

Groundwater Transfer Review Summary Form

Transfer/PA # T- 13531 Re-Review

GW Reviewer J. Hootsmans Date Review Completed: June 2, 2025

Summary of Same Source Review:

☐ The proposed change in point of appropriation is not within the same aquifer as per OAR 690-380-2110(2).

Summary of Injury Review:

☐ The proposed transfer will result in another, existing water right not receiving previously available water to which it is legally entitled or result in significant interference with a surface water source as per 690-380-0100(3).

Summary of GW-SW Transfer Similarity Review:

☐ The proposed SW-GW transfer doesn't meet the definition of "similarly" as per OAR 690-380-2130.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations.



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1271
(503) 986-0900
www.wrd.state.or.us

Ground Water Review Form:

- ☒ **Water Right Transfer**
☐ **Permit Amendment**
☐ **GR Modification**
☐ **Other**

Application: T-13531 Re-Review

Applicant Name: Glenn Chowning / Port of Morrow

Proposed Changes: ☐ POA ☒ APOA ☐ SW→GW ☒ RA
☒ USE ☒ POU ☐ OTHER

Reviewer(s): J. Hootsmans

Date of Review: June 2, 2025

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 6/4/25

The information provided in the application is insufficient to evaluate whether the proposed transfer may be approved because:

- ☐ The water well reports provided with the application do not correspond to the water rights affected by the transfer.
- ☐ The application does not include water well reports or a description of the well construction details sufficient to establish the ground water body developed or proposed to be developed.
- ☐ Other _____

1. Basic description of the changes proposed in this transfer: The original GW review for this transfer was completed on September 2, 2022. Revisions were submitted April 14 and 17, 2023.

This revised application proposes several changes to water right certificate 93290. The proposed changes are 1) change character of use from irrigation to municipal, 2) change place of use, and 3) add up to 15 additional POAs. Certificate 93290 currently authorizes MORR 776 and MORR 777 for irrigation use, with a maximum rate of 1.23 cubic feet per second (cfs). T-13531 proposes to add two existing Port of Morrow wells Hillview #4/MORR 51714 and 4/MORR 1526 and up to 13 proposed wells for municipal use (see Figure 1 for well locations). Existing Port of Morrow wells 1/MORR 756 and 2/MORR 752 were removed from the application as part of the revisions.

The application refers to the currently authorized wells as MORR 777 and MORR 776. It appears MORR 51714 was drilled as a replacement for MORR 776, but never added to Certificate 93290 through a formal transfer process. MORR 776 and 51714 are of similar depths and are located about 20 feet apart.

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: Authorized and proposed POAs produce from water-bearing zones in the Columbia River Basalt Group aquifer system. Within the CRBG, most water occurs in confined aquifers that occupy thin rubble zones (interflow zones) at the contacts between lava flows. The interiors of the basalt flows generally have low porosity and permeability and act as confining beds. This geometry generally produces a stack of thin aquifers (interflow zones) separated by thick confining beds (flow interiors). The low permeability of the basalt flow interiors probably limits the natural vertical connection between overlying aquifers.

YES (Applies to proposed POAs MORR 51714, 1526, A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2, D3): Authorized POAs MORR 777 and MORR 776 are open to multiple water-bearing zones in the CRBG aquifer system. MORR 777 is open to the Pomona and upper Umatilla members of the Saddle Mountains Basalt Formation (SMB) of CRBG aquifer system. Authorized POA MORR 776 is open to the Umatilla and Pomona members of the SMB Formation, and the Priest Rapids (Lolo) and upper Frenchman Springs (Sentinel Gap) members of the Wanapum Basalt Formation. Currently unauthorized POA MORR 51714 is open to the Umatilla, Priest Rapids, and upper Frenchman Springs members. In addition, POA MORR 1526 is also open to multiple members of the SMB and Wanapum Basalt Formations.

Both authorized POAs and the To - POAs MORR 1526 and MORR 51714 commingle water-bearing zones that were not naturally connected. To avoid commingling in the proposed POAs and ensure current well construction standards are met, the applicant has proposed drilling up to four clusters of 2 to 4 wells that each develop a single water-bearing zone. At each well cluster, the applicant has proposed one well producing from the Umatilla member, one producing from the Priest Rapids member, and one producing from the upper unit of the Frenchman Springs member. If the proposed POAs are constructed according to the specifications provided in the application, they will produce from the same aquifer(s) as the authorized POAs.

3. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
☐ Yes ☒ No All authorized, unauthorized and proposed POAs produce from water-bearing zones in the CRBG aquifer system.
- b) If yes, estimate the portion of the right supplied by each of the sources and describe any limitations that will need to be placed on the proposed change (rate, duty, etc.): _____
4. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another ground water right**?
☒ Yes ☐ No Comments: Water level elevations and trends in the authorized POAs track with wells in the Ordinance Critical Groundwater Area (CGWA). The proposed POAs will also track with CGWA wells, however the proposed POAs will be located further from CGWA wells, so interference should not increase with CGWA wells.

However, MORR 1526 is approximately 1750 feet closer to another groundwater right POA than the authorized POAs so interference is likely to increase.

- b) If yes, would this proposed change, at its maximum allowed rate of use, likely result in another groundwater right not receiving the water to which it is legally entitled?

☐ Yes ☒ No If yes, explain: A Theis drawdown analysis was used to estimate interference drawdown at the nearest POA for an existing groundwater right, MORR 52462, located approximately 250 feet away from APOA MORR 1526 (see Figure 4. Theis Drawdown Analysis). The analysis was conducted assuming continuous pumping at the maximum rate of use (1.23 cfs). The applicable duty of 3 acre-ft per acre would be exhausted in approximately 121 days. Parameters for the Theis model used literature values and nearby aquifer test data including a pump test from MORR 52462. A sensitivity analysis of +/- 50% for transmissivity was used for the data range as the pump test at MORR 52462 was conducted while MORR 1526 was also pumping, suggesting the resulting transmissivity being possibly conservative to actual values.

Results of the analysis indicate that pumping at the maximum allowed rate of use from proposed APOA MORR 1526 would result in approximately 5 feet of interference drawdown at the POA for the nearest existing groundwater right (MORR 52462) for Scenario 2 in the model analysis provided below. Therefore, pumping at the maximum requested rate would likely not result in substantial or undue interference with neighboring well MORR 52462 (see attached Well Location Map and Theis Analysis).

5. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another surface water source**?

☐ Yes ☒ No Comments: Although the proposed POAs are much closer to the Columbia River, water-bearing zones in the proposed wells are below the elevation of local surface water sources, so hydraulic connection should be very inefficient. As a result, interference should not increase.

- b) If yes, at its maximum allowed rate of use, what is the expected change in degree of interference with any **surface water sources** resulting from the proposed change?

Stream: _____ ☐ Minimal ☐ Significant

Stream: _____ ☐ Minimal ☐ Significant

Provide context for minimal/significant impact: _____

6. For SW-GW transfers, will the proposed change in point of diversion affect the surface water source similarly (as per OAR 690-380-2130) to the authorized point of diversion specified in the water use subject to transfer?

☐ Yes ☐ No Comments: N/A

7. What conditions or other changes in the application are necessary to address any potential issues identified above: N/A

8. Any additional comments: N/A

1:25,000 scale

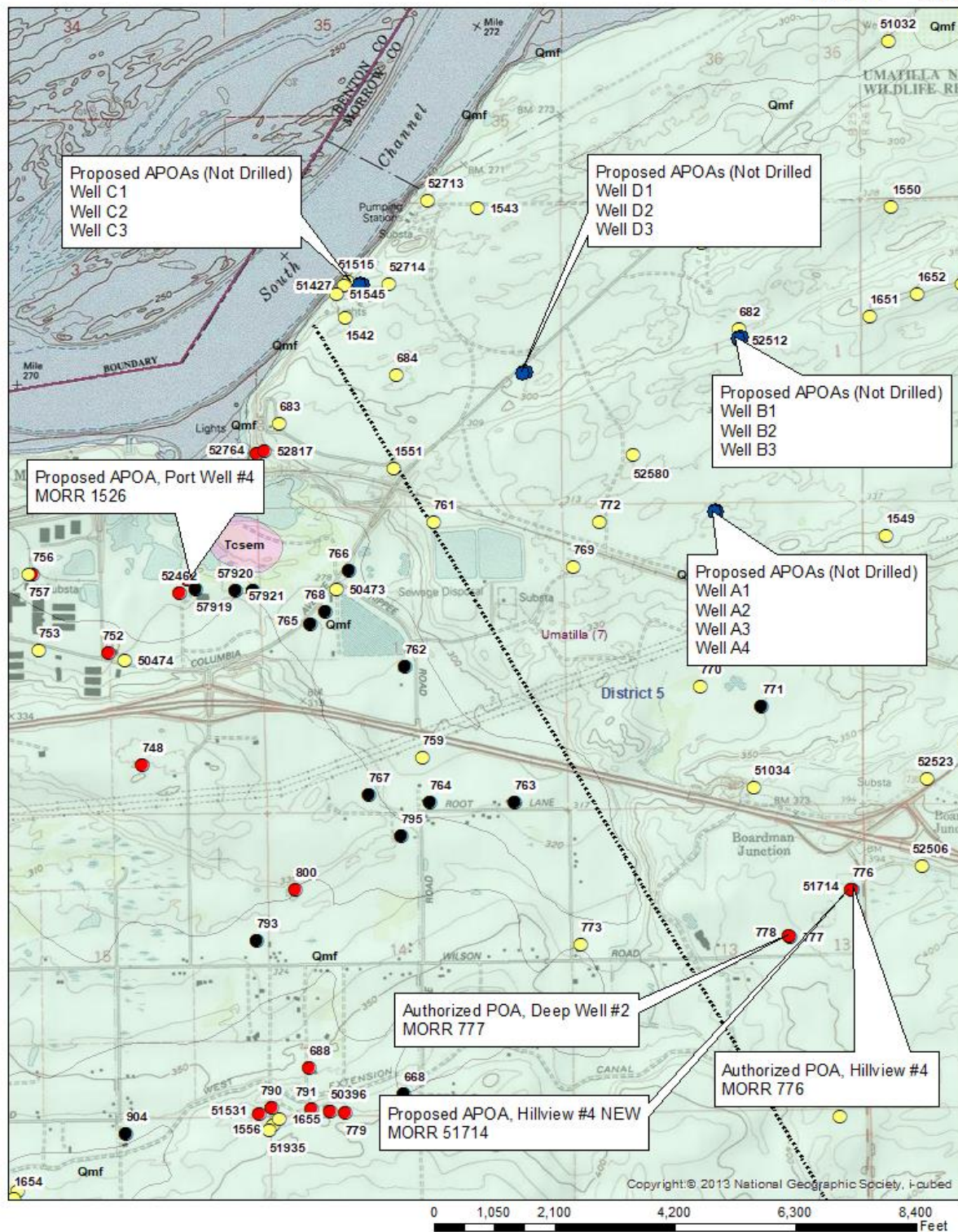


Figure 2. Geologic Cross-Section. Provided by Applicant's Agent.

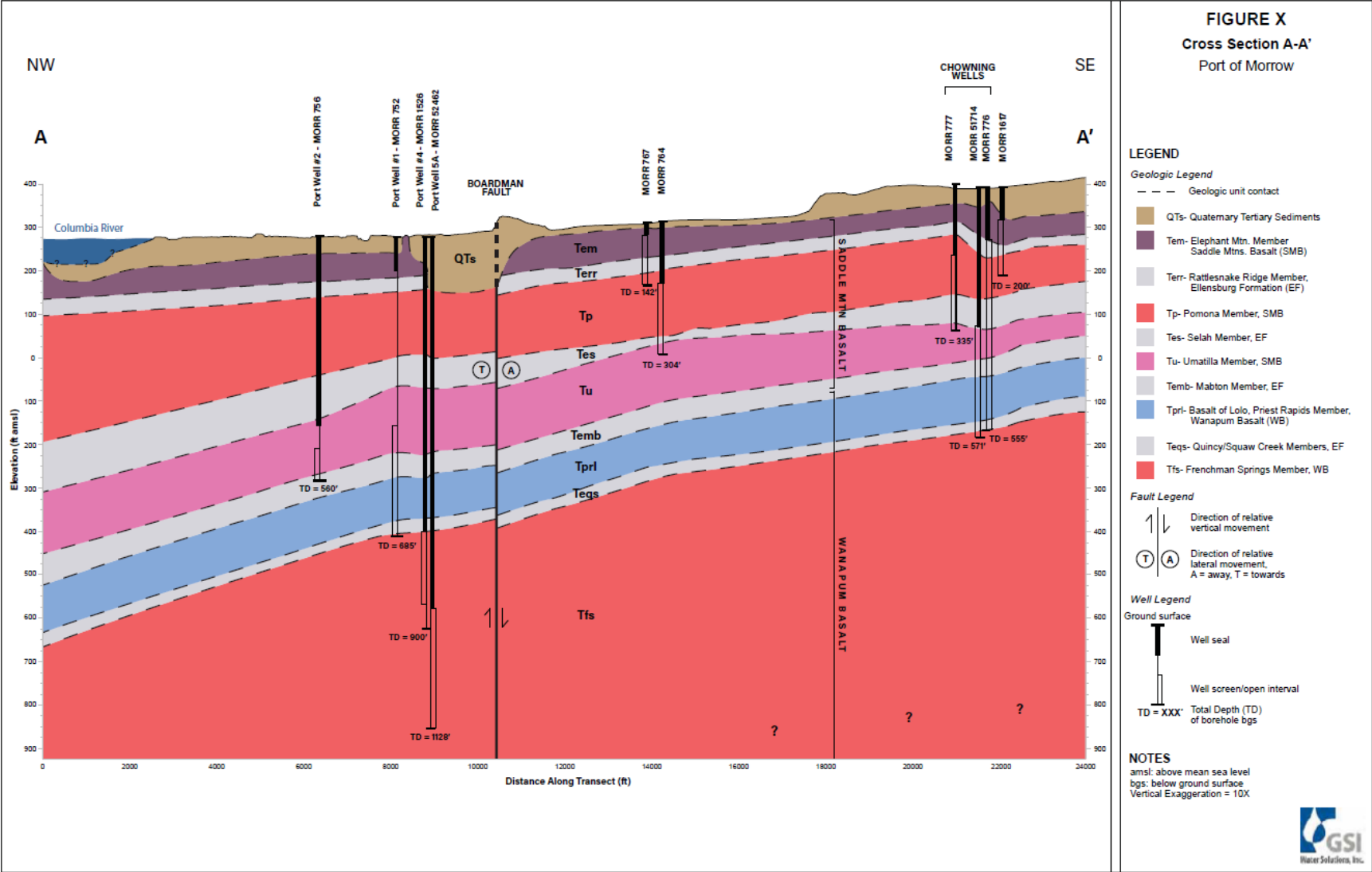


Figure 3. Water levels in nearby wells

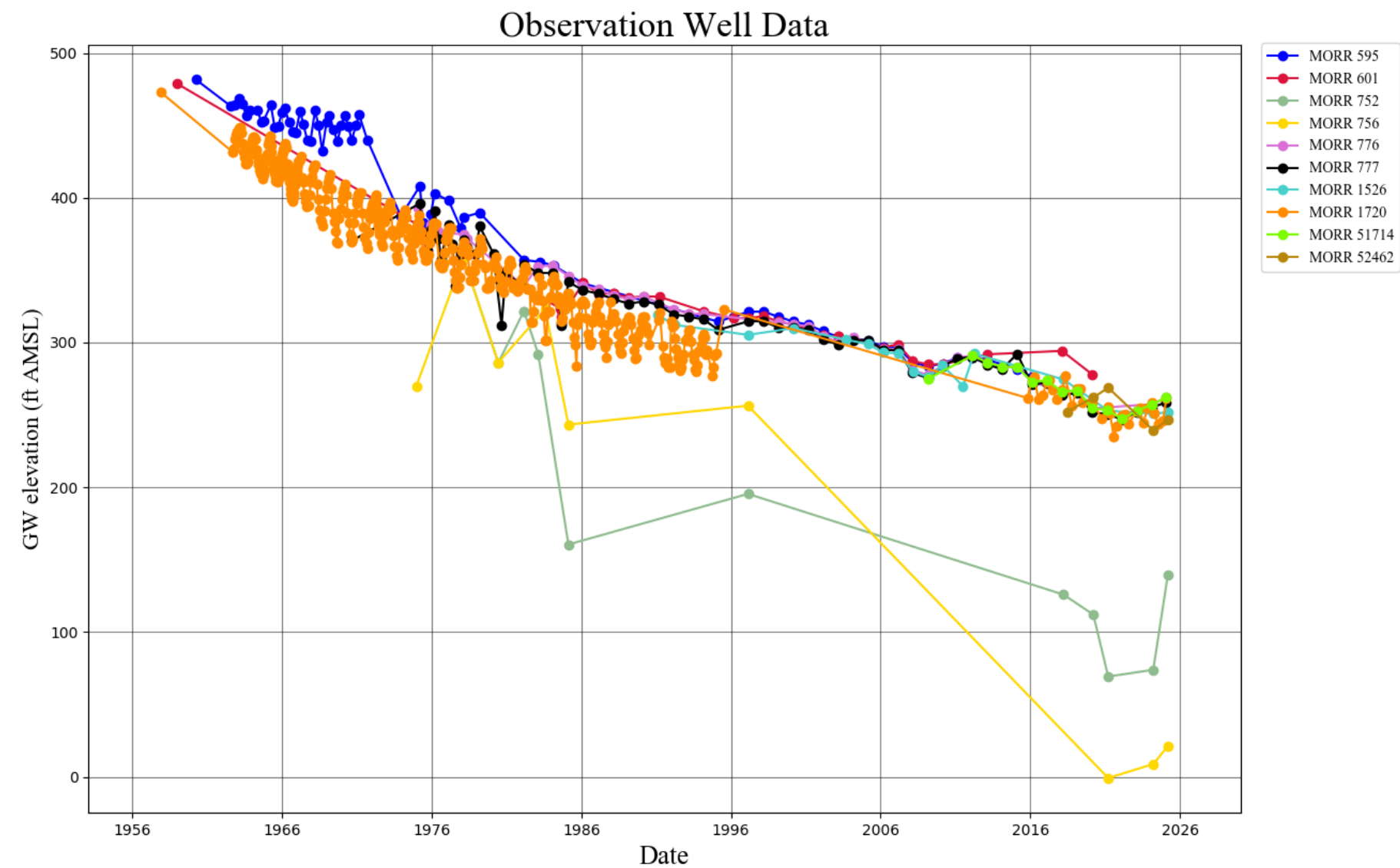


Figure 4. Theis Well Analysis

Theis Time-Drawdown Workshe v.3.00
 Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T values and radial distance, r , from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	VarName	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		121		d	
Radial distance from pumped well:	r		250		ft	Q conversions
Pumping rate	Q		1.23		cfs	552.02 gpm
Hydraulic conductivity	K	32	102.8	150	ft/day	1.23 cfs
Aquifer thickness	b		250		ft	73.80 cfm
Storativity	S ₁		0.0001			106,272.00 cfd
	S ₂		0.0005			2.44 af/d
Transmissivity Conversions	T _{f2pd}	8000	25700	37500	ft ² /day	
	T _{ft2pm}	5.555556	17.84722	26.04167	ft ² /min	
	T _{gpdft}	59840	192236	280500	gpd/ft	

Use the Recalculate button if recalculation is set to manual

