



38997: Drawdown from current location = 1.13 ft  
Drawdown from proposed location = 4.60 ft  
Net drawdown = **3.5 ft**

38993: Drawdown from current location = 1.21 ft  
Drawdown from proposed location = 6.36 ft  
Net drawdown = **5.1 ft**

38570: Drawdown from current location = 1.08 ft  
Drawdown from proposed location = 4.03 ft  
Net drawdown = **2.9 ft**

1847: Drawdown from current location = 2.74 ft  
Drawdown from proposed location = 4.28 ft  
Net drawdown = **1.5 ft**

1202: Drawdown from current location = 1.46 ft  
Drawdown from proposed location = 4.64 ft  
Net drawdown = **3.6 ft**

1203: Drawdown from current location = 1.13 ft  
Drawdown from proposed location = 4.69 ft  
Net drawdown = **3.6 ft**

2531: Drawdown from current location = 0.88 ft  
Drawdown from proposed location = 4.09 ft  
Net drawdown = **3.2 ft**

38991: Drawdown from current location = 1.18 ft  
Drawdown from proposed location = 5.56 ft  
Net drawdown = **4.4 ft**

Domestic 1: Drawdown from current location = 1.90 ft  
Drawdown from proposed location = 8.86 ft  
Net drawdown = **7.0 ft**

Domestic 2: Drawdown from current location = 1.98 ft  
Drawdown from proposed location = 9.2 ft  
Net drawdown = **7.2 ft**

Domestic 3: Drawdown from current location = 1.57 ft  
Drawdown from proposed location = 4.45 ft  
Net drawdown = **2.9 ft**

Domestic 4: Drawdown from current location = 1.15 ft  
Drawdown from proposed location = 6.10 ft  
Net drawdown = **5.0 ft**

Net drawdown exceeds the drawdown allowance of 4.0 ft for water right nos. 16536, 38993, 38991, and domestic wells 1, 2, and 4. Critical well analysis is necessary for those wells.

**Critical Well Evaluation:**

**16536:**

Water Column = 260 ft

DP = 4.3 ft (Net drawdown from the proposal indicated above)

DE = 46.9 ft (Water level decline from 2021 through 2046 based upon GMD3 model)

DD = 10.7 ft (S = 0.144, T = 103,025 gpd/ft, Q = 400 gpm, tp = 107 days, efficiency = 70%)

DT = 61.9 ft

Economic Drawdown Constraint (EDC) =  $0.4 * 260 \text{ ft} = 104 \text{ ft}$

Physical Drawdown Constraint (PDC) =  $260 \text{ ft} - 60 \text{ ft} = 200 \text{ ft}$

Total drawdown of 61.9 ft is less than the EDC and PDC, so this well is **not critical**.

**38993:**

Water Column = 286 ft

DP = 5.1 ft (Net drawdown from the proposal indicated above)

DE = 28 ft (Water level decline from 2021 through 2046 based upon GMD3 model)

DD = 1.8 ft ( $S = 0.09633$ ,  $T = 74,750$  gpd/ft,  $Q = 50$  gpm,  $tp = 82$  days, efficiency = 70%)

DT = 34.9 ft

Economic Drawdown Constraint (EDC) =  $0.4 * 286$  ft = 114.4 ft

Physical Drawdown Constraint (PDC) =  $286$  ft – 60 ft = 226 ft

Total drawdown of 34.9 ft is less than the EDC and PDC, so this well is **not critical**.

**38991:**

Water Column = 286 ft

DP = 4.4 ft (Net drawdown from the proposal indicated above)

DE = 28 ft (Water level decline from 2021 through 2046 based upon GMD3 model)

DD = 1.9 ft ( $S = 0.09633$ ,  $T = 74,750$  gpd/ft,  $Q = 50$  gpm,  $tp = 179$  days, efficiency = 70%)

DT = 34.3 ft

Economic Drawdown Constraint (EDC) =  $0.4 * 286$  ft = 114.4 ft

Physical Drawdown Constraint (PDC) =  $286$  ft – 60 ft = 226 ft

Total drawdown of 34.3 ft is less than the EDC and PDC, so this well is **not critical**.

**Domestic 1:**

Water Column = 267 ft

DP = 6.9 ft (Net drawdown from the proposal indicated above)

DE = 50.2 ft (Water level decline from 2021 through 2046 based upon GMD3 model)

DT = 57.1 ft

Economic Drawdown Constraint (EDC) =  $0.4 * 267$  ft = 106.8 ft

Physical Drawdown Constraint (PDC) =  $267$  ft – 20 ft = 247 ft

Total drawdown of 57.1 ft is less than the EDC and PDC, so this well is **not critical**.

**Domestic 2:**

Water Column = 267 ft

DP = 7.2 ft (Net drawdown from the proposal indicated above)

DE = 50.2 ft (Water level decline from 2021 through 2046 based upon GMD3 model)

DT = 57.4 ft

Economic Drawdown Constraint (EDC) =  $0.4 * 267 \text{ ft} = 106.8 \text{ ft}$

Physical Drawdown Constraint (PDC) =  $267 \text{ ft} - 20 \text{ ft} = 247 \text{ ft}$

Total drawdown of 57.4 ft is less than the EDC and PDC, so this well is **not critical**.

**Domestic 4:**

Water Column = 267 ft

DP = 5.0 ft (Net drawdown from the proposal indicated above)

DE = 50.2 ft (Water level decline from 2021 through 2046 based upon GMD3 model)

DT = 55.2 ft

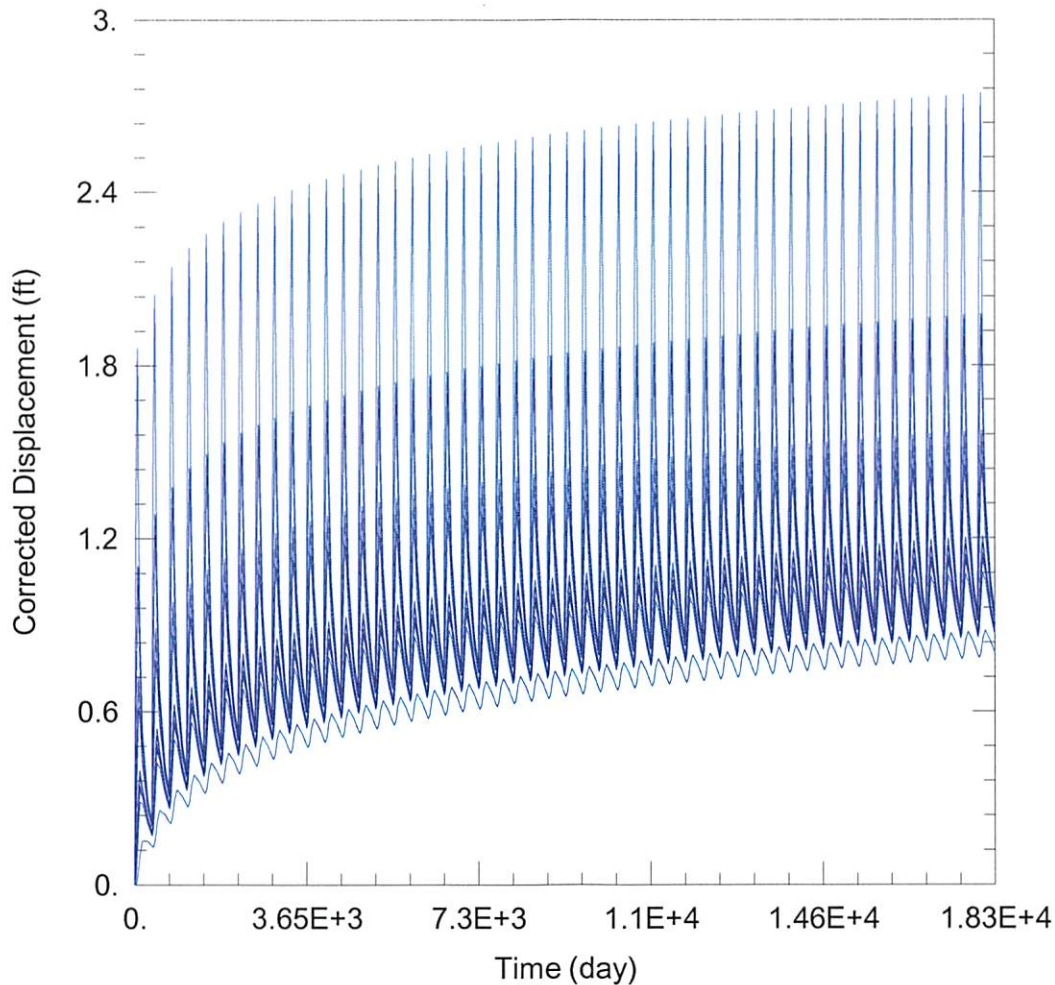
Economic Drawdown Constraint (EDC) =  $0.4 * 267 \text{ ft} = 106.8 \text{ ft}$

Physical Drawdown Constraint (PDC) =  $267 \text{ ft} - 20 \text{ ft} = 247 \text{ ft}$

Total drawdown of 55.2 ft is less than the EDC and PDC, so this well is **not critical**.

**Conclusion:**

The proposed moves are located in an area with ample saturated thickness and aquifer properties that allow for productive wells. If the proposed well were to pump its full authorized authority, there would likely be a noticeable effect on a few neighboring wells. Critical well analysis shows that none of these neighboring wells are critical, meaning that they are not likely to lose a significant amount of productivity because of this change. GMD3 staff recommends approval of the application.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021\_Moves\7195\_D1\7195 Current.aqt

Date: 10/22/21

Time: 16:22:45

PROJECT INFORMATION

Company: GMD 3

Project: 7195 D1

Location: Kearny County

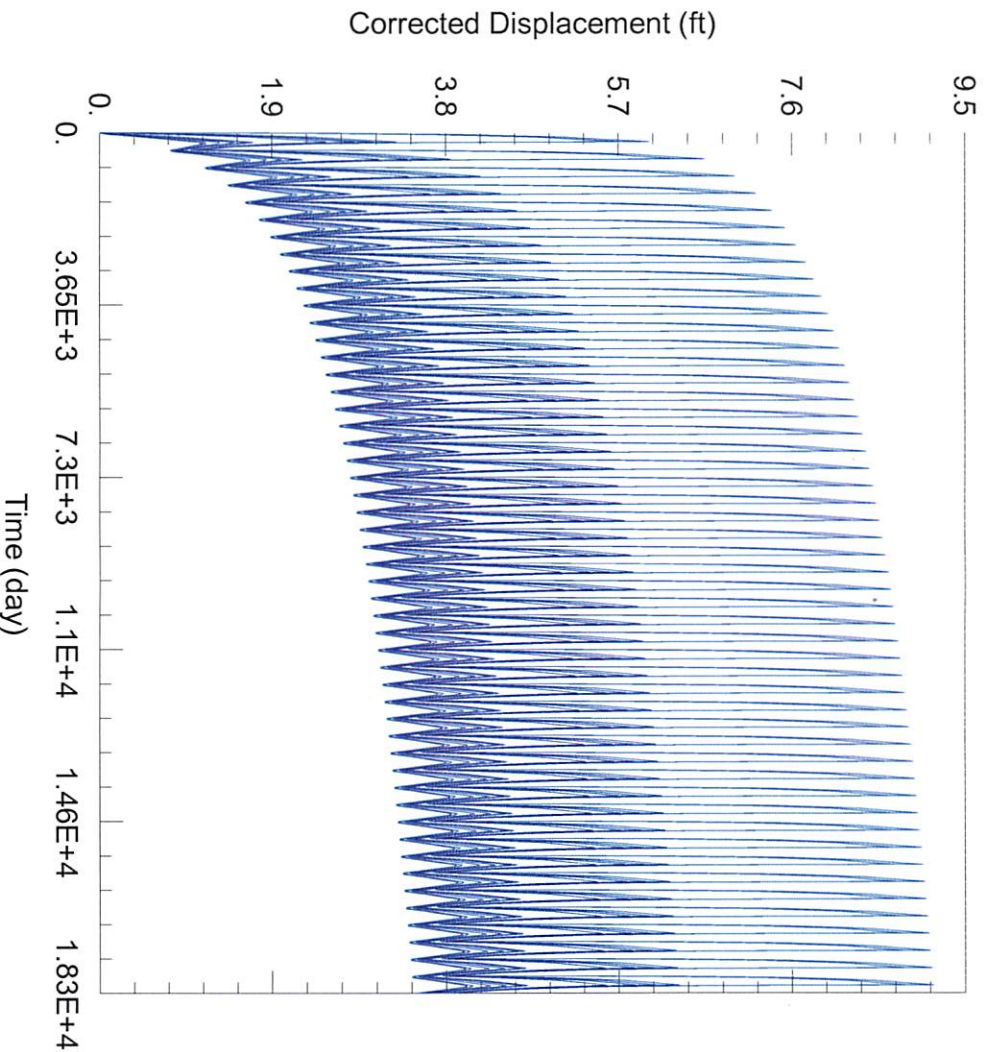
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
7195 ID8	-91621	410508

Observation Wells

Well Name	X (ft)	Y (ft)
□	-91621	410508
□ 16536	-90249	407226
□ 38997	-89015	405689
□ 38993	-92070	405576
□ 38570	-87543	406380
□ 1847	-91702	412129
□ 1202	-95454	410471
□ 1203	-96557	408224
□ 2531	-96571	404215
□ 38991	-90860	405451
□ Domestic 1	-93041	408266
□ Domestic 2	-92779	408262
□ Domestic 3	-95039	411206
□ Domestic 4	-94116	405797



**WELL TEST ANALYSIS**

Data Set: C:\Users\trevora\Documents\2021\_Moves\7195\_D1\7195\_Proposed.aqt  
 Date: 10/22/21 Time: 16:22:37

**PROJECT INFORMATION**

Company: GMD 3  
 Project: 7195 D1  
 Location: Kearny County

**WELL DATA**

**Pumping Wells**

Well Name	X (ft)	Y (ft)
Proposed PD	-92677	407533

**Observation Wells**

Well Name	X (ft)	Y (ft)
<input type="checkbox"/> 16536	-92677	407533
<input type="checkbox"/> 38997	-90249	407226
<input type="checkbox"/> 38993	-89015	405689
<input type="checkbox"/> 38570	-92070	405576
<input type="checkbox"/> 1847	-87543	406380
<input type="checkbox"/> 1202	-91702	412129
<input type="checkbox"/> 1203	-95454	410471
<input type="checkbox"/> 2531	-96557	408224
<input type="checkbox"/> 38991	-96571	404215
<input type="checkbox"/> Domestic 1	-90860	405451
<input type="checkbox"/> Domestic 2	-93041	408266
<input type="checkbox"/> Domestic 3	-92779	408262
<input type="checkbox"/> Domestic 4	-95039	411206
<input type="checkbox"/> Domestic 4	-94116	405797