

# Groundwater Transfer Review Summary Form

Transfer/PA # T- 14106

GW Reviewer Grayson Fish Date Review Completed: 10/2/2023

## 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-14106      Applicant Name: Fred Ronald Barnes and Dawn Catherine Barnes

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

Reviewer(s): Grayson Fish

Date of Review: 10/2/2023

Date Reviewed by GW Mgr. and Returned to WRSD: \_\_\_\_\_

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 \_\_\_\_\_

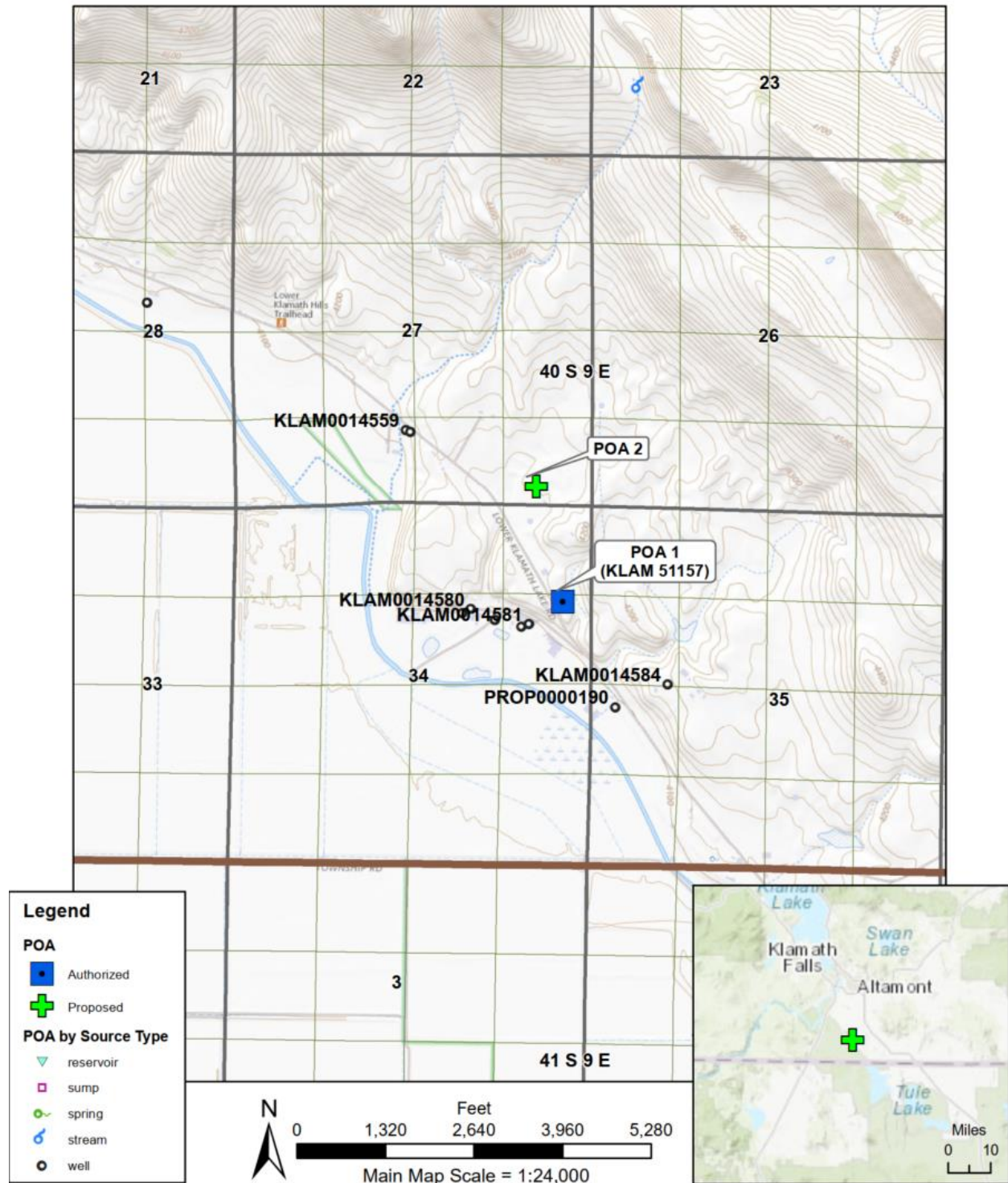
1. Basic description of the changes proposed in this transfer: The applicant proposes to add an additional point of appropriation **POA 2** under **Certificate 96379**. Water is currently appropriated from **POA 1 (KLAM 51157)** for industrial (aquaculture and geothermal heating) use.
2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?  
☐ Yes    ☒ **No**    Comments: The proposed APOA **POA 2** is located approximately 1700 feet to the north of authorized **POA 1**. The construction of **POA 1** as documented on well report **KLAM 51157** indicates a total depth of 360 feet below land surface (bls) and a seal depth to 200 feet bls. The well report lists that two water bearing zones were encountered: (1) 82 to 92 feet bls with a SWL of 55 feet bls and (2) 312 to 360 feet bls with a static water level of 83 feet bls. The well report indicates that the shallow water encountered at 82 feet bls was "cold" and not suitable for the intended use. The temperature of water sourced from the deeper water bearing zone was listed as 184 degrees Fahrenheit. Only the deeper water bearing unit between 312 to 360 feet bls is developed by **POA 1**.

The proposed construction for **POA 2** is 360 feet total depth and a seal to 38 feet bls. This proposed seal depth could leave the well open to the colder, shallow water bearing unit and allow for comingling of deeper, hotter water and, therefore, would not develop the same (single) source as authorized **POA 1**. See section 7 of this review form for recommend conditions and changes.

3. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?  
☐ Yes ☒ No Authorized **POA 1** sources geothermally heated water from the Tertiary aged sedimentary rocks at depths of greater than 300 feet bls.
- 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.): \_\_\_\_\_
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: Proposed APOA POA 2 is approximately 2000 feet from **KLAM 14559** an authorized POA under groundwater permit **G-17708** with a junior priority date of 3/9/2001 compared to the approximately 4000 feet from authorized **POA 1**. The reduced intervening distance from the proposed APOA **POA 2** has the potential to increase interference with **KLAM 14559**.
- 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: Given the relatively high transmissivity and estimated thickness of the volcanic source aquifer, it is unlikely that the increased interference would result in another user not receiving the water to which it is legally entitled. It should be noted that a senior user cannot injure a junior user.
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 proposed APOA is further away from Lower Klamath Lake, the closest expected point of hydraulic connection, than the authorized POA. No increase in interference with a surface water source is likely to occur due to the changes proposed by the applicant.
- 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: The applicant's proposed seal depth should be deep enough to ensure that comingling of colder shallow water and deeper geothermally heated water does not occur. It is recommended that the proposed well be cased and sealed to a minimum depth of 325 feet bls in order to isolate the hydrothermally heated groundwater at depth. It should be noted that the final construction of the proposed POA will need to meet well construction standards per OAR 690-210 and final sealing depth may need to be deeper than the recommended 325 feet below land surface based on conditions observed during drilling.
8. Any additional comments: \_\_\_\_\_

## Transfer Review Map

T-14106



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