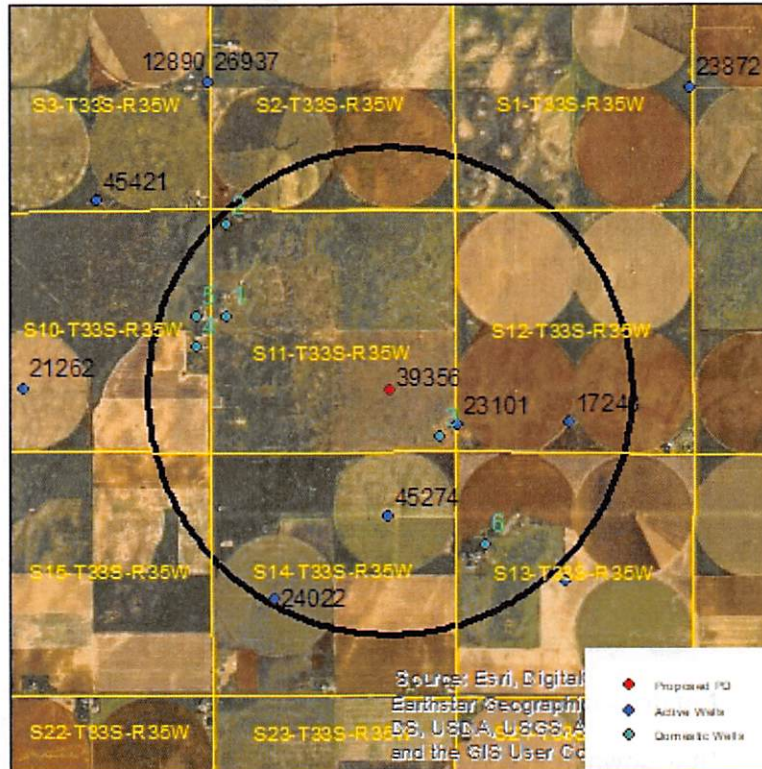


**Evaluation of proposed new appropriation for Water Right No 50238**

Proposed: Create new water right no. 50238 to increase the maximum allowable pumping rate from the well authorized under water right no. 39356 from 650 gpm to 747 gpm.



Wells within 1 mile: 23101, 17248, 45274, 24022, and 6 domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 339 ft, based upon the GMD3 model. For saturated thicknesses greater than 200 ft, the maximum allowable Theis drawdown to neighboring critical wells is 4.0 ft.

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

$S = 0.1976$ ,  $T = 12,779 \text{ ft}^2/\text{day}$ ,  $t_{p_{\text{current}}} = 4 \text{ days}$  (based upon observed rate and reported quantity),  $Q_{\text{current}} = 650 \text{ gpm}$  (current authorized rate),  $t_{p_{\text{proposed}}} = 33 \text{ days}$ ,  $Q_{\text{proposed}} = 747 \text{ gpm}$ . Note that the well has not been operated much over the last 10 years, so average reported quantity is likely much lower than what would be pumped without the proposed appropriation. Therefore, the following results are considered to be very conservative.

Theis drawdowns were calculated as follows:

23101: Drawdown from current location = 0.14 ft  
 Drawdown from proposed location = 1.12 ft  
 Net drawdown = **1.0 ft**

17248: Drawdown from current location = 0.05 ft

Drawdown from proposed location = 0.50 ft  
Net drawdown = **0.4 ft**

45274: Drawdown from current location = 0.07 ft  
Drawdown from proposed location = 0.69 ft  
Net drawdown = **0.6 ft**

24022: Drawdown from current location = 0.04 ft  
Drawdown from proposed location = 0.41 ft  
Net drawdown = **0.4 ft**

Domestic 1: Drawdown from current location = 0.05 ft  
Drawdown from proposed location = 0.51 ft  
Net drawdown = **0.5 ft**

Domestic 2: Drawdown from current location = 0.04 ft  
Drawdown from proposed location = 0.41 ft  
Net drawdown = **0.4 ft**

Domestic 3: Drawdown from current location = 0.15 ft  
Drawdown from proposed location = 1.26 ft  
Net drawdown = **1.1 ft**

Domestic 4: Drawdown from current location = 0.05 ft  
Drawdown from proposed location = 0.47 ft  
Net drawdown = **0.4 ft**

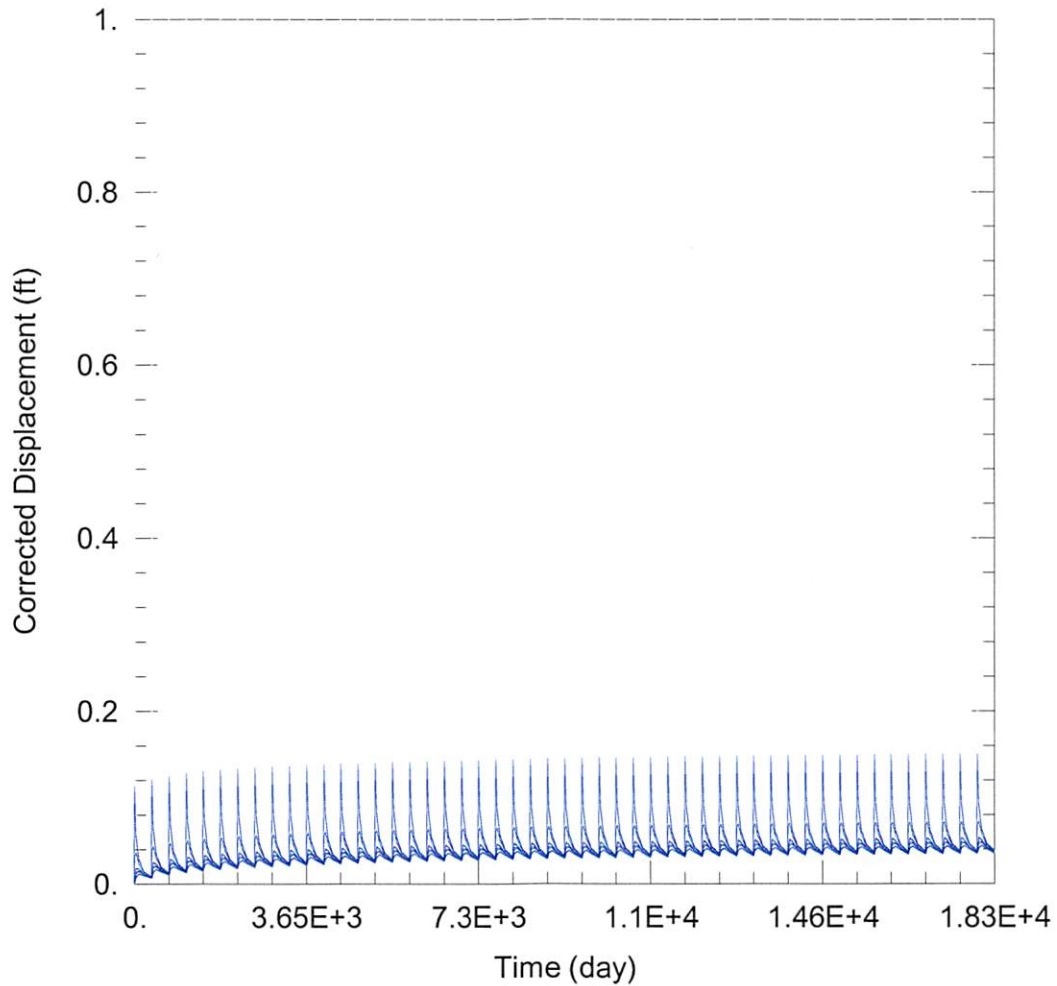
Domestic 5: Drawdown from current location = 0.05 ft  
Drawdown from proposed location = 0.45 ft  
Net drawdown = **0.4 ft**

Domestic 6: Drawdown from current location = 0.05 ft  
Drawdown from proposed location = 0.51 ft  
Net drawdown = **0.5 ft**

Net drawdown does not exceed the drawdown allowance for any neighboring wells, so critical well evaluation evaluation is not necessary.

**Conclusion:**

Given the current saturated thickness, this proposed change is unlikely to create noticeable effects on neighboring wells.



### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019\_moves\50238\50238 Current.aqt

Date: 06/04/19

Time: 16:41:22

### PROJECT INFORMATION

Company: GMD 3

Project: 50238

Location: Stevens County

Test Well: 50238

### WELL DATA

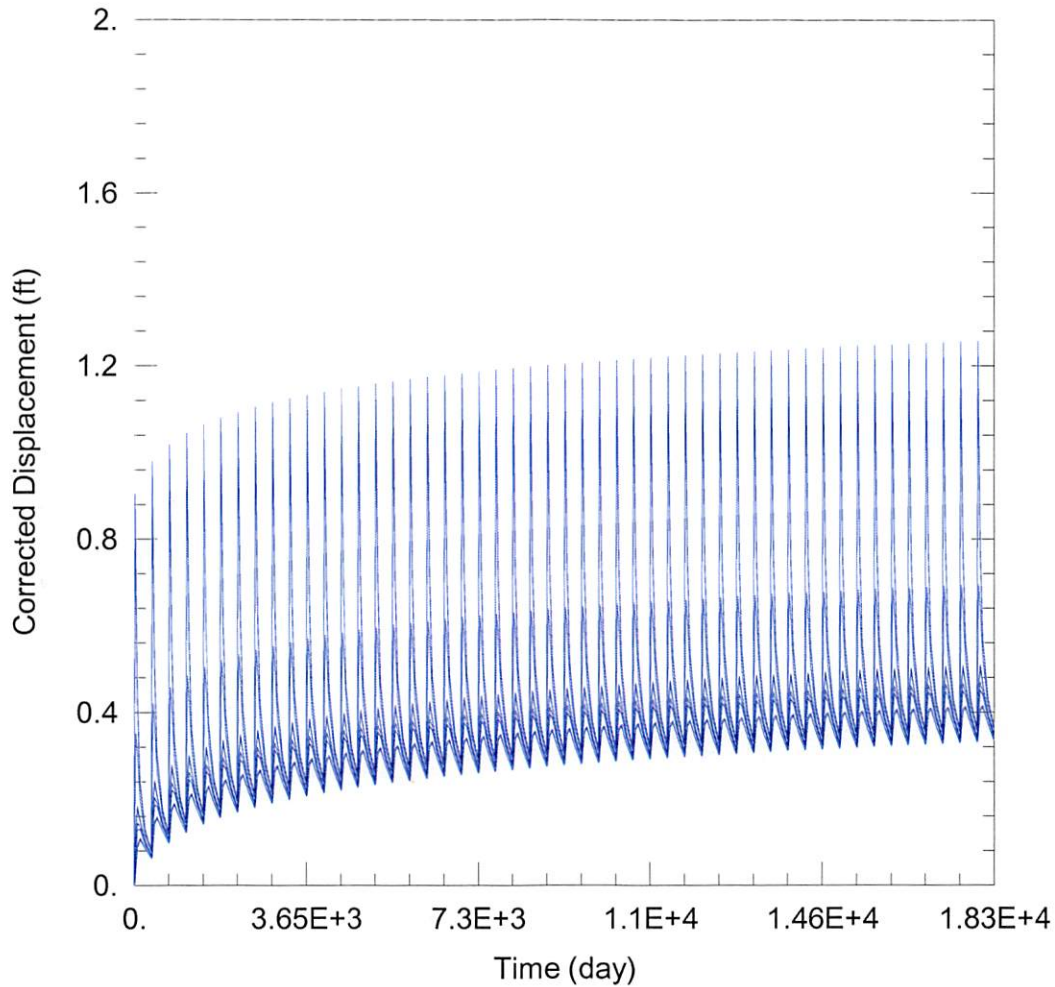
#### Pumping Wells

Well Name	X (ft)	Y (ft)
50238	-84761	114217

#### Observation Wells

Well Name	X (ft)	Y (ft)
□	-84761	114217
□ 23101	-83276	113498
□ 17248	-80843	113505
□ 45274	-84803	111467
□ 24022	-87264	109713
□ Domestic 1	-88324	115839
□ Domestic 2	-88322	117812
□ Domestic 3	-83654	113213
□ Domestic 4	-88984	115179
□ Domestic 5	-88984	115837
□ Domestic 6	-82670	110885

SOLUTION



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019\_moves\50238\50238 Proposed.aqt

Date: 06/04/19

Time: 16:41:15

PROJECT INFORMATION

Company: GMD 3

Project: 50238

Location: Stevens County

Test Well: 50238

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
50238	-84761	114217

Observation Wells

Well Name	X (ft)	Y (ft)
□	-84761	114217
□ 23101	-83276	113498
□ 17248	-80843	113505
□ 45274	-84803	111467
□ 24022	-87264	109713
□ Domestic 1	-88324	115839
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□ Domestic 3	-83654	113213
□ Domestic 4	-88984	115179
□ Domestic 5	-88984	115837
□ Domestic 6	-82670	110885

SOLUTION