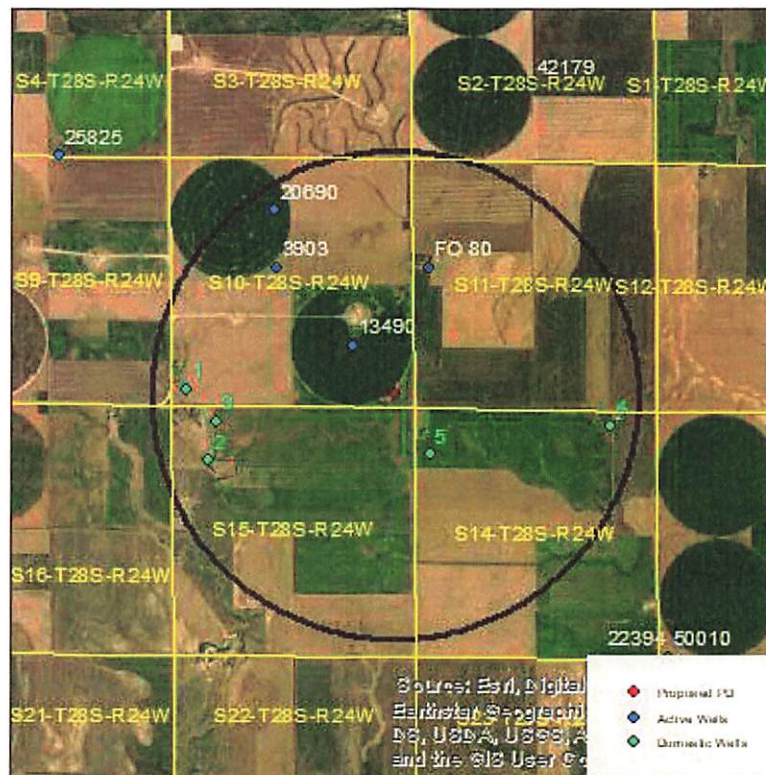


Evaluation of proposed move for Water Right No. 13490

Proposed: Move water right no. 13490 to a new well location, 1,414 ft to the southeast.



Wells within 1 mile: 20690, 3903, FO 80, and five domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 98 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:

$S = 0.2581$, $T = 11,294 \text{ ft}^2/\text{day}$, $t_{p\text{current}} = 83 \text{ days}$, $Q_{\text{current}} = 323 \text{ gpm}$, $t_{p\text{proposed}} = 62 \text{ days}$,
 $Q_{\text{proposed}} = 1050 \text{ gpm}$

Theis drawdowns were calculated as follows:

20690: Drawdown from current location = 0.59 ft
Drawdown from proposed location = 1.13 ft
Net drawdown = **0.5 ft**

3903: Drawdown from current location = 0.76 ft
Drawdown from proposed location = 1.32 ft
Net drawdown = **0.6 ft**

FO 80: Drawdown from current location = 0.76 ft
Drawdown from proposed location = 1.65 ft
Net drawdown = **0.9 ft**

Domestic 1: Drawdown from current location = 0.55 ft
Drawdown from proposed location = 1.18 ft
Net drawdown = **0.6 ft**

Domestic 2: Drawdown from current location = 0.52 ft
Drawdown from proposed location = 1.22 ft
Net drawdown = **0.7 ft**

Domestic 3: Drawdown from current location = 0.59 ft
Drawdown from proposed location = 1.30 ft
Net drawdown = **0.7 ft**

Domestic 4: Drawdown from current location = 0.41 ft
Drawdown from proposed location = 1.14 ft
Net drawdown = **0.7 ft**

Domestic 5: Drawdown from current location = 0.66 ft
Drawdown from proposed location = 2.75 ft
Net drawdown = **2.1 ft**

Net drawdown exceeds the drawdown allowance for the domestic well labeled 5 on the map. Critical well analysis is necessary on that well.

Critical Well Evaluation:

Domestic 5:

Water Column = 72 ft

DP = 2.1 ft (Net drawdown from the proposal indicated above)

DE = 20.8 ft (Water level decline from 2023 through 2048 based upon GMD3 model)

DT = 22.9 ft

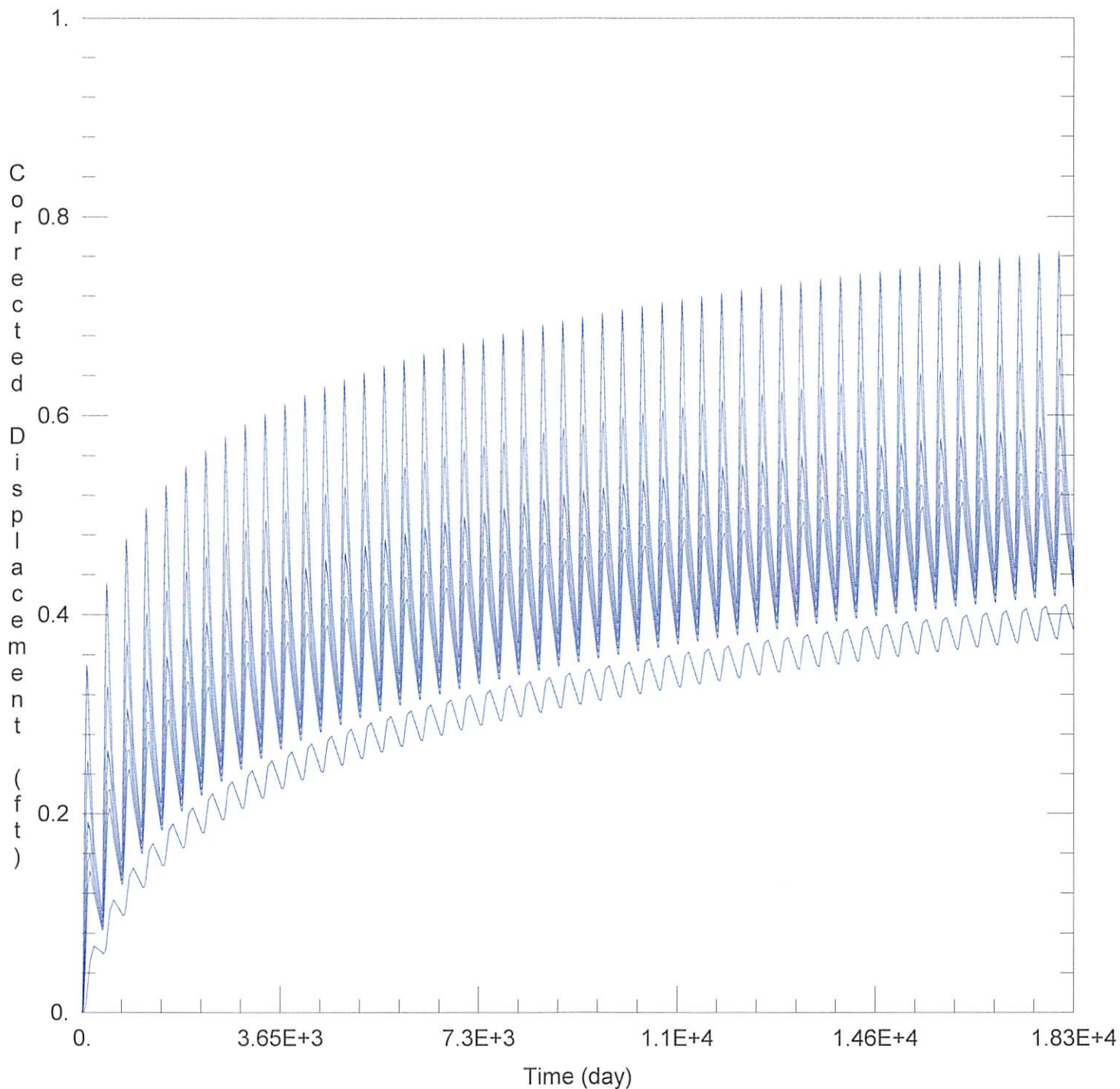
Economic Drawdown Constraint (EDC) = $0.4 * 72 \text{ ft} = 28.8 \text{ ft}$

Physical Drawdown Constraint (PDC) = $72 \text{ ft} - 20 \text{ ft} = 52 \text{ ft}$

Total drawdown of 22.9 ft is less than the EDC and the PDC, so this well is **not critical**.

Conclusion:

The analysis shows that most well-to-well effects are unlikely to be noticeable. The effect on the neighboring domestic well to the southeast slightly exceeds the drawdown allowance, but the well was not flagged as critical because declines are not exceeding 40% in 25 years and remaining saturated thickness should be sufficient for a domestic well to operate. It should be noted that the neighbor with the domestic well to the southeast has already submitted a letter of concern over this proposal. In the letter, the neighbor stated that their well is only 800 ft from the proposed well location. The WWC5 driller's log database was used to locate domestic wells for this analysis, and it located the well about 1500 ft from the proposed well. Effects on the neighboring well would be significantly greater at 800 ft distance than this analysis shows. Concerned neighbors should contact GMD3 at (620) 275-7147 or the Division of Water Resources at (620) 276-2901 to document any concerns or provide better information.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2023_moves\13490\13490 Current.aqt
 Date: 01/08/24 Time: 11:21:05

PROJECT INFORMATION

Company: GMD 3
 Project: 13490
 Location: Ford County

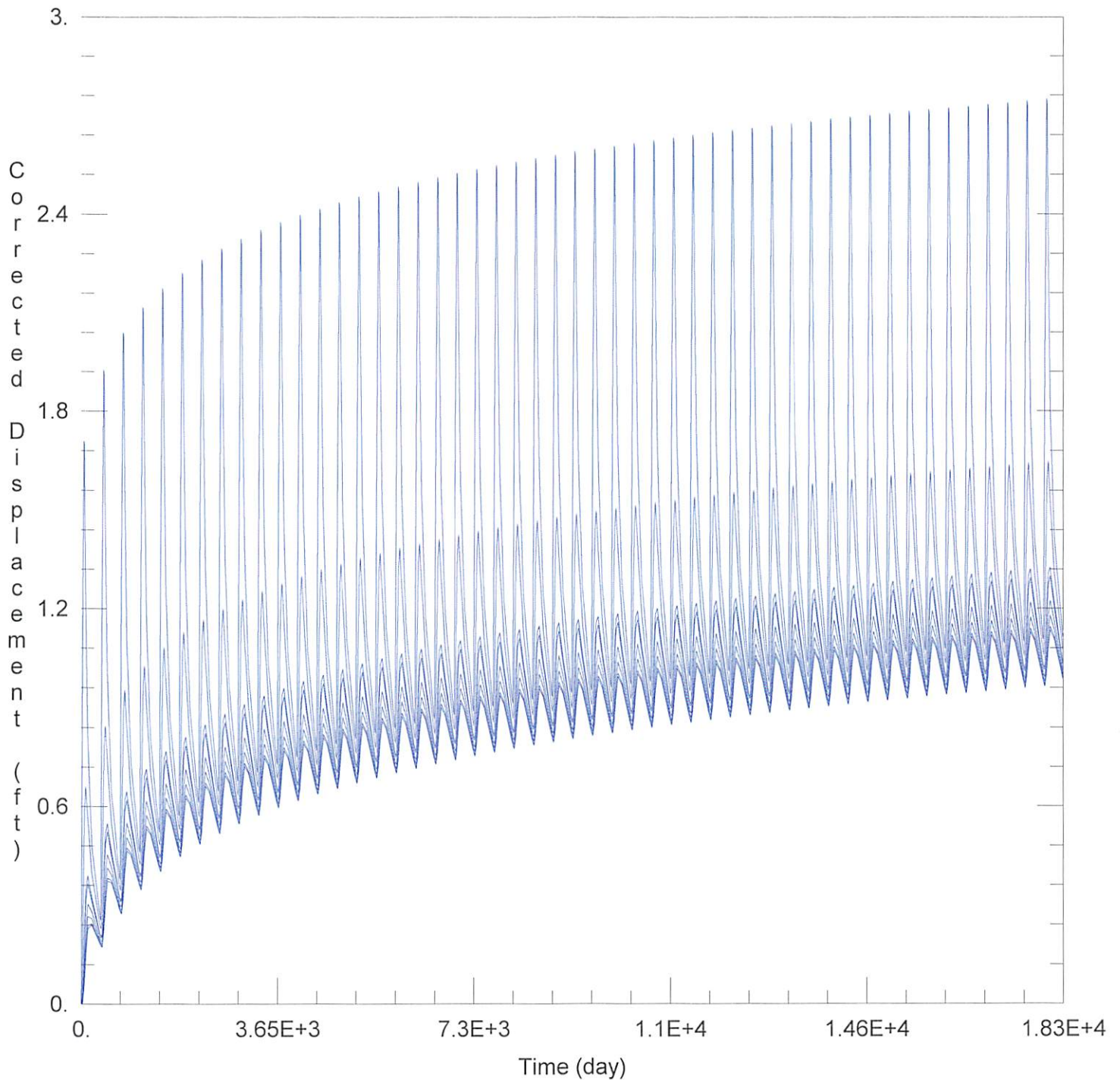
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
13490	252070	273162

Observation Wells

Well Name	X (ft)	Y (ft)
□ 20690	252070	273162
□ 20690	250360	276093



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2023_moves\13490\13490 Proposed.aqt
 Date: 01/08/24 Time: 11:21:22

PROJECT INFORMATION

Company: GMD 3
 Project: 13490
 Location: Ford County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
13490	252996	272093

Observation Wells

Well Name	X (ft)	Y (ft)
□	252996	272093
□ 20690	250360	276093