0745	JG	2	109	25	2.746	18.9	0	yes	no	
21	0815	SS	2	139	25	2.67	18.9	0	yes	no	
22	0743	SS	2	142	25	2.53	18.5	0	yes	no	
23	0930	JG	2	181	25	2.920	18.5	0	yes	no	
24	0750	SS	2	150	25	2.88	18.1	0	yes	no	
25	0930	JG	2	144	25	2.482	18.1	0	yes	no	
26	0800	HO	2	151	25	2.44	17.6	0	yes	no	
27	0845	TH	2	108	25	2.66	18.5	0	yes	no	*PSPS
28	0900	JG	off	off	25	2.756	17.6	0	yes	no	

29	1000	JG	2	120	25	2.766	18.5	0	yes	no	
30	0930	JG	2	167	25	2.306	18.5	0	yes	no	
31	0815	JG	2	200	25	2.267	18.5	0	yes	no	

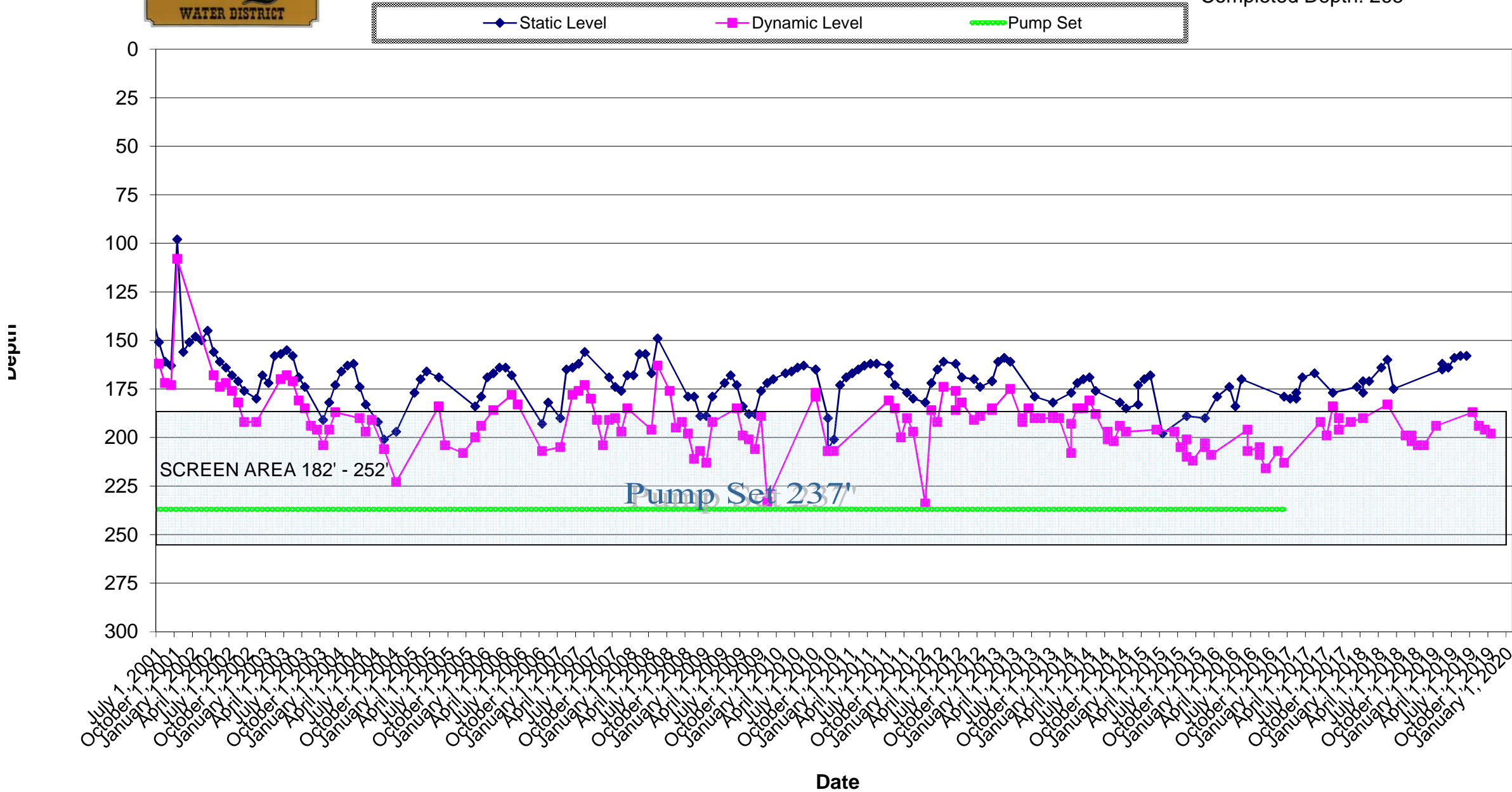


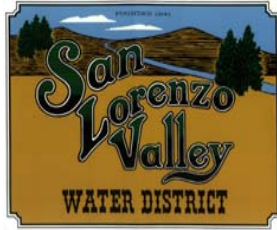
# SAN LORENZO VALLEY WATER DISTRICT

## Well Drawdown Report

### Quail Well 4-A

Location: Cumora Ln. Ben Lomond  
Elevation: 596.54 ft @ Pad  
Installed: 6-07-2001  
State Well #: 4410014-026  
Completed Depth: 265



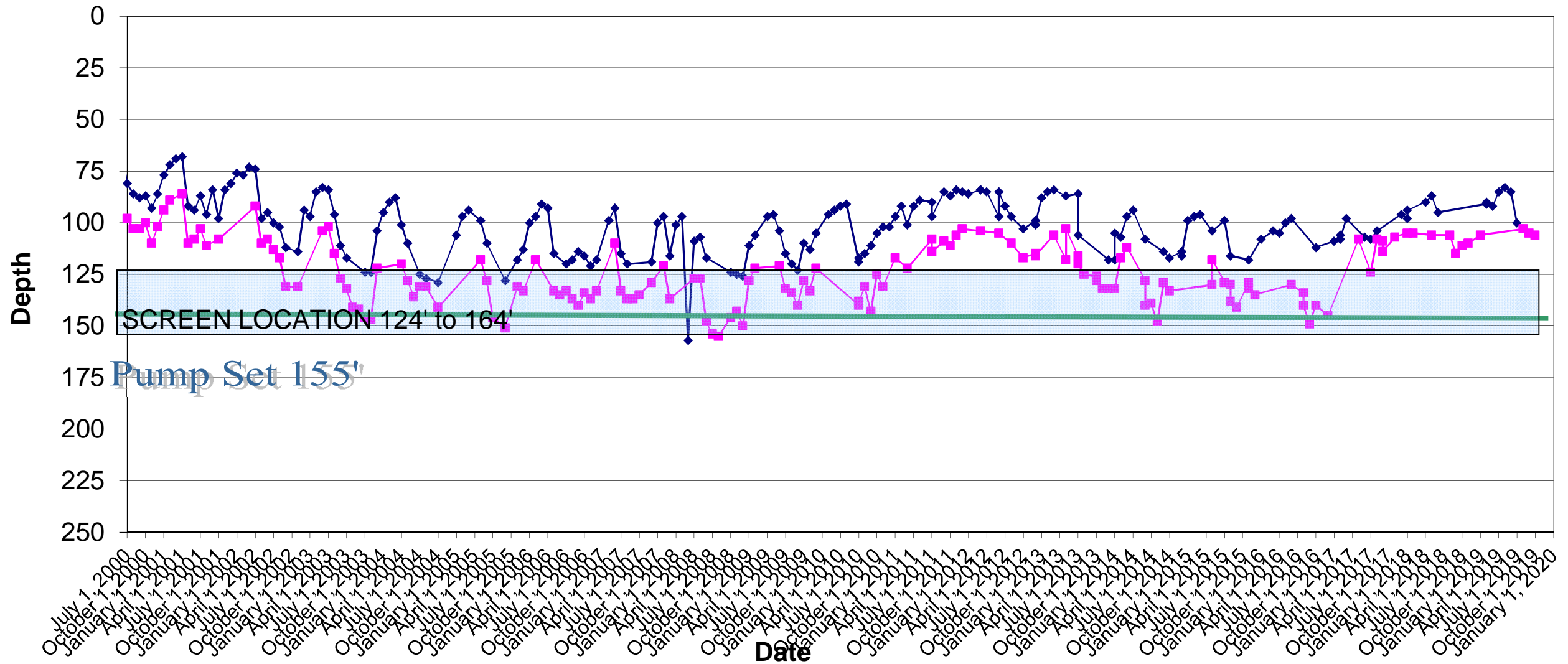
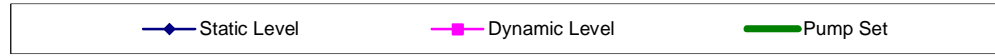


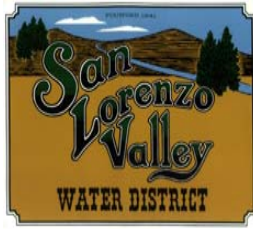
# SAN LORENZO VALLEY WATER DISTRICT

## Well Drawdown Report

### Quail Well 5-A

Location: 1161 Quail Hollow Rd.  
Ben Lomond  
Elevation: 517.65 ft. @ Pad  
Installed: March 2000  
State Well #: 4410014-025  
Completed Depth: 174'



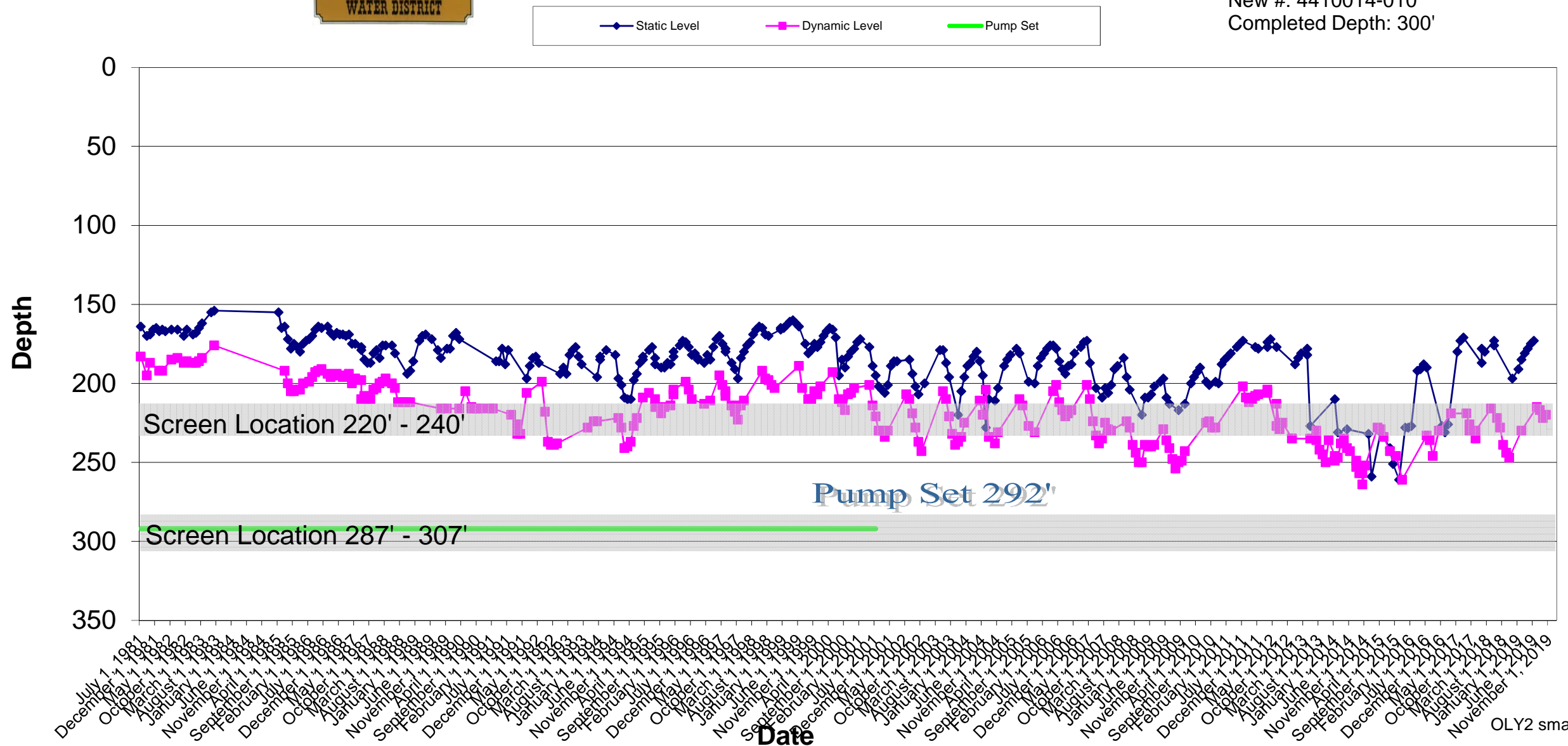


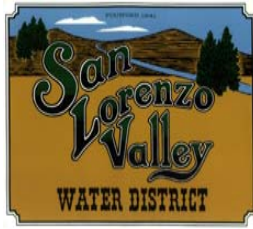
# SAN LORENZO VALLEY WATER DISTRICT

## Well Drawdown Report

### Olympia 2

Location: 7701 E. Zayante Rd.  
Elevation: 525'  
Installed: April 28, 1980  
State Well #:10S/O2W-11P01  
New #: 4410014-010  
Completed Depth: 300'



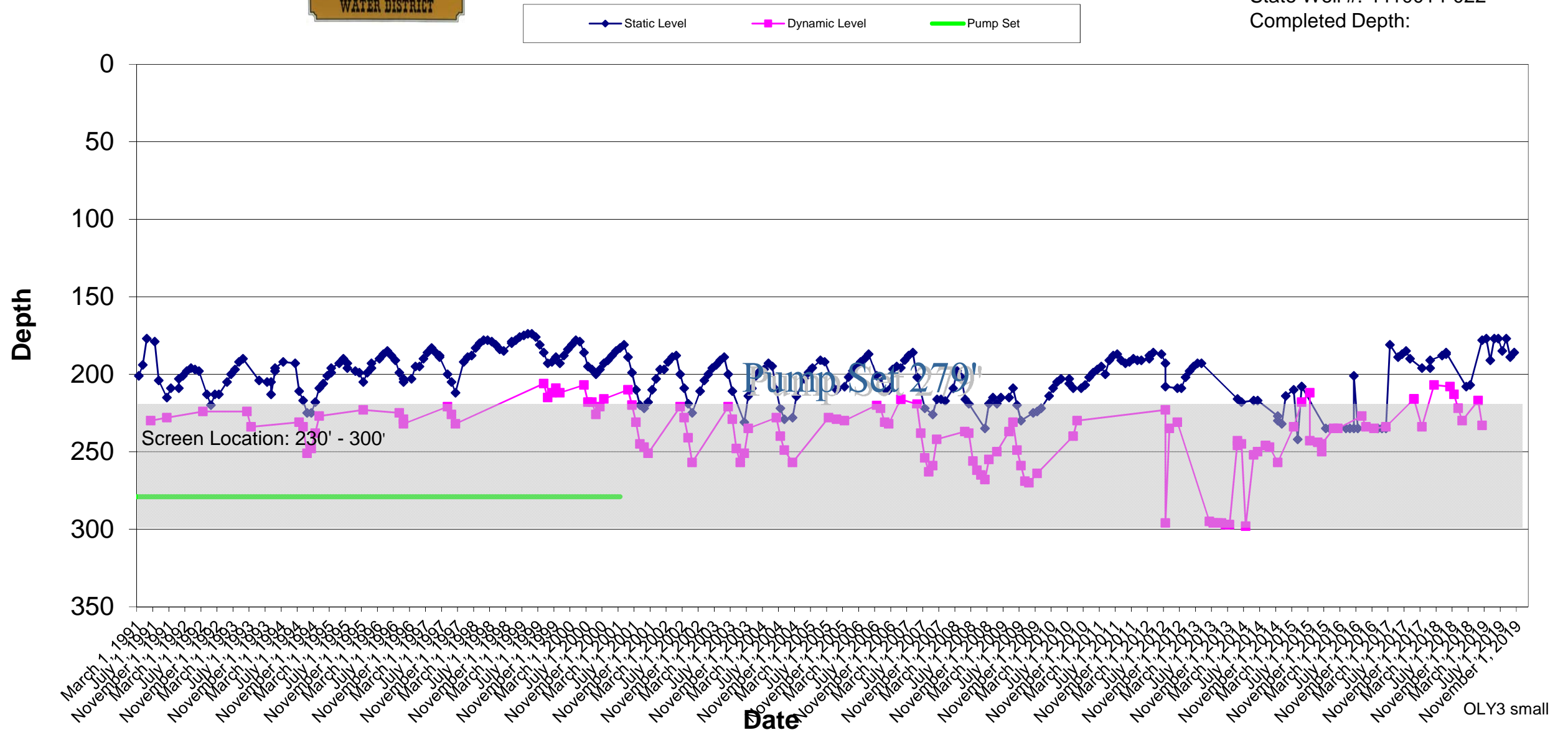


# SAN LORENZO VALLEY WATER DISTRICT

## Well Drawdown Report

### Olympia 3

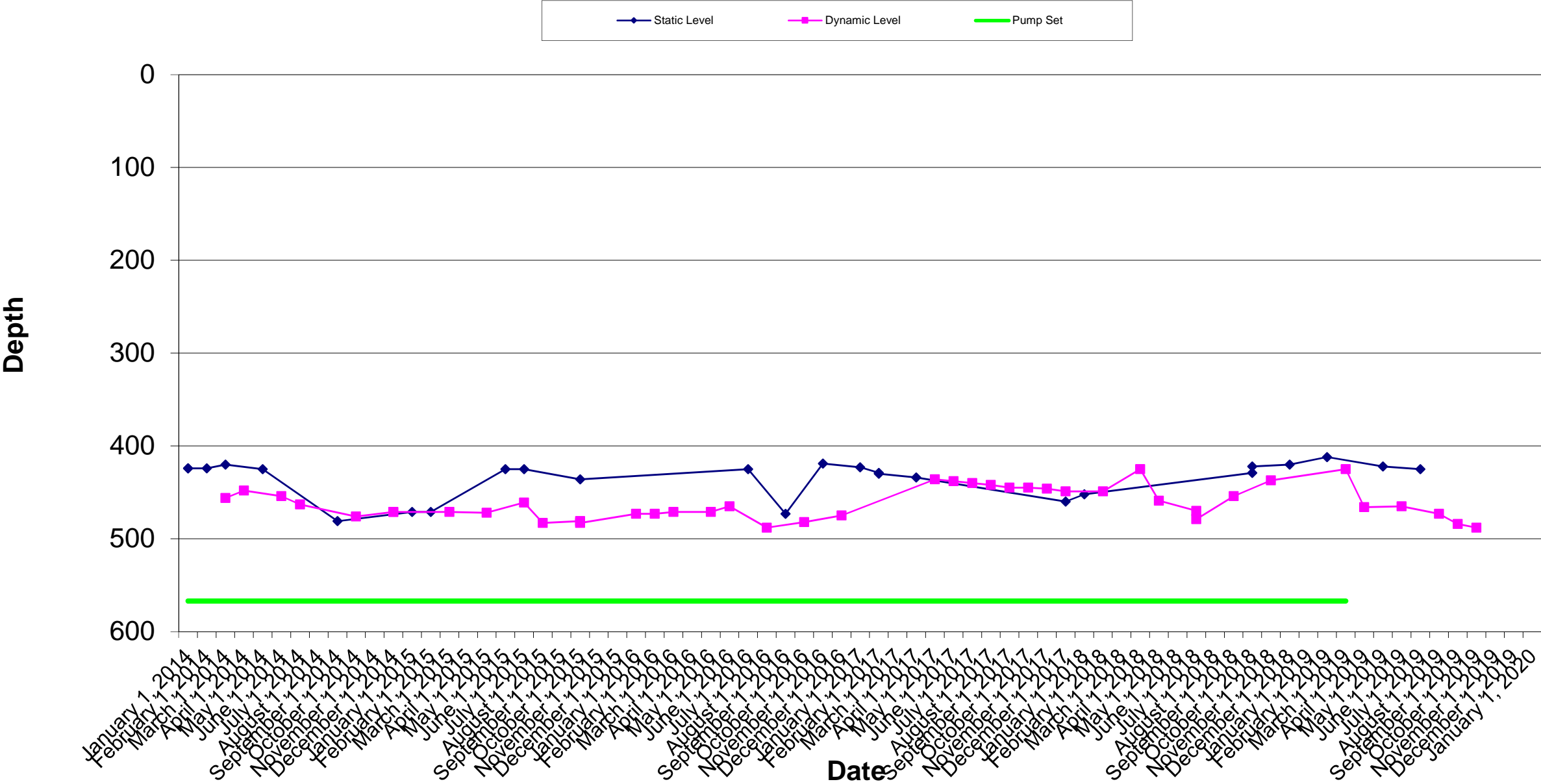
Location: 7701 E. Zayante Rd  
Elevation: 538' Mean Sea Level  
Installed: 8-15-90  
State Well #: 4410014-022  
Completed Depth:





**SAN LORENZO VALLEY WATER DISTRICT**  
**Well Drawdown Report**  
**Pasatiempo 5-A**

Location: So. Of 3650 Graham Hill Rd  
Elevation: 752'  
Installed 1-1-14  
State Well #:4410014-014  
Completed Depth: 710'



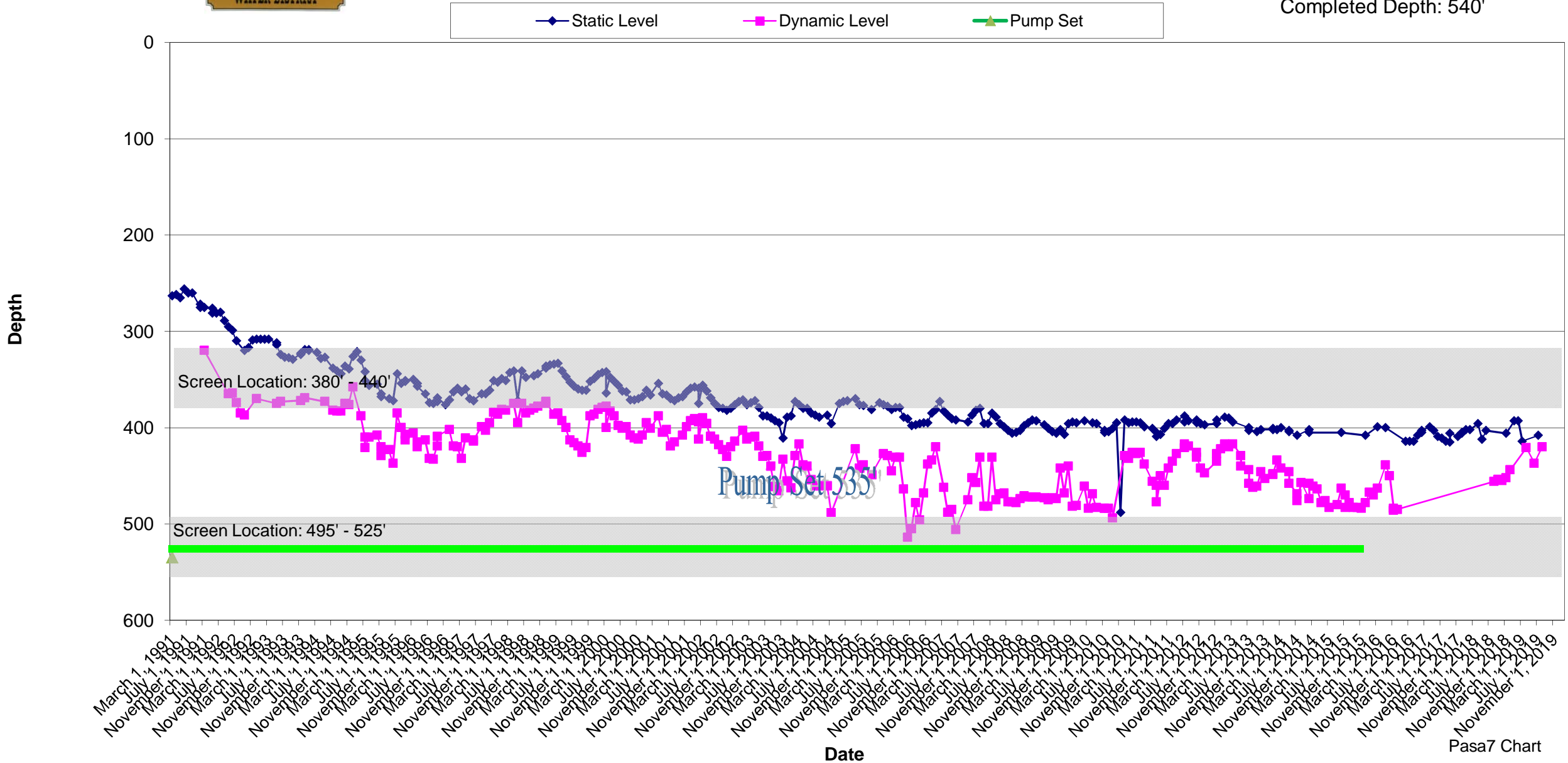


# SAN LORENZO VALLEY WATER DISTRICT

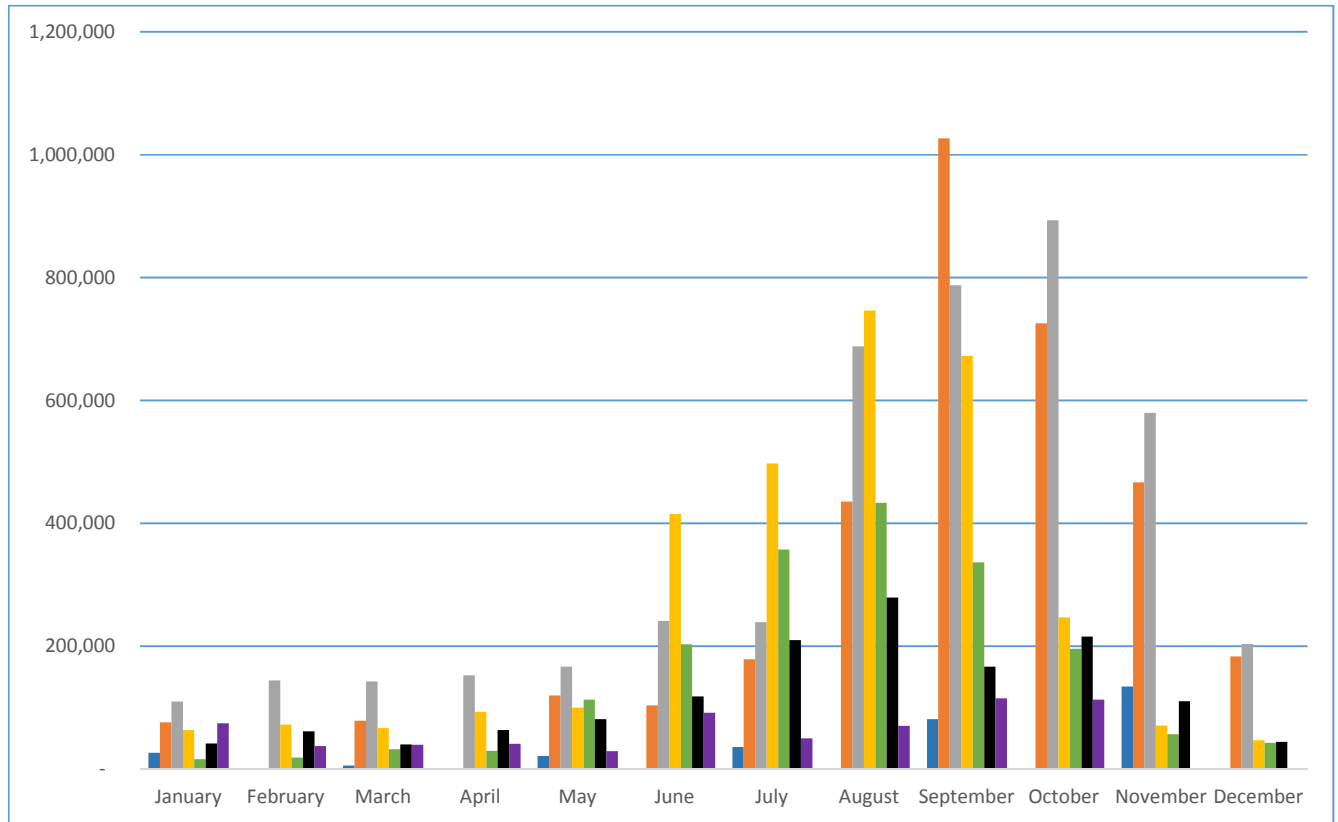
## Well Drawdown Report

### Pasatiempo 7

Location: South of Probaton Center  
Elevation: 734' MSL  
Installed: July 21, 1990  
State Well #: 4410014-024  
Completed Depth: 540'



**SAN LORENZO VALLEY WATER DISTRICT**  
**BULK WATER SALES**  
**GALLONS**  
**October 2019**



<u>Month</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
January	26,928	76,296	109,965	63,850	16,456	41,888	74,800
February			144,364	72,556	18,700	61,366	37,400
March	5,984	78,540	142,868	66,572	32,164	40,392	39,644
April			152,592	93,500	29,920	63,580	41,140
May	21,692	119,680	166,804	100,232	112,948	81,532	29,172
June		103,972	240,983	415,140	203,179	118,184	92,004
July	35,904	178,772	239,360	497,420	357,544	210,188	50,116
August		435,336	688,160	746,504	433,092	279,004	70,312
September	81,352	1,026,256	787,644	672,183	336,570	166,804	115,192
October		725,560	893,112	246,840	195,976	215,424	112,948
November	134,640	466,752	579,700	71,060	56,848	110,704	
December		183,260	203,456	47,124	42,636	44,132	
<b>Totals</b>	<b>306,500</b>	<b>3,394,424</b>	<b>4,349,008</b>	<b>3,092,981</b>	<b>1,836,033</b>	<b>1,433,198</b>	<b>662,728</b>

SAN LORENZO VALLEY WATER DISTRICT  
MONTHLY LEAK REPORT  
October 2019

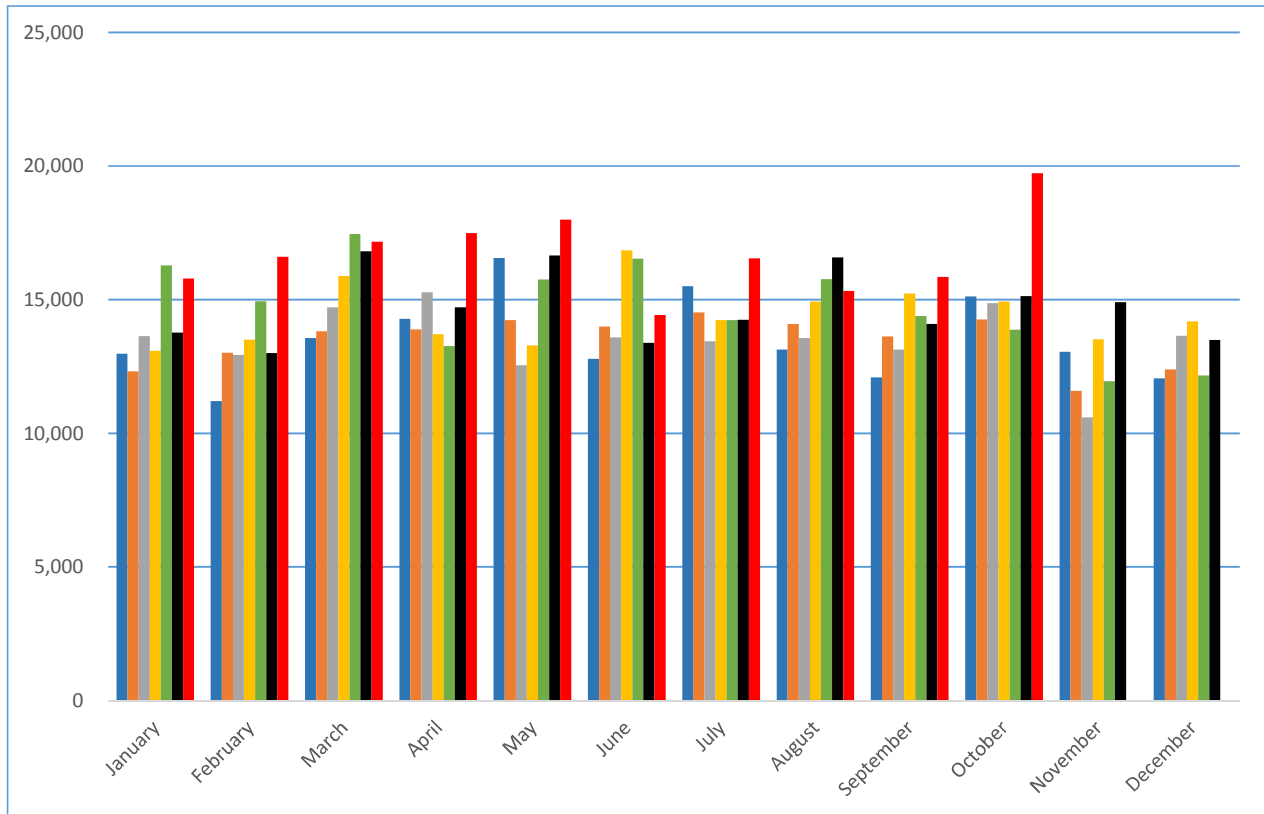
Leak Type	Location - NORTH SYSTEM	Town	Gallons Lost
400 MAIN LEAKING	175 SHADOWBROOK LANE	BEN LOMOND	36,000
400 MAIN LEAKING	COUNTRY CLUB DRIVE	BEN LOMOND	800
400 MAIN LEAKING	ROWARDENNAN DR./HWY 9	BEN LOMOND	2,160
400 MAIN LEAKING	DUNDEE AVE	BEN LOMOND	550
400 MAIN LEAKING	HIGH ST	BEN LOMOND	7,200
400 MAIN LEAKING	7766 HWY 9	BEN LOMOND	500
400 MAIN LEAKING	386 MEADOW DR.	BOULDER CREEK	1,000
400 MAIN LEAKING	MORE DR.	BOULDER CREEK	2,880
400 MAIN LEAKING	215 RIDGE DR	BOULDER CREEK	86,400
400 MAIN LEAKING	LAUREL & BIG BASIN	BOULDER CREEK	17,280
400 MAIN LEAKING	165 VALE WAY	BOULDER CREEK	360
400 MAIN LEAKING	335 VISTA TERRACE	BOULDER CREEK	1,600
400 MAIN LEAKING	LORENZO AVE	BOULDER CREEK	2,160
400 MAIN LEAKING	14660 WESTPARK	BOULDER CREEK	100,800
400 MAIN LEAKING	IRWIN WAY	BOULDER CREEK	1,440
400 MAIN LEAKING	UPPER REDWOOD	BOULDER CREEK	10,080
400 MAIN LEAKING	FAIRVIEW AVE	BOULDER CREEK	1,800
400 MAIN LEAKING	11600 CLEARCREEK RD	BROOKDALE	3,600
400 MAIN LEAKING	IRWIN WAY	BROOKDALE	6,750
Total North			283,360
FELTON SYSTEM			
400 MAIN LEAKING	7700 E ZAYANTE RD	FELTON	7200
Total Felton			7,200
LOMPICO			
400 MAIN LEAKING	9629 ZAYANTE DR.	LOMPICO	36,000
400 MAIN LEAKING	10649 VISITAR ST.	LOMPICO	1,800
400 MAIN LEAKING	10720 LAKE BLVD	LOMPICO	3,000
Total Lompico			40,800
SCOTTS VALLEY			
Total Scotts Valley			-
Total All Systems			331,360

[illegible]

# SAN LORENZO VALLEY WATER DISTRICT

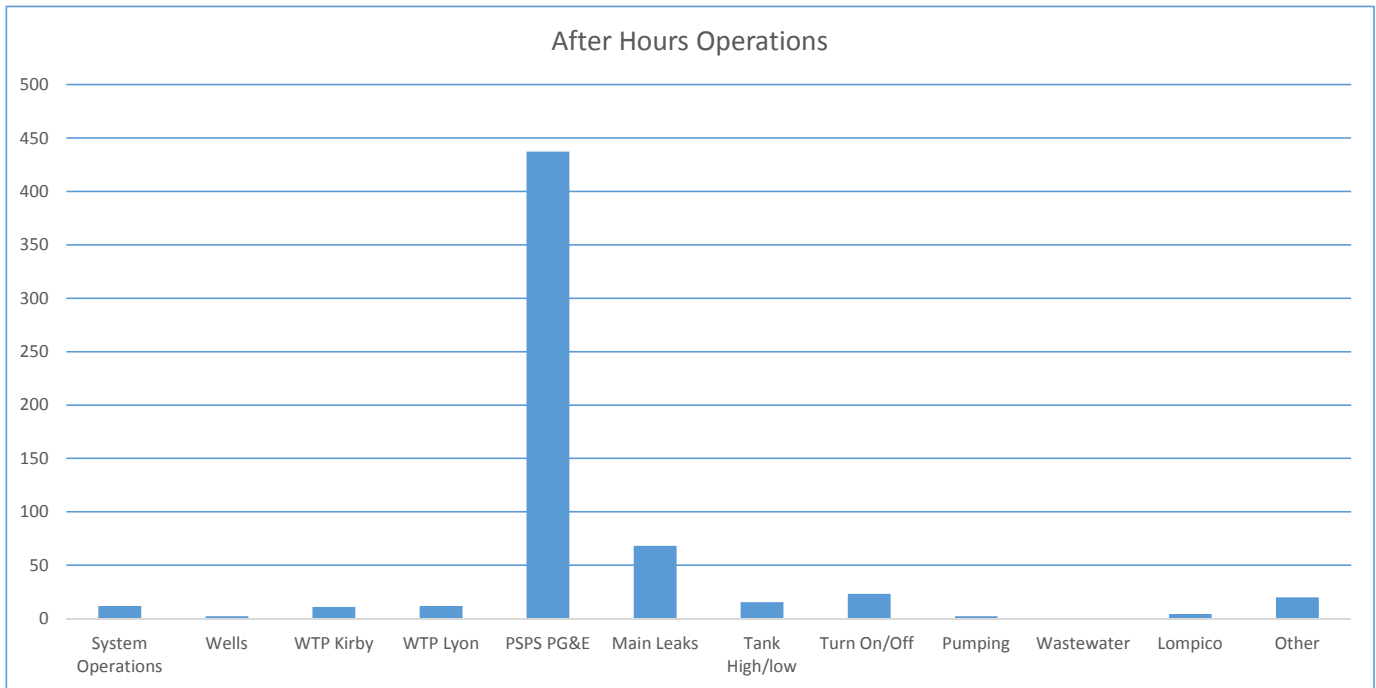
## VEHICLE MILEAGE

### October 2019



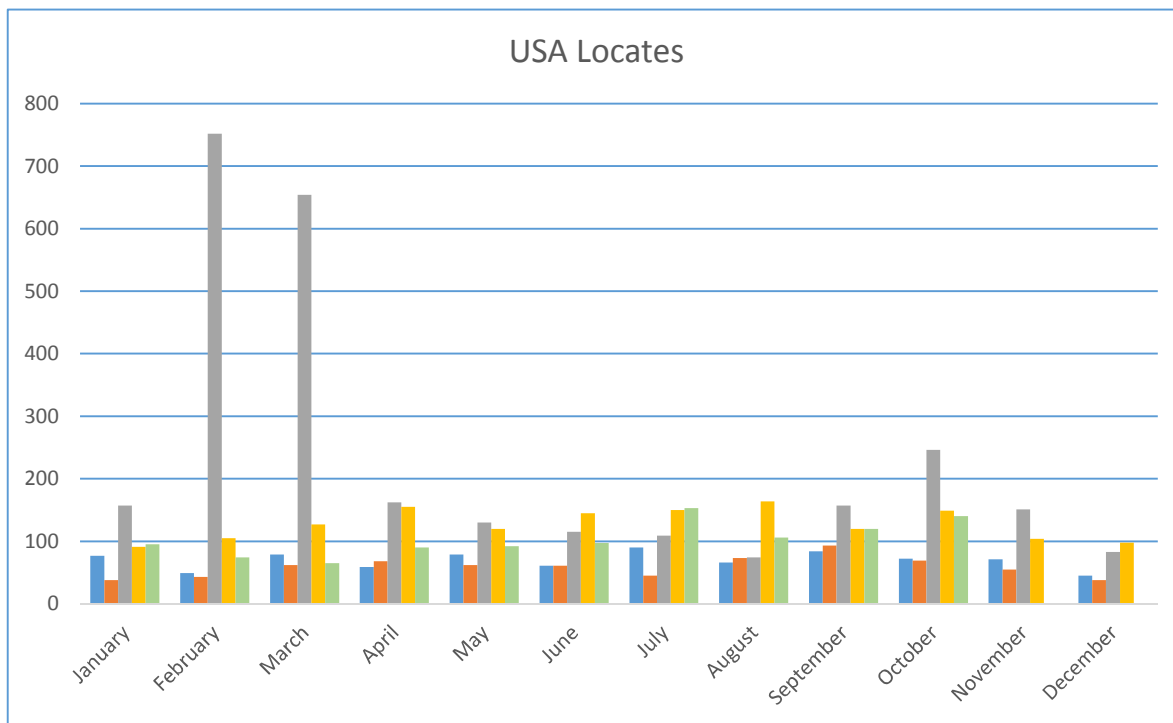
<u>Month</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
January	12,976	12,317	13,633	13,082	16,286	13,763	15,790
February	11,201	13,015	12,934	13,505	14,945	13,003	16,599
March	13,558	13,817	14,714	15,882	17,451	16,809	17,167
April	14,283	13,883	15,279	13,704	13,270	14,711	17,488
May	16,560	14,228	12,550	13,290	15,757	16,646	17,998
June	12,780	14,000	13,582	16,841	16,534	13,390	14,420
July	15,497	14,519	13,441	14,228	14,229	14,242	16,541
August	13,136	14,096	13,569	14,923	15,761	16,576	15,319
September	12,087	13,622	13,137	15,229	14,388	14,094	15,853
October	15,120	14,261	14,868	14,924	13,880	15,126	19,726
November	13,046	11,594	10,591	13,510	11,952	14,908	
December	12,060	12,394	13,648	14,187	12,158	13,492	
Totals	162,304	161,746	161,946	173,305	176,611	176,760	166,901

**SAN LORENZO VALLEY WATER DISTRICT**  
**OPERATIONS DEPARTMENT**  
 October 2019



Description	Hours		2015	2016	2017	2018	2019
System Operations	11.75	January	N/A	145.00	280.75	90.50	96.50
Wells	2	February	N/A	86.50	192.25	72.00	180.00
WTP Kirby	10.75	March	N/A	153.75	105.75	80.25	106.25
WTP Lyon	11.75	April	82.50	72.00	128.75	156.75	76.25
PSPS PG&E	437.25	May					82.50
Main Leaks	68	June	172.50	83.25	112.75	89.00	136.75
Tank High/low	15.25	July	124.25	80.25	162.00	145.25	158.30
Turn On/Off	23	August	111.75	81.25	141.25	134.5	119.75
Pumping	2	September	230.25	175.00	201.25	155.25	133.00
Wastewater	0	October	128.25	78.50	104.00	111.5	605.75
Lompico	4.25	November	114.25	96.25	122.50	197.5	
Other	19.75	December	186.25	130.75	134.00	220.25	
Total	605.75		1150.00	1182.50	1685.25	1452.75	1695.05

**SAN LORENZO VALLEY WATER DISTRICT**  
**OPERATIONS DEPARTMENT**  
 October 2019



<u>Month</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
January	77	38	157	91	95
February	49	43	752	105	74
March	79	62	654	127	65
April	59	68	162	155	90
May	79	62	130	120	92
June	61	61	115	145	97
July	90	45	109	150	153
August	66	73	74	164	106
September	84	93	157	120	120
October	72	69	246	149	140
November	71	55	151	104	
December	45	38	83	98	
<b>Total to Date</b>	<b>832</b>	<b>707</b>	<b>2,790</b>	<b>1528</b>	<b>1032</b>

