

5953: Drawdown from current location = 1.53 ft
Drawdown from proposed location = 4.86 ft
Net drawdown = **3.3 ft**

8975 & 11369: Drawdown from current location = 0.94 ft
Drawdown from proposed location = 2.24 ft
Net drawdown = **2.2 ft**

7520: Drawdown from current location = 1.41 ft
Drawdown from proposed location = 4.78 ft
Net drawdown = **3.4 ft**

21259: Drawdown from current location = 0.91 ft
Drawdown from proposed location = 2.24 ft
Net drawdown = **1.3 ft**

Domestic 1: Drawdown from current location = 1.13 ft
Drawdown from proposed location = 2.20ft
Net drawdown = **1.1 ft**

Domestic 2: Drawdown from current location = 1.11 ft
Drawdown from proposed location = 2.22 ft
Net drawdown = **1.1 ft**

Domestic 3: Drawdown from current location = 1.61 ft
Drawdown from proposed location = 6.18 ft
Net drawdown = **4.6 ft**

Domestic 4: Drawdown from current location = 1.07 ft
Drawdown from proposed location = 2.62 ft
Net drawdown = **1.5 ft**

Net drawdown exceeds the drawdown allowance for the wells operated under water right nos. 5953 and 7520. Both wells are owned and operated by the applicant, so critical well analysis was not performed on them. The drawdown allowance of 2.5 ft (saturated thickness is 102 ft at well location) for Domestic 3 is exceeded and this well is not owned by the applicant. Critical well analysis was performed, and the results are as follows.

Critical Well Evaluation:

Domestic 3:

Water Column = 102 ft

DP = 4.6 ft (Net drawdown from the proposal indicated above)

DE = 44.5 ft (Water level decline from 2021 through 2046 based upon GMD3 model)

DT = 49.1 ft

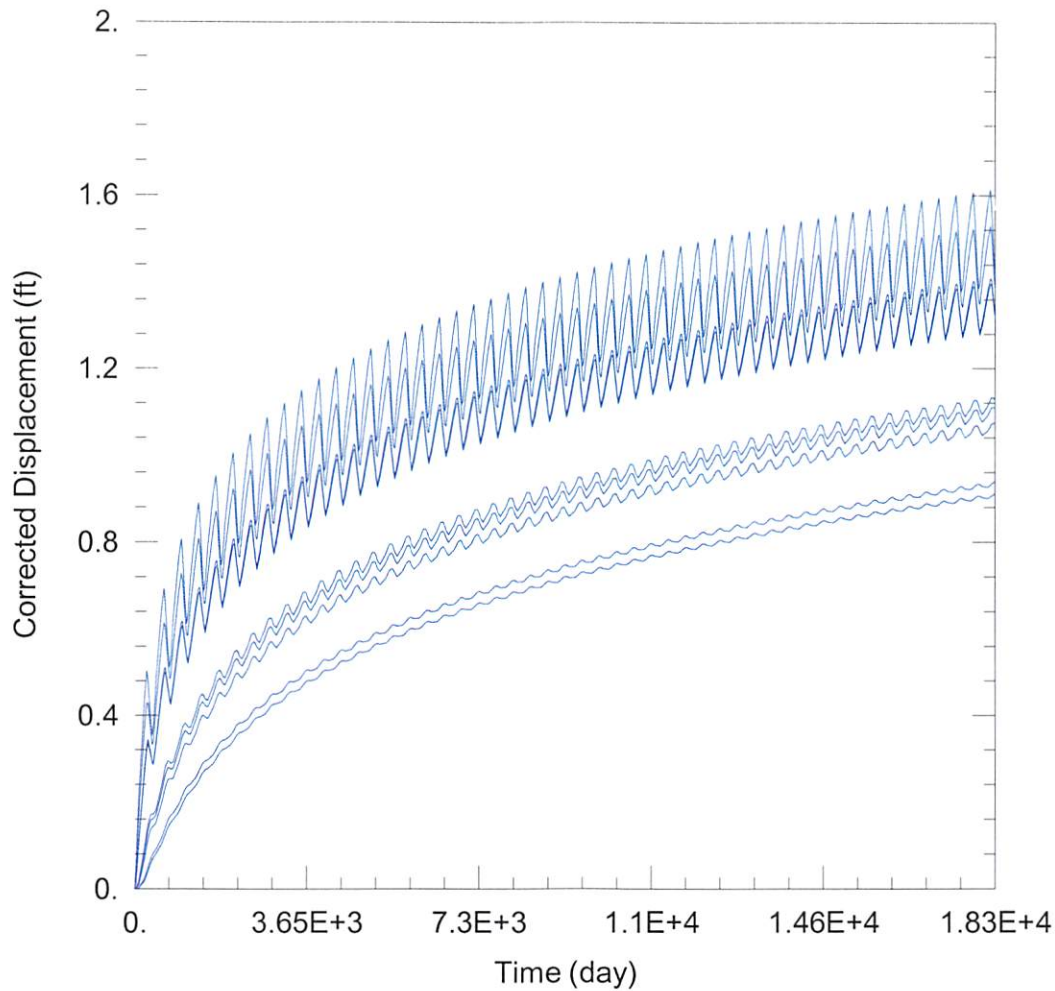
Economic Drawdown Constraint (EDC) = $0.4 * 102 \text{ ft} = 40.8 \text{ ft}$

Physical Drawdown Constraint (PDC) = $102 \text{ ft} - 20 \text{ ft} = 82 \text{ ft}$

Total drawdown of 49.1 ft is greater than the EDC, so this well is **critical**.

Conclusion:

The proposed move is located in an area with depleted aquifer and if the new well is operated at the proposed rate and quantity, it is likely to create noticeable effects on neighboring critical wells. GMD3 staff recommends a rate limitation of 500 gpm and a quantity limitation of 179 AF at the proposed new well location. This rate and quantity would reduce the net effect on the neighboring critical domestic well to 2.5 ft.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\29808\29808 Current.aqt
 Date: 04/15/21 Time: 16:56:57

PROJECT INFORMATION

Company: GMD 3
 Project: 29808
 Location: Finney County
 Test Well: 29808

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
29808	36180	336260

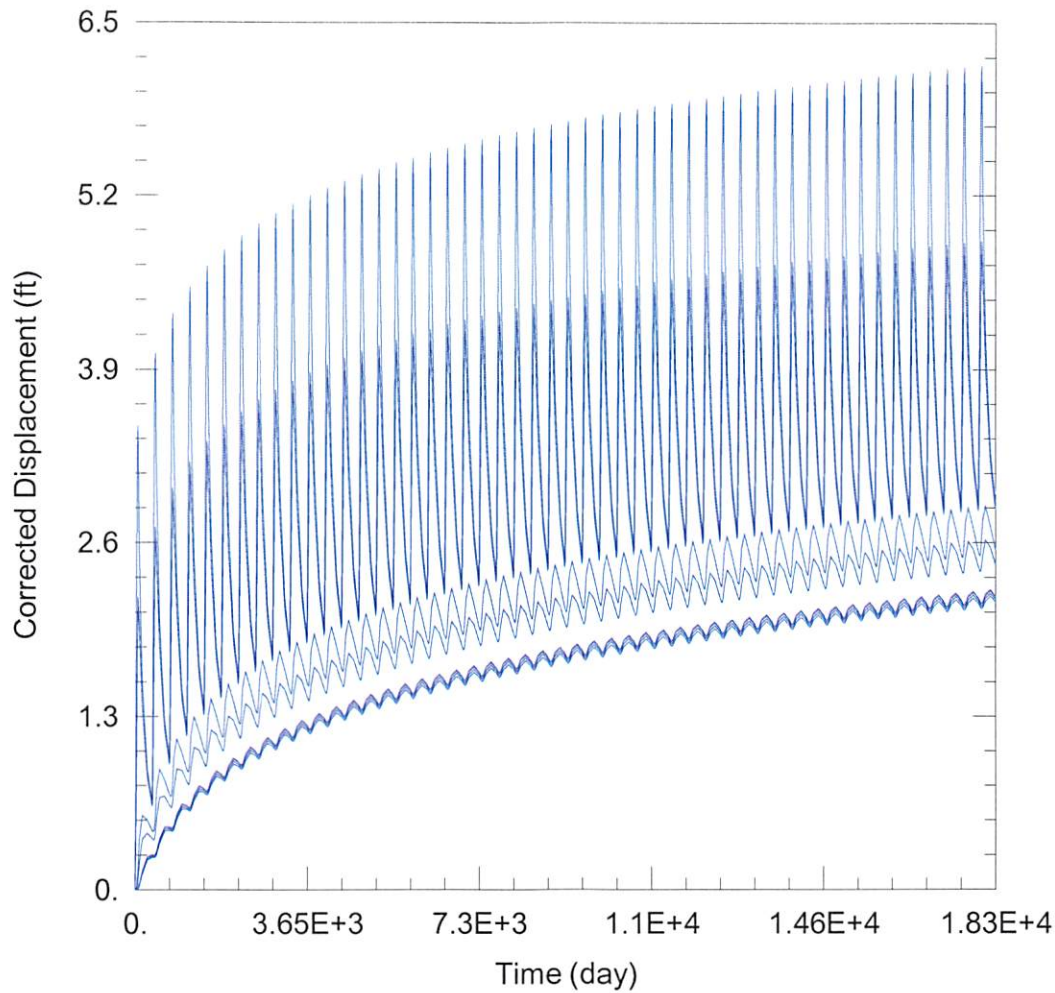
Observation Wells

Well Name	X (ft)	Y (ft)
□	36180	336260
□ 29807	33559	336421
□ 5953	38184	335371
□ 8975 & 11369	41450	335077
□ 7520	36077	333682
□ 21259	41221	333686
□ Domestic 1	35170	340029
□ Domestic 2	32537	338021
□ Domestic 3	37782	335132
□ Domestic 4	33802	332676

SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\29808\29808 Proposed.aqt
 Date: 04/15/21 Time: 16:57:12

PROJECT INFORMATION

Company: GMD 3
 Project: 29808
 Location: Finney County
 Test Well: 29808

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
29808	36602	335211

Observation Wells

Well Name	X (ft)	Y (ft)
□	36602	335211
□ 29807	33559	336421
□ 5953	38184	335371
□ 8975 & 11369	41450	335077
□ 7520	36077	333682
□ 21259	41221	333686
□ Domestic 1	35170	340029
□ Domestic 2	32537	338021
□ Domestic 3	37782	335132
□ Domestic 4	33802	332676

SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis