

**Water Right Conditions
Tracking Slip**

Groundwater/Hydrology Section

FILE ## G-17066

ROUTED TO: Water Rights

TOWNSHIP/

RANGE-SECTION: 26S/29E-23

CONDITIONS ATTACHED? ☒ Yes ☐ No

REMARKS OR FURTHER INSTRUCTIONS:

Reviewer: Mike Zwart

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section

Date September 17, 2008FROM: Ground Water/Hydrology Section Mike Zwart

Reviewer's Name

SUBJECT: Application G- 17066

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 ground water 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: Lynn Deguire County: HarneyA1. Applicant(s) seek(s) 8.0 cfs from 3 well(s) in the Malheur Lake Basin,
Harney Lake subbasin Quad Map: Northwest Harney LakeA2. Proposed use: Irrigation, 800 acres Seasonality: March 1 – October 31

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	HARN 51141	1	Basalt	8.0	26S/29E-23 SE-NW	1740' S, 2510' E fr NW cor S 23
2	MALH 2323	2	Basalt	8.0	26S/29E-23 SE-SW	65' N, 2375' E fr SW cor S 23
3	Proposed	3	Basalt	8.0	26S/29E-23 NW-NW	80' S, 950' E fr NW cor S 23
4						
5						

* 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	4131	48	36	1/24/2005	85	0-18	-1.5-20			1000		A
2	4111	169	32	11/15/1981	400	0-20	-2-248			Unk.		Unk.
3	4143				100	0-18						

Use data from application for proposed wells.

A4. Comments: _____

A5. ☒ Provisions of the Malheur Lake Basin rules relative to the development, classification and/or management of ground water 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: _____

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

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1, 3	Basalt, cinders and sandstone (QTb)	☐	☒
2	Basalt, cinders and sandstone (QTb)	☒	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: Ground water in the shallow basalts and valley-fill sediments is regionally unconfined and hydraulically connected to surface water sources, including Malheur and Harney Lakes. Well #2 appears to be confined, but it is possible that the well constructor under-reported shallower water-bearing zones. Most area wells report first ground water encountered at shallow depths. Therefore, this finding may be suspect.

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	Silver Creek	4090±	4103	11200	☒	☐	☐	☐	☒
2	1	Silver Creek	4090±	4103	7500	☒	☐	☐	☐	☒
3	1	Silver Creek	4090±	4103	12800	☒	☐	☐	☐	☒
1	2	Harney Lake	4090±	4095±	12000±	☒	☐	☐	☐	☒
2	2	Harney Lake	4090±	4095±	10500±	☒	☐	☐	☐	☒
3	2	Harney Lake	4090±	4095±	14500±	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: Ground-water gradient is likely very low in this area. Heads in the aquifer likely vary with fluctuations in the elevation of Harney Lake. Heads are currently below the adjacent reach of Silver Creek. Ground water ultimately discharges to Harney Lake.

Water Availability Basin the well(s) are located within: 31200401 SILVER CR> HARNEY L- 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 source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and 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.

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													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
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: It is likely that interference with surface water is diffuse and divided between Harney Lake and possibly lower reaches of Silver Creek. It is therefore likely that use of the currently available analytical model (Hunt/Wozniak) is not appropriate as it would overestimate the magnitude of interference with Silver Creek, especially given the head relationship.

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 ground water 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:**

References Used: Local well logs; local recent reviews, especially G-16826 and G-16420; GW Report 16, by Leonard, 1970; Greene, Walker, and Corcoran, 1972, Geologic Map of the Burns Quadrangle, Oregon, USGS Miscellaneous Geologic Investigations Map I-680; Memo by Ivan Gall, 1/15, 2008, Stream Assessment for Division 9 Review in the Malheur Lakes Basin.

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: _____ Logid: _____

D2. **THE WELL does not 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:**

- a. ☐ constitutes a health threat under Division 200 rules;
b. ☐ commingles water from more than one ground water reservoir;
c. ☐ permits the loss of artesian head;
d. ☐ permits the de-watering of one or more ground water reservoirs;
e. ☐ other: (specify) _____

D4. **THE WELL construction deficiency is described as follows:** _____

_____D5. **THE WELL** a. ☐ was, or ☐ was not constructed according to the standards in effect at the time of original construction or most recent modification.b. ☐ I don't know if it met standards at the time of construction.D6. ☐ **Route to the Enforcement Section.** I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Enforcement Section and the Ground Water Section.

THIS SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNELD7. ☐ Well construction deficiency has been corrected by the following actions: _____

__________, 200_____
(Enforcement Section Signature)D8. ☐ **Route to Water Rights Section (attach well reconstruction logs to this page).**

SILVER CR> HARNEY L- AT MOUTH MALHEUR LAKE BASIN

Water Availability as of 9/7/2008

Watershed ID #: 31200401

Exceedance Level: 80%

Date: 9/7/2008

Time: 12:19 PM

Water Availability Calculation

Consumptive Uses and Storages

Instream Requirements

Reservations

Water Rights

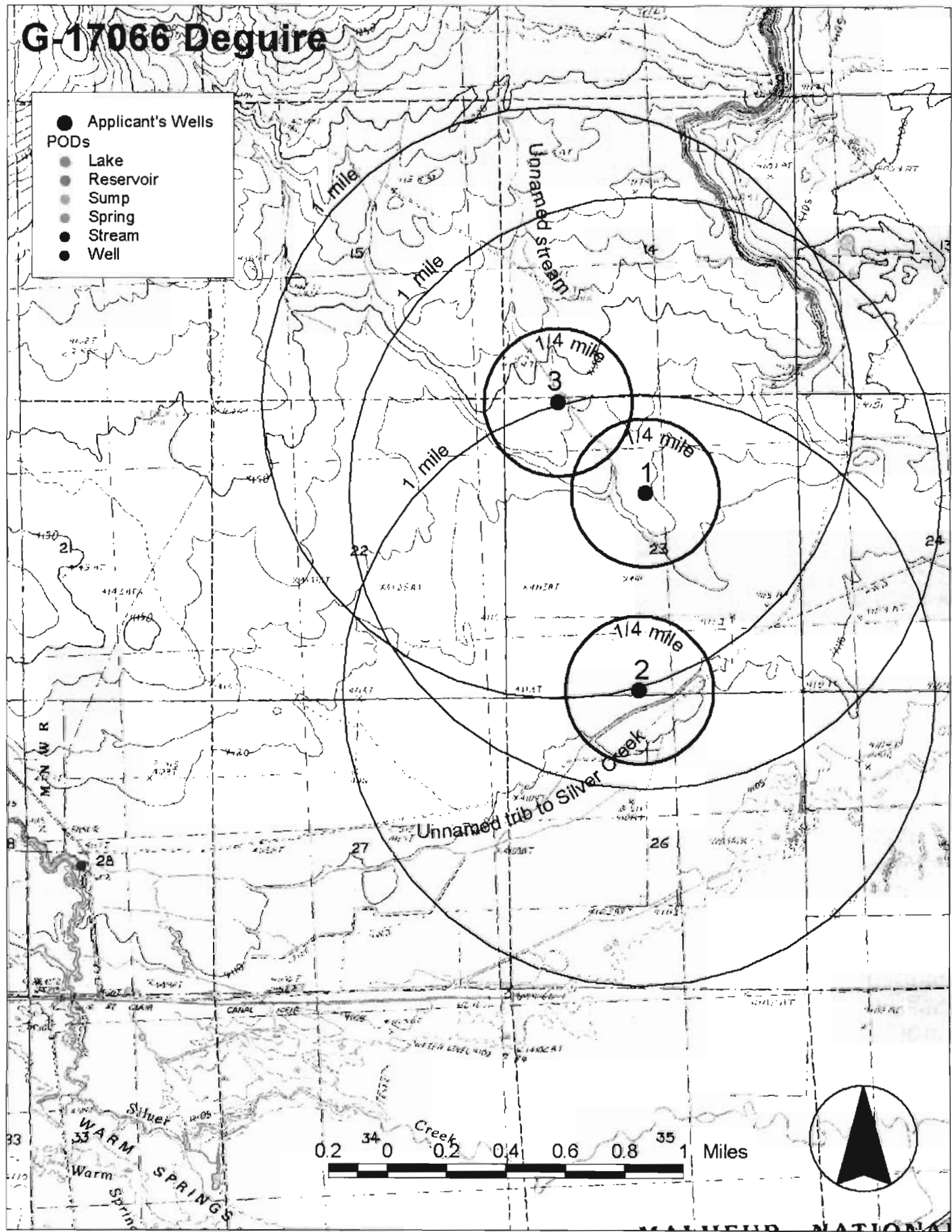
Watershed Characteristics

Water Availability Calculation

Monthly Streamflows in Cubic Feet per Second

Storage at 50% Exceedance in Acre-Feet

Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirement	Net Water Available
Jan	29.70	4.50	25.20	0.00	0.00	25.20
Feb	37.60	7.79	29.80	0.00	0.00	29.80
Mar	65.50	30.10	35.40	0.00	0.00	35.40
Apr	140.00	82.40	57.60	0.00	0.00	57.60
May	68.90	146.00	-77.20	0.00	0.00	-77.20
Jun	45.00	115.00	-70.00	0.00	0.00	-70.00
Jul	29.30	40.00	-10.70	0.00	0.00	-10.70
Aug	26.30	17.60	8.74	0.00	0.00	8.74
Sep	26.20	10.40	15.80	0.00	0.00	15.80
Oct	26.90	6.64	20.30	0.00	0.00	20.30
Nov	28.20	3.23	25.00	0.00	0.00	25.00
Dec	29.10	3.66	25.40	0.00	0.00	25.40
Storage Acre-Feet at 50%	56,400.00	28,300.00	34,200.00	0.00	0.00	34,200.00



MEMO

Sept. 17, 2008

TO: Application G-17066

FROM: GW: Mike Zwart
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

YES

☒ NO

The source of appropriation is within or above a Scenic Waterway

YES

✓ NO

Use the Scenic Waterway condition (Condition 7J)

Per ORS 390.835, the Ground Water 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 Ground Water 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.**

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 _____ Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

[illegible]