## PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO:		Water	Rights S	ection				Date	e Februar	y 3, 201	1		
FROM	<b>[:</b>	Groun	d Water/	Hydrology	Section _	Mich	ael Zwart						
CLIDIE	CT.	A 1.	4: C	15/51			iewer's Name	:c					
SUBJE	2C1:	Applic	cation G-	17451		Su	persedes re	view oi		Date of Re	view(s)		
	- ~				~= ~==		_						
OAR 6	<b>90-310-1</b> , <i>safety a</i> mine wh	30 (1) T nd healt ether the	he Depart h as descr presumpt	ribed in ORS tion is establ	oresume the 537.525. ished. OA	<i>at a propos</i> Departmen R 690-310	sed groundw t staff reviev -140 allows	w ground wat the proposed	ensure the presser applications use be modifie icies in place a	under OA d or cond	AR 690-3 litioned to	10-140 meet	
<b>A.</b> <u><b>GE</b></u>	NERAL	INFO	RMATIO	<u>ON</u> : A	pplicant's	Name:	Chris Ray	•		County:	Malheu	ır	
A1.	Applica	ant(s) see	ek(s) <b>1.8</b>	<b>494</b> cfs fro	m <b>one</b>	well	(s) in the	Malheur				Basin,	
		well(s) in the <u>Malheur</u> Willow Creek subbasin Quad Map: Ironside									,		
		VV IIIO W	CICCK			subc	asii Qu	аа тар. <u>11</u>	Olisiac				
A2.	Propose	ed use:	Irr	igation, 120	.1 acres	Sea	sonality:	Not stated			• 1\		
A3.	Well an	id aquife	er data ( <b>att</b>	tach and nu	mber logs	for existin	ng wells; ma	irk proposed	l wells as such	under lo	gid):		
Wel 1	Logid Applicant s Well #		A C	oposed quifer*	Propos Rate(c:		Location /R-S QQ-Q)		Location, metes and bound 2250' N, 1200' E fr NW cor 79.2' N, 2046'W fr SE cor				
1	MALI	H 27	2		. Rocks	1.849	4 14S/3	89E-21 SW-	SE 79.2' N	79.2' N, 2046'W fr SE cor S 21			
2													
3													
5													
	um, CRB,	Bedrock				I	L		<u> </u>				
	Well	First			337 11	G 1	G :	Liner	D.C.	Wall	Descri		
Well	Elev	Water	SWL	SWL Well Depth		Seal Interval	Casing Intervals	Intervals	Or Screens			Test	
	ft msl	ft bls	ft bls	Date	(ft)	(ft)	(ft)	(ft)	(ft)	(gpm)	(ft)	Type	
2	3765	72	33	8/6/1951	320	None*	0-300	None	60-300	800	89	P	
Use data	from ann	lication f	or proposed	d wells							<u> </u>		
A4. with bo	Commoth me ar	ents: <u>*T</u> nd the a	his well w	vas apparen The applic	ant is willi	ing to repa	ir the well l	by installing	rd and Ivan Ga a well seal. I i o be determine	recomme	nd that t	the seal	
A5. 🛛	manage (Not all	ment of basin ru	iles contai	ater hydraul in such prov	ically conr isions.)	nected to su	ırface water	ules relative t	o the developm <b>☐ are not</b> , active	ent, class vated by t	ification his applic	and/or cation.	
A6. 🗌	Name o	of admini	istrative a	rea:				p(s) an aquif		administ	rative res	striction.	

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В. <u>GI</u>	ROUN	ND WATER AVAIL	ABILITY CONSIDERATION	IS, OAR 690-310-130, 400	-010, 410-0070					
B1.	Bas	sed upon available data	a, I have determined that ground w	ater* for the proposed use:						
	a.	period of the prop		<b>not</b> over appropriated, $or \boxtimes$ <b>cannot be determined to be</b> over appropriated during any * This finding is limited to the ground water portion of the over-appropriation in OAR 690-310-130;						
	b.		II likely be available in the amount ground water portion of the inju							
	c.	☐ will not or ☐ wi	ill likely to be available within the	capacity of the ground water r	esource; or					
	d.	<ul><li>i.</li></ul>	conditioned, avoid injury to existing it should contain condition #(s) it should be conditioned as indicate it should contain special condition	7N ed in item 2 below.						
B2.	a.	Condition to allo	w ground water production from n	o deeper than	ft. below land surface;					
	b.	☐ <b>Condition</b> to allo	w ground water production from n	o shallower than	ft. below land surface;					
	c.	Condition to allow water reservoir be	w ground water production only from tween approximately	om theft. below la	ground and surface;					
	d.	to occur with this	on is necessary to accomplish one use and without reconstructing are nee of the permit until evidence of the Section.	cited below. Without reconstr	ruction, I recommend					
			s related to water availability— that not within the capacity of the resou							
В3.		ound water availability playing relatively stabl	remarks: <u>Nearby State Obser</u> e water levels.	vation wells (MALH 28 and	MALH 40) have been					
	_									

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

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

Wel 1	Aquifer or Proposed Aquifer	Confined	Unconfined
2	Interbedded sand, gravel, clay and sandstone,	$\boxtimes$	
	likely tuffaceous sedimentary rocks (Tst) of GMS-7		

Basis for aquifer confinement evaluation: <u>Significant clay beds are described above the shallowest water-bearing zone.</u>
Review of local well logs confirms that these clay beds are likely extensive. The static water levels are above the water-bearing zones.

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 Elev Elev Con		Hydraulically Connected? YES NO ASSUMED	Potential for Subst. Interfer. Assumed? YES NO		
2	1	South Willow Creek	±3730	3755	400		
2	2	Middle Willow Creek	±3730	3750	1500		
2	3	Willow Creek	±3730	3720	2800		

Basis for aquifer hydraulic connection evaluation: The creeks are within deposits of Quaternary alluvium and are not likely incised to the level of the shallowest water-bearing zone of the sedimentary rocks within one mile of the well. There is likely hydraulic connection between the sedimentary deposits and the adjacent and overlying alluvium. The head relationship suggests that indirect and diffuse interference is likely with a downstream reach of Willow Creek beyond a mile.

Water Availability Basin the well(s) are located within: 31011926 WILLOW CR> MALHEUR R- AB LONG CR; 31011929 WILLOW CR> MALHEUR R- AB S WILLOW CR; 71462 S WILLOW CR> WILLOW CR- AT MOUTH.

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 < 1/4 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?

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C3b. **690-09-040 (4):** Evaluation of stream impacts <u>by total appropriation</u> 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 sorti	on door	not apply			_	_		

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-E	Distributed	Wells											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfer	rence CFS												
			l						l				
Distri	buted Wel	ls											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfe	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfe	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfer	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
,	rence CFS												
$(\mathbf{A}) = \mathbf{T}$	otal Interf.												
(B) = 80	) % Nat. Q												
(C) = 1	% Nat. Q												
( <b>D</b> ) = (A	A) > (C)	<b></b>	<b>√</b>	<b>√</b>	<b>√</b>	$\checkmark$	<b>√</b>	<b>√</b>	<b>/</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
$(\mathbf{E}) = (\mathbf{A}$	A / B) x 100	%	%	%	%	%	%	%	%	%	%	%	%

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690-09-040 (5) (b) The potential to impair or detrimentally affect the public interest is to be determined by the Rights Section.  If properly conditioned, the surface water source(s) can be adequately protected from interference, and/or ground wa under this permit can be regulated if it is found to substantially interfere with surface water:  i.   The permit should contain condition 4(s)  ii.   The permit should contain special condition(s) as indicated in "Remarks" below;  SW/GW Remarks and Conditions  SW/GW Remarks and Conditions  References Used: Local well logs; water-level data at nearby wells; review of file G-17102; Geology of the Oregon		
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f the Delrey 10 hr, 20 Overdyengle, hr, Dweelre, et al. 1076 (CMC 7)		
f the Baker 1° by 2° Quadrangle, by Brooks, et al, 1976 (GMS-7).	W / GW Remarks an	ocal well logs; water-level data at nearby wells; review of file G-17102; Geology of the Oregon F
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D. <u>V</u>	VELL CO	NSTRUCTION	N, OAR 690-200			
D1.	Well #:	2	Logid: MALH 27			
D2.	a. ⊠ b. □	review of the w field inspection	meet current well construction standards based upon:  vell log; n by E Communication with Bob Maynard and Ivan Gall.			
D3.	THE WELL construction deficiency:  a.   constitutes a health threat under Division 200 rules;  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.	recomn	VELL constructi nend that a well ined by Enforce	ion deficiency is described as follows:There is no well seal reported on the well lo I seal be placed to deeper than 32 feet below land surface with the specific depth to be ement staff.	<u>g. I</u> <u>e</u>		
D5.	THE W	VELL 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.			nent Section. I recommend withholding issuance of the permit until evidence of well recoment and approved by the Enforcement Section and the Ground Water Section.	onstruction		
TH	IS SECTIO	ON TO BE CO	MPLETED BY ENFORCEMENT PERSONNEL			
D7.	☐ Well co	onstruction deficie	ency has been corrected by the following actions:			
	-					
				, 200		
	(Enforcement Section Signature)					
D8.	☐ Route		s Section (attach well reconstruction logs to this page).			

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