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WATER RESOURCES
WESTERN REGION

Watermaster's Report **Ground Water District 63-S (Stewart Gulch)** **March 1, 2015 to March 1, 2016**

Withdrawals

The total withdrawal of low temperature geothermal water in GWD63-S in Water Year 2015 (WY15) was 190.3 mgal (Figure 1). This amount is 23.4 mgal more than the withdrawal in Water Year 2014 (WY14), which is a 14% increase (Table 1). This increase is mainly attributable to the Terteling Ranch Windsock well in WY15.

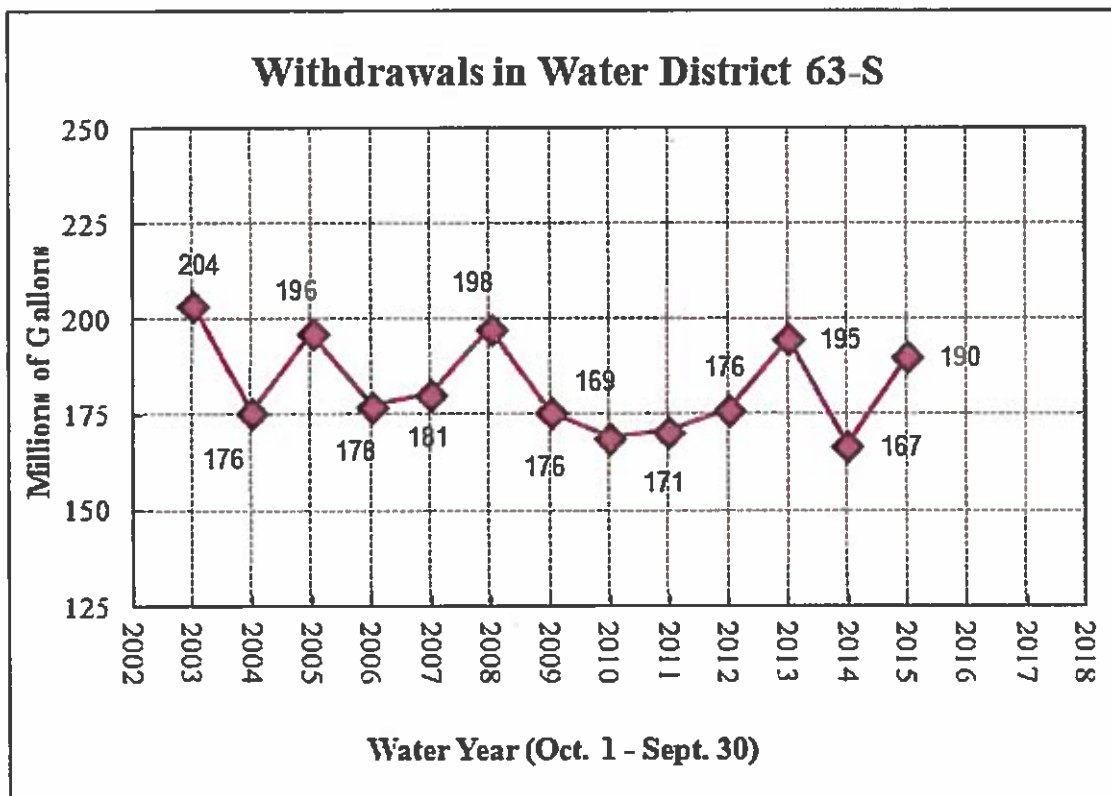


Figure 1. Geothermal withdrawals in Stewart Gulch Water District 63-S for Water Years 2003-2015.

Table 1. Withdrawals¹ from Stewart Gulch Ground Water District 63-S geothermal wells for Water Year 2015 (October 1, 2014 through September 30, 2015).

Well	Withdrawals in WY15 (millions of gallons)	Change from WY14 (millions of gallons)	Percent Change from WY14
TTCI Tiegs (Triangle)	0	0	0
TTCI Silkey (Shed)	19.4	-0.4	-2%
TTCI House (Office)	3.1	-0.3	-10%
Edwards Greenhouse	48.7	+0.4	+1%
Terteling Ranch Windsock	90.4	+24.9	+38%
Terteling Ranch Pool	18.0	-3.0	-14%
Quail Hollow (Tee Ltd) Upper	<0.1	-1.2	NC ²
Quail Hollow (Nibbler) Lower	4.6	+2.7	+146%
Niznik (Whitehead)	6.1	+0.3	+5%
Total	190.3	+23.4	+14.0%

¹These numbers contain some degree of uncertainty which is typically associated with measurement equipment and methods. Therefore, the amounts are being reported in millions with one decimal place.

²NC = Not Calculated because the number would be so large that it would not be of value to report.

The ownerships and locations of the wells allow them to be grouped into withdrawal centers, which is a useful approach for summarizing the withdrawals in these localized areas within the District. Table 2 shows the three centers and the changes in withdrawals.

Table 2. Three withdrawal centers in GWD63-S and changes from WY14 to WY15.

Withdrawal Center	Number of Wells	Numerical change from WY14 to WY15	Percentage change from WY14 to WY15
Edwards Greenhouse, Terteling Garden Center, Niznik	5 (4 in use; 1 unused)	0 mgal	0%
Quail Hollow	2	+1.5 mgal	+50%
Terteling Ranch	2	+21.9 mgal	+25%

Water Levels

Four wells are currently monitored for water levels by their owners: Tiegs, Edwards, Quail Hollow Lower, and Quail Hollow Upper. Overall, ground water levels in GWD63-S wells showed a slight decreasing trend in WY15. Both the Edwards well and the TTCI Tiegs well had maximum water levels that were about two feet lower in WY15 than in WY 14 (Figures 2 and 3). The minimum water levels in the Tiegs and Edwards wells were 1.0 feet and 2.3 feet higher in WY15, respectively. The Quail Hollow Upper well had a decrease of about four feet in the maximum water level (Figure 4). The Quail Hollow Lower well did not have a change in the maximum water level (Figure 5). The minimum level in the Quail Hollow Upper well was 2.8 feet higher, while the minimum level in the Quail Hollow Lower well was essentially unchanged.

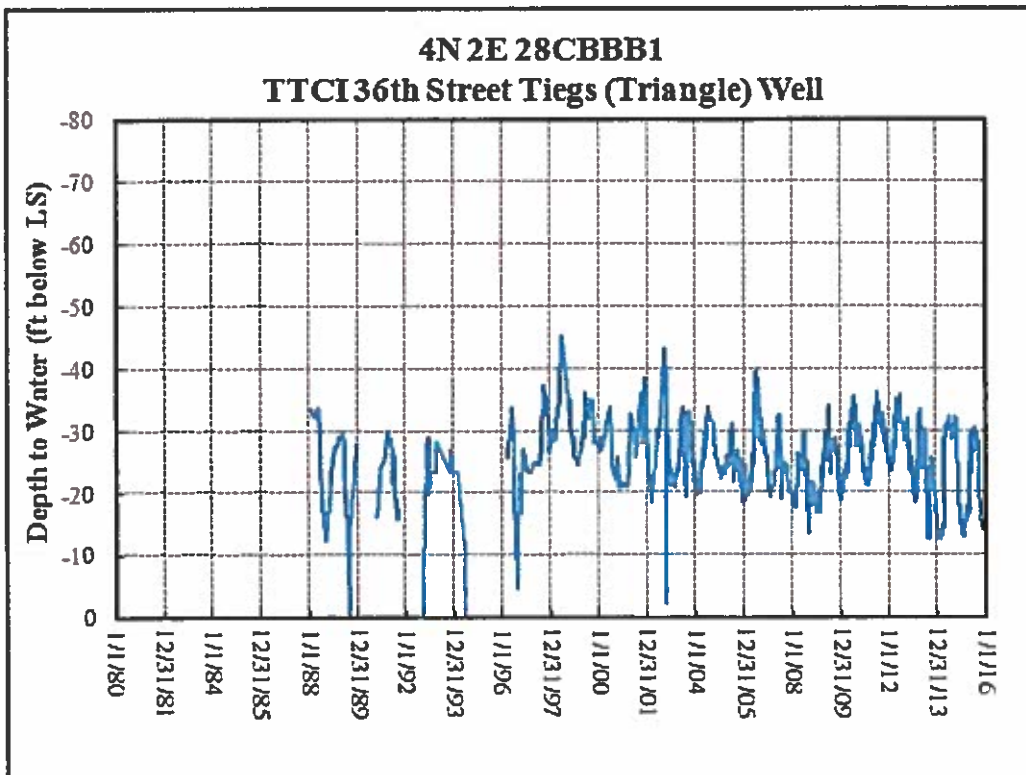


Figure 2. Water level hydrograph for the TTCI 36th Street Tieg's (Triangle) well.

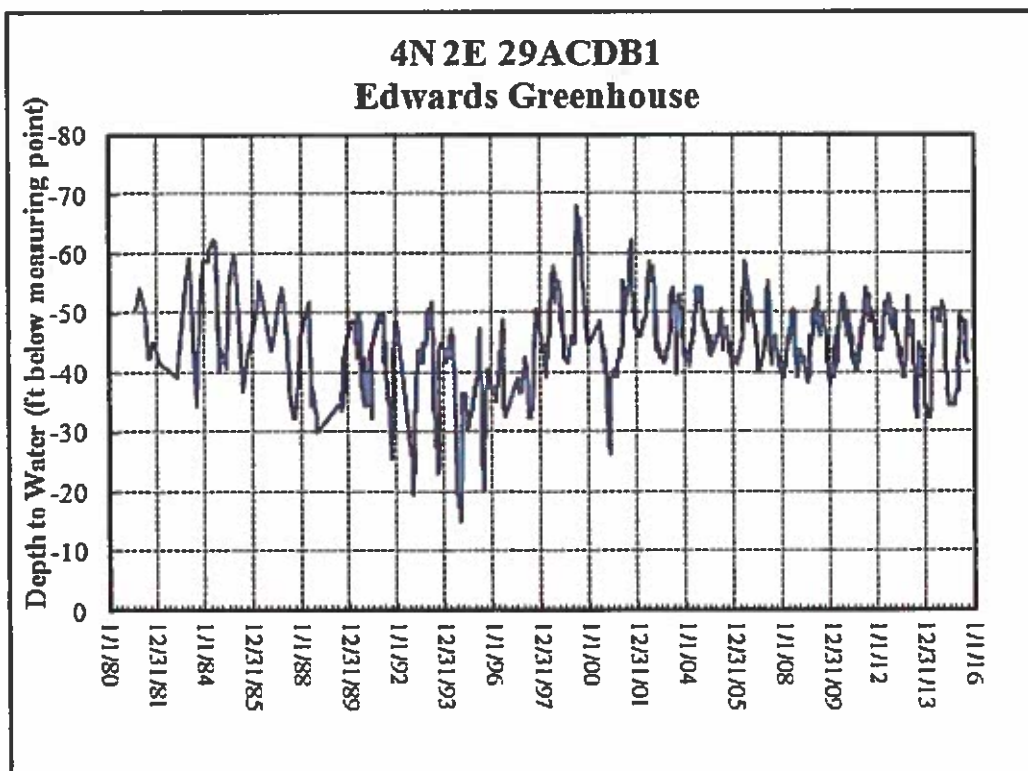


Figure 3. Water level hydrograph for the Edwards Greenhouses well.

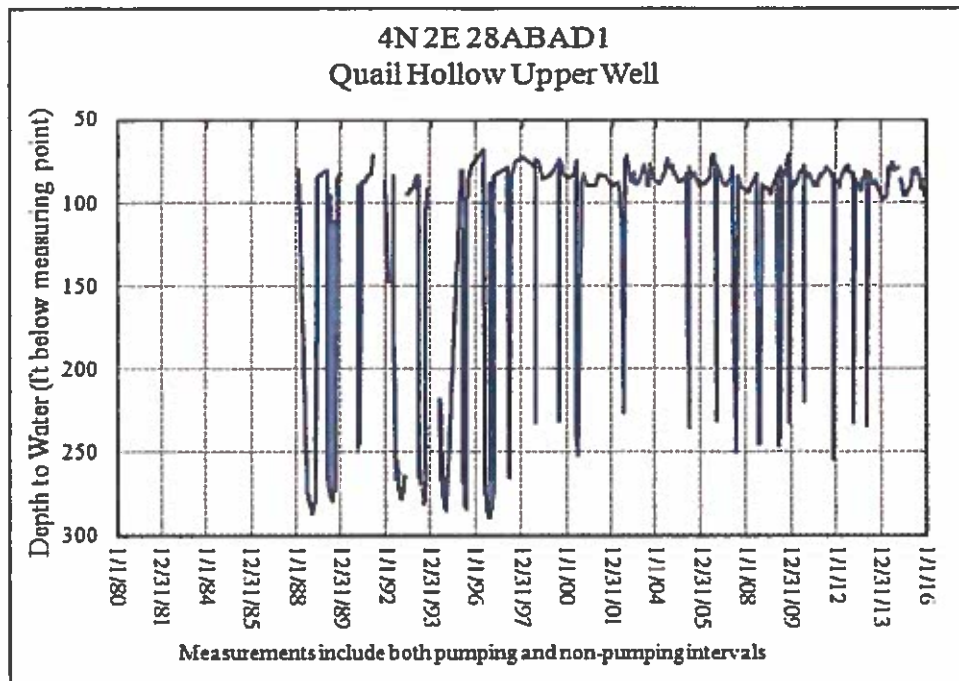


Figure 4. Water level hydrograph for the Quail Hollow Upper well.

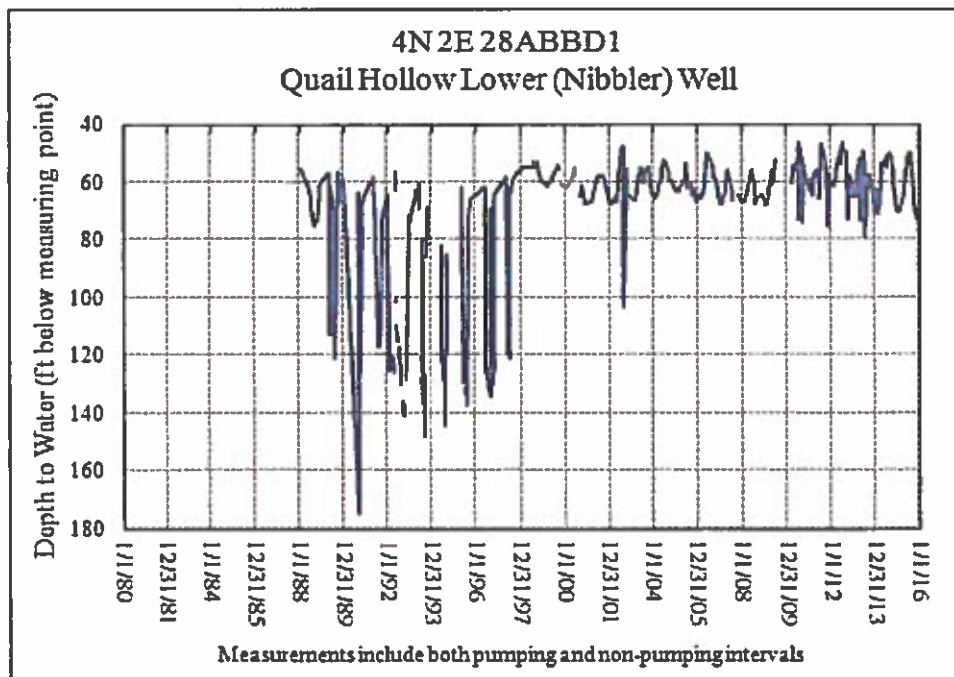


Figure 5. Water level hydrograph for the Quail Hollow Lower well.

Respectfully submitted,

Kenneth Neely

Kenneth Neely, Watermaster for Ground Water District 63-S