## Water Right Conditions Tracking Slip

Groundwater/Hydrology Section

Ologhan area, and
FILE ## G-17834 ROUTED TO: Water Rights - Rim
TOWNSHIP/ RANGE-SECTION: 255/30 E - 33+34 265/30 E - 2+4
RANGE-SECTION: 251/30 E 33737
265/30 E - 2+4
CONDITIONS ATTACHED?: [1] yes [] no
REMARKS OR FURTHER INSTRUCTIONS:
Paviewer Mike Zwart

## WATER RESOURCES DEPARTMENT April 18,20 14 **MEMO** Application G-17834 TO: GW: Mike Zwart (Reviewer's Name) FROM: **SUBJECT: Scenic Waterway Interference Evaluation** YES П 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 \_\_

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Waterway by the following amounts expressed as a proportion of the consumptive use by

which surface water flow is reduced.

## PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO:		Wate	r Rights S	Section				Dat	e	April 18	3, 2014			
FROM	1:	Grou	nd Water/	Hydrology	Section _		ael Zwart							
SUBJ	ECT·	Anni	ication G-	17834			iewer's Name persedes r	eview of						
5000	<b>LC1</b> .	тррі	icution G	17004		04	perseucs	oview oi			Date of Re	eview(s)		
oar of welfare to determine the pre-	590-310-1 e, safety a rmine who sumption	30 (1) and head either the criteria	The Depart th as describe presumpt This revi	ibed in ORS ion is establi ew is based ON: A	oresume the 537.525. ished. OAl upon ava	at a propos Departmen R 690-310- ilable infor Name:	ted groundy t staff revie 140 allows mation an	water use will w ground wat the proposed d agency pol ot Malheur J	er ap use b icies	plications of the place at	under OA l or condi t the time	R 690-31 itioned to	10-140 meet a <b>tion</b> .	
						subb	asin Q	uad Map:N	orth	west & No	rtheast l	Harney I	ake	
A2.	Propose	ed use:	Irr	igation, 277	acres	Seas	sonality:	March 1 t	o Oc	tober 31				
A3.								ark proposed			under lo	gid):		
Well	Log	id	Applican Well #		oposed quifer*	Propos Rate(c		Location I/R-S QQ-Q)				and boun		
1	HARN:	51448	9		nic Seds.	4.62		30E-33 SE-S	W			fr NE co		
2	HARN:		10		nic Seds.	4.62		30E-3 NW-N				fr NW cor		
3	HARN:		11		nic Seds.	4.62		30E-3 NW-N		1005' S, 375' E fr NW cor S 3 2605' S, 2450' E fr NW cor S 33*				
5	HARN:		12		nic Seds.	4.62	4.62 25S/30E-33 SE-NW 4.62 26S/30E-4 NE-NW			1090' S, 2705' W fr NE cor S 4				
6	HARN		14		nic Seds.		4.62 25S/30E-33 SE-SE				1000' N, 10' W fr SE cor S 33			
7	HARN:		15		nic Seds.		4.62 25S/30E-33 SE-SE 1000' I					N, 30' W fr SE cor S 33		
8	HARN		1	Volca	nic Seds.		4.62 25S/30E-33 NE-NW 1317' S, 1355' E fr NW							
9	HARN:		5		nic Seds.	4.62		30E-33 SE-S	_			fr NE c		
10	HARN:		7	Volca	nic Seds.	4.62	25S/	30E-34 SE-S	<u> W</u>	4725' S.	1877' E	fr NW c	or S 34	
* Alluv	ium, CRB,	Bedroc	k											
	Well	First	CMA	CNAT	Well	Seal	Casing	Liner	Pe	rforations	Well	Draw	Toot	
Well	Elev	Wate	r SWL	SWL Date	Depth	Interval	Intervals	Intervals	0	r Screens	Yield	Down	Test Type	
	ft msl	ft bls	<u> </u>		(ft)	(ft)	(ft)	(ft)		(ft)	(gpm)	(ft)		
1	4152	107	86	05/02/08	200	0-20	0-92	None	No		4000 2800	10	P P	
3	4162	104	104	02/11/11 01/28/11	167 195	0-18 0-24	0-60 0-102	None None	No		2800	5	P	
4	4135	88	88	10/21/11	170	0-18	0-102	None	No		1000	<del>                                     </del>	Air	
5	4159	100	92	02/10/08	280	0-35	0-35	None	No		1000	140	P	
6	4138	94	94	08/15/12	232	0-18	0-94	None	No		800		Air	
7	4138	107	107	08/24/13	310	0-18	0-183	None	No		1000		Air	
8	4129	75	70	02/01/10	170	0-18	0-107	None	No		1000	-	Air	
9	4148	117 349			0-105 0-64	0-105 0-77				1000 550	102	Air P		
	10         4165         349         98         04/30/06         375         0-64         0-77         None         None         550         102         P           Use data from application for proposed wells.													
A4.														
A5. 🛚	Provis manage (Not all	ions of ment o	the Malhe f ground w rules contain	eur Lake	cally conn	ected to su	rface water	ules relative t						
A6. [	Well(s) Name of	f admii	nistrative a	rea:,	,	,	, t	ap(s) an aquit	fer lin	nited by an	administ	rative res	triction.	

Version: 08/15/2003

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:		sed upon available data, I have determined that ground water* for the proposed use:
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)   Th (provided that the above findings are overcome)     ii.   The permit should contain condition #(s)   Th (provided that the above findings are overcome)     iii.   The permit should contain special condition(s) as indicated in item 2 below,     iii.   The permit should contain special condition(s) as indicated in item 3 below;   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):  Ground water availability remarks: The Region Manager recommends use of Condition 7N in the Harney Valley. These wells are within an area known as Weaver Springs are for several valvas. These data have disclosed a pattern of vear-to-vear groundwater level declines. This is significant, given the fact that several existing groundwater permits in the area have vet to be developed. In addition, other recent applications are pending in the area	a.	
d.   will, if properly conditioned, avoid injury to existing ground water rights or to the ground water resource:   The permit should contain condition #(s)	b.	<b>will not</b> <i>or</i> □ <b>will</b> 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;
i. The permit should contain condition #(s) TN (provided that the above findings are overcome) iii. The permit should be conditioned as indicated in item 2 below.  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 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):  Ground water availability remarks: The Region Manager recommends use of Condition 7N in the Harney Valley. These wells are within an area known as Weaver Springs, which has experienced significant groundwater development for irrigation in recent vears. As a result of this, the Department has been collecting quarterly water-level data at selected wells in the Weaver Springs area for several vears. These data have disclosed a pattern of vear-to-vear groundwater permits in the area have yet to be developed. In addition, other recent applications are pending in the area. Thus, the water-level declines are likely to increase in time as these estigning and pending rights are more fully developed. Issuance of a permit for the amounts proposed here will likely result in water-level declines at the proposed wells would also likely result in an increased rate of water-level declines and possibly also substantial interference at existing and proposed wells with senior rights.  Special Permit Condition: The permit	c.	will not or will likely to be available within the capacity of the ground water resource; or
b. Condition to allow ground water production from no shallower than	d.	<ul> <li>i.  The permit should contain condition #(s) 7N (provided that the above findings are overcome)</li> <li>ii.  The permit should be conditioned as indicated in item 2 below.</li> </ul>
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Date: April 18, 2014

Version: 08/15/2003

Application G-17834 continued

sais for aquifer confinement evaluation: Water levels in these and nearby wells are coincident with or somewove the depths where groundwater was first encountered. Regionally, this aquifer is likely unconfined and distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be sumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond on hat are evaluated for PSI.  Well SW Surface Water Name Elev Elev fit msl fit	Basis for aquifer confinement evaluation: Water levels in these and nearby wells are coincident with or somewhabove the depths where groundwater was first encountered. Regionally, this aquifer is likely unconfined and dist to Harney or Malheur Lakes.  90-09-040 (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. Include in this table any streams located beyond one that are evaluated for PSI.    Well   SW	action of the applicant of the surface water source. Limit evaluation to that surface water source.    Sw		Aquifer or Proposed Aquifer						Confined Unconfined						
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Well   SW   Well <   Qw >   Water   Water   1%   Natural   of 80%   Matural   for 14 mile?   5 cfs?   Right   Right Q   ISWR2   Flow   Natural   (%)   In	Well   SW   Well <   Qw >   Water   Water   1%   Natural   of 80%   Interference   for S   Interference   Inte	SW Well < Qw > Water Water   Water   1%   Natural   of 80%   30 days   Interference   for Substitution   SwR2   Flow   Natural   (%)   Interference   for Substitution   Interference   for Substitution   SwR2   Flow   Natural   (%)   Interference   for Substitution   Interference   for Substitution   Interference   for Substitution   Interference   for Substitution   Interference   Interference														
Well # 1/4 mile?   5 cfs?   Right   Right Q   15WR2   Flow   Natural   600 days   In	Well   #   1/4 mile?   5 cfs?   Right   Right Q   190   Flow   Natural   Well   Interest   Well   Well   Flow   Natural   Well   Well   Interest   Well	# 1/4 mile?   5 cfs?   Right   Right Q   15WR2   Flow   Natural   600 days   Interfer	Vater A  O-09-( onnectore pertine reque	vailal  O40 (4 ed and nent to	bility B  : Eval l less the other suate aga	Basin the valuation of nan 1 miles urface water inst the 19	suggests an ined in the literature well(s) are local stream impacts from a surface er source, and now of 80% naturell. Any checke	ted within: for each well water source. tot lower SW sal flow for the	No WAB of that has be Limit evaluates to be pertinent.	ection with For the ground lata in this a en determine uation to instantion the strewhich the strewater Availa ell is assumed	d or asserteam ream under bility Edito have	sumed ights a der evaluation (we the	to be hydrad minimaluation i WAB). I potential	draulica num stres s tributas If Q is no to cause	ally am flory. Coot dist	ows omp
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<del>╶┤╶┤╞╡┤╞╡╎</del> ┈┈┼╌┈┼ <del>╞╡╎</del> ┈┈┼┾			Vater A  O-09-0  Onnectore pertine requely well,	Vailal  O40 (4) ed and nent to ested ruse full  SW	bility B  bility B  control  con	Basin the valuation of nan 1 miles inst the 19 or each we will a like the control of the control	suggests an ine d in the literature well(s) are loca stream impacts a from a surface er source, and now of 80% natural ell. Any checke Instream Water s? Right	ted within: for each well water source. ot lower SW sal flow for the d  box indic  Instream Water Right Q	No WAB of that has be Limit evaluates to we pertinent waters the way and the way and the way are the way and the way are the w	ection with For the ground lata in this a sen determine uation to instance which the strewater Availa ell is assumed 80% Natural Flow	rea. d or ass ream ream une bility Ed to hav	sumed ights a der evaluation (we the world) 1% 80% ural	to be hydrad minimaluation i WAB). I potential Interfer	draulica num stres s tributa If Q is no to cause rence days	ally am flory. Coot dist	ows omp cribu
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Date: April 18, 2014

Application G-17834 continued

C1. 690-09-040 (1): Evaluation of aquifer confinement:

C. GROUND WATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040

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.

S	sw #	Q	w > cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw 19 ISW	6	80% Natural Flow (cfs)	Qw > of 80 Natu Flow	0% ıral	Interference @ 30 days (%)	Pote for S Inte Assu	ubst.

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-D	istributed	Wells											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
	ence CFS												
Well	outed Wel SW#	is Jan	Feb	Mar	A	Mov	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Well	3W#	Jan %	reb	Wiai	Apr %	May %	Jun %	<del>Jui</del> %	Aug %	Зер	% %	NOV %	%
Well Q	as CES	- ~	- 10	- A	70	70	70	70	70	~		70	70
	ence CFS												
mener	Chec Cr 5	%	%	- %	%	%	%	%	%	%	%	%	%
Well Q	as CFS	-											
	ence CFS												
	T	%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
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Well Q	as CFS						-						
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Well Q	as CFS												
Interfer	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
	as CFS												
Interfer	ence CFS												
(A) = To	otal Interf.	1											
	% Nat. Q												
	% Nat. Q												
( <b>D</b> ) = (A	A) > (C)	<b>V</b>	<b>√</b>	<b>V</b>	V	<b>V</b>	<b>√</b>	1	<b>√</b>	<b>/</b>	1	<b>√</b>	<b>V</b>
	/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.

Version: 08/15/2003

plication G-1/834 continued	Date: April 18, 2014
Basis for impact evaluation:	
690-09-040 (5) (b) The potential to impair or detrimenta Rights Section.	lly affect the public interest is to be determined by the Wa
☐ If properly conditioned, the surface water source(s) can be a under this permit can be regulated if it is found to substantiall i. ☐ The permit should contain condition #(s)	y interfere with surface water:
<ul> <li>i.  The permit should contain condition #(s)</li> <li>ii.  The permit should contain special condition(s) as</li> </ul>	s indicated in "Remarks" below;
SW / GW Remarks and Conditions	
References Used: <u>Local well logs; local recent reviews; GW</u> Corcoran, 1972, Geologic Map of the Burns Quadrangle, Ore	gon, USGS Miscellaneous Geologic Investigations Map I
680; Memo by Ivan Gall, 1/15, 2008: Stream Assessment for I Groundwater Study, DRAFT Report by Aquaveo, LLC for th	Division 9 Review in the Malheur Lakes Basin; Harney Be Harney County Watershed Council, November 2012.

Applica	ation G- <u>17834</u>	continued	Date: April 18, 2014
D. <u>W</u>	ELL CONSTRUCTIO	ON, OAR 690-200	
D1.	Well #:	Logi	d:
D2.	<ul><li>a.  review of the</li><li>b.  field inspecti</li><li>c.  report of CW</li></ul>	well log; on by RE	nt well construction standards based upon:
D3.			ner comment is described as follows:
			pliance Section for a review of existing well construction.
Water	Availability Tables		

