

Groundwater Application Review Summary Form

Application # G- 19423

GW Reviewer Phillip I. Marcy Date Review Completed: 07/02/2025

Summary of GW Availability and Injury Review:

☐ Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.

Summary of Potential for Substantial Interference Review:

☐ There is the potential for substantial interference per Section C of the attached review form.

Summary of Well Construction Assessment:

☐ The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).

WATER RESOURCES DEPARTMENT

MEMO

July 2, 2025

TO: Application G- 19423

FROM: GW: Phillip I. Marcy
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

☒ **YES** The source of appropriation is hydraulically connected to a State Scenic
☐ **NO** Waterway or its tributaries

☒ **YES**
☐ **NO** Use the Scenic Waterway Condition (Condition 7J)

☐ Per ORS 390.835, the Groundwater Section is **able** to calculate ground water interference with surface water that contributes to a Scenic Waterway. The calculated interference is distributed below

☒ Per ORS 390.835, the Groundwater Section is **unable** to calculate ground water interference with surface water that contributes to a scenic waterway; **therefore, the Department is unable to find that there is a preponderance of evidence that the proposed use will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway**

DISTRIBUTION OF INTERFERENCE

Calculate the percentage of consumptive use by month and fill in the table below. If interference cannot be calculated, per criteria in 390.835, do not fill in the table but check the "unable" option above, thus informing Water Rights that the Department is unable to make a Preponderance of Evidence finding.

Exercise of this permit is calculated to reduce monthly flows in [Enter] Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section
 FROM: Groundwater Section

Date 07/02/2025

Phillip I. Marcy

Reviewer's Name

SUBJECT: Application G- 19423Supersedes review of 03/15/2024

Date of Review(s)

PUBLIC INTEREST PRESUMPTION; GROUNDWATER

OAR 690-310-130 (1) *The Department shall presume that a proposed groundwater use will ensure the preservation of the public welfare, safety and health as described in ORS 537.525.* Department staff review groundwater applications under OAR 690-310-140 to determine whether the presumption is established. OAR 690-310-140 allows the proposed use be modified or conditioned to meet the presumption criteria. **This review is based upon available information and agency policies in place at the time of evaluation.**

A. GENERAL INFORMATION: Applicant's Name: Shawn Bingaman County: Union

A1. Applicant(s) seek(s) 1.48 cfs from 1 well(s) in the Grande Ronde Basin,
 _____ subbasin

A2. Proposed use Irrigation (135.9 acres) Seasonality: March 1st – October 31st (245 days)

A3. Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under logid):

POA Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	UNIO 52461	1	Alluvium	<u>1.70</u>	1S/39E-3 SE-SE	4545'S, 4798'E fr NW cor S 3
2						
3						
4						

* Alluvium, CRB, Bedrock

POA Well	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Drawdown (ft)	Test Type
1	1036	0-60	0-58.5	0-518, 538-938, 978-998	518-538, 938-978	1200	NA	Air
2								
3								
4								

POA Well	Land Surface Elevation at Well (ft amsl)	Depth of First Water (ft bls)	SWL (ft bls)	SWL Date	Reference Level (ft bls)	Reference Level Date
1	2812.6	448	8	03/28/2023	8	03/28/2023
2						
3						
4						

Use data from application for proposed wells.

A4. **Comments:** The applicant proposes to produce groundwater from existing well UNIO 52461, previously authorized under Permit G-16532 for irrigation of 164.6 acres at a maximum rate of 2.05 CFS. If this application results in a permit, the total authorized maximum rate would climb to 3.75 CFS for primary irrigation of 278.6 acres.

This re-review is being conducted to assess the proposed development with the proposed rate of 1.70 CFS (Well-specific Rate), correcting the previous version of the review which was based on a rate of 1.48 CFS (Total Maximum Rate).

A5. ☒ **Provisions of the** Grande Ronde Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water ☐ **are, or** ☒ **are not**, activated by this application. (Not all basin rules contain such provisions.)

Comments: _____

- A6. ☐ **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
 Name of administrative area: _____
 Comments: _____

B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070

B1. **Based upon available data**, I have determined that groundwater* for the proposed use:

- a. ☐ **is** over appropriated, ☒ **is not** over appropriated, *or* ☐ **cannot be determined to be** over appropriated during any period of the proposed use. * This finding is limited to the groundwater portion of the over-appropriation determination as prescribed in OAR 690-310-130;
- b. ☐ **will not** *or* ☐ **will** likely be available in the amounts requested without injury to prior water rights. * This finding is limited to the groundwater portion of the injury determination as prescribed in OAR 690-310-130;
- c. ☐ **will not** *or* ☐ **will** likely to be available within the capacity of the groundwater resource; *or*
- d. ☒ **will, if properly conditioned**, avoid injury to existing groundwater rights or to the groundwater resource:
- i. ☒ The permit should contain condition #(s) "Large Water Use Reporting";
 - ii. ☐ The permit should be conditioned as indicated in item 2 below.
 - iii. ☒ The permit should contain special condition(s) as indicated in item 3 below;

- B2. a. ☐ **Condition** to allow groundwater production from no deeper than _____ ft. below land surface;
- b. ☐ **Condition** to allow groundwater production from no shallower than _____ ft. below land surface;
- c. ☐ **Condition** to allow groundwater production only from the _____ groundwater reservoir between approximately _____ ft. and _____ ft. below land surface;
- d. ☐ **Well reconstruction** is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Groundwater Section.

Describe injury –as related to water availability– that is likely to occur without well reconstruction (interference w/ senior water rights, not within the capacity of the resource, etc): _____

- B3. **Groundwater availability remarks:** The applicant proposes to produce groundwater from existing well UNIO 52461, previously authorized under Permit G-16532. The review resulting in this permit assumed production from Columbia River Basalt Group and associated high degree of confinement typical of CRBG aquifers. Updated information from the driller's log and geologic mapping (Ferns and Others, 2010) taken together indicate that production in the proposed POA well is primarily from sediments beneath flows of the Powder River Volcanic Field. It is uncertain to what distance the confining volcanic units extend laterally, but considerable confinement is reported on the driller's log, in the form of static water level rising significantly above the level of the productive water-bearing zones, in addition to the elevation of the nearby Grande Ronde River.

Pumping groundwater at the proposed POA is not anticipated to result any notable interference to nearby wells. There are no wells within reasonable distance or producing from the same depth interval as the proposed POA. No indication of a declining water level trend is exhibited by permit condition measurements collected under Permit G-16532.

Special Condition: Due to the relatively unknown character and extent of the proposed aquifer system, further development should be approached with caution. Permit condition measurements currently required under Permit G-16532 are useful for determination of year-upon-year trends, but little is known about seasonal drawdown and recovery that may affect neighboring groundwater users and/or nearby surface water. Therefore, if a permit is issued, the permittee shall be required to grant access to the POA well to OWRD personnel upon reasonable notice to obtain water level measurements in order to better understand the seasonal fluctuations in the target aquifer.

C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040**C1. 690-09-040 (1):** Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	Coarse sediments beneath PRV Volcanics	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: Water levels rise dramatically above the elevation from which groundwater is produced. Though little is known about the subsurface distribution of Powder River Volcanics (PRV), the confinement displayed within the POA well results in static water level well above the level of the water-bearing units and the nearby Grande Ronde River.

C2. 690-09-040 (2) (3): Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Grande Ronde River	2805.6	2666	3100	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: Based upon the head elevation differences observed between the proposed POA and the Grande Ronde River, and the geometry of productive materials buried by lava flows of the PRV, available data predominantly suggests a lack of hydraulic connection within one mile.

Water Availability Basin the well(s) are located within: Grande Ronde R > Snake R – AB Gordon Cr.

C3a. 690-09-040 (4): Evaluation of stream impacts for each well that has been determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water (SW) source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that SW source, not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% *natural* flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked ☒ box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation for all wells determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. **Complete only if Q is distributed among wells.** Otherwise same evaluation and limitations apply as in C3a above.

	SW #		Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: _____

C4a. **690-09-040 (5):** Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

(A) = total interference as CFS; (B) = WAB calculated natural flow at 80% exceed. as CFS; (C) = 1% of calculated natural flow at 80% exceed. as CFS; (D) = highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage.

Basis for impact evaluation: _____

C4b. **690-09-040 (5) (b)** The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.

- C5. ☐ **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or groundwater use under this permit can be regulated if it is found to substantially interfere with surface water:
- ☐ The permit should contain condition #(s) _____;
 - ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** There is limited data available from the subsurface to establish a hydrogeologic framework for the vicinity of the proposed POA. However, geologic mapping indicates that at the location of the POA, the local stratigraphic sequence is dipping roughly westward (Ferns and others, 2010), descending beneath the nearby reach of the Grande Ronde River. This sequence includes flows of the Miocene Powder River Volcanic Field, and may also include Grande Ronde Basalt, mapped in adjacent valleys, but not exposed at land surface in the immediate area around the proposed POA. In either case, the 210' thick sequence of volcanic rock reported within the borehole appears to comprise a confining horizon whose orientation is anticipated to severely limit hydraulic connection to nearby surface water and wells to the west, a conclusion which is supported by the disparity between the elevation of nearby surface water and head elevation in the target aquifer.

Under this conceptual model, it is anticipated that the groundwater reservoir accessed by the proposed POA well inevitably discharges to either the Grande Ronde River or one of its tributaries. Considering the impact to the scenic waterway, the complexity of the local geology and the implications to groundwater movement cannot be accurately quantified. Therefore, the degree and location of impacts to the Grande Ronde River cannot be assessed at this time. If additional information becomes available that indicates impacts that measurably reduce flow to the scenic waterway, the quantity of water available for use under any permit resulting from this application may be reduced.

References Used:

Development Potential of Ground Water in the Grande Ronde Valley, Union County, Oregon, Ham, 1966; Geology and Ground-Water Resources of the Upper Grande Ronde River Basin, Union Co., OR, by Brown and Hampton, 1959.

Ferns, M. L., McConnell, V. S., Madin, I. P., and Johnson, J. A., 2010, Geology of the upper Grande Ronde River basin, Union County, Oregon; Oregon Department of Geology and Mineral Industries Bulletin 107, scale 1:100,000, 65 p

Groundwater review for Application G-17110; local well logs, GWIS water level database.

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: _____ Logid: _____

D2. **THE WELL does not appear to meet current well construction standards based upon:**

- a. ☐ review of the well log;
- b. ☐ field inspection by _____;
- c. ☐ report of CWRE _____;
- d. ☐ other: (specify) _____

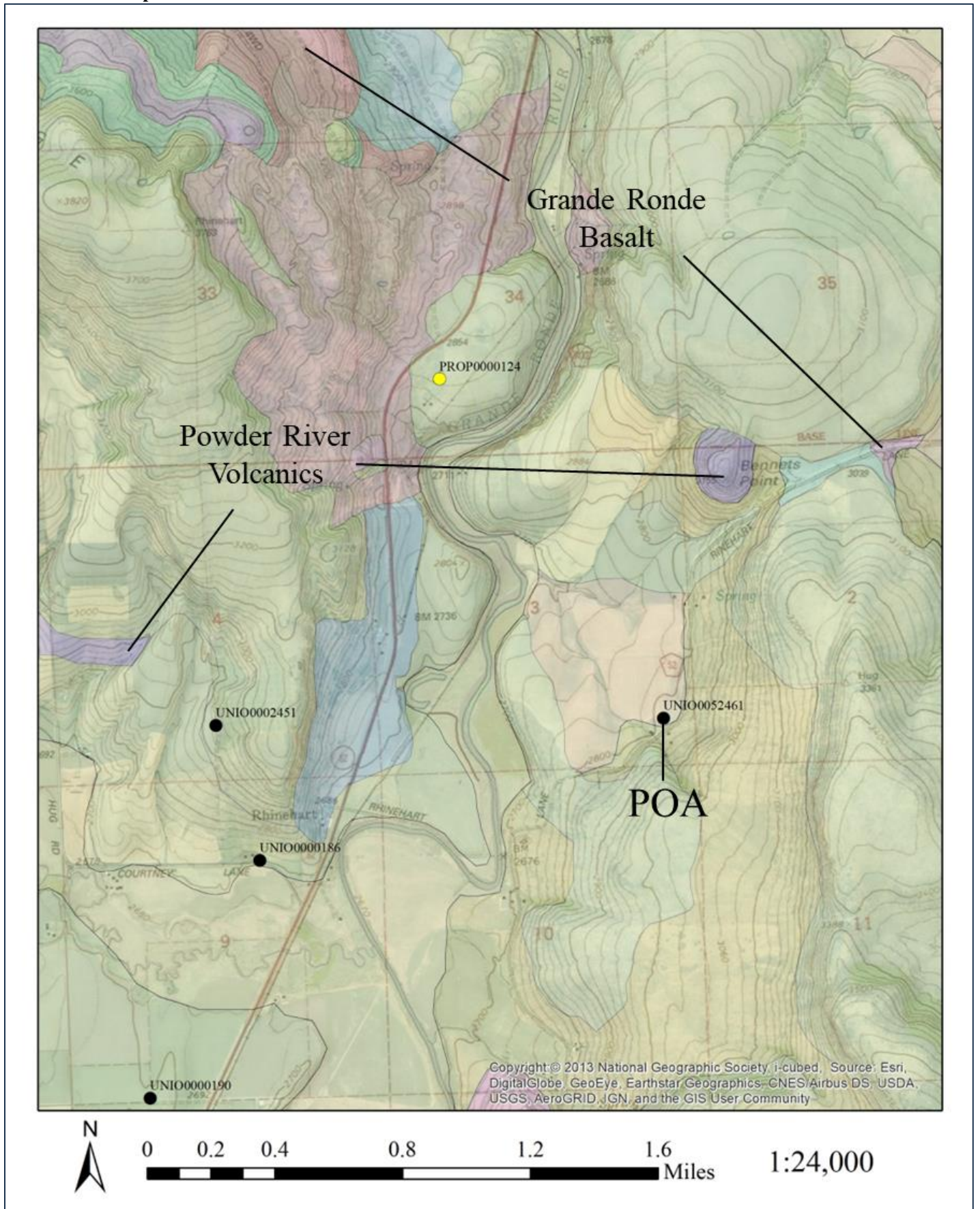
D3. **THE WELL construction deficiency or other comment is described as follows:** _____D4. ☐ **Route to the Well Construction and Compliance Section for a review of existing well construction.****Water Availability Tables**

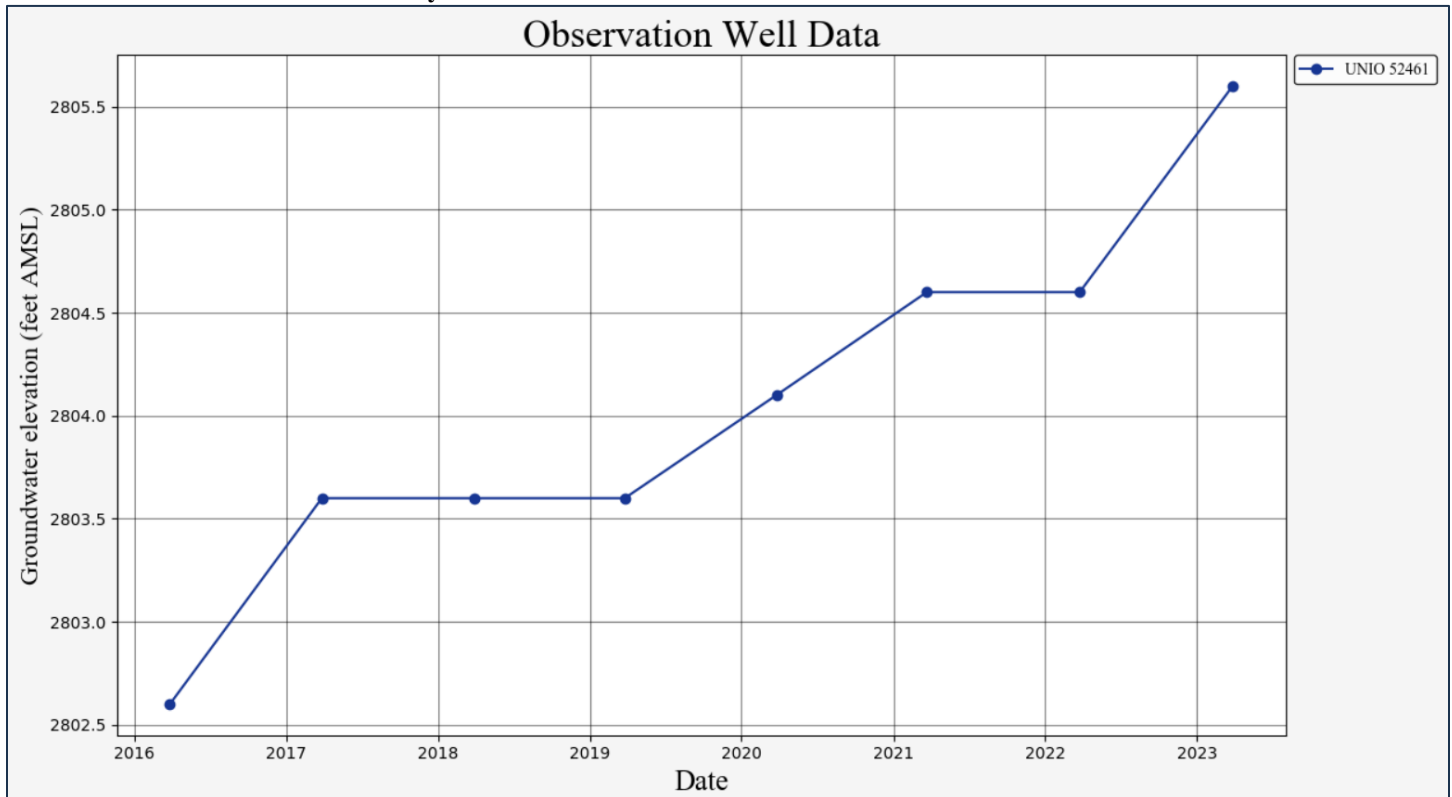
Watershed ID #: 30810406 GRANDE RONDE R > SNAKE R - AB GORDON CR Exceedance Level: 80
 Time: 11:41 AM Basin: GRANDE RONDE Date: 03/12/2024

Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirements	Net Water Available

Monthly values are in cfs.						
Storage is the annual amount at 50% exceedance in ac-ft.						
JAN	165.00	19.30	146.00	23.70	0.00	122.00
FEB	336.00	24.10	312.00	62.30	0.00	250.00
MAR	613.00	26.50	586.00	118.00	0.00	469.00
APR	1,160.00	161.00	999.00	131.00	0.00	868.00
MAY	1,340.00	399.00	941.00	187.00	0.00	754.00
JUN	628.00	370.00	258.00	58.40	0.00	199.00
JUL	286.00	174.00	112.00	0.00	0.00	112.00
AUG	215.00	101.00	114.00	0.00	0.00	114.00
SEP	140.00	69.90	70.10	0.00	0.00	70.10
OCT	98.20	24.30	73.90	1.55	0.00	72.30
NOV	108.00	15.90	92.10	0.00	0.00	92.10
DEC	133.00	18.10	115.00	13.00	0.00	102.00
ANN	545,000	84,900	460,000	35,900	0	424,000

Well Location Map



Water-Level Measurements in Nearby Wells

The proposed POA is the only nearby well known to penetrate the productive aquifer and with relevant measurements. Reported permit condition measurements do not suggest declines.