#### PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section								Date	e Se	<u>ptemb</u>	er 11, 20	006	
FROM	•	Groun	nd Water/Hy	drology	Section _	Micha	nel Zwart						
SUBJE	ECT:	Appli	cation G	16606			ewer's Name persedes r	eview of	Ap	<u>ril 27,</u>	2006 Date of Rev	riew(s)	
OAR 6 welfare to deter the pres	90-310-1: , safety armine whe sumption	30 (1) 7 and healt ther the criteria.	th as describe presumption This review	ent shall pe ed in ORS is establi is based	resume tha 537.525. I shed. OAR upon avai	at a propose Department R 690-310-1 lable infor	ed grounds staff revie 140 allows mation an	water use will on water use will on the ground water the proposed of agency policy policy by the Scham water	er applica use be m cies in p	e prese ations u odified lace at	rvation of nder OAl or condit the time	of the pub R 690-31 ioned to of evalu	0-140 meet
			RMATION						ino		<u>**</u>	4300	
							Basin,						
	]	<u>Eightm</u>	ile Creek _			subb	asın Q	uad Map: Pe	<u>etersbur</u>	<u>e</u>			
A2.	Propose	d use:	Irrig	ation, <u>434</u>	.6 acres (I	) Seas	onality: _	March 1 to	Octobe	r 31			
A3.	Well an	d aquif	er data (attac	h and nu	mber logs	for existin	g wells; m	ark proposed					
Well	Log	id	Applicant's Well #		posed	Propose Rate(cf		Location T/R-S QQ-Q)	L			ind bound fr NW cor	
1	Propo		1		uifer* CRB	5.0		/14E-3 SE-NV	V			fr NW co	
2	Propo		2	(	CRB	5.0	1N	/14E-4 SW-N	E	2405' S	, 187 <u>0</u> ° W	fr NW c	or S 3
3 4								<del></del>					
5							+						
* Alluvi	um, CRB,	Bedrocl	ζ .	•			•						
Well	Liby   Mater		r SWL	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perfora Or Sc	reens	Well Yield (gpm)	Draw Down (ft)	Test Type
1	725	200±	200±		350±	20-200*	20-200*		None				
2	530	200±	200±		350±	20-200*	20-200*	<del>  -</del>	None				$\vdash$
									-				
Use data	a from app	lication	for proposed v	vells.	l		!					l	
A4. applica referes basalt applica	Commation was ace. This well that ant's age	ents: *' s later a letter i will no	The revised of the re	constructi letter from t the appli o have the my opini	n Larry T icants and potential on that th	oll of Tenr their ager for substa e proposed	neson Engi nt will wor antial inter	d seal depth of the control of the c	d July 2 partmen nearby	<mark>6, 2006</mark> it staff jurface	, which i to devel water so	s cited hop, if pos ources.	ere as a sible, a The
			-7				W W			-68.00-			7762
								340		-			
A5. 🗵	manage (Not al	ement o l basin i	rules contain	er hydrauli such provi	ically conn isions.)	ected to su	rface water	rules relative t	] are no	velopm t, activ	ent, class ated by th	ification in a specific applies	and/or ation.
A6. [	Name of	of admi	nistrative are	a:				tap(s) an aquif		d by an	administ	rative res	striction.

Applic	ation	G- <u>16606</u>	continued		Date: September 11, 2006						
B. <u>G</u> 1	<u>ROU</u> ì	ND WATER A	VAILABILITY CONSIDER	ATIONS, OAR 690-3	10-130, 400-010, 410-00	<u>70</u>					
B1.	Bas	sed upon availa	ble data, I have determined that gr	ound water* for the prope	osed use:						
	a.	period of the	propriated, is not over appropriate in its not over appropriate in its proposed use. * This finding is its notation as prescribed in OAR 690-310	limited to the ground wa							
	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 o	$r \square$ will likely to be available with	thin the capacity of the gro	ound water resource; or						
	d.	i. 🛛 T	operly conditioned, avoid injury the permit should contain condition the permit should be conditioned as	1#(s)7N, 7K*		source:					
		iii. 🔲 T	he permit should contain special co	ondition(s) as indicated in	item 3 below;						
B2.	a.	☐ Condition	n to allow ground water production	from no deeper than	ft. below lan	d surface;					
	b.	☐ Condition	n to allow ground water production	from no shallower than _	ft. below lan	d surface;					
	c.	Condition water reser	to allow ground water production rvoir between approximately	only from the ft. and	Basalt _ ft. below land surface;	ground					
	d.	occur with issuance of Water Sect  Describe inj	nstruction is necessary to accomple this use and without reconstructing of the permit until evidence of well stion.  ury—as related to water availabiling rights, not within the capacity of the structure of the	g are cited below. Without reconstruction is filed with ty—that is likely to occur	ut reconstruction, I recommen h the Department and approve without well reconstruction (i	d withholding ed by the Ground nterference w/					
В3.	con con	tinuously cased tinuously cased apleted in such	ilability remarks:*Use condition it is and continuously sealed to a mile and continuously sealed to a mile a manner that they allow ground comes apparent that the wells	nimum depth of 425 feet nimum depth of 230 feet I water to be developed	t below land surface. Well 2 t below land surface. The w	shall be ells may not be					
			(1.00 to 1.00								
				- III-EL							
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	-										
	_										
	_										

Application G-16606	continued

Date: September 11, 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	Basalt of the Columbia River Basalt Group		

Basis for aquifer confinement evaluation: <u>Ground water in CRB aquifers typically exists under confined conditions, except where shallow water-bearing zones are hydraulically connected to overlying unconfined aquifers or surface water sources.</u>

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	Spring Branch	525±	670	200			
1	2	Unn. Creek (McCoy?)	525±	600	1850			
1	3	Eightmile Creek	525±	280	5200			
1	4	Fifteenmile Creek	525±	300	5800			
2	1	Spring Branch	400±*	470	800			
2	2	Unn. Creek (McCoy?)	400±*	500	2700			
2	3	Eightmile Creek	400±*	280	1600			
2	4	Fifteenmile Creek	400±*	270	4600			

Basis for aquifer hydraulic connection evaluation: Both Eightmile and Fifteenmile creeks are locally incised within the basalt rocks and the likely head relationship and presence of springs in the area strongly suggest that shallow basalt aquifers discharges to these creeks locally, \*My estimate for head at well #2.

Water Availability Basin the well(s) are located within: 15mile Cr > Col R ab 8mile Cr (30410546) and 8mile Cr > 15mile Cr at mouth (71798).

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 < 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?
							<u> </u>			
<u> </u>										
									i	

Comments:

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?
					<u> </u>			
							-	

. 690-09-040 (5): Estimated impacts on hydraulically connected surface water sources greater than one mile as a

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-Distributed	Wells											
Well SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	%	%	11/4	9/6	%	%	%	%	9/6	%	%	%
Well Q as CFS												
Interference CFS		-										
									······			
Distributed Well		F 4				_			~			_
Well SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	%	%	%	1/4	9/6	¶/n	%	%	1/0	9/0	%	%
Well Q as CFS												
Interference CFS												
	%	%	9/6	9/4	%	%	%	%	⁰/₀	9/4	%	1/₀
Well Q as CFS												
Interference CFS										9		
	º/u	%	9/6	9/0	%	%	%	%	n/o	%	%	%
Well Q as CFS												
Interference CFS												
	%	"∕₀	9/0	%	%	%	º/o	%	1/0	%	9/4	9/0
Well Q as CFS												
Interference CFS												-
	<sup>10</sup> / <sub>0</sub>	%	9/4	9/0	%	º/u	%	9/0	11/0	%	%	%
Well Q as CFS												
Interference CFS												
	%	%	%	4/4	9/4	º/o	9/0	9/0	%	%	⁰/₀	°/u
Well Q as CFS												
Interference CFS												
					<u></u>							
(A) = Total Interf.									1			
(B) = 80 % Nat. Q												
(C) = 1 % Nat. Q												
(0) (1) 5 (0)	-/-	7		1.7	28	75	-2	-/-	DZ:	7	- 7	12
(D) = (A) > (C)	1/4	%	%	%	1/0	%	%	%	1/0	9/0	%	P/
$(E) = (A / B) \times 100$	<u></u>											%

(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.

Application G-16606continued	Date: September 11, 2006
** * * * * * * * * * * * * * * * * * * *	
Basis for impact evaluation:	
	3000 S
4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
C4b. 690-09-040 (5) (b) The potential to impair or detrimentally Rights Section.	y affect the public interest is to be determined by the Wate
25.  If properly conditioned, the surface water source(s) can be ad under this permit can be regulated if it is found to substantially i.  The permit should contain condition #(s)	
ii. The permit should contain condition #(s)	ndicated in "Remarks" below:
F(e) az -	,
26. SW / GW Remarks and Conditions Properly designed and constants zones, will not be hydraulically connected with the nearby creel accomplish this will likely be greater than the maximum (200 ft. site #1, which is higher in elevation. My proposed minimum cast of basalt water-bearing zones to below approximately 300 feet a	k reaches. The depth of casing and seal required to a) originally proposed in the application, especially at welling and seal depths are intended to limit the development
	1.000
A MARKET OF THE STATE OF THE ST	
References Used: <u>Nearby well logs; nearby recent reviews; recommunication with Marc Norton &amp; Brian Mayer; letter from</u>	gional geologic mapping, esp. by Hodge, 1941; personal Larry Toll dated July 26, 2006.

App	licati	ion G- <u>16</u>	6606 continued	Date: September 11, 2006
D 1	13.717:11	I CO	NICTRICTION OAD COO 200	
D	W CI	JL CO	NSTRUCTION, OAR 690-200	
D1.		Well #:	:Logid:	
D2.		THE W	VELL does not meet current well construction standards base	d upon:
		a. 🔲	review of the well log;	•
		ь. 🔲	field inspection by	
		с. 🔲	report of CWRE	
		d. 🔲	other: (specify)	
D3.			VELL construction deficiency:	
		a.	constitutes a health threat under Division 200 rules; commingles water from more than one ground water reservoir;	
			permits the loss of artesian head;	
			permits the de-watering of one or more ground water reservoirs;	
			other: (specify)	
D4.		THE W	VELL construction deficiency is described as follows:	
	9			
D5.		THE W	VELL a. ☐ was, or ☐ was not constructed according to original construction or most recent modification.	
			b.   I don't know if it met standards at the time o	f construction.
D6.			to the Enforcement Section. I recommend withholding issuance with the Department and approved by the Enforcement Section and	
TH	IS S	ECTIC	ON TO BE COMPLETED BY ENFORCEMENT PERS	ONNEL
D7		337-11	4.6.11	
טז.		well co	onstruction deficiency has been corrected by the following actions:	
	3			
	2			
	9			
	3			
				. 200
			(Enforcement Section Signature)	,,
D8.		Route	to Water Rights Section (attach well reconstruction logs to th	is nage)
<i>2</i> 0.	Ľ	Avoute (	to mater August Section (attach wen reconstruction logs to th	is hetc).
	- 32			

#### **PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS** TO: Water Rights Section Date April 27, 2006 FROM: Ground Water/Hydrology Section Michael Zwart Reviewer's Name Application G-<u>16606</u> Supersedes review of \_\_\_\_\_ N/A SUBJECT: Date of Review(s) **PUBLIC INTEREST PRESUMPTION; GROUNDWATER** OAR 690-310-130 (1) The Department shall presume that a proposed groundwater use will ensure the preservation of the public welfare, safety and health as described in ORS 537.525. Department staff review ground water applications under OAR 690-310-140 to determine whether the presumption is established. OAR 690-310-140 allows the proposed use be modified or conditioned to meet the presumption criteria. This review is based upon available information and agency policies in place at the time of evaluation. Applicant's Name: Paul and Dixie Schanno County: Wasco A. GENERAL INFORMATION: A1. Applicant(s) seek(s) <u>5.0</u> cfs from <u>two</u> well(s) in the <u>Hood</u> Eightmile Creek subbasin Quad Map: Petersburg A2. Irrigation, 434.6 acres (P) Seasonality: March 1 to October 31 Proposed use: Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under logid): A3. Applicant's Proposed Proposed Location Location, metes and bounds, e.g. Well Logid Well# Aquifer\* Rate(cfs) (T/R-S QQ-Q) 2250' N, 1200' E fr NW cor S 36 **Proposed** 1 CRB 5.0 1N/14E-3 SE-NW 1420' S, 1785' E fr NW cor S 3 2 2 Proposed -CRB-5.0 1N/14E-4 SW-NE 2405' S, 1870' W fr NW cor S 3 3 4 Alluvium, CRB, Bedrock Well First Well Well Seal Casing Liner Perforations Draw **SWL** SWL Test Well Elev Water Depth Interval Intervals Intervals Or Screens Yield Down ft bls Date Type ft msl ft bls (ft) (ft) (ft) (ft) (ft) (gpm) (ft) 725 200± 200± 350± 20-200\* 20-200\* None 2 200± 200± 530 350± 20-200\* 20-200\* None Use data from application for proposed wells. A4. Comments: The application does not propose an aquifer, but includes a well log (WASC 51428) that appears to develop the Dalles Formation and underlying basalt. However, due to the lower elevation of these sites, I feel confident that the proposed depth will be adequate to develop the CRB aquifers. Also, this is likely the better choice of aquifer to secure the desired rate. Therefore, I am assuming that the wells will develop basalt aquifers. \*The revised construction indicates that the casing and seal depth could vary between these values. A5. Provisions of the Hood Basin rules relative to the development, classification and/or management of ground water hydraulically connected to surface water $\square$ are, $or \bowtie$ are not, activated by this application. (Not all basin rules contain such provisions.) Comments: A6. Well(s) # \_\_\_\_\_ \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, tap(s) an aquifer limited by an administrative restriction.

Name of administrative area:

Comments:

cation (	G-16606 continued		Date: April 2	7, 2006							
ROUN	ND WATER AVAILABILITY CONSI	DERATIONS, OAR 69	00-310-130, 400-0	010, 410-0070							
	ed upon available data, I have determined t			\$							
a.	is over appropriated, is not over apperiod of the proposed use. * This find determination as prescribed in OAR 69	ling is limited to the ground	e determined to be	e over appropriated during any ne over-appropriation							
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	will not or will likely to be available within the capacity of the ground water resource; or									
d.	will, if properly conditioned, avoid in  i.	dition #(s) <u>7C</u> ned as indicated in item 2 b	pelow.	round water resource:							
a.	Condition to allow ground water produ	action from no deeper than		_ ft. below land surface;							
b.	Condition to allow ground water produ	action from no shallower th	nan	_ ft. below land surface;							
c.	Condition to allow ground water produ water reservoir between approximately	ction only from the	Basaltft. below land	ground ground							
	issuance of the permit until evidence of Water Section.  Describe injury —as related to water avaisenior water rights, not within the capacity	lability- that is likely to oc	ccur without well re	construction (interference w/							
Gro	ound water availability remarks:										
_											
_											
-											
		35000		0,00							
_											
		20.00									
-											

#### 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			
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L						

Basis for aquifer confinement evaluation: Ground water in CRB aquifers typically exists under confined conditions, except where shallow water-bearing zones are hydraulically connected to overlying unconfined aquifers or surface water sources.

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.

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Basis for aquifer hydraulic connection evaluation: <u>Both Eightmile and Fifteenmile creeks are locally incised within the basalt rocks and the likely head relationship and presence of springs in the area strongly suggest that basalt ground water discharges to these creeks locally. \*My estimate for head at well #2.</u>

Water Availability Basin the well(s) are located within: 15mile Cr > Col R ab 8mile Cr (30410546) and 8mile Cr > 15mile Cr at mouth (71798).

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 < 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?
1	3			71798	5.12	$\boxtimes$	3.74		<25%	$\boxtimes$
2	3			71798	5.12		3.74	$\boxtimes$	<25%	$\boxtimes$
2	4			30410546	4.0	X	4.6		<25%	
							·			

MJZ 5/3/06

Version: 08/15/2003

Application G-16606	continued

Date: April 27, 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?
							<u> </u>	
			_					
Comments:								

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	Wells											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	9/0	%	%	%	%	%	%	%	%
Well Q	as CFS			·									
Interfere	ence CFS												
Distrib	uted Well	le							<u> </u>				
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		9/0	%	7/0	%	%	0/6	%	%	%	%	0/0	9/0
Well Q	as CFS												
Interfere	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
	ence CFS												
		%	9/0	%	⁰⁄₀	0/a	%	0/0	%	9/0	%	%	%
Well Q	as CFS					-							
Interfere	ence CFS							_					_
		%	9/0	%	9/₀	9/0	%	%	%	9/0	0/n	º/o	9/0
Well Q	as CFS												
Interfere	ence CFS												
		0/6	%	n/o	%	%	%	%	u/o	%	%	%	%
Well Q	as CFS	= =		= = =			= =		=		=	=	= =
Interfere	ence CFS												
		%	%	%	%	9/0	%	0/4	%	%	%	%	%
Well Q	as CFS					T i							
Interfere	ence CFS												
(A) - T-	4-1 7-4												
	tal Interf.												
· ·	% Nat. Q		_										
(C) = 1 "	% Nat. Q												
(D) = (A	) > (C)	1	1	1	1	1	1	1	V	1	1	1	-
(E) = (A	/ B) x 100	%	%	%	9/0	%	%	%	7/0	9/11	%	9∕₀	°/o

(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.

plication G- <u>16606</u>	continued	Date: April 27, 2006
75 1 5 4		
Basis for impact eval	uation: <u>This section applies to</u> rm these calculations. See rem	o well #1 and Fifteenmile Creek. At this time, I believe that it is
unnecessary to perior	in these carculations. See rem	arks below.
\ <del></del>		
690-09-040 (5) (b)	The potential to impair or def	trimentally affect the public interest is to be determined by the Wate
Rights Section.		
☐ If properly condition	med the curfoce water course(s)	can be adequately protected from interference, and/or ground water use
under this permit can	the regulated if it is found to sui	bstantially interfere with surface water:
	mit should contain condition #(s	
ii. The per	mit should contain special condi	tion(s) as indicated in "Remarks" below;
<b>-</b> .	•	(-,
SW / GW Remarks and	Conditions The findings mad-	e above were the result of the vague and rather shallow proposed
well construction inform	nation provided in the applica	tion. Given that the depth to top of basalt is unknown and may be
rather shallow, especial	lly at well site #2, I made the pr	resumption that the applicant intends to develop the shallowest
water-bearing zones en	<u>countered at each site. These </u>	shallow zones are in hydraulic connection with the nearby reaches o
Eightmile and Fifteenm	ile creeks. Properly designed	and constructed basalt wells, which develop deeper water-bearing
zones, can likely avoid i	he findings of PSI with the nex	arby creek reaches. The depth of casing and seal required to
in elevation.	ly be greater than the maximu	ım (200 ft.) proposed here, especially at well site #1, which is higher
in elevation.	7	
1.2		
References Used: Neg	rhy well logs: nearby recent r	eviews; regional geologic mapping, esp. by Hodge, 1941; personal
communication with M.	arc Norton & Brian Mayer.	eviews, regional geologic mapping, esp. by modge, 1941, personal
	AT CITAL OF SHARE THE VOS	<u> </u>
12		
CV Night		
O		
61		

Appli	ication G- <u>16606</u>	continued	Date: April 27, 2006
D. <u>W</u>	VELL CONSTRUCT	ΓΙΟΝ, OAR 690-200	
D1.	Well #:	Logid:	
D2.	a. review of b. field inspect. report of C	ction by	tandards based upon:
D3.	a. constitutes b. commingle c. permits the	ruction deficiency:  a health threat under Division 200 rules water from more than one ground we loss of artesian head;  e de-watering of one or more ground we cify)	rater reservoirs;
D4.	THE WELL const	ruction deficiency is described as fol	llows:
	-	3 - 3	
D5.		b. I don't know if it met standard reement Section. I recommend withh	
		eficiency has been corrected by the fol	
D8.		ent Section Signature) ights Section (attach well reconstruc	

### WATER RESOURCES DEPARTMENT April 27,2006 **MEMO** Application G- /6606 TO: GW: Michael Zwart (Reviewer's Name) FROM: SUBJECT: YES The source of appropriation is within or above a Scenic Waterway 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 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.

Jan	Feb	Mar	Арг	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				,							

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

Exercise of this permit is calculated to reduce monthly flows in

which surface water flow is reduced.

12 | 1.60 | 5.46 | 3.84 | 0.00 | 0.00 | 0.00 | 0.00 | 10.90

DETAILED REPORT OF INSTREAM REQUIREMENTS
Water Availability as of 4/27/2006 for
FIFTEENMILE CR > COLUMBIA R - AT MOUTH

Watershed ID #: 70262 Basin: HOOD Exceedance Level: 80 Time: 14:45 Date: 04/27/2006 |-----ISWRs------| APP #|IS 70262|MF 190| 0| 0| 0| 0| 0 MAXIMUM \*\*\*\*\* Status | Cert. | Cert. | 
 1
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 6 | 20.00 | 20.00 | 7 | 13.00 | 13.00 | 13.00 12.90 8 İ 13.00 4.00 9 | 10 | 4.00 | 11 | 4.00 | 12 | 4.00 | 
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### DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION Water Availability as of 4/27/2006 for

EIGHTMILE CR > FIFTEENMILE CR - AT MOUTH

Watershed ID #: 71798 Basin: HOOD Exceedance Level: 80
Time: 14:45 Date: 04/27/2006

t	Ne	Instream	Reserved	Expected	Consumptiv	Natural	Month
1	Wate	Require-	Stream	Stream	Use and	Stream	ĺ
. 4	Availabl	ments	Flow	Flow	Storage	Flow	
	2.3	10.00	3.48	15.80	0.27	16.10	1
1	13.9	10.00	15.90	39.80	0.35	40.20	2
	6.2	15.00	22.90	44.10	0.39	44.50	3
	4.1	26.00	6.90	37.00	6.75	43.80	4
ì	-15.6	26.00	5.37	15.80	18.00	33.80	5
1	-25.0	26.00	5.14	6.14	15.00	21.10	6
	-9.8	10.80	1.37	2.34	4.48	6.82	7
. 1	-4.3	5.12	0.69	1.43	2.31	3.74	8
4	-6.7	7.68	0.91	1.84	2.38	4.22	9
1	-4.0	8.37	1.14	5.51	0.25	5.76	10
	-3.3	10.00	1.55	8.23	0.25	8.48	11
.(	-2.8	10.00	1.60	8.74	0.26	9.00	12
	1130	9950	4000	22900	3070	25900	Stor-50%

### DETAILED REPORT OF CONSUMPTIVE USES AND STORAGES Water Availability as of 4/27/2006 for

EIGHTMILE CR > FIFTEENMILE CR - AT MOUTH

Watershed ID #: 71798 Basin: HOOD Exceedance Level: 80
Time: 14:45 Date: 04/27/2006

1.										
1	10 St	orage	Irrig   M	unic  Ir	nd/Man Co	ommer  Do	omest   Ag	ricul  (	Other	Total
1										
	1	0.03	0.00	0.00	0.05	0.00	0.12	0.08	0.00	0.27
-1	2	0.11	0.00	0.00	0.05	0.00	0.12	0.08	0.00	0.35
	3	0.15	0.00	0.00	0.05	0.00	0.12	0.08	0.00	0.39
	4	0.05	6.46	0.00	0.05	0.00	0.12	0.08	0.00	6.75

12 | 1.60 | 5.46 | 3.84 | 0.00 | 0.00 | 0.00 | 0.00 | 10.90

DETAILED REPORT OF INSTREAM REQUIREMENTS Water Availability as of 4/27/2006 for FIFTEENMILE CR > COLUMBIA R - AT MOUTH

!				ISWRB-				
APP #	IS 70262	MF 190	0	0	0	0	0	MUMIXAM
Status	Cert.	Cert.						
1	4.00	4.00	0.00	0.00	0.00	0.00	0.00	4.00
2	4.00	4.00	0.00	0.00	0.00	0.00	0.00	4.00
3	13.00	13.00	0.00	0.00	0.00	0.00	0.00	13.00
4	20.00	20.00	0.00	0.00	0.00	0.00	0.00	20.00
5	20.00	20.00	0.00	0.00	0.00	0.00	0.00	20.00
6	20.00	20.00	0.00	0.00	0.00	0.00	0.00	20.00
7	13.00	13.00	0.00	0.00	0.00	0.00	0.00	13.00
8	12.90	13.00	0.00	0.00	0.00	0.00	0.00	13.00
9	4.00	4.00	0.00	0.00	0.00	0.00	0.00	4.00
10	4.00	4.00	0.00	0.00	0.00	0.00	0.00	4.00
11	4.00	4.00	0.00	0.00	0.00	0.00	0.00	4.00
12	4.00	4.00	0.00	0.00	0.00	0.00	0.00	4.00

## DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION Water Availability as of 4/27/2006 for

FIFTEENMILE CR > COLUMBIA R - AB EIGHTMILE CR
Watershed ID #: 30410546 Basin: HOOD Exceedance Level: 80
Time: 14:46 Date: 04/27/2006

Month	Natural   C	onsumptiv	Expected	Reserved	Instream	Ne
I	Stream	Use and	Stream	Stream	Require-	Wate:
	Flow	Storage	Flow	Flow	ments	Availabl
1 !	18.30	0.55j	17.80	28.70	4.00	-14.9
2	51.30	0.57	50.70	43.50	4.00	3.2
3	51.60	0.56	51.00	32.20	13.00	5.8
4	42.40	12.40	30.00	17.00	20.00	-7.0
5	50.50	33.20	17.20	6.18	20.00	-8.9
6	33.00	28.00	5.03	0.92	20.00	-15.9
7	8.35	8.69	-0.35	0.00	13.00	-13.3
8	4.92	4.71	0.21	0.00	13.00	-12.8
9	4.60	4.83	-0.24	0.00	4.00	-4.2
10	5.80	0.52	5.28	1.70	4.00	-0.4
11	8.61	0.52	8.09	3.35	4.00	0.7
12	11.70	0.53	11.20	9.30	4.00	-2.1
cor-50%	30900	5753	25200	8500	7450	1060

# DETAILED REPORT OF CONSUMPTIVE USES AND STORAGES Water Availability as of 4/27/2006 for FIFTEENMILE CR > COLUMBIA R - AB EIGHTMILE CR

Watershed ID #: 30410546 Basin: HOOD Exceedance Level: 80

Time:	14:46						Da	ate: 04	/27/2006	
Mo Sto	rage	Irrig	Munic   Ir	nd/Man C	Commer	Domest	gricul	Other	Total	
1	0.03	0.00	0.38	0.00	0.00	0.05	0.09	0.00	0.55	
2   3	0.05	0.00	0.38 0.38	0.00	0.00	0.05	0.09	0.00	0.57 0.56	
4	0.04	11.90	0.38	0.00	0.00	0.05	0.09	0.00	12.50	

Nearby well

NOTICE TO WATER WELL CONTRACTOR WATER WELL REPORT State Well No. 114£3CC The original and first copy of this report are to be filed with the STATE OF OREGON MAR 1 17 1977 STATE ENGINEER, SALEM, ORE (Please type or print) within 30 days from the date State Permit No. (Do not write above the HPR RESOURCES DEPT. of well completion. (10) LOCATION OF WELL: (1) OWNER: John C. Ward Driller's well number County 14 SW 14 Section Rt 3, Box 33 Address <u> 3 т. 1 N в.</u> The Dalles, Oregon Bearing and distance from section or subdivision corner (2) TYPE OF WORK (check): New Well X Reconditioning [7] Abandon [ Deepening [] If abandonment, describe material and procedure in Item 12. (11) WATER LEVEL: Completed well. (3) TYPE OF WELL: (4) PROPOSED USE (check): Depth at which water was first found Rotary Driven 🛚 ft: below land surface. Date3-4-77 Domestic 🚰 Industrial 🔲 Municipal 🔲 Static level Cable ō Jetted Irrigation | Test Well | Other lbs. per square inch. Date Dug Bored 🔲 Artesian pressure CASING INSTALLED: Threaded | Welded M. (12) WELL LOG: Diameter of well below casing 6 " Diam. from \_\_\_\_ 0 \_\_\_ ft. to \_\_\_\_ 61 ft. Gage \_\_\_ 250 \_\_ 213 ft. Depth of completed well 213 Depth drilled " Diam. from \_\_\_\_\_ ft. to \_\_\_ Formation: Describe color, texture, grain size and structure of materials; ft. to \_\_\_\_\_ft. Gage \_\_\_ and show thickness and nature of each stratum and squifer penetrated, with at least one entry for each change of formation. Report each change in .... Diam. from ...... position of Static Water Level and indicate principal water-bearing strate. PERFORATIONS: Perforated? Tyes KNo. MATERIAL From Type of perforator used 0 in. by Soil, black Size of perforations 5 Gravel #Ł. \_\_ perforations from \_\_\_\_ Rock, round river rock 10 16 \_\_\_ perforations from \_\_\_\_ 16 Gravel \_\_ perforations from .\_\_\_\_ tc27 Conglomerate, rock, clay, e (7) SCREENS: 37 Well screen installed? 

Yes 

No Rock, decomposed Manufacturer's Name . Rock, grey 89 \_ Model No. Rock, reddish grey Туре ... ..... £t. to \_\_\_ ... **41**. 89 .... Set from ...... Rock, greenish grey 136 141 Dlam, \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Rock, green clay seams Rock, greenish-grey 210 (8) WELL TESTS: Drawdown is amount water level is lowered below static level 210 212 Rock, green clay seams 212 Was a pump test made? ☐ Yes ☐ No If yes, by whom? 213 Rock, greenish grey gal./min. with ft drawdown after hrs. m w 1r Minxtest 60 gal./min. with 120 ft. drawdown after hrs. g.p.m. encountered ... 24 19 77Completed March 4 1977 Work started Feb. March 4 Date well drilling machine moved off of well (9) CONSTRUCTION: Drilling Machine Operator's Certification: Cement - Bentonite Well seal-Material used ..... This well was constructed under my direct supervision. Materials used and information reported above are true to my Well sealed from land surface to \_\_\_ Diameter of well bore to bottom of seal \_\_\_\_\_\_in. best knowledge and belief Delle 3-15, 19.77 Dismeter of well bore below seal \_\_\_\_\_\_ in. (Drilling Machine Ope Number of sacks of cement used in well seal .... Drilling Machine Operator's License No. ....129...... Number of sacks of hentonite used in well seal ..... Water Well Contractor's Certification: Number of pounds of bentonite per 100 gallons This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. NamGilbert Clayton Well Drilling (Type or print) Was a drive shoe used? [XYes [] No Plugs ..... Size: location ..... ft. (Person, firm or corporation)
Address 1, Box 61-A, Did any strata contain unusable water? 

Yes Mo The Dalles, OR 97058 Type of water? depth of strata Method of scaling strata off Was well gravel packed? Tyes Yes No Size of gravel:

Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_

Contractor's License No. ....

19.

569 Date March 15

