

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14749

GW Reviewer Grayson Fish Date Review Completed: 10/28/2025

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-14749

Applicant Name: Wenrong Wang

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

Reviewer(s): Grayson Fish

Date of Review: 10/28/2025

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 3/12/26

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: The applicant provided the following reasoning for the application: "To obtain water supply for nursery uses on my property south of Cave Junction. My application G-19387 was denied."

The applicant proposes a surface water to groundwater transfer by moving water use from authorized surface water POD on the West Fork Illinois River to a groundwater POA located approximately 1.4 miles to the north-northeast. The applicant also requests changing use from irrigation to nursery.

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
 Yes No Comments: In general, groundwater is connected to surface water within the Illinois basin, with the larger rivers such as the West Fork Illinois River serving as regional discharge points. The proposed POA Well 2 (JOSE 62064) sources water from Pleistocene aged quaternary terrace deposits to the east of the West Fork Illinois River. The West Fork Illinois River runs through Holocene aged alluvium and in places Upper Jurassic aged metasedimentary rocks (Ramp, 1986). For the purpose of this SW-GW transfer review, the authorized POD and proposed POA are considered to develop the same source due to the groundwater surface water connection and interconnected nature of the quaternary sediments.
3. a) Is the existing authorized POA subject to a water level decline condition?
 Yes No Comments: Surface water POA.

- 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: N/A
4. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
 Yes No Comments: The proposed POA Well 2 sources water from Quaternary terrace deposits.
- 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: Changing from a surface water POD to a groundwater POA is likely to result in an increase in interference with wells near the location of Well 2.
- 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 closest groundwater uses to the applicant's proposed POA Well 2 are likely exempt domestic wells located on nearby tax lots approximately 300 to 800 feet to the south. Given the source aquifer (alluvial) and the low requested rate by the applicant, there is insufficient evidence to suggest that another groundwater right would not receive the water to which it is legally entitled.
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 location of Well 2 puts it roughly 0.5-mile from both the West and East forks of the Illinois River. The change from a surface water POD on the West Fork Illinois to a groundwater POA located equidistant from the West and East forks of the Illinois River will increase interference with the East Fork Illinois River.
- 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: East Fork Illinois Minimal Significant
 Provide context for minimal/significant impact: Given the low requested rate of 12 gpm and the likelihood that interference will be split between both the West and East Forks of the Illinois River the expected degree of interference with the East Fork Illinois River is minimal.
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: The proposed POA is located greater than 500 feet from the authorized surface water source and greater than 1000 feet upstream from the original point of diversion. The applicant provided a report titled "Point of Diversion Transfer for Water Certificate #95711" prepared by a licensed geologist to fulfill the requirements of OAR 690-380-2130 2(e). I reviewed the provided report during the preparation of this transfer review.

The provided report does not present information that shows that groundwater use would affect the surface water source similarly to the authorized point of diversion. “Similarly” is defined in OAR 690-380-2130 11(b) as “the use of groundwater at the new point of diversion affects the surface water source specified in the permit or certificated or decreed water right and would result in stream depletion of at least 50 percent of the rate of appropriation within 10 days of continuous pumping.” The report does attach the groundwater review for Application G-19387 which includes stream depletion modeling showing minimal (<3%) surface water interference after 365 days of pumping.

Stream depletion was evaluated using the Hunt (1999) model to determine if groundwater use proposed under this transfer would meet the definition of “similarly.” A transmissivity value of 140 ft²/d was derived from a pump test completed at a well (JOSE 60035) located ~1.5 miles southeast from the proposed Well 2 and sources water from the quaternary terrace deposits. Other aquifer parameters used are representative of the local geology. With a pumping rate of 0.0267 cfs and 7,500 feet to the authorized POD, the Hunt (1999) model predicts ~0% interference after 10 days of continuous pumping. If the surface water intercept is reduced to 3,000 feet, the distance between Well 2 and the nearest point of the West Fork Illinois River (POD’), interference remains at ~0% after 10 days of continuous pumping.

Additionally, the location of proposed POA Well 2 is approximately equidistant to both the West and East Forks of the Illinois River with similar geology between both streams. Groundwater use at the proposed location would split interference between those two surface water sources and approximately halve the amount of interference estimated at any given time after pumping begins. For example, if Hunt stream depletion modeling estimated 30% interference with the West Fork Illinois River after 10 days of pumping, the actual amount of interference would be closer to 15% due to splitting interference with the East Fork Illinois River.

Using a preponderance of the evidence standard, it is more likely than not that groundwater use from the proposed POA Well 2 would not affect the authorized surface water source similarly as defined in OAR 690-380-2160 11(b).

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

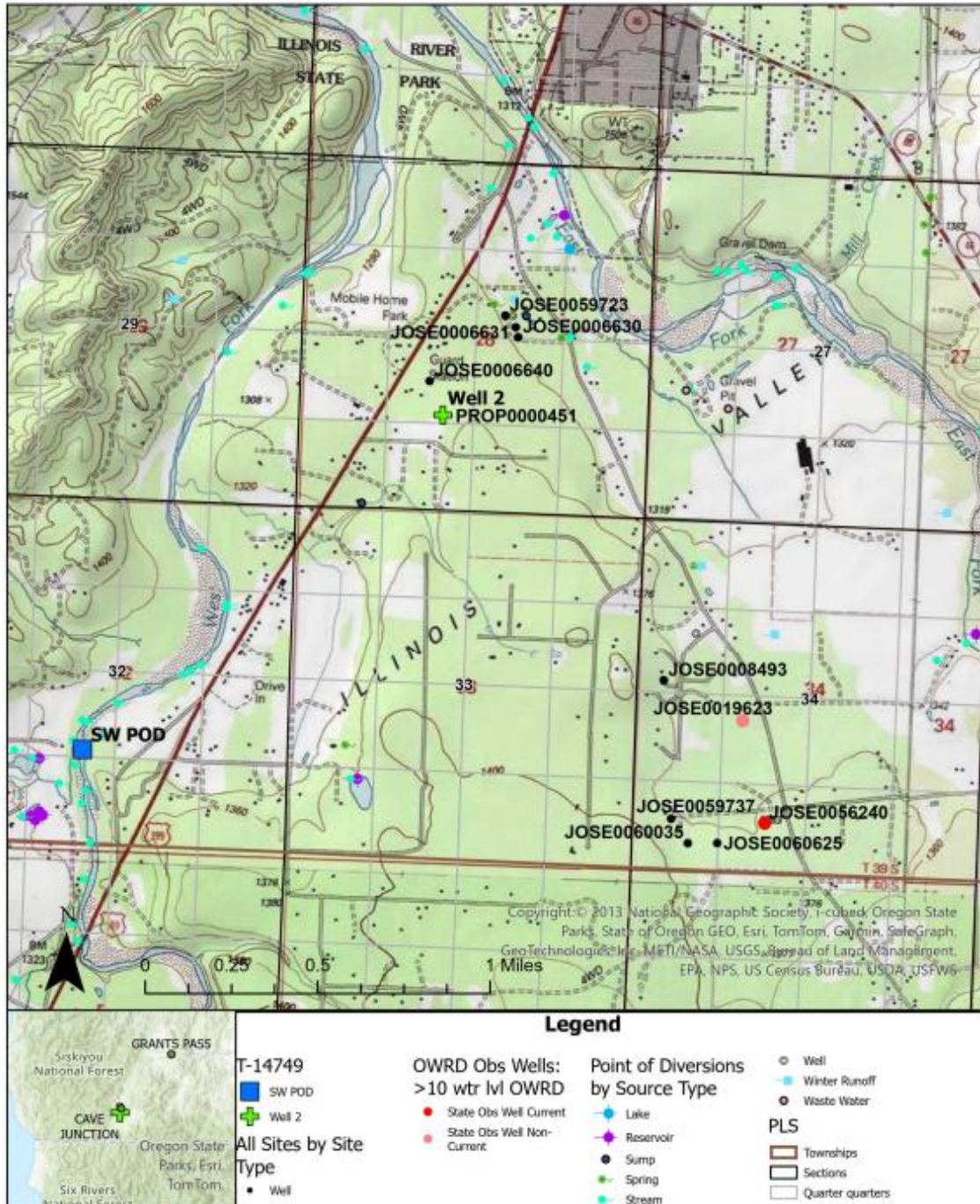
References

Hunt, Bruce. “Unsteady Stream Depletion from Ground Water Pumping.” Groundwater 37, no. 1 (1999): 98–102. <https://doi.org/10.1111/j.1745-6584.1999.tb00962.x>.

Oregon Water Resources Department. Groundwater Information System (GWIS). Accessed 10/28/2025.

Ramp, Len. 1986. *Geologic Map of The Northwest Quarter of The Cave Junction Quadrangle, Josephine County, Oregon*. Oregon Department of Geology and Mineral Industries. GMS-38.

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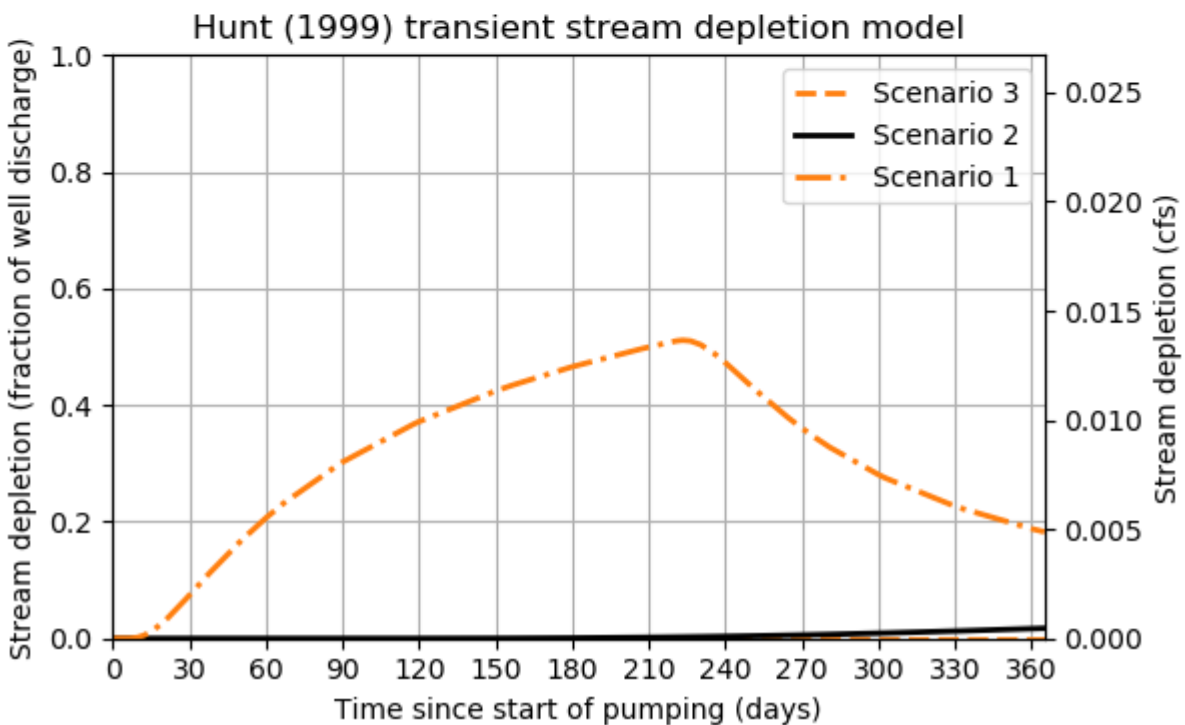
Hunt (1999) Stream Depletion to POD

Application type:	T
Application number:	14749
Well number:	1
Stream Number:	1
Pumping rate (cfs):	0.0267
Pumping duration (days):	214
Pumping start month number (3=March)	1
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	7500	7500	7500	ft
Aquifer transmissivity	T	300	140	100	ft ² /day
Aquifer storativity	S	0.001	0.01	0.1	-
Aquitard vertical hydraulic conductivity	Kva	.1	.05	0.01	ft/day
Not used		5	5	5	
Aquitard thickness below stream	babs	2	2	2	ft
Not used		0.2	0.2	0.2	
Stream width	ws	200	150	100	ft

Stream depletion for Scenario 2:

Days	10	30	60	90	120	150	180	210	240	270	300	330	360
Depletion (%)	0	0	0	0	0	0	0	0	0	1	1	1	2
Depletion (cfs)	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



Hunt (1999) Stream Depletion to Nearest Surface Water Intercept

Application type:	T
Application number:	14749
Well number:	1
Stream Number:	1
Pumping rate (cfs):	0.0267
Pumping duration (days):	214
Pumping start month number (3=March)	1
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	3000	3000	3000	ft
Aquifer transmissivity	T	300	140	100	ft ² /day
Aquifer storativity	S	0.001	0.01	0.1	-
Aquitard vertical hydraulic conductivity	Kva	.1	.05	0.01	ft/day
Not used		5	5	5	
Aquitard thickness below stream	babs	2	2	2	ft
Not used		0.2	0.2	0.2	
Stream width	ws	200	150	100	ft

Stream depletion for Scenario 2:

Days	10	30	60	90	120	150	180	210	240	270	300	330	360
Depletion (%)	0	0	2	5	9	13	17	20	23	25	24	22	20
Depletion (cfs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01

