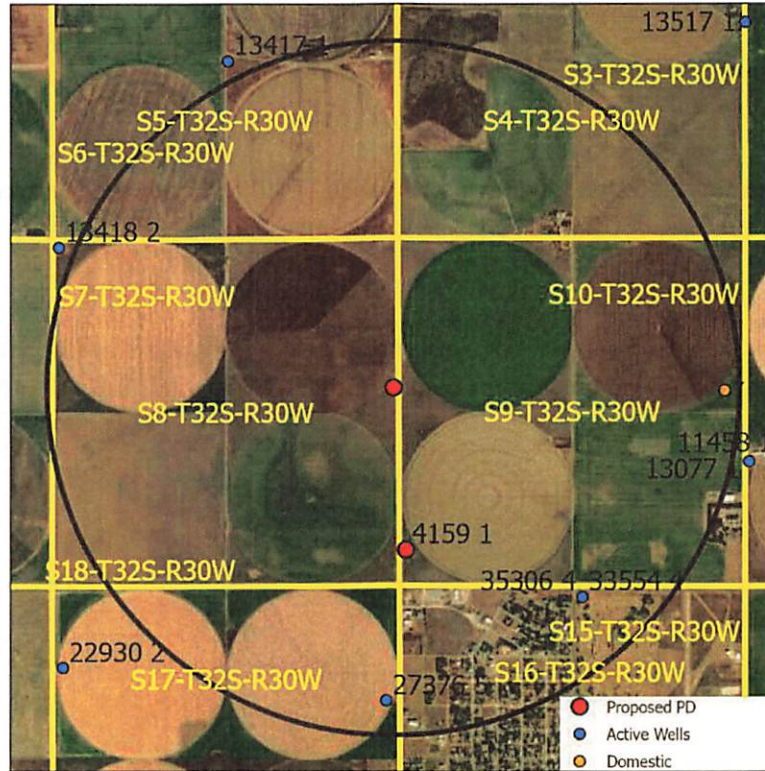


Evaluation of proposed move for Water Right No. 4159

Proposed: Create additional well under water right no. 4159 to the north 2,465 ft. An authorized quantity of 585 AF at 980 gpm will remain at the current location and an authorized quantity of 375 AF at 600 gpm will be moved to the new location.



Wells within 1 mile: 27376, 35554, and one domestic well in S9-32-30.

The saturated thickness at the proposed well location is estimated to be 270 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:

$$S = 0.037, T = 57,323 \text{ ft}^2/\text{day}$$

4159 current location: $tp_{\text{current}} = 112$ days (based on average use and observed rate), $Q_{\text{current}} = 1226$ gpm (based on 2021 field inspection), $tp_{\text{proposed}} = 135$ days, $Q_{\text{proposed}} = 980$ gpm

4159 new location: $tp_{\text{proposed}} = 141$ days, $Q_{\text{proposed}} = 600$ gpm

These drawdowns were calculated as follows:

27376: Drawdown from current location = 1.83 ft
Drawdown from proposed location = 2.33 ft
Net drawdown = 0.5 ft

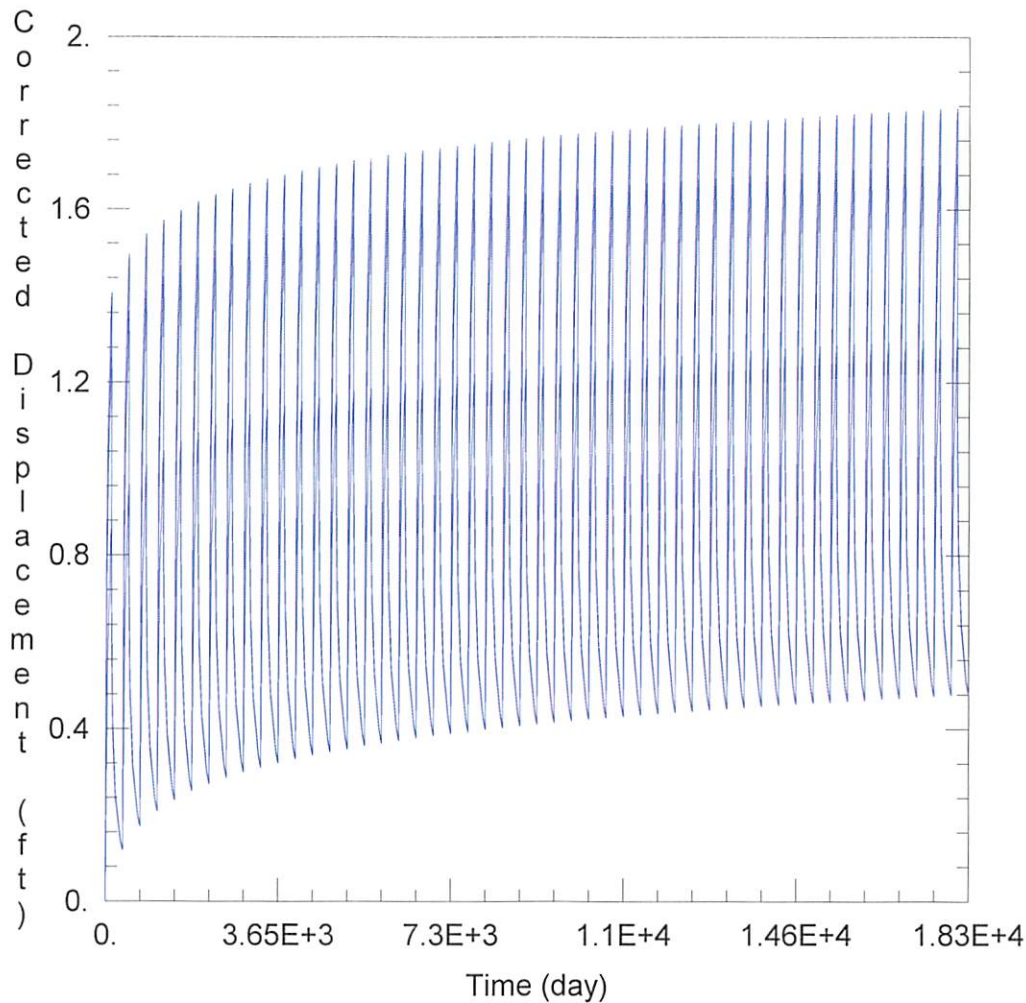
35554: Drawdown from current location = 1.71 ft
Drawdown from proposed location = 2.27 ft
Net drawdown = 0.6 ft

Domestic S9-32-30: Drawdown from current location = 1.28 ft
Drawdown from proposed location = 1.87 ft
Net drawdown = 0.6 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 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\scanstation\Documents\move requests\4159\4159 current.aqt
 Date: 12/03/24 Time: 13:45:15

PROJECT INFORMATION

Test Well: 4159

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
4159	58457	144964

Observation Wells

Well Name	X (ft)	Y (ft)
□	58457	144964
□ <u>27376</u>	58168	142666
□ <u>33554</u>	61151	144252
□ <u>Domestic</u>	63328	147388

SOLUTION

Aquifer Model: Unconfined

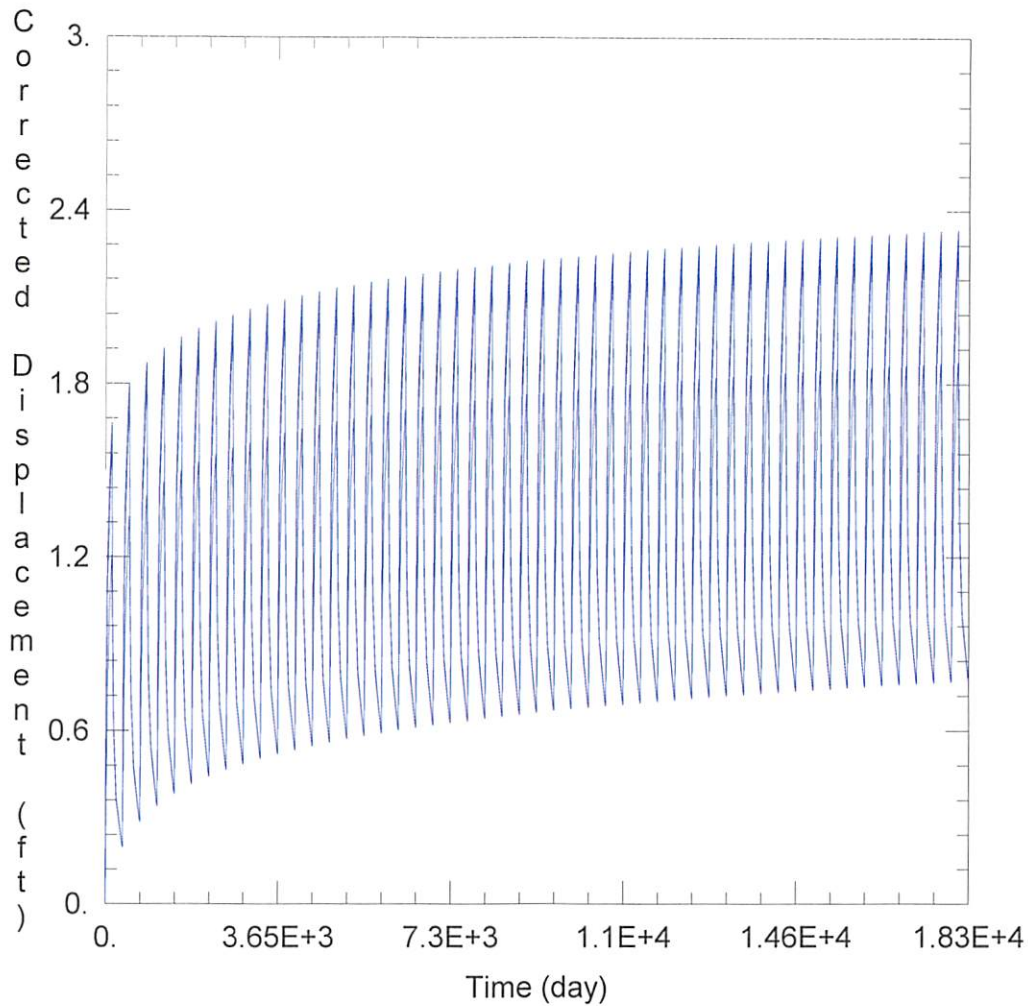
Solution Method: Theis

T = 5.732E+4 ft²/day

S = 0.037

Kz/Kr = 1.

b = 270.2 ft



WELL TEST ANALYSIS

Data Set: C:\Users\scanstation\Documents\move requests\4159\4159 proposed.aqt
 Date: 12/03/24 Time: 13:45:18

PROJECT INFORMATION

Test Well: 4159

WELL DATA

Pumping Wells

Observation Wells

Well Name	X (ft)	Y (ft)
<u>4159</u>	58457	144964
<u>4159 new location</u>	58270	147422

Well Name	X (ft)	Y (ft)
□	58457	144964
□	58270	147422
□ <u>27376</u>	58168	142666
□ <u>33554</u>	61151	144252
□ <u>Domestic</u>	63328	147388

SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 5.732E+4 ft²/day

S = 0.037

Kz/Kr = 1.

b = 270.2 ft