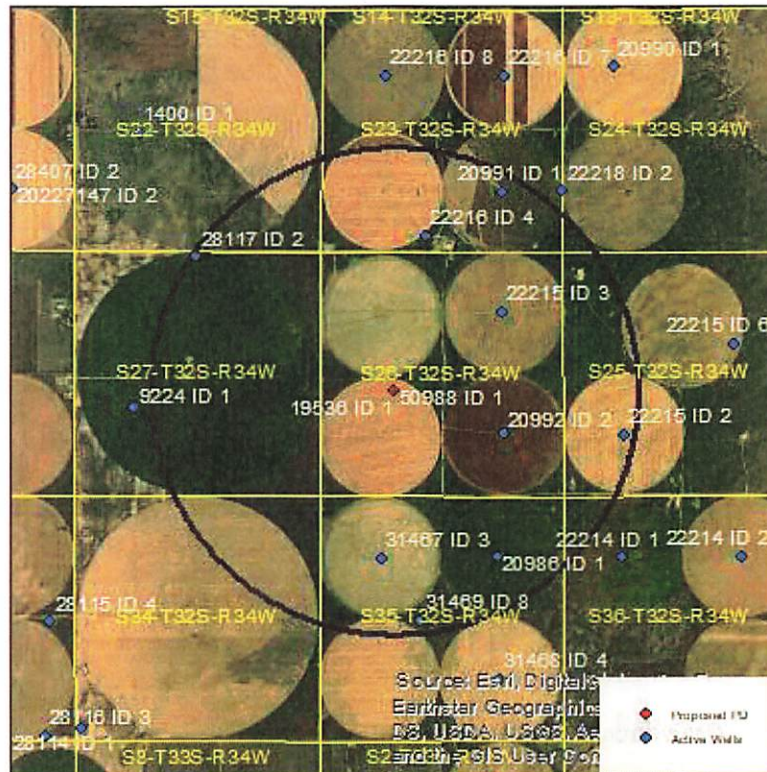


Evaluation of proposed new appropriation for Water Right No. 50988

Proposed: Create new water right no. 50988 to add rate to the well currently authorized under water right no. 19536. The total authorization on this well will change from 457 AF @ 1035 gpm to 457 AF @ 1190 gpm.



Wells within 1 mile: 22216, 20991, 20992, 22215 ID2, 22215 ID3, 31467, 31469, and 20986.

The saturated thickness at the proposed well location is estimated to be 186 ft, based upon the GMD3 model. 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:

$S = 0.1883$, $T = 13,898 \text{ ft}^2/\text{day}$, $tp_{\text{current}} = 89 \text{ days}$ (based on average use and observed rate),
 $Q_{\text{current}} = 1035 \text{ gpm}$ (based on authorized rate), $tp_{\text{proposed}} = 87 \text{ days}$, $Q_{\text{proposed}} = 1190 \text{ gpm}$

Theis drawdowns were calculated as follows:

22216: Drawdown from current location = 1.94 ft
Drawdown from proposed location = 2.18 ft
Net drawdown = **0.2 ft**

20991: Drawdown from current location = 1.51 ft
Drawdown from proposed location = 1.70 ft
Net drawdown = **0.2 ft**

20992: Drawdown from current location = 2.44 ft
Drawdown from proposed location = 2.75 ft
Net drawdown = **0.3 ft**

22215 ID2: Drawdown from current location = 1.48 ft
Drawdown from proposed location = 1.66 ft
Net drawdown = **0.2 ft**

22215 ID3: Drawdown from current location = 2.22 ft
Drawdown from proposed location = 2.50 ft
Net drawdown = **0.3 ft**

31467: Drawdown from current location = 1.86 ft
Drawdown from proposed location = 2.10 ft
Net drawdown = **0.2 ft**

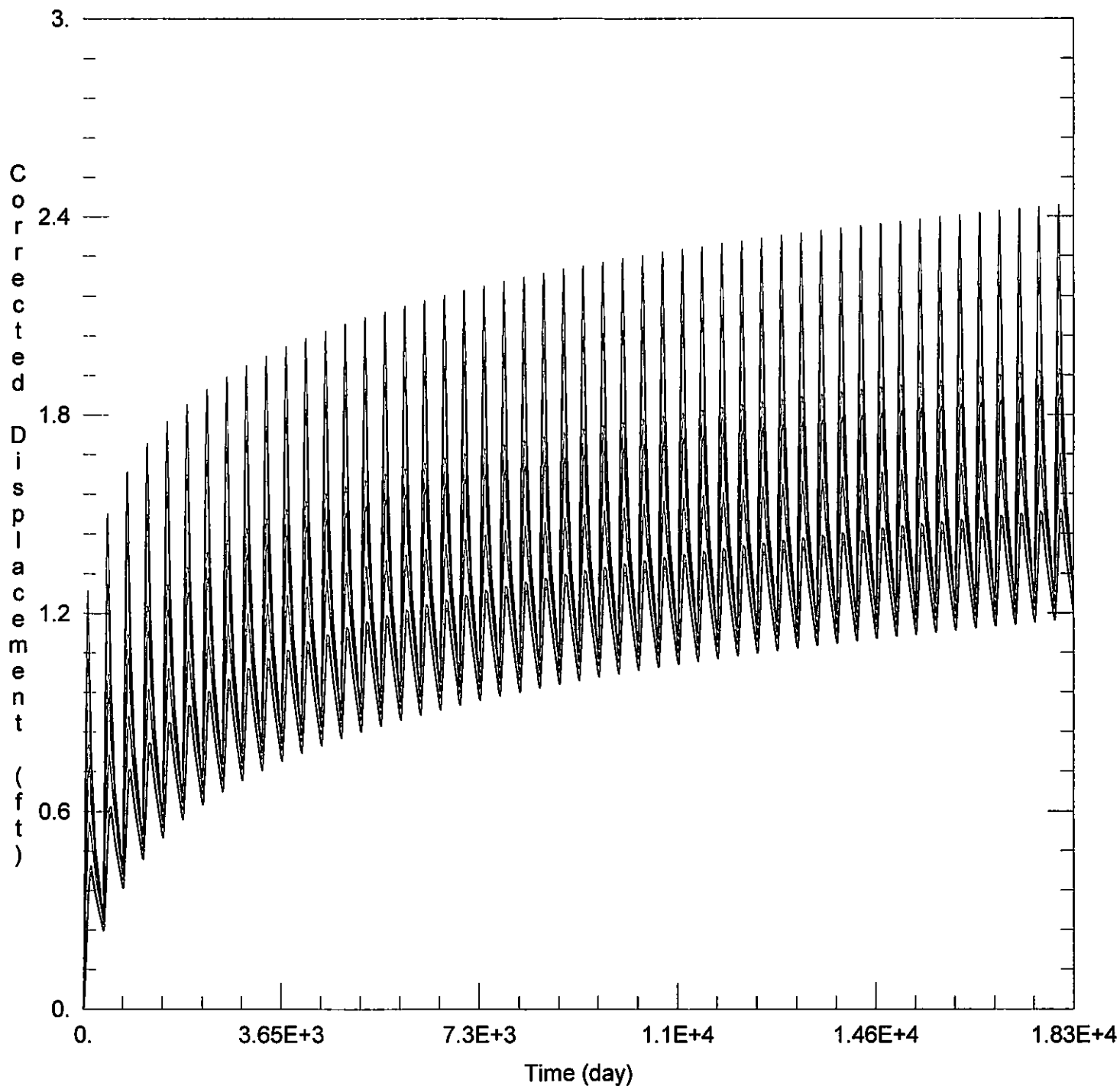
31469: Drawdown from current location = 1.48 ft
Drawdown from proposed location = 1.67 ft
Net drawdown = **0.2 ft**

20986: Drawdown from current location = 1.68 ft
Drawdown from proposed location = 1.89 ft
Net drawdown = **0.2 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 appears unlikely to cause impairment. 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\2023 New Appropriations\50988\50988 Current.aqt

Date: 08/25/23

Time: 14:13:37

PROJECT INFORMATION

Company: GMD 3

Project: 50988

Location: Seward County

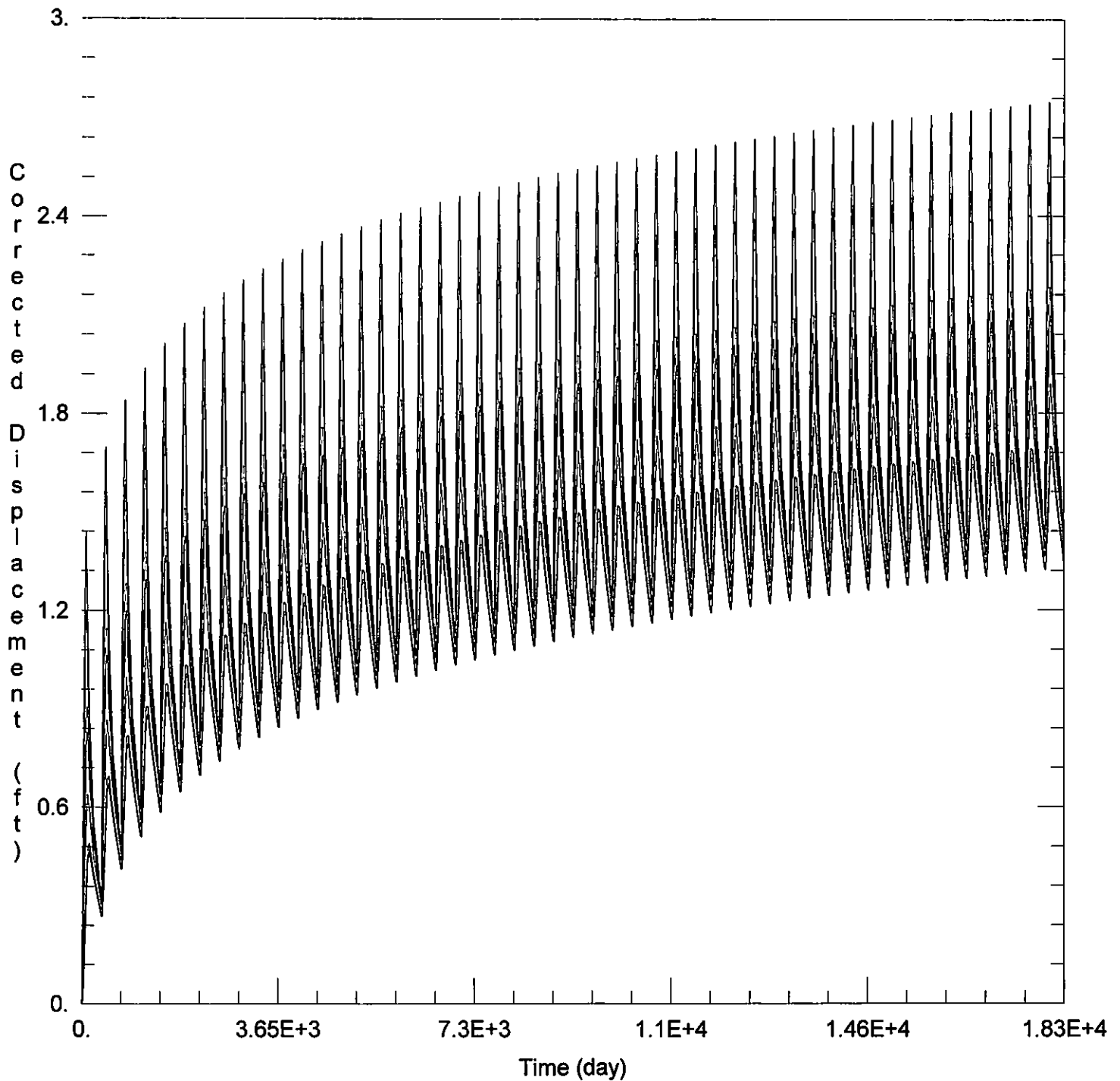
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
19536	-55390	130892

Observation Wells

Well Name	X (ft)	Y (ft)
□	-55390	130892
□ 22216	-54734	131251



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2023 New Appropriations\50988\50988 Proposed.aqt

Date: 08/25/23

Time: 14:13:31

PROJECT INFORMATION

Company: GMD 3

Project: 50988

Location: Seward County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
19536	-55390	130892

Observation Wells

Well Name	X (ft)	Y (ft)
□	-55390	130892
□ 22216	-54734	134251