Water Right Conditions Tracking Slip
Groundwater/Hydrology Section
FILE # # <u>G-1775</u> ROUTED TO: <u>Water Rights - Kim</u> TOWNSHIP/ RANGE-SECTION: <u>265/33E-25</u> JJ
CONDITIONS ATTACHED?: [4] yes [] no
REMARKS OR FURTHER INSTRUCTIONS:
Reviewer: Mike Zwart

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WATER RESOURCES DEPARTMENT

MEMO

January 27,20 14

TO: Application G-<u>17751</u>

FROM:

GW: Mike Zwart (Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

- YES
 The source of appropriation is within or above a Scenic Waterway
 ✓ NO
- 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 ______ 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

PUBI	LIC INT	ERES	TREVIE	EW FOR G	ROUND	WATER	APPLIC	ATIONS				
TO:		Wate	er Rights S	Section				Date	e <u>Janua</u>	ry 27, 201	4	1.2.
FROM	1 :	Groundwater Section				Mike	Zwart					-
SUBJ	ECT:	Appl	ication G-	17751		Su	persedes re	eview of		Date of Re	eview(s)	-
PUBI OAR of welfard to dete the pre	LIC INT 590-310-1 e, safety a rmine wh esumption ENERAL	ERES 30 (1) and hea ether th criteria LINF(T PRESU The Depart ath as described presump a. This revision DRMATIC	MPTION; tment shall p ribed in ORS tion is establi iew is based ON: Aj	GROUN resume that 537.525. D ished. OAR upon avail pplicant's N	DWATE t a propose Department & 690-310- lable infor Name:	R ed groundw staff review 140 allows mation and James an	water use will w w ground wate the proposed d agency polition d Sue Gilmo	ensure the pro- er application use be modificies in place	eservation s under OA ed or cond at the time County:_	of the put AR 690-3 itioned to e of evalue <u>Harne</u>	blic 10-140 o meet uation.
A1.	Applica	ant(s) se	eek(s) 2.4	cfs from	n <u>one</u>	well((s) in the	Malheur	Lake	12		_ Basin,
A2. A3.	Propose Well ar	ed use_ nd aquif	Irı fer data (at	rigation, 12 tach and nu	6.2 acres	subb Seas for existin	asin Qu conality: g wells; ma	uad Map: <u>N</u> March 1 1 ark proposed	ew Princeto to October : wells as suc	on 30 h under lo	gid):	
Well	Logi	gid Applicant's Well # Propos		ed Aquifer*	Proposed Location Rate(cfs) (T/R-S QQ-Q)		Q) Location, metes and bounds 2250' N, 1200' E fr NW cor			inds, e.g. cor S 36		
1 2	HARN 5	1923	1	Е	Basalt		.4	26S/33E-25 S	E-SE 6	600' N, 160' W fr SE cor S25		
3						1.50				-		
5												
* Alluv	ium, CRB,	, Bedroc	k	1.1					And Death	1	1- 4- 5	
Well	Well Elev ft msl	First Wate	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	4106	18	7	04/14/2013	409	0-40 295-301	0-301.5	None	None	1000		Air
											3	
Use dat A4.	a from app Comm	ents: <u>N</u>	for propose	d wells. off all shallo	wer basin-	fill sedime	ents.					
A5. 🛛	Provis manage (Not all Comme	tions of ement o l basin ents:	f ground w rules conta	eur Lake vater hydrauli in such provi	ically conne sions.)	ected to su	Basin r rface water	ules relative t	o the develop	ment, class livated by t	ification his appli	and/or cation.
									10.45			
A6.	Well(s)	#	nistrative a	,, .	,	,	, ta	ap(s) an aquife	er limited by	an adminis	trative re	striction.
	Comme	ents:			-							

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 cannot 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. The permit should contain condition #(s) 7N
 - 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;
- 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>SOWs #183 and #180 are near this area</u>. These wells are currently displaying small declines and "noise" such as recent or nearby pumping. In recent years, there has been some increased local concerns about water-level declines and pumping interference, especially in the Crane area about 10 miles to the north. The Region Manager recommends use of Condition 7N in this basin.

ground

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	Basalt, andesite and/or rhyodacite (Tb, Tba, Trd)	\boxtimes			
120	The second s				
15					

Basis for aquifer confinement evaluation: <u>Locally, this aquifer appears well confined, with a head above that for the</u> overlying basin-fill sediments.

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	Malheur Lake	4099	4090±	9800±		
	-						
				1			
				-			
	-		-		-		

Basis for aquifer hydraulic connection evaluation: <u>As the lake level changes, distance to the well will vary quite a bit.</u> It is very likely that the aquifer penetrated ultimately discharges to Malheur Lake.

Water Availability Basin the well(s) are located within: No WAB data available.

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?
									1	
	-						- Hard		E. 12 0.13	

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age

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?
					9			

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	stributed	Wells								1	100		
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
_		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS												
Distrib	uted Welk	5											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	9%	%	%	90
Well Q	as CFS												
Interfere	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS	-											
Interfere	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS												-
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS						-			-			
Interfere	ence CFS			6.1	-								
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS			-	-								
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS			-									
(A) = To	tal Interf.						T	1					
(B) = 80	% Nat. Q												
(C) = 1	% Nat. Q			_									
(D) = (A) > (C)	1	~	1	1	1	1	1	1	1	1	1	1
(E) = (A /	/ B) x 100	%	%	%	%	%	%	%	%	%	%	%	%

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(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 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; 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. Version: 07/26/2013

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D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: 1 Logid: HARN 51923

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

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

D3. THE WELL construction deficiency or other comment is described as follows: I have no issues with the construction of this well.

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

Water Availability Tables

