

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14433

GW Reviewer Gabriela Ferreira Date Review Completed: July 12, 2024

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.



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Ground Water Review Form:

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

Application: T-14433

Applicant Name: Twin Springs LLC, c/o Lili Tova

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

Reviewer(s): Gabriela Ferreira

Date of Review: July 12, 2024

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 8/26/24

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 transfer proposes to modify Permit G-18341, which authorizes nursery use on 18.5 acres for a total 0.46 cfs by two POAs, Well 1 (not yet constructed) and Well 2 (CLAC 75517). The transfer proposes three additional POAs, Well 3, Well 4, and Well 5.

Note: Groundwater level data from the authorized POA well indicate rapidly-declining levels in the few years of available data, further discussed in Section 7 of this review.

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: The current authorized POAs, proposed Well 1 and Well 2 / CLAC 75517, develop groundwater bearing zone(s) within the Rhododendron Formation. Near the POAs, the Rhododendron Formation is encountered at depths greater than approximately 200 feet bls to the top of the CRBG, approximately 1000 feet bls. Permit G-18431 Condition #4 states that "Groundwater production shall occur only from the groundwater reservoir between approximately 200 feet and 400 feet below land surface." The original groundwater review completed July 17, 2019 indicates that the POAs should develop one water-bearing zone only, the Rhododendron Formation, in order to prevent commingling between the Rhododendron Formation and overlying alluvium, and to prevent the likelihood of hydraulic connection between the POAs and the Sandy River. A memorandum dated December 6, 2019 regarding Permit G-18150 Condition #4 clarified that "a well completed in a single consolidated volcanic groundwater reservoir located deeper than the approximate 300 foot depth listed in permit G-18150 will meet the intent of Condition #4". Therefore, the proposed construction of the additional POAs would develop the same source as the authorized POAs.
3. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
☐ Yes ☒ No Not applicable
- 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.): _____
- 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 nearest wells producing from the Rhododendron Formation are much shallower than the existing and proposed POAs. The nearest similarly constructed well also producing from the Rhododendron Formation was identified as CLAC 51283. The authorized location for POA Well 1 (not yet constructed) is approximately 2,150 feet from CLAC 51283; proposed APOA Well 5 is about 1,950 feet from that same location. The proposed APOA Well 5 location is about 200 feet nearer to CLAC 51283. Based on the reduced intervening distance, the proposed use could result in an increase in interference.
- 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?
4. ☐ Yes ☒ No If yes, explain: The potential interference between Well 5 and CLAC 51283 was evaluated with the maximum authorized rate of 0.46 cfs (~206 gpm). The results are shown on the attached figures. The relatively minor change in distance does not substantially change the modeled drawdown. Under more conservative aquifer parameters, drawdown may temporarily exceed 25 feet, particularly during irrigation season pumping; however, under all aquifer parameter scenarios evaluated, the total drawdown equilibrates to less than 25 feet. Therefore, the proposed change is unlikely to result in another groundwater right not receiving the water to which it is legally entitled.

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: The currently authorized POAs are hydraulically connected to the Sandy River, approximately 2,200 feet north of the authorized POAs. Proposed POAs Well 3, Well 4, and Well 5 would be located between 1,400 and 2,000 feet from the Sandy River. The reduced intervening distance would likely result in an increase in interference with the Sandy River. The authorized POAs are also hydraulically connected to Cedar Creek, although the proposed APOAs are farther north and east from Cedar Creek, and therefore interference is not likely to 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: Sandy River

☒ Minimal ☐ Significant

Stream: _____

☐ Minimal ☐ Significant

Provide context for minimal/significant impact: Analytical models typically used to estimate stream interference/depletion (Hunt 1999, Hunt 2003) are not appropriate for this particular hydrogeologic setting within a volcanic/volcaniclastic formation, given the locality's high local topographic relief and correspondingly great variability in surface water and groundwater levels. However, the estimate changed in degree of interference is expected to be minimal, given the proposed POA's relatively minor change in intervening distance and low transmissivity.

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: Not applicable
7. What conditions or other changes in the application are necessary to address any potential issues identified above: _____
8. Any additional comments: Water level measurements reported for currently authorized POA Well 1 / CLAC 75517 indicate water levels have rapidly declined from the first available measurement in 2020 at 484.1 ft bls to the most recent measurement in 2024 at 521.02 ft bls (total 36.92 feet of decline, average 9 feet per year).

Permit G-18341 indicates that, "Following the first year of water use, the user shall report seven consecutive annual static water level measurements. The first of these seven annual measurements will establish the reference level against which future annual measurements will be compared [...] The water user shall discontinue use of, or reduce the rate or volume of withdrawal from, the well(s) if any of the following events occurs: [...] B. Annual water level measurements reveal a water level decline of 15 or more feet in fewer than five consecutive years; or C. Annual water level measurements reveal a water level decline of 25 or more feet"

Based on the language within Permit G-18341 and water use reporting, the reference level for CLAC 75517 is 491.17 feet (dated March 15, 2021, following the first year of use in 2020). **Reported water levels indicate a decline from the reference level of 27.83 feet from 2021 to 2024, exceeding conditions B and C stated above.**

The proposed APOAs and the second authorized POA have not yet been drilled.

If T-14433 is approved, the reference level set for the remaining authorized and the proposed additional POAs should be based on the March 15, 2021 water level measurement of CLAC 75517.

Given the topographical relief, some hydraulic gradient is expected between the locations for the authorized and proposed POAs. The reference levels for the APOAs will be set based on measurements taken after the wells are constructed, using the measurements from CLAC 75517 as the basis for extrapolation of a reference level set for each additional well based on the water level calculated to have existed at the well location following the first year of water use under the permit.

Further, given (1) observed water level declines in the area, (2) that the remaining undeveloped authorized POA and any future authorized APOAs may be drilled 7 years or more after first water use under the permit, and (3) given the condition in permit G-18561 that "...the Director may require the user to obtain and report additional annual static water level measurements beyond the seven year minimum reporting period.", if T-1443 is approved, the superseding permit shall require the water right holder to obtain, from a qualified individual, and report annual static water level measurements for the life of the water right (until/unless the right is canceled).

Bibliography

Water rights documents: Application T-14433; Permit G-18341.

McFarland, W.D., and Morgan, D.S., 1996, Description of the Ground-Water Flow System in the Portland Basin, Oregon and Washington, Water Supply Paper 2470-A, 58 p: 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.

Theis, C.V., 1935, The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage, American Geophysical Union Transactions, vol. 16, p. 519-524.

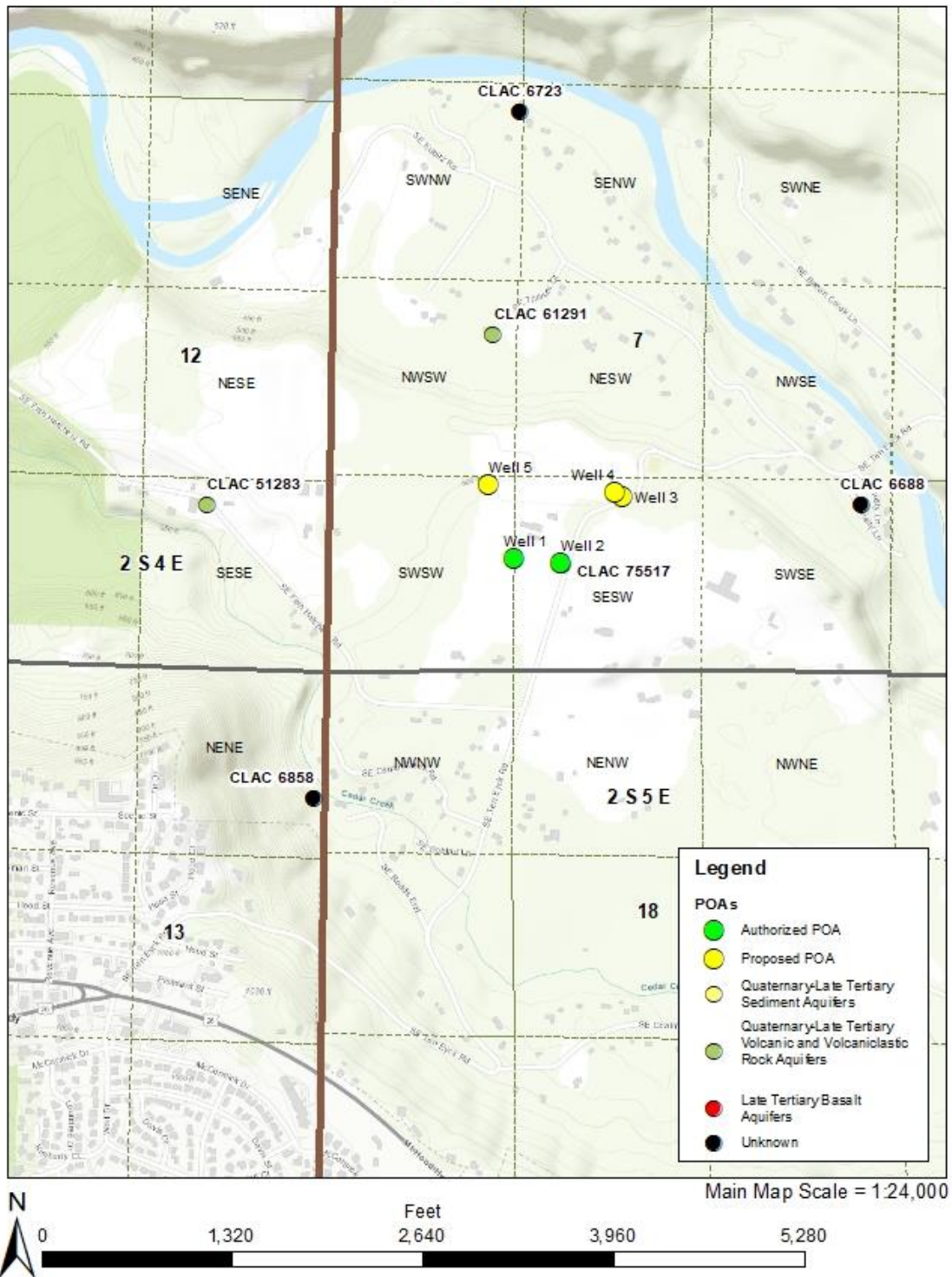
United States Geological Survey, 2014, National Hydrography Dataset (NHD), 1:24,000, U. S. Department of the Interior, Reston, VA.

United States Geological Survey, 2017, *Sandy quadrangle*, Oregon [map], 1:24,000, 7.5 minute topographic series, U.S. Department of the Interior, Reston, VA.

Woodward, D.G., Gannett, M.W., and Vaccaro, J.J., 1998, Hydrogeologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-B, 82 p.

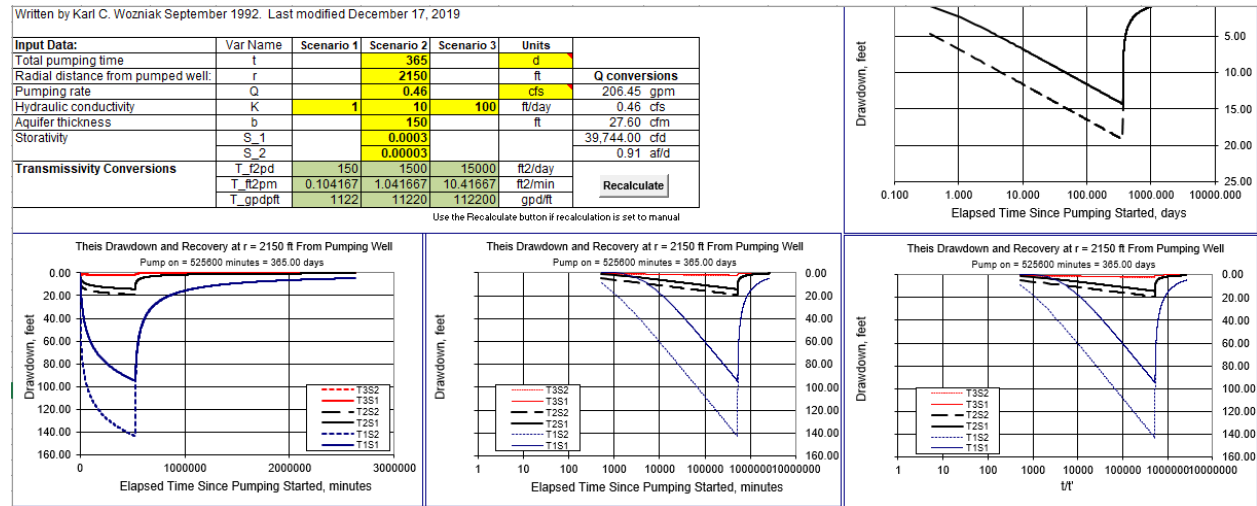
Site Map

T-14433 Twing Springs LLC 2 S, 5 E, Section 7

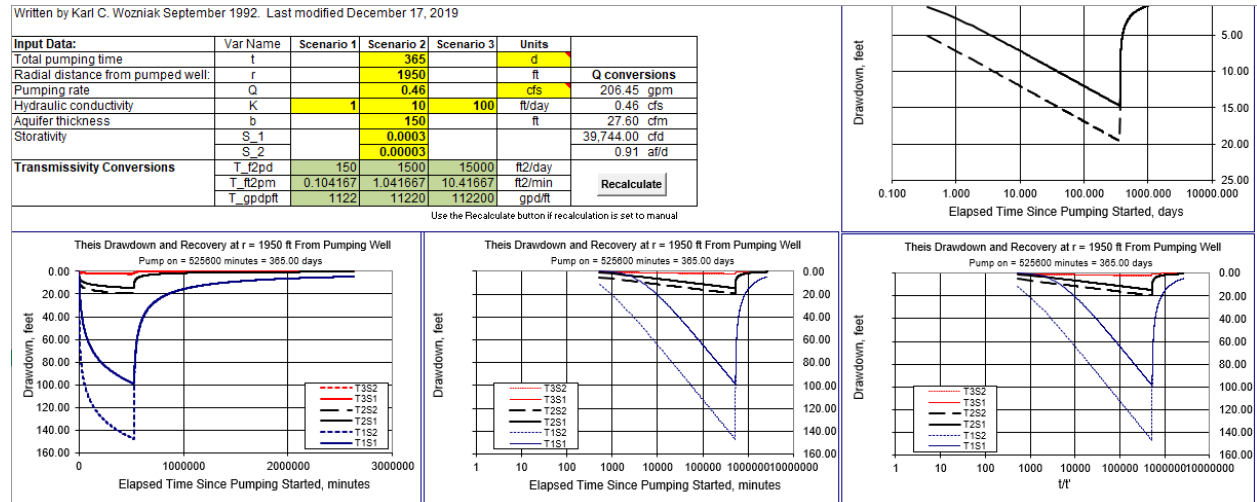


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Modeled Interference: Authorized Well 1 to CLAC 51283



Modeled Interference: Proposed Well 5 to CLAC 51283



Search Records

Well Log Id: or GW Logid: [Chart](#)[Clear](#)

Well Location:	2.00S/5.00E-7CD-	Total Depth (bls):	---	Water Level Count:	5
Log ID:	CLAC 75517 Well Log	Land Surface Elevation:	670 ft	Wtr Lvl Date Range:	3/10/2020 - 3/12/2024
Well Tag:	132654	Vertical Reference Datum:	NAVD1988	Wtr Lvl Depth Min-Max:	484.1 - 521.02 ft
State Observation:		Primary Use of Well:		Recorder Wtr Lvl Count:	0
USGS Site:		Primary Aquifer System:	Rhododendron Formation	Recorder Wtr Lvl Date Range:	---
More Information	GWIS	Groundwater Mapping Tool		Recorder Wtr Lvl Depth Min-Max:	---

Groundwater Levels for CLAC 75517



Source: Oregon Water Resources

Water Use Report Based on Water Right

Permit: G 18341 *

TOVA, LILI TWIN SPRINGS LLC 19779 SE LANGENSAND RD SANDY, OR 97055

Records per page: [View All](#)

Acre-feet (AF) of Water Used																
Water Year*	Report ID	Facility	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total Water Used	Irrigated Acres
2023	68186	WELL 2	0.17	0.05	0.01	0.02	0.02	0.12	0.12	0.59	2.17	3.75	2.20	2.12	11.33	
2022	68185	WELL 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2022	68186	WELL 2	0.16	0.05	0.02	0.02	0.02	0.06	0.19	0.20	1.02	2.84	2.92	2.21	9.69	8.50
2021	68185	WELL 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2021	68186	WELL 2	0.02	0.02	0.00	0.00	0.02	0.01	0.29	0.56	2.56	2.72	2.85	1.59	10.64	
2020	68186	WELL 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54	3.07	2.30	6.91	7.00
2019	68185	WELL 1											0.00	0.00	0.00	
2019	68186	WELL 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53	0.00	0.00	1.54	7.00

*The water year is named for the calendar year in which it ends. Example: the 2018 water year begins Oct. 1, 2017 and ends Sep. 30, 2018.

- The Water Resources Department makes reasonable efforts to screen the data for quality control; however, the Department cannot accept responsibility for errors, omissions, or accuracy of the information. Notification of any errors is appreciated. Send notifications to owrd.waterusereporting@water.oregon.gov or call 971-345-7489.
- Water use is reported by point of diversion (POD), rather than by water right.
- If a POD is shared with multiple water rights, it is not feasible to separate out the amount used under the water right being queried from water used by other rights using this same POD.
- Monthly amounts indicate:
 - For diverted rights, the total amount diverted during the month;
 - For storage rights, the amount generally stored in the reservoir/pond during the month, as represented by the volume of water impounded on approximately the same day each month.
- Water use amounts have all been converted to "acre-feet" (AF), regardless of the original measurement unit reported. One AF is the volume of water that will cover an acre of ground one foot deep = 325,850 gallons.
- Zeroes indicate that a report was received stating that no water was used during those months; if a year is not listed, no report of water use was received for that year.