Water Right Conditions Tracking Slip

Groundwater/Hydrology Section

FILE # # ____G-16974

ROUTED TO: ___ Water Rights

TOWNSHIP/
RANGE SECTION: \&S/IW-G

CONDITIONS ATTACHED?: [Vyes [] no]

REMARKS OR FURTHER INSTRUCTIONS:

Redense Josh Hackett

WATER RESOURCES DEPARTMENT

MEM	Ю							J	uly i	25	2008
TO: FROM SUBJ		GW:	Jos	eviewer's N	acket		luation	I			
V	_YES _NO	The so	urce of	appropi	riation is	s within	or abo	ve a Sce	enic Wa	terway	
	_YES _NO	Use the	e Scenic	e Water	way con	ndition (Conditi	ion 7J)			
	Per OF interfethe De that the	rence wated inted inted inted inted inted integers. S 390.8 rence water partments of the properties of	ith surfarferences 335, the ith surface tis ur osed use	ace water is districted on the districted of the	er that c ributed I Water er that c find th teasura	ontribut below. Section ontribut at ther bly red	is una tes to a e is a pi uce the	to calconic value to cascenic value to cascenic value surface of a sce	Waterwa alculate vaterwa erance e water	ground ground y; there of evide flows	water
Calcula culculat	RIBUTION te the per content of the the per content of the	centage o	of consun 390.835,	iptive use do not fil	by monta	able but c	heck the	"unable"	' option a	bove, thu	S
Watery	se of thi way by t surface	he follo	wing a	nounts					ie consu		Scenic use by
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO:		Water	r Rights Se	ection				Date	July 25,	2008		
FROM	:	Groun	nd Water/I	lydrology	Section			rl Wozniak				
SUBJE	CT:	Appli	cation G-	16974			ewer's Name persedes re	view of		Date of Rev	view(s)	
OAR 69 welfare, to deteri	90-310-1 safety a mine who	30 (1) 7 and healt there	The Departi th as descri e presumpti	nent shall p bed in ORS on is establ	537.525. Dished. OAR	t a propose epartment 690-310-1	ed groundwa staff review 140 allows th	ground wate	ensure the prese er applications u use be modified cies in place at	inder OA	R 690-31 tioned to	0-140 meet
A. GEN	ERAL II	NFORM	IATION: A	Applicant's	Name:	Eugene B	eyer		County: Mar	ion		
A1.	Applica	ant(s) se			from 1				ayton NE			
A2. A3.	Propose Well an	ed use: _ id aquife	<u>Irri</u> er data (atta	gation ach and nu	mber logs f	Seas	onality: g wells; ma	March 1 – rk proposed	October 31 wells as such t	ınder log	(id):	
Well 1 2	Log		Applicant' Well #	Propos	ed Aquifer*	Propose Rate(cfs	s) (T	Location /R-S QQ-Q) 1W-6 SE-SE	2250' N	Location, metes and bound 2250' N, 1200' E fr NW co 750'N, 525'W fr SE cor		S 36
3 4 5	- CDD											
* Alluviı	ım, CRB,	Bedrock			_							
Well	Well Elev ft msl	First Water ft bls	tt ble l	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	602				~400	0-50	0-100		250-300	Contrat.		
-												
Use data	from app	lication	for proposed	wells.			<u> </u>		<u> </u>			
A4.	Comme	ents:										
A5. 🛛	manage (Not all	ment of basin r	ules contair	ter hydrauli such provi	ically conne isions.)	cted to sur	face water [are, or 🛚	o the developmed are not, activates	ated by th	is applica	ation.
A6. 🗌	Well(s) Name of	f admin	istrative are	ea:					er limited by an	_		

Version: 08/15/2003

В. <u>G</u>	ROUN	TO WATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070									
B1.	Bas	ed upon available data, I have determined that ground water* for the proposed use:									
	a.	is over appropriated, is not over appropriated, or is 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)7B, 7I (with totalizing flowmeter); 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;									
	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):									
В3.	Gre	ound water availability remarks:									
		ECIAL CONDITIONS: 1) Ground-water production shall be limited to a single aquifer in the Columbia River									
	2) 7	The permittee shall instruct the well constructor to contact the Ground Water Section of the Water Resources partment prior to drilling each well to arrange for the collection of drill cuttings.									
	3) I Ide one	Prior to using water on this permit, the permittee shall ensure that the well on this permit has an OWRD Well ntification Number (Well ID or Well tag number). If a well does not have a Well ID, the permittee shall apply for from the Department. The Well ID shall be attached to the well and shall be used as a reference identification nber for any correspondence regarding the well including any water use, water level, or pump test reports.									
		e applicant has proposed a well that will produce from water-bearing zones in the Columbia River Basalt Group (CRBG).									
		CRBG consists of a series of lava flows that range up to 500 feet thick in the vicinity of the proposed well. Although									

Application: G- 16974_____ continued

The CRBG consists of a series of lava flows that range up to 500 feet thick in the vicinity of the proposed well. Although unconfined ground water occurs near the surface of the basalts, most water occurs in confined aquifers that occupy thin rubble zones (interflow zones) that occur at the contacts between lava flows. The interiors of the basalt flows generally have low porosity and permeability and act as confining beds. This physical geometry generally produces a stack of thin aquifers (interflow zones) separated by thick confining beds (flow interiors). In the area of the proposed well, the basalt aquifers are truncated by local stream drainages which have eroded to various levels through the basalt column. Because the aquifers are confined (storativity is estimated to be 0.0001), pumping impacts will propagate outward at rapid rates and reach aquifer boundaries (streams, faults, and truncated basalt flow margins) within a matter of minutes. Using aquifer parameters appropriate for the basalts, it can be shown that the cone of depression from a pumped well will produce measureable impacts at a distance of 1 mile within 1 hour. Therefore, hydraulic interference with nearby wells, springs, and streams will occur rapidly once pumping begins. The presence of local aquifer boundaries will increase the degree of interference with nearby

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Date: July 25, 2008_____

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Application:	G- 16974	continued	Date	e: July 25, 2008	3
thes offs diffi plot com 60 f pres	e faults impedet of thin permerent fault bloch suggests that aparing nearby eet. These factors are factors are such that	e horizontal flow or enhance neable zones is likely to prod cks. The observance of signi- there is a poor natural conne wells MARI 9191 and MAF tors indicate that individual of t wells open to multiple zone	alts are broken into many fault-bounded evertical flow of ground-water is unknown fault-bounded evertical flow of ground-water is unknown fluce some degree of isolation between efficantly different water levels in nearby ection between overlying aquifers in the RI 9193 which have March water-level of water-bearing zones in the basalts are liles will waste natural reservoir pressure of the open interval in each well to a sing	wn. However, any significant vertical equivalent water-bearing zones in wells of different depths (see attached e CRBG. This is illustrated by elevations that differ by approximately kely to have sufficiently different through cross borehole flow. This	<u>l</u>
con the	fidence becaus same fault blo	se of the lack of long-term was ck. The 7I decline condition,	the proposed use from the proposed well ater level records for wells completed in as stipulated by OAR 690-502-0250, specome evident in the future.	n the same water-bearing zones within	
					_

Fasis for aquifer confinement evaluation: _General experience in the CRBG indicates that most aquifers in the basalt are onlined. D-09-040 (2) (3): Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ½ 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 methat are evaluated for PSI. Well SW	Well		A	quifer or Proposed	l Aquifer			Confined	i	Unconfined
D-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 methat are evaluated for PSI. Well SW	1			CRB						
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This it it is a south Fork Pudding River 350-475 350-570 1800 □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	horizoi assume that are	ntal dist ed to be e evalua SW	ance less than hydraulically ated for PSI.	¼ mile from a sur connected to the su	face water sou urface water so GW Elev	ource that prource. Incl	oduce water lude in this ta	from arable any	n unconfined aqui streams located l Hydraulically Connected?	fer shall be
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ID (cfs) (cfs) Flow? (76) Assume	Vater A 00-09- onnective pertine required well,	Availab 040 (4) ded and inent to ested ra use ful	less than 1 m that surface wate against the 1 rate for each	of stream impacts if ile from a surface ater source, and not 1% of 80% natural well. Any checked Instream Water	for each well twater source. ot lower SW sold flow for the lower source. Instream	that has been Limit evaluates to we have a contract to the ween Limit Park the Ween Li	en determine uation to ins which the str Water Availa ell is assume	ed or ass tream ri eam und bility B d to hav	sumed to be hydr ghts and minimum der evaluation is to asin (WAB). If Cover the potential to	n stream flows ributary. Comp Q is not distributated ause PSI.
	Vater A 00-09- onnective pertine required well,	Availab 040 (4) ded and inent to ested ra use ful	less than 1 m that surface wate against the 1 rate for each	of stream impacts of stream impacts of stream a surface ater source, and not also of 80% natural well. Any checked Instream Water cfs? Right	for each well to water source. It lower SW sold flow for the lower sold box indices. Instream Water Right Q	that has be Limit eval ources to v pertinent v ates the wo	en determine uation to ins which the str Water Availa ell is assume 80% Natural Flow	ed or ass tream ri eam und ability B d to hav Qw > of 8	sumed to be hydr ghts and minimum der evaluation is to easin (WAB). If (WAB) is the potential to 1% Interferen (@ 30 day (%)	n stream flows ributary. Comp Q is not distributated Cause PSI. Potentia for Subs Interfer
	Water A 90-09- connective perti- the required by well,	Availab 040 (4) ded and inent to ested ra use ful	less than 1 m that surface wate against the l rate for each Well < Quality Well < Quality Willer Quality Willer Quality	of stream impacts of stream impacts of stream a surface ater source, and not also of 80% natural well. Any checked Instream Water cfs? Right	for each well to water source. It lower SW sold flow for the lower sold box indices. Instream Water Right Q	that has be Limit eval ources to v pertinent v ates the wo	en determine uation to ins which the str Water Availa ell is assume 80% Natural Flow	ed or ass tream ri eam und ability B d to hav Qw > of 8	sumed to be hydr ghts and minimum der evaluation is to easin (WAB). If (WAB) is the potential to 1% Interferen (@ 30 day (%)	n stream flows ributary. Comp Q is not distrib cause PSI. Potenti for Sub

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Date	July 25,	2008
Date.	July 23,	, 2006

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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:	 							

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.

	stributed W									~			_
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS				HEHra Sta								
	ALC: NO.						12.00						
	ated Wells									0			~
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	L	%	%	%	%	%	%	%	%	%_	%	_%	%
Well Q			_					_					
Interfere	ence CFS												
		%	%	%	%	%	%	%	_%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS		_						_				
	ence CFS					_	_						
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
	ence CFS									_			
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CES			70	76	70		- /0	70		70	70	
	ence CFS								_				
Interior	1	%	%	%	%	%	%	%	%	%	%	%	%
Well Q	oc CES	70		/0		70	/0	70	- /0		/0	70	70
	ence CFS										_		
meriere	ence Crs								-				
(A) = To	tal Interf.	1							_				
· ·	% Nat. Q		_									_	
	% Nat. Q												
(D) = (A	a) > (C)			1	1	1	1	1	4	1	1		
(E) = (A	/ 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.

Basis for impact evaluation:

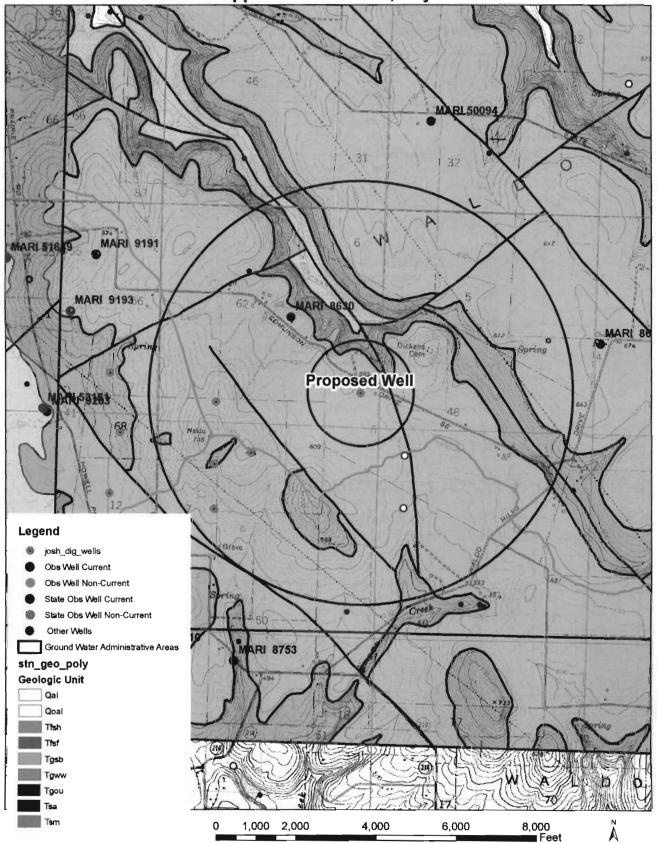
Applic	ation: G-16974	continued	Date: July 25, 2008
			95.400
24b.	690-09-040 (5) (b) Rights Section.	The potential to impair or detrim	entally affect the public interest is to be determined by the Water
C5. 区	under this permit ca	oned, the surface water source(s) can n be regulated if it is found to substan mit should contain condition #(s)	n be adequately protected from interference, and/or ground water use ntially interfere with surface water:
	ii. X The per	mit should contain special condition	(s) as indicated in "Remarks" below;
	<u>2</u> 1110 pc.	The stourd column special contains	(-)
<u>er</u> G	oded down to an elevaroup within the fault b	tion of about 350 feet within the upplock that contains the proposed well.	n 1 listed in B3. The South Fork of the Little Pudding River has er part of the Sentinel Bluffs member of the Columbia River Basalt A seal that prevents production from aquifers above this elevation, of interference with local stream reaches.
_			
R	eferences Used:		
	onlon and others, 2005 evestigations Report 20		llamette Basin, Oregon: U.S Geological Survey Scientific
		998, Geologic framework of the Willessional Paper 1424-A,	lamette lowland aquifer system, Oregon and Washington: U.S.
	olan, Terry L. and Bee regon, USGS Open Fi		o of the Silverton and Scotts Mills 7.5 Minute Quadrangles, Northwe
			er, 2000, Geologic Map and Database of the Salem East and Turner Database: USGS Open File Report 00-351.
			ne Willamette lowland aquifer system, Oregon and Washington: U.S
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App	licati	ion: G- 16974	continued	Date: July 25, 2008	7
D. <u>Y</u>	WEI	LL CONSTRUCT	ION, OAR 690-200		
D1.		Well #:	Logid:		
D2.		a. review of theb. field inspectc. report of C	tion by WRE	ndards based upon:	; ;
D3.		b.	ruction deficiency: a health threat under Division 200 rules s water from more than one ground wateloss of artesian head; de-watering of one or more ground watelify)	er reservoirs;	
D4.					
D5.					
D6.				ding issuance of the permit until evidence of well reconsent Section and the Ground Water Section.	truction
TH	IS S	ECTION TO BE	COMPLETED BY ENFORCEM	ENT PERSONNEL	
D7.		Well construction de	eficiency has been corrected by the follo	wing actions:	
		(T. C.			200
D8.		`	ent Section Signature) ghts Section (attach well reconstruction)	on logs to this page).	

Date: July 25, 2008_

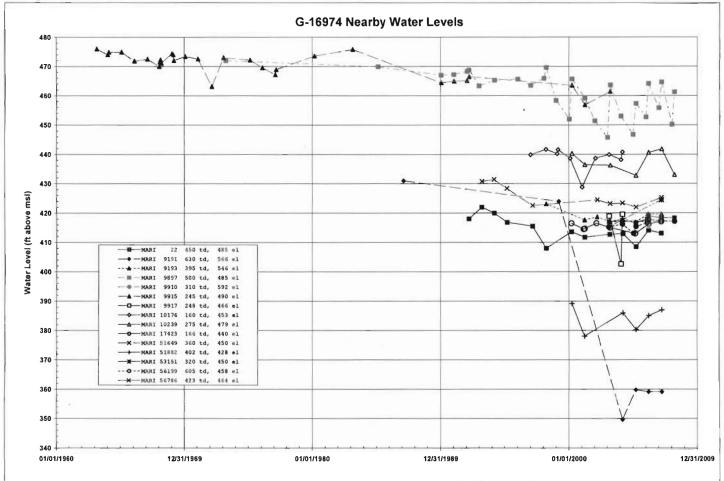
Well Location Map (Shows only a partial representation of geologic structures. Refer to original USGS maps for details).





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Nearby Water Levels



Version: 08/15/2003