

Groundwater Transfer Review Summary Form

Transfer/PA # T- 13491 re-review

GW Reviewer Travis Brown

Date Review Completed: 1/2/2024

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-13491 re-review

Applicant Name: Dustin Fox

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

Reviewer(s): Travis Brown

Date of Review: 1/2/2024

Supersedes Review Dated: 10/15/2020

Date Returned to WRSD: 1/2/2024

*The applicant appears to have checked the wrong boxes in Part 5 of the application: the applicant checked "Point of Diversion" and "Surface Water POD to Ground Water POA" but is simply changing the POA on a Groundwater right so "Point of Appropriation" would be the appropriate box to check.

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 applicant proposes to change the POA on Cert. 50297 from the authorized From-POA ("Sump") to a new, proposed well ("Well"). The proposed To-POA is approx. 450 ft from the original POA. The transfer is for the full acreage on the water right which is 9.75 acres and the full rate of 0.12 cfs. The applicant amended their application on 2/25/2021 to provide the construction of the proposed To-POA, which has already been constructed per Water Supply Well Report LANE 77420 (Well Label L-137137).

Will the proposed POA develop the same aquifer (source) as the existing authorized POA?

☐ Yes ☒ No Comments: The depth of the sump is listed as "unknown" on the original permit but is likely producing from the shallow alluvial aquifer system adjacent to the Coast Fork Willamette. (By definition in OAR 690-200-0050(103) as sump cannot be greater than 10 ft in depth.) The proposed To-POA (LANE 77420) is open from 123-203 ft below land surface (bls) in what is referred to as "blue claystone", which is presumed to belong to the Spencer Formation and not the alluvial aquifer system (McCloughry et al, 2010). Furthermore, the well log notes a water-bearing zone from 150-180 ft bls within the "blue claystone" which is not part of the alluvial aquifer system. Therefore, the proposed To-POA does not develop the same source as the authorized, shallow From-POA ("Sump").

2. 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.): _____

3. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another groundwater right**?

☒ Yes ☐ No Comments: the new POA is to be a drilled well instead of a large-diameter sump. Drawdown in the aquifer will be much greater from the drilled well than from the sump and this will increase interference with several nearby permitted groundwater rights. There are two permitted groundwater POAs within 400 ft of the proposed new POA.

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: Estimated drawdown at the nearest groundwater POAs will likely be less than 3 ft, which is not significant-enough of an impact to cause injury.

4. 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 change from a sump to a well will increase drawdown in the aquifer near the well, the new POA is farther from nearby surface water sources such that the net effect to surface water will likely be negligible.

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: _____

5. 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: _____

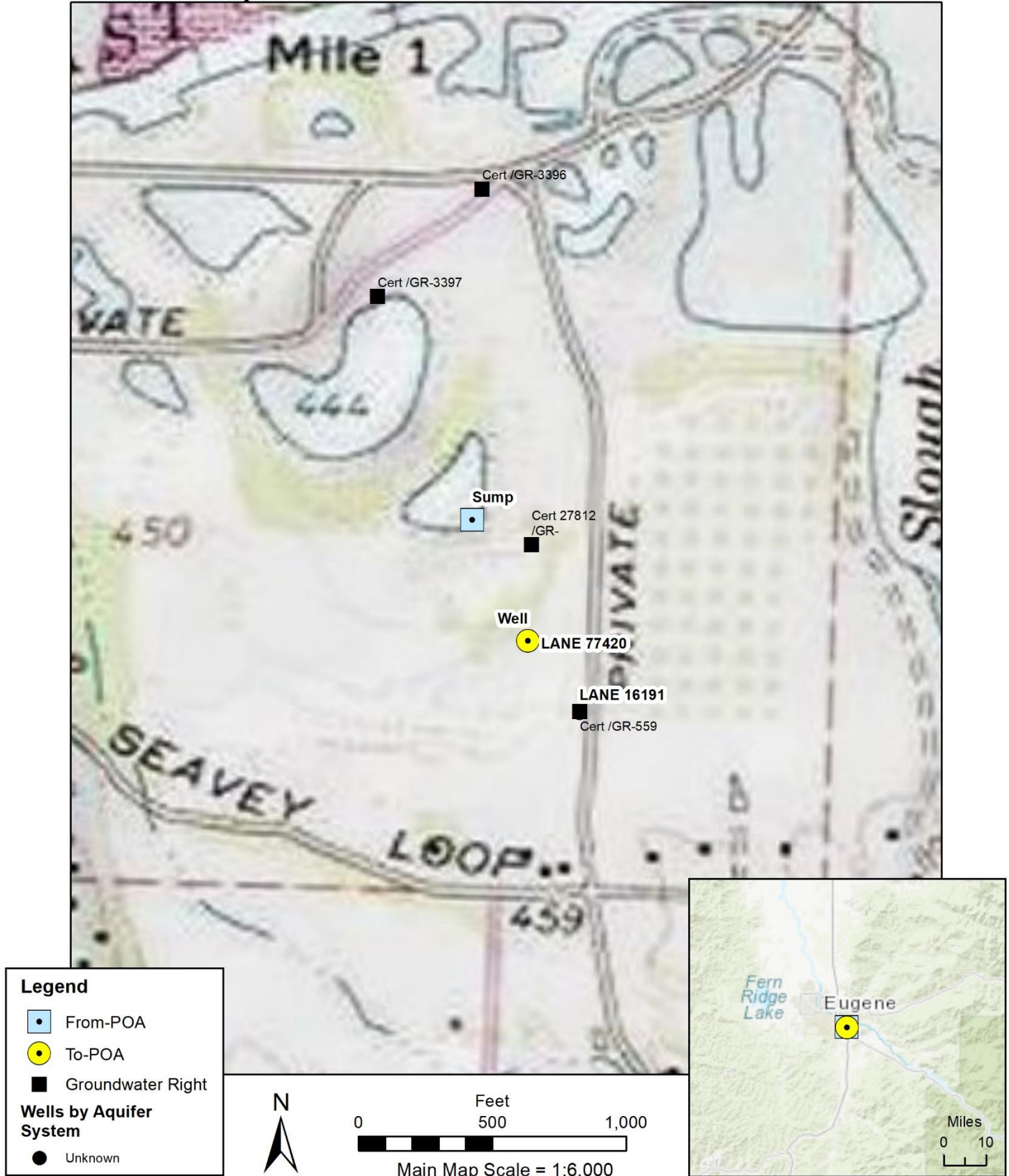
6. What conditions or other changes in the application are necessary to address any potential issues identified above: **To ensure the proposed To-POA would produce from the same source as the authorized From-POA, the new well must be constructed to produce primarily from the alluvial aquifer system and penetrate no more than 5 ft into competent bedrock underlying the alluvium. Because the proposed To-POA (LANE 77420) currently penetrates ~109 ft into the underlying competent bedrock ("blue claystone"), at least 104 ft of the present borehole for LANE 77420 would need to be sealed off for it meet this condition and produce only from the same source as the authorized From-POA.**
7. Any additional comments: In an alternative to the proposed condition in Item 7, the applicant can submit proposed well construction information and the Department will re-evaluate the application.

References

McClaghry, J.D., Wiley, T.J., Ferns, M.L., and Madin, I.P., 2010, Digital geologic map of the southern Willamette Valley, Benton, Lane, Linn, Marion, and Polk Counties, Oregon, Open-File Report O-2010-03, 116 p., 1 pl: Oregon Department of Geology and Mineral Industries, Portland, OR.

Well Location Map

T-13491 Fox



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Estimated drawdown to nearby groundwater POAs**Theis Time-Drawdown Worksheet**

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 30, 2014

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		244		d	
Radial distance from pumped well:	r		330.00		ft	Q conversions
Pumping rate	Q		0.120		cfs	53.86 gpm
Hydraulic conductivity	K	10.000	50.000	200.000	ft/day	0.12 cfs
Aquifer thickness	b		100		ft	7.20 cfm
Storativity	S_1		0.10000			10,368.00 cfd
	S_2		0.01000			0.24 af/d
Transmissivity Conversions	T_f2pd	1,000	5,000	20,000	ft ² /day	
	T_ft2pm	0.6944	3.4722	13.8889	ft ² /min	
	T_gpd/pft	7,480	37,400	149,600	gpd/ft	

Recalculate

Use the Recalculate button if recalculation is set to manual

