Groundwater Transfer Review Summary Form

Transfer/PA # T- 14395

GW Reviewer _Aaron Orr / Travis Brown_ Date Review Completed: _11/5/2024_

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-14395 Applicant Name: Westwood Farms

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

Reviewer(s): Aaron Orr / Travis Brown Date of Review: 11/5/2024

Date Returned to WRSD: 11/5/2024

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 _____

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1. Basic description of the changes proposed in this transfer: Applicant proposes to add an additional point of appropriation (APOA) to Certificate 35374. The authorized POA is **MARI 2932**.The proposed APOA is **MARI 4811**. Applicant proposes 36.7 acres of the 50.0 acres be transferred from the authorized POA to the APOA. The total appropriation, limited to 1/80 CFS per acre for irrigation, equals a transferrable rate of 0.46 CFS. The proposed APOA (MARI 4811) is also the sole requested POA for Application G-19414, which would authorize Irrigation of 37.79 acres which do not overlap the subject acreage of this transfer. Under the proposed change to Cert 35374 and the requested use per Application G-19414, the maximum combined rate for the proposed APOA (MARI 4811) would be 0.93 cfs and the maximum combined duty would be 186.225 af/yr.

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
   ☒ Yes ☐ No Comments: The proposed APOA will source water from the same aquifer as the authorized POA (Willamette Aquifer, Upper Sedimentary Unit)

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.): 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 proposed APOA (MARI 4811) is ~2,000 ft from neighboring well MARI 4814 (POA on GR-459), which is ~1,250 ft closer to MARI 4814 than is the authorized POA (MARI 2932). The closer proximity of the APOA will likely increase interference with MARI 4814.

   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: Under the proposed change, the APOA could be pumped at a maximum combined rate of 0.93 cfs (under both Cert 35374 and App G-19414) so long as the authorized POA is not simultaneously pumping more than 0.17 CFS (~75 gpm). The closest water well with a water right not owned by the applicant is MARI 4814, 2,000 feet from the APOA. Modeling with conservative hydraulic parameters indicates drawdown at MARI 4814 would likely be less than 3.85 feet while simultaneously pumping the APOA and the authorized POA at the proposed rates. Given the thickness, high transmissivity, and high storativity of the Willamette Aquifer in this area, the anticipated interference is not likely to cause injury to MARI 4814 or similarly-located neighboring water rights.

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: No significant increase in interference with another surface water source 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:

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: N/A

8. Any additional comments: Certificate 35374 does not have any permit decline conditions.

References

Conlon, T.D., Wozniak, K.C., Woodcock, D., Herrera, N.B., Fisher, B.J., Morgan, D.S., Lee, K.K., and Hinkle, S.R., 2005, Ground-water hydrology of the Willamette Basin, Oregon, Scientific Investigations Report 2005-5168: U. S. Geological Survey, Reston, VA.

McFarland, W.D., and D.S. Morgan, 1996, "Description of the Ground-Water Flow System in the Portland Basin, Oregon and Washington." USGS Numbered Series. *Description of the Ground-Water Flow System in the Portland Basin, Oregon and Washington*. Water Supply

Paper. Washington D.C.: U. S. Geological Survey, 1996. B3. GW Library. https://doi.org/10.3133/wsp2470A.

Woodward, D.G., Gannett, M.W., and Vaccaro, J.J., 1998, Hydrogeologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-B, 82 p.

Well Location Map

Theis Interference Analysis

Hydraulic Conductivity: Values ranged from 140 ft/day (McFarland and Morgan, 1996) to 600 ft/day (Woodward et al., 1998). The final transmissivity estimates of 4,740 **(T1)**, 9,090 **(T2)**, and 13,950 **(T3)** ft^2/day were the 1st, 2nd, and 3rd quartiles from 200-model runs using a range of the previously stated hydraulic conductivity values.

Storativity: 0.0003 to 0.03 (McFarland and Morgan, 1996; Conlon et al., 2005, Table 1). The final storativity estimates of 0.051 **(S1)** and 0.15 **(S2)** are the 1st and 3rd quartiles from 200-model runs using a range of the previously stated storativity values.

Time: 245 days (Irrigation Season).

Rate: (1) 0.93 cfs (maximum combined rate) for the APOA (MARI 4811), **(2)** 0.17 cfs (remaining rate) for the authorized POA (MARI 2932).

Distance: (1) 2,000 feet from the APOA (MARI 4811) to MARI 4184; **(2)** 3,750 feet from the authorized POA (MARI 2932) to MARI 4184.

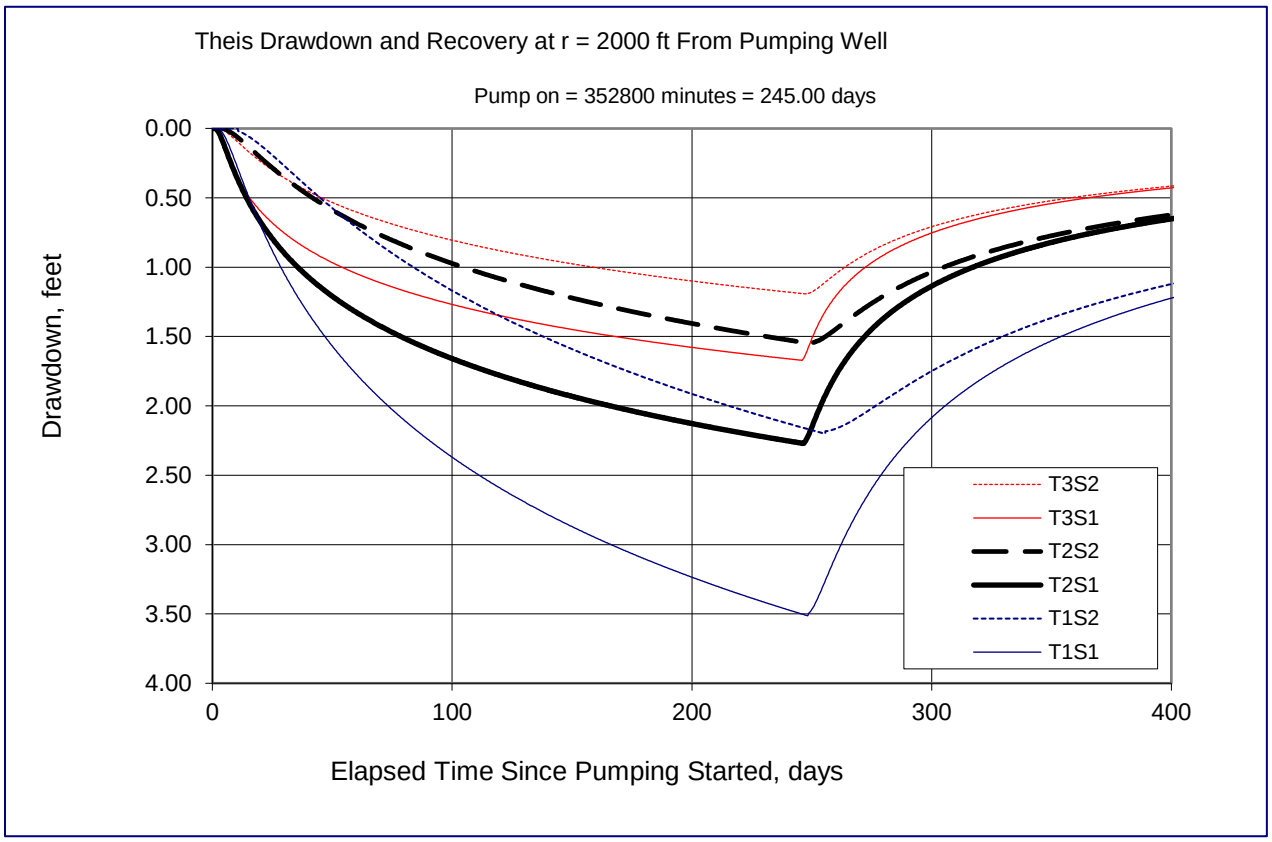

Figure 1. Estimated time-drawdown with the To-POA pumping at the maximum combined rate of 0.93 CFS

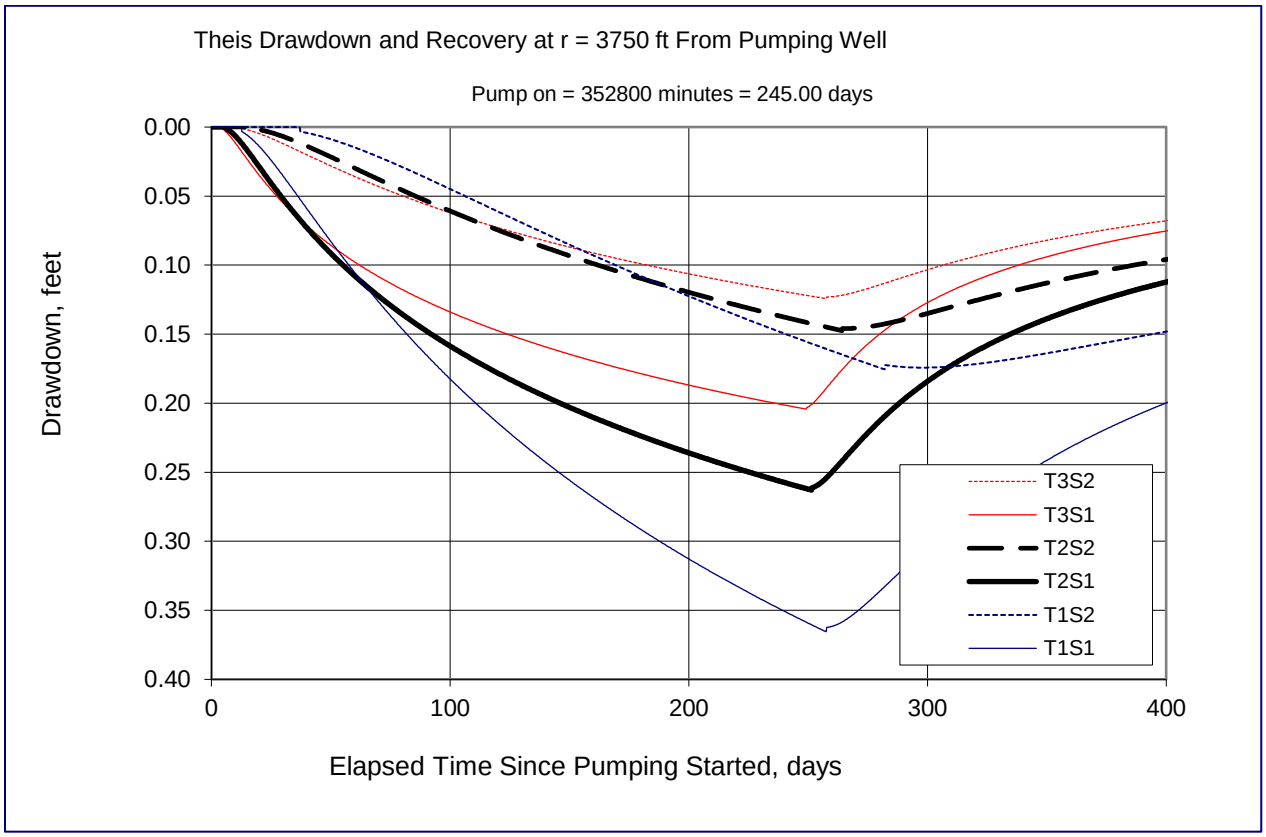

Figure 2. Estimated time-drawdown with the From-POA pumping at the proposed rate of 0.17 CFS