

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14183

GW Reviewer Joe Kemper Date Review Completed: 6/21/2023

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.



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Ground Water Review Form:

- Water Right Transfer
- Permit Amendment
- GR Modification
- Other

Application: T-14183

Applicant Name: Deschutes Valley Water District

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

Reviewer(s): Joe Kemper

Date of Review: 6/21/2023

Date Reviewed by GW Mgr. and Returned to WRSD: _____

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: Permit S-36515 currently authorizes 11.92 cfs from a single surface water POD (Opal Springs along the Crooked River). This application proposes to change the source from surface water to three existing groundwater wells (JEFF 50263, JEFF 50418, and JEFF 50654) and one proposed well (Well 8). It is noted that T-9720 already authorized moving 10.38 cfs from the same spring POD on S-36515 to JEFF 50263, JEFF 50418, and JEFF 50654 under certificate 97088.
2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
 Yes No Comments: USGS publications and professional reports have documented short-term and long-term hydraulic connection between the Deschutes groundwater system. While the proposed well will be located on the west side of the Crooked River, there is a considerable upward gradient and flux of groundwater towards the stream on this general area. A cross-sectional view of the current POAs illustrates how the 400-750 foot deep proposed well will be producing from the same source as the current wells.
3. 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.): 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: Groundwater production at the proposed wells may create a cone of depression that would result in well-to-well interference with adjacent groundwater users, the closest of which could be located approximately 2100 feet to the east.
- 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 highly transmissive system, the strong upward gradient, and the thickness of the target aquifer, it is unlikely that any well-to-well interference that results from these proposed changes would be rise to the level of substantial or undue interference for reasonably efficient well that fully penetrates the Deschutes Formation.
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: NA
- 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: Crooked River Minimal Significant
Stream: _____ Minimal Significant
Provide context for minimal/significant impact: The goal of a SW-GW transfer is to maximize interference with the adjacent stream. This metric does not apply.
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: As the “from” POD and the “to” wells are located within the Deschutes groundwater study area (DGWSA), OAR 690-380-2130(3) provides more flexible guidelines for a SW-GW transfer. All of the proposed APOAs are located approximately within 100 feet of the Crooked River and have been found to be hydraulically connected to the Crooked River. The wells are not required to meet the definition of similarly in OAR 690-380-2130(11)(b). Instead, previous hydrogeologic investigations in the region and site are sufficient to establish the efficient hydraulic connection between groundwater and surface water at this location.
7. What conditions or other changes in the application are necessary to address any potential issues identified above: _____
8. Any additional comments: _____

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>

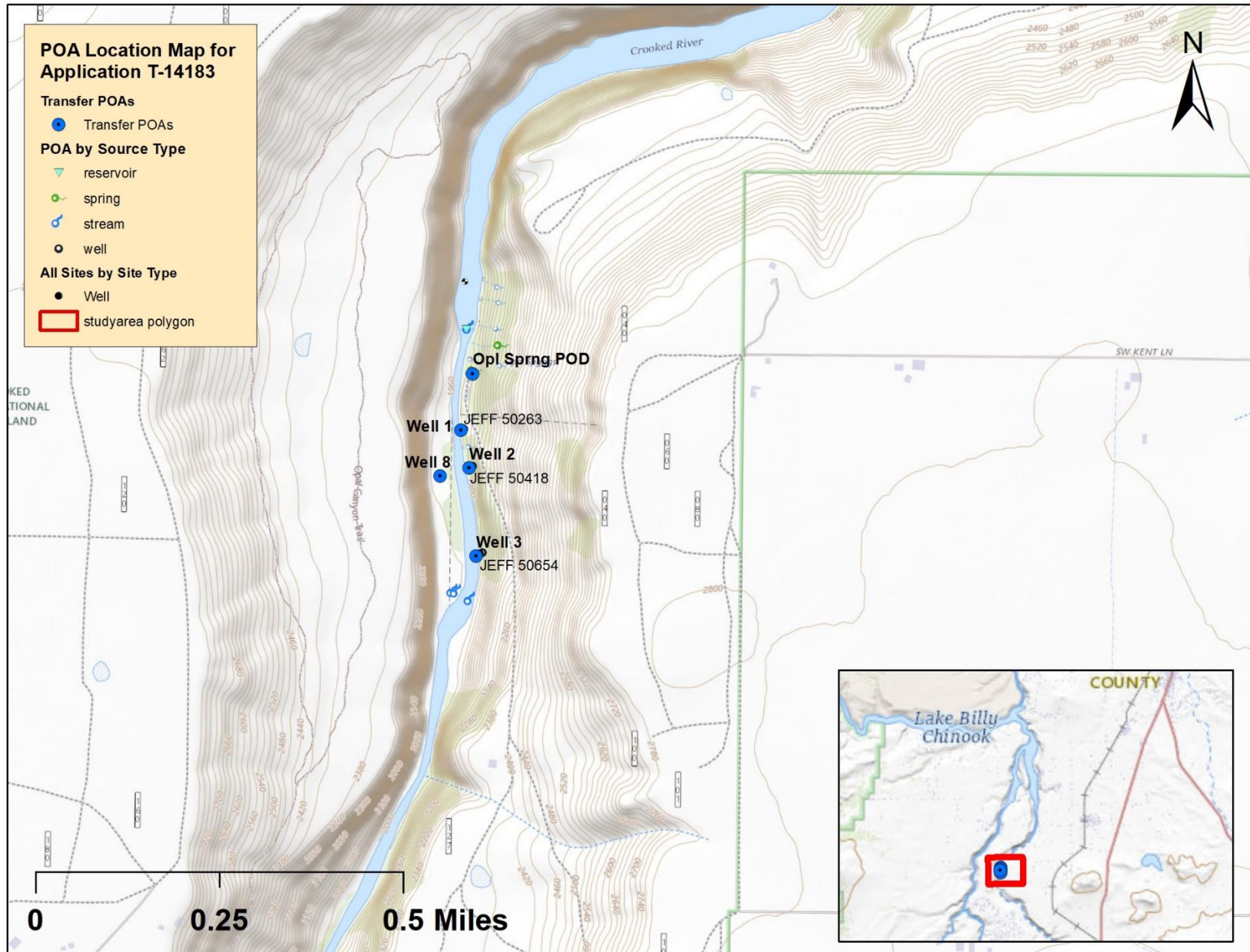
Lite, K. E. and Gannett, M. W., 2002, Geologic Framework of the Regional Ground-Water Flow System in the Upper Deschutes Basin, Oregon. USGS Water-Resources Investigation Report 02-4015, 44 p., <https://pubs.er.usgs.gov/publication/wri024015>

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. 2009. T-9720 Hydraulic Connection Finding Memo. Oregon Water Resources Department.

Transfer Map



Cross Section of Current Wells

