Groundwater Transfer Review Summary Form

Transfer/PA # T- _14113_

GW Reviewer _Joe Kemper_ Date Review Completed: _2/27/2023_

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-14113 Applicant Name: Oregon Parks and Recreation Dept

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

Reviewer(s): Joe Kemper Date of Review: 2/27/2023

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 3/23/23

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 39065 is served by two wells (Well 1 aka JEFF 521and Well 2 aka JEFF 522). T-14113 proposes to add an APOA (currently undrilled) to the current POAs under certificate 39065. No change in character or place of use is proposed.

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
   ☒ Yes ☐ No Comments: Although there is some discrepancy in the location, construction, and depth of Well 1 and Well 2, best available information indicates that they access groundwater hosted within the mixed volcanics, volcaniclastic sediments, and alluvium of the Deschutes Formation. Lake Billy Chinook likely acts as the primary source of recharge to these wells, particularly considering the immediate proximity of the wells to the lake. The APOA is proposed to reach a total depth of 275 feet and would also access groundwater hosted in mixed volcanics and sediments of the Deschutes Formation. The proposed APOA is located within 2200 feet of the current legal locations of Well 1 and Well 2.

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 applicant's wells are located on a peninsula surrounded by Lake Billy Chinook, which provides consistent recharge to the immediate groundwater system. Adjacent tax lots are predominately undeveloped public land. Considering the hydrogeologic setting, the high permeability of the Deschutes Formation, and buffer from any other groundwater users, it is likely that groundwater production from the proposed change would result in any meaningful 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: NA

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 proposed APOA is located slightly further from Lake Billy Chinook. Considering the high permeability of the target aquifer, moving groundwater production to the requested APOA will either reduce interference with surface water or result in no change.

   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: NA ☐ Minimal ☐ Significant

   Stream: NA ☐ Minimal ☐ Significant

   Provide context for minimal/significant impact: NA

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: _____

8. Any additional comments: The two POAs on certificate 39065 are not currently correlated to specific wells by OWRD. The applicant indicates that JEFF 521 correlates to Well 1 and JEFF 522 correlates to Well 2 of certificate 39065. The legal locations of Well 1 and Well 2 on Certificate 39065, both in TRSqq 12S/12E-15 NE-NW, were first identified by a 12/20/1967 map that depicted the constructed water delivery system (see map below). According to permit documents, Well 1 had an elevation of 2045 feet amsl and Well 2 had an elevation of 1995 feet amsl, both of which are well above the approximate elevation of Lake Billy Chinook (1945 feet amsl). Limited water level data from the area indicates that the lake acts as a recharging boundary, where wells close to the lake have water level elevations that are very close to the lake's elevation e.g. JEFF 529 and JEFF 822.

   JEFF 521 and JEFF 522 were drilled in July of 1970 with reported locations of 12S/12E 16 NE-NE, both with depths of 49 feet bls, and a reported SWL of 9 feet bls and 11 feet bls respectively. A note from the final proof survey of certificate 39065 indicates that well 1 and well 2 are approximately 80 feet deep and that "… the 2 wells in this app are used for emergency use only."

USGS OFR 97-197 (Caldwell and Truini, 1997) indicate that two wells were located during field visits. This publication correlates the visits to JEFF 521 and JEFF 522. Depth to water was measured at 12.65 and 11.26 feet BLS respectively. The location of these wells is in 12S/12E section 10, however. Additionally, 2005 applications for Well ID Tags indicate that JEFF 521 and JEFF 522 are located in section 10.

Lastly, aerial imagery shows infrastructure at the well locations provided in OFR 97-197 but no infrastructure at the legal locations of Well 1 and Well 2 of certificate 39065.

In conclusion, best available information indicates that its unlikely that well logs JEFF 521 and JEFF 522 correspond to wells constructed at the legal POA locations under certificate 39065. If there is groundwater production at the legal locations, the SWLs should 50-100 feet BLS and those wells would not likely correspond to JEFF 521 and JEFF 522. If those are the correct well logs, then the wells are not located in the location specified by certificate 39065.

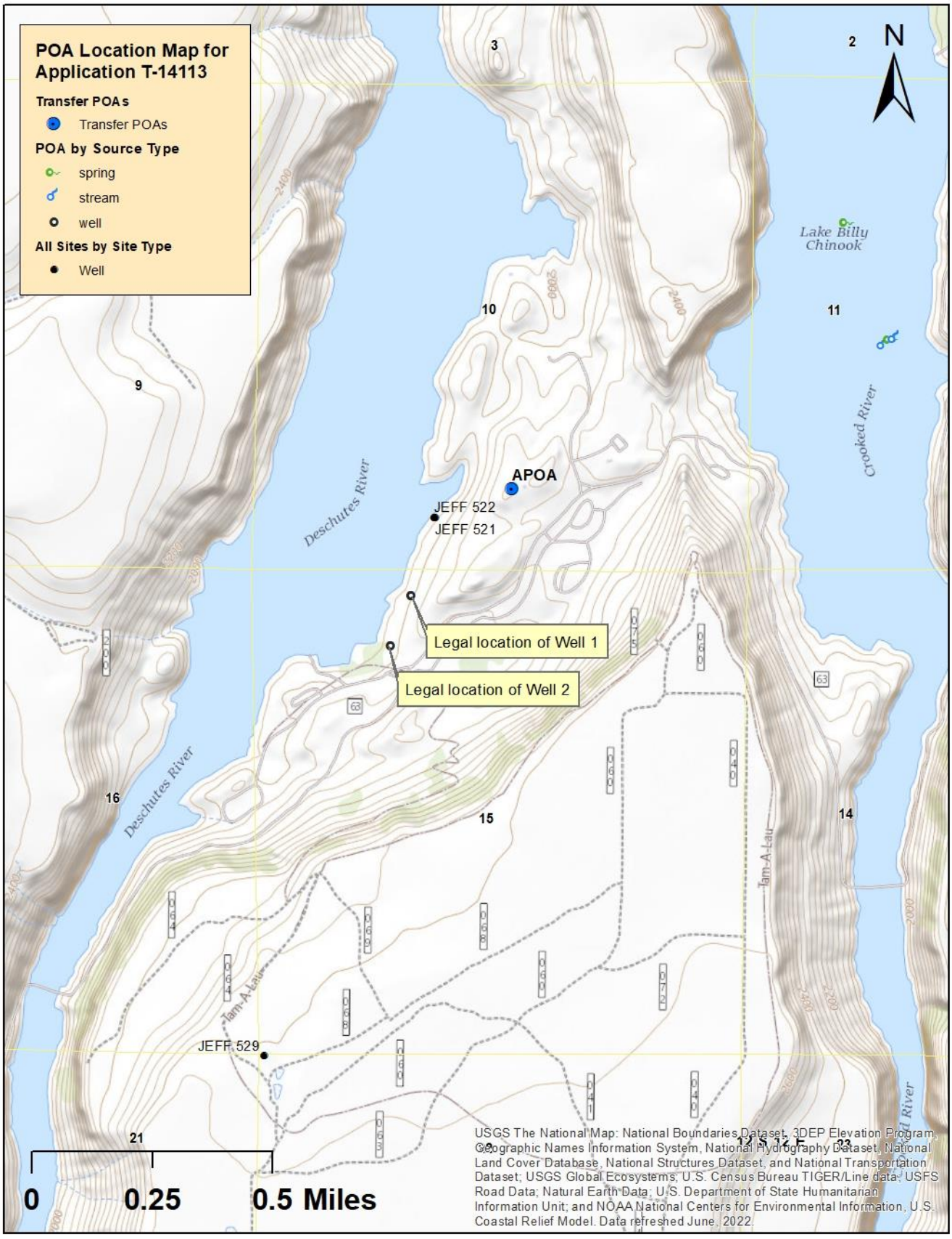
References

Caldwell, Rodney R., and Margot Truini. “Ground-Water and Water-Chemistry Data for the Upper Deschutes Basin, Oregon.” Report. Open-File Report. Portland, OR, 1997.

Gannett, M.W., Lite, Jr., K.E., Morgan, D.S., and Collins, C.A., 2001, Ground-water hydrology of the upper Deschutes Basin, Oregon: U.S. Geological Survey Water-Resources Investigations Report 00-4162, 74 p.

Lite Jr., K.E., and M.W. Gannett. “Geologic Framework of the Regional Ground-Water Flow System in the Upper Deschutes Basin, Oregon.” USGS Numbered Series. Geologic Framework of the Regional Ground-Water Flow System in the Upper Deschutes Basin, Oregon. Water-Resources Investigations Report.

Map of Proposed Changes



Water Levels in Adjacent Wells