

Water Right Conditions
Tracking Slip

Groundwater/Hydrology Section

FILE ## G-17547

ROUTED TO: Water Rights

TOWNSHIP/

RANGE-SECTION: 85/38E-25ad

CONDITIONS ATTACHED? ☒ yes ☐ no

REMARKS OR FURTHER INSTRUCTIONS:

Reviewer: Mike Zwart

MEMO

April 26, 2002

YES

✓ NO

YES

☒ YES ☐ NO

[illegible]

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date April 26, 2012

FROM: Ground Water/Hydrology Section Michael Zwart
Reviewer's Name

SUBJECT: Application G- 17547 Supersedes review of _____
Date of Review(s)

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: Richard J. Haines County: Baker

A1. Applicant(s) seek(s) 0.049 cfs from one well(s) in the Powder Basin,
_____ subbasin Quad Map: Wingville

A2. Proposed use: Irrigation, 2 acres Seasonality: March 1 to October 31

A3. Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under logid):

Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	BAKE 50159	1	Alluvium	0.049	8S/38E-25 SE-NE	1750' S, 225' W fr NE cor S 25
2						
3						
4						
5						

* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	3790	135	40	04/14/97	160	0-20	0-160	None	120-140	22		Air

Use data from application for proposed wells.

A4. **Comments: The applicant is requesting a higher rate than is usual and customary, which appears to be based on the production rate of the well as reported on the log. Please note that in order to avoid a finding of PSI with Salmon Creek, the rate needs to be limited to less than 0.0275 cfs, which is also higher than the customary rate. Therefore, I recommend that the permit, if issued be limited to no more than 0.02749 cfs.**

A5. ☒ **Provisions of the Powder** _____ 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) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
Name of administrative area: _____
Comments: _____

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	Interbedded clay, sand and gravel	☒	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: Regionally, the aquifer is likely unconfined, but locally some water-bearing zones may be semi-confined to confined below significant low-permeability beds. In this case, the well has a relatively deep casing depth and the lithology is described as primarily clay from the surface to a depth of 131 feet. Low-permeability beds are unlikely to be very extensive in this area, based on the geology (alluvial fan) and lithology as described in well logs.

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)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1A	Pine Creek	3750	3785	1200	☐	☒	☐	☐	☒
1	1B	Pine Creek	3750	3635	5280	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: Groundwater flow direction and heads suggest discharge to surface water sources at lower elevation reaches of local creeks, such as Pine Creek, rather than to the nearest reaches of such creeks.

Water Availability Basin the well(s) are located within: Salmon Cr > Powder R at mouth (30920329).

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	1B	☐	☐			☐	2.75	☐	<25	☐
		☐	☐			☐	(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: The permit, if issued, should be limited to a rate of less than 0.0275 cfs.

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-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)			✓	✓			✓	✓	✓	✓	✓	✓	✓
(E) = (A / 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: Based on the well's distance from Salmon Creek, the natural streamflow for that creek and previous experience with the Hunt/Wozniak model with other nearby applications in the area, I am confident that the maximum interference will be well under 1% of natural flows. Therefore, it is judged not to be necessary to perform the calculations.

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**

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.

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: 1 Logid: BAKE 50159

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. ☐ other: (specify) _____

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**, *or* ☐ **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 SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNEL

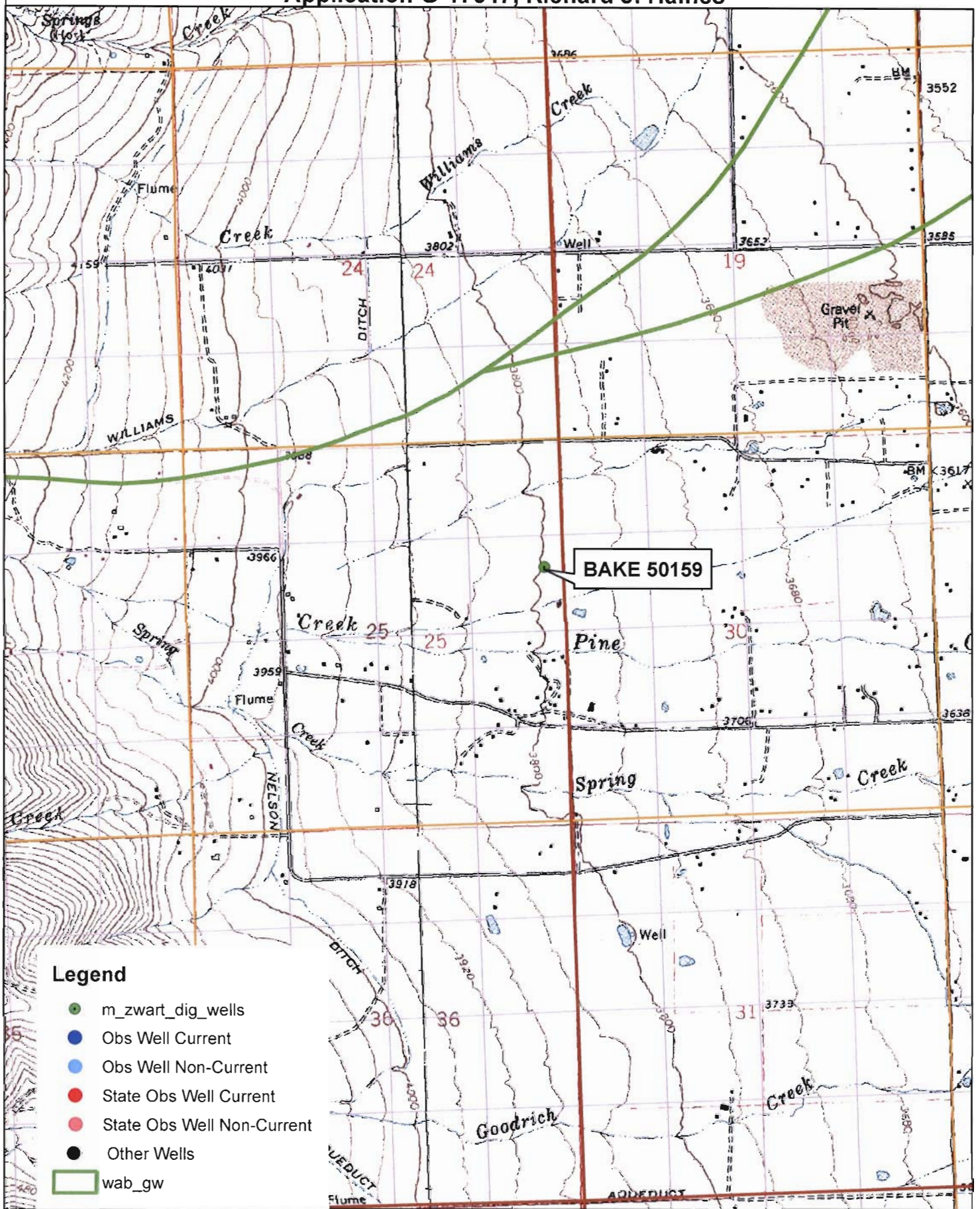
D7. ☐ Well construction deficiency has been corrected by the following actions: _____

(Enforcement Section Signature)

, 200

D8. ☐ **Route to Water Rights Section (attach well reconstruction logs to this page).**

Application G-17547, Richard J. Haines



Legend

- m_zwart_dig_wells
- Obs Well Current
- Obs Well Non-Current
- State Obs Well Current
- State Obs Well Non-Current
- Other Wells
- wab_gw



0 0.5 1 1.5 Miles