

Wynola Water District **4th Quarter 2016 Operations Report**

Well Water Level Chart: Water levels dropped through the dry summer season and began to recover in the fall. With a majority of this season's rain coming in December, the rain total season to date is higher than the past 2 years. The all time low water levels for our 2 largest producing wells were recorded in the 3rd quarter and they are currently lower than the last 2 years at this time.

- Rainfall for the 2016/17 (July1, 2016 to Jan. 1, 2017) is 13.7 inches compared to 8.04 inches for last year and 8.85 inches the previous year for the same time period.
- Well #5, our static monitoring well, is 8 feet higher than last year at this time. (It is 157 feet lower than the record high measured in April 2012.)
- Well #9, our largest producer, is 14 feet lower than last year at this time. (It is 409 feet lower than the record high measured in September 2011.)
- Well #11, our second highest producer, is 31 feet lower than last year at this time. (It is 313 feet lower than the record high measured in November 2011.)
- Well #10, produces about 25% of Well #9, is 13 feet higher than last year at this time. (It is 163 feet lower than the record high measured in April 2012.)

Well Production Charts: Well hourly production increased each month of the quarter as the pumping hours per day decreased and water levels started to rise. Water usage and pumping hours/day were higher in October and November.

- Well #3 that only feeds Tank #1 had been off line from mid-December 2015 until September 19, 2016 when we started filling the refurbished Tank #1. Production rates for Well #3 are lower than when it went off line but improved slightly in December. They will have to be watched as well water levels should be rising during the rainy months.
- Well # 11: Production rates improved slightly during the quarter. It is obvious that the well isn't running all the time that the CFW system is on. However, the percentage of run time has improved over the quarter and it actually pumped 100% of the time in December.
- Well #7 : Appears not to be running all the time that the CFW system is on. Although the percentage of run time improved a little in the 4th quarter its production rate should continue to be watched closely.
- Wells #9 and #10 production continues to be relatively steady.

Conservation Chart: The State has determined that the emergency water conservation order is to be replaced by conservation targets developed by each water district based on the individual water districts water availability. Since WWD's only source of water is ground water and based on well levels being a little lower than last year, WWD sent out a conservation request in June and individual usage charts in July requesting customers target water usage at or below 2015 levels. Unfortunately during the quarter water demands were above 2015 levels. The usage for the 3rd quarter was approximately 15% greater than 2015. However, year to date, 2016 usage is about 3% lower than the first 3 quarters of 2015. The high use this quarter may be partially due

to the lower amount of rain this quarter as compared to last year and the 60,000 gallons of water required to fill the refurbished storage tank in September.

- Based on the pump house meters, the water production for the 4th quarter 2016 was 1.2 million gallons which was approximately 40% less than 3rd quarter of 2016 and 9% more than the 4th quarter of 2015.
- Although the monthly usage from June through November was higher in 2016 compared to 2015, the total usage for 2016 was slightly less than in 2015.
- Water usage for 2016 was 35% less than in 2013.

Repairs and Replacements:

- CFW & TOU Adjustments:
 - Oct. 2: Set TOU Timer to run wells outside of Peak Price Period (Run wells between 6:15 PM and 10:45 AM.)
 - Oct 7: Adjusted float switch levels in T2. CFW on at 14' 6" off at 15'-3"
 - Oct 16: Adjusted float switch levels in T1. CFW on at 14' 3" off at 15'-6"
 - Oct. 18: Adjusted TOU timer clock schedule to reduce Semi-Peak run time.
 - Nov 1: Winter TOU Schedule started. Adjusted time clock settings accordingly
 - Nov. 6: Daylight Savings Time ended, adjusted current time on TOU time clock.
 - Nov. 8: Last 3 days well pumps have run the maximum time (4 hours) allowed by current TOU program and tanks less the 15' 0" in the morning. Added another 45 run period in Semi Peak Time period.
- Routine Repairs and Replacements:
 - Oct. 12: Replaced slow running residential meter - Lot #59.
 - Nov. 6: Replaced 9 volt battery in automatic throw over switch controller.
 - Nov. 25: Replaced leaking residential meter - Lot #85, service was turned on at new property owners request. Existing meter that had never been turned on had a cracked base and had to be replaced.

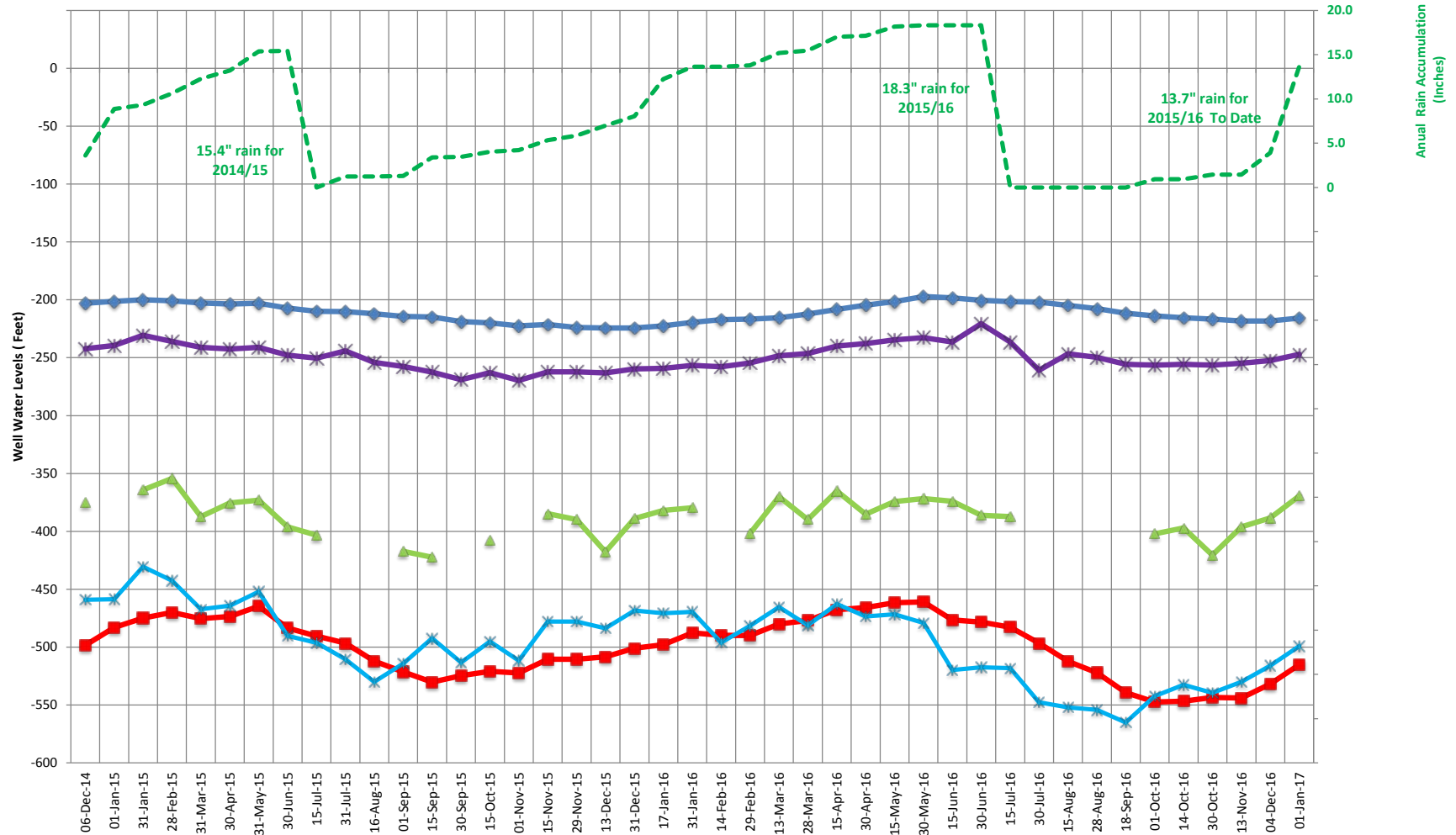
Electrical Issues & Outages:

- Oct 28 to Dec 4: Because of the SDG&E distribution line construction on Route 78/79, the VSD was taken out of service to avoid potential damage by surges due to unplanned Power outages.
- Dec 9: Unplanned 30 minute power outage. Generator started and stopped automatically. Generator ran for about 0.4 hours.

Attachments:

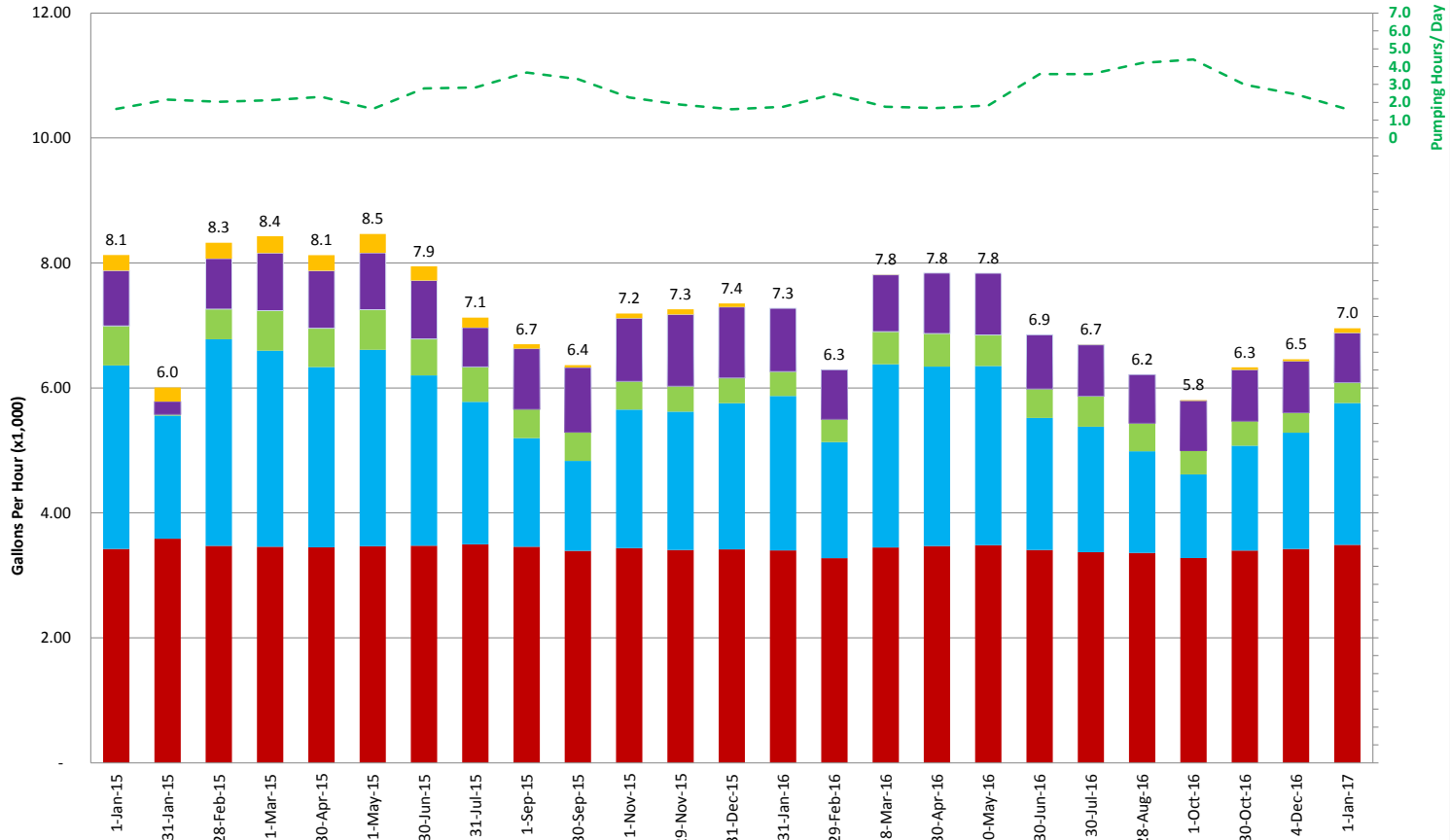
- Well Water Level Chart: Well Water Levels Dec 2014 to Dec 2016
- Well Production Charts:
 - Well Gallons per Day Dec 2014 to Dec 2016
 - Well Gallons per Hour Dec 2014 to Dec 2016
- Water Usage
 - Chart: Conservation 2016 vs 2013 Data through Dec. 2016

WWD Well Water Levels and Rain - 12/6/14 thru 1/1/17
Drop in summer water levels due to poor rain last 4 years.



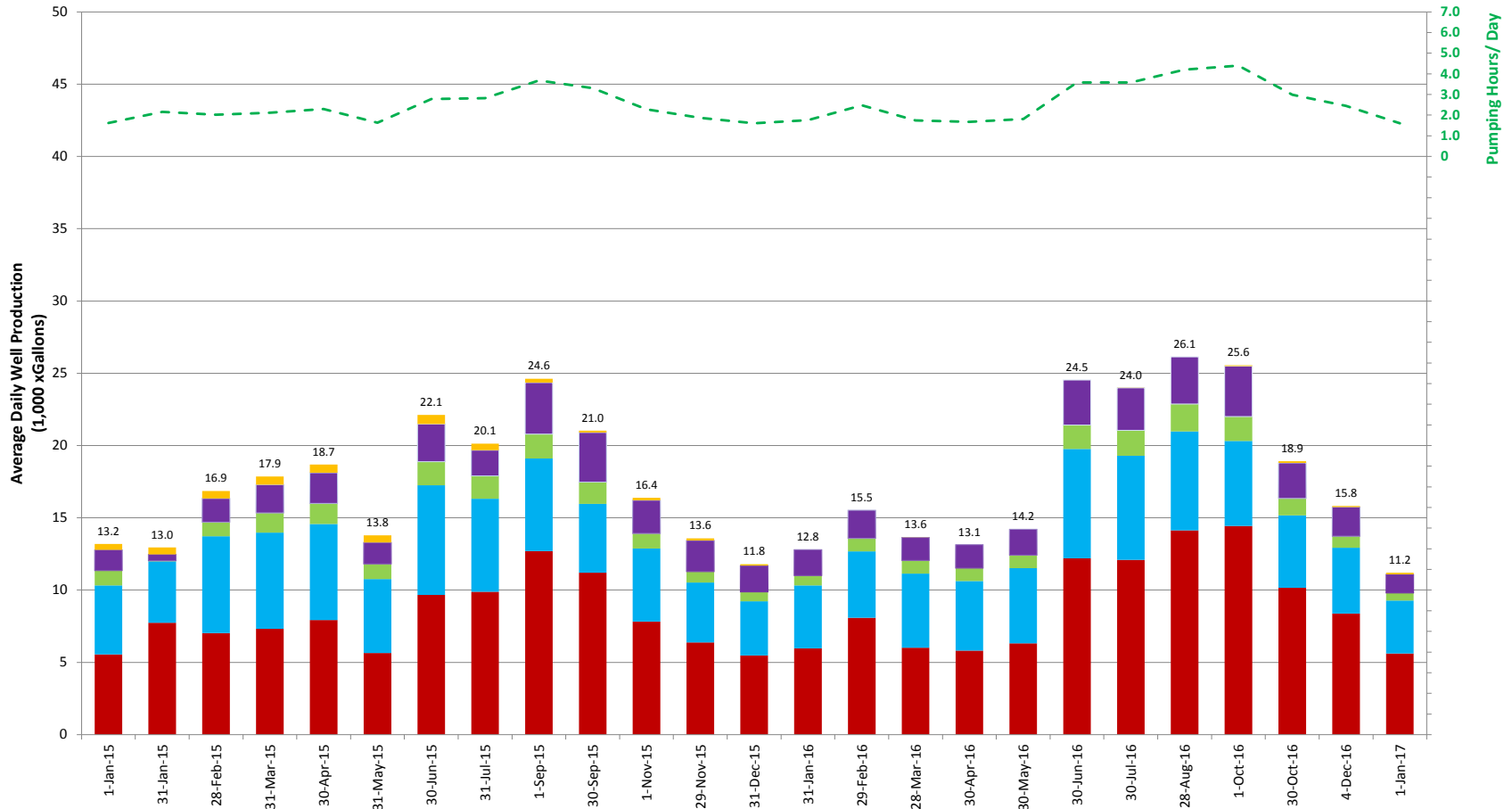
	06-Dec-14	01-Jan-15	31-Jan-15	28-Feb-15	31-Mar-15	30-Apr-15	31-May-15	30-Jun-15	15-Jul-15	31-Jul-15	16-Aug-15	01-Sep-15	15-Sep-15	30-Sep-15	15-Oct-15	01-Nov-15	15-Nov-15	29-Nov-15	13-Dec-15	31-Dec-15	17-Jan-16	31-Jan-16	14-Feb-16	29-Feb-16	13-Mar-16	28-Mar-16	15-Apr-16	30-Apr-16	15-May-16	30-May-16	15-Jun-16	30-Jun-16	15-Jul-16	30-Jul-16	15-Aug-16	28-Aug-16	18-Sep-16	01-Oct-16	14-Oct-16	30-Oct-16	13-Nov-16	04-Dec-16	01-Jan-17	
Well-5	-203	-201	-200	-201	-203	-204	-203	-207	-210	-210	-212	-214	-215	-219	-220	-222	-221	-224	-224	-224	-222	-219	-217	-217	-215	-212	-208	-205	-202	-197	-198	-201	-202	-202	-202	-205	-208	-212	-214	-216	-217	-218	-218	-216
Well-9	-498	-483	-475	-470	-475	-474	-465	-484	-490	-497	-512	-521	-530	-525	-521	-522	-511	-511	-508	-501	-498	-488	-490	-490	-480	-477	-468	-466	-462	-461	-477	-478	-483	-497	-512	-522	-539	-547	-547	-543	-544	-532	-515	
Well-7	-375	-364	-354	-387	-376	-373	-396	-403		-417	-422		-408		-385	-390	-418	-389	-382	-380		-402	-370	-390	-365	-385	-374	-372	-374	-386	-387							-402	-397	-421	-396	-388	-369	
Well-10	-242	-239	-231	-236	-241	-242	-241	-248	-250	-244	-254	-258	-262	-269	-263	-270	-262	-262	-263	-260	-259	-257	-258	-255	-248	-246	-240	-238	-235	-233	-236	-221	-236	-261	-247	-250	-256	-256	-257	-255	-252	-247		
Well-11	-459	-459	-430	-443	-467	-464	-452	-490	-496	-511	-530	-514	-492	-513	-495	-512	-478	-478	-484	-468	-471	-470	-496	-482	-465	-481	-463	-473	-472	-479	-520	-517	-518	-548	-552	-554	-565	-542	-533	-540	-530	-516	-499	
Rain"	3.6	8.85	9.31	10.6	12.3	13.2	15.4	15.4	0	1.23	1.23	1.31	3.39	3.44	4.02	4.22	5.35	5.85	6.98	8.04	12.2	13.7	13.7	13.8	15.2	15.5	17	17.1	18.2	18.3	18.3	18.3	0	0	0	0	0	0.93	0.93	1.44	1.44	3.92	13.7	

Monthly Average Hourly Well Production Dec 2014 to Dec 2016



	1- Jan- 15	31- Jan- 15	28- Feb- 15	31- Mar- 15	30- Apr- 15	31- May- 15	30- Jun- 15	31- Jul- 15	1- Sep- 15	30- Sep- 15	31- Oct- 15	1- Nov- 15	30- Nov- 15	1- Dec- 15	29- Dec- 15	31- Jan- 16	29- Feb- 16	31- Mar- 16	29- Apr- 16	28- May- 16	30- Jun- 16	30- Jul- 16	30- Aug- 16	30- Sep- 16	28- Oct- 16	1- Nov- 16	30- Dec- 16	4- Jan- 17	1- Jan- 17
Usage (Gal/Dayx1,000)	13.2	13.0	16.9	17.9	18.7	13.8	22.1	20.1	24.6	21.0	16.4	13.6	11.8	12.8	15.5	13.6	13.1	14.2	24.5	24.0	26.1	25.6	18.9	15.8	11.2				
Total (Gal/Hrx1,000)	8.1	6.0	8.3	8.4	8.1	8.5	7.9	7.1	6.7	7.2	7.3	7.4	7.3	7.4	7.3	7.4	7.3	7.8	7.8	7.8	6.9	6.7	6.2	5.8	6.3	6.5	7.0		
WELL-3 (Gal/Hrx1,000)	0.25	0.22	0.25	0.27	0.25	0.30	0.23	0.16	0.07	0.04	0.07	0.08	0.06	-	-	0.00	-	-	-	0.00	-	0.01	0.04	0.03	0.07				
WELL-10 (Gal/Hrx1,000)	0.89	0.21	0.81	0.92	0.92	0.91	0.94	0.63	0.97	1.04	1.01	1.15	1.14	1.01	0.79	0.91	0.97	0.99	0.87	0.82	0.78	0.79	0.82	0.82	0.80				
WELL-7 (Gal/Hrx1,000)	0.63	0.02	0.48	0.64	0.62	0.64	0.58	0.56	0.46	0.46	0.45	0.41	0.40	0.39	0.36	0.52	0.53	0.50	0.46	0.49	0.45	0.38	0.39	0.32	0.33				
WELL-11 (Gal/Hrx1,000)	2.94	1.97	3.31	3.14	2.89	3.14	2.73	2.28	1.74	1.44	2.22	2.21	2.34	2.47	1.86	2.93	2.87	2.87	2.11	2.01	1.63	1.34	1.68	1.86	2.27				
WELL-9 (Gal/Hrx1,000)	3.42	3.59	3.47	3.46	3.45	3.47	3.47	3.50	3.46	3.39	3.44	3.41	3.42	3.40	3.28	3.45	3.47	3.48	3.41	3.37	3.36	3.28	3.40	3.42	3.49				
Pumping Hours/Day	1.6	2.2	2.0	2.1	2.3	1.6	2.8	2.8	3.7	3.3	2.3	1.9	1.6	1.8	2.5	1.7	1.7	1.8	3.6	3.6	4.2	4.4	3.0	2.4	1.6				

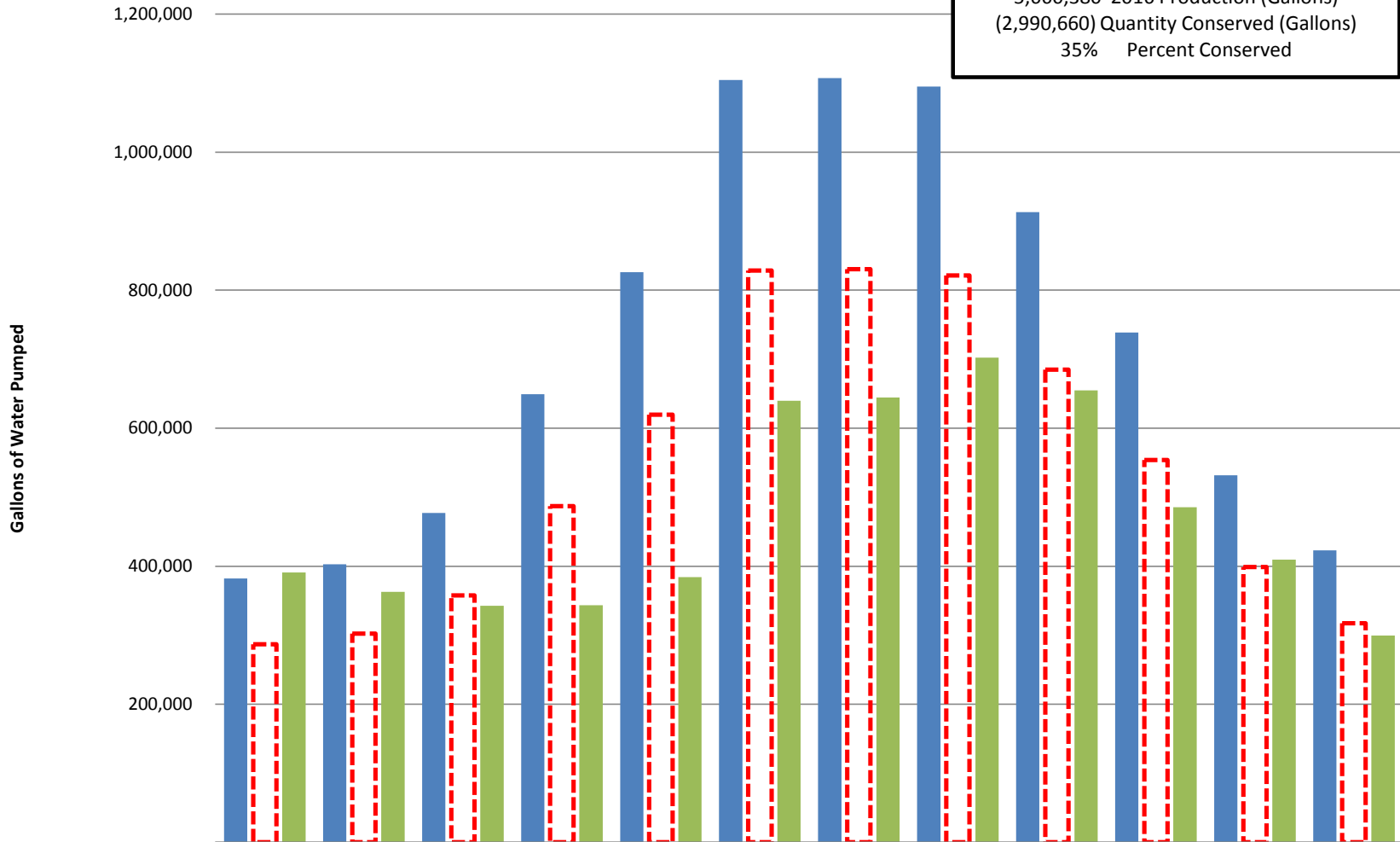
Monthly Average Daily Well Production Dec 2014 to Dec 2016



	1-Jan-15	31-Jan-15	28-Feb-15	31-Mar-15	30-Apr-15	31-May-15	30-Jun-15	31-Jul-15	1-Sep-15	30-Sep-15	1-Nov-15	30-Nov-15	29-Dec-15	31-Jan-16	29-Feb-16	28-Mar-16	30-Apr-16	30-May-16	30-Jun-16	30-Jul-16	28-Aug-16	1-Oct-16	30-Oct-16	4-Dec-16	1-Jan-17	
Usage KiloGPD	13.2	13.0	16.9	17.9	18.7	13.8	22.1	20.1	24.6	21.0	16.4	13.6	11.8	12.8	15.5	13.6	13.1	14.2	24.5	24.0	26.1	25.6	18.9	15.8	11.2	
well-3 KiloGPD	0.4	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.3	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
well-10 KiloGPD	1.4	0.4	1.6	2.0	2.1	1.5	2.6	1.8	3.6	3.4	2.3	2.2	1.8	1.8	2.0	1.6	1.6	1.8	3.1	2.9	3.3	3.5	2.5	2.0	1.3	
well-7 KiloGPD	1.0	0.0	1.0	1.4	1.4	1.0	1.6	1.6	1.7	1.5	1.0	0.8	0.6	0.7	0.9	0.9	0.9	0.9	1.7	1.7	1.9	1.7	1.2	0.8	0.5	
well-11 KiloGPD	4.8	4.3	6.7	6.7	6.6	5.1	7.6	6.4	6.4	4.8	5.1	4.1	3.8	4.3	4.6	5.1	4.8	5.2	7.6	7.2	6.8	5.9	5.0	4.6	3.7	
well-9 KiloGPD	5.6	7.7	7.0	7.3	7.9	5.6	9.7	9.9	12.7	11.2	7.8	6.4	5.5	6.0	8.1	6.0	5.8	6.3	12.2	12.1	14.1	14.4	10.2	8.4	5.6	
hours/day	1.6	2.2	2.0	2.1	2.3	1.6	2.8	2.8	3.7	3.3	2.3	1.9	1.6	1.8	2.5	1.7	1.7	1.8	3.6	3.6	4.2	4.4	3.0	2.4	1.6	

WWD Water Production 2016 vs 2013

8,651,040	2013 Production (Gallons)
5,660,380	2016 Production (Gallons)
(2,990,660)	Quantity Conserved (Gallons)
35%	Percent Conserved



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
■ 2013 Actual	382,340	402,840	477,100	649,350	826,020	1,104,720	1,107,490	1,095,160	912,920	738,490	531,690	422,920
■ 25% Reduction Target	286,755	302,130	357,825	487,013	619,515	828,540	830,618	821,370	684,690	553,868	398,768	317,190
■ 2016 Actual	390,900	362,800	342,600	343,420	384,400	639,900	644,700	702,200	654,860	485,450	409,540	299,610