Groundwater Application Review Summary Form

Application # G- 18775 GW Reviewer 5. Hackett	
GW Reviewer J. Hackett	Date Review Completed: 2/12/2019
Summary of GW Availability and Injury Review:	
[] Groundwater for the proposed use is either over amounts requested without injury to prior water right capacity of the groundwater resource per Section B of the groundwater p	hts, OR will not likely be available within the
Summary of Potential for Substantial Interference R	Review:
[] There is the potential for substantial interference	e per Section C of the attached review form.
Summary of Well Construction Assessment:	
[] The well does not appear to meet current well co review form. Route through Well Construction and C	
This is only a summary. Documentation is attached of basis for determinations and for conditions that may	

WATER RESOURCES DEPARTMENT

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 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 flow 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, thut 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.	MEM	0							7	1/12	_,20_/	9
SUBJECT: Scenic Waterway Interference Evaluation 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 wate 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 wate 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 flow 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, the 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.	TO:		Applic	ation G	-187	75						
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Ion Fob Mar Ann Mou Lin III A C C						capiess	ca as a	proporti	on or th	ie consu	приче	use by
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: FROM	:		er Rights S Indwater S	ection ection		J. Hac	kett	Dat	e	Februa	ry 12, 20	019	
SUBJE	CT.					Revi	iewer's Name						
SODIE	CI.	Appi	ication G-	18//5		Su	persedes	review of			Date of Re	view(s)	
DUDI											Date of Re	view(s)	
OAR 69 welfare, to determ	90-310-1 safety a mine who	30 (1) <i>nd hea</i> ether th	<i>The Depart</i> lth as descr ne presumpt	<i>ibed in ORS</i> ion is establ	resume that 537.525. D ished. OAR	a proposi epartment 690-310-	ed ground t staff revie 140 allows	water use will ew groundwate s the proposed and agency pol	er application use be m	tions un odified	nder OA	R 690-31	0-140 meet
A. <u>GEN</u>	NERAL	INFO	ORMATIC	<u>ON</u> : A	pplicant's N	lame:	Scenic W	oods LLC		(County: _	Benton	
A1.	Applica	int(s) se	eek(s) <u>0.5</u>					Willamette					_Basin,
						subb	asın						
A2.	Propose	ed use _	Irri	gation		Seas	sonality: _	March 1 – Oct	ober 31			-	
A3.	Well an	d aquif	fer data (att	ach and nu	mber logs f	or existin	g wells; m	ark proposed	wells as	such u	ınder log	gid):	
Well	Logic	i	Applicant Well #	's Propos	ed Aquifer*	Prop Rate		Location (T/R-S QQ			ion, mete N, 1200'		
1	Propose		1		Bedrock	0.5		11S/4W-2 NW	/-NW	90	O'S, 1225'H	E fr NW co	r S 2
3	Propose	ed	2		Bedrock	0.5	56	11S/4W-2 NW	/-NW	6.	25'S, 995'I	e fr NW co	r S 2
4													
5 * Alluviu	ım, CRB,	Bedroc	k										
					T T								
Well	Well Elev	First Water	r SWL	SWL	Well Depth	Seal Interval	Casing Intervals	Liner Intervals	Perfora Or Scr		Well Yield	Draw Down	Test
	ft msl	ft bls	ft bls	Date	(ft)	(ft)	(ft)	(ft)	(ft)		(gpm)	(ft)	Type
2	320				400 est. 400 est.	0-50	0-100 0-100						
							0.100						
Use data	from appl	lication	for proposed	l wells									
A4.													
A5. 🛚	manage (Not all	ment o basin i	rules contai	ter hydrauli n such provi	cally connections.)	eted to sur	face water	rules relative t ☐ are , or ⊠] are not	elopme , activa	ent, classited by th	ification is applic	and/or ation.
A6. 🗌	Name o	f admii	nistrative ar	ea:				ap(s) an aquifo			administ	rative res	triction.

Version: 05/07/2018

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Date: February 12, 2019

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

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:	Bas	sed upon available data, I have determined that groundwater* for the proposed use:
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) TN; 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	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 groundwater portion of the over-appropriation determination as prescribed in OAR 690-310-130;
d. will, if properly conditioned, avoid injury to existing groundwater rights or to the groundwater resource: i. The permit should contain condition #(s) 7N; 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 only from the ft. below land surface; c. Condition to allow groundwater production only from the 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 reconstruction 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):	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;
i.	c.	\square will not or \square will likely to be available within the capacity of the groundwater resource; or
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): Groundwater availability remarks: Applicant's proposed wells will produce from marine sandstone of the late Eocene Spencer Formation. There are no OWRD Observation Well data in the area of the proposed POAs so groundwater overappropriation could not be determined. There are also few nearby groundwater POAs in the Spencer Formation, so injury to	d.	 i.
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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 Aquifer	Confined	Unconfined
1	Bedrock of Spencer Fm	\boxtimes	
2	Bedrock of Spencer Fm	\boxtimes	

Basis for aquifer confinement evaluation: Most well logs for the surrounding area report SWL above First Water, indicating at least partially-confined conditions.

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)	C	draulically onnected?	Potentia Subst. Int Assume YES	terfer.
1	1	Willamette River	200	180	4450	\boxtimes			\boxtimes
2	1	Willamette River	200	180	3950	\boxtimes			
1	2	Bowers Slough	200	205	4315	\boxtimes			\boxtimes
2	2	Bowers Slough	200	205	4125	\boxtimes			\boxtimes

Basis for aquifer hydraulic connection evaluation: GW elevations are estimated to be coincident or above SW elevations suggesting groundwater is flowing towards and discharging to 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 Dox 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			MF184A	1750		2540		<<25%	
2	1			MF184A	1750		2540		<<25%	
1	2			-			2540		<<25%	
2	2			-			2540		<<25%	

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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.

SV #	1	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: Modeling in similar circumstances indicates that due to the low-permeability of Spencer Formation rocks, impacts will be much less than 25% of the pumping rate after 30 days of pumping.

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-D	istributed	Wells											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS												
Interfer	rence CFS												
Distrib	outed Well	6											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
******	J ,, , ,,	%	%	%	%	%	%	%	%	% Sep	%	%	%
Well (Q as CFS	70		,,,	70	70	70	7.0	70	70	70	70	70
	rence CFS												
	T	%	%	%	%	%	%	%	%	%	%	. %	%
Well (Q as CFS	,,		,,,		,,,	,,,		70	,,,	,,,	,,,	,,,
	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS												
Interfer	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS												
Interfer	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS												
Interfer	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
	Q as CFS												
Interfer	rence CFS												
(A) = T	otal Interf.		*****************										
	% Nat. Q												
(C) = 1	% Nat. Q												
(D) =	(A) > (C)												
	/B) x 100	%	%	%	%	%	%	%	%	%	%	%	%
(2) - (11	2) 1 100	CEC	(D) III.	L , , e	L	7 .000	,,,	CEC (C	107 6	,,	1.0	. 000	,,,

(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.

_	asis for imp	act evaluation:							
-									
o. 69	90-09-040 Rights Se	(5) (b) The poction.	tential to imp	air or detrim	entally affect	the public	interest is	to be dete	ermined by the
	under this po	conditioned, the ermit can be reg The permit shou The permit shou	ulated if it is fould contain con	ound to substandition #(s)	ntially interfe	re with surf	ace water:		d/or groundwat
	11.	The permit shou	and contain spe	cial condition	(s) as indicate	d in "Rema	rks" below;		
SW /	/ GW Rema	rks and Condi	tions:						
									,
	0								
	erences Use		Zandrack D. H	Herrera N.R.	Fisher R I	Morgan D.S	S. Lee K. K	and Hin	kle S.R. 2005
Conl	lon, T.D., W	l: ozniak, K.C., W drology of the V							
Conlo Grou Gann	lon, T.D., Wund-water hy	ozniak, K.C., W	Willamette Bas , 1998, Geolog	sin, Oregon: U	J.S. Geologica	1 Survey Sc	ientific Inv	estigations	Report 2005-5
Gann U.S.	lon, T.D., Wund-water hynett, M.W. a Geological odward, D.G	ozniak, K.C., W drology of the V nd Caldwell, R.,	Willamette Bas , 1998, Geolog onal Paper 142 , and Vaccaro	ic framework 24-A, 32p.	of the Willan	l Survey Sc nette Lowlan framework	ientific Invend aquifer s	estigations ystem, Ore	Report 2005-5

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D. WELL CONSTRUCTION, OAR 690-200

D1.	Well #:	Logid:
D2.	a.	LL does not appear to meet current well construction standards based upon: view of the well log; eld inspection by; port of CWRE; her: (specify);
D3.		LL construction deficiency or other comment is described as follows:
D4.	Route to t	the Well Construction and Compliance Section for a review of existing well construction.

Page

Date: February 12, 2019

Water Availability Tables

Water Availability Analysis Detailed Reports

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

Water Availability as of 2/11/2019

Watershed ID #: 30200321 (Map)

Exceedance Level:

80% ▼

Date: 2/11/2019

Time: 2:59 PM

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	8,730.00	0.00	1,750.00	6,980.00
FEB	11,600.00	4,290.00	7,310.00	0.00	1,750.00	5,560.00
MAR	11,000.00	4,560.00	6,440.00	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	5,870.00	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	665.00	2,610.00	0.00	1,750.00	855.00
AUG	2,560.00	603.00	1,960.00	0.00	1,750.00	207.00
SEP	2,540.00	517.00	2,020.00	0.00	1,750.00	273.00
OCT	2,860.00	269.00	2,590.00	0.00	1,750.00	841.00
NOV	4,170.00	354.00	3,820.00	0.00	1,750.00	2,070.00
DEC	8,150.00	379.00	7,770.00	0.00	1,750.00	6,020.00
ANN	7,460,000.00	1,240,000.00	6,230,000.00	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											

