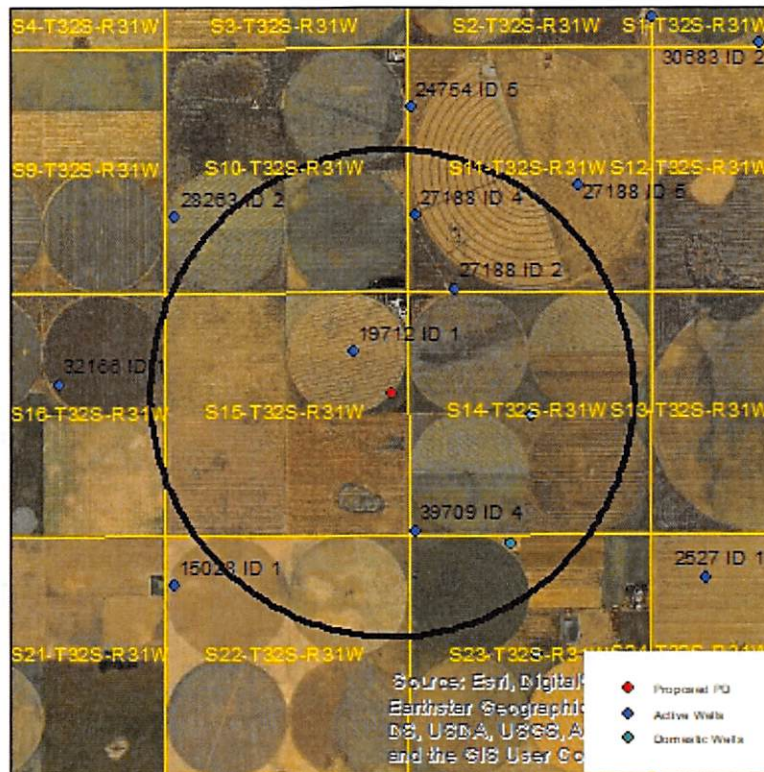


## Evaluation of proposed move for Water Right No 19712

Proposed: Move water right no. 19712 a distance of 1,212 ft to the southeast.



Wells within 1 mile: 27188 ID 2, 27188 ID 4, 11906, 39709, and a domestic well in section 23-32-31.

The saturated thickness at the proposed well location is estimated to be 185 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:

$S = 0.02664$ ,  $T = 3681 \text{ ft}^2/\text{day}$ ,  $t_{p\text{current}} = 100 \text{ days}$ ,  $Q_{\text{current}} = 342 \text{ gpm}$  (based upon 2017 field inspection),  
 $t_{p\text{proposed}} = 42 \text{ days}$ ,  $Q_{\text{proposed}} = 900 \text{ gpm}$

Theis drawdowns were calculated as follows:

27188 ID 2:	Current drawdown = 3.99 ft
	Proposed drawdown = 5.26 ft
	Net drawdown = <b>1.3 ft</b>
27188 ID 4:	Current drawdown = 3.45 ft
	Proposed drawdown = 3.80 ft
	Net drawdown = <b>0.4 ft</b>

11906:                   Current drawdown = 2.96 ft  
                              Proposed drawdown = 4.58 ft  
                              Net drawdown = **1.6 ft**

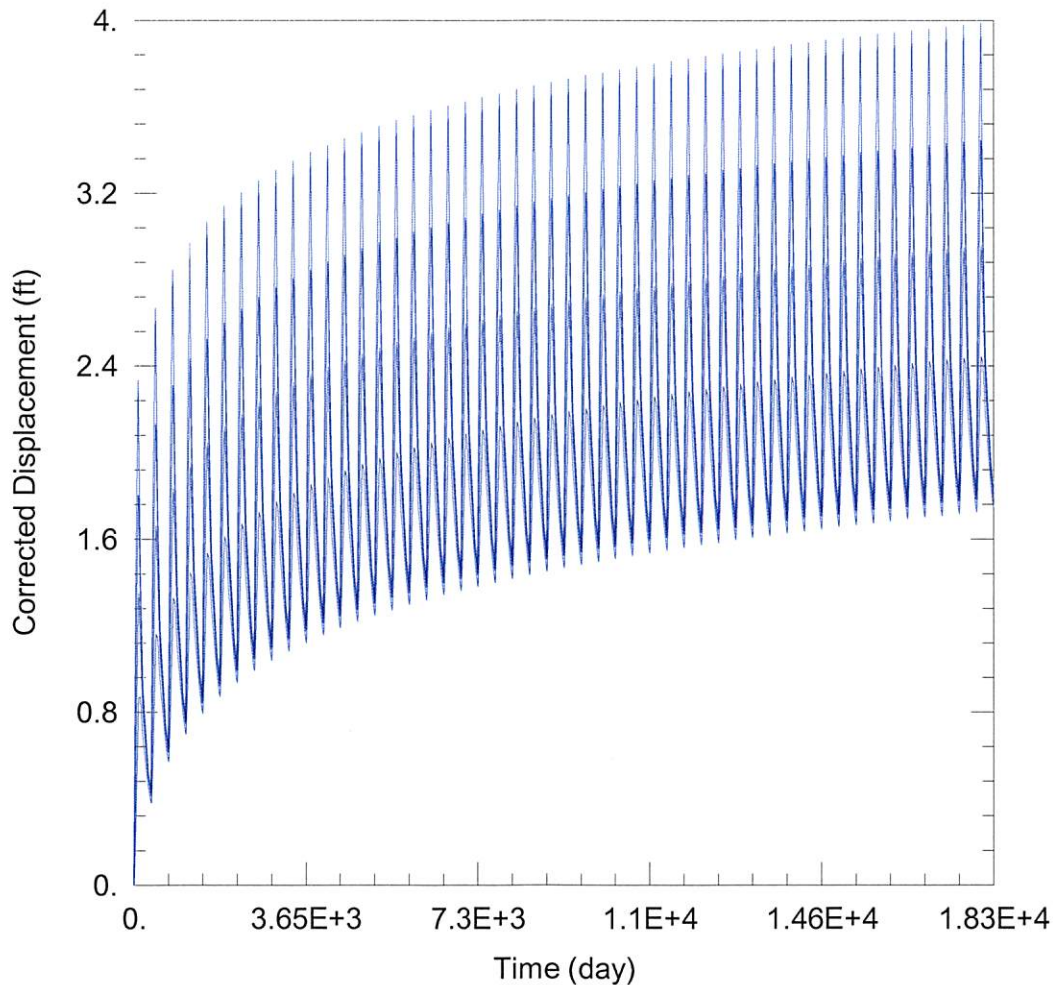
39709:                   Current drawdown = 2.96 ft  
                              Proposed drawdown = 4.63 ft  
                              Net drawdown = **1.7 ft**

Domestic 23-32-31:    Current drawdown = 2.45 ft  
                              Proposed drawdown = 3.53 ft  
                              Net drawdown = **1.1 ft**

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

**Conclusion:**

The proposed change should result in minimal effects on neighboring wells and is unlikely to create an impairment situation. GMD3 staff recommends approval of the application.



### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2020\_moves\19712\19712 Current.aqt

Date: 03/20/20

Time: 15:46:50

### PROJECT INFORMATION

Company: GMD 3

Project: 19712

Location: Seward County

Test Well: 19712

### WELL DATA

#### Pumping Wells

Well Name	X (ft)	Y (ft)
19712	36027	143123

#### Observation Wells

Well Name	X (ft)	Y (ft)
□	36027	143123
□ 27188 ID 2	38249	144480
□ 27188 ID 4	37371	146067
□ 11906 ID 3	39912	141748
□ 39709 ID 4	37381	139228
□ Domestic 23-32-31	39456	138981

### SOLUTION

Aquifer Model: Unconfined

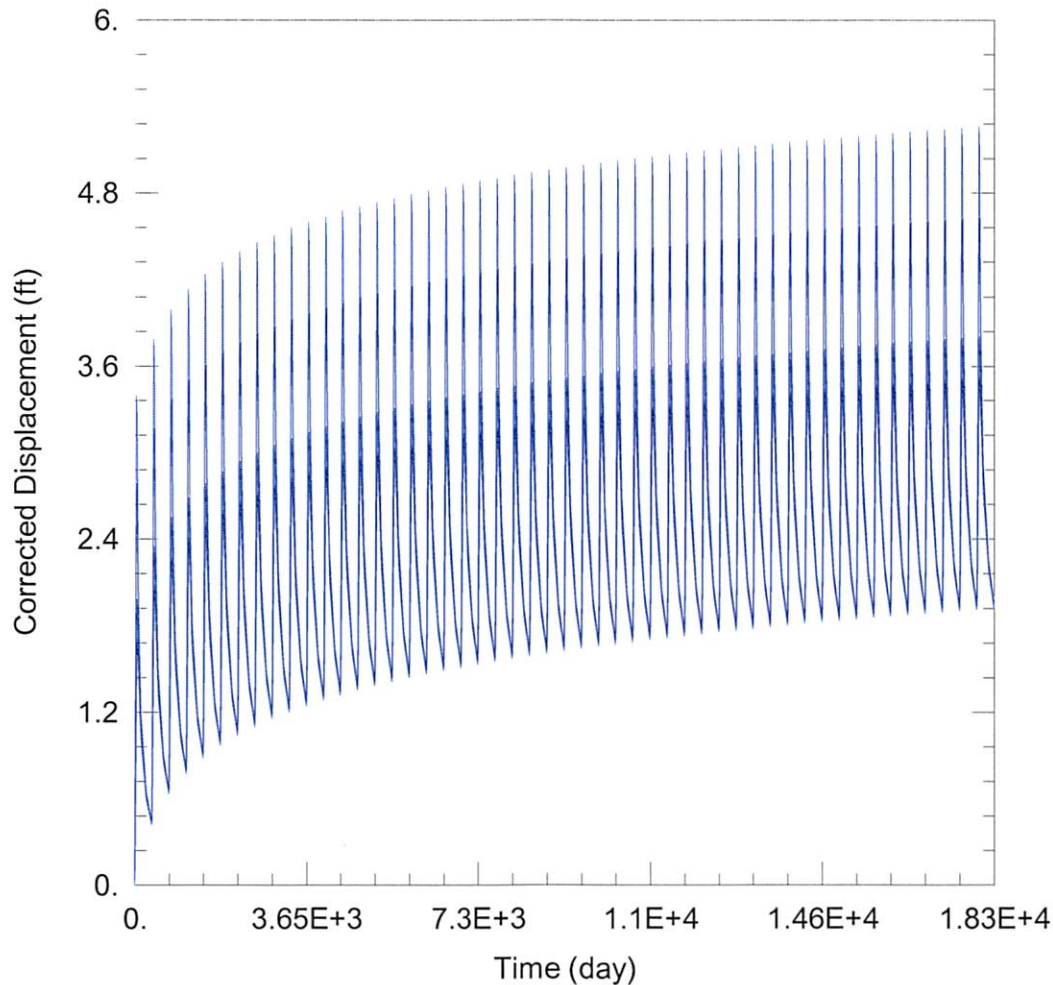
Solution Method: Theis

T = 3681. ft<sup>2</sup>/day

S = 0.02664

Kz/Kr = 1.

b = 185. ft



### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2020\_moves\19712\19712 Proposed.aqt

Date: 03/20/20

Time: 15:46:43

### PROJECT INFORMATION

Company: GMD 3

Project: 19712

Location: Seward County

Test Well: 19712

### WELL DATA

#### Pumping Wells

Well Name	X (ft)	Y (ft)
19712	36855	142239

#### Observation Wells

Well Name	X (ft)	Y (ft)
□	36855	142239
□ 27188 ID 2	38249	144480
□ 27188 ID 4	37371	146067
□ 11906 ID 3	39912	141748
□ 39709 ID 4	37381	139228
□ Domestic 23-32-31	39456	138981

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 3681. ft<sup>2</sup>/day

S = 0.02664

Kz/Kr = 1.

b = 185. ft