

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14339

GW Reviewer Grayson Fish Date Review Completed: 10/31/2024

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.



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-14339

Applicant Name: Bell A Land and Cattle Co.

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

Reviewer(s): Grayson Fish

Date of Review: 10/31/2024

Returned to WRSD: 10/31/2024

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 make all authorized POAs of certificates 97175, 97176 and 97177 APOAs on each of those certificates as well as add three new yet to be drilled wells as APOAs on each of those certificates. The following table summarizes the proposed changes:

POA#	Well Log ID#	97175	97176	97177	Total proposed max rate under this transfer	Max rate on other rights	Total resulting max rate
1	LAKE 1245	Proposed	Proposed	Authorized	1.46	6.09	7.55
2	LAKE 743	Proposed	Proposed	Authorized	1.57	5.55	7.12
3	LAKE 746	Proposed	Proposed	Authorized	1.58	5.94	7.52
4	LAKE 747	Authorized	Authorized	Authorized	1.49	3.17	4.66
5	LAKE 742	Proposed	Proposed	Authorized	1.49	2.97	4.46
6	LAKE 1317	Proposed	Proposed	Proposed	1.99	1.47	3.46
7	UNBUILT 1	Proposed	Proposed	Proposed	1.99	--	1.99
8	UNBUILT 2	Proposed	Proposed	Proposed	1.99	--	1.99
9	UNBUILT 3	Proposed	Proposed	Proposed	1.99	--	1.99

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 existing authorized wells LAKE 746, LAKE 743, LAKE 1317, LAKE 1245, LAKE 742 and LAKE 747 are completed to 230 to 428 feet below land surface. Each well appears to access water from volcanic units (Basalt, cinders, black sand) at depth. Water level elevations from the existing POA are within ~6 feet of each other, suggesting the same water bearing units are being accessed (attached). The proposed construction of the unbuilt wells, POA 7-9, is likely to access water from the volcanic units at depth. The proposed seal depth of 150 feet below land surface may or may not be adequate based on subsurface conditions encountered. Wells constructed for proposed POA 7-9 should be constructed in accordance with current well construction standards.

3. a) Is the existing authorized POA subject to a water level decline condition?

☐ Yes ☒ No Comments: Certificates 97175, 97176 and 97177 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:

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: All existing wells on these certificates are closer to existing wells on other water rights than the unbuilt POA 7-9. However, increasing the maximum pumping rate allowed on existing wells is likely to result increased interference with nearby existing groundwater rights.

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 POA closest to other nearby water rights is LAKE 747 which is approximately 1,150 feet from the POA associated with certificate 66477. If this transfer is approved, the maximum pumping rate allowed under all water rights on LAKE 747 would be 4.66 cfs.

The potential drawdown was calculated using the Theis equation (attached). 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 (4.66 cfs), the results indicate a drawdown of ~18 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 APOA are not located significantly closer to surface water sources than the currently authorized wells. The currently authorized wells are already near surface water. The overall interference with surface water would be expected to remain the same if this transfer were approved.

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: _____

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: _____

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

9. Any additional comments: None

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