Water Right Trackin	Conditions ng Slip
Groundwater/Hyd FILE # # <u>6</u> 1751 ROUTED TO: <u>Kerny</u> TOWNSHIP/	rology Section <u>H</u> <u>Kavanagh</u>
RANGE-SECTION: 35 CONDITIONS ATTACHES REMARKS OR FURTHER I	D?: Xyes [] no NSTRUCTIONS:
Reviewer: Jen W	loody

WATER RESOURCES DEPARTMENT

MEMO

TO:

Application G-175 GW: Jen Worden (Reviewer's Name)

FROM:

SUBJECT: Scenic Waterway Interference Evaluation



The source of appropriation is within or above a Scenic Waterway

12/29/2011,200



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.

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.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oċt	Nov	Dèc
						×					

		KESI I	KEVIEW	FOR GROU	UND WAT	ER APPL	ICATIONS						
TO:		Wate	r Rights S	Section				Date	e	12/27/20	11		
FROM	0 0	Grou	nd Water	/Hydrology	Section _	Jen W Revie	oody ewer's Name						
SUBJE	CT:	Appl	ication G	- 17514		Su	persedes re	view of		<u>n/a</u>	Date of Re	view(s)	
PUBL DAR 69 welfare, to detern the pres	IC INT 90-310-1 safety al mine whe umption	ERES 30 (1) 2 nd heal ether th criteria	The Depar The Depar th as desc. e presump . This rev	JMPTION treat shall p ribed in ORS tion is establ iew is based	GROUN Soresume that S 537.525. I ished. OAF upon avai Name	DWATE at a propose Department 690-310-1 lable infor	R ed groundwa staff review 40 allows th mation and od Kathryn F	ater use will ground wate the proposed agency poli Harrington	ensur er app use be icies i	the the press blications use modified n place at	ervation of inder OA or condi the time	of the pub R 690-31 tioned to e of evalu	olic 0-140 meet ation .
A1.	Applica	int(s) se	ek(s) 0.	34 cfs	from 2 v	vell(s) in th	e	Rogue	_000	<u>.</u>	Jackson		Basin
		subbasin Quad Map: <u>Shady Cove</u>											
42. 43.	Proposed use: irrigation Seasonality: March 1- November 15 Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under logid):												
Well	Log	id Applicant's Proposed Aquifer* Proposed Location Location, metes and b Well # Proposed Aquifer* Rate(cfs) (T/R-S OO-O) 2250' N, 1200' E fr NV							and bound fr NW cor	d bounds, e.g. NW cor S 36			
1 2 3	JACK PROP 9	2932 99999	2 1 vo 99 2 vo		aniclastic aniclastic	0.34	35S/ 35S/1	35S/1W-28 NE NE 35S/1W-27 NW NW		1250' S, 607' W fr SE cor S 21 1323' S, 0' W fr SE cor S 21			S 21 21
4 5													
' Alluviı	ım, CRB,	Bedroc	k										
Well	Well Elev ft msl	First Wate ft bls	r SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Per Or	rforations r Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	1440	unkn	0 17.8	8/12/2011	134	0-21	0-21	0-134	20-1	134	43.4*	unkno	Р
2	1430	unkno wn	o unkn own	none									
lise data	from app	lication	for propose	ad wells									
44.	Comme Well log	ents:	Well 1 or bes materia	riginal log = als as claysto	JACK 2932 ne- likely fi	2. alteration ractured vo	log for line	r installation olcaniclastic	= JA	CK 34376 s of the We	. Well 2 estern Ca	is not yet scades. *	well

A5. Provisions of the <u>Rogue</u> Basin rules relative to the development, classification and/or management of ground water hydraulically connected to surface water **are**, or **are not**, activated by this application. (Not all basin rules contain such provisions.) Comments: _____

A6. Well(s) # _____

Well(s) # _____, ____, ____, ____, tap(s) an aquifer limited by an administrative restriction. Name of administrative area: ______

Comments: _____

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

- B1. Based upon available data, I have determined that ground water* for the proposed use:
 - a. is over appropriated, is not over appropriated, or annot 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. i will not or i 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) 7C, 7F, 7P
 - 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 bedrock aquifer <u>ground</u> 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):

B3. Ground water availability remarks: <u>There are 26 well logs on record for 35S/1W-28. Reported yield ranges from 0 to 225 gpm (many are air tests which can over estimate pumping yields), median yield is 20 gpm. The pump test showed JACK 2932 has an above median yield. Water level data are sparse for this area, with the nearest well with useable time series data located over a mile away. In Section C of the application, the applicant proposes monitoring static water levels over time to balance use with the capacity of the groundwater resource. In light of the lack of data to otherwise demonstrate the resource's long-term capacity. I think this is a reasonable approach, and recommend condition 7C to capture those water level data annually for seven years.</u>

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	Fractured volcanic and volcaniclastics of the W. Cascades	\boxtimes	
2	Fractured volcanic and volcaniclastics of the W. Cascades	\boxtimes	

Basis for aquifer confinement evaluation: <u>The information on JACK 2932 does not define the level of confinement.</u> However, other well logs in the same section and same aquifer report that water levels rise above the water bearing zone, so these wells are assumed to access a confined groundwater resource.

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 ¹/₄ 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	Hog Creek	1422	1360	4660		
2	1	Hog Creek	1422*	1410	4295		

Basis for aquifer hydraulic connection evaluation: The aquifer is confined per C1 and the wells are greater than ¹/₄ mile from Hog Creek, therefore by rule they are not assumed to have PSI. The existing well is open to the elevation of Hog Creek, so it is probably hydraulically connected, though it is not likely to be an efficient connection based on the distance and the irregular permeability of the fractured rock aquifer.

*assumed based on water level at well 1.

Water Availability Basin the well(s) are located within: __Watershed ID #: 270, ROGUE R > PACIFIC OCEAN - AB CURRY G AT GAGE 1435900_____

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 < ¼ 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			MF270A	1200		1130		<<25%	
2	1			MF270A	1200		1130		<<25%	
_										

Version: 08/15/2003

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.

e i ui uu ui	MANANANA MANANANA MPATI MANA AAA MAALAL												
	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 (2) 30 days (%)	Potential for Subst. Interfer. Assumed?			

Comments: _____There is no good model to calculate interference in a fractured rock aquifer at these distances. While there may be some interference with Hog Creek, it is expected to be much less than 25 % at 30 days.

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-Dis	tributed W	ells											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q a	as CFS												
Interfere	nce CFS												
1942 1942									í			i	
Distribu	ted Wells												
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q a	as CFS			2									
Interfere	nce CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q a	as CFS					1		22/21/2	1.5.1.2.6				
Interfere	nce CFS					1				1940 T	6 I		
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q a	as CFS										Area -		
Interfere	nce CFS									Sec. 1			
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q a	as CFS					e., 1	şe.	-	1.1	W. Sie			
Interfere	nce CFS									1000	1.1		
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q a	as CFS												
Interfere	nce CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q a	as CFS												
Interfere	ence CFS									-			
$(\Lambda) = T_{\Omega}$	tal Interf	a gan an a											a of the staff
(A) = 10	Not O								1	· · · · · · · · · · · · · · · · · · ·			
(B) = 80	76 Nat. Q												
(C) = 1 %	% Nat. Q		4		5			the second second		State of the state			
(D) = (A) > (C)	1	\checkmark	\checkmark	\checkmark	~ ~	V -	\checkmark	~	1.	\checkmark	~	~
$(\mathbf{E}) = (\mathbf{A})$	/ B) x 100	%	%	%	%	%	%	%	%	%	%	%	%

4

plication: G-17514 continued	Date: 12/27/2011
b. 690-09-040 (5) (b) The potential to impair or detrimentally Rights Section.	affect the public interest is to be determined by the W
 If properly conditioned, the surface water source(s) can be adequader this permit can be regulated if it is found to substantially in i. The permit should contain condition #(s)	quately protected from interference, and/or ground water iterfere with surface water: dicated in "Remarks" below;
SW / GW Remarks and Conditions:	
References Used: USGS 7.5 minute quad maps for Shady Cove and	d Eagle Point Quadrangles, 1983.
Hladky, F.R. 1992. Geology and Mineral Resources Map of the Shac Oregon Department of Geology and Mineral Industries.	y Cove Quadrangle, Jackson County, Oregon. GMS-52.
Wiley, T.J. 1993 Preliminary Geologic Map of the Medford East, M	edford West, Eagle Point, and Sams Valley quadrangles,

Applicat	tion: G-17	7514 continued Date: 12/	27/20116
D. <u>WE</u>	LL CONS	STRUCTION, OAR 690-200	
D1.	Well #:	Logid:	
D2.	THE WE a. re b. fi c. re d. o'	ELL does not meet current well construction standards based upon: review of the well log; field inspection by	;
D3.	THE WE a.	ELL construction deficiency: 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 WE	ELL construction deficiency is described as follows:	
D5.	THE WE	 ELL a. was, or was not constructed according to the standards in e original construction or most recent modification. b. don't know if it met standards at the time of construction. 	ffect at the time of
D6. 🗌	Route to is filed with	o the Enforcement Section. I recommend withholding issuance of the permit unti- vith the Department and approved by the Enforcement Section and the Ground Wat	l evidence of well reconstruction er Section.
THIS S	SECTION	N TO BE COMPLETED BY ENFORCEMENT PERSONNEL	
D7. 🗌	Well cons	nstruction deficiency has been corrected by the following actions:	
		,	
			, 200
	(1	(Enforcement Section Signature)	
D8.	Route to	o Water Rights Section (attach well reconstruction logs to this page).	

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

Watershe Time: 11	RC ed ID #: 270 :14 AM)GUE R > PACIF)	FIC OCEAN - A Basin: ROG	B CURRY G UE	AT GAGE 14359 Exceeda Date: 12/27/20	0000 nce Level: 80 011
Month	Natural Stream Flow	Consumptive Use and Storage	and Stream age Flow		Instream Requirements	Net Water Available
		Monthly Storage is the ann	values are in claud amount at 5	fs. 0% exceedanc	ce in ac-ft.	
JAN	2.180.00	1.200.00	985.00	0.00	1,200.00	-215.00
FEB	2,710.00	2,110.00	600.00	0.00	1,200.00	-600.00
MAR	2,750.00	1,880.00	868.00	0.00	1,200.00	-332.00
APR	2,810.00	1,100.00	1,710.00	0.00	1,200.00	509.00
MAY	2,750.00	434.00	2,320.00	0.00	1,200.00	1,120.00
JUN	1,760.00	421.00	1,340.00	0.00	1,200.00	139.00
JUL	1,330.00	445.00	885.00	0.00	1,200.00	-315.00
AUG	1,160.00	408.00	752.00	0.00	1,200.00	-448.00
SEP	1,130.00	352.00	778.00	0.00	1,200.00	-422.00
OCT	1,160.00	292.00	868.00	0.00	1,200.00	-332.00
NOV	1,370.00	409.00	961.00	0.00	1,200.00	-239.00
DEC	1,810.00	627.00	1,180.00	0.00	1,200.00	-17.50
ANN	1,900,000	579,000	1,320,000	0	869,000	500,000



