Evaluation of proposed new Water Right No. 50568

Proposed: Create a new water right no. 50568 and stack it onto the existing well authorized under water right no. 13527. Water right no. 50568 will provide an additional rate of 62 gpm. It will be limited to provide no additional quantity. Authorized rate at the well location will increase from 415 gpm to 477 gpm. Authorized quantity will remain at 400 AF. This well does not meet the spacing requirements under GMD3 rules to water right nos. 6557 & 17656 ID1 and 6557 & 17656 ID2. Adding the additional authority as proposed will require a waiver of rules by the GMD3 Board of Directors.



Wells within 1 mile: 19800, 6557 & 17656 ID1, 6557 & 17656 ID2, 8197, and 6256.

The saturated thickness at the proposed well location is estimated to be 29 ft, based upon the GMD3 model. For saturated thickness less than 50 ft, the drawdown allowance is 1.0 ft.

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

S = 0.2174, T = 2986.9 ft²/day, $tp_{current} = 69$ days (based upon average use and authorized rate), $Q_{current} = 415$ gpm (based upon authorized rate), $tp_{proposed} = 60$ days, $tp_{troposed} = 477$ gpm

Theis drawdowns were calculated as follows:

19800:

Drawdown from current location = 1.88 ft

Drawdown from proposed location = 1.89 ft

Net drawdown = 0.0 ft

6557 & 17656 ID1: Drawdown from current location = 2.57 ft

Drawdown from proposed location = 2.59 ft

Net drawdown = 0.0 ft

6557 & 17656 ID2: Drawdown from current location = 2.12 ft

Drawdown from proposed location = 2.12 ft

Net drawdown = **0.0** ft

8197: Drawdown from current location = 1.24 ft

Drawdown from proposed location = 1.24 ft

Net drawdown = 0.0 ft

6256: Drawdown from current location = 1.24 ft

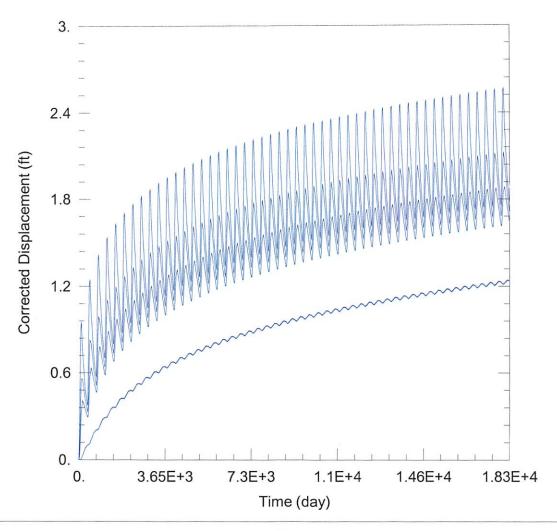
Drawdown from proposed location = 1.24 ft

Net drawdown = 0.0 ft

Net drawdown does not exceed the drawdown allowance of 1.0 ft for any well within 1 mile of the proposed location. Therefore, critical well analysis is not necessary.

Conclusion:

The proposed new authority is located within an area with a depleted water table and does not meet spacing to neighboring wells. However, analysis shows effects of running the well at an additional 62 gpm to be negligible. GMD3 staff recommends waiver of rules and approval of the application.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\50568\50568 Current.aqt

Date: 06/18/21

Time: 15:20:22

PROJECT INFORMATION

Company: GMD 3 Project: 50568

Location: Kearny County

WELL DATA

F	Pumping Wells	
Well Name	X (ft)	Y (ft)
13527	-187319	423165

Well Name	X (ft)	Y (ft)
	-187319	423165
19800	-184732	422459
□ 6557 & 17656 ID1	-186465	421695
□ 6657 & 17656 ID2	-187363	420929
□ 8197	-184498	418779
6256	-182140	422416

Observation Wells

SOLUTION

Aquifer Model: Unconfined

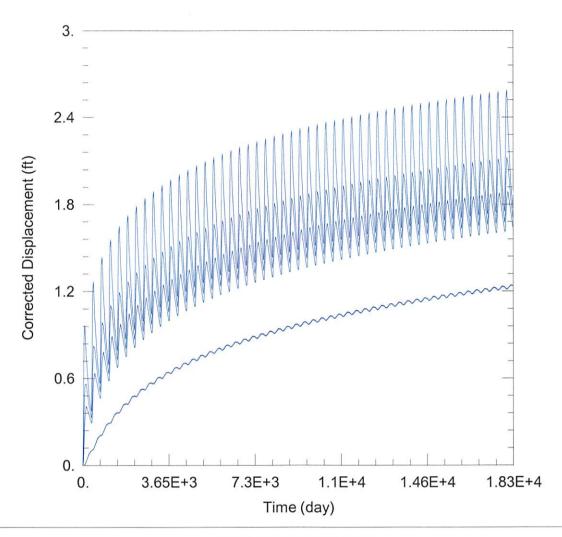
 $= 2986.9 \text{ ft}^2/\text{day}$

Kz/Kr = 1.

S = 0.2174

Solution Method: Theis

= 29. ft b



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\50568\50568 Proposed.aqt

Date: 06/18/21 Time: 15:19:05

PROJECT INFORMATION

Company: GMD 3 Project: 50568

Location: Kearny County

WELL DATA

Pumping wells			
Well Name	X (ft)	Y (ft)	
13527	-187319	423165	

Observation Wells				
Well Name	X (ft)	Y (ft)		
	-187319	423165		
19800	-184732	422459		
□ 6557 & 17656 ID1	-186465	421695		
□ 6657 & 17656 ID2	-187363	420929		
8197	-184498	418779		
- 6256	-182140	422416		

SOLUTION

Aquifer Model: Unconfined

T = 2986.9 ft²/day

Kz/Kr = 1.

Solution Method: Theis

S = 0.2174b = 29. ft