

Groundwater Transfer Review Summary Form

Transfer/PA # T- 13749

GW Reviewer M. Thoma

Date Review Completed: 03/08/2022

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 SW-GW Transfer Similarity Review:

☐ ~~The proposed SW-GW transfer doesn't meet the definition of "similarly" as per OAR 690-380-2130.~~
"similarly" criteria is not required for SW-GW transfers in the Deschutes Groundwater Study Area

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-13749

Applicant Name: Big Falls Ranch

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

Reviewer(s): M. Thoma

Date of Review: 03/08/2022

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 3/10/22

The information provided in the application is insufficient to evaluate whether the proposed transfer may be approved because:

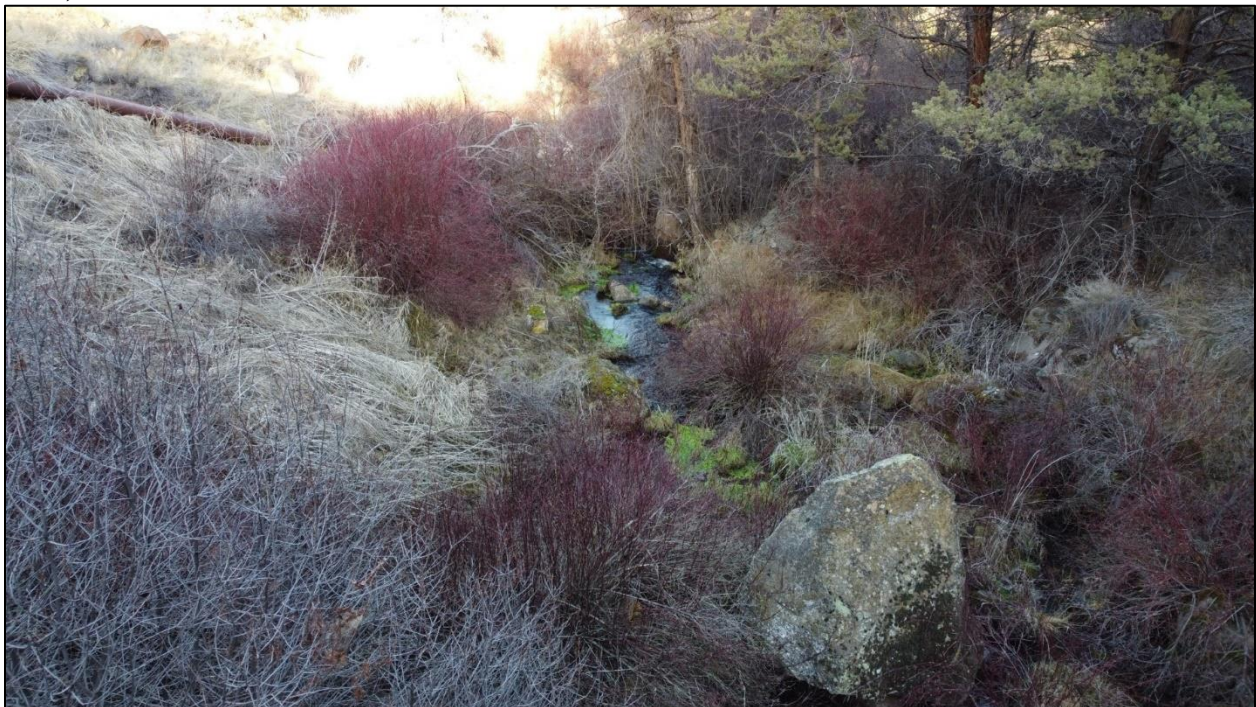
- ☐ The water well reports provided with the application do not correspond to the water rights affected by the transfer.
- ☐ The application does not include water well reports or a description of the well construction details sufficient to establish the ground water body developed or proposed to be developed.
- ☐ Other _____

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1. Basic description of the changes proposed in this transfer: The application proposes to transfer the POD on Cert. 76372 from the existing surface water POD on McKenzie Canyon to four (4) groundwater PODs: DESC0002100, DESC0002087, DESC0002098, DESC0000768 (the four wells are labeled wells 1, 3, 4, 7, respectively, on the application). The proposed transfer is similar to T-12651.
 2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: see Item 6 below
 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.): _____

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 increased pumping at the proposed groundwater PODs will cause direct but minute hydraulic interference with existing groundwater users in the area.
- 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: _____
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: see Item 8
- 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
Stream: _____ ☐ Minimal ☐ Significant
Provide context for minimal/significant impact: _____
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: OAR 690-380-2130(3) requires that SW-GW transfers in the Deschutes Groundwater Study Area only “affect the surface water source hydraulically connected to the authorized point of diversion specified in the water use subject to transfer”. The POD on the underlying certificate on this application is a spring in McKenzie Canyon which discharges to the Deschutes River. Therefore, the surface water source hydraulically connected to the authorized point of diversion for this application is interpreted to be the Deschutes River. This review finds that the proposed GW PODs would likely be affecting the Deschutes River downstream of the current POD if they are not directly affecting the spring POD.
7. What conditions or other changes in the application are necessary to address any potential issues identified above: The surface water source for this application was subject to a previous SW-GW transfer (T-12651) which was approved in 2018 and moved 4.5 cfs from the same spring on McKenzie Canyon to the same groundwater wells. That transfer, along with this transfer, would move 6.39 cfs from the source spring to groundwater wells. Field investigations by OWRD Watermaster Jeremy Giffin on July 13, 2021 located the source springs. From the pictures provided (attached), it is questionable whether the spring is providing 6.39 cfs of continuous flow and so there is a legitimate concern that approval of this transfer could lead to enlargement of the underlying right by allowing pumping from the groundwater wells to exceed the rate of flow at the original spring source. Therefore, this review recommends adding a Large Water Use reporting condition to the resulting Order to address the concerns for enlargement.

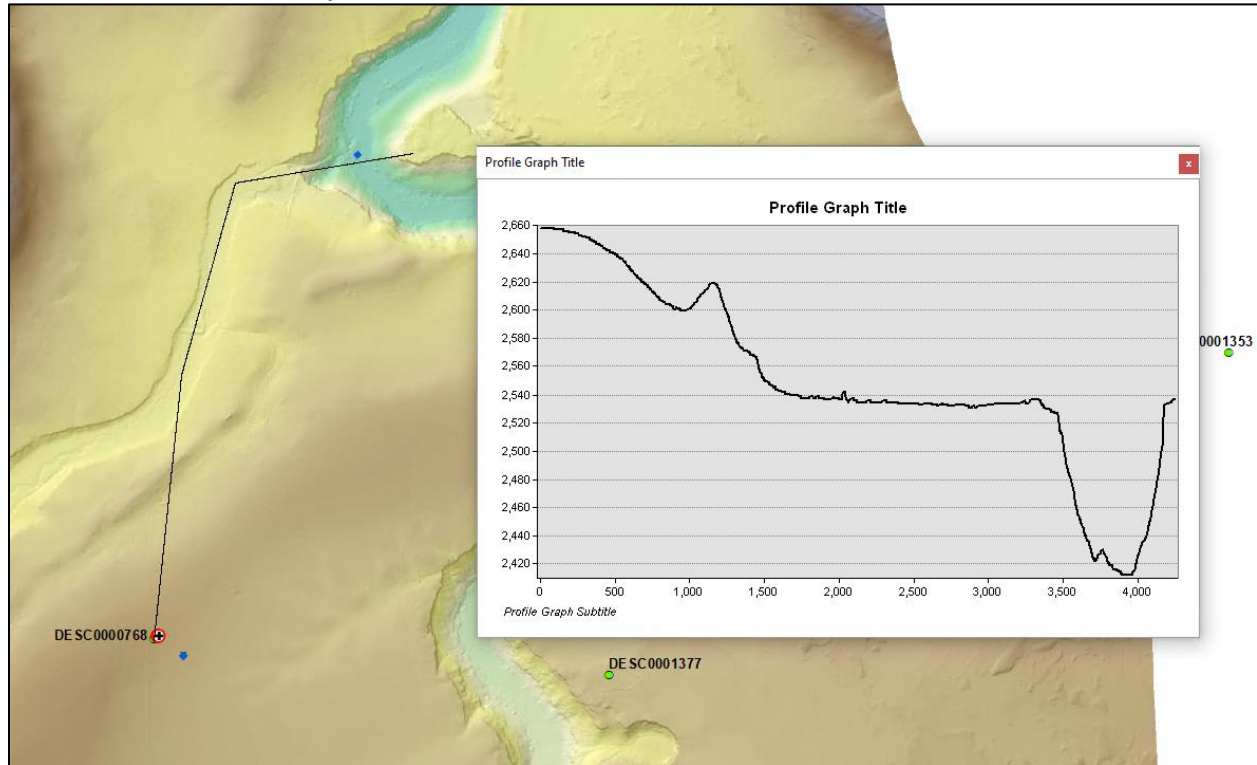
8. Any additional comments: The proposed change would move the point of appropriation from a spring discharging in the McKenzie Canyon to an aquifer system that may be intersecting both local and regional flowpaths. Water level data in one of the proposed groundwater PODs (DESC 768) shows a recent water level elevation of 2484 ft AMSL in 2020. The elevation of the spring is likely between 2420 and 2520 (the precise elevation is not available), which would be coincident with water levels in the well. Water levels in DESC 768 and other nearby wells show rates of declines of approx. 0.5 ft per year since the early 2000s but it is unclear if the declines in water levels in the aquifer are manifesting as reduced flow from the current spring POD, which would be expected if the spring was discharging from the same aquifer the wells were producing from. If the springs are not discharging from the same local aquifer zones as the proposed groundwater wells, then the groundwater wells would be producing from the regional aquifer system and intersecting flowpaths which discharge substantially at springs much farther to the north near the confluence of the Deschutes and Crooked Rivers. At the time of this review, however, there is not sufficient evidence that the groundwater wells are not producing from the same aquifer that the springs are discharging from and so the finding in Item 5 above appropriate.

Photograph of Cert. 76372 spring source taken by OWRD Watermaster (around July 13, 2021)

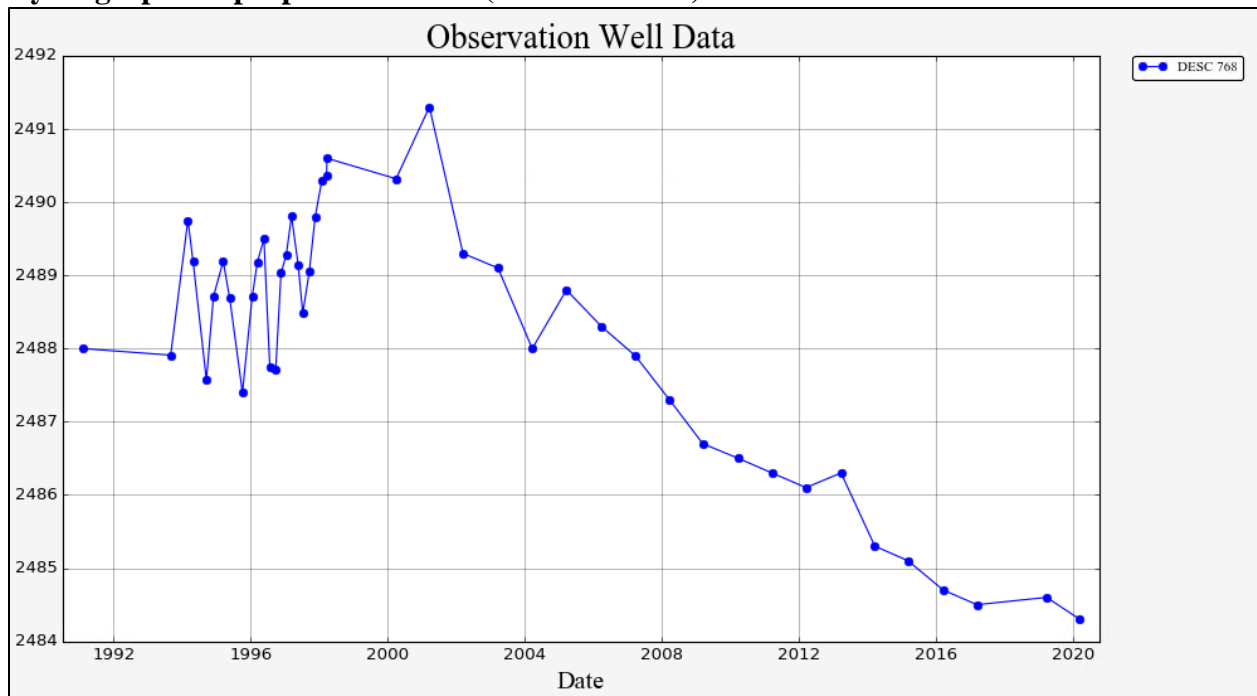


[illegible]

Lidar elevation map showing topographic profile from proposed POD #4 (DESC0000768) down to McKenzie Canyon and across the Deschutes River



Hydrograph for proposed POD #4 (DESC0000768)



Hydrograph of wells in the area