

Water Right Conditions
Tracking Slip

Groundwater/Hydrology Section

FILE ## G-17531

ROUTED TO: Water Rights - Kerry

TOWNSHIP/

RANGE-SECTION: 27S/30E-35
28S/30E-1+2

CONDITIONS ATTACHED? [☒]yes [☐]no

REMARKS OR FURTHER INSTRUCTIONS:

Reviewer: Mike Zwart

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date February 17, 2012

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

SUBJECT: Application G- 17531 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: Don Nienke County: Harney

A1. Applicant(s) seek(s) 17.825 cfs from eight well(s) in the Malheur Lake Basin,
Blitzen Valley subbasin Quad Map: Coyote Buttes

A2. Proposed use: Irrigation, 1304 acres Seasonality: April 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	CF 1	Volcanic Seds.	17.825	28S/30E-1 SW-NW	1850' S, 400' E fr NW cor S 1
2	Proposed	CF 2	Volcanic Seds.	17.825	27S/30E-35 SE-NE	3630' N, 40' W fr SE cor S 35
3	Proposed	CF 3	Volcanic Seds.	17.825	27S/30E-35 NW-SE	1980' N, 2310' W fr SE cor S 35
4	Proposed	CF 4	Volcanic Seds.	17.825	27S/30E-35 SE-NW	3300' N, 3168' W fr SE cor S 35
5	Proposed	CF 5	Volcanic Seds.	17.825	27S/30E-35 SW-NW	3380' N, 5082' W fr SE cor S 35
6	Proposed	CF 6	Volcanic Seds.	17.825	28S/30E-2 SE-NW	1650' S, 3360' W fr NE cor S 2
7	Proposed	CF 7	Volcanic Seds.	17.825	27S/30E-35 SE-SW	860' N, 3100' W fr SE cor S 35
8	Proposed	CF 8	Volcanic Seds.	17.825	28S/30E-1 NW-SE	2838' S, 2904' E fr NW cor S 1

* 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	4138				160	0-20	0-100	None	100-160			
2	4154				160	0-20	0-100	None	100-160			
3	4180				160	0-20	0-100	None	100-160			
4	4178				160	0-20	0-100	None	100-160			
5	4202				160	0-20	0-100	None	100-160			
6	4212				160	0-20	0-100	None	100-160			
7	4195				160	0-20	0-100	None	100-160			
8	4116				160	0-20	0-100	None	100-160			

Use data from application for proposed wells.

A4. **Comments:** All construction information from the application. There was some disagreement regarding the maximum rate; I chose to use 8000 gpm, which is 17.825 cfs, rather than 9730 gpm.

A5. ☒ **Provisions of the Malheur Lake** _____ 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: _____

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: Currently, groundwater development in this part of the basin is limited. There are no nearby State Observation Wells. However, two applications (G-17524 & G-17525) have been filed recently within the same WAB, but about seven miles to the east.**

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
All	Sedimentary deposits (Tds) of WSP 841	☐	☒
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: It is anticipated that an unconfined aquifer will be developed, based on the proposed construction and few nearby well logs on file.

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
All	1	Donner und Blitzen River	4110±	4108- 4110	18,000- 26,000	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: The unconfined aquifer appears to extend to the river where it is overlain by younger alluvial deposits.

Water Availability Basin the well(s) are located within: Donner und Blitzen R > Malheur Lake at mouth (31200311).

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													
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Well Q as CFS													

Basis for impact evaluation: Use of the Hunt 99 model at a well under file G-16953 has disclosed that the potential interference with the Donner und Blitzen River will be less than 0.1 percent of natural flow. The wells on this application are at least double the distance from the river. Clearly, the interference here will also be less than 1 percent of natural flow.

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: Recent application reviews, especially G-17524 & G-17525; local well logs; GW Report # 16; WSP #841; Geologic Map of the Burns Quadrangle, Oregon, by Greene, et al, 1972, USGS Miscellaneous Geologic Investigations Map I-680.

D. WELL CONSTRUCTION, OAR 690-200

- D1. Well #: _____ Logid: _____
- 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: _____

 _____, 200____.
- (Enforcement Section Signature)

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

MEMO

February 17, 2002

TO: Application G- 17531

FROM: GW: Mike Zwart
(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)

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.

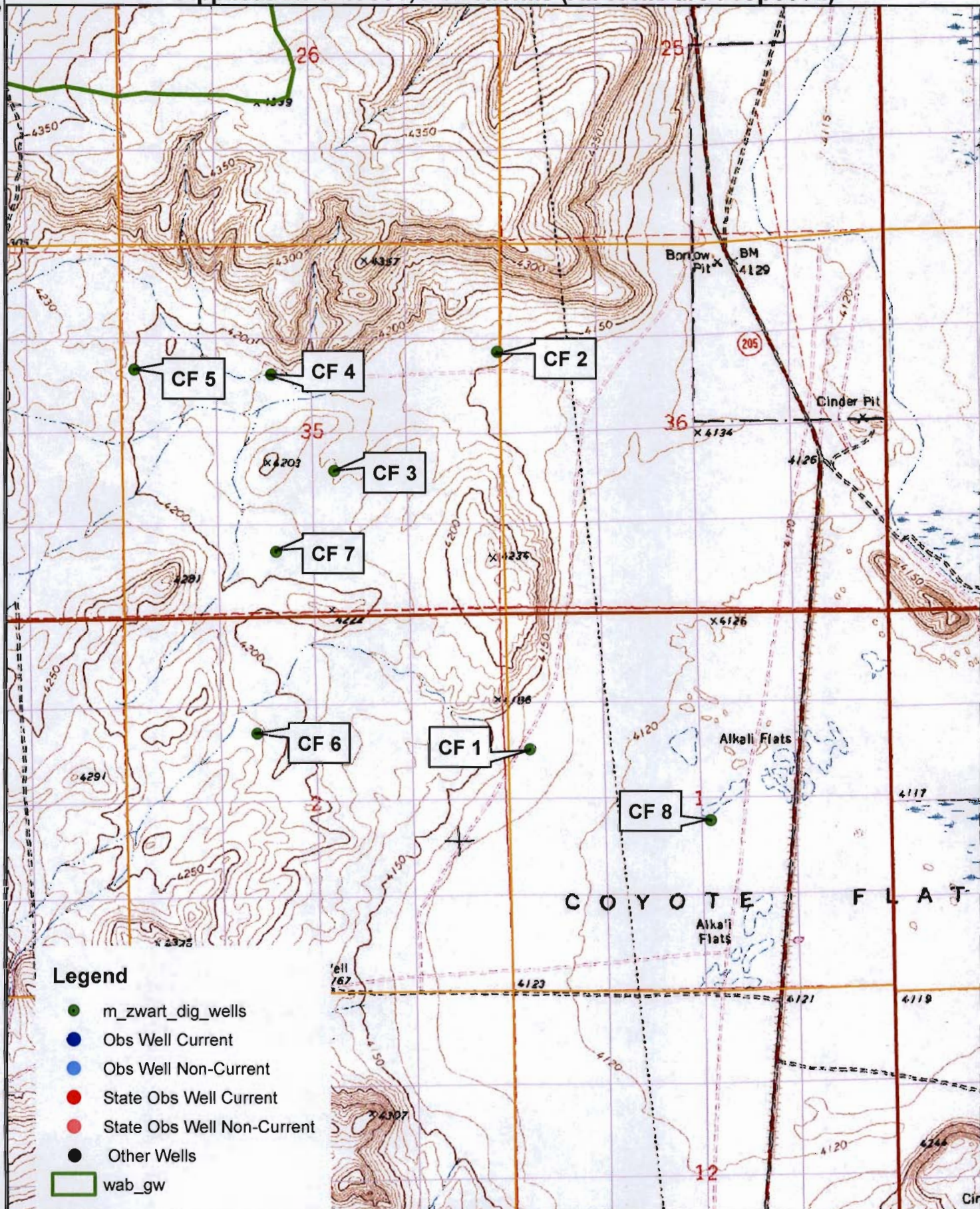
Per ORS 390.835, the Ground Water Section is **unable** to calculate ground water interference with surface water that contributes to a scenic waterway; **therefore, the Department is unable to find that there is a preponderance of evidence that the proposed use will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway.**

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.

[illegible]

Application G-17531, Don Nienke (All Wells are Proposed)



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