

TO: Water Rights Section Date July 31, 2003

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

SUBJECT: Application G- 16026 Supersedes review of N/A
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: James K. Woods & Janet L. Stauffer

- A1. Applicant(s) seek(s) 0.624 cfs from one well(s) in the Deschutes Basin,
Lower Deschutes subbasin Quad Map: Dufur West
- A2. Proposed use: Irrigation, 50 acres (P) 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	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, example: 2250' N, 1200' E fr NW cor S 36
1	WASC 51141	CRB	0.624	1S/13E 32 SW-NW	790' E fr W ¼ cor Sec. 32
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	Casing Intervals	Liner Intervals	Perforations Or Screens	Well Yield	Draw Down	Test Type
1	1675	564	200	4/13/03	584	0-18	0-23.5	None	None	200+	380	Air

Use data from application for proposed wells.

A4. Comments: Well penetrates about 273 feet of Dalles Formation (sandstone) above basalt. The lack of casing and seal into the basalt may allow commingling, since the SWL is up within the Dalles Formation. Well WASC 50985, about one mile to the west, is a good example of construction which will prevent commingling.

A5. Provisions of the Deschutes 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	Basalt of the Columbia River Basalt Group	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: Deep water-bearing zones within this aquifer are typically confined in this area.

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	1	Fifteen Mile Creek	1475	1540	1700	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Eightmile Creek	1475	1200	8250	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: The deep water-bearing zone is below the bed of the creeks.

Identify the Water Availability Sub-Basin the well(s) are located within: _____

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?
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

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?
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

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), (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													

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: 1 Logid: WASC 51141

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) Marc Norton has worked with well constructors in this area and believes the construction here is deficient.

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: The well develops basalt of the Columbia River Basalt Group under confined conditions. The casing and seal do not extend into the basalt. The "sandstone" of the Dalles Formation occurs to a depth of 273 feet, but is not reported as water bearing. The static water level of 200 feet is within the exposed lower portion of the Dalles Formation in the well bore. Commingling may occur by allowing basalt ground water to move into the Dalles Formation, or the reverse. However, if the Dalles Formation is non water bearing, commingling may not occur. I defer to Enforcement staff to make the call as to whether a deficiency exists. See nearby log WASC 50985 for deeper casing/seal.

- 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).

WELL LOGS WITHIN 1 MILE OF APPLICATION G 16026

ABANDON: 0
 RECONDITIONED: 0
 REPAIRED: 0
 CONVERSION: 0
 DEEPENINGS: 2
 NEW CONSTRUCT: 11

COMMUNITY USE: 0
 DOMESTIC USE: 7
 INDUSTRIAL USE: 0
 INJECTION USE: 0
 IRRIGATION USE: 8
 THERMAL USE: 0
 LIVESTOCK USE: 0

PERMITTED WELLS WITHIN 1 MILE OF APPLICATION G 16026

\$RECNO	APPLICATION	PERMIT	CLAIM	LOC-QQ	USE_CODE
1	0	G	4130	0 1.00S13.00E30NWNE	IS
1	0	S	33396	0 1.00S13.00E30NWNE	IR
1	S 6904	S	4319	0 1.00S13.00E30NWNE	IR
1	G 4378	G	4130	0 1.00S13.00E30NWNE	IS
1	S 44644	S	33396	0 1.00S13.00E30NWNE	IR
2	G 6143	G	5820	0 1.00S13.00E30SWSE	IS
3				1.00S13.00E32SWNW	
4	G 1903	G	1741	0 1.00S13.00E31SWSE	IS
4	G 1903	G	1741	0 1.00S13.00E31SWSE	IR
4	G 2839	G	2647	0 1.00S13.00E31SWSE	IR
4	G 2839	G	2647	0 1.00S13.00E31SWSE	IR
4	0	S	1041	0 1.00S13.00E31SWSE	IR
4	0	S	1041	0 1.00S13.00E31SWSE	IR
4	S 54189	S	40564	0 1.00S13.00E31SWSE	IR
4	G 7348	G	6778	0 1.00S13.00E31SWSE	IS
4	G 9785	G	8959	0 1.00S13.00E31SWSE	IS
5	G 11483	G	10615	0 1.00S13.00E32SESE	IS
5	G 12273	G	11691	0 1.00S13.00E32SESE	IR
6	G 15299	G	15094	0 2.00S13.00E 3SWNW	IR
6	G 15299	G	15094	0 2.00S13.00E 3SWNW	TC
7	G 15299	G	15094	0 2.00S13.00E 4NWSE	TC
7	G 15299	G	15094	0 2.00S13.00E 4NWSE	IR
7	G 1104	G	951	0 2.00S13.00E 4NWSE	IR
7	G 2541	G	2352	0 2.00S13.00E 4NWSE	IR

NO CONDITIONED WELLS WITHIN 1 MILE OF APPLICATION G 16026

APPLICATION G 16026 FALLS WITHIN THESE QUAD(S)

DUFUR WEST
