WATER RESOURCES DEPARTMENT

MEMO

August 8, 200 4

TO:

Application G-17865

FROM:

GW: Mihe Zwart (Reviewer's Name)

SUBJECT:

(Reviewer's Name) Scenic Waterway Interference Evaluation



The source of appropriation is within or above a Scenic Waterway



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.

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 ______ 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	Dèc

PUB	LIC IN I	EKE	SIKEVI	SW FOR C	JKOUND	WALE	K APPL	ICATIONS					
TO:		Wat	er Rights S	Section				Dat	te <u>A</u> ı	igust 8	8 <u>, 2014</u>		
FROM	И :	Gro	undwater S	Section		Mike	Zwart						
						Rev	iewer's Nan						
SUBJ	ECT:	Арр	lication G	17865		Su	persedes	review of			Date of Re	viau(a)	
											Date of Re	view(s)	
OAR (welfar to dete the pre	690-310-1 e, safety a ermine wh esumption	30 (1) and hea ether t criteri	The Depar alth as descu he presump a. This rev	ribed in ORS tion is establ iew is based	<i>537.525.</i> D ished. OAR upon avail	t a propos epartmen 690-310- able info	t staff rev 140 allow	dwater use will iew ground wa vs the proposed and agency pol	ter applic use be m icies in p	ations u odified lace at	or cond the time	R 690-3 itioned to e of evalu	10-140 o meet uation.
A. <u>GI</u>	UNERAL	<u>, INF</u>	ORMATI	<u>UN</u> : A	pplicant's N	lame:	V BOX	<u>Land and Liv</u>	estock	C	county:	Maine	<u>ur</u>
A1.	Applica	ant(s) s	eek(s) <u>2.7</u>	<u>6</u> cfs from	m	well	(s) in the	Malheur					_ Basin,
						subb	asin	Quad Map: <u>S</u>	<u>humwa</u>	Rese	rvoir		
	_		-										
A2. A3.	Propose Woll ar	ed use	for data (at	rigation, 22	<u>0.6 acres</u>	Seas	sonality:	<u>March 1</u> mark proposed	to Octol	<u>er 31</u>	nderlo	rid):	
AS.	wen ai	ia aqui			liber logs i								
Well	Logi	d	Applicant Well #	's Propos	ed Aquifer*		osed (cfs)	Location (T/R-S QQ				s and bou E fr NW	
1	MALH	2317	1	В	edrock		76	24S/39E-7 N				E fr E ¼ (
2	MALH 5		2	В	edrock		76	24S/39E-6 N	3075'	' S, 2585'	E fr NW	cor S 6	
3													
4													
-	ium, CRB,	Bedro											
	ium, end,	Bedro											
	Well	Firs		SWL	Well	Seal	Casing		Perfora		Well	Draw	Test
Well	Elev ft msl	Wate ft bl	I ff blc	Date	Depth (ft)	Interval (ft)	Interval (ft)	s Intervals (ft)	Or Scr (ft)		Yield (gpm)	Down (ft)	Туре
1	4500		245	07/08/1956	295	?	0-20	None	Nor	e			
2	4492	235	235	08/07/2012	410	0-18	0-42	None	Nor	e	700		Air
Lise dat	a from ann	lication	for propose	t wells									L
Use dat													
A4.	Comme	ents: 🔟	MALH 231	<u>7 does not r</u>	<u>eport whet</u>	<u>her a san</u>	itary sea	was provided	•				
A5. 🛛	Provis	ions of	f the <u>Malhe</u>	ur			Basir	rules relative t	o the dev	elopme	nt, classi	ification	and/or
						cted to su	rface wat	er 🗌 are, or 🛛	si are no	t, activa	ated by the	his applic	cation.
				n such provi									
	comme												
A6. 🗌	Well(s)	#		·,	,	,	<u> </u>	tap(s) an aquif	er limited	by an a	administ	rative res	striction.
	Comme	ints:											

2

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

- B1. Based upon available data, I have determined that ground water* for the proposed use:
 - a. is over appropriated, is not over appropriated, or annot be determined to be over appropriated during any period of the proposed use. * This finding is limited to the ground water 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 ground water 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 ground water resource; or
 - d. **will, if properly conditioned**, avoid injury to existing ground water rights or to the ground water resource:
 - i. \square The permit should contain condition #(s) <u>7C</u>
 - 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 ground water production from no deeper than ______ ft. below land surface;

- b. Condition to allow ground water production from no shallower than ______ ft. below land surface;
- c. Condition to allow ground water production only from the ______ ground water 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 Ground Water 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. Ground water availability remarks: <u>There are no reasonably close observation wells</u>. There is limited groundwater development in this area, which is remote. Only a few well logs are on file in a 20-square-mile area surrounding the site.

Version: 07/26/2013

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, 2	Sandstone and basalt (Tvc)		

Basis for aquifer confinement evaluation: <u>Although the water level did not reportedly rise above the depth that</u> groundwater was first encountered, such bedrock aquifers are typically under confined conditions.

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)	Cor	raulically nnected? O ASSUMED	Potentia Subst. Int Assume YES	erfer.
1	1	Unnamed creek #1	4255	4495	75				\boxtimes
2	2	Unnamed creek #2	4257	4490	100				\boxtimes

Basis for aquifer hydraulic connection evaluation: <u>The water level and depth to the water-bearing zone are well below</u> the local surface water sources.

Water Availability Basin the well(s) are located within: Granite Cr > S Fk Malheur R ab Star Cr (31011619).

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 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?

Page

3

Version: 07/26/2013

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?
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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-Di	istributed	Wells									-		
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q) as CFS												
Interfer	ence CFS												
													9738252
Well	uted Well SW#	s Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
W CII	3117	Ja11 %	Fe0 %	Wiai %	Api %	Wiay %	Juli %	- Jui %	Aug %	30p	%	MOV %	%
Well () as CFS	70	70	70	70	70	10	70	10	10	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	nu -	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	ence CFS							~					
interior		%	%	%	%	%	%	%	%	%	%	%	%
Well C	as CFS	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~			
	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well C	as CFS												
	ence CFS					-							
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfer	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfer	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
	Q as CFS												
Interfer	ence CFS												
(∆) = T(otal Interf.												CLOSSIC De
	% Nat. Q												
$(\mathbf{C}) = \mathbf{I}$	% Nat. Q												
(D) = ($(\mathbf{A}) > (\mathbf{C})$	4	4	4	 ✓ 	1	- see	4	V	<	1	-1,-11	1
(E) = (A	/ B) x 100	%	%	%	%	%	%	%	%	%	%	%	%

Application G-17865

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7

690-09-040 (5) (b) The potential to impair or detrimentally affect the public interest is to be determined by the W Rights Section. If properly conditioned, the surface water source(s) can be adequately protected from interference, and/or ground water under this permit should contain condition #(s)		= highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage. sis for impact evaluation:
Rights Section. If properly conditioned, the surface water source(s) can be adequately protected from interference, and/or ground water under this permit should contain condition #(s) i. The permit should contain condition #(s) ii. The permit should contain special condition(s) as indicated in "Remarks" below; SW / GW Remarks and Conditions		•
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under this permit can be regulated if it is found to substantially interfere with surface water: i. The permit should contain condition #(s)	U,	
ii. The permit should contain special condition(s) as indicated in "Remarks" below; W / GW Remarks and Conditions		nder this permit can be regulated if it is found to substantially interfere with surface water:
References Used: Local well logs; regional geologic maps; Geologic map of the Owyhee Region, Malheur County, Ore		ii. The permit should contain special condition(s) as indicated in "Remarks" below;
References Used: Local well logs; regional geologic maps; Geologic map of the Owyhee Region, Malheur County, Ore		
	w /	GW Remarks and Conditions
	_	
	YK	LUCINAN CL AL, 1707.

D. WELL CONSTRUCTION, OAR 690-200

Well #: _____1 D1.

Logid: MALH 2317

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

- a. \square review of the well log;
- b. field inspection by _____

D3. THE WELL construction deficiency or other comment is described as follows: The well log does not report that a well seal was provided.

D4. 🛛 Route to the Well Construction and Compliance Section for a review of existing well construction.

Water Availability Tables

