

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14101

GW Reviewer Jen Woody Date Review Completed: 8/8/2023

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.



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Ground Water Review Form:

- ☐ Water Right Transfer
☐ Permit Amendment
☒ GR Modification
☐ Other

Application: T-14101

Applicant Name: Andrews Holdings, LLC

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

Reviewer(s): Jen Woody

Date of Review: 8/8/2023

Date Reviewed by GW Mgr. and Returned to WRSD: JTL6/4/25

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 application for T-14101 proposes to change GR-1598/Cert GR-1549 by replacing an older, 48 foot well (UMAT 4996) with a new 265' well. The old well has reportedly caved in and will be properly abandoned. A new 370' well was completed at this location on January 18, 2023 for Andrews Holdings LLC: UMAT 59017. This review assumes UMAT 59017 is the proposed replacement point of appropriation (POA). The transfer application also ties UMAT 4996 to the POA for GR-1597, and states that UMAT 4996 and UMAT 4987 are the same well. However, these 2 logs report different locations and are tied to GR certificates with different POA locations, so this review is not assuming UMAT 4996 and 4987 are the same well.

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: Both wells develop a sedimentary aquifer consisting of sand, gravel and clay. In this particular area, a thin layer (10s of feet thick) of coarse sediments (gravel and cobbles) overlies approximately 250 feet of saturated consolidated sand, gravel and clay. These coarse-grained consolidated sediments generally provide water to wells in this area on the order of 100 gpm. Beneath the coarse-grained consolidated sediments lies approximately 100 feet of fine-grained consolidated sediments, reported as grey or blue clay on well logs. Below the sedimentary package lies the Columbia River Basalt Group. The new well (UMAT 59017) is approximately 340 feet deeper than the approved POA and extends into clay from approximately 270-370 feet below land surface. However, the clay underlying the consolidated coarse-grained sediments does not represent a different aquifer. Wells in this area rarely report increased yield from the fine-grained consolidated sediments and there is not a marked head change between these layers.
3. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
☐ Yes ☒ No see comments in Section 2.
- 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
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 replacement well is located approximately 600 feet north of the authorized POA. This will change well-to-well interference with UMAT 5552, decreasing the distance between the authorized POA and UMAT 5552 from 600 feet to 300 feet.
- 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: As shown in Figure 2, drawdown increases approximately 0.2 feet after 180 days of pumping, when the distance between wells decreases from 600 to 300 feet. Aquifer parameters are from a multi-well pumping test by Petrides (2012). This degree of interference will not prevent other groundwater users from accessing groundwater.
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 distance to the nearest surface water will increase by 600 feet at the proposed POA. Therefore, no increase in stream depletion is expected.
- 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: N/A
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: N/A

7. What conditions or other changes in the application are necessary to address any potential issues identified above: none.
8. Any additional comments: none.

References

Barlow, Paul M. and Leake, Stanley A., 2012, Streamflow depletion by Wells- Understanding and managing the effects of groundwater pumping on streamflow, U.S. Geological Survey Circular 1376, 84 p.

Hunt, Bruce, 1999, Unsteady stream depletion from groundwater pumping: Ground Water, v. 37. No. 1. P. 98-102.

Newcomb, R.C., 1965, Geology and Groundwater Resources of the Walla Walla River Basin Washington-Oregon, State of Washington Water Supply Bulletin No. 21, 165 p.

Petrides, Aristides Crisostomos Jimenez, 2012, PhD Dissertation: managed Artificial Aquifer Recharge and Hydrological Studies in the Walla Walla Basin to Improve River and Aquifer Conditions, OSU.

Theis, C.V., 1940, The source of water derived from wells- essential factors controlling the response of an aquifer to development: Civil Engineering, V. 10, no. 5, p. 277-280.

OWRD Groundwater Information System, accessed 8/7/2023.

Figure 1. Well location Map

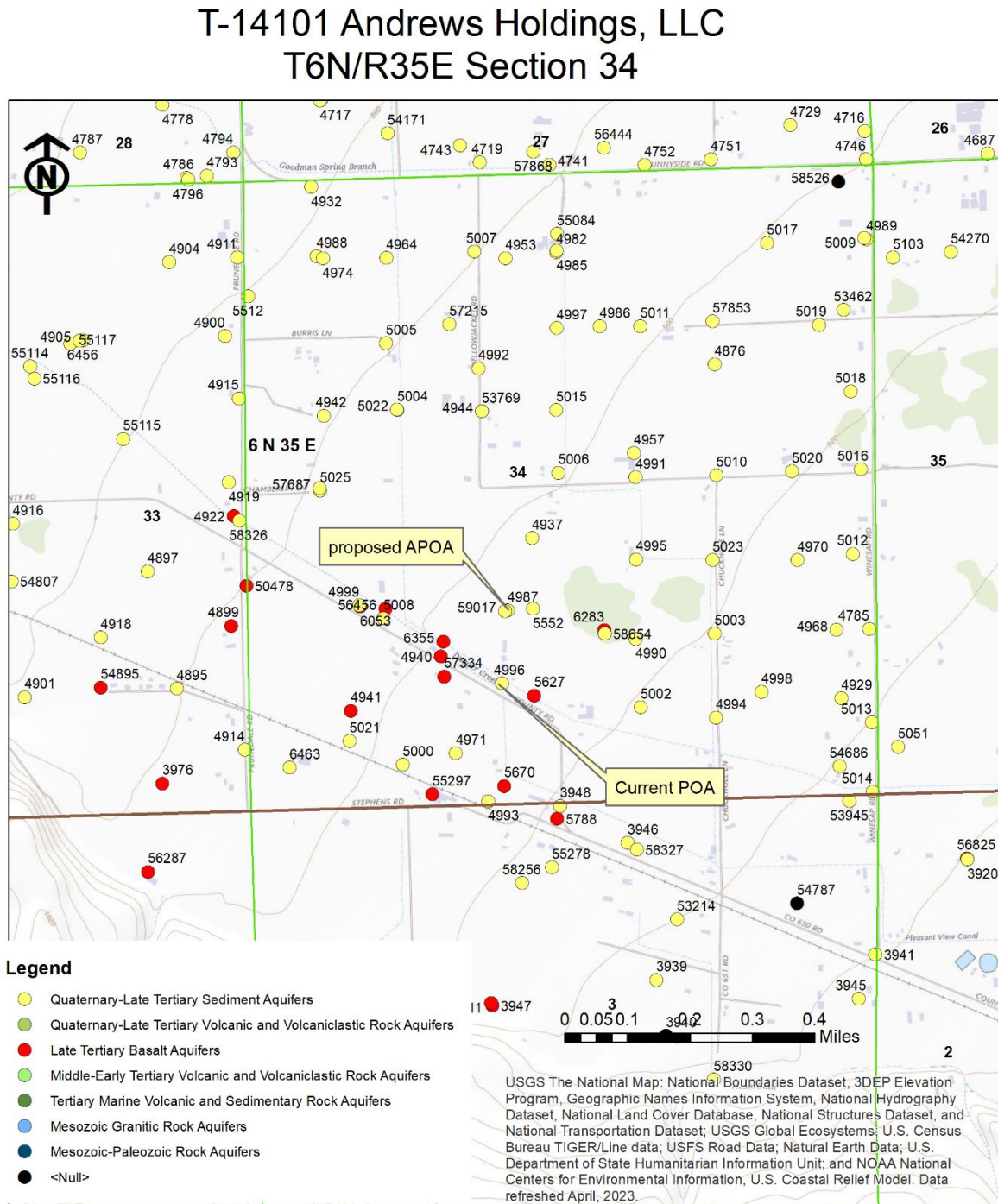
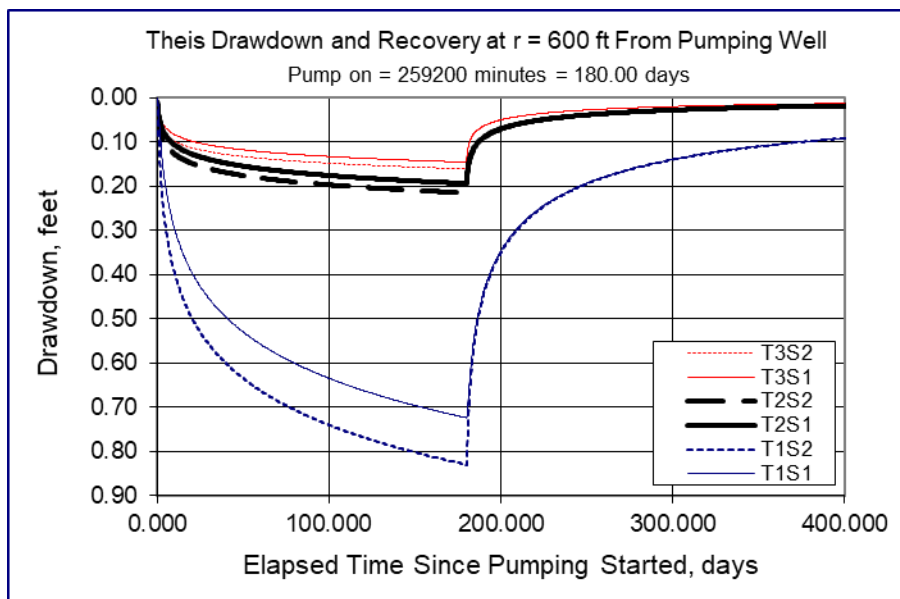
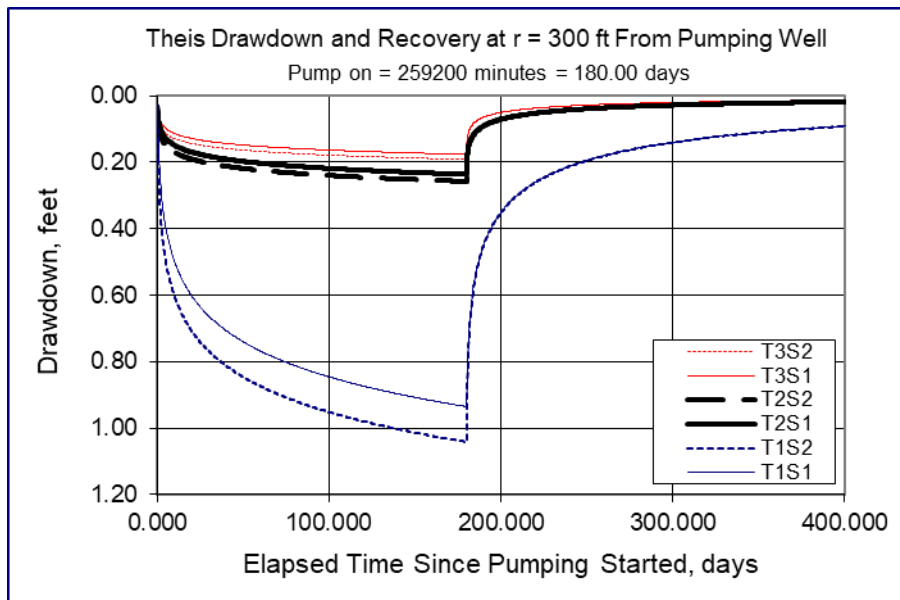


Figure 2. Well to well interference estimates

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units
Total pumping time	t		180		d
Radial distance from pumped well:	r		300		ft
Pumping rate	Q		100		gpm
Hydraulic conductivity	K	100	500	700	ft/day
Aquifer thickness	b		100		ft
Storativity	S_1		0.1		
	S_2		0.05		
Transmissivity Conversions	T_f2pd	10000	50000	70000	ft ² /day
	T_ft2pm	6.94444444	34.7222222	48.6111111	ft ² /min
	T_gpdft	74800	374000	523600	gpd/ft