PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO:		Wate	r Rights S	ection		DateApril 3, 2006								
FROM	[:	Grou	nd Water/	Hydrology	Section		ael Zwart							
SUBJI	ECT:	Appli	ication G-	16599			ewer's Name persedes re	view of		N/A	Date of Re	view(s)		
OAR 6 welfare to deter the pres	90-310-1 c, safety a mine who sumption	30 (1) (1) (1) and heal ether the criteria	The Depart th as descr e presumpt	ibed in ORS ion is establi ew is based	resume that 537,525, D shed, OAR upon avail	t a proposi epartment 690-310- able infor	ed groundw t staff reviev 140 allows t mation and	ater use will y ground wat he proposed I agency poli Buerman	er app use be icies i	re the press plications u e modified n place at	ervation of the condition of the conditi	of the pub R 690-31 tioned to of evalu	10-140 meet	
A1.	Applica	nt(s) se	eek(s) <u>4.0</u>	1 cfs from	n two	well(Malheur I ad Map: <u>N</u>		east Harne	y Lake		_ Basin,	
A2. A3.				igation 314. ach and nu				March 1 to			ınder log	gid):		
Well	Log		Well # Aquifer*		Propose Rate(cf	s) (T	Location /R-S QQ-Q)		2250' N	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36				
1 2	HARN 50472 MALH 2323				3.12 0.89	26S/30E-10 SW-SW 26S/30E-15 SE-NE			65' N, 1254' E fr SW cor S 10 93' N, 760' W fr E ½ cor S 15					
3	WADII 2323								_	,				
5														
	ium, CRB,	Bedrocl	k							<u> </u>				
Well	Well Elev ft msl	First Wate ft bls	r SWL	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)		rforations Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type	
1	4158	88	88 32/66	10/15/99	285	0-18	0-39	None	Not		1400	25	P P	
2	4228	169	32/00	11/15/81	400	0-20	0-248	None	Noi	16	?	?	P	
A4. <u>Malhe</u>	Comme	ents: <u>M</u> v; vielo	l informat	is same as	whited ou	t; the "we	ll seal-mate	ion listed is serial used" li	ne al	so appear:	s doctore	ed from t		
A5. 🛛	manage (Not all	ment o	ules contai	ater hydrauli n such provi	sions.)	cted to sur	rface water	ules relative t	are	not, activa	ated by th	is applic		
A6. 🗌	Name o	of admin	nistrative ai	rea:		,	, ta	ı p(s) an aquif	er lim	nited by an	administ	rative res	triction.	

Applica	tion (G- <u>16599</u>	continued	Date: April 3, 2006
B. <u>GR</u>	OUN	D WATER A	VAILABILITY CONSIDERATIONS,	, OAR 690-310-130, 400-010, 410-0070
B1.	Bas	ed upon availat	ole data, I have determined that ground water	r* for the proposed use:
	a.	period of th	ropriated, is not over appropriated, or in proposed use. * This finding is limited to it in as prescribed in OAR 690-310-130;	cannot be determined to be over appropriated during any the ground water portion of the over-appropriation
	b.			equested without injury to prior water rights. * This finding determination as prescribed in OAR 690-310-130;
	c.	will not or	will likely to be available within the cap	pacity of the ground water resource; or
	d.	i. 🛭 T1 ii. 🖾 T1	perly conditioned, avoid injury to existing go the permit should contain condition #(s)7C he permit should be conditioned as indicated the permit should contain special condition(s)	in item 2 below.
B2.	a.	☐ Condition	to allow ground water production from no de	eeper than ft. below land surface;
	b.	☐ Condition	to allow ground water production from no sh	hallower than ft. below land surface;
	c.	Condition water reser	to allow ground water production only from to voir between approximately ft. a	the <u>basalt and volcanic sediments</u> ground and <u>ft. below land surface;</u>
	d.	occur with issuance of Water Sect Describe inju	this use and without reconstructing are cited to the permit until evidence of well reconstruction. ury —as related to water availability—that is 1	more of the above conditions. The problems that are likely to below. Without reconstruction, I recommend withholding tion is filed with the Department and approved by the Groun likely to occur without well reconstruction (interference w/, etc):
B3.	Gro	ound water avai	ilability remarks:	
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Application G-16599	continued	Date: April 3, 2006

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	Late Tertiary to Quaternary basalt and volcaniclastic sedimentary rocks				

Basis for aquifer confinement evaluation: Regionally, the aquifer may be more semiconfined to unconfined; well 1 appears to describe an unconfined shallow system, but well 2 appears to develop a more confined system.

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	Surface Water Name GW SW Elev Elev ft msl ft msl Distance (ft) Hydraulically Connected? YES NO ASSUMED		Potential for Subst. Interfer. Assumed? YES NO		
1	1	Harney Lake	4070	4098*	14000		
2	1	Harney Lake	4162	4098	10800		
				T			

Basis for aquifer hydraulic connection evaluation: *Elevation from quad map (1983). It is generally accepted that Harney and Malheur Lakes are regional discharge areas for the ground-water system in the basin. At well 1, the gradient appears to be opposite of what is expected. Despite this, I expect hydraulic connection exists with the lake, but actual interference will likely be very diffuse.

Water Availability Basin the well(s) are located within: No WAB in this area.

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?

Date: April 3, 2006

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.

	istributed		.				_			_	_		
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	9/6	%	%	%	%	%	%	%	%	%	9/0
Well Q													
Interfere	nce CFS												
Distrib	uted Well	s											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	9/6	%	%	9/6	%	9/0	%
Well Q	as CFS												
Interfere	nce CFS		- 5										
		0/u	%	9/0	9/4	%	9/0	%	%	9/6	%	%	%
Well Q	as CFS							:					
Interfere	nce CFS												
		%	%	%	11/4	11/6	%	%	%	9/0	%	%	%
Well Q	as CFS					_							
Interfere	nce CFS												
		%	%	9/0	9/0	1/0	%	%	%	9/0	%	%	%
Well Q	as CFS						i						
Interfere	nce CFS						Ì						
		%	¹⁷ /0	%	%	%	%	%	º/a	%	9/4	%	%
Well Q	as CFS												
Interfere	nce CFS					Ī							
		%	<u>%</u>	%	%	%	9/6	%	%	%	9∕₀	9/0	9/0
Well Q a	as CFS												
Interfere	nce CFS												
(A) = Tot	tal Interf.										I		
	% Nat. Q										:		
(C) = 1 %													
(D) = (A)		V	V	V	1	V	1	1	V	1	1	4	1
(E) = (A / A)	/ B) x 100	Ψ/a	%	%	%	9/6	%	%	%	9/6	9∕u	1/6	9/11

(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.

indirect, I believe it	t is inappropriate to attempt calculation of the potential interference using the Wozniak modifi
of the Hunt model.	In any case, there are no water availability values determined in the area.
690-09-040 (5) (b Rights Section.	b) The potential to impair or detrimentally affect the public interest is to be determined by the
under this permit of	itioned, the surface water source(s) can be adequately protected from interference, and/or ground wat can be regulated if it is found to substantially interfere with surface water: permit should contain condition #(s)
ii. The p	permit should contain special condition(s) as indicated in "Remarks" below;
	()
W / GW Remarks a	and Conditions

Applic	ion G- <u>16599</u> continued Date: <u>April 3, 2006</u>
D. <u>WI</u>	LL CONSTRUCTION, OAR 690-200
D1.	Well #: Logid:MALH 2323
D2.	THE WELL does not meet current well construction standards based upon: a. review of the well log; b. field inspection by report of CWRE d. other: (specify)
D3.	THE WELL construction deficiency: a.
D4.	THE WELL construction deficiency is described as follows: Constructor appears to have doctored the same well log to be used at two locations, neither of which coincides with the location here.
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.
D6. [b.
	Well construction deficiency has been corrected by the following actions:
D8. [(Enforcement Section Signature) Route to Water Rights Section (attach well reconstruction logs to this page).

WATER RESOURCES DEPARTMENT pril 3 ,200 6 **MEMO** TO: Application G-16599 GW: Michael Zwar (Reviewer's Name) FROM: SUBJECT: YES The source of appropriation is within or above a Scenic Waterway NO YES 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

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

