

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14681

GW Reviewer Stacey Garrison Date Review Completed: 11/19/2025

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-14681

Applicant Name: Justin Henderson

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

Reviewer(s): Stacey Garrison

Date of Review: 11/19/2025

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: Applicant proposes to add two groundwater POAs to a 0.16 cfs PORTION of **Certificate 32467** and the ENTIRE **Certificate 5492**: POA 1/Well 1 (PROP 720) and POA 2/Well 2 (PROP 721). Both **Certificate 32467** and **Certificate 5492** are surface water rights, so OAR 690-380-2130 applies. Both water rights show as primary on three acres of land; in accordance with OAR 690-380-5120, the applicant has concurrently filed for a partial diminution of 3 acres (0.037 cfs) for **Certificate 32467***. The combined allocations per the subject application to POA 1/Well 1 (PROP 720) and POA 2/Well 2 (PROP 721) are included in the table below.

Rates and Duties		POA	
		Well 1/POA 1 (PROP 720)	Well 2/APOA 2 (PROP 721)
POU (ac)	This transfer, T-14681/Certificate 5492	13.5 ac	13.5 ac
	This transfer, T-14681/Certificate 32467	3 ac	3 ac
	Total	16.5 ac	16.5 ac
Authorized duty (AF/year)	This transfer, T-14681/Certificate 5492	33.75 AF	33.75 AF
	This transfer, T-14681/Certificate 32467	7.5 AF	7.5 AF
	Total	41.25 AF	41.25 AF
Flow rate CFS (gpm)	This transfer, T-14681/Certificate 5492	0.165 cfs (94.3 gpm)	0.165 cfs (94.3 gpm)
	This transfer, T-14681/Certificate 32467	0.04 cfs (17.9 gpm)	0.04 cfs (17.9 gpm)
	Total	0.205 cfs (92 gpm)	0.205 cfs (92 gpm)

*There is a potential rounding error resulting in a Remaining portion of Certificate 32467 that is subject to forfeiture in accordance with OAR 690-380-2130 (7), see table below.

Certificate 32467 calculations				
Rates and Duties	Full	Portion allocated to GW POAs per T-14681	Portion subject to diminution	Remaining
POU (ac)	17.2	13.5	3.03	0.670
Authorized Duty (AF)	43	33.75	7.58	1.67
Flow Rate CFS (gpm)	0.21 cfs (94.3 gpm)	0.165 cfs (74.0 gpm)	0.037 cfs (16.6 gpm)	0.008 cfs (3.7 gpm)

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
 - Yes No Comments: The existing PODs for **Certificate 32467** and **Certificate 5492** are surface water points of diversion which divert water from Owl Creek. The proposed groundwater POAs, POA 1/Well 1 (PROP 720) and POA 2/Well 2 (PROP 721), are anticipated to produce groundwater from the unconfined, alluvial Holocene floodplain deposits of Owl Creek (McCloughry et al., 2010). These deposits have a very efficient hydraulic connection to Owl Creek when groundwater elevations are at or near the elevation of the streambed, see (9) below for further discussion.

3. a) Is the existing authorized POA subject to a water level decline condition?
 - Yes No Comments: Existing POD is surface water.
 - 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: _____

4. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
 - Yes No Comments: **Certificate 32467** and **Certificate 5492** have only developed a surface water source (Owl Creek).

- 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.): _____
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: Interference with nearby wells will increase as a result of the proposed transfer, since the subject POD diverts directly from surface water and the proposed groundwater POAs, POA 1/Well 1 (PROP 720) and POA 2/Well 2 (PROP 721), will utilize groundwater.
- 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: The proposed change would not move pumping considerably closer to any other groundwater users.
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: The proposed transfer is a surface water to groundwater transfer. While the timing of depletion of the surface water source (Owl Creek) would be altered by the proposed change, no overall increase in interference with the surface water source is likely.
- 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: _____
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: OAR 690-380-2130 includes two components to the definition of similarly: a location component and a stream depletion component. The groundwater POAs are within 500 ft of the surface water source and within 1000 ft upstream or downstream of the surface water PODs. For the stream depletion component, the Hunt (1999) model was used to assess whether the proposed groundwater POAs, POA 1/Well 1 (PROP 720) and POA 2/Well 2 (PROP 721), would meet the definition of “similarly” per OAR 690-380-2130 (see attached Stream Depletion Analysis); this definition requires that greater than 50 percent of the groundwater POA pumping rate be derived from stream depletion within 10 days of continuous pumping. The Hunt (1999) model was selected due to the apparent unconfined nature of the aquifer anticipated to be developed by the proposed POA. Parameters used in the Hunt (1999) model were derived from regional data and studies (Pumping Test Reports; Conlon et al., 201; Herrera et al., 2014) or are within a typical range of values for the given parameter within the hydrogeologic regime (Morris and Johnson, 1967; Heath, 1983). Results of the analysis indicate that the proposed groundwater POA will likely derive greater than 50 percent of its pumping rate from stream depletion within 10 days of continuous pumping (see attached Stream Depletion Analysis). **The proposed change in point of diversion will likely affect the Willamette River “similarly” (per OAR 690-380-2130) to the authorized points of diversion in Certificates 32467 and 5492.**

8. What conditions or other changes in the application are necessary to address any potential issues identified above: _____
9. Any additional comments: Owl Creek is likely losing (i.e. contributing to groundwater) at this location as the local streambed elevation is higher than reported groundwater elevations from nearby well logs: LINN 10585, LINN 10511, LINN 15090, LINN 8662, BENT 4678, BENT 1476, BENT 1675. When groundwater levels drop in the summer, streamflow contribution to groundwater likely only persists as percolation and streamflow may cease entirely. The surface water PODs for **Certificate 32467** and **Certificate 5492** are located on a reach of Owl Creek that has the potential to be disconnected from the adjacent upstream and downstream reaches of Owl Creek in dry periods. Due to the nature of the hydraulic connection between the surface water source and the unconfined groundwater source, enlargement may occur if water diverted from a groundwater POA exceeds the quantity lawfully available at the original surface water source.

References

Application File: T-14681

Pumping Test Reports: LINN 8670, LINN 10585, LINN 8694

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.

Gannett, M.W. and Caldwell, R., 1998, Geologic framework of the Willamette Lowland aquifer system, Oregon and Washington, Professional Paper 1424-A, 32 p: U. S. Geological Survey, Reston, VA.

Heath, R.C., 1983, Basic ground-water hydrology, Water Supply Paper 2220, 86 p: U.S. Geological Survey, Reston, Va.

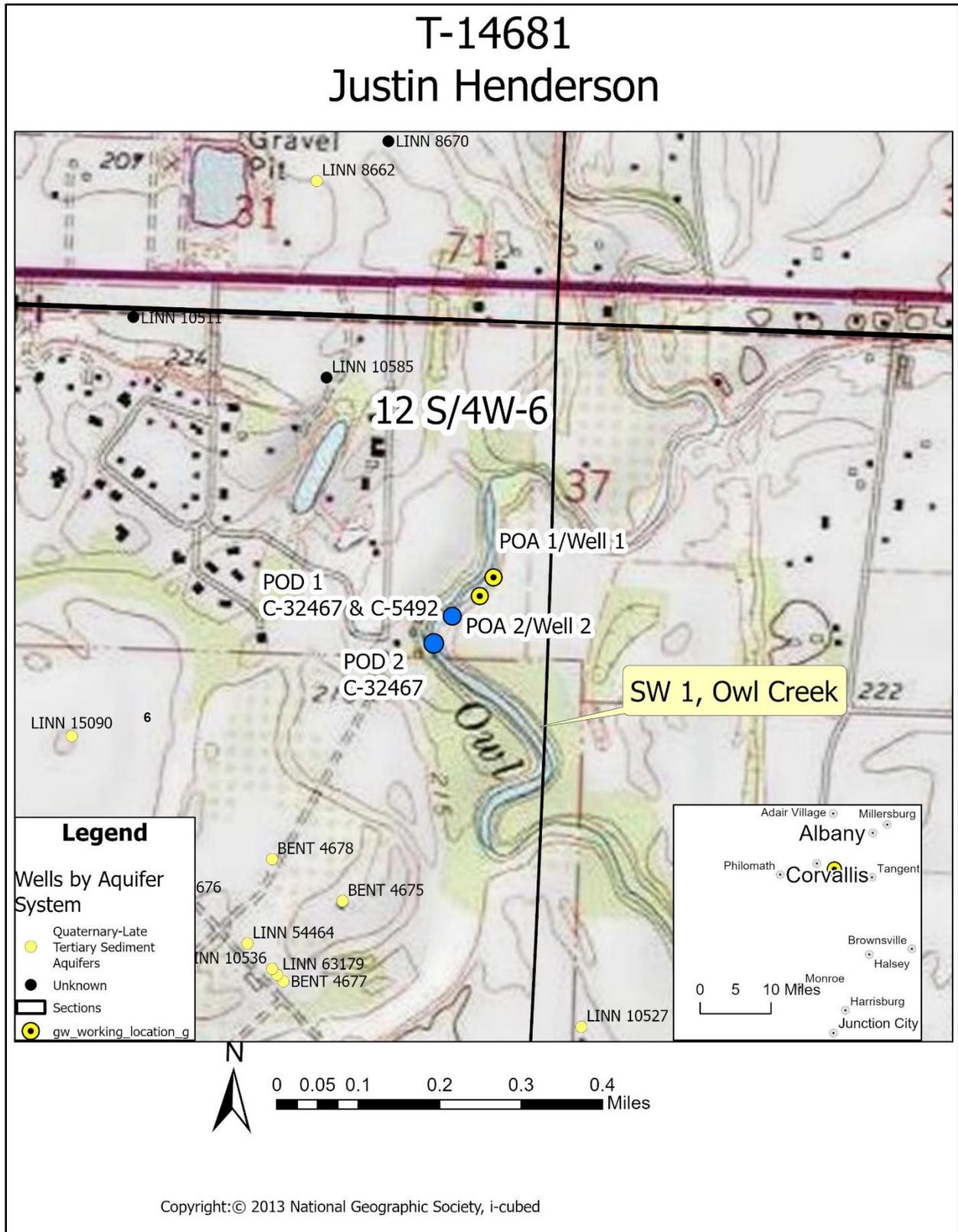
Hunt, B., 1999, Unsteady Stream Depletion from Ground Water Pumping: Ground Water, January-February, Vol 37, p 98-102.

McClaghry, J. D., T. J. Wiley, M. L. Ferns, and I. P Madin. 2010. Digital Geologic Map of the Southern Willamette Valley, Benton, Lane, Linn, Marion, and Polk Counties, Oregon. Oregon Dept. of Geology and Mineral Industries. Open File Report O-10-13

O'Connor, J. E., Sarna-Wojcicki, A., Wozniak, K. C., Polette, D. J., Fleck, R. J., 2001, Origin, Extent, and Thickness of Quaternary Units in the Willamette Valley, Oregon, Professional Paper 1620: 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.

Map

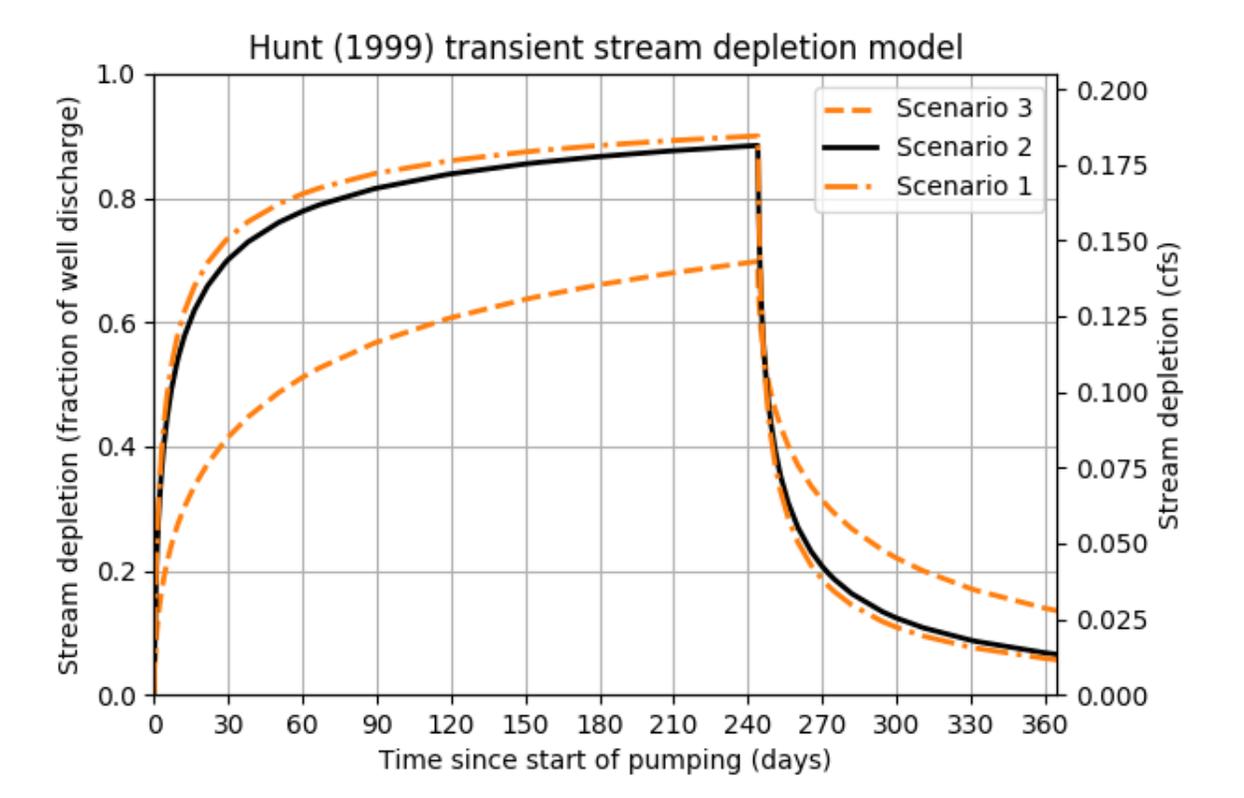


Stream Depletion Analysis-POA 1

Application type:	T
Application number:	14681
Well number:	1
Stream Number:	1
Pumping rate (cfs):	0.205
Pumping duration (days):	244.0
Pumping start month number (3=March)	3.0
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	50.0	50.0	50.0	ft
Aquifer transmissivity	T	1700.0	2700.0	31000.0	ft ² /day
Aquifer storativity	S	0.2	0.2	0.2	-
Aquitard vertical hydraulic conductivity	Kva	1.0	1.0	1.0	ft/day
Not used		3.0	3.0	3.0	
Aquitard thickness below stream	babs	3.0	3.0	3.0	ft
Not used		0.2	0.2	0.2	
Stream width	ws	50.0	50.0	50.0	ft

Days	10	330	360	30	60	90	120	150	180	210	240	270	300
Depletion (%)	55	9	7	70	78	82	84	85	87	88	88	21	12
Depletion (cfs)	0.11	0.02	0.01	0.14	0.16	0.17	0.17	0.18	0.18	0.18	0.18	0.04	0.03



Stream Depletion Analysis-POA 2

Application type:	T
Application number:	14681
Well number:	2
Stream Number:	1
Pumping rate (cfs):	0.205
Pumping duration (days):	244.0
Pumping start month number (3=March)	3.0
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	90.0	90.0	90.0	ft
Aquifer transmissivity	T	1700.0	2700.0	31000.0	ft ² /day
Aquifer storativity	S	0.2	0.2	0.2	-
Aquitard vertical hydraulic conductivity	Kva	1.0	1.0	1.0	ft/day
Not used		3.0	3.0	3.0	
Aquitard thickness below stream	babs	3.0	3.0	3.0	ft
Not used		0.2	0.2	0.2	
Stream width	ws	50.0	50.0	50.0	ft

Stream depletion for Scenario 2:													
Days	10	330	360	30	60	90	120	150	180	210	240	270	300
Depletion (%)	50	10	7	67	76	80	82	84	85	86	87	23	14
Depletion (cfs)	0.10	0.02	0.02	0.14	0.15	0.16	0.17	0.17	0.17	0.18	0.18	0.05	0.03

