

Groundwater Transfer Review Summary Form

Transfer/PA # T- 13811

GW Reviewer Joe Kemper Date Review Completed: 9/11/2023

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.



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1271
(503) 986-0900
www.wrd.state.or.us

Ground Water Review Form:

- ☒ **Water Right Transfer**
☐ **Permit Amendment**
☐ **GR Modification**
☐ **Other**

Application: T-13811

Applicant Name: City of Bend

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

Reviewer(s): Joe Kemper

Date of Review: 9/11/2023

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 12/28/231

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: Certificate 85412 allows for municipal use to a maximum rate of 7.57 cfs from four wells (DESC 1653, DESC 8499, DESC 5578, DESC 5577). Certificate 85559 authorizes municipal use up to a maximum rate of 4.16 cfs from three wells (DESC 9108, DESC 1738, and DESC 9997). The applicant proposes to add three wells (DESC 51943, DESC 54252, and DESC 57760) as APOAs both certificates 85412 and 85559.
 2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: All wells that are authorized POAs or proposed POAs for this transfer access the Deschutes regional groundwater system, which is considered to be a single aquifer for the purpose of this review. All authorized and proposed POAs are located within a 2.5 mile radius of on another along the same approximate flowpaths from the recharge zone in the Cascades to the regional discharge point near the Crooked and Deschutes confluence area.
 3. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
☐ Yes ☒ No NA
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.): NA

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: The proposed changes would move some groundwater pumpage closer to certain permitted and exempt use wells. This will likely result in some increase in well-to-well interference.
- 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: Considering the high transmissivity, storage, and thickness of the Deschutes regional groundwater system in this area, it is very unlikely that any well-to-well interference that results from this transfer would prevent another groundwater right not receiving the water to which it is legally entitled to.
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 target aquifer is dominated by long, regional flowpaths that discharge to surface water at certain reaches of the Deschutes and Crooked rivers. Assuming that there is no enlargement that results from the transfer, the change in location of groundwater pumpage is next expected to have a measurable change on groundwater interference with surface water.
- 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: Deschutes River ☐ Minimal ☐ Significant
Stream: Crooked River ☐ Minimal ☐ Significant
Provide context for minimal/significant impact: see abobove
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: na
7. What conditions or other changes in the application are necessary to address any potential issues identified above: na
8. Any additional comments: na

References

Gannett, M. W., Lite Jr, K. E., Morgan, D. S., and Collins, C. A., 2001, Ground-Water Hydrology of the Upper Deschutes Basin, Oregon, USGS Water-Resources Investigations Report 00-4162, 74 p., <https://pubs.usgs.gov/wri/wri004162/pdf/WRIR004162.pdf>

Gannett, M. W. and Lite, K. E., 2004, Simulation of Regional Ground-Water Flow in the Upper Deschutes Basin, Oregon, USGS Water Resources Investigation Report 2003-4195, 84 p., <https://pubs.er.usgs.gov/publication/wri034195>

Gannett, M.W., Lite, K.E., Jr., Risley, J.C., Pischel, E.M., and La Marche, J.L., 2017, Simulation of groundwater and surface-water flow in the upper Deschutes Basin, Oregon: U.S. Geological Survey Scientific Investigations Report 2017–5097, 68 p., <https://doi.org/10.3133/sir20175097>.

Lite, K. E. and Gannett, M. W., 2002, Geologic Framework of the Regional Ground-Water Flow System in the Upper Deschutes Basin, Oregon. USGS Water-Resources Investigation Report 02-4015, 44 p., <https://pubs.er.usgs.gov/publication/wri024015>

OWRD Groundwater Information System (GWIS) Database – Accessed 9/11/2023.

Sherrod, David R., Taylor, Edward M., Ferns, Mark L., Scott, William E., Conrey, Richard M., and Smith, Gary A., 2004, Geologic map of the Bend 30- x 60-minute quadrangle, central region: U.S. Geological Survey Geologic Investigations Series I-2683, scale 1:100,000.

Table of Wells/Points of Appropriation

Water Right	POA Name & Number	Authorized or Proposed	LOGID	TRS QQ
85412	River Well 1	Authorized	DESC 5577	18S/12E-5 SW-NW
85412	River Well 2	Authorized	DESC 5578	18S/12E-5 SW-NW
85412	Copperstone Well	Authorized	DESC 1653	17S/11E-25 SW-NE
85412	Pilot Butte Well 1	Authorized	DESC 8499	17S/11E-33 NE-NE
85412	Bear Creek Well 1	Proposed	DESC 51943	17S/12E-33 SE-SE
85412	Outback Well 4	Proposed	DESC 54252	17S/111E-34 SW-SE
85412	Outback Well 7	Proposed	DESC 57760	18S/11E-3 NE-NW
85559	Rock Bluff 1	Authorized	DESC 9108	18S/12E-7 NW-SE
85559	Rock Bluff 2	Authorized	DESC 1738	18S/12E-7 NW-SE
85559	Rock Bluff 3	Authorized	DESC 9997	18S/12E-7 NW-SE
85559	Bear Creek Well 1	Proposed	DESC 51943	17S/12E-33 SE-SE
85559	Outback Well 4	Proposed	DESC 54252	17S/111E-34 SW-SE
85559	Outback Well 7	Proposed	DESC 57760	18S/11E-3 NE-NW

Transfer Map



