Water Right Conditions Tracking Slip
Groundwater/Hydrology Section
FILE ## G-16009
ROUTED TO: Water Rights TOWNSHIP/ RANGE-SECTION: 405/8E-22 bd
CONDITIONS ATTACHED? Hyes [] no REMARKS OR FURTHER INSTRUCTIONS:
Reviewer: Michael Zwart

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TO .		117.4											
10:		water	Rights S	Section					Dat	e July 29.	2003		
FROM	[:	Ground	d Water	Hydrology	Section_	Mich	ael Zwart						
SUBJE	ECT:	Applic	ation G-	16009		Rev	newer's Name Ipersedes re	eview c	of	N/A			
							1				Date of R	eview(s)	
PUBL OAR 6 welfare to deter the pres	IC INT 90-310-1 , safety at mine whe sumption	EREST 30 (1) The and healthe ether the period	PRESU ne Depart as descri presumpt This revi	MPTION tment shall p tibed in ORS ion is establ ew is based	GROUN <i>Tesume th</i> 537.525. ished. OA upon ava	DWATE at a proposi Departmen R 690-310- ilable info	ER sed groundw at staff review 140 allows t rmation and	<i>ater use</i> v ground he prop l agenc	e will d wate bosed y poli	ensure the preser er applications use be modified cies in place a	<i>servation</i> under OA d or cond t the time	of the put AR 690-3 itioned to e of evalu	blic 10-140 meet Jation .
A. <u>GE</u>	NERAL	INFOR	RMATI	<u>ON</u> : A	pplicant's	Name:	Fraser Br	<u>os. LL</u>	.C, M	argaret Sack	COS		
A1.	Applica	nt(s) seel	k(s) <u>2.2</u>	3cfs from	m <u>one</u>	well	(s) in the	Powd	ler				_Basin,
	1	Powder H	River			subt	oasin Qu	ad Map	p: B a	aker City			
A2.	Propose	d use:	Irr	igation, 167	.0 acres	Sea	sonality:	Marc	ch 1 to	October 31			
A3.	Well an	d aquifer	data (at i	ach and nu	mber logs	for existin	ng wells; ma	rk proj	posed	wells as such	under log	gid):	
Well	Lo	gid	Pr	oposed	Proposed	1	Location		Lo	cation, metes a	and bound	ls, exam	ple:
1	Prop	osed		luvium	2.23) (T) 85/40	/R-S QQ-Q))E-22 SE-N	w		2250' N, 1200 1425' E, 1345' S	'E fr NW S fr NW c	cor S 36 or Sec. 22	
2								<u> </u>					
3													
4													
3	CDD	Dodroali											
Alluvit	іпі, СКВ,	Deulock			-								
Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval	Casing Intervals	Lin Interv	er vals	Perforations Or Screens	Well Yield	Draw Down	Test Type
1	3351	?	?		50	0-23	0-50	None		40-50	1000		
Use data	from appl	ication for	proposed	wells.									f
A4. <u>explaini</u> would r	Commer ing the p	nts: <u>All co</u> roposed	<u>onstruct</u> construc dards. F	ion informa tion. I prop lased on the	tion is fro	m applica Enforceme	tion. A lette ent staff revi	r, dated ew this	d <u>May</u> s cons	7 19, 2003 was truction to def	sent by t termine v	<u>he appli</u> whether i at it is hi	<u>cant</u> t
unlikely	that the	propose	d well c	ould produc	ce 1000 gp	m. The pr	oposed desig	en appe	ears i	nefficient and	not deep	enough	to tap
<u>the high</u> See BA1	<u>ier vieldi</u> KE 5049	ng <u>sands</u> 9 for an 4	<u>and gra</u> example	vels that oc of a nearby	cur gener	ally below fuction we	a clay or sa	i <mark>ndy cla</mark> rforate	ay lay d no s	er that extend shallower that	<u>s to abou</u> 70 feet	<u>tt 70 to 1</u>	<u>00 feet.</u>
A5. 🛛	Provisio manager (Not all	ons of the nent of g basin rule	Powder round wates contain	iter hydrauli n such provi	cally conne sions.)	ected to sur	Basin ru face water	les rela	tive to or	the developm are not, active	ent, class ated by th	ification a is applica	and/or ation.

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A6. Well(s) #____

Comments: ____

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

_____ continued

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 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) _____
 - 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): <u>The well construction, as proposed, will likely</u> result in a finding of hydraulic connection with nearby surface water sources, notably Baldock Slough. If the proposed well construction condition is used, the finding would be that there is no hydraulic connection with these surface water sources. See my review for file G-14098 (attached).

B3. Ground water availability remarks:

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 of the Powder River alluvial fan	\boxtimes	

Basis for aquifer confinement evaluation: <u>This and all following findings are made under the presumption that the</u> recommended well construction condition is used. I believe that the sands and gravels below a clay layer that may extend to a depth of 70 to over 100 feet below land surface are under semiconfined to 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 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	Baldock Slough	3340	3348	4200		
1	2	Highway 203 Pond	3340	3349	2200		
1	3	Powder River	3340	3349	5900		

Basis for aquifer hydraulic connection evaluation: <u>GW Elev is estimated. See previous comments; note that the</u> findings above presume the use of a well construction condition recommended on page 2.

Identify the Water Availability Sub-Basin the well(s) are located within: Baldock Slough: 30920330; Powder R.: 30920327

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?

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:	omments: This section does not apply.												

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), (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												
Interfere	ence CFS												
The 4	4 3 3 7 1												
Distrib	outed Well	S Tam	Esh	Mar	A	Man	Tum	T.,1	4.0.0	Sam	Oat	Nov	Dec
well	<u>5₩#</u>	Jan	Feb	Iviar ø	Apr	May	Jun	Jui	Aug	Sep	000	INUV %	Dec
	070	90	70	70	70	-70	-70	710	-70	-70	-70	70	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Well Q	as CFS												
Interfere	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS							-					
Interfere	ence CFS												
	Γ	%	%	%	%	%	%	%	%	%	%	%	%
Well O	as CES												
Interfer													
Interfere	ence CFS	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~	~		C.			Ø	01	01	07.	6 /-
	070	%	%	%	%0	%	%0	%0	%0	%0	%0	%0	70
Well Q	as CFS												
interfere	I T	0%	01-	01-	07-		<i>0</i> /-	Ø/c	0/2	Ø/r	Ø/c	<i>%</i>	0%
NV II O	0.50	-70	-70	-70	-70	-70	70	10	70			~~~~~	,0
well Q	as CFS												
Interfere	ence CFS												

(A) = Total Interf.												
(B) = 80 % Nat. Q												
(C) = 1 % Nat. Q												_
(D) = (A) / (B)	%	%	%	%	%	%	%	%	%	%	%	%
(E) = (A) / (C)	%	%	%	%	%	%	%	%	%	%	%	%
(A) = total interferen CFS, (D) = total int Basis for im	ce as CFS, erference d pact evalu	(B) = WA ivided by 8 ation:	B calculate 0% flow a This sect	ed natural f s a percent ion does f	flow at 80% age (e.g., 2 not apply	% exceed. a 22%, not 0.	$(E) = \frac{1}{22}, (E) = \frac{1}{22}$	= 1% of c total interf	alculated r erence divi	atural flow ided by 1%	at 80% ex flow as pe	ceed. as rcentage.
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н е стал а стала												
C4b. 690-09-0 4	10 (5) (b)	The pot	ential to i	mpair or	detrimer	ntally affe	ect the pu	blic inter	est is to b	e determ	ined by th	ne Water

- 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 ___

Rights Section.

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D. <u>W</u>	VELL CONSTRUCTION, OAR 690-200
D1.	Well #:1 Logid:Proposed
D2.	THE WELL does not meet current well construction standards based upon: a. review of the well log; b. field inspection by; c. report of CWRE; d. X other: (specify) See remarks on page 1 regarding proposed construction.
D3.	THE WELL construction deficiency: a. constitutes a health threat under Division 200 rules; b. commingles water from more than one ground water reservoir; c. permits the loss of artesian head; d. permits the de-watering of one or more ground water reservoirs; e. other: (specify)
D4.	THE WELL construction deficiency is described as follows:
D5.	THE WELL a. was, <i>or</i> was not constructed according to the standards in effect at the time of original construction or most recent modification.
	b. I don't know if it met standards at the time of construction.
D6.	Route to the Enforcement Section. I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Enforcement Section and the Ground Water Section.
THIS	S SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNEL
D7.	Well construction deficiency has been corrected by the following actions:
	,200
	(Enforcement Section Signature)
D8.	Route to Water Rights Section (attach well reconstruction logs to this page).

Mater ne	
MEMO	July 30 . 2003
TO	Application G-16009
FROM	GW:(Reviewer's Name)
SUBJECT	Scenic Waterway Interference Evaluation
Yes No	The source of appropriation is within or above a Scenic Waterway.
Yes No	Use the Scenic Waterway condition (Condition 7J).

Water Recourses Department

PREPONDERANCE OF EVIDENCE FINDING: (Check box only if statement is true)

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At this time the Department is unable to find that there is a preponderance of evidence that the proposed use of ground water will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway in quantities necessary for recreation, fish and wildlife.

FLOW REDUCTION: (To be filled out only if <u>Preponderance of Evidence</u> box is not checked)

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	N ov	Dec

STATE OF OREGON WATER RESOURCES DEPARTMENT

INTEROFFICE MEMO

Tα FILE

From: MICHAEL ZWART

Date: April 4, 1996

Subject: APPLICATION G-14098, MICHAEL H. AND ANN TRINDLE

This application proposes to use 2.0 cfs of groundwater from one proposed well for irrigation of 58.95 acres. The well is estimated to be completed to a depth of 100 feet and will likely penetrate an aquifer developed in sand and gravel. The aquifer appears to be unconfined at shallow depths, but rising static water levels with depth in some nearby wells may indicate that the deeper zones are semiconfined to confined. The well is 1120 feet or more from Baldock Slough. If the proposed well is constructed to case off (and preferably seal off) the shallow water-bearing zones, then there is no potential for substantial interference with the nearby reach of the slough.

Permit condition 7B is recommended, as is a special well construction condition allowing groundwater production from no shallower than 60 feet.



ABANI	DON:	0				
RECONDITION	JED:	4				
REPAIR	RED:	2				
CONVERSI	ON:	0				
DEEPENIN	IGS:	5				
NEW CONSTRU	JCT:	48				
COMMUNITY	USE:	0				
DOMESTIC	USE:	53				
INDUSTRIAL	USE:	0				
INJECTION	USE:	0				
IRRIGATION	USE:	18				
THERMAL	USE:	0				
LIVESTOCK	USE:	0				
*	****	****	* * * * * * * * *	* * * * * * * * *	******	* * * * * *

PERMITTED WELLS WITHIN 1 MILE OF APPLICATION G 16009

\$RECNO	APE	PLICATION	PE.	RMIT	CLAIM		LOC-QQ	USE_CODE
1	G	4274	G	4025		0	8.00S40.00E15NENW	IS
2	G	5447	G	5363		0	8.00S40.00E14SENE	IR
3	G	3949	G	3706		0	8.00S40.00E14SWNE	IR
4	G	6600	G	6185		0	8.00S40.00E16SWNE	IS
4	G	6600	G	6185		0	8.00S40.00E16SWNE	IR
5	G	2772	G	2572		0	8.00s40.00e15sesw	IS
6	G	3662	G	3438		0	8.00S40.00E23NWNW	IR
6	S	54003	S	40266		0	8.00540.00E23NWNW	IS
7							8.00S40.00E22SENW	
8	G	6752	G	6073		0	8.00S40.00E26SWNW	IS
8	G	12448	G	12423		0	8.00540.00E26SWNW	IR
8	G	6752	G	6073		0	8.00S40.00E26SWNW	IS
9	G	2261	G	2077		0	8.00S40.00E27SWNE	IS
9	G	2261	G	2077		0	8.00S40.00E27SWNE	IS
10	G	1941	G	1784		0	8.00S40.00E27NESE	IS
11	G	9347	G	8769		0	8.00540.00E28NWSE	IS
12		0		0		0	8.00S40.00E28NESW	IR
12		0		0		0	8.00S40.00E28NESW	IR
12		0		0		0	8.00S40.00E28NESW	IR
12	G	9347	G	8769		0	8.00S40.00E28NESW	IS
13	G	14098	G	12999		0	8.00S40.00E27SESE	IS
14	G	11022	G	10404		0	8.00s40.00e35nenw	IS
15	G	12891	G	13111		0	8.00S40.00E34NENE	IR
15	G	12891	G	13111		0	8.00S40.00E34NENE	IS
15	G	12891	G	13111		0	8.00S40.00E34NENE	IM
16	G	12891	G	13111		0	8.00540.00E34NWNE	IR
16	G	12891	G	13111		0	8.00S40.00E34NWNE	IS
16	G	12891	G	13111		0	8.00540.00E34NWNE	IM
16	G	12891	G	13111		0	8.00S40.00E34NWNE	IM
16	G	12891	G	13111		0	8.00S40.00E34NWNE	IS
16	G	12891	G	13111		0	8.00S40.00E34NWNE	IR
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CONDITIONED WELLS WITHIN 5 MILES OF APPLICATION G 16009

\$RECNO	APPLICATION PERMIT	LOC-QQ	CONDITION-CODE
1		8.00S40.00E27SESE	
	* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * *

APPLICATION G 16009 FALLS WITHIN THESE QUAD(S)

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