Groundwater Application Review Summary Form

Application # G- <u>19157</u>

GW Reviewer <u>Phillip I. Marcy</u> Date Review Completed: <u>02/03/2023</u>

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

_February 03, 2023

TO: Application G-<u>19157</u>

FROM: GW: <u>Phillip Marcy</u> (Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

- □ YES The source of appropriation is hydraulically connected to a State Scenic Waterway or its tributaries
- □ YES
 □ Use the Scenic Waterway Condition (Condition 7J)
 □ NO
- 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 <u>[Enter]</u> 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	Date <u>02/03/2023</u>
FROM:	Groundwater Section	Phillip I. Marcy
		Reviewer's Name
SUBJECT:	Application G- _19157 _	Supersedes review of <u>06/29/2021</u>
	· · ·	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: <u>Robert Skinner, Skinner Ranches</u> County: <u>Malheur</u>

Applicant(s) seek(s) <u>1.50</u> cfs from <u>1</u> well(s) in the <u>Owyhee</u> Basin, A1.

______ subbasin

Proposed use Supplemental Irrigation (375 acres) Seasonality: April 1st – October 15th (198 days) A2.

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

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	MALH 54351	1	Bedrock	1.50	30S/44E-23 NE-NE	950'S, 100'W fr NW cor S 24
2						
3						
4						

* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	4243	65	240	11/04/2016	408	0-98	0-98	8-268	269-408	200	NA	Air

Use data from application for proposed wells.

A4. **Comments:** The applicant proposes to use a well previously intended for exempt livestock watering for supplemental irrigation of 375 acres and fire suppression, in addition to continuing livestock watering.

This re-review is being conducted to reevaluate the determination of over-appropriation in Section B1(a) of this review form considering the updated guidance in the Iverson memo of 01/18/2023.

management of groundwater hydraulically connected to surface water \Box are, or \Box 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:

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

- B1. **Based upon available data**, I have determined that <u>groundwater</u>* 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. \Box will not or \Box 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) 7N; "Large Water Use Reporting"
 - ii. \Box The permit should be conditioned as indicated in item 2 below.
 - iii. \Box 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:** <u>Only short-term records of water levels are available for the deep volcanic aquifer in</u> the Danner Valley area. Modest declines have been observed in the few wells measured, but discernment of long-term aquifer trends is not possible without an extended record.

There is insufficient evidence at the present time for a determination that the groundwater source proposed for development by this application has "Declined Excessively" as defined in OAR 690-008-0001(4), and therefore is not over-appropriated...

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	Fractured basalt		\boxtimes

Basis for aquifer confinement evaluation: The proposed POA well and other nearby wells completed into fractured basalts at similar depth have reported static water levels coincident with the elevation of the productive water-bearing zone.

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 ¹/₄ 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)	H YES	Hydra Conn NO	ulically ected? ASSUMED	Potentia Subst. In Assum YES	I for terfer. ed? NO
1	1	Jordan Creek	4003	4240	4170		\boxtimes			X

Basis for aquifer hydraulic connection evaluation: <u>Groundwater elevations in the target aquifer are well below those of</u> local surface water, with a thick unsaturated zone between the perched unconfined alluvial aquifer.

Water Availability Basin the well(s) are located within: <u>Owyhee R > Snake R - At Mouth</u></u>

C3a. **690-09-040** (4): Evaluation of stream impacts for <u>each well</u> 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?

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C3b. **690-09-040 (4):** Evaluation of stream impacts <u>by total appropriation</u> 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?

Comments: <u>This section does not apply because the proposed POA well is not hydraulically connected to surface water within one mile.</u>

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-D	istributed	Wells											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well 0	Q as CFS												
Interfei	rence CFS												
Distrik	outed Well	ls									-	- 	
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS												
Interfer	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS												
Interfei	rence CFS												
		-	-	-	-	-	-	-	-	-	-	-	-
$(\mathbf{A}) = \mathbf{T}$	otal Interf.												
(B) = 80) % Nat. Q												
(C) = 1	% Nat. Q												
							-					-	
(D) =	(A) > (C)	\checkmark											
(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:
 - i. \Box The permit should contain condition #(s)_
 - ii. \Box The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW** / **GW Remarks and Conditions:** <u>Shallow groundwater in the Danner Valley is coincident with surface water elevations,</u> and represents a perched aquifer system, separated from groundwater present in the deeper volcanic aquifer by an unsaturated zone typically greater than 100' in thickness. It is unclear why this situation does not exist in the adjacent Jordan Valley, but it is <u>likely that vertical permeability is much higher in Jordan Valley due to the presence of fractures or fault offsets resulting from</u> <u>structural activity.</u>

References Used:

GWIS lithology and water level databases

Application reviews for G-18065 and G-18802.

Walker, G.W., Repenning, C.A., 1966, Reconnaissance geologic map of the west half of the Jordan Valley quadrangle, Malheur County, Oregon, Interpretive Map 457, U.S. Geological Survey, Washington, DC., map scale 1:250,000.

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	_; _;
D3.	THE WELL construction deficiency or other comment is described as follows:	
D4. [$egin{array}{c} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	

Water Availability Tables

			WATER	AVAILAB:	ILITY TA	ABLE	2											
			OWYHEE R	> SNAKE	R – AT	MOU	JTH											
Water	shed ID #:	31111001		Basin:	OWYHEE									Exce	edar	ice I	.evel	1: 80
Time:	: 12:01 PM														Date	2: 06	5/28/	2021
#	Watershed																	
Nest	ID Number	Stream Name			J	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	STOR
1	31111001	OWYHEE R > SNAKE R - AT MOUTH	I			NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES

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Well Location Map



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Water-Level Measurements in Nearby Wells



Deep wells producing from volcanic rock in the Danner Valley exhibit little to no confined pressure, as opposed to those producing from similar depths in Jordan Valley to the east, in which confining pressure brings static water levels to near land surface. Water level records in the Danner Valley deep aquifer (top) do not conclusively display excessive declines upon review of available data.