

MEMO

TO: District Manager

FROM: Director of Operations

SUBJECT: OPERATIONS DEPARTMENT STATUS REPORT
February 2019

DATE: March 21, 2019

RECOMMENDATION:

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

BACKGROUND:

DISTRICT FLUSHING PROGRAM

During the reporting period staff kicked off the 2019 Mainline Flushing Program. Each year several areas of the distribution system are flushed to remove iron and manganese deposits and sediment from mainlines. The first flushing began on February 11, 2019 and will continue to April 19, 2019. Direct mailing and display ads will be used to notify customers in flushing areas directly affected by the flushing activities, weekly as the flushing moves areas.

BLUE TANK REPLACEMENT

Don Chapin Company completed the concrete slab enhancements. The tank is in fabrication and is to be delivered at the end of April to the Blue Tank Location on Miraflores Rd. Scotts Valley. Superior Tank Company will move in to erect the new tank on the existing improved concrete slab.

During routine inspection it was discovered that the Districts Blue Tank in Manana Woods has experienced extensive corrosion to the upper ring of staves, roof and internal roof structure system. In addition to corrosion the tank experienced buckling damage from the 1989 Loma Prieta Earthquake.

FELTON WATER SYSTEM WATER METER REPLACEMENT

With the abundance of rain and other projects Felton Water System Meter Replacement Project slowed significantly in February. The change out will be getting back on track here in the next couple of months as dry weather comes back to the Valley.

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.

PASO WELL #8

The new Paso Well #8 construction continues. Well head design is put together and was reviewed and edited by District staff and submitted to the State Water Resources Control Board for approval.

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.

PASO WELL #5A

Water jetting and swabbing to clean the screens and gravel pack is complete. The Well column along with pump and motor has been installed. District staff is in the process of disinfecting, flushing and sampling the Well.

The District received multiple calls in the Scott's Valley area of brown and dirty water in December 2018. The water quality group found that Paso Well #5A was pumping sand and gravel. The Well was pulled and video of the Well was taken. There was an area found in the screens where there was sand and gravel coming through the gravel pack and screen. It is undetermined what caused the sand and smaller gravel to begin to come through the gravel pack and screens, could have been ground movement or the pump and motor hitting the side of the Well column during a start or stop.

SCADA (Supervisory control and data acquisition) UPGRADE

In February 2019 there was little progress on the SCADA upgrade as the outside contractor contact was on vacation then got sick. The SCADA project is in the testing and fine tuning stage. The project is proceeding forward and the District staff is anxious and looking forward to the system upgrade being complete.

The District is about 90% done with conversion of the new SCADA and HMI system. The conversion that is done is operational and live. Our equipment and software are out of date and have been crashing needing restarting and rebooting several times a month, leading to this upgrade. District staff has been working with an outside contractor that was contracted to do the upgrade and replacement.

MAIN BREAK RESULTING IN BOIL ORDER NOTICE

On February 16, 2019 District staff was called to a water main break off Ridge Dr. Boulder Creek. This main break resulted in a 4200 gallon tank to go empty. It is the District's responsibility to notify the State Water Resources Control and the result of this in a Boil Order Notice to the affected customer. The Boil Order Notice was issued to the 9 customers connections that this tank serves. Water sampling

was done in this zone for two days and all samples came back negative for contaminations. On February 18, 2019 a notice lifting the Boil Order Notice approved by the State was distributed to the same customer connections.

COMMUNICATIONS RESULTING IN BOIL ORDER NOTICE

On February 7, 2019 District staff was called to out of water at a few addresses on Caledonia Ave., and Hartmen Ave. in Ben Lomond. It was determined in the field that the Spring tank 63,000 gallons, serving 93 service connections was empty due to lack of pumping with the loss of tank communications. No low alarm came in due to no communications between the tank and the SCADA system. This was caused by a tree that had fallen and took the communication lines down with it.

This was reported to State Water Resources Control and a Boil Order Notice was issued and distributed to the 93 service connections. Water sampling was done in this zone for two days and all samples came back negative for contaminations. On February 9, 2019 a notice lifting the Boil Order Notice approved by the State was distributed to the same service connections.

MAINTENANCE ISSUES

Service Line Replacement Lompico

Service Line Replacement:
None

Main Line Repairs

6 inch main line repairs 288 Douglas Ave Boulder Creek.

System Wide

Full service line replacement 925 Forest St. Brookdale.

Full service line replacement 145 Pacific Ave. Brookdale.

Removed 2 old 2" meters and piping back to the main line and installed a 2" standpipe wharf hydrant for the flushing program.

Changed out faulted check valves in the Felton Heights Booster Station.

Replaced 20' of sewer main at #9 Oakwood Lane Bear Creek Estates.

Removed and rerouted power, water, and communication lines at the Blue Tank site conflicting the Concrete Slab Enhancements.

Facility Checks for storm damage and drainage due to heavy rains.

Shuttling of emergency generators and fueling equipment during storms.

7+/- Mainline/Service Line Leaks Were Repaired.

James Furtado

Director of Operations

SAN LORENZO VALLEY WATER DISTRICT PRODUCTION COMPARRISON

Source	February-19	January-19	February-13	Difference This Year To 2013
North System				
Surface Water Sources				
Foreman Creek	25,763,519	21,052,220	12,069,000	
Peavine Creek + Hydro	745,487	775,923	6,750,000	
Clear Creek	2,091,596	5,878,714	6,519,000	
Sweetwater Creek	1,394,398	3,919,143	4,346,000	
Sub-Total (Streams)	29,995,000	31,626,000	29,684,000	1.05%
Wells (North)				
Olympia No. 2	1,363,000	1,289,000	254,000	
Olympia No. 3	532,000	329,000	219,000	
Quail Well No. 4-A	71,000	690,000	1,000	
Quail Well No. 5-A	9,700	240,200	6,200	
Sub Total North Wells	1,975,700	2,548,200	480,200	311.43%
South System Wells				
Pasatiempo 5A	-	-	N/A	
Pasatiempo 6	-	-	4,942,000	
Pasatiempo 7	652,000	1,508,000	1,836,000	
Sub Total Pasatiempo Wells	652,000	1,508,000	6,778,000	-90.38%
North South All Sources Combined	32,622,700	35,682,200	36,942,200	-11.69%
Felton System - Surface Water				
Fall Creek	2,986,356	4,606,162	3,751,890	
Bennett Spring	2,599,300	2,083,180	3,605,400	
Bull 1 & 2	1,097,316	1,274,592	3,994,500	
Total Felton System Sources	6,682,972	7,963,934	11,351,790	-41.13%
Manana Woods System				
Well 1	-	-	106,775	
Total Manana Woods Sources	-	-	106,775	
Sub - Total Production				
North / Felton / Manana	39,305,672	43,646,134	48,400,765	-18.79%
Surface	36,677,972	39,589,934	41,035,790	-10.62%
Wells	2,627,700	4,056,200	7,364,975	-64.32%
Total Surface Water Percentage	93.31	90.71	84.78	10.06%
Total Wells Percentage	6.69	9.29	15.22	-56.07%

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

North System All Sources	<u>32,622,700</u>
Interties IN +	<u>493</u>
Interties OUT -	<u>4,594,930</u>
TOTAL NORHT SYSTEM	<u>28,028,263</u>
Felton Water system All Sources	<u>6,682,972</u>
Interties IN +	<u>422,091</u>
Interties OUT -	<u>3</u>
TOTAL FELTON SYSTEM	<u>7,105,060</u>
Manana Woods System	
Manana Woods Well 1	<u>0</u>
Interties IN +	<u></u>
TOTAL MANANA WOODS	<u>0</u>

SAN LORENZO VALLEY WATER DISTRICT
INTERTIE USAGE
February 2019

INTERTIE 2

SLVWD to SVWD 0

SVWD to SLVWD 0

INTERTIE 3

SLV SOUTH to SLV NORTH 490

SLV NORTH to SLV SOUTH 4,172,839

INTERTIE 4

SLVWD to MHWD 0

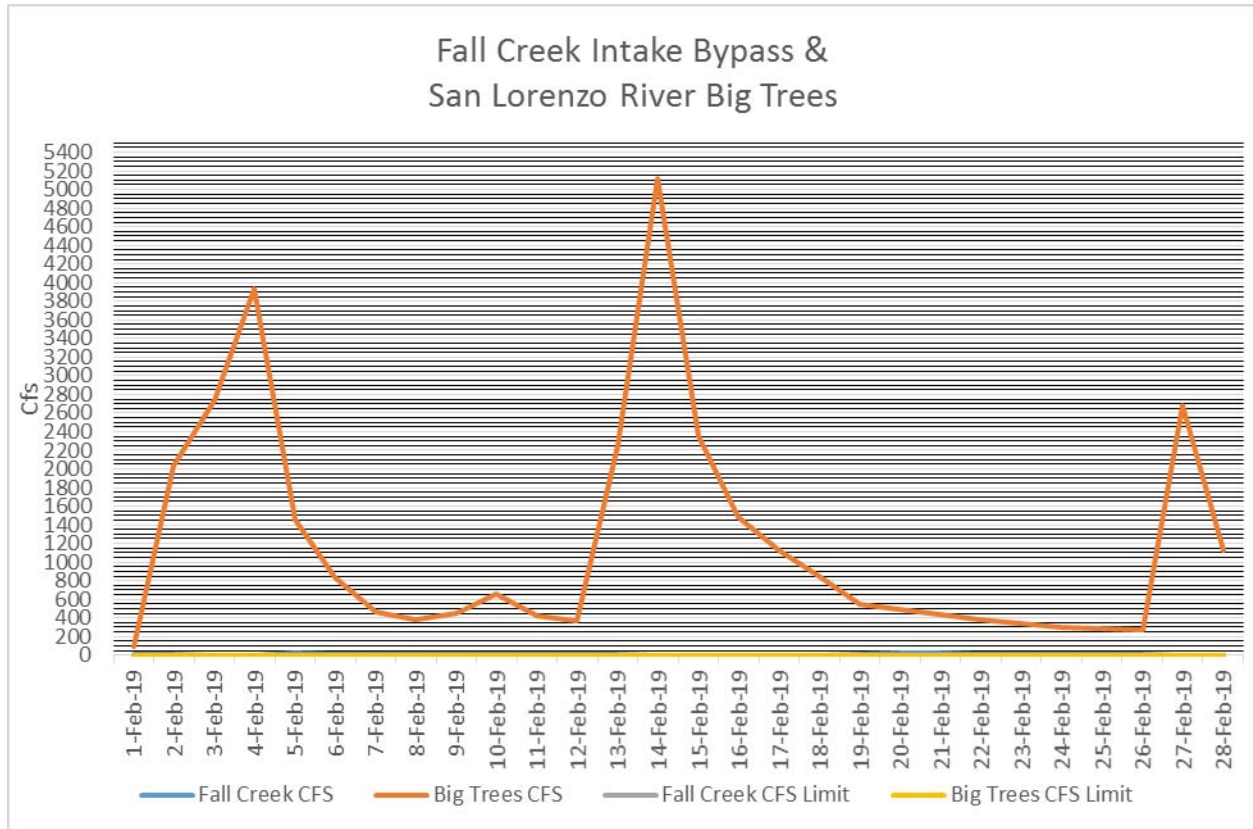
MHWD to SLVWD 0

INTERTIE 6

SLV NORTH to SLV FELTON 422,091

SLV FELTON to SLV NORTH 3

Fall Creek Intake February 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

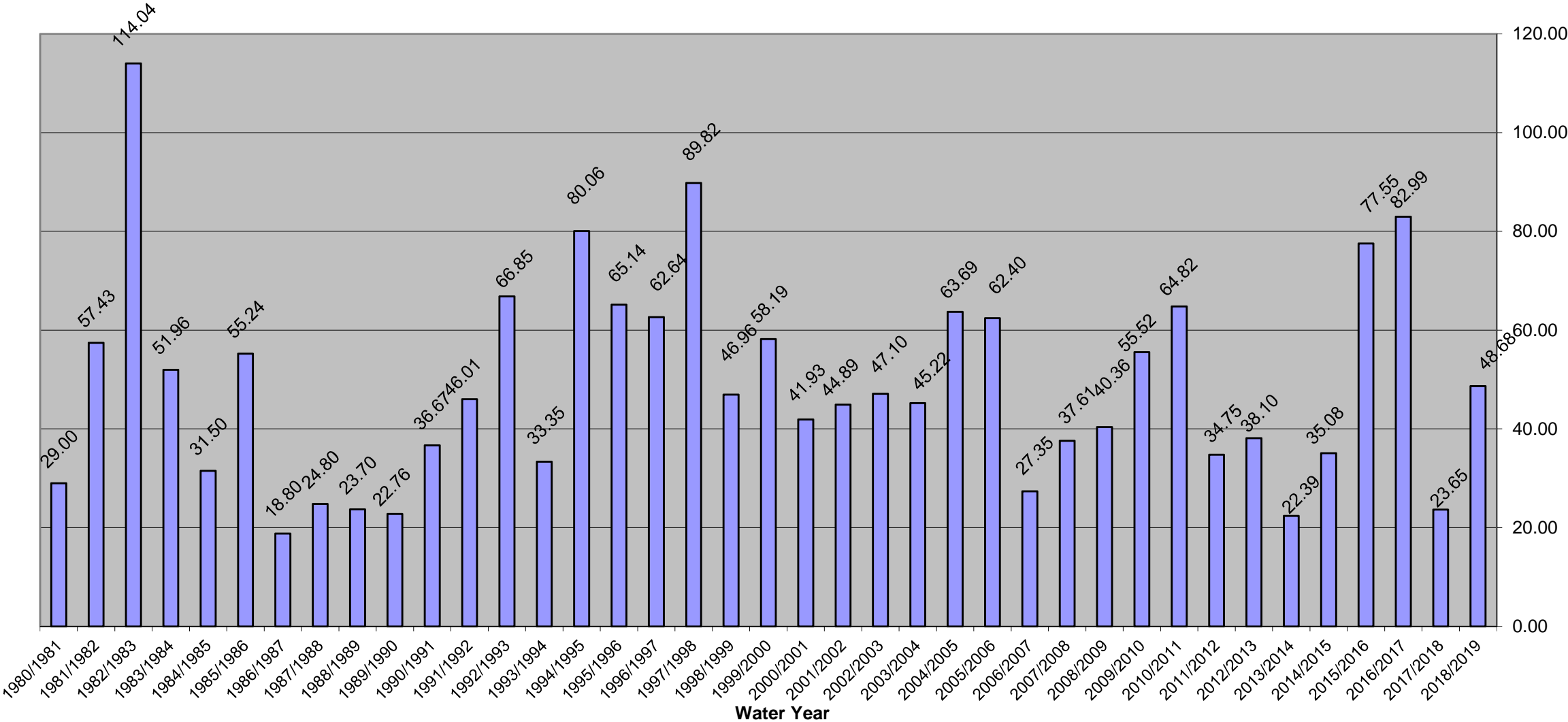
Fall Creek Intake February 2019

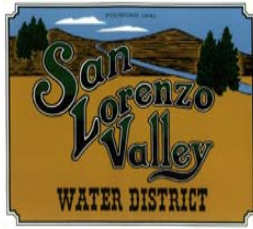
For the protection of fish and wildlife, during the period: (a) April 1 through October 31 bypass a minimum of 0.5 cfs; (b) November 1 through March 31 bypass a minimum of 1.5 cfs past the Fall Creek point of diversion. The natural streamflow shall be bypassed whenever it is less than 1.5 cfs; provided, 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

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San Lorenzo Valley Water District
Annual Rainfall History Graph



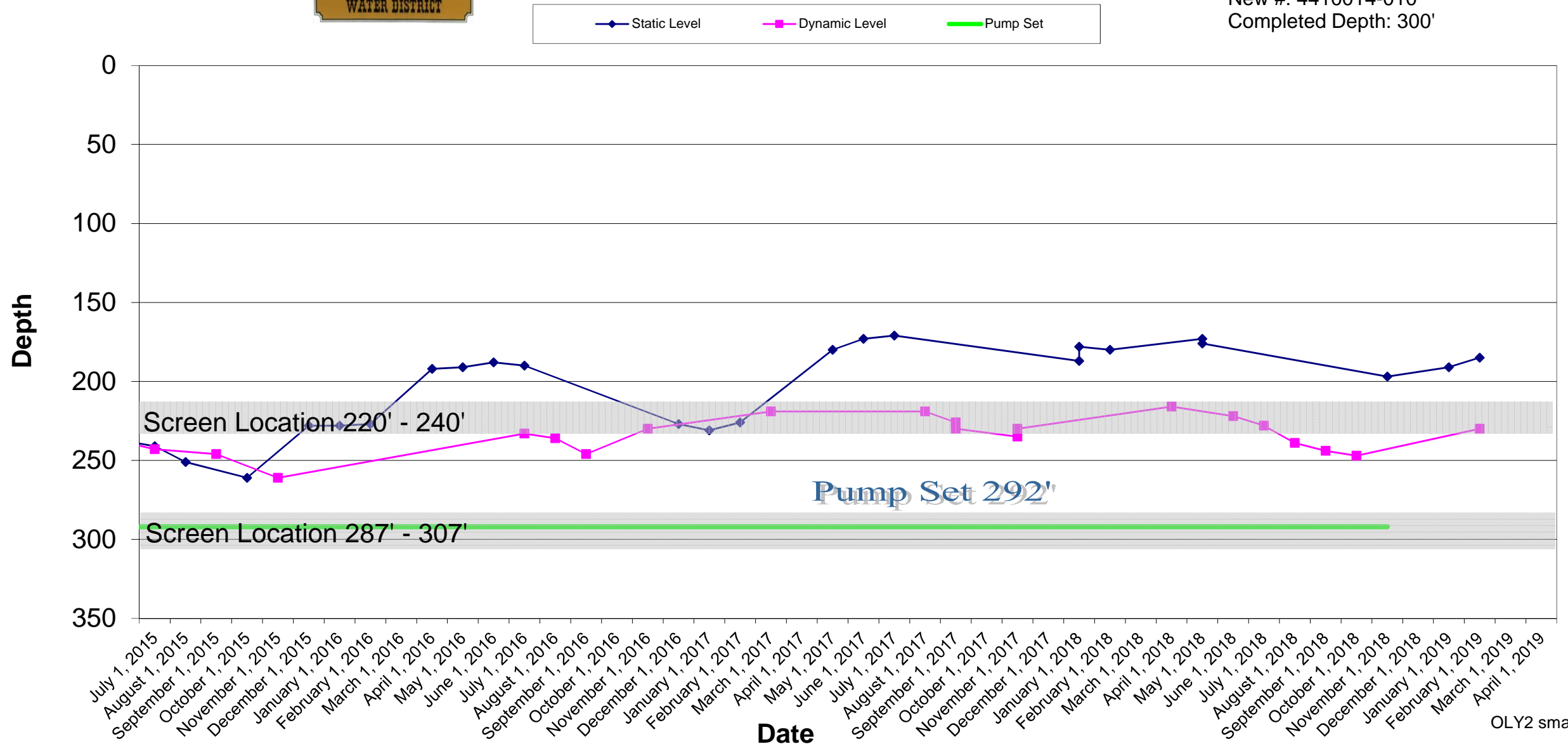


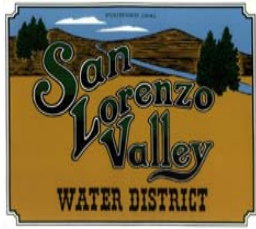
SAN LORENZO VALLEY WATER DISTRICT

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'



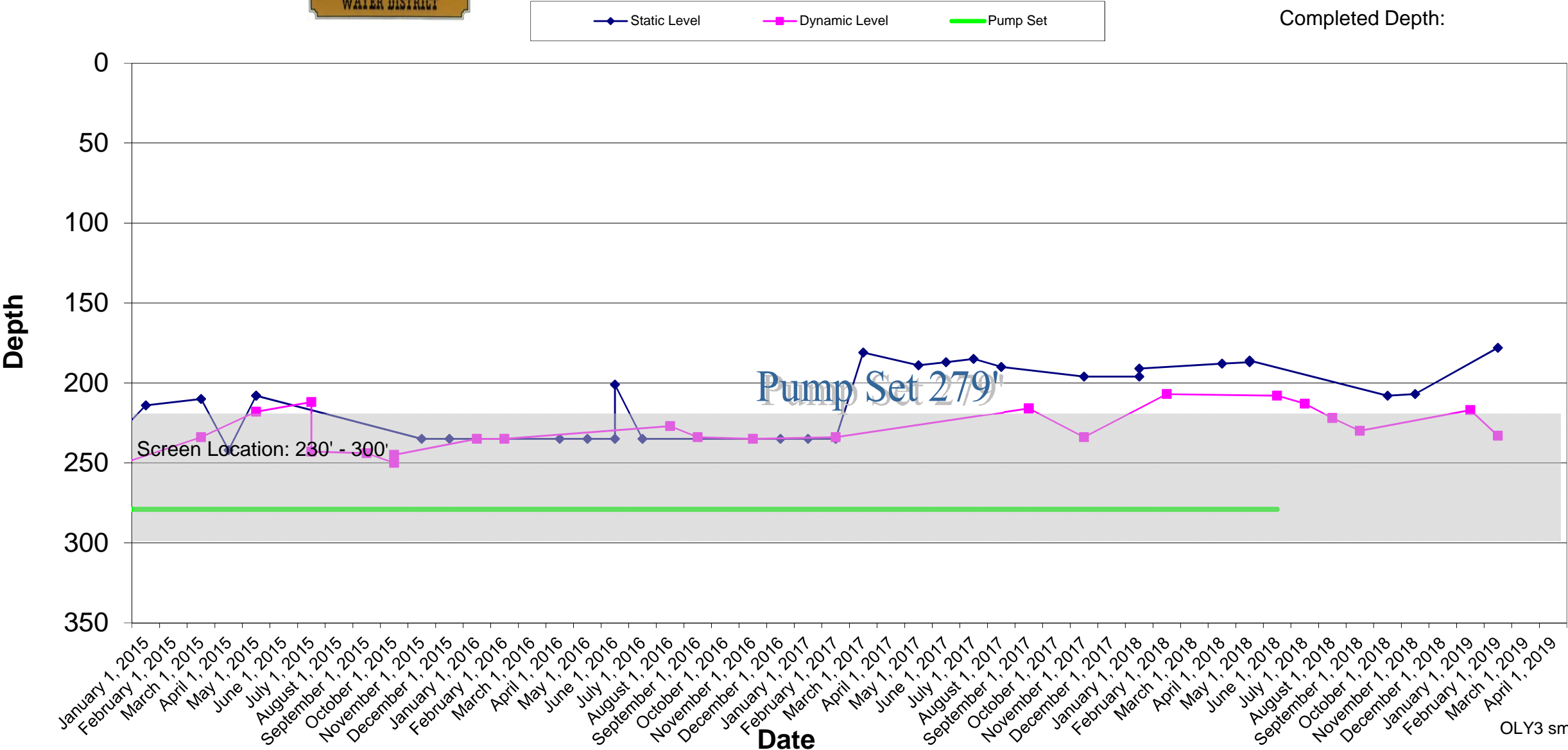


SAN LORENZO VALLEY WATER DISTRICT

Well Drawdown Report

Olympia 3

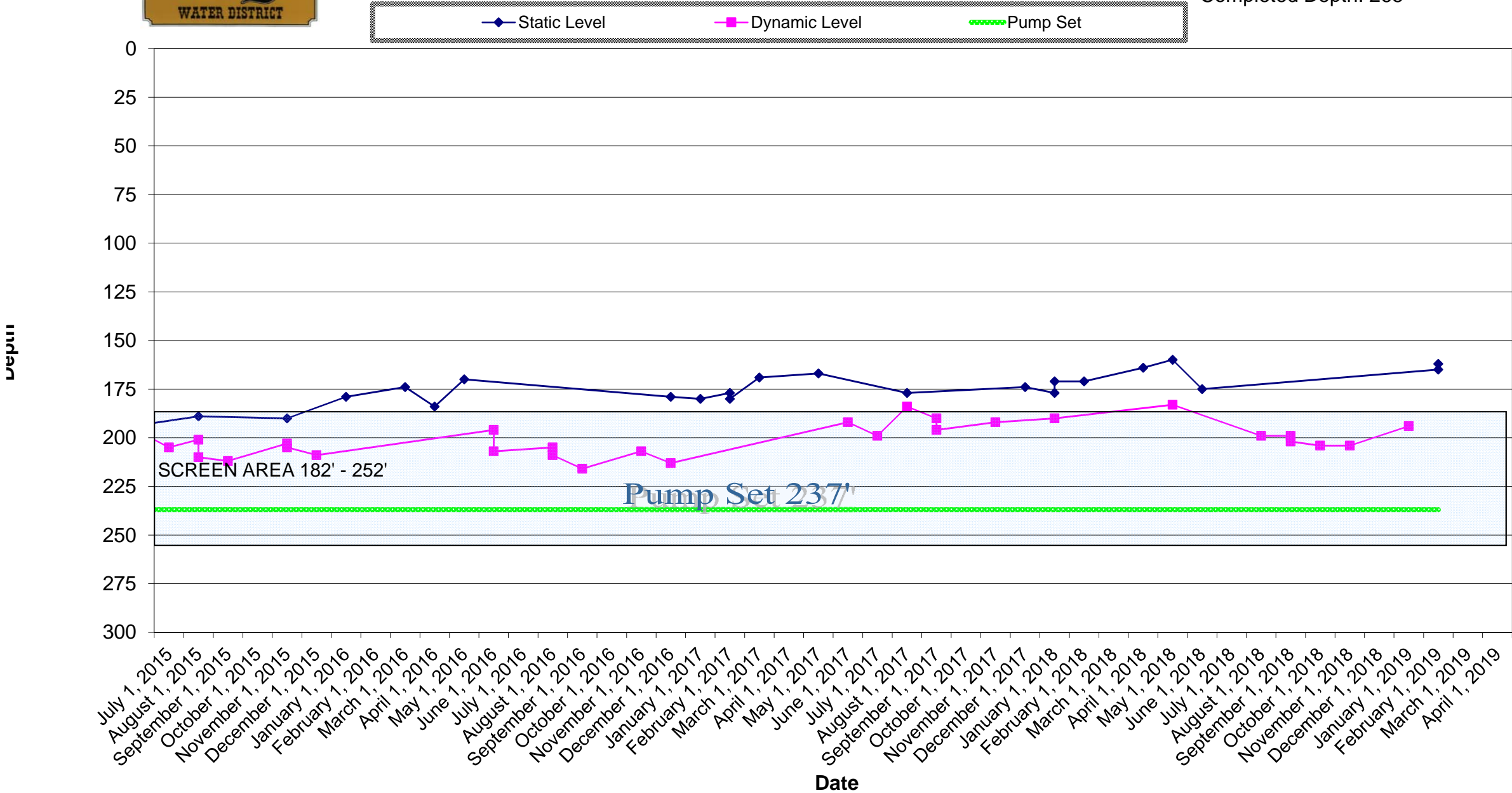
Location: 7701 E. Zayante Rd
Elevation: 538' Mean Sea Level
Installed: 8-15-90
State Well #: 4410014-022
Completed Depth:

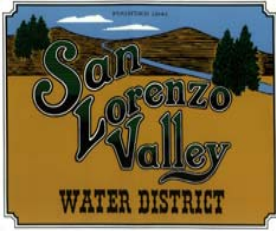




SAN LORENZO VALLEY WATER DISTRICT
Well Drawdown Report
Quail Well 4-A

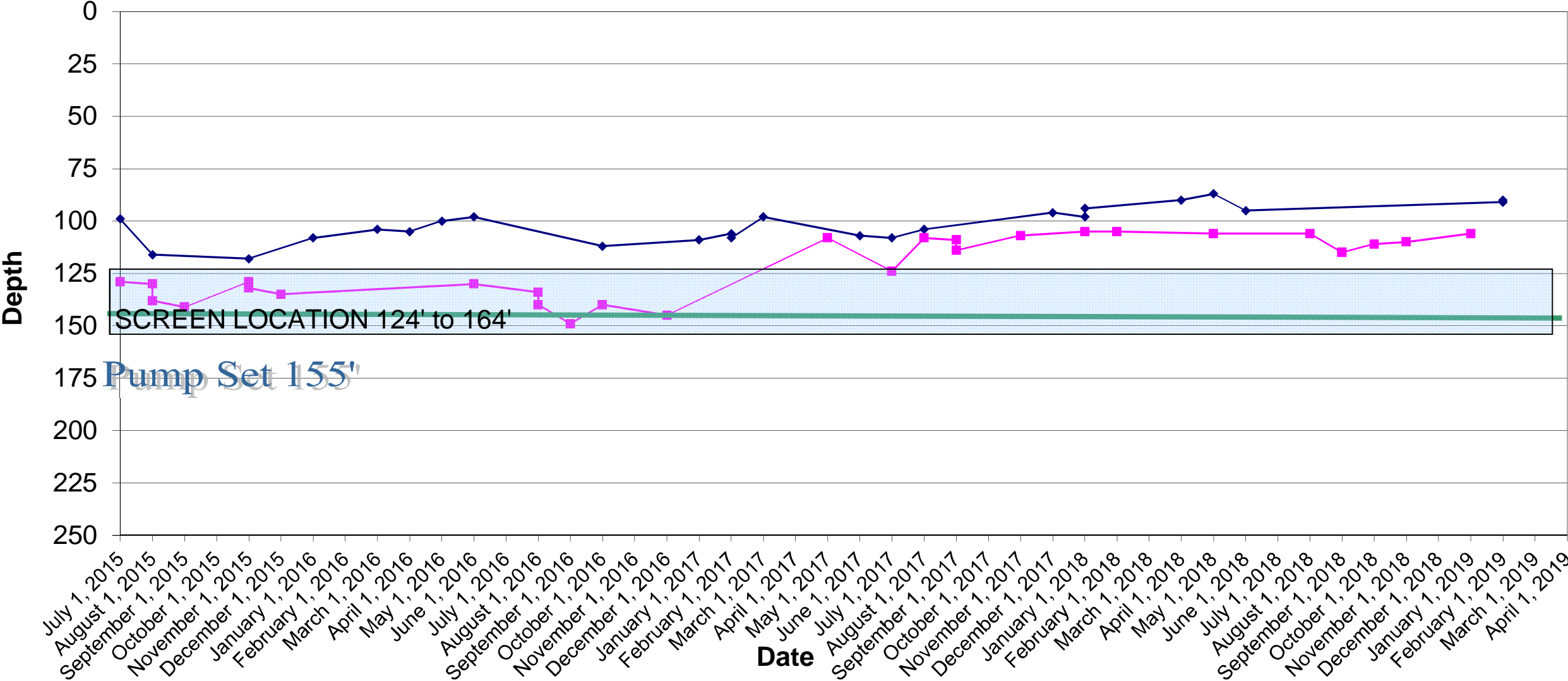
Location: Cumora Ln. Ben Lomond
Elevation: 596.54 ft @ Pad
Installed: 6-07-2001
State Well #: 4410014-026
Completed Depth: 265





SAN LORENZO VALLEY WATER DISTRICT
Well Drawdown Report
Quail Well 5-A

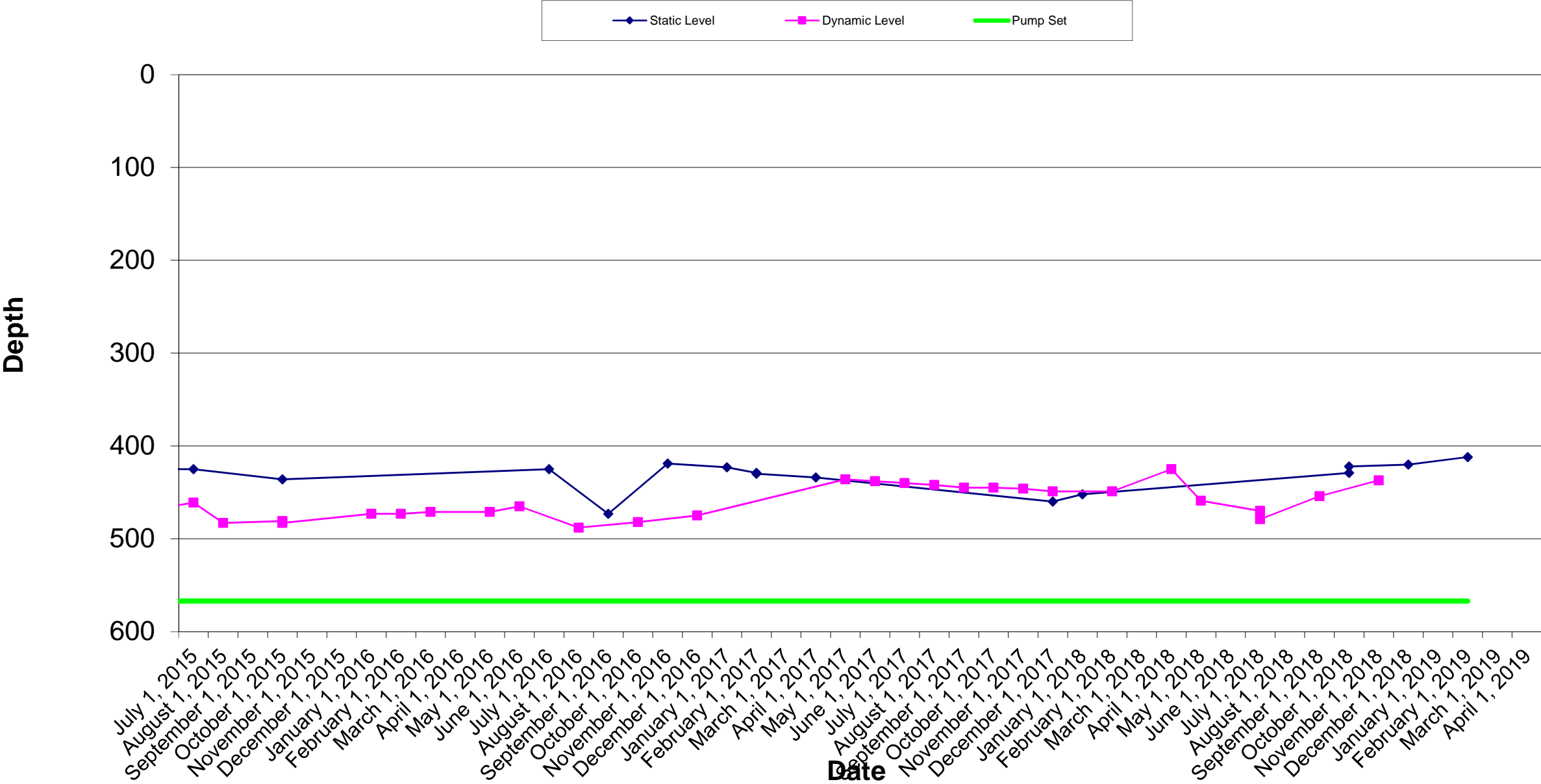
Location: 1161 Quail Hollow Rd.
Ben Lomond
Elevation: 517.65 ft. @ Pad
Installed: March 2000
State Well #: 4410014-025
Completed Depth: 174'





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

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



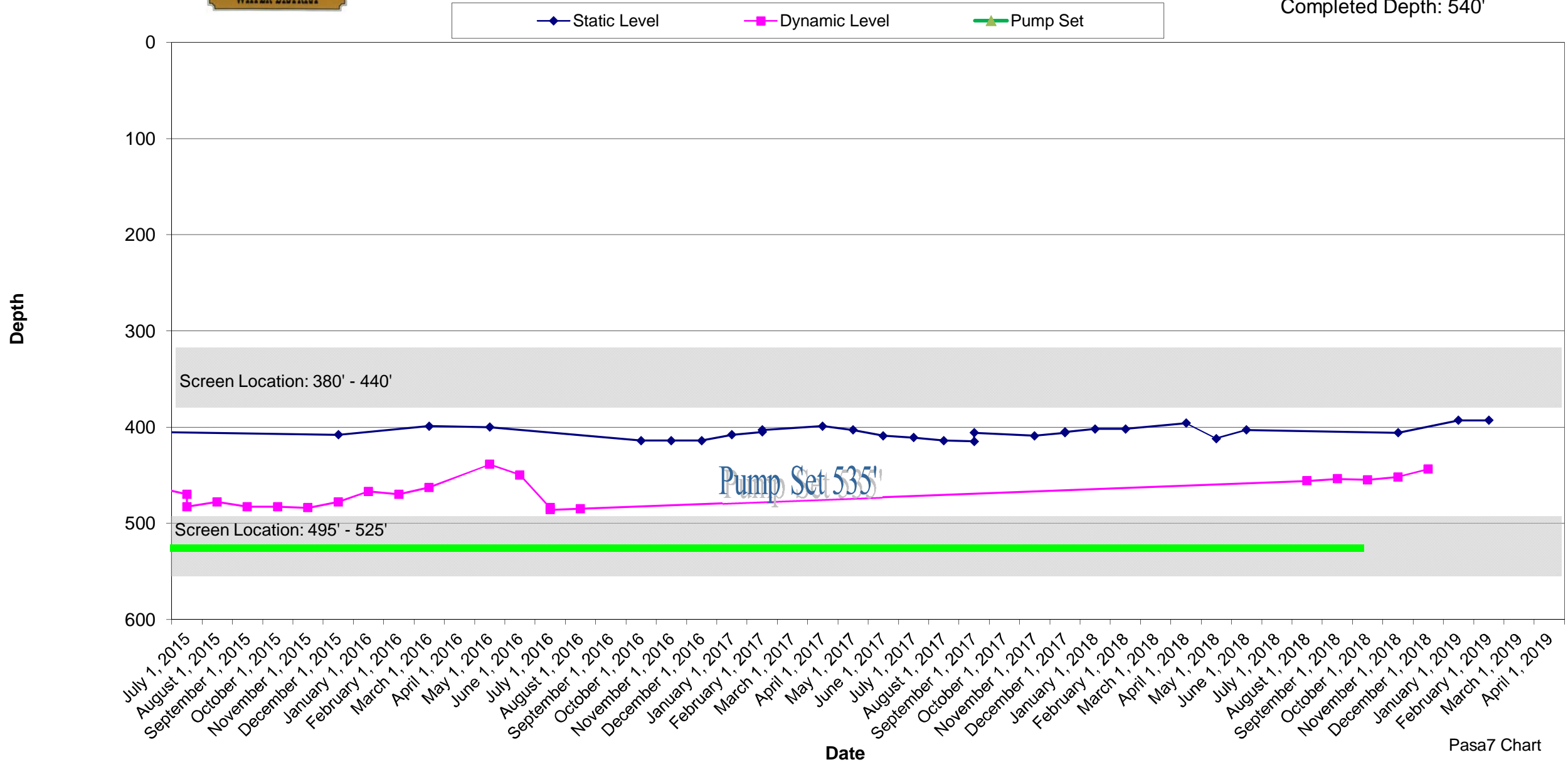


SAN LORENZO VALLEY WATER DISTRICT

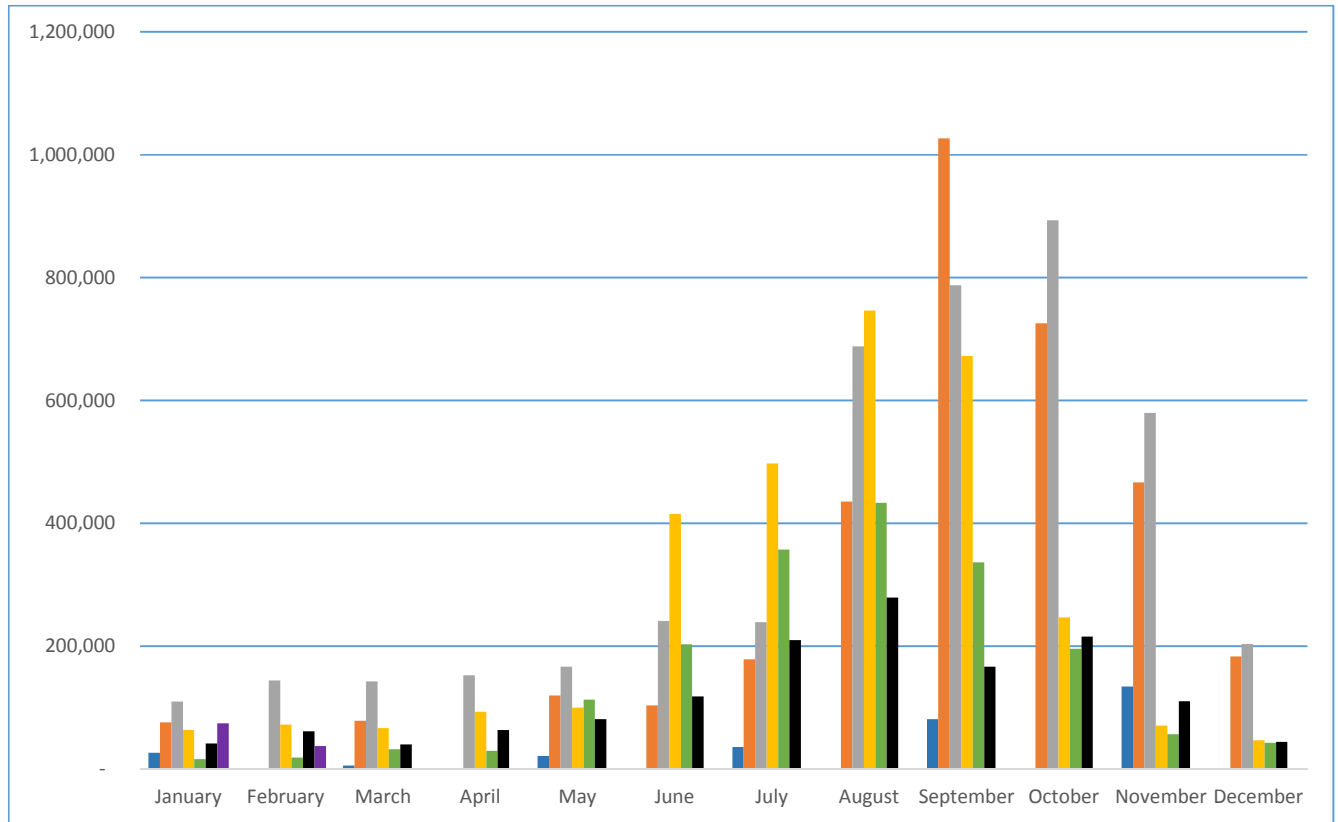
Well Drawdown Report

Pasatiempo 7

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



SAN LORENZO VALLEY WATER DISTRICT
BULK WATER SALES
GALLONS
February 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	
April			152,592	93,500	29,920	63,580	
May	21,692	119,680	166,804	100,232	112,948	81,532	
June		103,972	240,983	415,140	203,179	118,184	
July	35,904	178,772	239,360	497,420	357,544	210,188	
August		435,336	688,160	746,504	433,092	279,004	
September	81,352	1,026,256	787,644	672,183	336,570	166,804	
October		725,560	893,112	246,840	195,976	215,424	
November	134,640	466,752	579,700	71,060	56,848	110,704	
December		183,260	203,456	47,124	42,636	44,132	
Totals	306,500	3,394,424	4,349,008	3,092,981	1,836,033	1,433,198	112,200

SAN LORENZO VALLEY WATER DISTRICT
MONTHLY LEAK REPORT
February 2019

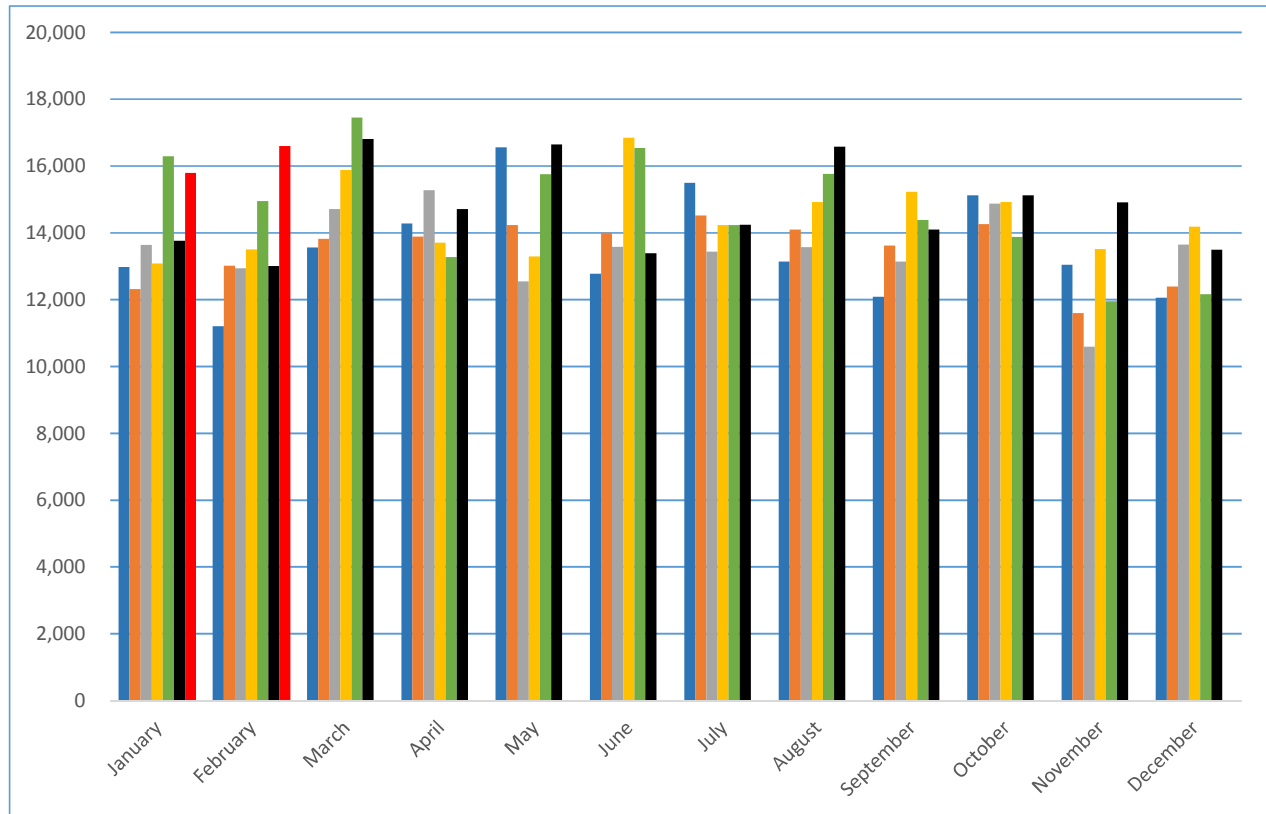
Leak Type	Location - NORTH SYSTEM	Town	Gallons Lost
400 MAIN LEAKING	8297 HERMOSA AVE.	BEN LOMOND	11,520
400 MAIN LEAKING	555 COOK WAY	BEN LOMOND	10
400 MAIN LEAKING	288 DOUGLAS AVE	BOULDER CREEK	24,750
412 TANK LEAKING	QUAIL TANKS	BEN LOMOND	7,200
400 MAIN LEAKING	925 FOREST WAY	BROOKDALE	600
TOTAL			44,080
FELTON SYSTEM			
Total Felton System			-
LOMPICO			
Total Lompico			-
SCOTTS VALLEY			
400 MAIN LEAKING	581 LA CUESTA DR	SCOTTS VALLEY	300.00
Total Scotts Valley			300
Total All Systems			44,380

				Water Quality Complaint List						
Date Received	Type Of Complaint							Address	Conclusion	System
	Taste/ Odor	Color	Turbidity/ Particles	Worms/ Other Visible Organisms	Pressure (High/Low)	Illness (Waterborne)	Other (Specify)			
2/12/2019		X					Customer complained of brown water observed at his residence.	740 Lockewood Ln	Upon investigation by SLVWD staff, water quality results were normal and within range. At customers front hose bib, free chlorine was 0.9 mg/L and no color was observed in field sample. Customer was notified of results and told to flush his internal plumbing if the problem persists.	SLVWD-North
2/26/2019			X				Customer stated that sand is observed in the water while the bathtub runs.	275 Bobs Ln	Upon investigation by SLVWD staff, sandy particles were observed in customers front hose bib. SLVWD staff flushed the hydrant next to 275 Bobs Ln and advised customer to flush out internal plumbing. On 2/27/2019, SLVWD staff followed up with customer to see if sand had persisted, customer stated that the sand is gone. SLVWD staff will be performing annual flushing in this area of Scotts Valley on the week of March 4th, 2019 to further remove sediment in the distribution mains.	SLVWD-North
2/28/2019		X					Customer reported yellowish water for the last few days.	180 Buck Knoll Rd	Upon investigation by SLVWD staff, water quality results were normal and within range. At customers front hose bib, free chlorine was 0.8 mg/L and no color was observed in field sample. Customer was notified of results and told to call back if the problem comes back.	SLVWD-North

SAN LORENZO VALLEY WATER DISTRICT

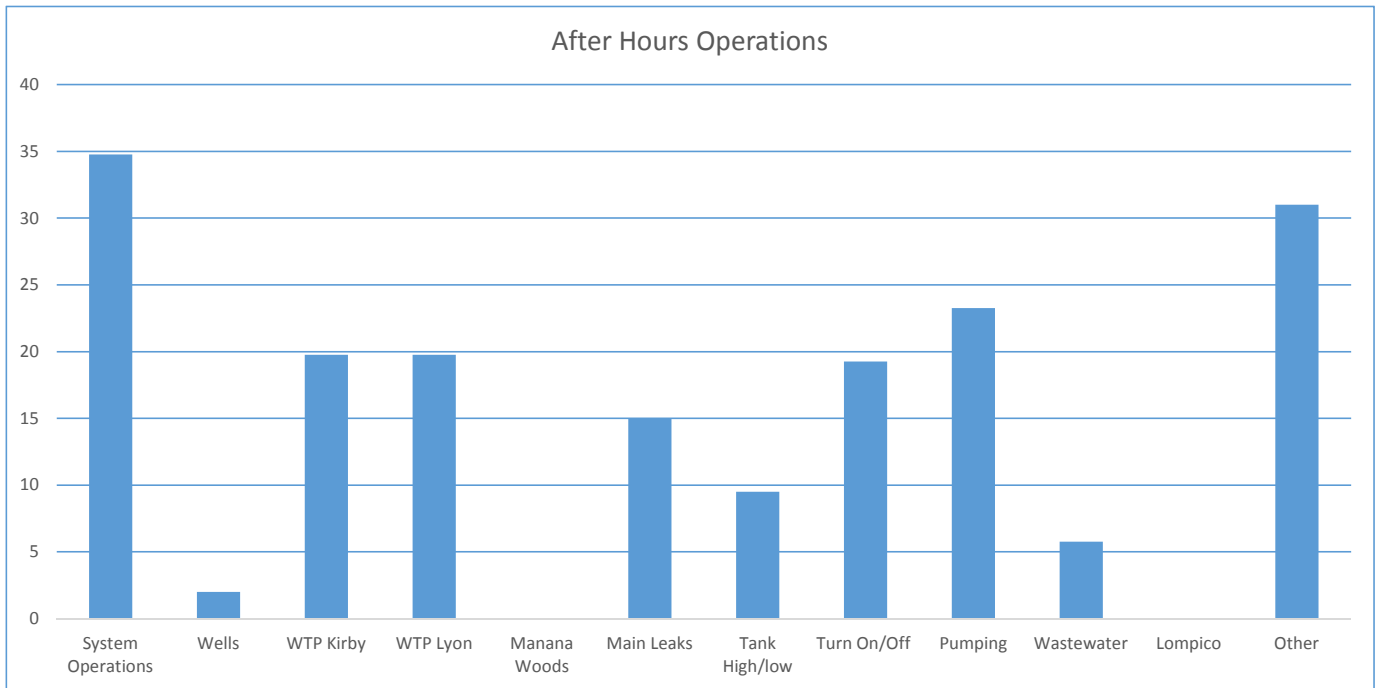
VEHICLE MILEAGE

February 2019



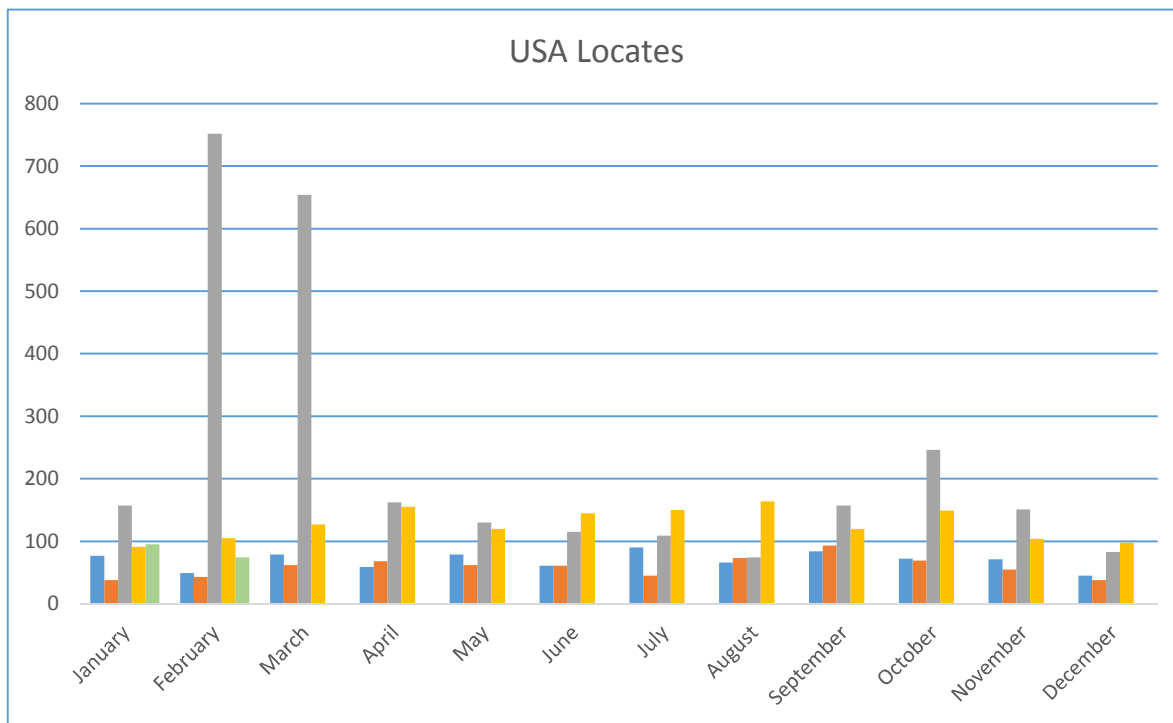
<u>Month</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
January	12,976	12,317	13,633	13,082	16,286	13,763	15,790
February	11,201	13,015	12,934	13,505	14,945	13,003	16,599
March	13,558	13,817	14,714	15,882	17,451	16,809	
April	14,283	13,883	15,279	13,704	13,270	14,711	
May	16,560	14,228	12,550	13,290	15,757	16,646	
June	12,780	14,000	13,582	16,841	16,534	13,390	
July	15,497	14,519	13,441	14,228	14,229	14,242	
August	13,136	14,096	13,569	14,923	15,761	16,576	
September	12,087	13,622	13,137	15,229	14,388	14,094	
October	15,120	14,261	14,868	14,924	13,880	15,126	
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	32,389

SAN LORENZO VALLEY WATER DISTRICT
OPERATIONS DEPARTMENT
February 2019



Description	Hours		2015	2016	2017	2018	2019
System Operations	34.75	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	19.75	March	N/A	153.75	105.75	80.25	
WTP Lyon	19.75	April	82.50	72.00	128.75	19.00	
Manana Woods	0	May	104.75	49.25	132.75	105.5	
Main Leaks	15	June	172.50	83.25	112.75	89.00	
Tank High/low	9.5	July	124.25	80.25	162.00	145.25	
Turn On/Off	19.25	August	111.75	81.25	141.25	134.5	
Pumping	23.25	September	230.25	175.00	201.25	155.25	
Wastewater	5.75	October	128.25	78.50	104.00	111.5	
Lompico	0	November	114.25	96.25	122.50	197.5	
Other	31	December	186.25	130.75	134.00	220.25	
Total	180		1254.75	1231.75	1818.00	1420.50	276.50

SAN LORENZO VALLEY WATER DISTRICT
OPERATIONS DEPARTMENT
 February 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	
April	59	68	162	155	
May	79	62	130	120	
June	61	61	115	145	
July	90	45	109	150	
August	66	73	74	164	
September	84	93	157	120	
October	72	69	246	149	
November	71	55	151	104	
December	45	38	83	98	
Total to Date	832	707	2,790	1528	169

