

**Water Right Conditions
Tracking Slip**

Groundwater/Hydrology Section

FILE # ~~7~~ = G-16141

ROUTED TO: WR'S

TOWNSHIP/

RANGE-SECTION: 2S/1E-23

CONDITIONS ATTACHED? yes no

REMARKS OR FURTHER INSTRUCTIONS:

Reviewer: Dann Miller

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date 2/5/04
 FROM: Ground Water/Hydrology Section Don Miller
 Reviewer's Name
 SUBJECT: Application G- 16141 Supersedes review of None
 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 + Kathy Harmon County: Washington

- A1. Applicant(s) seek(s) 0.80 ^{SIC → probably seeking 0.08 cfs actually} cfs from one well(s) in the Willanette Basin,
 _____ subbasin Quad Map: Lake Oswego
- A2. Proposed use: Irrigation Seasonality: 3/1 - 10/31
- 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 | CLAL 58293 | 1 | CRB | 0.80 | 25/1E-23 SWSW | 1150' N, ~900' E fr SW cor S 23 |
| 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 | 740 | 75 | 571 | 10/22/02 | 672 | 0-110 368-378 | 0-378 | 12-672 | 653-671 | 25 | - | Air |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Use data from application for proposed wells.

A4. Comments: Well info from log. Two major WBZ's are identified 75' to 105' and 634' to 661'. The huge gap from 105' to 634' that is highly fractural is not indicated as water bearing. This seems odd.

A5. Provisions of the Willanette 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: not applicable to CRB

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 | CRB | <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"/> |

Basis for aquifer confinement evaluation: Well log information and CRB nature generally lead to my confined aquifer conclusion.

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 | Unnamed trib Tualatin R ^{to SSW} | 169 | 120 | 6000 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 1 | 2 | Unnamed trib Willamette R ^{to ESW} | 169 | 120 | 6000 | <input checked="" type="checkbox"/> | <input 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: Head relationships that note gas flow to the surface water under natural conditions. Since location is at Rosemont crest, interflow could be on either the Willamette or Tualatin sides

Water Availability Basin the well(s) are located within: Tualatin R, AB mouth, Willamette R, AB mouth

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.

more than 1 mile

| 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 | 1 | <input type="checkbox"/> | <input type="checkbox"/> | — | — | <input type="checkbox"/> | — | <input type="checkbox"/> | — | <input type="checkbox"/> |
| 1 | 2 | <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 **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 | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----------------------|-----|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|--------|
| Well | SW# | | | | | | | | | | | | |
| 1 | 1 | 6.62% | 6.8% | 0.00% | 0.12% | 0.50% | 1.11% | 1.85% | 2.68% | 3.56% | 4.45% | 5.35% | 6.12% |
| Well Q as CFS | | 0.80 | | | | | | | | | | | |
| Interference CFS | | 0.053 | 0.055 | 0.000 | 0.0096 | 0.004 | 0.009 | 0.016 | 0.021 | 0.028 | 0.036 | 0.043 | 0.049 |
| Distributed Wells | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Well | SW# | % | % | % | % | % | % | % | % | % | % | % | % |
| 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. | | 0.053 | 0.055 | 0.000 | 0.0096 | 0.004 | 0.009 | 0.016 | 0.021 | 0.028 | 0.036 | 0.043 | 0.049 |
| (B) = 80 % Nat. Q | | 1290 | 1640 | 1300 | 834 | 407 | 191 | 90.3 | 68.6 | 46.8 | 52.0 | 183.0 | 968.00 |
| (C) = 1 % Nat. Q | | 12.9 | 16.4 | 13.0 | 8.34 | 4.07 | 1.91 | 0.90 | 0.69 | 0.47 | 0.52 | 1.83 | 9.68 |

| | | | | | | | | | | | | |
|---------------------|--------|--------|---------|--------|--------|--------|--------|-------|--------|--------|--------|--------|
| (D) = (A) > (C) | NO | | | | | | | | | | | |
| (E) = (A / B) x 100 | .004 % | .003 % | 0.000 % | .000 % | .001 % | .005 % | .018 % | .03 % | 0.06 % | 0.07 % | .023 % | .005 % |

(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: Assumed hydraulic connection focused at unnamed trib of Tualatin River. The requested rate of 0.8 cfs is probably too high as the average is 6 ac and a rate of 0.08 cfs is the allowable rate. Therefore the actual impact could be 1/10 th of the values in (A) and (E).

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 The nature of the sw/gw interconnection is not very clear. It make good sense to cite one with both the Tualatin + Willamette River + its tribs based on heads, geology, topography, reports etc. The strength of connection is more the issue.

References Used: OWRD GW Report #127,
USGS WSP #1697

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 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 | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----------------------|-----|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|--------|--------|
| Well | SW# | | | | | | | | | | | | |
| 1 | 2 | 6.62% | 6.8% | 0.00% | 0.12% | 0.50% | 1.11% | 1.85% | 2.68% | 3.56% | 4.45% | 5.35% | 6.12% |
| Well Q as CFS | | 0.80 | | | | | | | | | | | |
| Interference CFS | | 0.053 | 0.055 | 0.000 | .00096 | .004 | 0.009 | 0.016 | 0.021 | 0.028 | 0.036 | 0.043 | 0.049 |
| Distributed Wells | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Well | SW# | % | % | % | % | % | % | % | % | % | % | % | % |
| 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. | | 0.053 | 0.055 | 0.000 | .00096 | .004 | 0.009 | 0.016 | 0.021 | 0.028 | 0.036 | 0.043 | 0.049 |
| (B) = 80 % Nat. Q | | 27,500 | 30,000 | 28,500 | 25,400 | 20,700 | 11,000 | 6,280 | 4,890 | 4,930 | 5,990 | 12,700 | 24,800 |
| (C) = 1 % Nat. Q | | 275 | 300 | 285 | 254 | 207 | 110 | 62.8 | 48.9 | 49.3 | 59.9 | 127 | 248 |

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: 1 Logid: CLAC 58293

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).**