

# Groundwater Transfer Review Summary Form

Transfer/PA # T- 13531

GW Reviewer J. Hackett Date Review Completed: September 2, 2022

## 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).

*Two of the 14 proposed POAs are not in the same aquifer as the authorized POAs.*

## 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.*



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## Ground Water Review Form:

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

Application: T-13531

Applicant Name: Glenn Chowning / Port of Morrow

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

Reviewer(s): J. Hackett

Date of Review: September 2, 2022

Date Reviewed by GW Mgr. and Returned to WRSD:

JTI 10/7/22

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: This 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 14 additional POAs. Certificate 93290 currently authorizes MORR 776 and MORR 777 for irrigation use. T-13531 proposes to add two existing Port of Morrow wells 1/MORR 756 and 2/MORR 752 and up to 12 proposed wells for municipal use (see Figure 1 for well locations).

The application refers to the currently authorized wells as MORR 777 and MORR 51714. 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.

### **Notes:**

- A. MORR 51714 is not an authorized POA on certificate 93290. The applicant needs to file another transfer application to add the well as a POA to the certificate.

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.

**NO (Applies to proposed POAs MORR 752 and MORR 756):** Available evidence indicates proposed POAs MORR 756 and MORR 752 do not develop the same source as the authorized POAs. A stratigraphic cross-section provided by the applicant's agent shows that the proposed POAs (MORR 756 and MORR 752) are open to many of the same stratigraphic units as the authorized POAs (MORR 777 and MORR 776) and the unauthorized POA (MORR 51714) (see figure 2). Although the wells are open to the same stratigraphic units, water level elevations in the proposed POAs are significantly lower than the authorized wells (Figure 3). The proposed POAs are located 2.5 miles northwest of the authorized POAs. Despite their proximity, the water level elevation and trends from the proposed POAs, MORR 756 and MORR 752, are approximately 100 feet lower than the authorized POAs. The proposed POAs are also on the opposite side of the Boardman fault, a large right-lateral strike-slip fault. Stratigraphic offset across the fault may impede groundwater flow and contribute to water level head differences.

**YES (Applies to proposed POAs 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.

Both authorized POAs and the unauthorized POA 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 3 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 and the unauthorized POA.

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.
- 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: \_\_\_\_\_
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: 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: \_\_\_\_\_
7. What conditions or other changes in the application are necessary to address any potential issues identified above: \_\_\_\_\_
8. Any additional comments: MORR 51714 was presented as an authorized POA on certificate 93290, however, it is not an authorized POA. The applicant needs to file another transfer application to add the well as a POA to the certificate.

Figure 1. Well Location Map

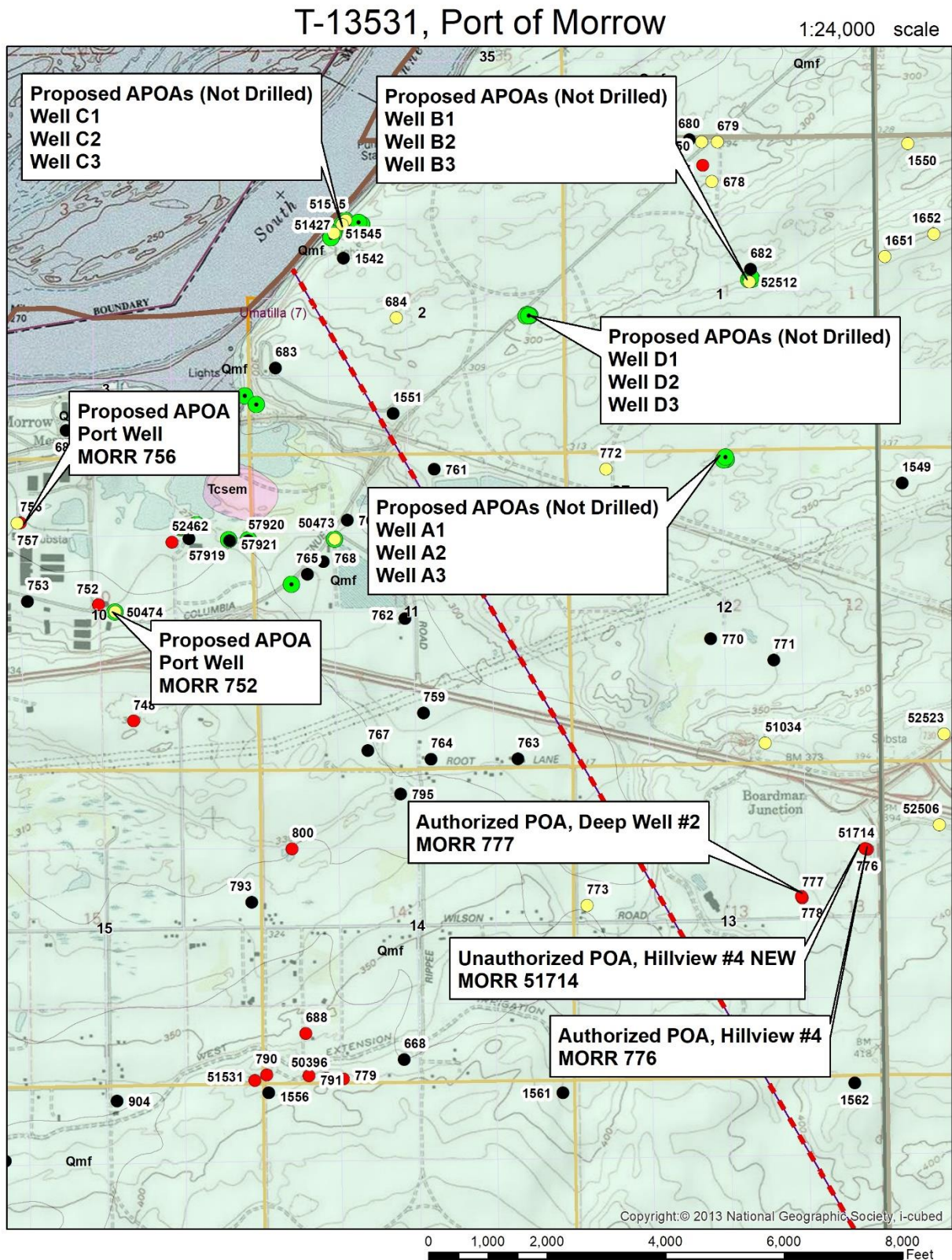


Figure 2. Geologic Cross-Section. Provided by Applicant's Agent.

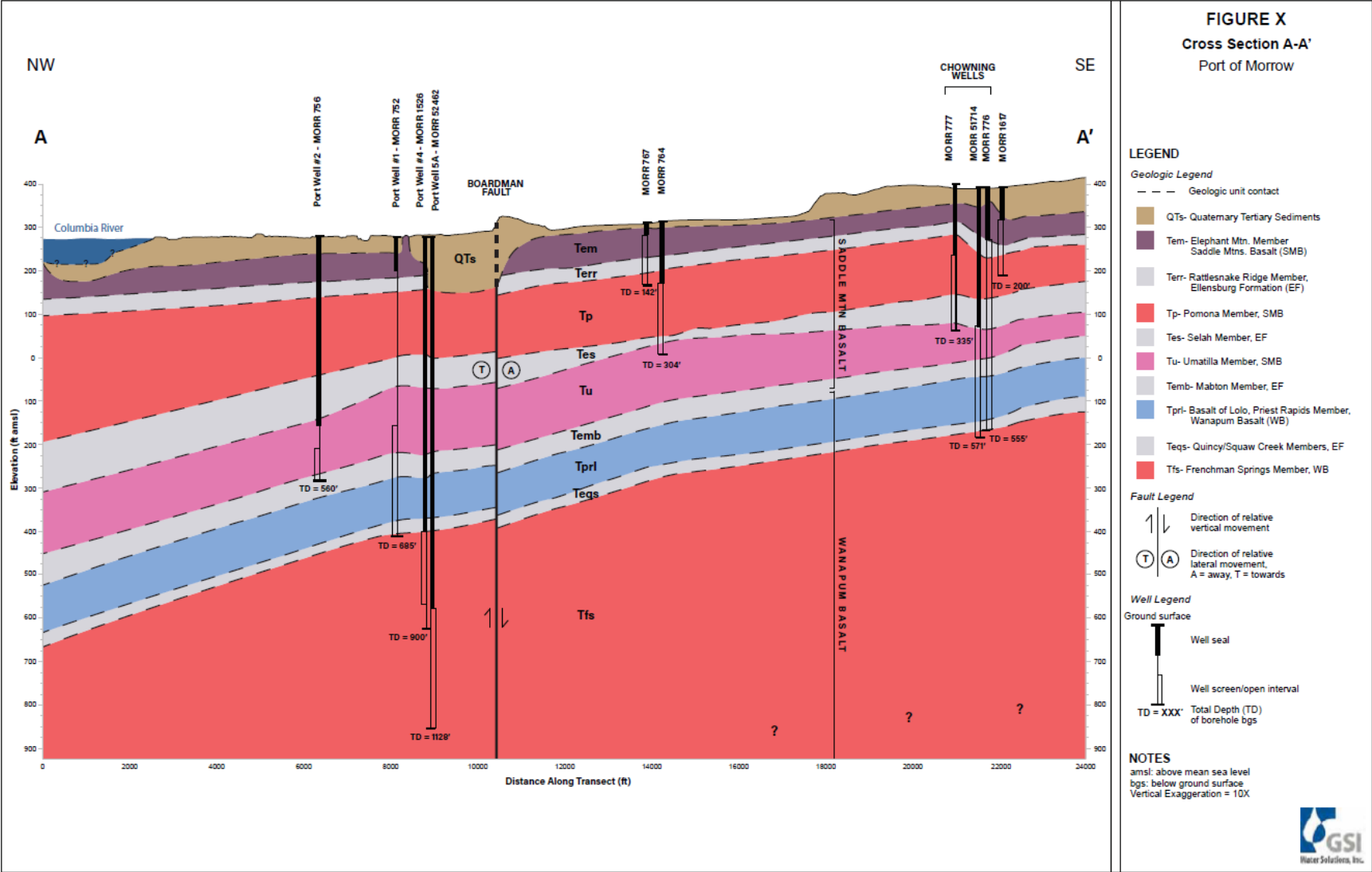


Figure 3. Water levels in nearby wells

