Approved: 

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager

From: Travis Kelly, Well Construction Program Coordinator

Subject: Review of Water Right Application G-19157

Date: July 6, 2021

The attached application was forwarded to the Well Construction and Compliance Section by the Groundwater Section. Phil Marcy reviewed the application. Please see Phil's Groundwater Review and the Well Report.

Applicant's Well #1 (MALH 54351): Based on a review of the Well Report, Applicant's Well #1 seems to protect the groundwater resource.

The construction of Applicant's Well #1 may not satisfy hydraulic connection issues.

MALH 54351

MALH 54351

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765 & OAR 690-205-0210)

WELL I.D. LABEL# L 119847
START CARD # 1032643
ORIGINAL LOG #

(1) LAND OWNER
Owner Well I.D.
First Name Bob Last Name Skinner
Company Skinner Ranches
Address 3280 Skinner Rd.
City Jordan Valley State OR Zip 97910

(2) TYPE OF WORK
[X] New Well [ ] Deepening [ ] Conversion [ ] Alteration (complete 2a & 10) [ ] Abandonment(complete 5a)

(2a) PRE-ALTERATION

	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
Casing:									

	Material	From	To	Amt	sacks/lbs
Seal:					

(3) DRILL METHOD
[X] Rotary Air [ ] Rotary Mud [ ] Cable [ ] Auger [ ] Cable Mud
[ ] Reverse Rotary [ ] Other

(4) PROPOSED USE
[ ] Domestic [ ] Irrigation [ ] Community
[ ] Industrial/ Commericial [X] Livestock [ ] Dewatering
[ ] Thermal [ ] Injection [ ] Other

(5) BORE HOLE CONSTRUCTION
Special Standard [ ] (Attach copy)
Depth of Completed Well 408 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/lbs
16	0	19	Bentonite Chips	0	98	96	S
12	19	98			Calculated	63	
8	98	408					
					Calculated		

How was seal placed: Method [ ] A [ ] B [ ] C [ ] D [ ] E
[X] Other Slow pour from top
Backfill placed from ft. to ft. Material
Filter pack from ft. to ft. Material Size
Explosives used: [ ] Yes Type Amount

(5a) ABANDONMENT USING UNHYDRATED BENTONITE
Proposed Amount Pounds Actual Amount Pounds

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
●	○	8	X	2	98	.250	●	○	X	
○	●	6		8	268	.250	○	●		X
○	○						○	○		
○	○						○	○		
○	○						○	○		

Shoe [X] Inside [ ] Outside [ ] Other Location of shoe(s) 98
Temp casing [X] Yes Dia 12 From 0 To 80

(7) PERFORATIONS/SCREENS
Perforations Method
Screens Type Factory Slot Material PVC

Perf/Screen	Casing/Liner	Screen Dia	From	To	Scrn/slot width	Slot length	# of slots	Tele/pipe size
Screen		6	268	408	.02		11,900	

(8) WELL TESTS: Minimum testing time is 1 hour
○ Pump ○ Bailer ● Air ○ Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)
200		400	1

Temperature 58 °F Lab analysis [ ] Yes By
Water quality concerns? [ ] Yes (describe below) TDS amount 144

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)
County MALHEUR Twp 30 S N/S Range 44 E E/W WM
Sec 24 NW 1/4 of the NW 1/4 Tax Lot 1300
Tax Map Number Lot
Lat ° ' " or 42.94167 DMS or DD
Long ° ' " or -117.2897 DMS or DD
○ Street address of well ◉ Nearest address
3280 Skinner Rd., Jordan Valley OR

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Pre-Alteration				
Completed Well	11-04-2016			240

Flowing Artesian? [ ] Dry Hole? [ ]

WATER BEARING ZONES Depth water was first found 65

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
11-04-2016	65	80	30			65
11-04-2016	240	408	150			240

(11) WELL LOG
Ground Elevation 4,230

Material	From	To
Top Soil	0	5
Clayey Soil	5	10
Tan Clay	10	17
Lava Rock	17	19
Tan & Brown Clay	19	50
Gravel & Sand & Clay	50	80
Tan Clay	80	90
Black Lava W/Tan Color	90	98
Black Lava w/Brown Color	98	160
Black Lava w/Light Blue Color	160	210
Black Lava w/Gray Color	210	240
Black Lava w/Fractures	240	260
Red Lava w/Fractures	260	279
Black Lava Rock Fractures	279	314
Fractured Black Lava Rock w/Clay Streaks	314	384
Red Lava Fractures	384	390
Redish & Tan Clay	390	408

Date Started 10-17-2016 Completed 11-04-2016

(unbonded) Water Well Constructor Certification
I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
License Number Date NOV 21 2016
Signed

RECEIVED
SALEM, OR

(bonded) Water Well Constructor Certification
I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
License Number 1714 Date 11-17-2016
Signed Dave Adamson
Contact Info (optional)

ORIGINAL - WATER RESOURCES DEPARTMENT
THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK Form Version: 0.95

Groundwater Application Review Summary Form

Application # G- _19157_

GW Reviewer _Phillip I. Marcy_ Date Review Completed: _06/29/2021_

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 **_June 29, 2021_**

TO: **Application** G-**_19157_**

FROM: **GW:** **_Phillip Marcy_**
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

☐ **YES**
☒ **NO** The source of appropriation is hydraulically connected to a State Scenic 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 Date 06/29/2021
FROM: Groundwater Section Phillip I. Marcy
Reviewer's Name
SUBJECT: Application G- **19157** Supersedes review of
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: **Robert Skinner, Skinner Ranches** County: **Malheur**

A1. Applicant(s) seek(s) 1.50 cfs from 1 well(s) in the Owyhee Basin, subbasin

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

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.

A5. ☐ **Provisions of the** 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) **7N; "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:** Only short-term records of water levels are available for the deep volcanic aquifer in 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.

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**	☐	☒
		☐	☐
		☐	☐
		☐	☐

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 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? YES	NO	ASSUMED	Potential for Subst. Interfer. Assumed? YES	NO
1	**1**	**Jordan Creek**	**4003**	**4240**	**4170**	☐	☒	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

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

Water Availability Basin the well(s) are located within: Owyhee R > Snake R – At Mouth

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?
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

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?
			☐			☐		☐		☐
			☐			☐		☐		☐

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

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:

i. ☐ The permit should contain condition #(s)_____;

ii. ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** Shallow groundwater in the Danner Valley is coincident with surface water elevations, 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 likely that vertical permeability is much higher in Jordan Valley due to the presence of fractures or fault offsets resulting from structural activity.

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.

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

WATER AVAILABILITY TABLE

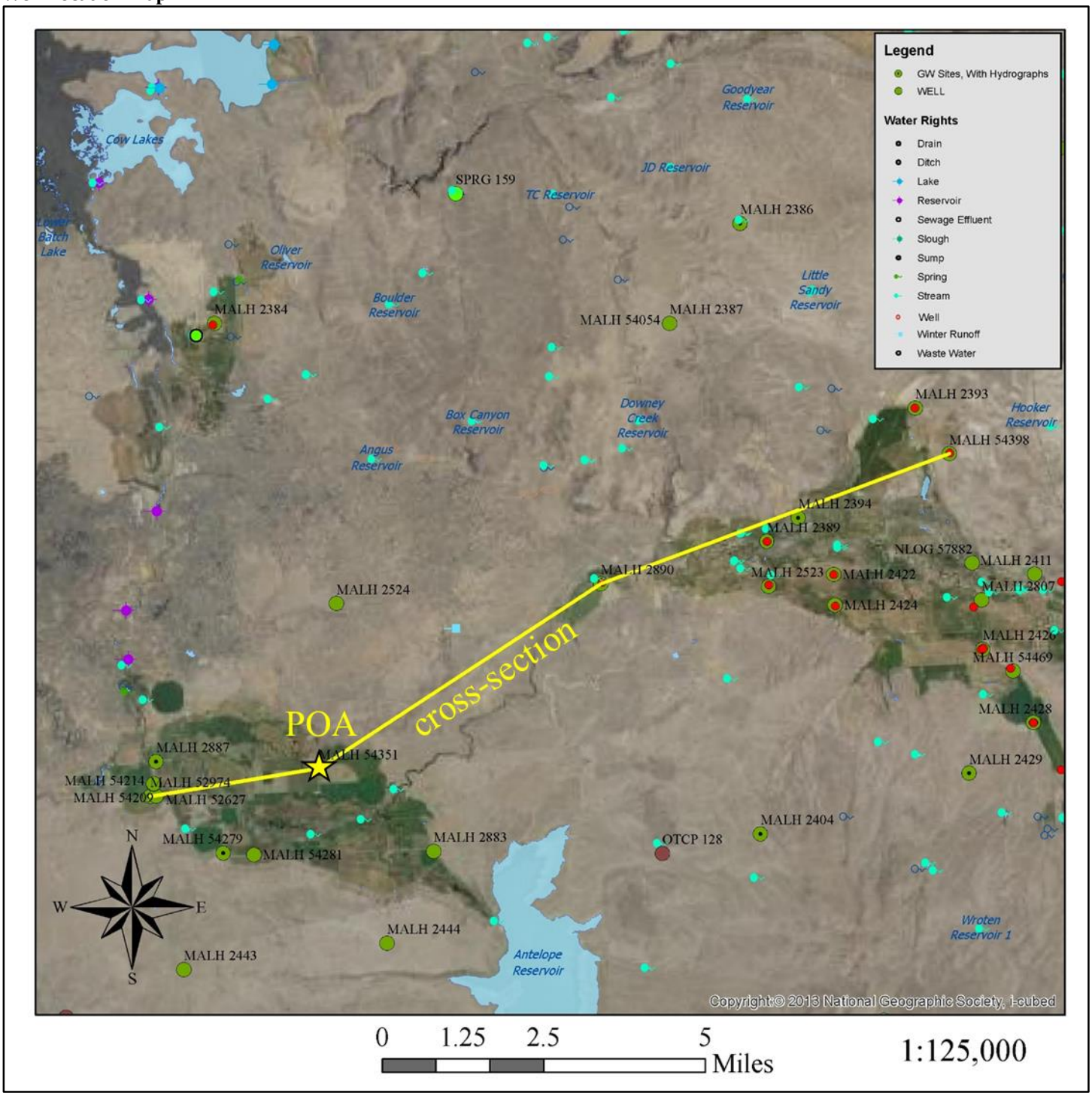
OWYHEE R > SNAKE R - AT MOUTH

Watershed ID #: 31111001 Basin: OWYHEE Exceedance Level: 80

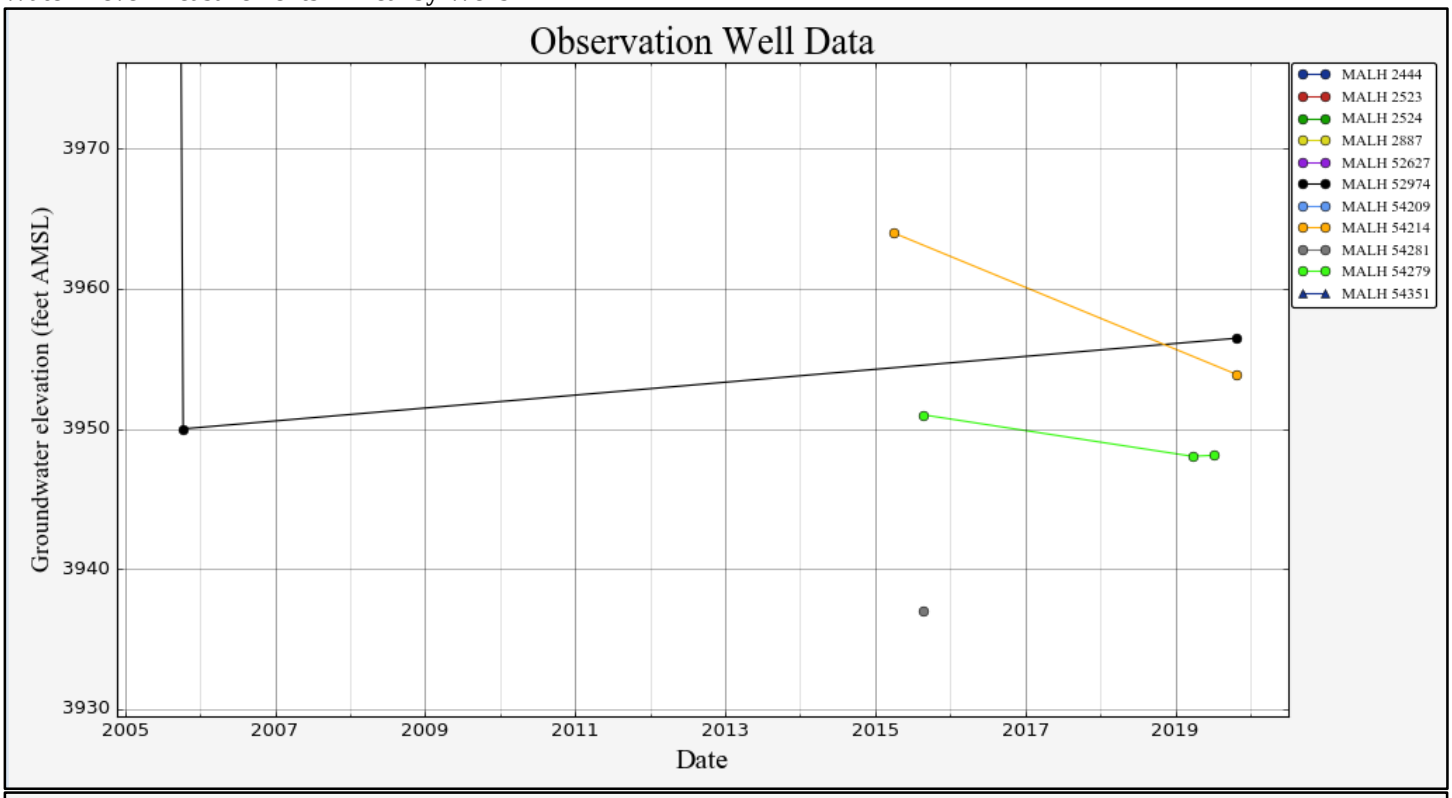
Time: 12:01 PM Date: 06/28/2021

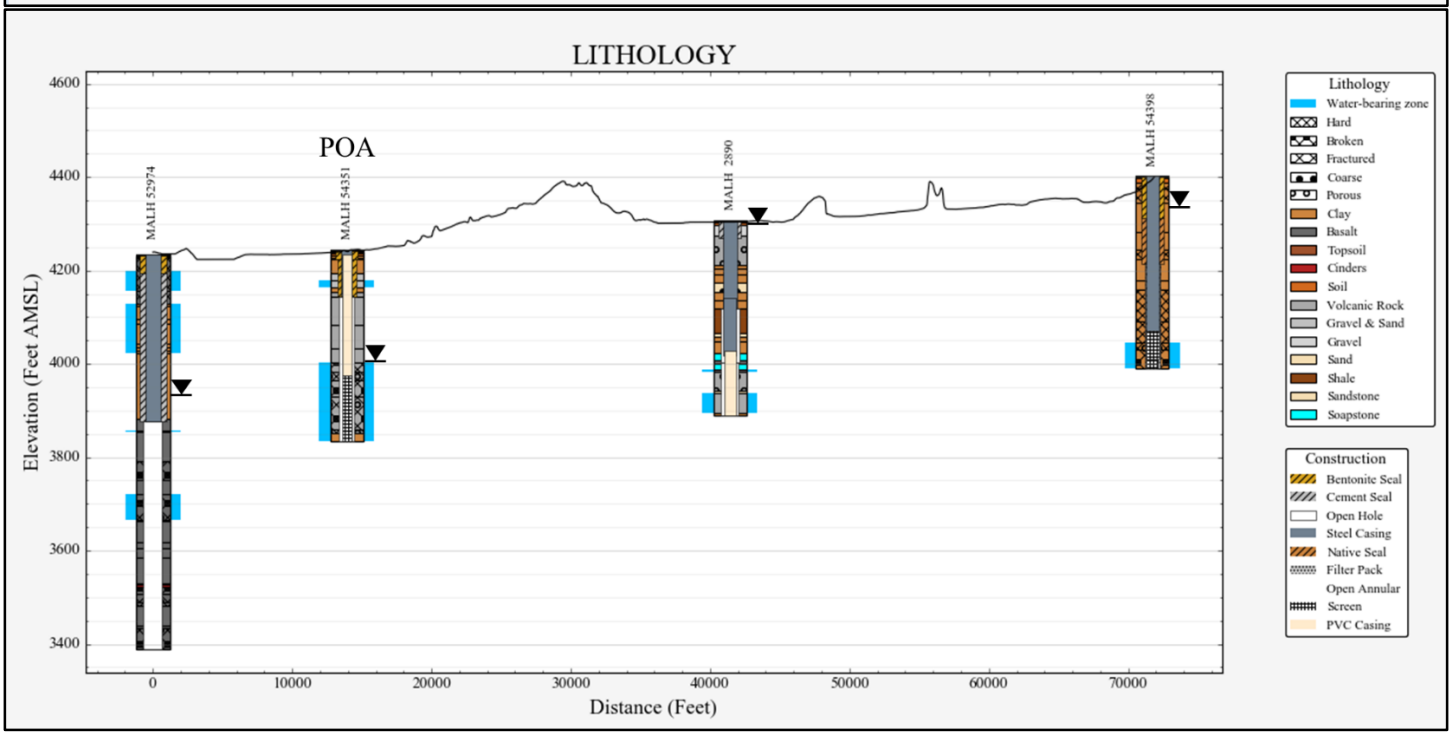
Nest	# Watershed ID Number	Stream Name	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	STOR
1	31111001	OWYHEE R > SNAKE R - AT MOUTH	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES

Well Location Map



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.