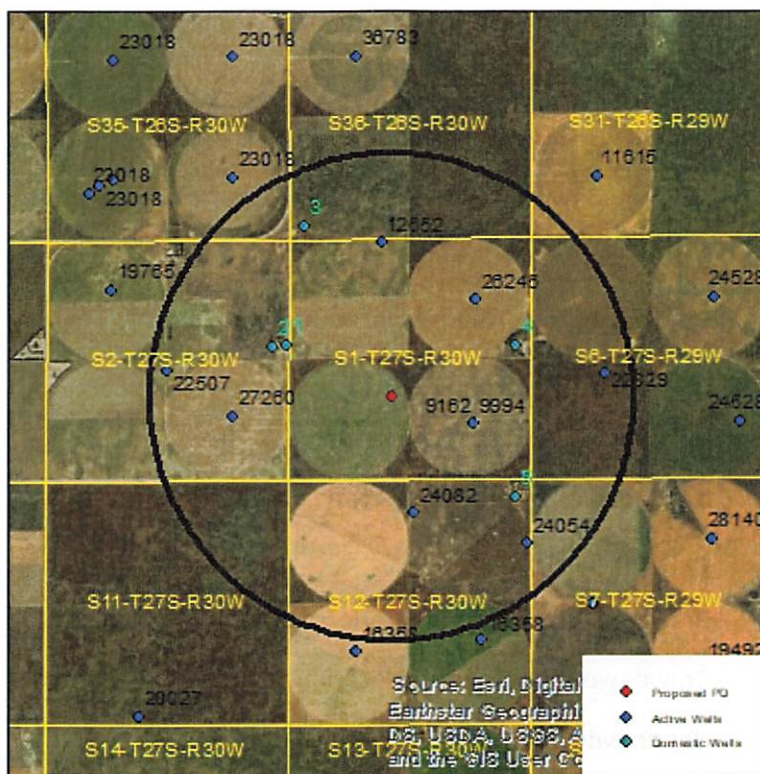


Evaluation of proposed move for Water Right Nos 9162 D1 and 9994 D1

Proposed: Move water right nos. 9162 D1 and 9994 D1 a distance of 1,885 ft to the northwest.



Wells within 1 mile: 26245, 12652, 27260, 22507, 24082, 24054, 22829, and five domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 76 ft, based upon the GMD3 model. For saturated thickness between than 75 ft and 100 ft, the drawdown allowance is 2.0 ft.

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

$S = 0.25$, $T = 7,693.6 \text{ ft}^2/\text{day}$, $tp_{\text{current}} = 120$ days (no observed rate, so assumed 120 days),

$Q_{\text{current}} = 207 \text{ gpm}$ (based upon avg use and 120 day operation), $tp_{\text{proposed}} = 131$ days, $Q_{\text{proposed}} = 995 \text{ gpm}$

Theis drawdowns were calculated as follows:

26245: Drawdown from current location = 0.81 ft
 Drawdown from proposed location = 4.10 ft
 Net drawdown = **3.3 ft**

12652: Drawdown from current location = 0.60ft
 Drawdown from proposed location = 3.71 ft
 Net drawdown = **3.1 ft**

27260: Drawdown from current location = 0.54 ft
Drawdown from proposed location = 3.62 ft
Net drawdown = **3.1 ft**

22507: Drawdown from current location = 0.46 ft
Drawdown from proposed location = 2.92 ft
Net drawdown = **2.5 ft**

24082: Drawdown from current location = 0.89 ft
Drawdown from proposed location = 4.30 ft
Net drawdown = **3.4 ft**

24054: Drawdown from current location = 0.77 ft
Drawdown from proposed location = 3.12 ft
Net drawdown = **2.3 ft**

22829: Drawdown from current location = 0.74 ft
Drawdown from proposed location = 3.01 ft
Net drawdown = **2.3 ft**

Domestic 1: Drawdown from current location = 0.59 ft
Drawdown from proposed location = 4.37 ft
Net drawdown = **3.8 ft**

Domestic 2: Drawdown from current location = 0.58 ft
Drawdown from proposed location = 4.12 ft
Net drawdown = **3.5 ft**

Domestic 3: Drawdown from current location = 0.51 ft
Drawdown from proposed location = 3.22 ft
Net drawdown = **2.7 ft**

Domestic 4: Drawdown from current location = 1.00 ft
Drawdown from proposed location = 3.98 ft
Net drawdown = **3.0 ft**

Domestic 5: Drawdown from current location = 1.03 ft
 Drawdown from proposed location = 3.60 ft
 Net drawdown = **2.6 ft**

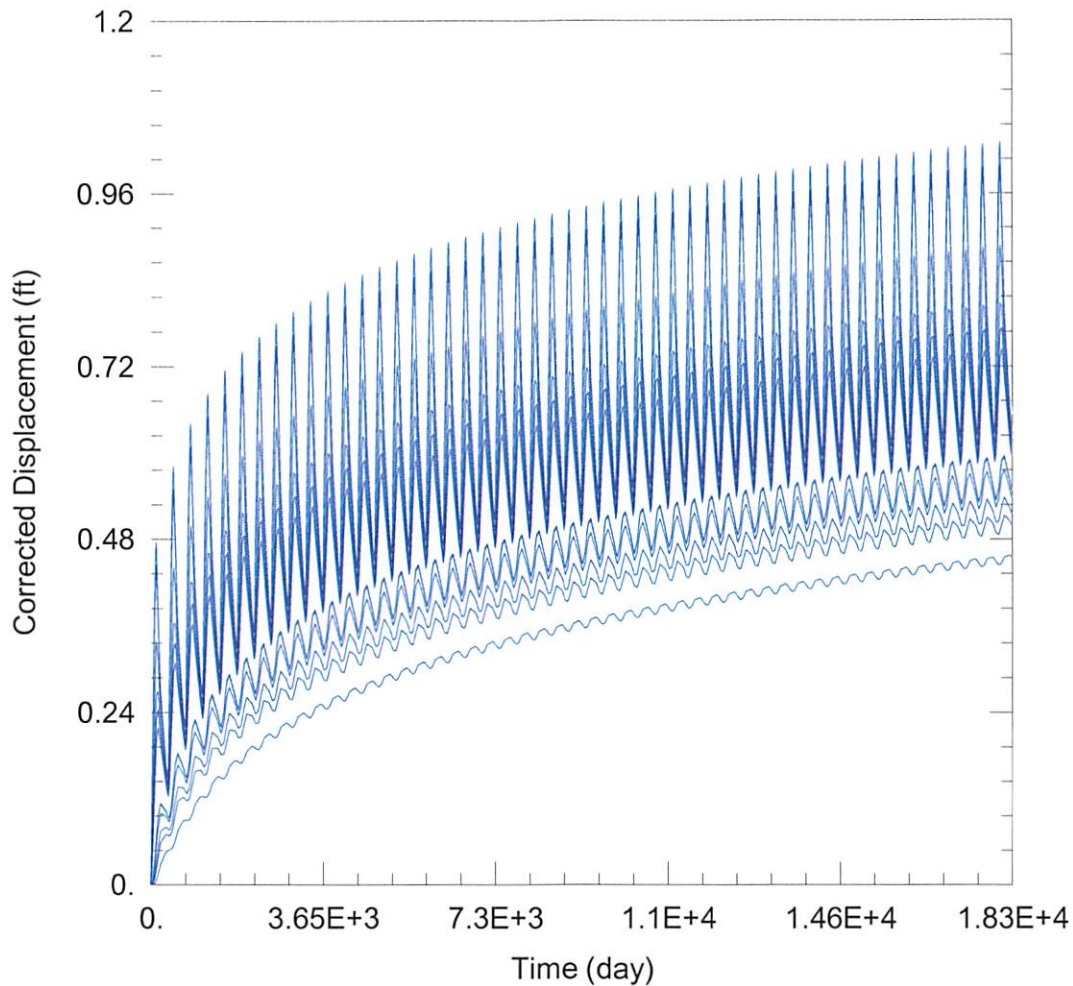
Net drawdown exceeds the drawdown allowance of 2.0 ft for all wells within 1 mile of the proposed location. The GMD3 model predicts a water table decline of 33 ft over the next 25 years in this area. This is more than 40% of the remaining saturated thickness, so all wells are critical.

Conclusion:

Based upon information from the GMD3 model, this proposal will cause noticeable effects on neighboring critical wells, likely making an existing problem worse. GMD3 staff recommends limiting the proposed rate of 955 gpm and quantity of 575 AF to a rate of 450 gpm and 350 AF. This would reduce net effect on neighboring wells to the following:

26245: Net drawdown = **1.6 ft**
12652: Net drawdown = **1.6 ft**
27260: Net drawdown = **1.6 ft**
22507: Net drawdown = **1.3 ft**
24082: Net drawdown = **1.6 ft**
22829: Net drawdown = **1.1 ft**
Domestic 1: Net drawdown = **2.0 ft**
Domestic 2: Net drawdown = **1.9 ft**
Domestic 3: Net drawdown = **1.4 ft**
Domestic 4: Net drawdown = **1.4 ft**
Domestic 5: Net drawdown = **1.1 ft**

The GMD3 staff recommendation is for a water right limitation at the proposed location, not a permanent reduction of right. The applicant would maintain his full water right for a future analysis at a different location.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2020_moves\9162D1_9994D1\9162D1 & 9994D1 Current.aqt
 Date: 07/07/20 Time: 10:38:20

PROJECT INFORMATION

Company: GMD 3
 Project: 9162D1 & 9994D1
 Location: Gray County
 Test Well: 9162D1 & 9994D1

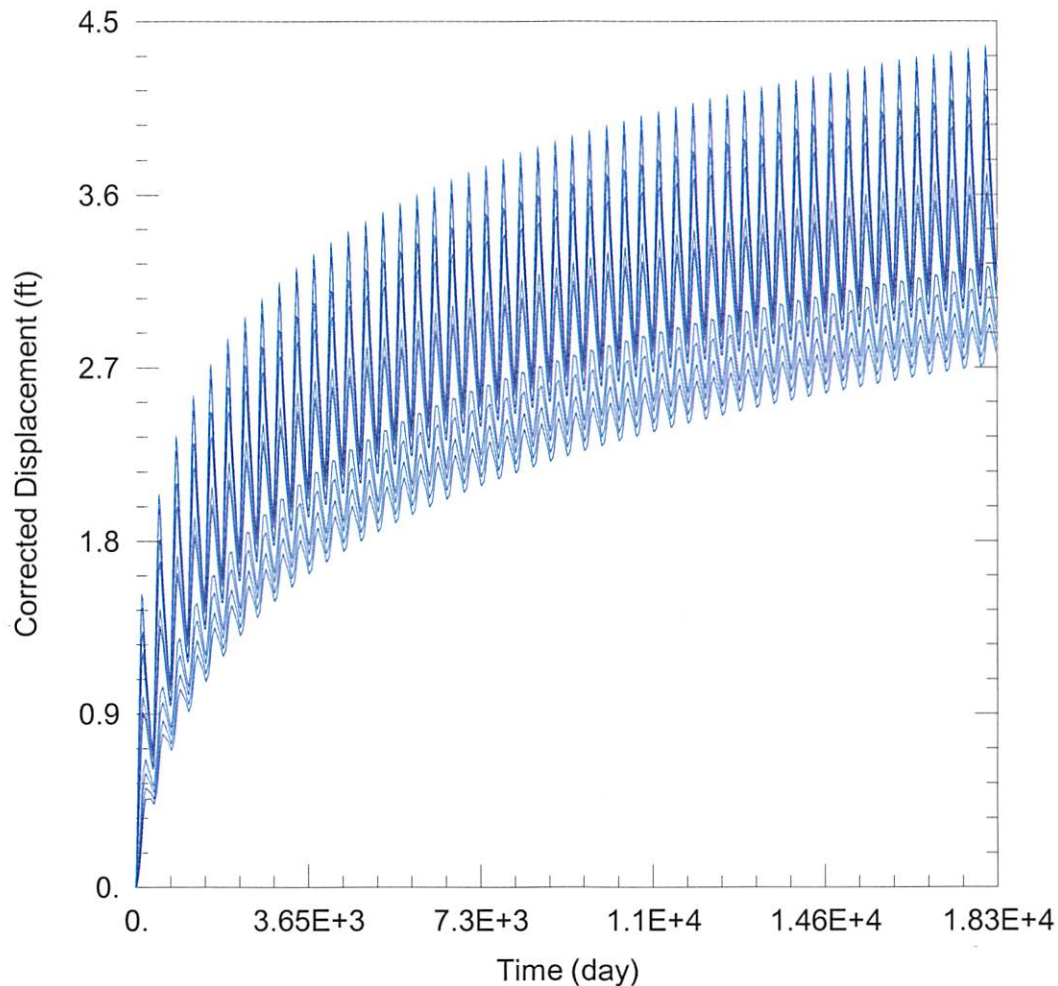
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
9162 & 9994	72930	309915

Observation Wells

Well Name	X (ft)	Y (ft)
□	72930	309915
□ 26245	72987	312601
□ 12652	70924	313817
□ 27260	67707	310058
□ 22507	66245	311034
□ 24082	71652	307952
□ 24054	74126	307297
□ 22829	75799	311023
□ Domestic 1	68862	311623
□ Domestic 2	68577	311569
□ Domestic 3	69252	314189
□ Domestic 4	73863	311618
□ Domestic 5	73861	308333



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2020_moves\9162D1_9994D1\9162D1 & 9994D1 Proposed.aqt
 Date: 07/07/20 Time: 10:38:13

PROJECT INFORMATION

Company: GMD 3
 Project: 9162D1 & 9994D1
 Location: Gray County
 Test Well: 9162D1 & 9994D1

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
9162 & 9994	71141	310508

Observation Wells

Well Name	X (ft)	Y (ft)
□	71141	310508
□ 26245	72987	312601
□ 12652	70924	313817
□ 27260	67707	310058
□ 22507	66245	311034
□ 24082	71652	307952
□ 24054	74126	307297
□ 22829	75799	311023
□ Domestic 1	68862	311623
□ Domestic 2	68577	311569
□ Domestic 3	69252	314189
□ Domestic 4	73863	311618
□ Domestic 5	73861	308333