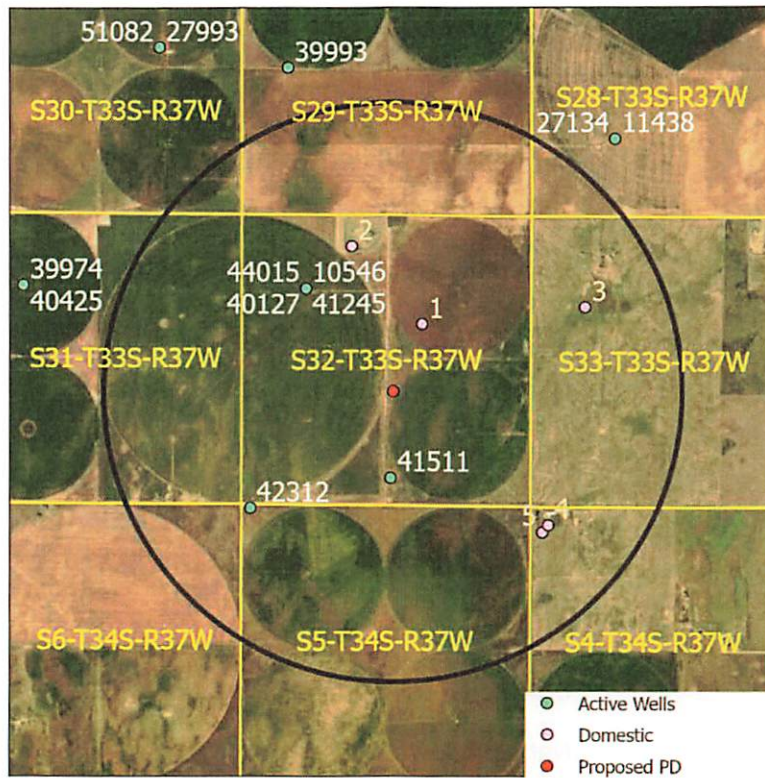


Evaluation of proposed move for Water Right No. 41511

Proposed: Move water right no. 41511 to a new well location, a distance of 1556 ft to the north.



Wells within 1 mile: 42312, 10546 & 40127 & 41245 & 44015, and five domestic wells numbered above.

The saturated thickness at the proposed well location is estimated to be 306.1 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:

$S = 0.2006$, $T = 6672.64 \text{ ft}^2/\text{day}$, $tp_{\text{current}} = 80 \text{ days}$ (based on average use and observed rate),
 $Q_{\text{current}} = 825 \text{ gpm}$ (based on 2014 field inspection), $tp_{\text{proposed}} = 69 \text{ days}$, $Q_{\text{proposed}} = 1270 \text{ gpm}$

Theis drawdowns were calculated as follows:

- 42312:
 - Drawdown from current location = 2.64 ft
 - Drawdown from proposed location = 3.53 ft
 - Net drawdown = **0.9 ft**

- 10546 & 40127 & 41245 & 44015:
 - Drawdown from current location = 2.06 ft
 - Drawdown from proposed location = 2.73 ft
 - Net drawdown = **0.7 ft**

Domestic 1: Drawdown from current location = 2.50 ft
Drawdown from proposed location = 5.96 ft
Net drawdown = **3.5 ft**

Domestic 2: Drawdown from current location = 1.91 ft
Drawdown from proposed location = 2.54 ft
Net drawdown = **0.6 ft**

Domestic 3: Drawdown from current location = 1.81 ft
Drawdown from proposed location = 2.40 ft
Net drawdown = **0.6 ft**

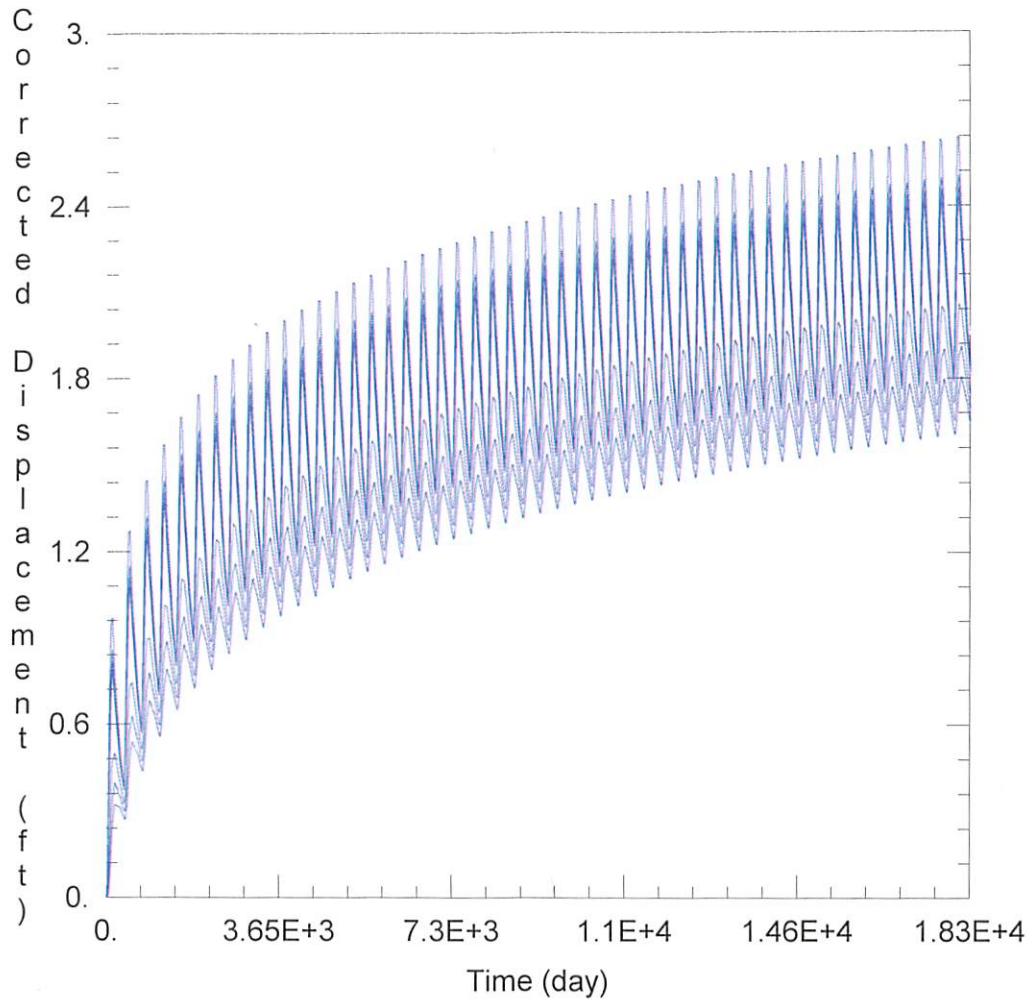
Domestic 4: Drawdown from current location = 2.43 ft
Drawdown from proposed location = 3.24 ft
Net drawdown = **0.8 ft**

Domestic 5: Drawdown from current location = 2.46 ft
Drawdown from proposed location = 3.29 ft
Net drawdown = **0.8 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\41511\41511 current.aqt
 Date: 06/12/24 Time: 16:30:17

PROJECT INFORMATION

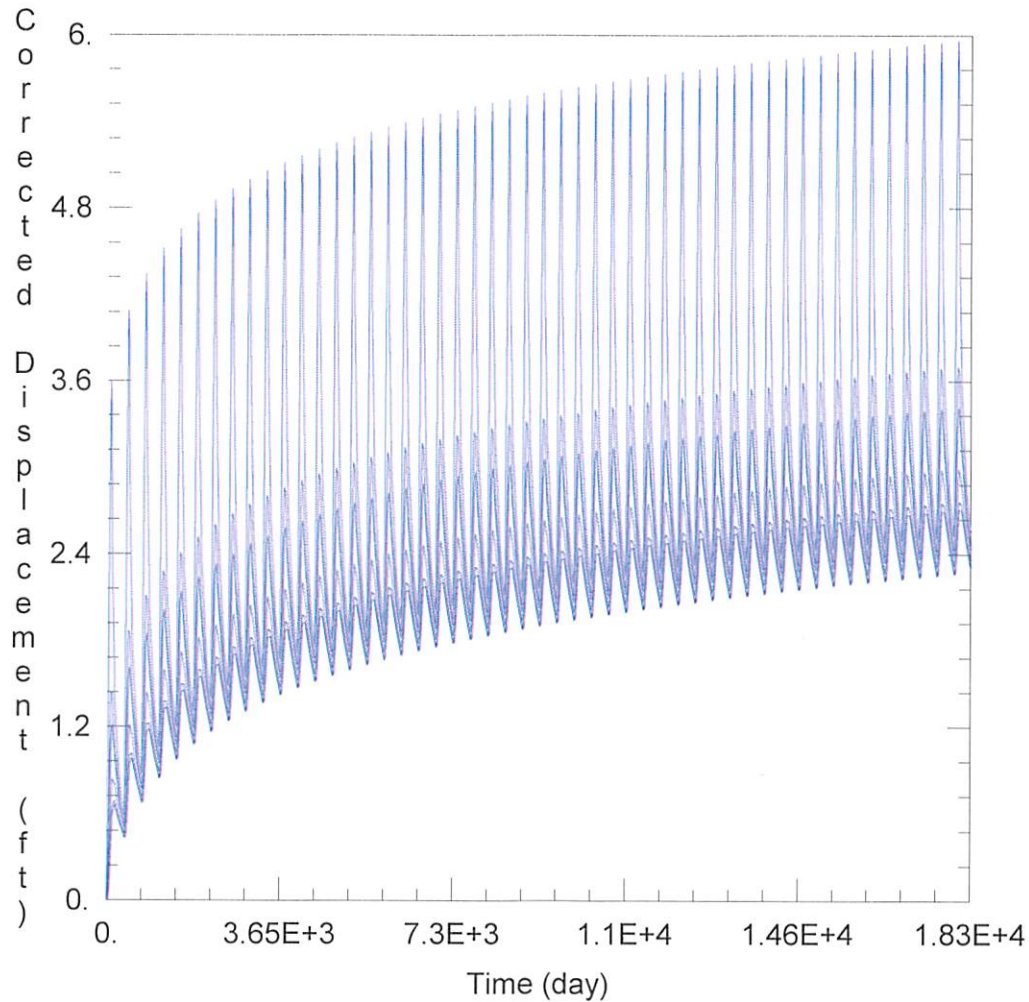
Test Well: 41511

WELL DATA

| Pumping Wells | | | Observation Wells | | |
|---------------|---------|--------|---------------------|---------|--------|
| Well Name | X (ft) | Y (ft) | Well Name | X (ft) | Y (ft) |
| 41511 | -165090 | 92556 | □ | -165090 | 92556 |
| | | | □ 10546 | -166644 | 96010 |
| | | | □ 42312 | -167659 | 92011 |
| | | | □ Domestic 1 | -164518 | 95350 |
| | | | □ Domestic 2 | -165814 | 96777 |
| | | | □ Domestic 3 | -161545 | 95654 |
| | | | □ Domestic 4 | -162218 | 91704 |
| | | | □ Domestic 5 | -162327 | 91575 |

SOLUTION

| | |
|--|-------------------------------|
| Aquifer Model: <u>Unconfined</u> | Solution Method: <u>Theis</u> |
| T = <u>6672.6</u> ft ² /day | S = <u>0.2006</u> |
| Kz/Kr = <u>1.</u> | b = <u>306.1</u> ft |



WELL TEST ANALYSIS

Data Set: C:\Users\scanstation\Documents\move requests\41511\41511 proposed.aqt

Date: 06/12/24

Time: 16:30:58

PROJECT INFORMATION

Test Well: 41511

WELL DATA

Pumping Wells

Observation Wells

| Well Name | X (ft) | Y (ft) |
|-----------|---------|--------|
| 41511 | -165054 | 94116 |

| Well Name | X (ft) | Y (ft) |
|---------------------|---------|--------|
| □ | -165054 | 94116 |
| □ 10546 | -166644 | 96010 |
| □ 42312 | -167659 | 92011 |
| □ Domestic 1 | -164518 | 95350 |
| □ Domestic 2 | -165814 | 96777 |
| □ Domestic 3 | -161545 | 95654 |
| □ Domestic 4 | -162218 | 91704 |
| □ Domestic 5 | -162327 | 91575 |

SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 6672.6 ft²/day

S = 0.2006

Kz/Kr = 1.

b = 306.1 ft