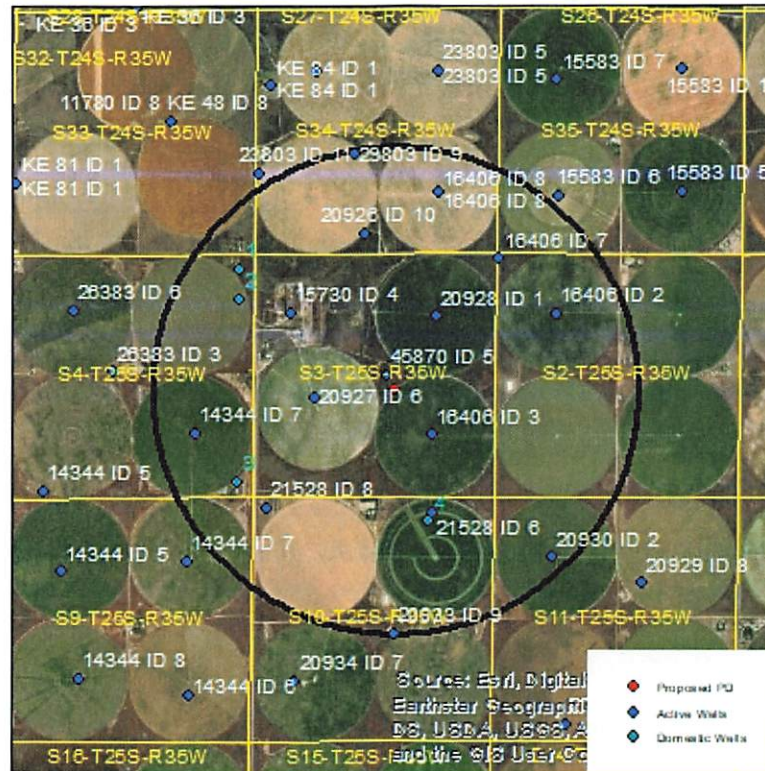


Evaluation of proposed move for Water Right No. 16406

Proposed: Move water right no. 16406 ID3 to a new well location, a distance of 1,266 ft to the northwest. This move location does not meet the spacing to the neighboring well authorized under water right no. 45870. A waiver of rules will be required to authorize the proposed change.



Wells within 1 mile: 23803, 20928 ID1, 20928 ID10, 16406 ID2, 16406 ID7, 16406 ID8, 14344, 15730, 20927, 45870, 21528 ID6, 21528 ID8, 20930, and four domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 219 ft, based upon the GMD3 model. For saturated thickness greater than 200 ft, the drawdown allowance is 4.0 ft.

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

$S = 0.2752$, $T = 20,599 \text{ ft}^2/\text{day}$, $tp_{\text{current}} = 120 \text{ days}$ (assumed), $Q_{\text{current}} = 360 \text{ gpm}$ (based on average use and assumed operation time), $tp_{\text{proposed}} = 58.5 \text{ days}$, $Q_{\text{proposed}} = 975 \text{ gpm}$

Theis drawdowns were calculated as follows:

23803: Drawdown from current location = 0.40 ft
 Drawdown from proposed location = 0.61 ft
 Net drawdown = **0.2 ft**

20928 ID1: Drawdown from current location = 0.71 ft
Drawdown from proposed location = 1.42 ft
Net drawdown = **0.7 ft**

20928 ID10: Drawdown from current location = 0.49 ft
Drawdown from proposed location = 0.83 ft
Net drawdown = **0.3 ft**

16406 ID2: Drawdown from current location = 0.56 ft
Drawdown from proposed location = 0.76 ft
Net drawdown = **0.2 ft**

16406 ID7: Drawdown from current location = 0.53 ft
Drawdown from proposed location = 0.80 ft
Net drawdown = **0.3 ft**

16406 ID8: Drawdown from current location = 0.46 ft
Drawdown from proposed location = 0.70 ft
Net drawdown = **0.2 ft**

14344: Drawdown from current location = 0.46 ft
Drawdown from proposed location = 0.69 ft
Net drawdown = **0.2 ft**

15730: Drawdown from current location = 0.53 ft
Drawdown from proposed location = 1.00 ft
Net drawdown = **0.5 ft**

20927: Drawdown from current location = 0.69 ft
Drawdown from proposed location = 1.46 ft
Net drawdown = **0.8 ft**

45870: Drawdown from current location = 0.94 ft
Drawdown from proposed location = 3.68 ft
Net drawdown = **2.7 ft**

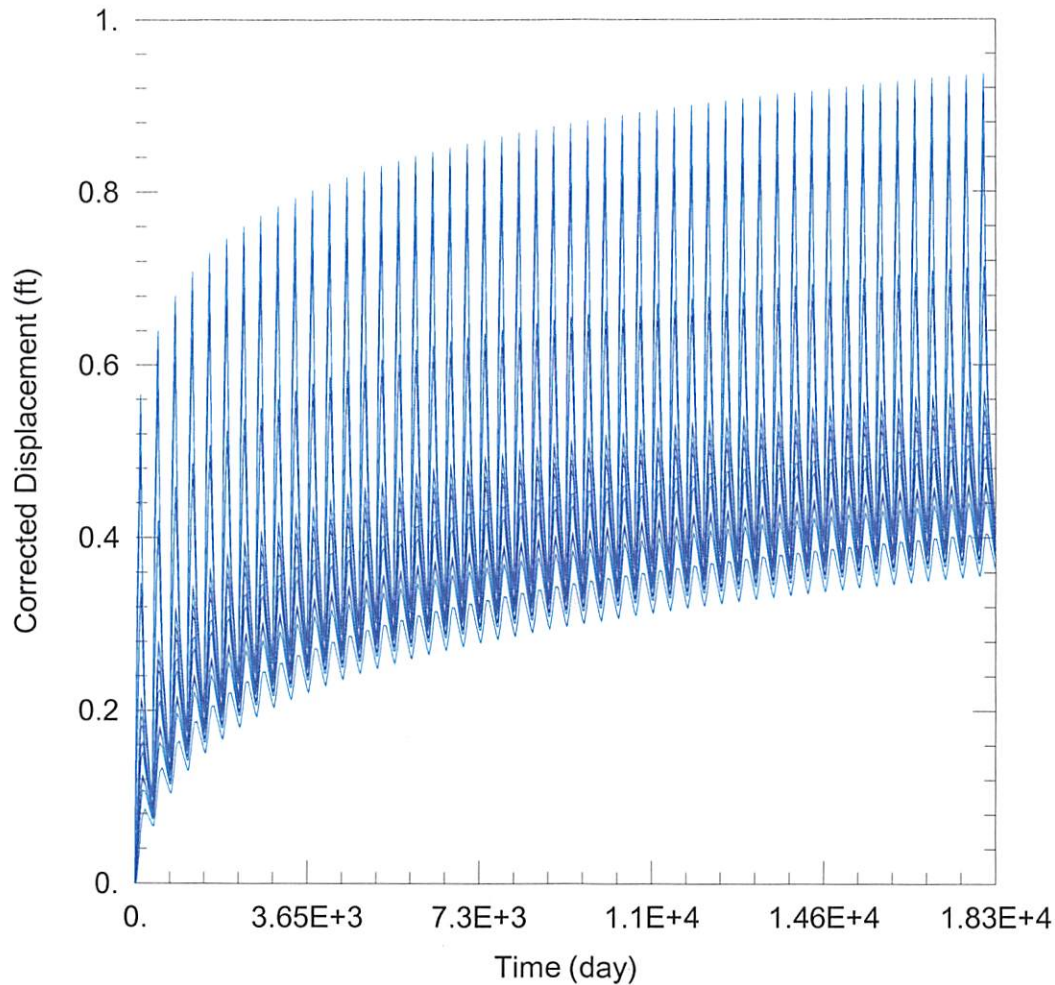
21528 ID6:	Drawdown from current location = 0.92 ft
	Drawdown from proposed location = 1.02 ft
	Net drawdown = 0.1 ft
21528 ID8:	Drawdown from current location = 0.55 ft
	Drawdown from proposed location = 0.77 ft
	Net drawdown = 0.2 ft
20930:	Drawdown from current location = 0.57 ft
	Drawdown from proposed location = 0.64 ft
	Net drawdown = 0.1 ft
Domestic 1:	Drawdown from current location = 0.44 ft
	Drawdown from proposed location = 0.71 ft
	Net drawdown = 0.3 ft
Domestic 2:	Drawdown from current location = 0.46 ft
	Drawdown from proposed location = 0.75 ft
	Net drawdown = 0.3 ft
Domestic 3:	Drawdown from current location = 0.51 ft
	Drawdown from proposed location = 0.75 ft
	Net drawdown = 0.2 ft
Domestic 4:	Drawdown from current location = 0.86 ft
	Drawdown from proposed location = 0.97 ft
	Net drawdown = 0.1 ft

Net drawdown does not exceed the drawdown allowance of 4.0 ft for any well within 1 mile of the proposed location. Therefore, critical well analysis is not necessary.

Conclusion:

The GMD3 model estimates high values for specific yield and transmissivity in the area of this proposal. These conditions allow for strong wells with small well-to-well interaction effects. Based on model values, the proposed move is likely to create minimal effects on neighboring wells and appears unlikely to cause impairment. However, the proposed location is only 354 ft away from nearby water right no. 45870. This is much closer than spacing rules allow. If the aquifer water levels decline, conditions will change, and effects will become greater. The proposed well also is the senior water right, so the neighboring water right will not have the ability to claim impairment later and will have limited options

to relocate if problems occur. Any concerned neighbors should contact GMD3 at (620) 275-7147 or the Division of Water Resources at (620) 276-2901.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2022_moves\16406\16406 Current.aqt

Date: 05/23/22

Time: 15:09:35

PROJECT INFORMATION

Company: GMD 3

Project: 16406

Location: Kearny County

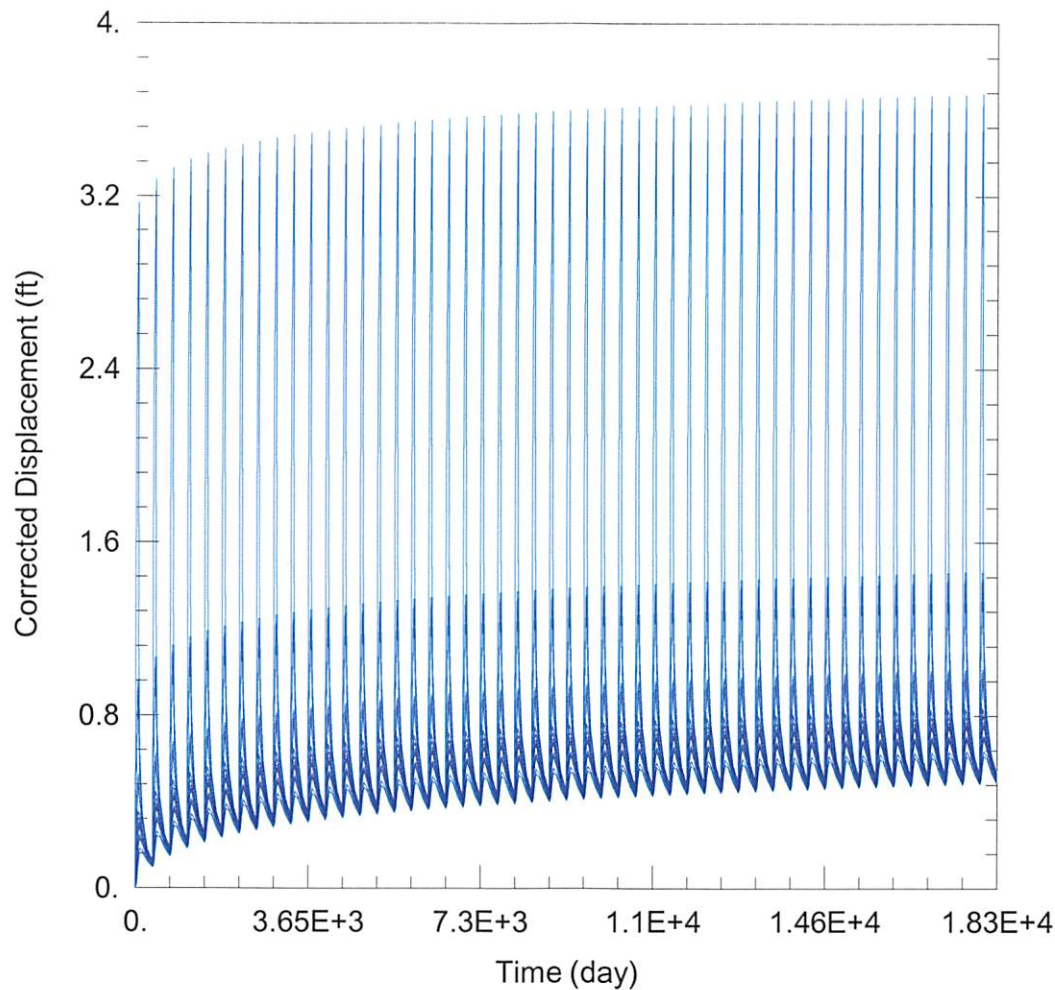
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
16406 ID3	-99589	375246

Observation Wells

Well Name	X (ft)	Y (ft)
□ 23803	-99589	375246
□ 20928 ID1	-101297	381344
□ 20928 ID10	-99527	377809
□ 16406 ID2	-101073	379614
□ 16406 ID7	-96896	377872
□ 16046 ID8	-98150	379064
□ 14344	-99483	380489
□ 15730	-104767	375270
□ 20927	-102695	377876
□ 45870	-102154	376035
□ 21528 ID6	-100594	376513
□ 21528 ID8	-99595	373567
□ 20930	-103192	373657
□ 20930	-97001	372596



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2022_moves\16406\16406 Proposed.aqt

Date: 05/23/22

Time: 15:09:22

PROJECT INFORMATION

Company: GMD 3

Project: 16406

Location: Kearny County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
16406 ID3	-100405	376214

Observation Wells

Well Name	X (ft)	Y (ft)
□	-100405	376214
□ 23803	-101297	381344
□ 20928 ID1	-99527	377809
□ 20928 ID10	-101073	379614
□ 16406 ID2	-96896	377872
□ 16406 ID7	-98150	379064
□ 16046 ID8	-99483	380489
□ 14344	-104767	375270
□ 15730	-102695	377876
□ 20927	-102154	376035
□ 45870	-100594	376513
□ 21528 ID6	-99595	373567
□ 21528 ID8	-103192	373657
□ 20930	-97001	372596