

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14413

GW Reviewer Darrick E. Boschmann Date Review Completed: 12/10/2024

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-14413

Applicant Name: Nonnemacher/GH2O Inc

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

Reviewer(s): Darrick E. Boschmann

Date of Review: 12/10/2024

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: _____

This application is related to permit G-16338 which authorizes groundwater pumping from two wells (HARN 295; HARN 50578) for Quasi-Municipal uses in the Malheur Lake Basin. The following changes are proposed:

1. Add one APOA – HARN 296.

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?

☒ Yes ☐ No Comments: _____

Groundwater occurs in multiple hydrostratigraphic units, and groundwater within these units is hydraulically connected, making a single groundwater system composed of multiple hydrostratigraphic units (Gingerich and others, 2022). The authorized and proposed wells develop groundwater occurring in the Silicic lava flows and domes hydrostratigraphic unit.

In general, groundwater in the Harney Basin flows from several upland recharge areas to a common discharge area near Malheur and Harney Lakes, with some apparent discharge to the Malheur Basin through one area along the eastern margin. While the rocks and sediments making up the aquifer system in the Harney Basin do constitute a single groundwater flow system, sub-watersheds within the basin contribute recharge to different parts of the system depending on groundwater flow-paths from recharge to discharge areas. In general, within these sub-watersheds water within the aquifer system is sourced from a common recharge area and can therefore be considered a single source. The currently authorized wells and the proposed well are located in the northwestern part of Harney Valley and are located along groundwater flow paths flowing generally southeastward toward Malheur Lake .

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

☒ Yes ☐ No Comments: _____

Permit G-16338 requires the water user to develop a plan to monitor and report the impact of water user under the permit. The signed monitoring plan (attached below) was received by OWRD 04/18/2016 and stipulates that water levels be monitored at nearby well HARN 296.

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: _____

LOGID	Reference Level	Most Recent SWL	Exceeded?
HARN 296	114.69	*107.95	No
*02/22/2024 SWL			

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.): _____

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 APOA is located approximately 800 feet to the southeast of the nearest currently authorized well. This will result in an incremental increase in interference with wells to the southeast.

- 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: _____

Any increase in interference with existing wells will not meet the standard for substantial or undue interference given the thickness of the aquifer system in the Harney Basin.

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 is located further from the nearest perennial surface water source than the currently authorized wells.

- 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: _____

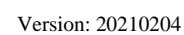
7. For SW-GW transfers, will the proposed change in point of diversion affect the surface water source similarly (as per OAR 690-380-2130) to the authorized point of diversion specified in the water use subject to transfer?

☐ 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: _____

In July 2023 the Department was contacted by the applicant to request the continuous water level recording device be pulled from HARN 296 in anticipation of this application. The equipment was pulled 8/21/2023, and quarterly manual measurements have continued since that time. If this application is approved, the Department will cease monitoring at HARN 296 which will void the current monitoring plan as stipulated in the plan. This will require a new monitoring plan be submitted for approval to the Department. At minimum, the new plan should include annual static water levels be measured in the month of March at HARN 296 and submitted to the Department using the Departments static water level reporting procedure. The reference level for HARN 296 shall remain 114.69 feet below land surface.



Proposed Water Level Measurement & Reporting Plan
Permit G-16338; File G-16928
G H 2 O Inc.

INTRODUCTION

This plan is intended to satisfy a condition for Permit G-16338 (App. G-16928) that requires G H 2 O Inc. to prepare a plan to monitor and report the impact of water use to the Oregon Water Resources Department (OWRD). This plan is drafted by OWRD staff in a cooperative agreement with G H 2 O Inc. Any variation from the plan at any future date shall be subject to the approval of OWRD.

BACKGROUND

The permit authorizes the use of 1.0 cubic foot per second (CFS), being 0.22 CFS from Well 1 (HARN 295) and 0.78 CFS from Well 2 (HARN 50578) for Quasi-Municipal use. The priority date for the permit is 9/17/2007.

- Name: WELL 1 (HARN 295)
T-R-S-QQ: 23.00S-30.00E-14-SE SW
Location Description: 1800 FEET SOUTH AND 1975 FEET EAST FROM W1/4 CORNER, SECTION 14
- Name: WELL 2 (HARN 50578)
T-R-S-QQ: 23.00S-30.00E-14-NW SW
Location Description: 1180 FEET SOUTH AND 40 FEET EAST FROM W1/4 CORNER, SECTION 14

WELL 1 (HARN 295) was completed on 10/15/1965 by Western Drilling Co. The well at ground surface is at an elevation of 4,296 feet above mean sea level (AMSL). The well is completed to a depth of 260 feet below ground surface (BGS), cased to a depth of 260 feet BGS with perforations from 240-260 feet BGS, and is sealed with bentonite to a depth of 20 feet BGS.

WELL 2 (HARN 50578) was completed on 9/18/2000 by Timothy K. Riley. The well at ground surface is at an elevation of 4,515 feet AMSL. The well is completed to a depth of 405 feet BGS, cased to a depth of 59 feet BGS, and is sealed with bentonite to 18 feet BGS.

Both authorized wells were visited by OWRD staff on 5/5/2015 and static water level measurements were attempted at both wells. A static water level measurement was not made at Well 1 (HARN 295) due to an obstruction near the top of the casing. A static water level measurement was not made at Well 2 (HARN 50578) because the pump was running at the time of the site visit, and is reported to be pumping frequently to meet the needs of the quasi-municipal water system.

For the reasons cited above the authorized wells are not suitable to satisfy the requirements of the monitoring plan.

Nearby irrigation well HARN 296, under the same ownership, is authorized for irrigation under certificate 39665. The well is located 0.15 and 0.53 miles from authorized wells 1 and 2, respectively. HARN 296 was completed on 8/9/1967 by Western Drilling Co. The well at ground surface is at an elevation of 4,247 feet AMSL. The well is completed to a depth of 305 feet BGS, cased to a depth of 140 feet, and is sealed with concrete to a depth of 25 feet BGS.

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During the 5/5/2015 site visit a static water level measurement was made at HARN 296, however there was a >5 foot column of turbine oil in the well, making accurate measurements difficult. In its current state HARN 296 is also not a suitable well to satisfy the requirements of the monitoring plan due to the presence of turbine oil in the well. In order for HARN 296 to be suitable for the monitoring plan, oil free static water level measurements are required. To achieve this, the pump will be permanently removed from the well and a dedicated measuring tube installed. The measuring tube will be lowered into the well with a plug in the bottom to a depth well below the oil-water interface. Once the tube is in place the plug will be blown or knocked out to allow for oil-free static water level measurements.

WATER-LEVEL MONITORING PLAN

OWRD will cover the costs of pump removal and measuring tube installation at HARN 296 on the condition that OWRD staff can gain regular access to the well for use as an observation well through the duration of the OWRD Harney Basin Groundwater Study (estimated study end date 12/31/2020).

For the duration of the OWRD Harney Basin Groundwater Study OWRD staff will obtain a static water level measurement at HARN 296 on a quarterly basis. Additionally, through the duration of the study a continuous water level recording device will be installed in the well. These measurements will satisfy the monitoring and reporting condition through this period of time.

Depending on available resources OWRD may wish to continue the use of HARN 296 as an observation well after completion of the Harney Basin Groundwater Study. This option will be discussed with the permit holder upon completion of the study.

At such time that OWRD is unable to continue static water level measurements at HARN 296 OWRD staff will notify the permit holder. At that time a representative of G H 2 O Inc. will be required to fulfill the monitoring requirements of the permit condition. At minimum this will require an oil-free static water level measurement at HARN 296 every year in the month of March.

REFERENCE WATER LEVEL

The reference water level against which any water-level declines will be compared will be the static water level measurement at HARN 296 obtained by OWRD staff on March 3, 2016. This measurement of 114.69 feet below ground surface was obtained with an electric water level indicator accurate to 0.01 feet.

REPORTING

Throughout the duration of the Harney Basin Groundwater Study, and until such time that OWRD is unable to continue monitoring at HARN 296, reporting will be completed by OWRD staff. The minimum anticipated duration of OWRD monitoring is through 12/31/2020.

At such time that OWRD is unable to continue static water level measurements at HARN 296 OWRD staff will notify the permit holder. At that time a representative of G H 2 O Inc. will be required to fulfill the reporting requirements of the permit condition. This will consist of documenting the annual March water level measurement on the OWRD Permit Condition Water-Level Reporting Form. The signed original of the completed form will be mailed to OWRD within 20 days of obtaining the water level measurement.

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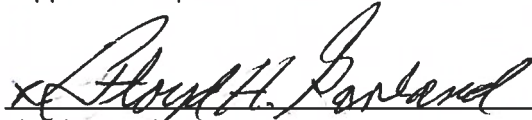
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I approve this plan as outlined above.



Darrick E. Boschmann
Hydrogeologist – Groundwater Section
Oregon Water Resources Department

I approve this plan as outlined above.



Floyd H. Garland
Owner – G H 2 O Inc.

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