Water Right Conditions Tracking Slip

Groundwater/Hydrology Section

FILE # # G-17729

ROUTED TO: Water Rights - Mary

TOWNSHIP/
RANGE-SECTION: 7S/39E - 8 cc

CONDITIONS ATTACHED?: [✓] yes [ ] no

REMARKS OR FURTHER INSTRUCTIONS:
Note: Same source issue noted and finding made.

Reviewer: Mike Zwart

WATER RESOURCES DEPARTMENT

MEMO November 14, 2013

TO: **Application** G- 17729

FROM: **GW:** Mike Zwart
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

☐ YES
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 water 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 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	Dec

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date **November 14, 2013**

FROM: Groundwater Section **Mike Zwart**
Reviewer's Name

SUBJECT: Application G- **17729** 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: **Wendt Family, LLC** County: **Baker**

A1. Applicant(s) seek(s) **4.2** cfs from **one** well(s) in the **Powder** Basin, _____ subbasin Quad Map: **Haines**

A2. Proposed use **Irrigation, 337.4 acres S** 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	**Proposed**	**2**	**Alluvium**	**4.2**	**7S/39E-8 SW-SW**	**764' N, 396' E fr SW cor S 8**
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	**3382**				**200**	**0-40**	**0-200**	**None**	**40-200**			

Use data from application for proposed wells.

A4. **Comments: Agent requested to perforate to 200 feet, which is deeper than specified on the application. This change will not affect the findings of my review. The proposed well will develop the same source of groundwater as does BAKE 83 (copy of log enclosed). This well is tied to the existing groundwater right (Permit G-2329, Certificate 34419) for the same lands.**

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: _____

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) **7N**;
   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: The few nearby observation wells are non-current. The water levels have been reasonably stable during the period of record.**

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; alluvium and terrace gravels**	☐	☒
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: **The alluvial aquifer is typically unconfined to poorly confined. The proposed well construction does target all water-bearing zones from just below the proposed seal depth to the bottom of the well.**

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? YES	NO	ASSUMED	Potential for Subst. Interfer. Assumed? YES	NO
1	1	**Warm Springs Creek**	**3370±**	**3370**	**6000**	☒	☐	☐	☐	☒
1	2	**Little Muddy Creek**	**3370±**	**3360**	**5600**	☒	☐	☐	☐	☒
1	3	**Powder River**	**3370±**	**3295**	**11000**	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: **The unconfined aquifer and the head relationship suggest an efficient hydraulic connection. There are some ditches (Mansfield and Williams) and other unnamed tributaries located closer to the well than those listed above. However, it is likely that these creeks may either be intermittent or have been in part channelized to convey ditch water. Due to this complex system, only the above named surface water sources were considered for this Division 9 review.**

Water Availability Basin the well(s) are located within: **POWDER R > SNAKE R - AB UNN STR (72191).**

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: 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), (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													

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
(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: **This section applies. However, I believe that the local geology and the local surface water system of ditches and creeks is too complex for an analytical model, such as the Hunt model, to adequately calculate interference with Warm Springs or Little Muddy creeks. The alluvial aquifer pinches out against the west flank of Hutchinson Hill, which would limit the potential for interference with the Powder River. Based on the proximity and configuration of the Mansfield Ditch, which is perhaps less than 100 feet from the proposed well, nearly all of the actual surface water interference would be with this ditch. Rick Lusk confirmed that this is an unlined ditch.**

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, 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; past personal communications with DOGAMI Regional Geologist and other OWRD staff; nearby recent reviews.**

D. WELL CONSTRUCTION, OAR 690-200

D1. **Well #:** _____ **Logid:** _____

D2. **THE WELL does not appear to 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 or other comment is described as follows:** _____

D4. ☐ **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Water Availability Tables

ORIGINAL
File Original, and Duplicate with the STATE ENGINEER, SALEM, OREGON

Baker 83

WATER WELL DRILLERS REPORT
STATE OF OREGON

Do Not Fill In — State Well No. 7/39-7 J

State ~~Permit~~ No. 128 G2473

(1) OWNER:
Name W.C. McCALL 2710 SE. 50TH

Address PORTLAND, OREGON

(2) LOCATION OF WELL:
County BAKER Owner's number, if any—

R. F. D. or Street No.

Bearing and distance from section or subdivision corner

1685' N; 1150' W. SE COR SEC. 7, T. 7S R. 39 EWM NE¼ SE¼ Sec. 7, T. 7S R. 39 EWM

(3) TYPE OF WORK (check):
New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☐ Municipal ☐

Irrigation ☒ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☐

Cable ☒

Dug Well ☐

(6) CASING INSTALLED:
Threaded ☐ Welded ☐

FROM	ft. to	ft.	Diam.	Gage or Wall
"	0	147½	12	3/8
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"

Type and size of shoe or well ring Steel

Describe joint welded

If gravel packed

Diameter of Bore	from ft.	to ft.
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"

Size of gravel:

(7) PERFORATIONS:
Type of perforator used

SIZE of perforations	in., length, by	in.
FROM ft. to ft.	perf per foot	No. of rows
" 0 " 147½ " 3/16	" " "	" 6 "
" " "	" " "	" " "
" " "	" " "	" " "
" " "	" " "	" " "

SCREENS:
Give Manufacturer's Name, Model No. and Size

(8) CONSTRUCTION:
Was a surface sanitary seal provided? ☐ Yes ☒ No To what depth ft.

Were any strata sealed against pollution? ☐ Yes ☒ No

If yes, note depth of strata

FROM	ft. to	ft.
"	"	"

METHOD OF SEALING

(9) WATER LEVELS:
Depth at which water was first found 30 ft.

Standing level before perforating ft.

Standing level after perforating 6 ft.

Log Accepted by:

[Signed] ..... Dated ....., 19.....
Owner

(10) WELL TESTS:
Baker Drilling

Was a pump test made? ☒ Yes ☐ No If yes, by whom?

Yield:	gal./min. with	ft. draw down after	hrs.
" 1000	"	80 "	16 "
"	"	"	"

Artesian flow 720 g.p.m.

Shut-in pressure ..... lbs. per square inch.

Bailer test ..... g.p.m. with ..... ft. drawdown

Temperature of water 56 Was a chemical analysis made? ☐ Yes ☒ No

Was electric log made of well? ☐ Yes ☒ No Air

(11) WELL LOG:
Diameter of well, 11 inches.

Total depth 150 ft. Depth of completed well 130 ft.

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

ft. to

0 " 5 black top soil

5-33 Light Colored sort of clay & sand at 25-30' to

33 " 68 sand & fine gravel

68 " 75 sand & clay

75 " 100 Coarse sand, lots

100 " 130 fine sand at bottom Coarse gravel

Ground elevation at well site ..... feet above mean sea level.

Work started 19 , Completed 19

Well Driller's Statement:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME A W Robinson
(Person, firm, or corporation) (Typed or printed)

Address 3240 - 10th St

Driller's well number

[Signed] A W Robinson
(Well Driller)

License No. 128 Dated May 7, 19 56

Application G-17729, Wendt Family, LLC