

Evaluation of proposed move for Water Right No 1589

Proposed: Move water right no. 1589 a distance of 474 ft to the southwest.



Wells within 1 mile: 11658, 11699, 30595, 21481, 11960, and 3 domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 163 ft, based upon the driller's log and an observation well in section 14-32-32. For saturated thickness between 150 ft and 200 ft, the drawdown allowance is 3.5 ft.

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

$S = 0.2379$, $T = 14,584 \text{ ft}^2/\text{day}$, $tp_{\text{current}} = 106 \text{ days}$ (based upon average use and observed rate),
 $Q_{\text{current}} = 745 \text{ gpm}$ (based upon 2017 field inspection), $tp_{\text{proposed}} = 74 \text{ days}$, $Q_{\text{proposed}} = 1945 \text{ gpm}$

This drawdowns were calculated as follows:

11658: Drawdown from current location = 2.29 ft
Drawdown from proposed location = 4.57 ft
Net drawdown = **2.3 ft**

11699: Drawdown from current location = 1.43 ft
Drawdown from proposed location = 2.60 ft
Net drawdown = **1.2 ft**

30595: Drawdown from current location = 1.08 ft
Drawdown from proposed location = 2.03 ft
Net drawdown = **1.0 ft**

21481: Drawdown from current location = 1.17 ft
Drawdown from proposed location = 2.29 ft
Net drawdown = **1.1 ft**

11960: Drawdown from current location = 1.31 ft
Drawdown from proposed location = 2.33 ft
Net drawdown = **1.0 ft**

Domestic 1: Drawdown from current location = 1.51 ft
Drawdown from proposed location = 3.13 ft
Net drawdown = **1.6 ft**

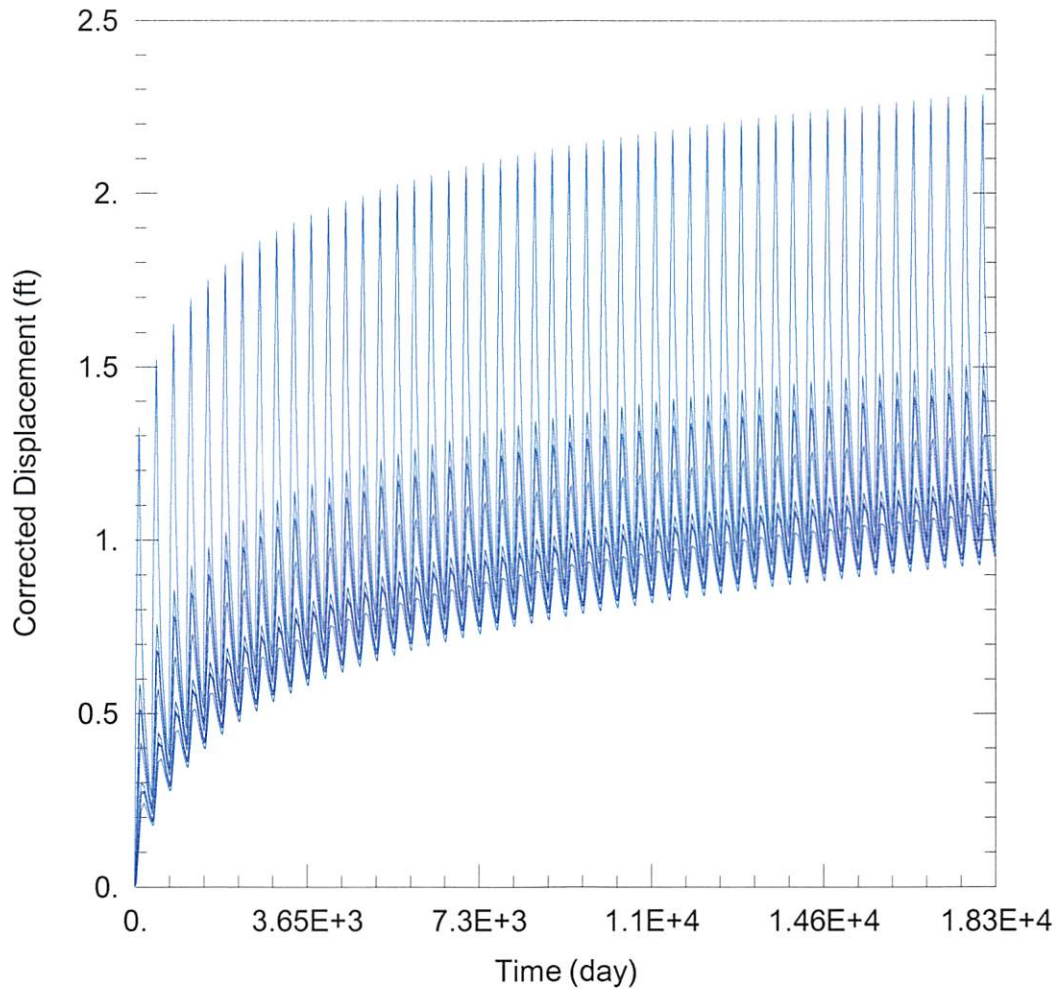
Domestic 2: Drawdown from current location = 1.14 ft
Drawdown from proposed location = 2.02 ft
Net drawdown = **0.9 ft**

Domestic 3: Drawdown from current location = 1.13 ft
Drawdown from proposed location = 2.02 ft
Net drawdown = **0.9 ft**

Net drawdown does not exceed the drawdown allowance of 3.5 ft for any wells within 1 mile of the proposed location. Therefore, critical well analysis is not necessary.

Conclusion:

Based upon information from the GMD3 model, this proposal will cause minimal effects on neighboring wells, and is unlikely to create an impairment. GMD3 staff recommends approval of the application.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2020_moves\1589\1589 Current.aqt

Date: 11/04/20

Time: 15:53:44

PROJECT INFORMATION

Company: GMD 3

Project: 1589

Location: Seward County

Test Well: 1589

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
1589	4091	138992

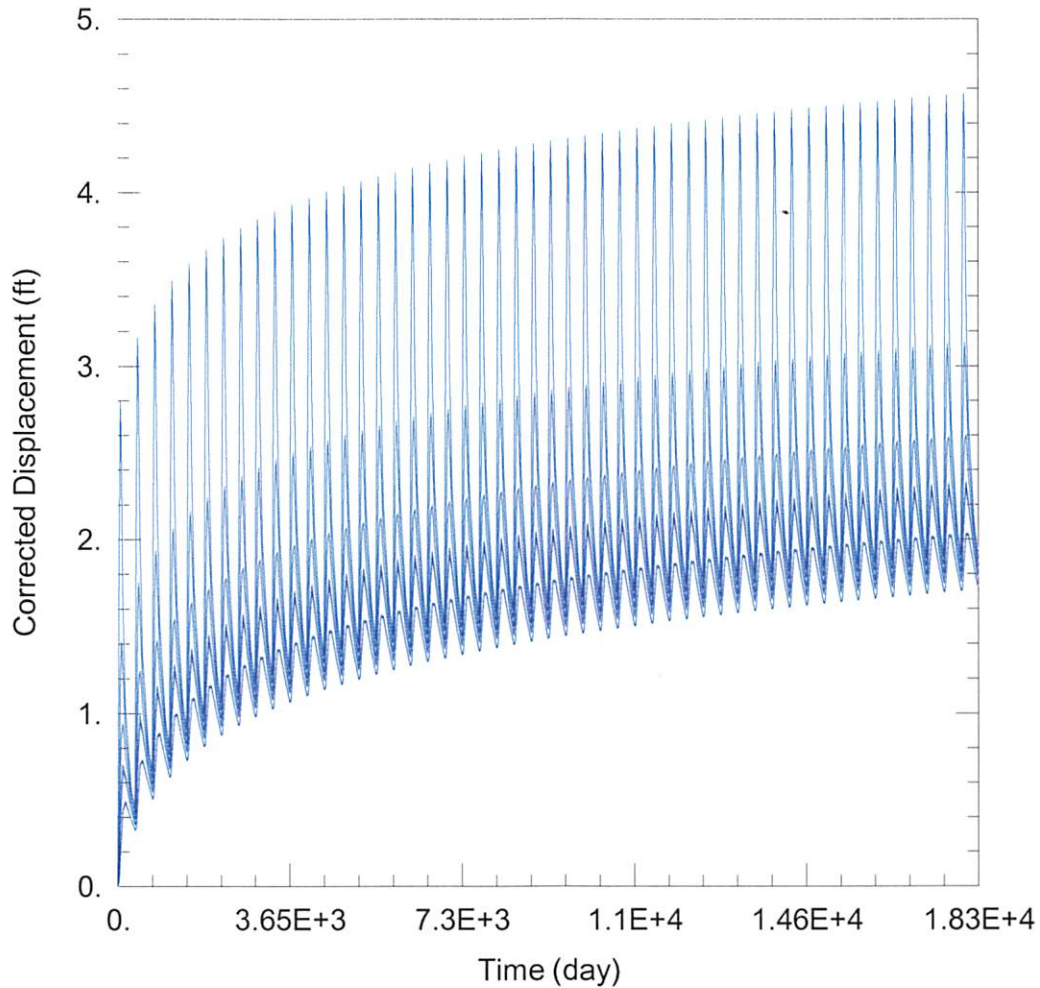
Observation Wells

Well Name	X (ft)	Y (ft)
□	4091	138992
□ 11658	3241	140501
□ 11699	3307	142455
□ 30595	-672	141707
□ 21481	-764	139075
□ 11960	7278	136451
□ Domestic 1	831	139487
□ Domestic 2	4114	144040
□ Domestic 3	3452	144045

SOLUTION

Aquifer Model: Unconfined

Solution Method: Thisis



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Well Name	X (ft)	Y (ft)
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