

# Groundwater Transfer Review Summary Form

Transfer/PA # T- 14701

GW Reviewer Dennis Orłowski Date Review Completed: September 17, 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 Water Level Decline Condition Review:

Water levels at the original point(s) of appropriation have exceeded the allowed decline threshold defined by conditions in the originating water right.

## 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-14701

Applicant Name: County of Clackamas

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

Reviewer(s): Dennis Orlowski

Date of Review: September 17, 2025

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 3/13/26

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 proposed transfer relates to certificate 90926, which authorizes the use of groundwater from a single POA (CLAC 56352, or “Well 1/Well B”) for supplemental irrigation of 109.7 acres and pond maintenance at the Stone Creek Golf Club located several miles southeast of Oregon City.

**Note:** at the time of this review, WRIS incorrectly indicated that CLAC 59771 was the authorized POA for certificate 90926. Statements in this application and the COBU for certificate 90926, as well as research by this reviewer, confirm that CLAC 56352 is the single authorized POA, and not CLAC 59771. The COBU identifies CLAC 59771 as “Well A”, confirmed that it “...was drilled in 2003, has a total depth of 1230 feet and at the time of the 2011 site visit it was welded shut.”

**Note:** preceding permit G-13947 was for primary irrigation and reservoir (pond) maintenance, yet certificate 90926 is for supplemental irrigation and pond maintenance. The COBU states that “...the groundwater right was converted to the supplemental right and the surface water right was utilized as the primary right.” However, a transfer that would have formally authorized this change in use was not found, and thus it is uncertain how this change in use was “converted.”

**This application proposes to add 3 APOA (to-be-drilled wells) to certificate 90926: “Well 4”, “Well 5”, “Well 6.”**

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?  
 Yes     No    Comments: See discussion in section 4 of this review.

3. a) Is the existing authorized POA subject to a water level decline condition?

Yes  No

Comments: (1) average water level decline of three or more feet per year for five consecutive years; (2) total water level decline of fifteen or more feet; (3) hydraulic interference decline of fifteen or more feet in any neighboring well providing water for senior exempt uses or wells covered by prior rights.

b) If yes, for each POA identify the reference level, most recent spring-high water level, and whether an applicable permit decline condition has been exceeded: Certificate 90926 states that "use of water from a new well shall not begin until an initial static water level in the well has been measured and submitted to the Department." Permit G-13947 was issued on 5/31/2001. CLAC 56352 was completed on 10/25/2000, and the first reported spring measurement was 284.60 ft bls (4/16/2002).

**Note:** the COBU states that the initial static water level from CLAC 56352 should be post-alteration work, which occurred both in 10/2002 (CLAC 58312, major: redrilling, screen installation, damaged top screen) and again in 5/2003 (CLAC 58971: minor: added seal from 10-40 ft bls). However, despite the COBU statement, the pre-alteration static water level (4/16/2002) has been determined to be an applicable reference level because it is generally comparable to the next spring measurement (4/01/2003) (and the 4/16/2002 measurement is actually several feet lower than 4/01/2003, a favorable aspect for the water right holder).

- **CLAC 56352 reference level: 284.60 ft bls (4/16/2002)**

As of the date of this review, it is uncertain if any decline conditions have been triggered because the most recently-reported measurements for CLAC 56352 are from 3/10/2017 (certificate 90926 does not place an upper limit on the number, nor a fixed duration, of required water-level measurements).

However, reporting of annual water levels for nearby CLAC 59771 were resumed in 2018 and have continued through March 2025; given the likely confusion surrounding WRIS incorrectly identifying CLAC 59771 as the authorized POA for certificate 90926, it is possible that the post-2018 measurements are indeed from CLAC 56352, or are from CLAC 59771 but intended to be consistent with current (albeit incorrect) WRIS information.

4. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?

Yes  No

Comments: Authorized POA CLAC 56352 is 1210 feet deep, and is cased and sealed from 0-800 ft bls; below 800 ft bls was originally open hole, but in 2002 screen and filter pack were added between ~807 and 1113 ft bls to address cave-in issues (see alteration log CLAC 58312). The CLAC 56352 well log shows "claystone" or "sandstone" for the interval below the cased and sealed section (800-1210 ft bls).

However, despite the “claystone” and “sandstone” designations on the CLAC 56352 log, it is highly likely that these rock types are instead basalt of the Columbia River Basalt Group (CRBG) aquifer system. This conclusion is based on the following factors: (1) the log for CLAC 59771, which is ~800 ft north-northwest of CLAC 56352 and at approximately the same ground surface elevation, shows basalt beginning at a depth of 960 ft bls (~elevation -525 ft msl); at and below this same depth, CLAC 36352 instead indicates “gray claystone” (and “gray sandstone” just above); (2) interpolation of the top of basalt contours from USGS geologic maps of the area (Wells and others, 2020) confirms the local presence of basalt as recorded in nearby CLAC 59771, with similar expectations at the nearby CLAC 56352 location (see attached location map and cross-section); (3) OWRD previously designated a CRBG aquifer source for CLAC 56352 (see 2017 GWIS entry by K. Wozniak); and (4) the set of water-level decline conditions contained in certificate 90926 are those typically assigned by OWRD for wells completed in the CRBG aquifer system.

It thus appears that authorized POA CLAC 56352 obtains groundwater from both sedimentary deposits corresponding to the Troutdale Formation and/or water-bearing portions of the Sandy River Mudstone **and** from the underlying CRBG aquifer system. Insufficient lithologic detail on the CLAC 56352 well log precludes being able to clearly distinguish between sedimentary rocks and underlying CRBG; however, the contact can be estimated by projecting the sediment/CRBG contact from CLAC 59771 at approximately elevation -525 ft msl (see attached cross-section; note that “Prop 707” corresponds to proposed APOA “Well 6”, and is intended to be representative of the other two proposed APOA wells) (Conlon and others, 2005; Swanson and others, 1993; Wells and others, 2020).

**Despite apparent commingling of aquifer types in authorized POA CLAC 56352, wells drilled as APOA under this transfer will be limited to only a single source (i.e., sedimentary or CRBG aquifer system).** Currently-planned construction details for the three proposed APOA (“Wells 4, 5, 6”) show total depths of approximately 1200 feet, cased and sealed between 0-700 feet. However:

- (1) If the applicant chooses a sedimentary aquifer source, the total depths are to be limited to approximately 960 feet, which corresponds to approximately elevation -525 ft msl at each of the three proposed APOA locations.**
- (2) Conversely, if a CRBG aquifer source is selected, then the cased and sealed portion of the APOA wells is to be extended to approximately 960 feet, or elevation -525 ft msl (actual depths will vary depending on borehole-specific conditions).**

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.): It is not possible to apportion well yields between sedimentary and basalt aquifer portions of CLAC 56352 with any meaningful amount of accuracy or confidence.

5. 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: The planned locations for the proposed APOA wells are within several hundred feet of authorized POA CLAC 56352, and not appreciably nearer to any known groundwater rights. Furthermore, the vast majority of area wells are significantly shallower than the authorized and proposed POA, and obtain groundwater from the overlying sedimentary deposits of the Troutdale or Sandy River Mudstone formations. For these reasons it is not likely that the proposed use will result in an increase in interference with other groundwater rights.

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: N/A

6. 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: Because the planned locations for the proposed APOA wells are within several hundred feet of authorized POA CLAC 56352, they are not appreciably nearer to any hydraulically-connected streams. Thus the proposed change is not likely to result in an increase in interference in another surface water source.

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: N/A

7. 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

8. What conditions or other changes in the application are necessary to address any potential issues identified above:

**Despite apparent commingling of aquifer types in authorized POA CLAC 56352, wells drilled as APOA under this transfer will be limited to only a single source (i.e., sedimentary or CRBG aquifer system).** Currently-planned construction details for the three proposed APOA (“Wells 4, 5, 6”) show total depths of approximately 1200 feet, cased and sealed between 0-700 feet. However:

**(1) If the applicant chooses a sedimentary aquifer source, the total depths are to be limited to approximately 960 feet, which corresponds to approximately elevation -525 ft msl at each of the three proposed APOA locations.**

**(2) Conversely, if a CRBG aquifer source is selected, then the cased and sealed portion of the APOA wells is to be extended to approximately 960 feet, or elevation -525 ft msl (actual depths will vary depending on borehole-specific conditions).**

9. Any additional comments: None

**References**Application T-14701

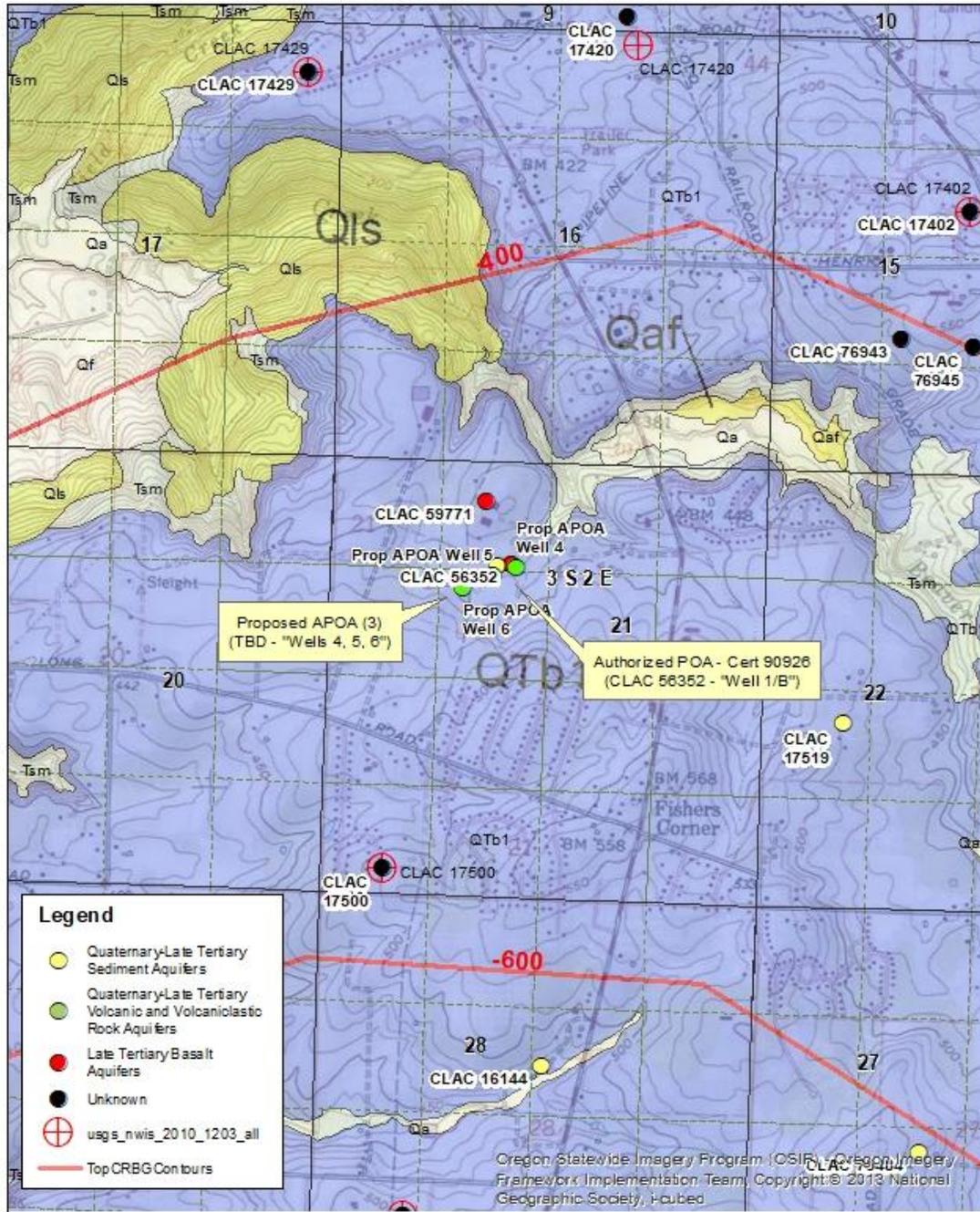
File: application G-15189 file (corresponds to preceding permit G-13947)

Conlon, T.D., Wozniak, K.C., Woodcock, D., Herrera, N.B., Fisher, B.J., Morgan, D.S., Lee, K.K., and Hinkle, S.R., 2005, *Ground-water hydrology of the Willamette Basin, Oregon*, Scientific Investigations Report 2005-5168: U. S. Geological Survey, Reston, VA.

Swanson, R. D., McFarland, W. D., Gonthier, J. B., and Wilkinson, J. M., 1993, A description of hydrogeologic units in the Portland Basin, Oregon and Washington, Water-Resources Investigations Report 90-4196, 56 p.: U. S. Geological Survey, Reston, VA.

Wells, R.E., Haugerud, R.A., Niem, A.R., Niem, W.A., Ma, L., Evarts, R.C., O'Connor, J.E., Madin, I.P., Sherrod, D.R., Beeson, M.H., Tolan, T.L., Wheeler, K.L., Hanson, W.B., and Sawlan, M.G., 2020, Geologic map of the greater Portland metropolitan area and surrounding region, Oregon and Washington: U.S. Geological Survey Scientific Investigations Map 3443, pamphlet 55 p., 2 sheets, scale 1:63,360, <https://doi.org/10.3133/sim3443>.

### Application T-14701 Clackamas County T3S, R2E, Section 21



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**Cross-section showing “top of basalt” in area wells** (note that information from CLAC 18421 and CLAC 20274 were used by USGS for CRBG mapping; also, “Prop 707” corresponds to proposed APOA “Well 6” and is assumed to be representative of the other two proposed APOA wells).

