

**OREGON WATER RESOURCES DEPARTMENT
INTEROFFICE MEMO**

To: Ground Water Files/Kerry Lefever

Date: June 30, 2003

From: Michael J. Zwart

Subject: File G-15927

I have reviewed the four files cited in your memo (G-2948, G-4515, G-5619 and G-6753). The wells authorized under file G-2948 are shallow sump wells and therefore produce from a different aquifer from the wells in this application. However, it appears very likely that the wells authorized under the other permits are the same wells as are being applied for here. The abstract of permits found in those files describe the wells as being 350 feet deep (files G-4515 and G-5619) and 218 feet deep (file G-6753) and at or near the same locations as the current application. I conclude that these are likely the same wells, and if not, must produce from the same aquifer as those proposed in this application.

INTEROFFICE MEMORANDUM

Water Rights Section

TO: Mike Zwart June 26, 2003
FROM: Kerry Lefever
RE: GW File Number G-15927 Frank Newell

Application G-15927 proposes to use groundwater from a well for irrigation for a portion of the same lands as described in four Certificates : Certificate 34934 (Application G-2948, Permit G-2740), Certificate 43866 (Application G-4515, Permit G-4254), Certificate 42863 (Application G-5619, Permit G-5022), and Certificate 48909 (Application G-6753, Permit G-6274).

Please review Application G-15927 and determine if the well proposed in this application will produce water from the same aquifer as the wells listed under the four certificates referenced above.

Please route to **Kerry Lefever** in water rights when finished.

Thanks.

G-2948: 4 sumb wells
G-5619 → G-4515: 1 well SE-NE 350'
same aqu as well #1
G-6753: same as #2

TO: Water Rights Section May 19, 2003
 FROM: Ground Water/Hydrology Section Michael Zwart
 SUBJECT: Application G-15927 Reviewer's Name
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: Frank L. Newell

- A1. Applicant(s) seek(s) 2.0 cfs from 2 well(s) in the Deschutes Basin,
Antelope Cr. > Trout Creek subbasin Quad Map: Degner Canyon
- A2. Proposed use: Irrigation (164.1 ac primary) Seasonality: April 1 - 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 3890 *	sandy clay, basalt	1.0	85/16 E-20 SE-NE	3160 N, 180 W fr SE cor sec. 20
2	WASC 3893	rhyolite	1.0	85/16 E-20 SE-SE	820 N, 360 W fr SE cor sec. 20
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	2218	est. 154	0	6/2/71	350	0-20	0-50	-	-	550	18	Pump
2	2245	70	41	12/13/73	218	0-20	0-40	-	-	50	2	3in

Use data from application for proposed wells.

A4. Comments: * deepened: WASC 3891, reconditioned: WASC 3892.

A5. Provisions of the _____ 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: Outside Deschutes Study Area

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 (b) (c)

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;
- b. will not or will likely be available in the amounts requested without injury to prior ground water rights;
- 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) 7, 13;
 - 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: _____

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, boulders, shale + clay	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	rhyolite	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: Both wells appear to develop complexly bedded sediments, volcaniclastic rocks and basaltic rocks of John Day formation. Static w.l. in both wells is above depth water first found (this depth not stated on log for Well #1, but is estimated by me). Other nearby wells describe similar complex rocks, but also indicate swl's higher than the level gw first found. A few nearby wells are flowing artesian.

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.

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	Antelope Creek	2218	2215	100	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	unnamed trib. > Antelope ck.	2204	2215	750	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Antelope Creek	2218	2205	1800	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	unnamed trib. > Antelope ck	2204	2240	250	<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"/>
						<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: Hydraulic connection appears likely at a more distant downstream reach of Antelope Creek, beyond one mile from the subject wells. The unnamed tributary does not breach the confining bed described at either well.

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. If Q is not distributed by well, use full rate for each well. If modeled, include description and model parameters in Comments (C3b). Any checked box indicates the well is assumed to have the potential to cause substantial interference with surface water.

Well	SW #	Well < 1/4 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"/>
		<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"/>
		<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: _____

C4a. 690-09-040 (5): Estimated impacts on surface water sources as percent or qualitative fraction* of proposed pumping rate. Limit evaluation to one year of pumping.

Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1	VL											VL
1	2	VL											VL
2	1	VL											VL
2	2	VL											VL

*VL = Very Low (<5%), L = Low (5-25%), I = Intermediate (25-75%), H = High (>75%).

Basis for impact evaluation: SW #2 is at elevation within to above the water bearing zones and therefore will have nearly no impacts as a result of pumping.
SW #1 does not breach the confining zone above the aquifer penetrated within one mile of the wells. Therefore as a result of the greater distance where impacts may occur, these impacts will also be small.

C4b. 690-09-040 (5): Evaluation of paragraphs under subsection 5. A determination of Low denotes no connection or a very indirect connection between surface water and ground water; High denotes hydraulic connection that would likely reduce surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.

- (a) The potential to reduce surface water availability in Antelope Creek is Low or High
- The potential to reduce surface water availability in unnamed trib > Antelope Creek is Low or High
- The potential to reduce surface water availability in _____ is Low or High
- The potential to reduce surface water availability in _____ is Low or High

Basis: _____

(b) The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.

C4b. 690-09-040 (5): Evaluation of paragraphs under subsection 5 continued.

(c) The percentage of appropriation in the first year of use that will be at the expense of surface water _____

Basis: _____

(d) The timing of interference will be immediate (within one year), or delayed;

Basis: _____

(e) The potential for cumulative adverse impacts: A graphical distribution of POAs and summary of permitted rights
 are or are not available at this time of review.

Impacted stream	Impacted basin or sub-basin	Existing Ground Water Rights (cfs)

Comments: _____

- 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) 7B, 7J;
 - ii. The permit should contain special condition(s) as indicated in "Remarks" below;
 - iii. The permit should be conditioned as indicated in item 6 below;

C6. If the well is not reconstructed, it will interfere with surface water. Well reconstruction, as follows, will adequately protect surface water from interference. If the ground water use under this permit is found to have the potential for substantial interference with surface water, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Ground Water Section.:

The well should be reconstructed as follows: _____

C7. SW / GW Remarks _____

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: 1, 2 Logid: Wasc 3890 / Wasc 3893

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)

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

WELL LOGS WITHIN 1 MILE OF APPLICATION G 15927

ABANDON: 0
 RECONDITIONED: 2
 REPAIRED: 0
 CONVERSION: 0
 DEEPENINGS: 6
 NEW CONSTRUCT: 21

 COMMUNITY USE: 0
 DOMESTIC USE: 3
 INDUSTRIAL USE: 0
 INJECTION USE: 0
 IRRIGATION USE: 23
 THERMAL USE: 0
 LIVESTOCK USE: 3

PERMITTED WELLS WITHIN 1 MILE OF APPLICATION G 15927

\$RECNO	APPLICATION	PERMIT	CLAIM	LOC-QQ	USE_CODE
1	G	2948	G 2740	0 8.00S16.00E20SWNE	IS
1	G	2948	G 2740	0 8.00S16.00E20SWNE	IR
1	G	2948	G 2740	0 8.00S16.00E20SWNE	IR
1	G	2948	G 2740	0 8.00S16.00E20SWNE	IS
1	G	2948	G 2740	0 8.00S16.00E20SWNE	IR
1	G	2948	G 2740	0 8.00S16.00E20SWNE	IS
2	G	5175	G 4822	0 8.00S16.00E21SENW	IR
2	G	5695	G 5504	0 8.00S16.00E21SENW	IR
3	G	8687	G 9006	0 8.00S16.00E19NESW	IR
4	G	2948	G 2740	0 8.00S16.00E20NWSE	IS
4	G	2948	G 2740	0 8.00S16.00E20NWSE	IR
5	G	6753	G 6274	0 8.00S16.00E20SESE	IS
5	G	6753	G 6274	0 8.00S16.00E20SESE	IR
6	G	10022	G 9591	0 8.00S16.00E30NENW	IS
7	G	7646	G 7148	0 8.00S16.00E29NENE	IR

NO CONDITIONED WELLS WITHIN 1 MILE OF APPLICATION G 15927

APPLICATION G 15927 FALLS WITHIN THESE QUAD(S)

DEGNER CANYON
