Groundwater Application Review Summary Form

Application # G- 18839	
GW Reviewer J. Hackett	Date Review Completed: _7/17/2019
Summary of GW Availability and Injury Review	
	over appropriated, will not likely be available in the or rights, OR will not likely be available within the on B of the attached review form.
Summary of Potential for Substantial Interfere	nce Review:
[L] There is the potential for substantial interfer	ence per Section C of the attached review form.
Summary of Well Construction Assessment:	
[] The well does not appear to meet current we review form. Route through Well Construction	ell construction standards per Section D of the attached and Compliance Section.
This is only a summary. Documentation is attaction basis for determinations and for conditions that	hed and should be read thoroughly to understand the may be necessary for a permit (if one is issued).

WATER RESOURCES DEPARTMENT 7/17 ,20/9 **MEMO** Application G- 18839 TO: GW: J. Hackett FROM: **SUBJECT: Scenic Waterway Interference Evaluation** YES 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 interférence 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 ______ Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced. Sep Nov Feb Mar May Jun Jul Oct Dec Jan Apr Aug

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: FROM	8						DateJuly 17, 2019 J. Hackett									
SUBJE			cation G- <u>18</u>			Reviev	wer's Name	eview of								
OAR 69 welfare, to deter	90-310-13 safety an mine whet umption c	0 (1) The definition of the description of the desc	h as describe presumption This review	nt shall prod in ORS in is established u	esume that 537.525. Deshed. OAR apon availa	a proposed epartment s 69 <mark>0</mark> -310-1 able inform	d groundw staff review 40 allows t nation and	v groundwater the proposed u	nsure the prese applications u use be modified vies in place at	nder OAR or condit	f the public 690-310 ioned to r)-140 meet				
A1.			ek(s) <u>0.517</u>	_ cfs from		well(s) in the					Basin,				
A2. A3.								March 1 – Octo		ındar log	id):					
Well 1 2 3	Logic Propos Propos	d	Applicant's Well #	ell # Alluvium		Propo Rate(o	Proposed Location Rate(cfs) (T/R-S QQ-Q) 0.517 14S/5W-24 SW-SW 0.517 14S/5W-24 SW-SW		Location 2250' -SW 1270	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36 1270' N, 1080' E fr SW cor S 24 1120' N, 1080' E fr SW cor S 24						
4 5 * Alluviu	ım, CRB, E	Bedrock														
Well 1 2	Well Elev ft msl 282 282	First Wate ft bls	r SWL ft bls	SWL Date	Well Depth (ft) 60 est. 60 est.	Seal Interval (ft) 0-18 est. 0-18 est.	Casing Intervals (ft) 0-60 est.	Liner Intervals (ft)	Perforations Or Screens (ft) 22-60 est. 22-60 est.	Well Yield (gpm)	Draw Down (ft)	Test Type				
Jse data	from appli		or proposed w													
A5. 🛛	managen (Not all b Commen	nent of pasin rusts: <u>The</u>	lles contain s e applicant's	hydraulica uch provis proposed v	ally connections.) wells will p	ted to surfa	ace water	\square are, or \square	the developme are not, activa and are located	ted by this	s applicat	tion.				
A6. 🗌	well(s) #											riction.				

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B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070

Bas	sed upon available data, I have determined that groundwater* for the proposed use:
a.	is over appropriated, is not over appropriated, <i>or</i> cannot be determined to be over appropriated during any period of the proposed use. * This finding is limited to the groundwater 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 groundwater 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 groundwater resource; or
d.	 will, if properly conditioned, avoid injury to existing groundwater rights or to the groundwater resource: i. The permit should contain condition #(s) 7C, Large water-use reporting 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;
a.	Condition to allow groundwater production from no deeper than ft. below land surface;
b.	Condition to allow groundwater production from no shallower than ft. below land surface;
c.	Condition to allow groundwater production only from the groundwater 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 Groundwater 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):
sano fine	bundwater availability remarks: The applicant's proposed wells are located in an area that is underlain by 20-40 feet of d and gravel of the Willamette aquifer. Underlying the Willamette aquifer is an approximately 250 feet package of mostly e-grained sediments with thin sand lenses. The proposed wells will produce from water-bearing zones in the Willamette ifer.
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C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040

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

Well	Aquifer or Proposed Aquif	fer Confined	Unconfined
1	Alluvium		\boxtimes
2	Alluvium		\boxtimes

Basis for aquifer confinement evaluation: Construction logs for nearby wells show permeable sand and gravel deposits present at/near land surface with no presence of potentially confining silt or clay beds.

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 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 mile that are evaluated for PSI.

Well	SW #	Surface Water Name	ft msl		Distance (ft)	Conne	ulically ected? ASSUMED	Potential for Subst. Interfer. Assumed? YES NO	
1	1	Willamette River	270	267	80	\boxtimes		\boxtimes	
2	1	Willamette River	270	267	80	\boxtimes		\boxtimes	
				,					
		-							

Basis for aquifer hydraulic connection evaluation: Water levels in the alluvial aquifer system are coincident with or above the elevations of nearby streams. This indicates groundwater flow is toward the streams and implies hydraulic connection between groundwater and surface water.

Water Availability Basin the well(s) are located within: 30200321: WILLAMETTE R > COLUMBIA R – AB PERIWINKLE CR AT GAGE 14174

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	1	\boxtimes		MF184A	1750.00		2540.00			\boxtimes
2	1	\boxtimes		MF184A	17 <mark>5</mark> 0.00		2540.00			\boxtimes

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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.

Comments:			
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.

Non-Di	istributed	Wells											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
	as CFS												
Interfer	ence CFS												
Distrib	uted Well	s								-			
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfer	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfer	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfer	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfer	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
	as CFS												
Interfer	ence CFS		-										
		%	%	%	%	%	%	%	%	%	%	%	%
	as CFS												
Interfer	ence CFS									, , , , , , , , , , , , , , , , , , , ,			
$(A) = T_0$	otal Interf.												
	% Nat. Q												
	% Nat. Q												
(D)	(A) - (C)		V				/						
	(A) > (C)	· ·			V ~	V ~	V	V		V	Y	✓	
$(\mathbf{E}) = (\mathbf{A}$	/ B) x 100	%	%	%	%	%	%	%	%	%	%	%	%

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D. WELL CONSTRUCTION, OAR 690-200

D1.	Well #:	Logid:	
D2.	a. review of the well lob. field inspection by report of CWRE other: (specify)	og;	onstruction standards based upon: ; ;
D3.		-	ent is described as follows:
D4.	Route to the Well Construc	ction and Compliance Se	ction for a review of existing well construction.

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Water Availability Tables

Date: 7/17/2019

WILLAMETTE R > COLUMBIA R - AB PERIWINKLE CR AT GAGE 14174 WILLAMETTE BASIN

Water Availability as of 7/17/2019

Watershed ID #: 30200321 (Map)

Exceedance Level:

80% -

Time: 2:57 PM

Watershed ID #. 30200321 (IMap)

Water Availability Calculation

Monthly Streamflow in Cubic Feet per Second Annual Volume at 50% Exceedance in Acre-Feet

Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	10,100.00	1,370.00	8 <mark>,</mark> 730.00	0.00	1,750.00	6,980.00
FEB	11,600.00	4,290.00	7 <mark>,</mark> 310.00	0.00	1,750.00	5,560.00
MAR	11,000.00	4,560.00	6 <mark>,</mark> 440.00	0.00	1,750.00	4,690.00
APR	9,760.00	4,260.00	5,500.00	0.00	1,750.00	3,750.00
MAY	8,430.00	2,560.00	5 <mark>,</mark> 870.00	0.00	1,750.00	4,120.00
JUN	5,360.00	856.00	4,500.00	0.00	1,750.00	2,750.00
JUL	3,270.00	666.00	2 <mark>,</mark> 600.00	0.00	1,750.00	854.00
AUG	2,560.00	604.00	1,960.00	0.00	1,750.00	206.00
SEP	2,540.00	518.00	2,020.00	0.00	1,750.00	272.00
OCT	2,860.00	270.00	2,590.00	0.00	1,750.00	840.00
NOV	4,170.00	355.00	3 <mark>,</mark> 820.00	0.00	1,750.00	2,070.00
DEC	8,150.00	380.00	7,770.00	0.00	1,750.00	6,020.00
ANN	7,460,000.00	1,240,000.00	6,230 <mark>,</mark> 000.00	0.00	1,270,000.00	4,960,000.00

Detailed Report of Instream Flow Requirements

Instream Flow Requirements in Cubic Feet per Second

Applicatio n #	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
MF184A	APPLICATI ON	00	00	00	00	00	00	00	00	00	00	00	00
Maximum		1,750. 00											

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Well Location Map

