

Groundwater Transfer Review Summary Form

Transfer/PA # T- 13598 (RA)

GW Reviewer Travis Brown Date Review Completed: 3/10/2021

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-13598

Applicant Name: Travis Brown

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

Reviewer(s): Travis Brown

Date of Review: 3/10/2021

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 3/10/21

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 _____

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1. Basic description of the changes proposed in this transfer: Applicant proposes to transfer 5.5 acres of POU and both POA under **Certificate 94783***, which currently authorizes Nursery Use on 62.4 acres at a maximum rate of 0.56 cfs in any combination from “Well 1” (**CLAC 784**) and “Well 2” (**CLAC 777**), with a further limitation on the individual rate from “Well 2” of no more than 0.54 cfs. The proposed To-POA are within ~550 ft of authorized “Well 2” (**CLAC 777**) and are yet to be constructed. The authorized From-POA and -POU as well as the proposed To-POA and -POU are within the Damascus Groundwater Limited Area.
 2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: The proposed To-POA would be constructed to a similar depth (TD ~375 ft bls) as the authorized From-POA (“Well 1” / **CLAC 784**, TD ~305 ft bls); “Well 2” / **CLAC 777**, TD ~360 ft bls). Both the authorized From-POA and proposed To-POA produce or would produce groundwater from the Troutdale Sandstone aquifer and from coarse-grained water-bearing units in the overlying Confining Unit 1 (Swanson et al., 1993).
 3. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
☐ Yes ☒ No _____
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.): N/A

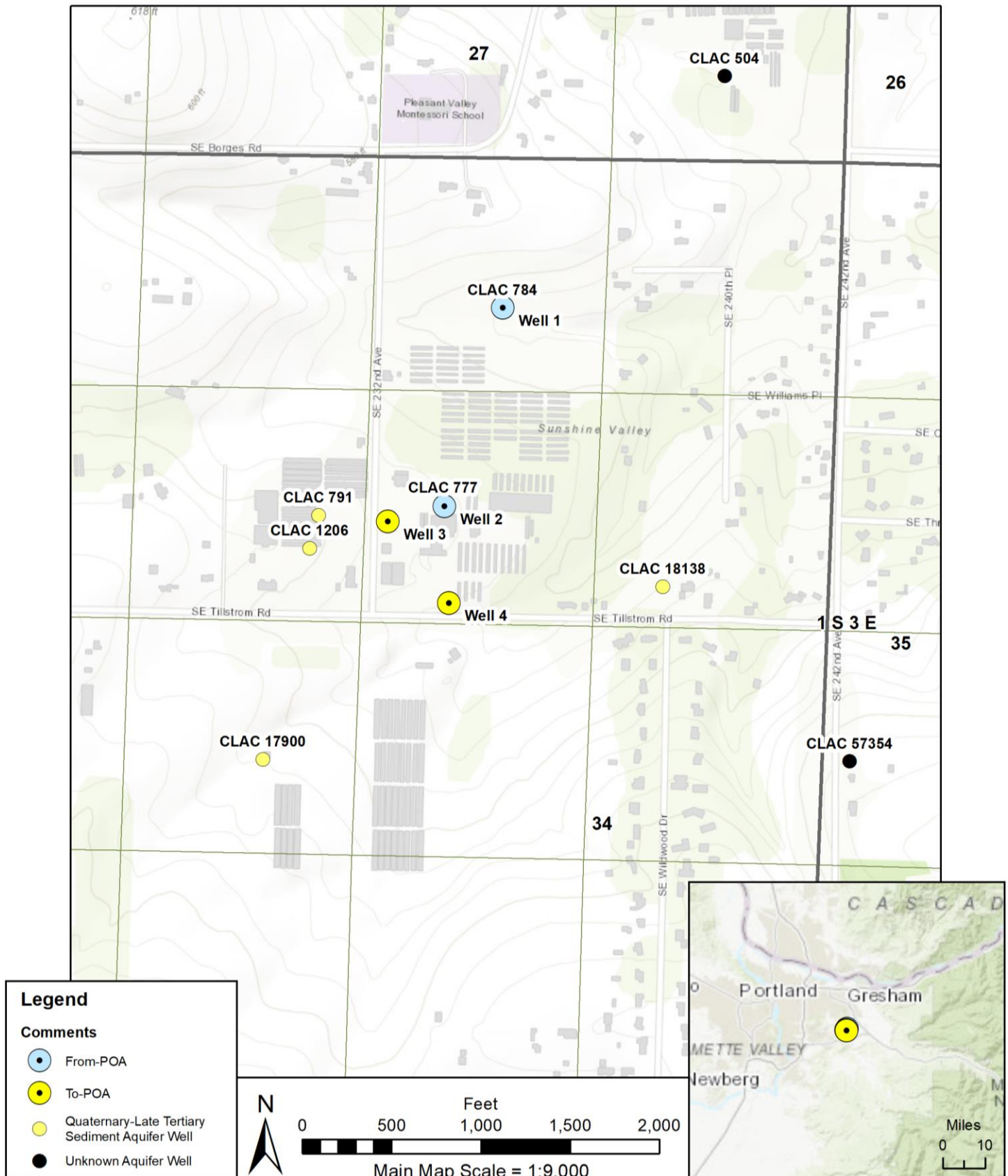
4. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another ground water right**?
☒ Yes ☐ No Comments: Proposed To-POA "Well 3" would be ~400 ft east of neighboring well CLAC 791, an authorized POA under Certificates 83290* and 88108* which is completed to a similar depth as the proposed To-POA. The closest From-POA, "Well 2" (CLAC 777), is ~700 ft from CLAC 791. The reduced intervening distance would likely cause an increase in interference with CLAC 791.
- 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 (1935) drawdown analysis was used to estimate the interference with CLAC 791 as a result of the proposed change. To provide a conservative analysis, it was assumed that proposed To-POA "Well 3" would pump continuously at the maximum allowable rate (0.56 cfs) up to the maximum allowable volume (156 af/yr) under Certificate 94783*, projected to take ~140 days. Results of the analysis indicate that although the interference between proposed To-POA "Well 3" and CLAC 791 may be substantial, it is unlikely to deprive CLAC 791 or similarly-located wells of groundwater to which they are legally entitled (see attached Theis Drawdown 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: The proposed To-POA are not appreciably closer to any nearby surface water sources. Therefore, no increase in interference with surface water is anticipated.
- 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
Provide context for minimal/significant impact: N/A
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: None
8. Any additional comments: None

References Used

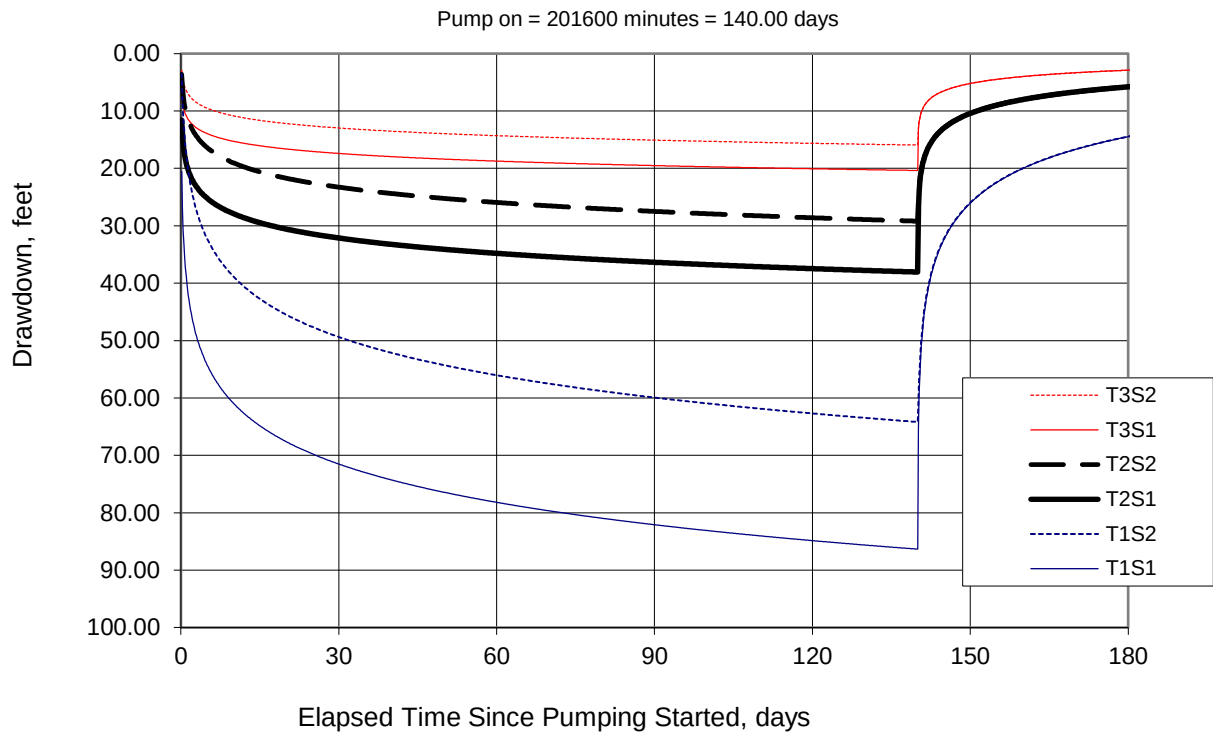
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- Theis, C.V., 1935, The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage, American Geophysical Union Transactions, vol. 16, p. 519-524.
- Swanson, R. D., McFarland,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

Well Location Map

T-13598 (RA) 44 Acre Farm



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Theis (1935) Drawdown AnalysisTheis Drawdown and Recovery at $r = 400$ ft From Pumping Well**Pumping Rate, $Q = 0.56$ cfs ≈ 251 gpm** **$T1 = 400$ ft²/day | $T2 = 1000$ ft²/day | $T3 = 2000$ ft²/day [OWRD Pumping Test Data]** **$S1 = 0.0001$ | $S2 = 0.001$ [McFarland and Morgan, 1996]**