Evaluation of proposed move for Water Right Nos FO 17 and 9115

Proposed: Convert water right number FO 17 from irrigation use to stock. Split the right and move 107.3 AF of authority to the well currently authorized by water right number 15447. Move 26.8 AF to the well currently authorized as a standby well for water right number 9115. Move full authority authorized under water right number 9115 to its current standby well. This well will have a total water use authority of 167.8 AF.



Wells within 1 mile: FO 77, 178, 31241 ID2, 31241 ID3, 31241 ID4, 31241 ID10, 31241 ID11, 31241 ID13, 17192 ID7, 17192 ID8, 17192 ID9, 10292, FO 86, 17012, FO 15, 28398, 1684, 33369, FO 70 ID7, FO 70 ID8, FO 70 ID9, FO 70 ID10, FO 18, 32548 & 43702, 41364, 6853, and 14 domestic wells, labeled on the above map.

The saturated thickness at the proposed well location is estimated to be 47 ft, based upon the GMD3 model. For saturated thickness less than 50 ft, the drawdown allowance is 1.0 ft.

50 year Theis Analysis: The following values were used to run the analysis:

S = 0.2798, T = 6700.62 ft²/day

FO 17: $tp_{current}$ = 219 days (assumed stock wells operate 60% of the time), $Q_{current}$ = 14 gpm (based upon average use)

9115: tp_{current} = 219 days, Q_{current} = 42 gpm, tp_{proposed} = 219 days, Q_{proposed} = 173 gpm

15447: tp_{current} = 219 days, Q_{current} = 69 gpm, tp_{proposed} = 219 days, Q_{Proposed} = 214 gpm

Theis drawdowns were calculated as follows:

FO 77: Drawdown from current location = 1.07 ft

Drawdown from proposed location = 2.97 ft

Net drawdown = 1.9 ft

178: Drawdown from current location \neq 0.91 ft

Drawdown from proposed location = 2.72 ft

Net drawdown = 1.8 ft

31241 ID2: Drawdown from current location = 0.73 ft

Drawdown from proposed location = 2.51 ft

Net drawdown = 1.8 ft

31241 ID3: Drawdown from current location = 0.75 ft

Drawdown from proposed location = 2.62 ft

Net drawdown = 1.9 ft

31241 ID4: Drawdown from current location = 0.82 ft

Drawdown from proposed location = 2.99 ft

Net drawdown = 2.2 ft

31241 ID10: Drawdown from current location = 0.89 ft

Drawdown from proposed location = 3.14 ft

Net drawdown = 2.2 ft

31241 ID11: Drawdown from current location = 0.84 ft

Drawdown from proposed location = 2.79 ft

Net drawdown = 1.9 ft

31241 ID13: Drawdown from current location = 0.88 ft

Drawdown from proposed location = 2.79 ft

Net drawdown = 1.9 ft

17192 ID7: Drawdown from current location = 0.94 ft

Drawdown from proposed location = 3.40 ft

Net drawdown = 2.5 ft

17102 IDO.	Drawdown from current location = 0.97 ft
17192 ID8:	Drawgown from current location = 0.97 ft

Drawdown from proposed location = 3.54 ft

Net drawdown = 2.6 ft

17192 ID9: Drawdown from current location = 0.94 ft

Drawdown from proposed location = 3.42 ft

Net drawdown = 2.5 ft

10292: Drawdown from current location = 0.63 ft

Drawdown from proposed location = 2.08 ft

Net drawdown = 1.5 ft

FO 86: Drawdown from current location = 0.63 ft

Drawdown from proposed location = 1.96 ft

Net drawdown = 1.3 ft

17012: Drawdown from current location = 0.84 ft

Drawdown from proposed location = 2.59 ft

Net drawdown = 1.8 ft

FO 15: Drawdown from current location = 0.84 ft

Drawdown from proposed location = 2.44 ft

Net drawdown = 1.6 ft

28398: Drawdown from current location = 0.69 ft

Drawdown from proposed location = 2.02 ft

Net drawdown = 1.3 ft

1684: Drawdown from current location = 0.72 ft

Drawdown from proposed location = 2.09 ft

Net drawdown = 1.4 ft

33369: Drawdown from current location = 0.72 ft

Drawdown from proposed location = 2.07 ft

Net drawdown = 1.4 ft

FO 70 ID7: Drawdown from current location = 0.71 ft

Drawdown from proposed location = 2.09 ft

Net drawdown = 1.4 ft

FO 70 ID8: Drawdown from current location = 0.77 ft

Drawdown from proposed location = 2.25 ft

Net drawdown = 1.5 ft

FO 70 ID9: Drawdown from current location = 0.70 ft

Drawdown from proposed location = 2.05 ft

Net drawdown = 1.3 ft

FO 70 ID10: Drawdown from current location = 0.67 ft

Drawdown from proposed location = 1.97 ft

Net drawdown = 1.3 ft

FO 18: Drawdown from current location = 0.70 ft

Drawdown from proposed location = 2.10 ft

Net drawdown = 1.4 ft

32548 & 43702: Drawdown from current location = 0.57 ft

Drawdown from proposed location = 1.73 ft

Net drawdown = 1.2 ft

41364: Drawdown from current location = 0.93 ft

Drawdown from proposed location = 2.88 ft

Net drawdown = 2.0 ft

6853: Drawdown from current location = 0.65 ft

Drawdown from proposed location = 2.07 ft

Net drawdown = 1.4 ft

Domestic 1: Drawdown from current location = 0.84 ft

Drawdown from proposed location = 3.02 ft

Net drawdown = 2.2 ft

Domestic 2: Drawdown from current location = 0.84 ft

Drawdown from proposed location = 2.92 ft

Net drawdown = 2.1 ft

Domestic 3: Drawdown from current location = 0.70 ft

Drawdown from proposed location = 2.21 ft

Net drawdown = 1.5 ft

Domestic 4: Drawdown from current location = 0.73 ft

Drawdown from proposed location = 2.17 ft

Net drawdown = 1.4 ft

Domestic 5: Drawdown from current location = 0.83 ft

Drawdown from proposed location = 2.40 ft

Net drawdown = 1.6 ft

Domestic 6: Drawdown from current location = 0.72 ft

Drawdown from proposed location = 2.08 ft

Net drawdown = 1.4 ft

Domestic 7: Drawdown from current location = 0.60 ft

Drawdown from proposed location = 1.86 ft

Net drawdown = 1.3 ft

Domestic 8: Drawdown from current location = 0.82 ft

Drawdown from proposed location = 2.54 ft

Net drawdown = 1.7 ft

Domestic 9: Drawdown from current location = 0.68 ft

Drawdown from proposed location = 2.08 ft

Net drawdown = 1.4 ft

Domestic 10: Drawdown from current location = 0.91 ft

Drawdown from proposed location = 2.63 ft

Net drawdown = 1.7 ft

Domestic 11:

Drawdown from current location = 0.77 ft

Drawdown from proposed location = 2.20 ft

Net drawdown = 1.4 ft

Domestic 12:

Drawdown from current location = 0.58 ft

Drawdown from proposed location = 1.75 ft

Net drawdown = 1.2 ft

Domestic 13:

Drawdown from current location = 0.61 ft

Drawdown from proposed location = 1.85 ft

Net drawdown = 1.2 ft

Domestic 14:

Drawdown from current location \neq 0.73 ft

Drawdown from proposed location = 2.19 ft

Net drawdown = 1.5 ft

Net drawdown exceeds the drawdown allowance of 1.0 ft for any wells within 1 mile of the proposed location. The GMD3 model predicts that the water table will deplete by more than 40% of the remaining saturated thickness over the next 25 years. Therefore, all neighboring wells are critical. Allowable quantities will need to be further reduced for this proposal to be consistent with the guidelines set forth by GMD3.