Water Right Conditions Tracking Slip							
Groundwater/Hydrology Section							
FILE # # G-17912							
ROUTED TO: Water Rights - Barbe							
TOWNSHIP/							
TOWNSHIP/ RANGE-SECTION: 95/40E-8							
CONDITIONS ATTACHED?: [] yes [1/10 REMARKS OR FURTHER INSTRUCTIONS:							
Reviewer: Mike Zwart							

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### WATER RESOURCES DEPARTMENT

**MEMO** 

Sept. 22,2004

TO:

Application G-17912

FROM:

SUBJECT:

GW: Mike Zwart Scenic Waterway Interference Evaluation



The source of appropriation is within or above a Scenic Waterway



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	Oct	Nov	Dèc

## PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

.

					01100110								
TO:		Wat	er Rights S	ection				Date	e <u>Se</u>	otemb	er 22, 2	014	
FROM	<b>/</b> 1:	Gro	undwater S	ection		Mike	Zwart						
						Revi	iewer's Nam	-					
SUBJ	ECT:	Арр	lication G-	17912		Su	persedes	review of			Date of Re		
											Date of Re	view(s)	
OAR ( welfard to dete the pre	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.         A. GENERAL INFORMATION:       Applicant's Name:Church of Jesus Christ of LDS       County: Baker												
A1.	A1. Applicant(s) seek(s) 0.223 cfs from one well(s) in the Powder Basin,												
		(5) 5		•••									
		·				subb	asın	Quad Map: <u>B</u>	aker Ch	<b>y</b>			
A2.	Propose	ed use	Irr	igation. 3	9 acres	Seas	sonality:	March 1 f	to Octob	er 31			
A3.													
Well	Logi							s and bounds, e.g. E fr NW cor S 36					
1	Propos	roposed 1 Alluvium 0.223 9S/40E-8 NW-SE 425' S, 410' E fr Ctr. 5											
2													
4													
5													
* Alluv	ium, CRB,	Bedro	ck										
	Well	Firs	t		Well	Seal	Casing	Liner	Perfora	tions	Well	Draw	
Well	Elev	Wate	er SWL	SWL Date	Depth	Interval	Interval	s Intervals	Or Scr	eens	Yield	Down	Test Type
1	ft msl 3410	ft bl	s n bis	Date	(ft) 300-500	(ft) 0-18?	(ft)	(ft)	(ft)		(gpm)	(ft)	Type
	5410	<u> </u>			300-300	0-10:							
					++								
Use dat	a from app	licatior	n for proposed	wells.									
A4.	Comm	ents: _'	The request	ed rate is i	n excess of t	the custor	mary rate	for 3.9 acres.					
A5. 🛛	Provis	ions o	f the Powde	r			Basin	rules relative to	o the dev	elonme	ent, class	ification	and/or
A.S. 🔼	manage	ment	of ground wa	ter hydraul	lically conne	cted to su	rface wate	er 🗌 are, or 🛛	are not	, activ	ated by the	his applic	cation.
	(Not all	basin	rules contai	n such prov	visions.)						·		
	Comme	ents:											
	<u> </u>												
A6. 🗌	] Well(s)	#		,	,	,	,	tap(s) an aquife	er limited	by an	administ	rative res	striction.
	Name o		inistrative ar	ea:									

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. **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) \_\_\_\_\_
    - 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 \_\_\_\_\_\_ ground 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>No local observation wells are available. I suspect that water levels are</u> reasonably stable in the alluvial aquifer.

## 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	Sand and gravel (Qal); alluvial fan deposits		$\boxtimes$

Basis for aquifer confinement evaluation: <u>The alluvial aquifer is typically unconfined and static water levels in local</u> wells are usually near the depth that groundwater was first encountered.

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 <sup>1</sup>/<sub>4</sub> 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)		Connec	lically cted? ASSUMED	Potential for Subst. Interfer. Assumed? <u>YES NO</u>		
1	1	Powder River	3395±	3414	2050	$\boxtimes$				$\boxtimes$	

Basis for aquifer hydraulic connection evaluation: <u>The Powder River is incised into Quaternary alluvium, which is the</u> targeted aquifer for development here.

Water Availability Basin the well(s) are located within: <u>Powder R > Snake R ab Rock Cr (30902327).</u>

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 < 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						12.6	$\square$	<25%	$\boxtimes$
							Sept.			

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: See comments at C6 regarding the above finding of PSI.

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	Wells											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS												
Distuit	uted Well	a					7.1						
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
wen	5111	5un %	%	%			%	%	%	%	%	%	%
Well O	as CFS			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	N			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~		
	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
	as CFS												
Interfere	ence CFS												
	tal Interf		Control of the Sound of					State - House Constant					
	tal Interf.												
	% Nat. Q												
(C) = 1	% Nat. Q				Second of the Later of the	1017712-275-27-8	0		56 PM. 1966 (167 or 7	- 1.7 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1.6 - 1		No. 1. 1. 19 19 19 19 19 19 19 19 19 19 19 19 19	
(D) = (	(A) > (C)	See 50000000	<ul> <li>✓</li> </ul>	4	✓	1	√ 	√	1	<ul> <li>Image: A start of the start of</li></ul>	4	1	1
	/ 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:** C4b. 690-09-040 (5) (b) The potential to impair or detrimentally affect the public interest is to be determined by the Water **Rights Section.** C5. If properly conditioned, the surface water source(s) can be adequately protected from interference, and/or ground water use under this permit can be regulated if it is found to substantially interfere with surface water: i. The permit should contain condition #(s) ii. The permit should contain special condition(s) as indicated in "Remarks" below; C6. SW / GW Remarks and Conditions The finding of PSI at C3a above could be avoided if the applicant reduces the requested rate to less than 1% of natural streamflow for the period of use. The customary rate for 3.9 acres is well below this threshold. References Used: Geology of the Oregon Part of the Baker 1° by 2° Quad, Brooks, McIntyre and Walker, 1976; OWRD Ground Water Report #6; Ground Water Resources of Baker Valley, Baker County, Oregon, by Frederick D. Trauger; Ground Water of Baker Valley, Baker County, Oregon, by Lystrom, Nees and Hampton, 1967; Nearby well logs and application reviews.

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# D. WELL CONSTRUCTION, OAR 690-200

D1.	Well #:	Logid:	
D2.	<ul> <li>a. review of the</li> <li>b. field inspection</li> <li>c. report of CWI</li> <li>d. other: (specify)</li> </ul>	n by	dards based upon: ; ;
D3.	THE WELL construct		as follows:
D4. [	Route to the Well Co	nstruction and Compliance Section for a revie	w of existing well construction.

Water Availability Tables

# Water Availability Analysis Detailed Reports

POWDER R > SNAKE R - AB ROCK CR POWDER BASIN

Water Availability as of 9/22/2014

Watershed ID #: 30920327 (Map) Date: 9/22/2014 Exceedance Level: 80% ~ Time: 1:04 PM

Water Availability Calculation	Consumptive Uses and Storages	Instream Flow Requirements	Reservations
Water F	Rights		haracteristics

## 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 Reguirement	Net Water Available
JAN	36.90	79.20	-42.30	0.00	25.00	-67.30
FEB	58.70	94.90	-36.20	0.00	30.00	-66.20
MAR	99.80	168.00	-67.90	0.00	40.00	-108.00
APR	213.00	242.00	-29.00	37.50	40.00	-107.00
MAY	300.00	430.00	-130.00	10.90	40.00	-181.00
JUN	163.00	521.00	-358.00	0.00	40.00	-398.00
JUL	42.00	321.00	-279.00	0.00	25.00	-304.00
AUG	17.60	238.00	-220.00	0.00	25.00	-245.00
SEP	12.60	195.00	-183.00	0.00	25.00	-208.00
OCT	15.40	76.50	-61.10	0.00	25.00	-86.10
NOV	25.20	61.60	-36.40	0.00	25.00	-61.40
DEC	34.90	72.80	-37.90	0.00	25.00	-62.90
ANN	114,000.00	151,000.00	18,200.00	2,900.00	22,000.00	7,130.00

Download Data ( Text - Formatted, Text - Tab Delimited, Excel )

