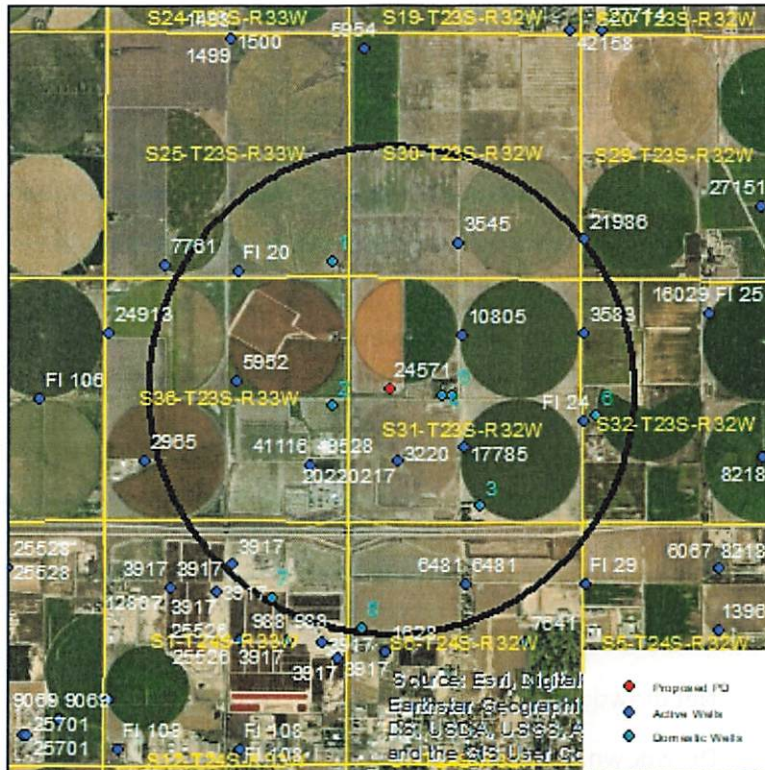


Evaluation of proposed move for Water Right No. 3220

Proposed: Move water right no. 3220 to the well currently authorized under water right no. 24571, 1,565 ft to the northwest.



Wells within 1 mile: FI 20, 3545, 5952, 41116 & 43528, 10805, 17785, 3583, FI 24, 3917 & 12807, 6481, and 8 domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 166 ft, based upon the driller’s log and an observation well in section 31-23-32. For saturated thickness between 150 ft and 200 ft, the drawdown allowance is 3.5 ft.

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

$S = 0.2335, T = 9938.4 \text{ ft}^2/\text{day},$

$tp_{\text{current}} = 41 \text{ days (based on average use and reported rate)}, Q_{\text{current}} = 550 \text{ gpm (based on 2021 water use report)}, tp_{\text{proposed}} = 27 \text{ days}, Q_{\text{proposed}} = 1342 \text{ gpm}$

Water right no. 24571 was moved to this location in 2021. Theis drawdowns that were calculated for that move have been added to the proposed move to show combined effect. The calculations are as follows:

FI 20: Drawdown from current location = 0.41 ft
Drawdown from proposed location = 0.78 ft
Net drawdown = **0.4 ft**
Drawdown from 24571 move = 0.3 ft
Combined drawdown = **0.7 ft**

3545: Drawdown from current location = 0.43 ft
Drawdown from proposed location = 0.89 ft
Net drawdown = **0.5 ft**
Drawdown from 24571 move = 0.4 ft
Combined drawdown = **0.9 ft**

5952: Drawdown from current location = 0.51 ft
Drawdown from proposed location = 0.91 ft
Net drawdown = **0.4 ft**
Drawdown from 24571 move = 0.3 ft
Net drawdown = **0.7 ft**

41116 & 43528: Drawdown from current location = 0.94 ft
Drawdown from proposed location = 1.22 ft
Net drawdown = **0.3 ft**
Drawdown from 24571 move = 0.0 ft
Combined drawdown = **0.3 ft**

10805: Drawdown from current location = 0.61 ft
Drawdown from proposed location = 1.53 ft
Net drawdown = **0.9 ft**
Drawdown from 24571 move = 0.9 ft
Combined drawdown = **1.8 ft**

17785: Drawdown from current location = 1.16 ft
Drawdown from proposed location = 1.43 ft
Net drawdown = **0.3 ft**
Drawdown from 24571 move = 0.6 ft
Combined drawdown = **0.9 ft**

3583: Drawdown from current location = 0.43 ft
Drawdown from proposed location = 0.76 ft
Net drawdown = **0.3 ft**

FI 24: Drawdown from current location = 0.40 ft
Drawdown from proposed location = 0.65 ft
Net drawdown = **0.3**
Drawdown from 24571 move = 0.3 ft
Combined drawdown = **0.6 ft**

3917 & 12807: Drawdown from current location = 0.48 ft
Drawdown from proposed location = 0.68 ft
Net drawdown = **0.2 ft**
Drawdown from 24571 move = 0.0 ft
Net drawdown = **0.2 ft**

6481: Drawdown from current location = 0.62 ft
Drawdown from proposed location = 0.74 ft
Net drawdown = **0.1 ft**
Drawdown from 24571 move = 0.1 ft
Combined drawdown = **0.2 ft**

Domestic 1: Drawdown from current location = 0.46 ft
Drawdown from proposed location = 0.98 ft
Net drawdown = **0.5 ft**
Drawdown from 24571 move = 0.4 ft
Combined drawdown = **0.9 ft**

Domestic 2: Drawdown from current location = 0.98 ft
Drawdown from proposed location = 2.26 ft
Net drawdown = **1.3 ft**
Drawdown from 24571 move = 1.2 ft
Combined drawdown = **2.5 ft**

Domestic 3: Drawdown from current location = 0.88 ft
Drawdown from proposed location = 0.94 ft
Net drawdown = **0.1 ft**
Drawdown from 24571 move = 0.2 ft
Combined drawdown = **0.3 ft**

Domestic 4: Drawdown from current location = 1.04 ft
Drawdown from proposed location = 2.68 ft
Net drawdown = **1.6 ft**
Drawdown from 24571 move = 1.7 ft
Combined drawdown = **3.3 ft**

Domestic 5: Drawdown from current location = 0.95 ft
Drawdown from proposed location = 2.21 ft
Net drawdown = **1.3 ft**
Drawdown from 24571 move = 1.3 ft
Combined drawdown = **2.6 ft**

Domestic 6: Drawdown from current location = 0.47 ft
Drawdown from proposed location = 0.74 ft
Net drawdown = **0.2 ft**
Drawdown from 24571 move = 0.2 ft
Combined drawdown = **0.4 ft**

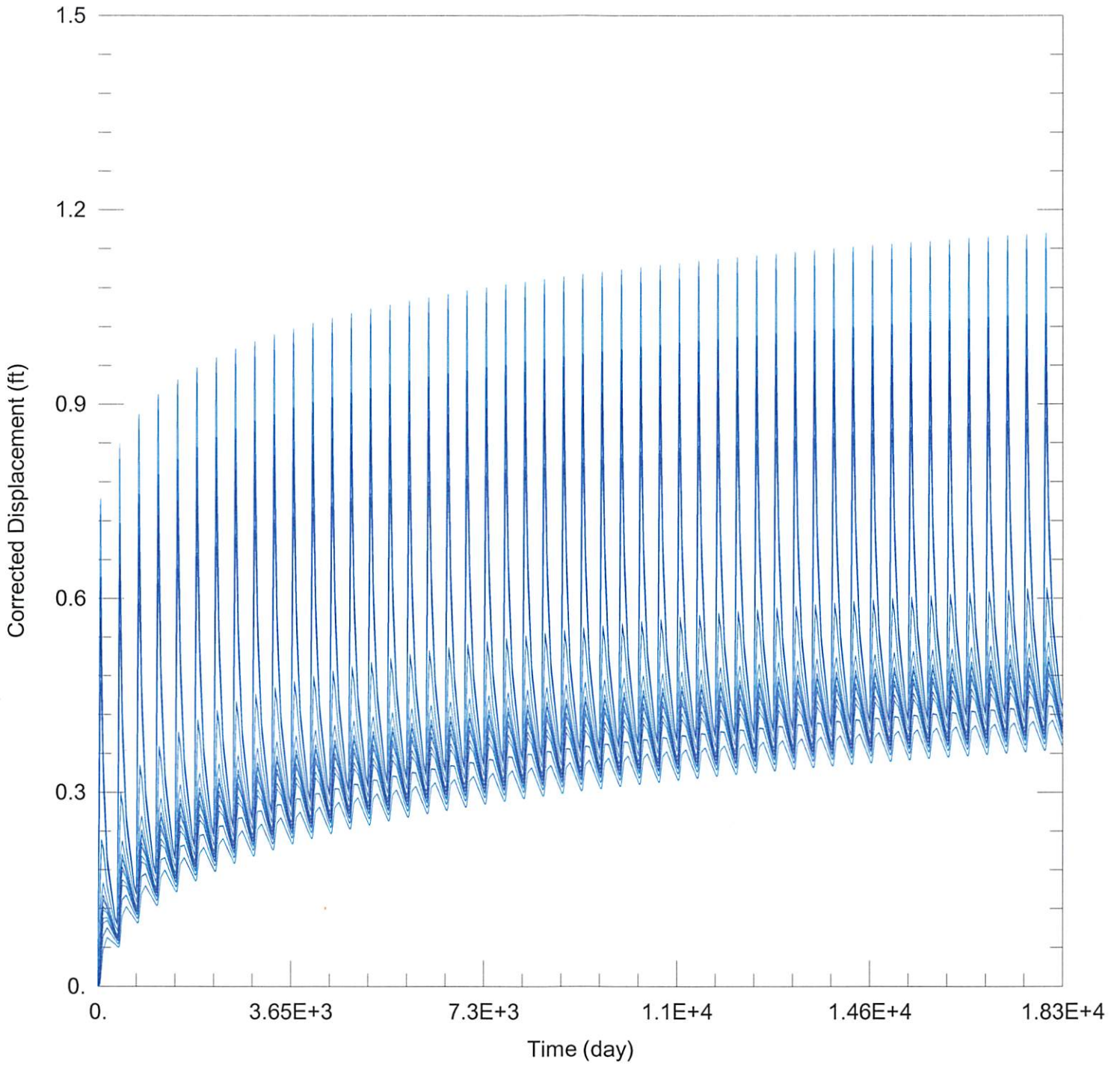
Domestic 7: Drawdown from current location = 0.50 ft
Drawdown from proposed location = 0.68 ft
Net drawdown = **0.2 ft**
Drawdown from 24571 move = 0.0 ft
Combined drawdown = **0.2 ft**

Domestic 8: Drawdown from current location = 0.53 ft
Drawdown from proposed location = 0.67 ft
Net drawdown = **0.1 ft**
Drawdown from 24571 move = 0.0 ft
Combined drawdown = **0.1 ft**

Net drawdown does not exceed the drawdown allowance of 3.5 ft for any well within 1 mile of the proposed location. Therefore, critical well analysis is not necessary.

Conclusion:

The proposed move is likely to create minimal effects on neighboring wells and is unlikely to cause impairment. GMD3 staff recommends approval of this proposal.



WELL TEST ANALYSIS

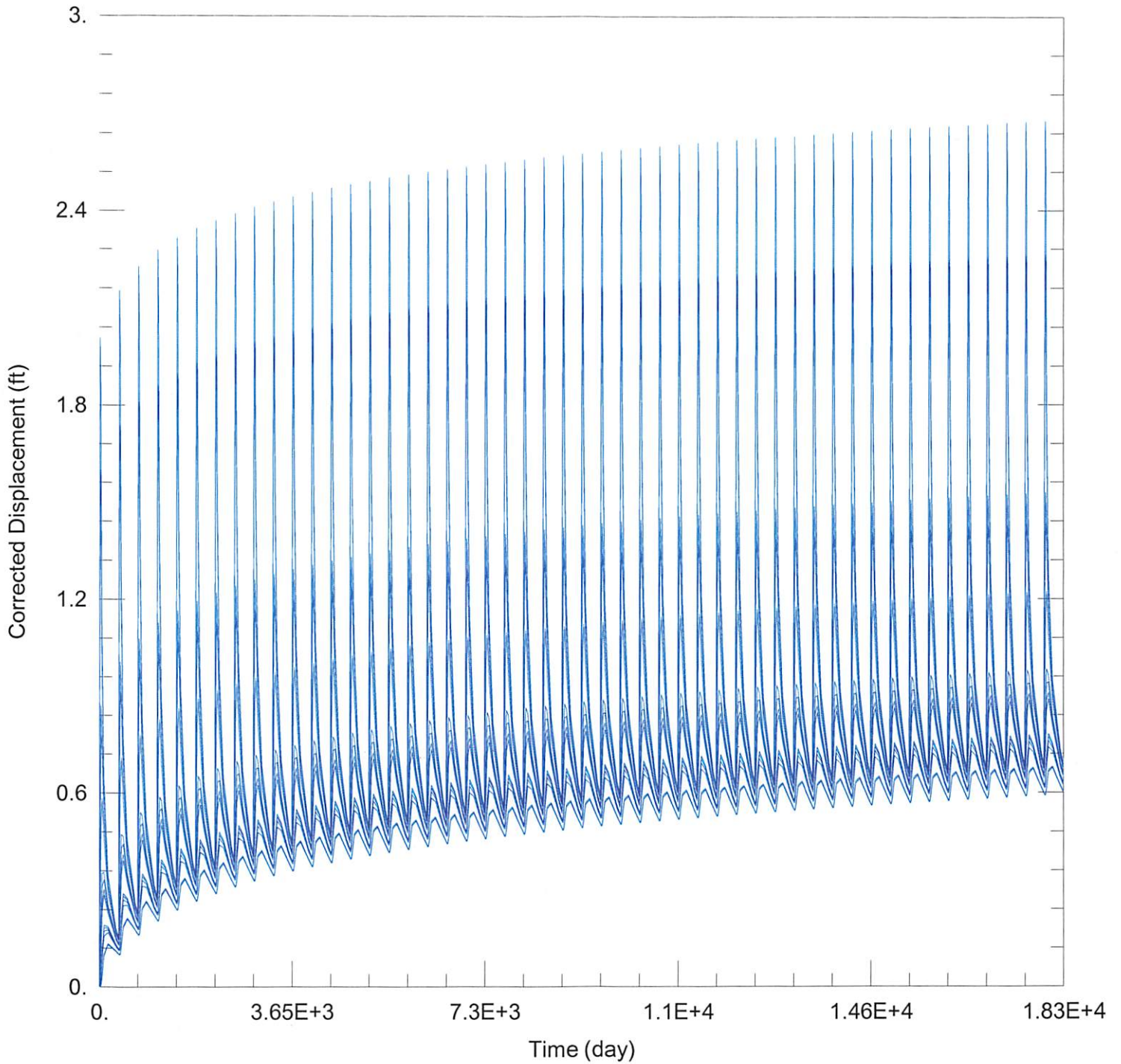
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 Date: 03/22/23 Time: 16:12:46

PROJECT INFORMATION

Company: GMD 3
 Project: 3220
 Location: Finney County

WELL DATA

Pumping Wells			Observation Wells		
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
3220	-23125	412399	□	-23125	412399



WELL TEST ANALYSIS

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 Date: 03/22/23 Time: 16:12:35

PROJECT INFORMATION

Company: GMD 3
 Project: 3220
 Location: Finney County

WELL DATA

Pumping Wells			Observation Wells		
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
3220	-23267	413957	□	-23267	413957