

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14516

GW Reviewer Grayson Fish Date Review Completed: 11/8/2024

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-14516

Applicant Name: Daniel & Leanne Miles

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

Reviewer(s): Grayson Fish

Date of Review: 11/8/2024

Date Returned to WRSD: 11/8/2024

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: The applicant proposes to transfer 31.9 acres of POU from POAs authorized under Certificates 96628 and 52643 to a new POU and POA Well 7 (LAKE 887) located ~2.5 miles to the southeast. The authorized and proposed wells are located ~11.5 miles west of Christmas Valley and are within the Fort Rock Classified are.

Note: the location of wells 1, 3, and 4 appear to be miscorrelated in the application based on location information provided on the well logs. The below table indicates how well logs are correlated in the application, and what appears to be the correct correlation:

<u>POA #</u>	<u>Well Log Correlated in Application</u>	<u>Updated Well Log Correlation</u>
Well 1	LAKE 755	LAKE 757/LAKE 758
Well 2	LAKE 756	LAKE 756 (no change)
Well 3	LAKE 774	LAKE 768
Well 4	LAKE 768	LAKE 774
Well 7	LAKE 887	LAKE 887 (no change)

This review's findings assume that the updated well log correlations are accurate.

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
 Yes No Comments: Groundwater in the Fort Rock Valley-Christmas Valley area (Fort Rock Classified Area) is identified as a single groundwater system. Groundwater is found in both a shallower predominantly basin-fill sediment unit and a deeper predominantly volcanic rocks and sediments unit below. The predominantly basin fill sediment unit and the predominantly volcanic rocks and sediment unit both readily yield groundwater, and the two units are hydraulically connected.

Miller (1986) describes the groundwater source as the main groundwater reservoir. That reservoir includes groundwater in different geologic units. The reservoir has three characteristics. First, the "natural" groundwater level changes less than 1.5 feet annually, indicating the system is highly modulated. Second, the 1980s potentiometric surface was approximately 4292 feet elevation amsl basin-wide with Silver Lake an exception. Third, the reservoir consists of numerous water producing zones in several formations, all having an essentially common potentiometric level, and all being very transmissive in general.

The authorized wells produce groundwater from water bearing zones within the predominantly basin-fill sediment and/or the underlying predominantly volcanic rocks and sediment unit of the main groundwater reservoir. The proposed well will also produce groundwater from water bearing zones within the main groundwater reservoir.

3. a) Is the existing authorized POA subject to a water level decline condition?
 Yes No Comments: Certificates 96628 and 52643 do not contain water level decline conditions.
- 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: One source developed.
- 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.): N/A
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: Proposed POA LAKE 887 will move pumping closer to existing well LAKE 886 on Certificate 52878. The reduced distance between the proposed POA LAKE 887 and existing well LAKE 886 is likely to result in an increase in interference when compared to what would be occurring due to pumping at the original POAs.
- 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 nearest authorized POA to Proposed POA LAKE 887 is LAKE 886 under Certificate 52878 which is located ~2,600 feet to the west. The potential increase in drawdown was calculated using the Theis equation (see attachments). The values used for the calculation are conservative and appropriate until better values become available. The calculation used an intermediate storage coefficient (0.001). The transmissivity used in the calculation (15,000 ft²/day) is from Morgan (1988) and McFarland and Ryals (1991). At the maximum allowed pumping rate on all water rights authorized on LAKE 887 (1.55 cfs), the results indicate a drawdown of ~5 feet, which would not meet the standard of “substantial or undue interference”.

The long-term impact on the groundwater system should be the same. That impact is to continue contributing to the ongoing annual Fort Rock Classified area groundwater level decline.

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 POA LAKE 887 is closer to Silver Lake than the authorized POAs. The reduced intervening distance between the proposed POA and Silver Lake would likely result in an increase in interference with that surface water source.

- 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: Silver Lake

Minimal Significant

Stream: _____

Minimal Significant

Provide context for minimal/significant impact: Proposed POA LAKE 887 is located ~7.5 miles north of Silver Lake. While this is a reduction of distance when compared to the authorized POAs (~8.5 miles north), any increase in interference is expected to be minimal at that distance.

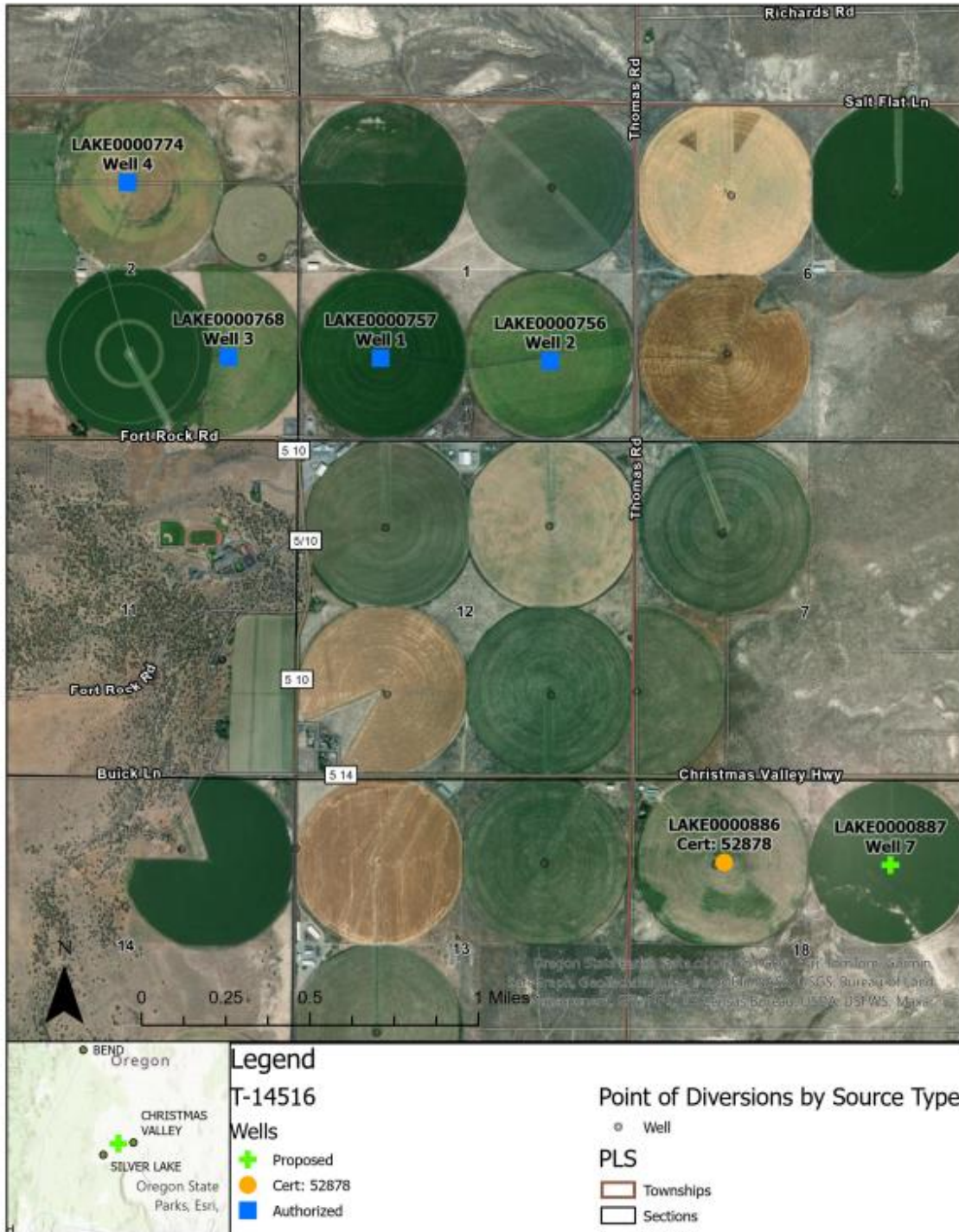
7. For SW-GW transfers, will the proposed change in point of diversion affect the surface water source similarly (as per OAR 690-380-2130) to the authorized point of diversion specified in the water use subject to transfer?

Yes No Comments: N/A

8. What conditions or other changes in the application are necessary to address any potential issues identified above: None.

9. Any additional comments: Locations/correlations of POAs should be confirmed/corrected.

T-14516



Thisis Time-Drawdown Workshee v.5.00

Calculates Thisis nonequilibrium drawdown and recovery at any arbitrary radial distance, r, from a pumping well for 3 different T values and radial distance, r, from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		245		d	
Radial distance from pumped well:	r		2600		ft	Q conversions
Pumping rate	Q		1.55		cfs	695.64 gpm
Hydraulic conductivity	K	150	150	150	ft/day	1.55 cfs
Aquifer thickness	b		100		ft	93.00 cfm
Storativity	S_1		0.001			133,920.00 cfd
	S_2		0.001			3.07 af/d
Transmissivity Conversions	T_ftpd	15000	15000	15000	ft ² /day	
	T_ft2pm	10.416667	10.416667	10.416667	ft ² /min	
	T_gpdft	112200	112200	112200	gpd/ft	

Use the Recalculate button if recalculation is set to manual

