

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14722

GW Reviewer Stacey Garrison Date Review Completed: 10/17/2025

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-14722

Applicant Name: City of Monmouth

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

Reviewer(s): Stacey Garrison

Date of Review: 10/17/2025

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 11/8/2025

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 one surface water point of diversion, POD 1, authorized under permit S-54332 for municipal use at 4.46 cfs year-round to three existing wells: POLK 52513/POA 1, POLK 52861/POA 2, and POLK 52953/POA 3. All three POAs are also authorized under permit G-17868, but the stacked rights are not considered in this review as the additional authorization does not impact the analyses. The applicant also proposes adding a new surface water POD, however the additional surface water POD is not considered as part of this Groundwater Review.
 2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☐ Yes ☐ No Comments: The existing POD is a surface water point of diversion which diverts water from the Willamette River. The proposed groundwater POAs (POLK 52513/POA 1, POLK 52861/POA 2, and POLK 52953/POA 3) are anticipated to produce groundwater from Floodplain deposits of the Willamette River (O'Connor et al., 2001). These mixed-grained deposits have a very efficient hydraulic connection to the Willamette River, which is typically gaining (i.e. receiving groundwater discharge) at this location (Woodward et al. 1998; Herrera et al., 2014).

3. a) Is the existing authorized POA subject to a water level decline condition?
☐ Yes ☒ No Comments: Per correspondence between the applicant and the Department, the Final Order issued per the subject transfer shall include a provision that limits the total quantity of water diverted from the new groundwater POAs and the new surface water POD to the amount legally available at the original POD.
- 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: Permit S-54332 has only developed a surface water source (the Willamette River).
- 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 (POLK 52513/POA 1, POLK 52861/POA 2, and POLK 52953/POA 3) 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 groundwater POAs (POLK 52513/POA 1, POLK 52861/POA 2, and POLK 52953/POA 3) are anticipated to produce groundwater from the alluvial aquifer system which has an efficient hydraulic connection with the Willamette River ~ 100 ft to the east. The efficient hydraulic connection with the Willamette River will substantially limit drawdown due to pumping the proposed groundwater POAs. Therefore, the proposed change is unlikely to result in other groundwater users not receiving water to which they are 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 proposed transfer is a surface water to groundwater transfer. While the timing of depletion of the surface water source (the Willamette River) 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: The Hunt (2003) model was used to assess whether the proposed groundwater POAs (POLK 52513/POA 1, POLK 52861/POA 2, and POLK 52953/POA 3) 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 (2003) model was selected due to the apparent confined nature of the aquifer anticipated to be developed by the proposed POA. Parameters used in the Hunt (2003) 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). The nearby reach of the Willamette River is anticipated to be gaining (i.e., receiving groundwater discharge) based on potentiometric mapping by Woodward et al. (1998) and numerical modeling by Herrera et al. (2014). The vertical conductivity value used in the Hunt (2003) model is the “Kv drain bed” parameter from Herrera et al., (2014). 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 Certificate 97291.

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

References

Application File: T-14722

Pumping Test Reports: POLK 2881, POLK 71, POLK 3873, MARI 13308, MARI 15527, POLK 2877, POLK 3039, POLK 3713, POLK 3741, POLK 87

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.

Herrera, N. B., Burns, E. R., Conlon, T. D., 2014, Simulation of groundwater flow and the interaction of groundwater and surface water in the Willamette Basin and Central Willamette Subbasin, Oregon, Scientific Investigations Report 2014-5136: U. S. Geological Survey, Reston, VA.

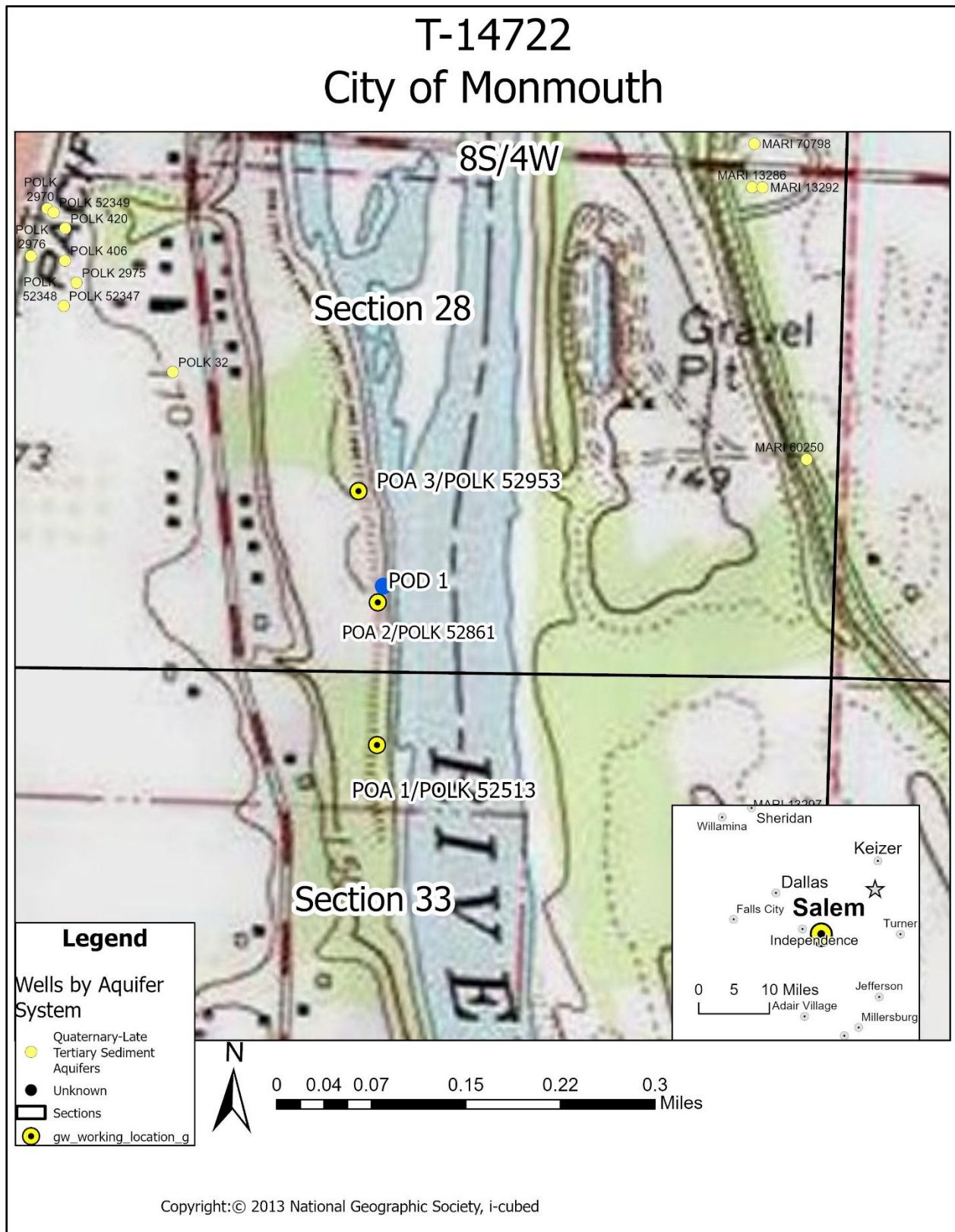
Hunt, B., 1999, Unsteady Stream Depletion from Ground Water Pumping: Ground Water, January-February, Vol 37, p 98-102.

Hunt, B., 2008, Stream Depletion for Streams and Aquifers with Finite Widths: Journal of Hydrologic Engineering, Vol 13, p 80-89.

Johnson, A.I., 1967, Specific yield-compilation of specific yields for various materials: U.S. Geological Survey Water-Supply Paper 1662-D.

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

Application type:	T
Application number:	14722
Well number:	1
Stream Number:	1
Pumping rate (cfs):	4.46
Pumping duration (days):	365.0
Pumping start month number (3=March)	1.0
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	100.0	100.0	100.0	ft
Aquifer transmissivity	T	400.0	17240.0	97000.0	ft ² /day
Aquifer storativity	S	0.003	0.1015	0.2	-
Aquitard vertical hydraulic conductivity	Kva	0.02	0.2	0.6	ft/day
Aquitard saturated thickness	ba	0.5	0.5	0.5	ft
Aquitard thickness below stream	babs	0.5	0.5	0.5	ft
Aquitard specific yield	Sya	0.2	0.2	0.2	-
Stream width	ws	330.0	330.0	330.0	ft

Stream depletion for Scenario 2:

Days	1	31	62	92	122	153	183	213	244	274	304	335	365
Depletion (%)	40	85	89	91	92	93	93	94	94	95	95	95	95
Depletion (cfs)	1.80	3.79	3.97	4.05	4.10	4.14	4.16	4.18	4.20	4.22	4.23	4.24	4.25

