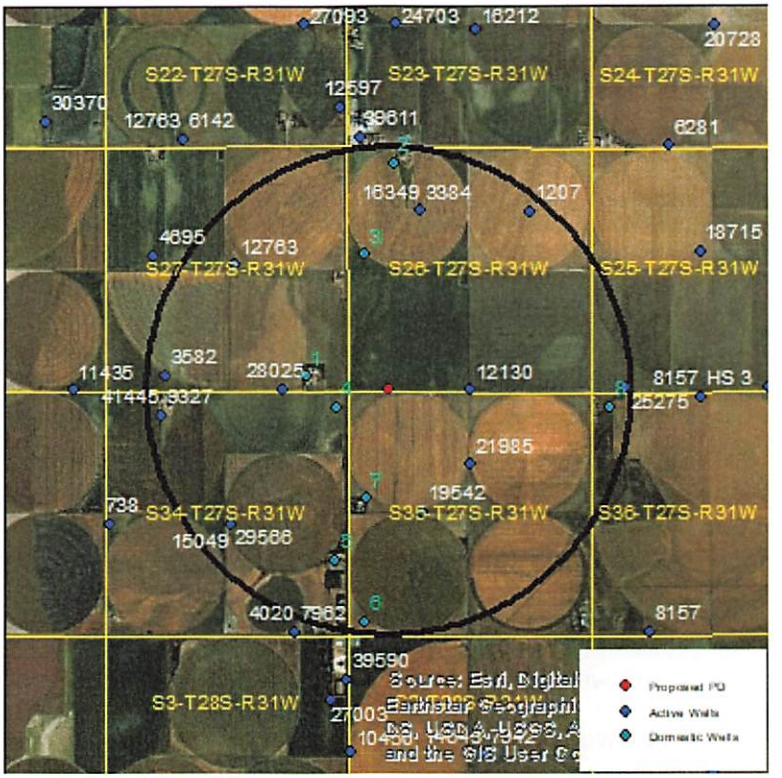
Evaluation of proposed move for Water Right No. 12130

Proposed: Move water right no. 12130 to a location 1,792 ft west.



Wells within 1 mile: 3384 & 16349, 1207, 3582, 28025, 12763, 25275, 9327 & 41445, 15049 & 29566, 21985, 19542, and eight domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 194 ft, based upon the driller's log and an observation well in section 36-27-31. Observation wells and driller's logs indicate that saturated thickness in the area ranges from 70 ft to 267 ft. Saturated thickness and drawdown allowance is listed at each well location below.

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

$S = 0.25$, $T = 15{,}600\ ft^2/day$, $tp_{current} = 36.5$ days, $Q_{current} = 200$ gpm, $tp_{proposed} = 96.5$ days, $Q_{proposed} = 900$ gpm

Theis drawdowns were calculated as follows:

3384 & 16349: Saturated thickness = 70 ft

Drawdown allowance = 1.5 ft

Drawdown from current location = 0.12 ft

Drawdown from proposed location = 1.38 ft

Net drawdown = **1.3 ft**

1207:	Saturated Thickness = 159 ft
	Drawdown allowance = 3.5 ft
	Drawdown from current location = 0.12 ft
	Drawdown from proposed location = 1.19 ft
	Net drawdown = **1.1 ft**
3582:	Saturated Thickness = 197 ft
	Drawdown allowance = 3.5 ft
	Drawdown from current location = 0.08 ft
	Drawdown from proposed location = 1.21 ft
	Net drawdown = **1.1 ft**
28025:	Saturated thickness = 213 ft
	Drawdown allowance = 4.0 ft
	Drawdown from current location = 0.12 ft
	Drawdown from proposed location = 2.00 ft
	Net drawdown = **1.9 ft**
12763:	Saturated thickness = 224 ft
	Drawdown allowance = 4.0 ft
	Drawdown from current location = 0.09 ft
	Drawdown from proposed location = 1.31 ft
	Net drawdown = **1.2 ft**
25275:	Saturated thickness = 117
	Drawdown allowance = 2.5 ft
	Drawdown from current location = 0.14 ft
	Drawdown from proposed location = 1.16 ft
	Net drawdown = **1.0ft**

9327 & 41445:	Saturated thickness = 193 ft
	Drawdown allowance = 3.5 ft
	Drawdown from current location = 0.08 ft
	Drawdown from proposed location = 1.19 ft
	Net drawdown = **1.1 ft**
15049 & 29566:	Saturated thickness = 250 ft
	Drawdown allowance = 4.0 ft
	Drawdown from current location = 0.09 ft
	Drawdown from proposed location = 1.27 ft
	Net drawdown = **1.2 ft**
21985:	Saturated thickness = 231 ft
	Drawdown allowance = 4.0 ft
	Drawdown from current location = 0.27 ft
	Drawdown from proposed location = 1.94 ft
	Net drawdown = **1.7 ft**
19542:	Saturated thickness = 231 ft
	Drawdown allowance = 4.0 ft
	Drawdown from current location = 0.16 ft
	Drawdown from proposed location = 1.80 ft
	Net drawdown = **1.6 ft**
Domestic 1:	Saturated thickness = 213 ft
	Drawdown allowance = 4.0 ft
	Drawdown from current location = 0.13 ft
	Drawdown from proposed location = 2.36 ft
	Net drawdown = **2.2 ft**

Domestic 2: Saturated thickness = 108 ft

Drawdown allowance = 2.5 ft

Drawdown from current location = 0.10 ft

Drawdown from proposed location = 1.20 ft

Net drawdown = **1.1 ft**

Domestic 3: Saturated thickness = 222 ft

Drawdown allowance = 4.0 ft

Drawdown from current location = 0.13 ft

Drawdown from proposed location = 1.69 ft

Net drawdown = **1.6 ft**

Domestic 4: Saturated thickness = 193 ft

Drawdown allowance = 3.5 ft

Drawdown from current location = 0.15 ft

Drawdown from proposed location = 3.04 ft

Net drawdown = **2.9 ft**

Domestic 5: Saturated thickness = 267 ft

Drawdown allowance = 4.0 ft

Drawdown from current location = 0.10 ft

Drawdown from proposed location = 1.40 ft

Net drawdown = **1.3 ft**

Domestic 6: Saturated thickness = 231 ft

Drawdown allowance = 4.0 ft

Drawdown from current location = 0.09 ft

Drawdown from proposed location = 1.18 ft

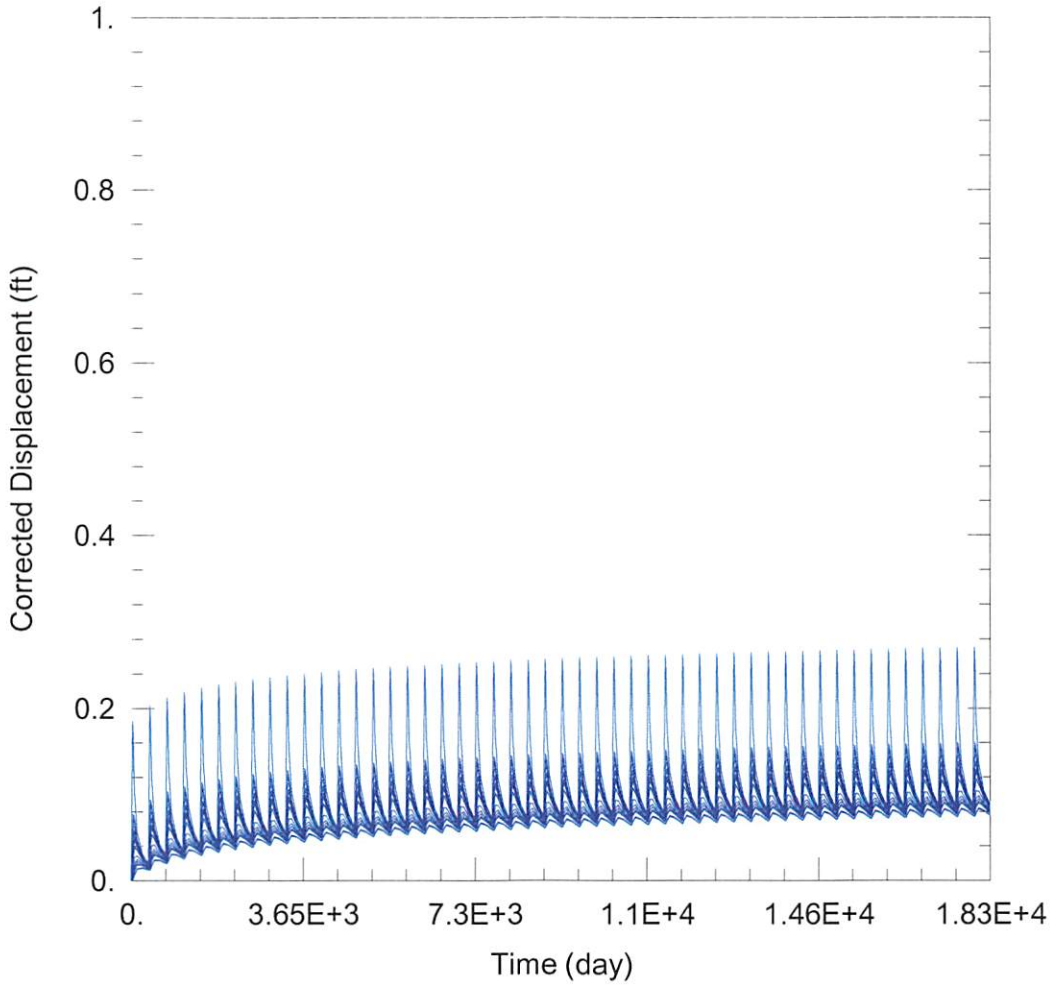
Net drawdown = **1.1 ft**

Domestic 7:	Saturated thickness = 231 ft
	Drawdown allowance = 4.0 ft
	Drawdown from current location = 0.14 ft
	Drawdown from proposed location = 1.94 ft
	Net drawdown = **1.8 ft**
Domestic 8:	Saturated thickness = 177 ft
	Drawdown allowance = 3.5 ft
	Drawdown from current location = 0.15 ft
	Drawdown from proposed location = 1.21 ft
	Net drawdown = **1.1 ft**

Net drawdown does not exceed the drawdown allowance for wells within 1 mile of the proposed change. Critical well analysis is not necessary.

Conclusion:

The proposed well location is within an area that the GMD3 model predicts will have large water level declines over the next 25 years. This regional decline is likely to significantly reduce the pumping capacity of some neighboring wells. Aquifer conditions, including remaining saturated thickness, transmissivity, and specific yield, appear to vary in the area, making a reliable evaluation difficult to conduct. The effects estimated in this report are based on the aquifer characteristics identified in the driller's log at the proposed well location. The evaluation shows that the well operated under its proposed conditions will likely have minimal interaction effects on neighboring wells, so GMD3 staff recommends approval of the application. Concerned neighbors should contact either GMD3 at (620) 275-7147 or the Division of Water Resources at (620) 276-2901 if they would like to put their concerns on record. Otherwise, the application may be approved as proposed.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\12130\12130 Current Updated T.aqt
Date: 08/20/21 Time: 11:30:21

PROJECT INFORMATION

Company: GMD 3
Project: 12130
Location: Haskell County

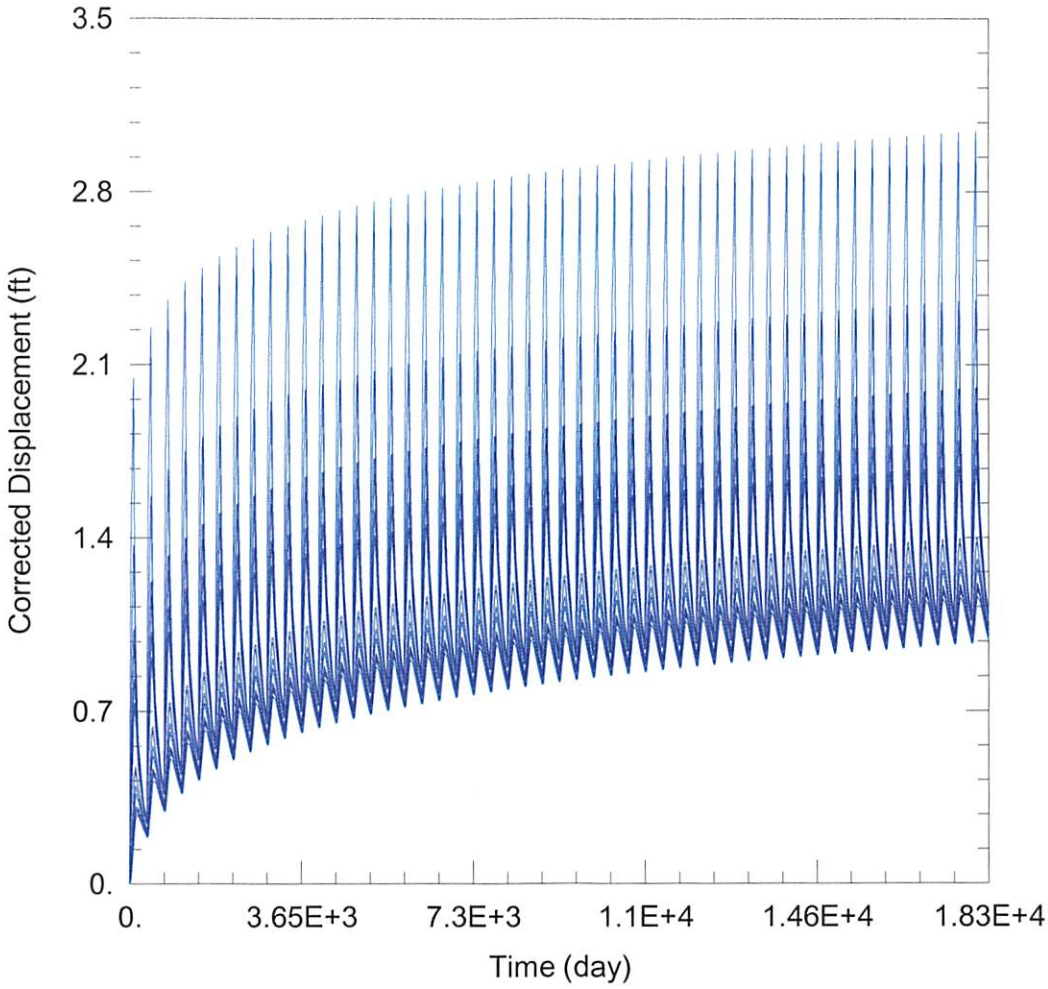
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Proposed_PD	34662	287251

Observation Wells

Well Name	X (ft)	Y (ft)
▫	34662	287251
▫ 3384 & 16349	33586	291161
▫ 1207	35960	291142
▫ 3582	28033	287561
▫ 28025	30581	287283
▫ 12763	29536	289987
▫ 25275	38049	287292
▫ 9327 & 41445	27918	286712
▫ 15049 & 29566	29426	284350
▫ 21985	34664	285638
▫ 19542	33624	284628
▫ Domestic 1	31079	287546
▫ Domestic 2	32987	292186
▫ Domestic 3	32353	290203



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\12130\12130 Proposed Updated T.aqt
Date: 08/20/21 Time: 11:30:10

PROJECT INFORMATION

Company: GMD 3
Project: 12130
Location: Haskell County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Proposed_PD	32870	287262

Observation Wells

Well Name	X (ft)	Y (ft)
▫	32870	287262
▫ 3384 & 16349	33586	291161
▫ 1207	35960	291142
▫ 3582	28033	287561
▫ 28025	30581	287283
▫ 12763	29536	289987
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