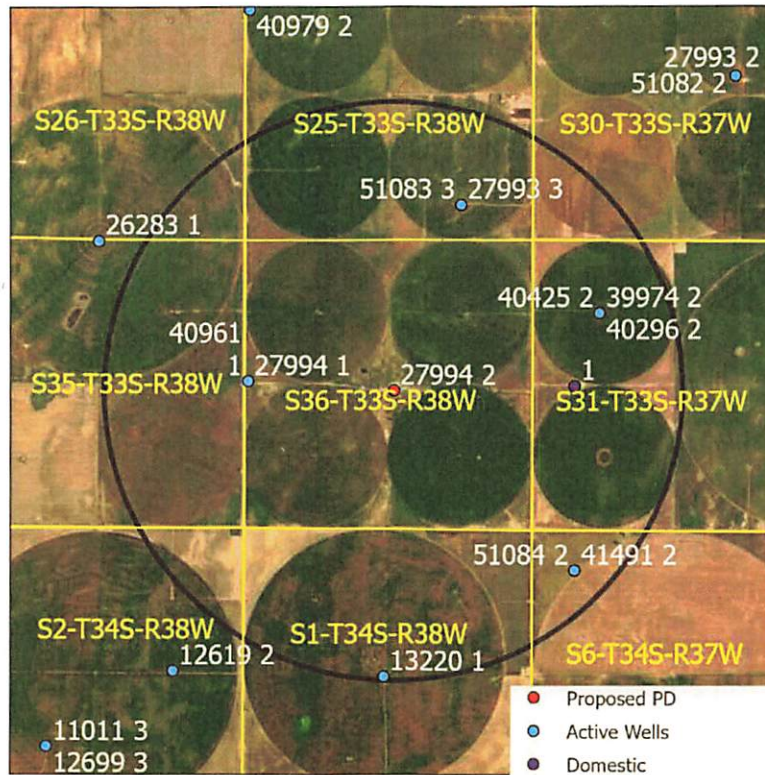


Evaluation of proposed move for Water Right No. 27994

Proposed: Move water right no. 27994 to a new well location, a distance of 2,661 ft to the southeast.



Wells within 1 mile: 27993 & 51083, 39974 & 40296 & 40425, 13220, and 41491 & 51084 along with one domestic well in section 31-33-37.

The saturated thickness at the proposed well location is estimated to be 285.2 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:

$S = 0.1676$, $T = 15,502.33 \text{ ft}^2/\text{day}$, $tp_{\text{current}} = 73 \text{ days}$ (based on average use and observed rate),
 $Q_{\text{current}} = 1490 \text{ gpm}$ (based on 2014 field inspection), $tp_{\text{proposed}} = 118 \text{ days}$, $Q_{\text{proposed}} = 1490 \text{ gpm}$

Theis drawdowns were calculated as follows:

27993 & 51083: Drawdown from current location = 2.21 ft
 Drawdown from proposed location = 3.37ft
 Net drawdown = **1.2 ft**

39974 & 40296 & 40425: Drawdown from current location = 2.02 ft
 Drawdown from proposed location = 3.14 ft
 Net drawdown = **1.1 ft**

41491 & 51084: Drawdown from current location = 1.81 ft
Drawdown from proposed location = 2.84 ft
Net drawdown = **1.0 ft**

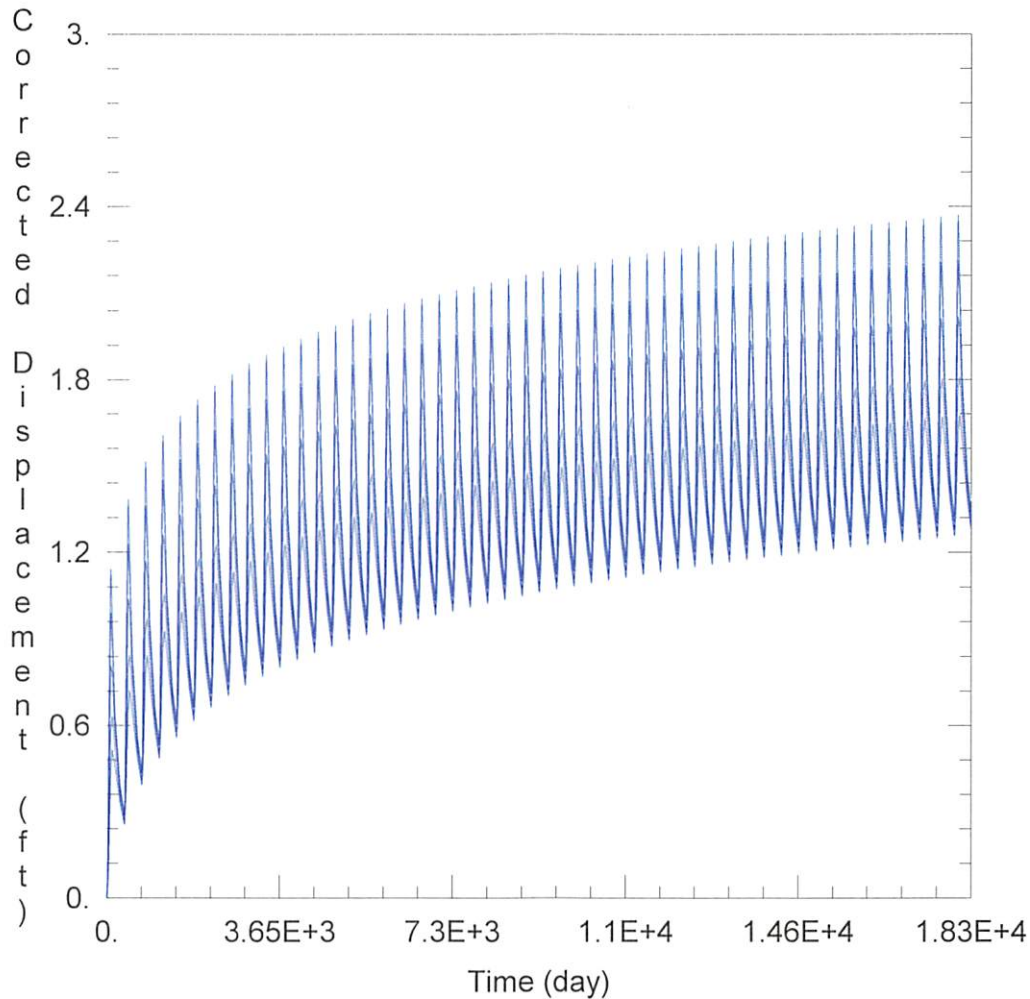
13220: Drawdown from current location = 1.68 ft
Drawdown from proposed location = 2.65 ft
Net drawdown = **1.0 ft**

Domestic 31-33-37: Drawdown from current location = 2.37 ft
Drawdown from proposed location = 3.56 ft
Net drawdown = **1.2 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\27994\27994.aqt
 Date: 06/10/24 Time: 15:00:31

PROJECT INFORMATION

Test Well: 27994

WELL DATA

Pumping Wells

Observation Wells

Well Name	X (ft)	Y (ft)
27994	-175567	94664

Well Name	X (ft)	Y (ft)
□	-175567	94664
□ 51083	-174330	98050
□ 39974	-171803	96071
□ 41491	-172259	91381
□ 13220	-175752	89448
□ Domestic 1	-172264	94750

SOLUTION

Aquifer Model: Unconfined

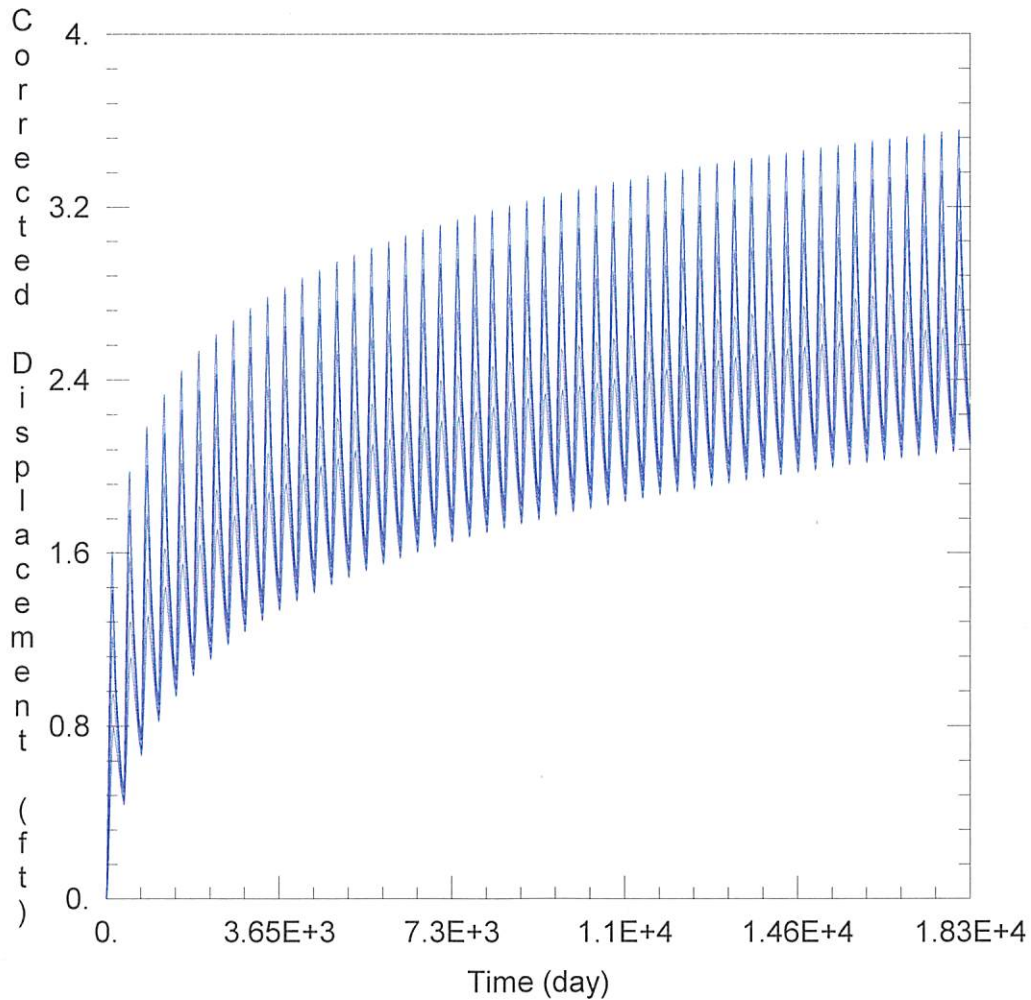
Solution Method: Theis

T = 1.55E+4 ft²/day

S = 0.1676

Kz/Kr = 1.

b = 285.2 ft



WELL TEST ANALYSIS

Data Set: C:\Users\scanstation\Documents\move requests\27994\27994 proposed.aqt
 Date: 06/10/24 Time: 15:00:35

PROJECT INFORMATION

Test Well: 27994

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
27994	-175567	94664

Observation Wells

Well Name	X (ft)	Y (ft)
□	-175567	94664
□ 51083	-174330	98050
□ 39974	-171803	96071
□ 41491	-172259	91381
□ 13220	-175752	89448
□ Domestic 1	-172264	94750

SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 1.55E+4 ft²/day

S = 0.1676

Kz/Kr = 1.

b = 285.2 ft