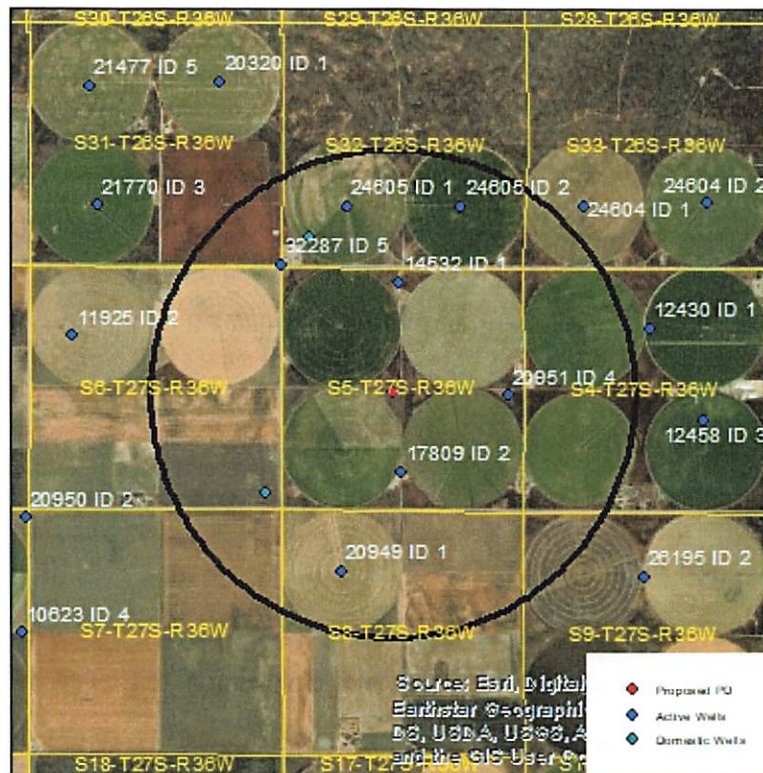


Evaluation of proposed move for Water Right No. 17809

Proposed: Move water right no. 17809 to a new well location, 1,718 ft to the northwest.



Wells within 1 mile: 32287, 24605 ID1, 24605 ID2, 14532, 20951, 20949, a domestic well in section 32-26-36, and a domestic well in section 6-27-36.

The saturated thickness at the proposed well location is estimated to be 129 ft, based upon the GMD3 model. For saturated thickness between 125 ft and 150 ft, the drawdown allowance is 3.0 ft.

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

$S = 0.2359$, $T = 2154.2 \text{ ft}^2/\text{day}$, $tp_{\text{current}} = 130 \text{ days}$, $Q_{\text{current}} = 327 \text{ gpm}$, $tp_{\text{proposed}} = 76 \text{ days}$,
 $Q_{\text{proposed}} = 880 \text{ gpm}$

This drawdowns were calculated as follows:

32287: Drawdown from current location = 2.05 ft
Drawdown from proposed location = 4.41 ft
Net drawdown = **2.4 ft**

24605 ID1: Drawdown from current location = 1.86 ft
Drawdown from proposed location = 4.06 ft
Net drawdown = **2.2 ft**

24605 ID2: Drawdown from current location = 1.86 ft
Drawdown from proposed location = 3.97 ft
Net drawdown = **2.1 ft**

14532: Drawdown from current location = 2.41 ft
Drawdown from proposed location = 5.73 ft
Net drawdown = **3.3 ft**

20951: Drawdown from current location = 3.03 ft
Drawdown from proposed location = 5.61 ft
Net drawdown = **2.6 ft**

20949: Drawdown from current location = 3.28 ft
Drawdown from proposed location = 4.19 ft
Net drawdown = **0.9 ft**

Domestic 32-26-36: Drawdown from current location = 1.97 ft
Drawdown from proposed location = 4.29 ft
Net drawdown = **2.3 ft**

Domestic 6-27-36: Drawdown from current location = 2.92 ft
Drawdown from proposed location = 4.52 ft
Net drawdown = **1.6 ft**

Net drawdown exceeds the drawdown allowance of 3.0 ft for the well authorized under WR No. 14532.
Critical well analysis is necessary on that well.

Critical Well Evaluation:

14532:

Water Column = 129 ft

DP = 3.3 ft (Net drawdown from the proposal indicated above)

DE = 25.9 ft (Water level decline from 2022 through 2047 based upon GMD3 model)

DD = 7.8 ft (S = 0.2069, T = 334,166 gpd/ft, Q = 888 gpm, tp = 130 days, efficiency = 70%)

DT = 37.0 ft

Economic Drawdown Constraint (EDC) = $0.4 * 129 \text{ ft} = 51.6 \text{ ft}$

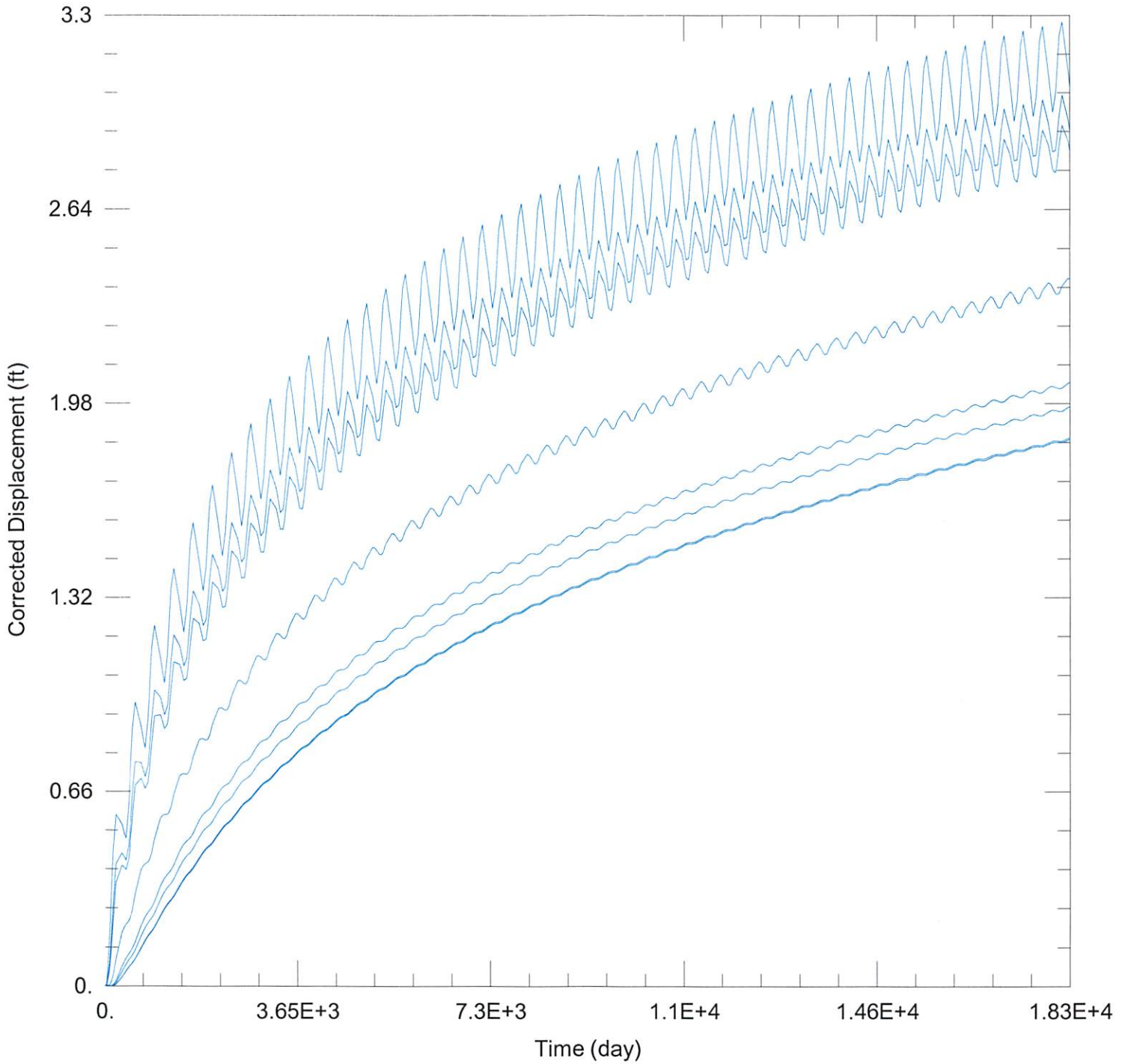
Physical Drawdown Constraint (PDC) = $129 \text{ ft} - 60 \text{ ft} = 69 \text{ ft}$

Total drawdown of 37.0 ft is less than the EDC and PDC, so this well is **not critical**.

*Note that S and T values were pulled from section 32-26-36 in the GMD3 model because the well is near the section line and observed well performance seems to be more in line with what the modeled values for that section would allow than the modeled values for section 5-27-36.

Conclusion:

The proposed move is in an area with depleted saturated thickness. If the proposed well were to pump its full authorized authority, there would likely be a net drawdown effect exceeding 3 ft on nearby water right no. 14532. Critical well analysis shows that this well is not critical because total drawdown effects, including the well's own dynamic drawdown and aquifer decline, are not projected to exceed 40% of the current saturated thickness over the next 25 years. 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\17809\17809 Current.aqt
 Date: 08/17/22 Time: 15:52:34

PROJECT INFORMATION

Company: GMD 3
 Project: 17809
 Location: Grant County

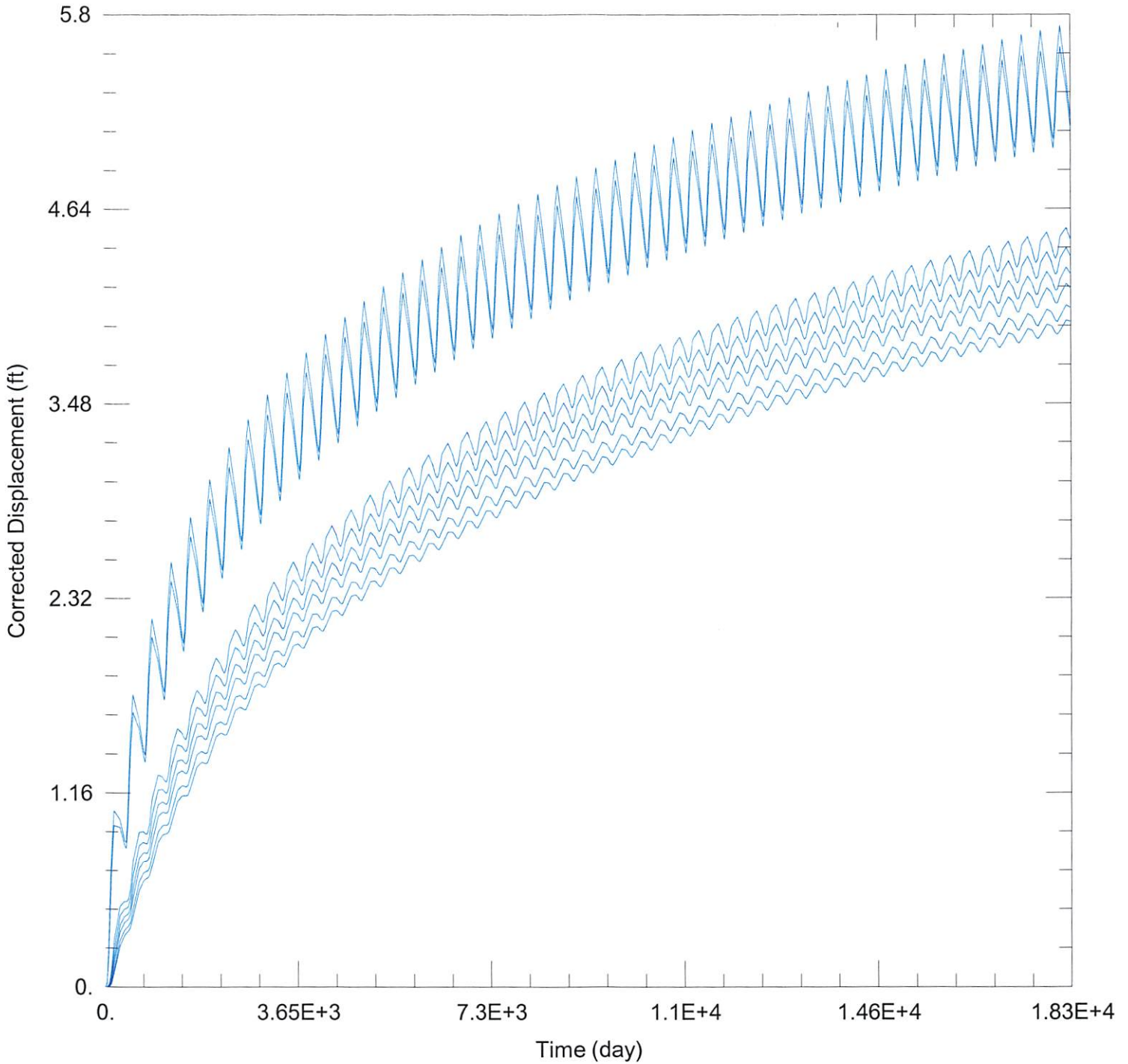
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
17809	-139283	309476

Observation Wells

Well Name	X (ft)	Y (ft)
□	-139283	309476



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2022_moves\17809\17809 Proposed.aqt
 Date: 08/17/22 Time: 15:52:26

PROJECT INFORMATION

Company: GMD 3
 Project: 17809
 Location: Grant County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
17809	-139471	311183

Observation Wells

Well Name	X (ft)	Y (ft)
□	-139471	311183