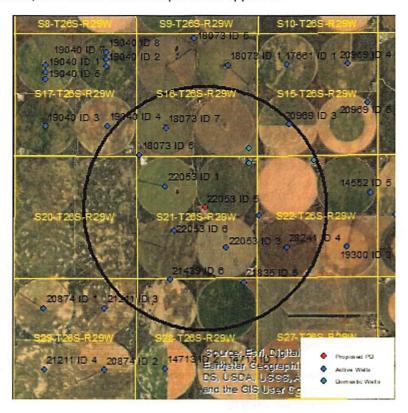
#### Evaluation of proposed move for Water Right No. 22053

Proposed: Reduce authorized quantity of water right no. 22053 ID 1 from 276 AF to 176 AF. Increase authorized quantity on water right no. 22053 ID 5 from 276 AF to 376 AF. The proposed change does not meet well spacing rules, so a waiver will be required for approval.



Wells within 1 mile: 22053 ID 1, 22053 ID 3, 22053 ID 6, 18073 ID 6, 18073 ID 7, 20969, 14552, 28241, 21439, 21835, a domestic well in section 16-26-29, a domestic well in section 21-26-29, and a domestic well in section 22-26-29.

The saturated thickness at the proposed well location is estimated to be 63 ft, based upon the driller's log and an average water table elevation at two nearby observation wells. For saturated thickness between 50 ft and 75 ft, the drawdown allowance is 1.5 ft.

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

$$S = 0.2873$$
,  $T = 9925.3$  ft<sup>2</sup>/day,

 $tp_{current} = 135 days$  (based on average use and observed rate),  $Q_{current} = 419 gpm$  (based on 2019 field inspection),  $tp_{proposed} = 203 days$ ,  $Q_{proposed} = 419 gpm$ 

Theis drawdowns were calculated as follows:

22053 ID 1: Drawdown from current location = 1.78 ft

Drawdown from proposed location = 2.46 ft

Net drawdown = 0.7 ft

Drawdown from proposed location = 2.45 ft

Net drawdown = **0.7** ft

22053 ID 6: Drawdown from current location = 1.95 ft

Drawdown from proposed location = 2.64 ft

Net drawdown = 0.6 ft

18073 ID 6: Drawdown from current location = 1.22 ft

Drawdown from proposed location = 1.79 ft

Net drawdown = 0.6 ft

18073 ID 7: Drawdown from current location = 1.18 ft

Drawdown from proposed location = 1.74 ft

Net drawdown = **0.6** ft

20969: Drawdown from current location = 0.99 ft

Drawdown from proposed location = 1.47 ft

Net drawdown = 0.5 ft

14552: Drawdown from current location = 1.58 ft

Drawdown from proposed location = 2.23 ft

Net drawdown = **0.6** ft

28241: Drawdown from current location = 1.16 ft

Drawdown from proposed location = 1.71 ft

Net drawdown = 0.6 ft

21439: Drawdown from current location = 1.25 ft

Drawdown from proposed location = 1.83 ft

Net drawdown = 0.6 ft

21835: Drawdown from current location = 1.22 ft

Drawdown from proposed location = 1.79 ft

Net drawdown = **0.6** ft

Domestic 16-26-29: Drawdown from current location = 1.31 ft

Drawdown from proposed location = 1.90 ft

Net drawdown = **0.6** ft

Domestic 21-26-29: Drawdown from current location = 1.46 ft

Drawdown from proposed location = 2.09 ft

Net drawdown = 0.6 ft

Domestic 22-26-29: Drawdown from current location = 0.99 ft

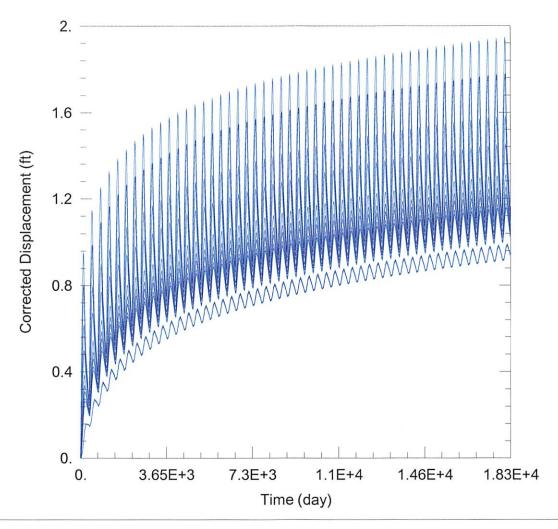
Drawdown from proposed location = 1.47 ft

Net drawdown = 0.5 ft

Net drawdown does not exceed the drawdown allowance of 1.5 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 is unlikely to cause impairment. GMD3 staff recommends approval of this proposal.



### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021\_Moves\22053\22053 Current.aqt

Date: 09/17/21

Time: 16:33:52

### PROJECT INFORMATION

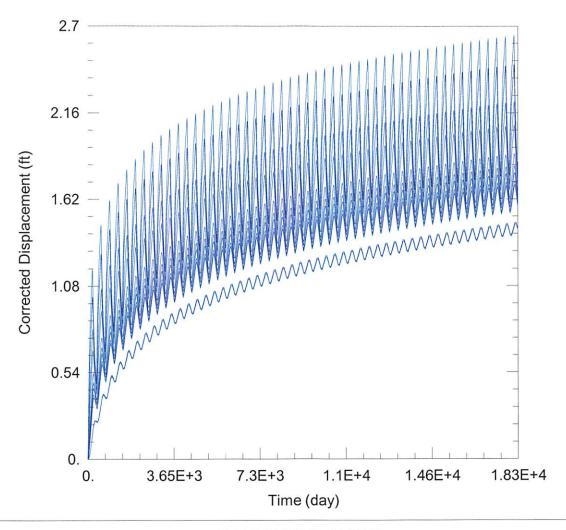
Company: GMD 3 Project: 22053

Location: Gray County

# **WELL DATA**

Pumping vveils			
Well Name	X (ft)	Y (ft)	
22053 ID5	87736	327661	

Observation Wells			
Well Name	X (ft)	Y (ft)	
	87736	327661	
□ 22053 ID1	86028	328587	
□ 22053 ID3	88667	325941	
□ 22053 ID6	86381	326695	
□ 18073 ID6	84897	329942	
□ 18073 ID7	86049	331118	
<b>20969</b>	91395	331267	
<b>14552</b>	90096	327322	
<b>28241</b>	91297	325950	
<b>21439</b>	86206	324539	
<b>21835</b>	89423	324436	
<ul> <li>Domestic 16-26-29</li> </ul>	89664	330245	
<ul> <li>Domestic 21-26-29</li> </ul>	89662	329583	
<ul> <li>Domestic 22-26-29</li> </ul>	92495	329731	



# WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021\_Moves\22053\22053 Proposed.aqt
Date: 09/17/21 Time: 16:33:44

# PROJECT INFORMATION

Company: GMD 3 Project: 22053

Location: Gray County

### **WELL DATA**

Pumping Wells			
Well Name	X (ft)	Y (ft)	
22053 ID5	87736	327661	

Observation Wells				
Well Name	X (ft)	Y (ft)		
	87736	327661		
□ 22053 ID1	86028	328587		
□ 22053 ID3	88667	325941		
□ 22053 ID6	86381	326695		
□ 18073 ID6	84897	329942		
□ 18073 ID7	86049	331118		
<b>20969</b>	91395	331267		
<ul><li>14552</li></ul>	90096	327322		
<b>28241</b>	91297	325950		
<b>21439</b>	86206	324539		
<b>21835</b>	89423	324436		
<ul> <li>Domestic 16-26-29</li> </ul>	89664	330245		
<ul> <li>Domestic 21-26-29</li> </ul>	89662	329583		
<ul> <li>Domestic 22-26-29</li> </ul>	92495	329731		