

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14848

GW Reviewer Byron Ebner Date Review Completed: 4/28/2026

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-14848

Applicant Name: Buck Church/Church Hay Farm Inc

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

Reviewer(s): Byron Ebner

Date of Review: 4/20/2026

Date Reviewed by Basin Hydrogeologist and Returned to WRSD: GCF 4/28/2026

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 97742

Water rights were purchased and proposed transfer will move POUs to complete 3 full circle pivots (22.1 acres in T28S/16E-S01, 20.6 acres in T27S/16E-S25, 10.8 acres in T27S/17E-S31).

Applicant is proposing to replace POA 1 with POA 8, POA 2 with POA 7, and add POA 5 as an APOA. A summary of POAs are listed in the table below.

Well county	Well number	POA Number	Authorized	Proposed
LAKE	1125	1	X	
LAKE	3105	2	X	
LAKE	1369	7		X
LAKE	50380	8		X
LAKE	51631	5		X

The max rate associated with POAs 1 and 2 is 0.67 CFS. Certificate 97742 states that use “shall not exceed 0.67 cubic foot per second from well 2 with any deficiency in the available supply from well 2 to be made up by appropriation from well 1.”

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: Groundwater in the Fort Rock/Christmas Valley area, also referred to as the Fort Rock Classified Area, is viewed as a single flow system. Groundwater is found in both the overlying basin fill sediment as well as the underlying unit, which is predominantly volcanic rock, and occurs in "confined, unconfined and perched conditions that reflect local variations in permeability of overlying rocks" (Miller, 1986). Miller (1986) also notes that groundwater in the Fort Rock Basin consists of "numerous water producing zones in several formations" that generally have common potentiometric level and are very transmissive. These units are all capable of yielding groundwater and are viewed as hydraulically connected to one another.
3. a) Is the existing authorized POA subject to a water level decline condition?
☐ Yes ☒ No Comments: Certificate 97742 does not contain 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: _____
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.): _____
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: The proposed POAs are moving closer to the POAs for Cert 65575 (LAKE 1076 and LAKE 922). The original authorized well, LAKE 3102, is 63,000 ft from LAKE 1076 and is 67,500 ft from LAKE 922. This reduced distance should result in an increase in interference with the POAs for Certificate 65575. The table below shows the distance of each proposed POA to LAKE 922 as well as the estimated rate in CFS.

Well county	Well number	POA Number	Distance from LAKE 922 (ft)	Estimated rate (CFS)
LAKE	51631	5	5150	0.25798
LAKE	1369	7	4650	0.27677
LAKE	50380	8	4000	0.13525

Since LAKE 922 has a larger max rate of 6.41 CFS, it will be used in the drawdown analysis in the following section.

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: A Theis drawdown analysis was performed for this proposed change in POA using an intermediate storage coefficient of 0.001, transmissivity estimate of 15,000 ft²/day from McFarland and Ryals (1991), a combined maximum pumping rate of 0.67 CFS for a duration of 365 days from the proposed POAs, and maximum pumping rates of 1.67 and 6.41 CFS for a duration of 245 days from LAKE 1076 and LAKE 922, respectively. Using these parameters, the estimated increase in drawdown on LAKE 922 from the proposed POAs is 1.55 ft for a max drawdown of 73.62 ft. Recent measurements from a nearby observation well, LAKE 874, suggest that water levels in the area have declined and are responsive to pumping from nearby wells. However, the rate associated with this transfer is much lower than the rate of the affected nearby wells and the increase in drawdown would not meet the standard of "substantial or undue interference" as the wells associated with Certificate 65575 have enough depth to withstand estimated drawdown using conservative parameters. Screenshots of the Theis drawdown analysis and referenced hydrograph are included as attachments at the end of the review.

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: Proposed POAs are moving closer to Paulina Marsh. This reduced distance may result in an increase in interference.

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: Paulina Marsh

☒ Minimal ☐ Significant

Stream: _____

☐ Minimal ☐ Significant

Provide context for minimal/significant impact: Proposed POA (LAKE 1369) that is moving closest to Paulina Marsh will be approximately 9.3 miles from the marsh compared to 22.2 miles for the original authorized POA. Due to the large distance between Paulina Marsh and the proposed POA, any increase in interference should be minimal.

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: _____

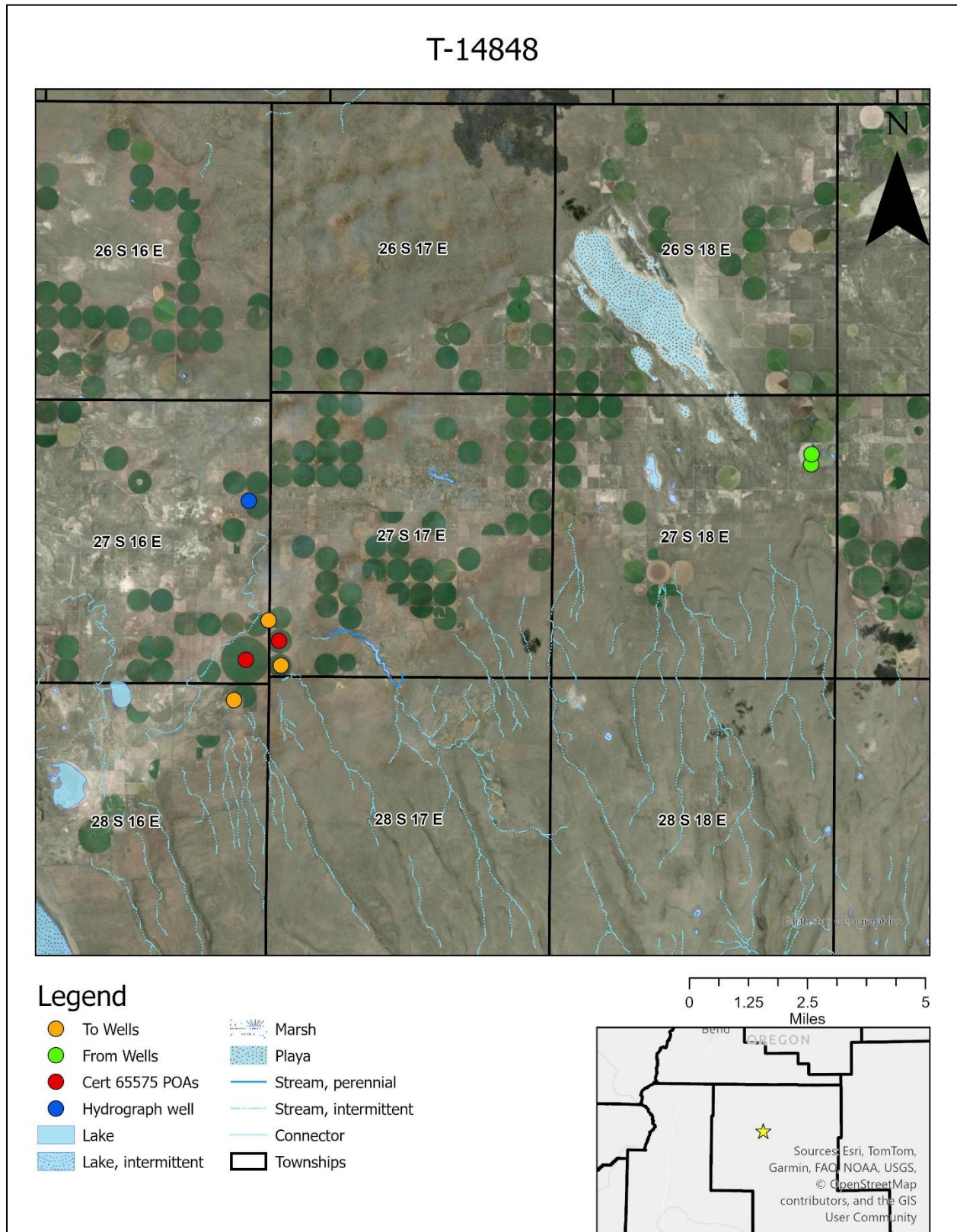
9. Any additional comments: _____

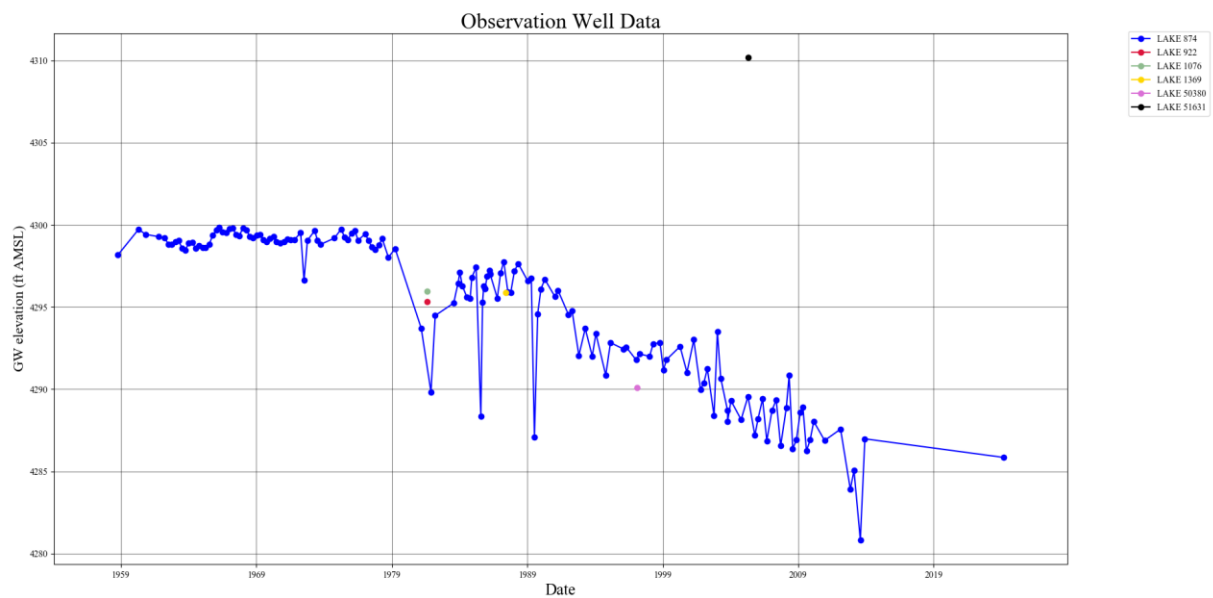
References:**Application File: T-14848**

McFarland, W. D., & Ryals, G. N. (1991). Adequacy of available hydrogeologic data for evaluation of declining ground-water levels in the Fort Rock Basin, south-central Oregon. In *Water-Resources Investigations Report* (USGS Numbered Series Nos. 89–4057; Water-Resources Investigations Report, p. 47). U.S. Geological Survey ; Books and Open-File Reports Section [distributor],. GW Library (B4). <https://doi.org/10.3133/wri894057>

Miller, D. W. (1986). *Ground Water Conditions in the Fort Rock Basin, Northern Lake County, Oregon* (No. 31; Ground Water Report, p. 196). Oregon Water Resources Department. GW Library (A3).

Theis, C.V., 1941, The effect of a well on the flow of a nearby stream: Am. Geophys.

Application Map:

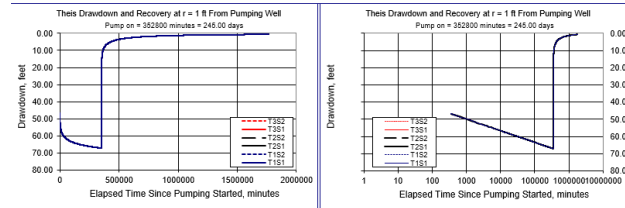
Hydrograph:

Hydrograph showing water levels from proposed POAS, POAs from Certificate 65575, and nearby observation well (LAKE 874)

Theis Drawdown Estimates for LAKE 922:

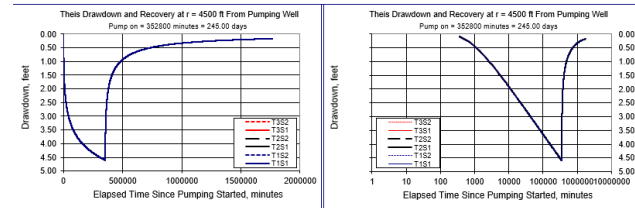
Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units
Total pumping time	t		245		d
Radial distance from pumped well	r		1		ft
Pumping rate	Q		6.41		dfs
Hydraulic conductivity	K	150	150	150	ft/day
Aquifer thickness	b		100		ft
Storativity	S	1	0.001		
	S-2		0.001		
Transmissivity Conversions	T	15000	15000	15000	ft ² /day
	T-2pm	10.41667	10.41667	10.41667	ft ² /min
	T-gpdft	112200	112200	112200	gpd/ft

Use the Recalculate button if recalculation is set to manual



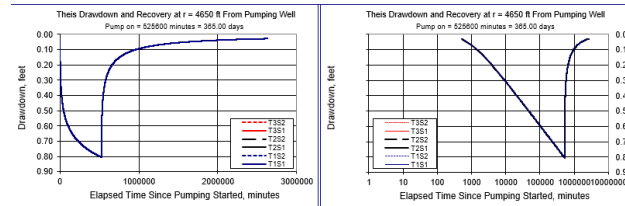
Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units
Total pumping time	t		245		d
Radial distance from pumped well	r		4500		ft
Pumping rate	Q		1.67		dfs
Hydraulic conductivity	K	150	150	150	ft/day
Aquifer thickness	b		100		ft
Storativity	S	1	0.001		
	S-2		0.001		
Transmissivity Conversions	T	15000	15000	15000	ft ² /day
	T-2pm	10.41667	10.41667	10.41667	ft ² /min
	T-gpdft	112200	112200	112200	gpd/ft

Use the Recalculate button if recalculation is set to manual

**Estimated drawdown from pumping of Certificate 65575 POAs**

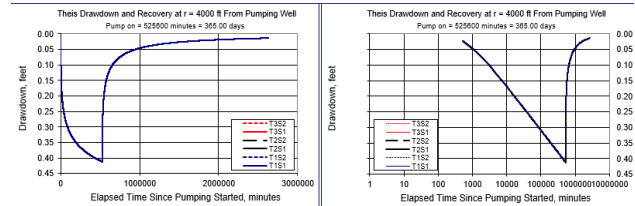
Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units
Total pumping time	t		365		d
Radial distance from pumped well	r		4650		ft
Pumping rate	Q		0.21677		dfs
Hydraulic conductivity	K	150	150	150	ft/day
Aquifer thickness	b		100		ft
Storativity	S	1	0.001		
	S-2		0.001		
Transmissivity Conversions	T	15000	15000	15000	ft ² /day
	T-2pm	10.41667	10.41667	10.41667	ft ² /min
	T-gpdft	112200	112200	112200	gpd/ft

Use the Recalculate button if recalculation is set to manual



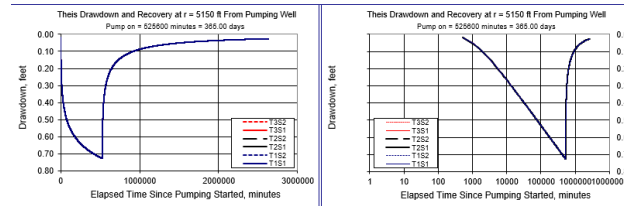
Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units
Total pumping time	t		365		d
Radial distance from pumped well	r		4000		ft
Pumping rate	Q		0.13525		dfs
Hydraulic conductivity	K	150	150	150	ft/day
Aquifer thickness	b		100		ft
Storativity	S	1	0.001		
	S-2		0.001		
Transmissivity Conversions	T	15000	15000	15000	ft ² /day
	T-2pm	10.41667	10.41667	10.41667	ft ² /min
	T-gpdft	112200	112200	112200	gpd/ft

Use the Recalculate button if recalculation is set to manual



Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units
Total pumping time	t		365		d
Radial distance from pumped well	r		5150		ft
Pumping rate	Q		0.25798		dfs
Hydraulic conductivity	K	150	150	150	ft/day
Aquifer thickness	b		100		ft
Storativity	S	1	0.001		
	S-2		0.001		
Transmissivity Conversions	T	15000	15000	15000	ft ² /day
	T-2pm	10.41667	10.41667	10.41667	ft ² /min
	T-gpdft	112200	112200	112200	gpd/ft

Use the Recalculate button if recalculation is set to manual

**Estimated drawdown from pumping of T-14848 proposed POAS**