

# Water Right Conditions Tracking Slip

Groundwater/Hydrology Section

FILE # # G-17456

ROUTED TO: Water Rights

TOWNSHIP/

RANGE-SECTION: 2N/2W-36

CONDITIONS ATTACHED?: [☒] yes [☐] no

REMARKS OR FURTHER INSTRUCTIONS:

see conditions on p 2.

Reviewer: J. Hackett

## MEMO

July 18, 2006 //

FROM: GW: J. Hackett  
(Reviewer's Name)

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]

**PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS**

TO: Water Rights Section Date July 18, 2011

FROM: Ground Water/Hydrology Section J. Hackett  
Reviewer's Name

SUBJECT: Application G- 17456 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: John Orlando County: Multnomah

A1. Applicant(s) seek(s) 0.035 cfs from 1 well(s) in the Columbia River Basin,  
McCarthy Creek subbasin Quad Map: Linnton

A2. Proposed use: Irrigation Seasonality: March 1 – 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    | MULT 2008/99216 | 1                  | CRBG              | 0.035              | 2N/2W-36 SE-NE        | 668' N, 825' W fr E ¼ cor S 36**                                 |
| 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    | 815              |                    | 605        | 06/08/2009 | 720             | 0-169              | 0-169                 | 25-765               | 745-765                      | 15.5             |                | A         |
|      |                  |                    |            |            |                 |                    |                       |                      |                              |                  |                |           |
|      |                  |                    |            |            |                 |                    |                       |                      |                              |                  |                |           |
|      |                  |                    |            |            |                 |                    |                       |                      |                              |                  |                |           |
|      |                  |                    |            |            |                 |                    |                       |                      |                              |                  |                |           |

Use data from application for proposed wells.

A4. **Comments:** \*\*Application map and WRIS incorrectly state "well is 825 feet East from the East ¼ corner of section 36". The well is actually 825 feet West from the East ¼ corner of section 36.

A5. ☒ **Provisions of the** Willamette 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: The applicant's well is not located within ¼ mile of the nearest surface water source, so the pertinent basin rules do not apply.

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) 7B, 7I;
  - 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 applicant's well (MULT 2008) produces from several water-bearing zones in the Columbia River Basalt Group (CRBG), a series of lava flows with a composite thickness that ranges up to 800 feet in the area. Although unconfined groundwater occurs near the surface of the basalts, most water occurs in confined aquifers that occupy thin rubble zones (interflow zones) at the contacts between lava flows. The interiors of the basalt flows generally have low porosity and permeability and act as confining beds. This geometry generally produces a stack of thin aquifers (interflow zones) separated by thick confining beds (flow interiors). The low permeability of the basalt flow interiors probably limits the natural vertical connection between overlying aquifers. In the area of the proposed permit, the basalt aquifers are truncated by local stream drainages that have eroded to various levels through the basalt column. Because the aquifers are confined (storativity is estimated to be 0.0001), pumping impacts will propagate outward at rapid rates and are likely to reach aquifer boundaries (streams, faults, and truncated basalt flow margins) within a fractions of an hour. Therefore, hydraulic interference with nearby wells, springs, and streams will occur rapidly once pumping begins if nearby streams and wells are connected to the same water-bearing zones that are open in the well.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**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    | CRBG                        | <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: General experience indicates that most aquifers in the CRBG are confined.

**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<br>ft msl | SW Elev<br>ft msl | Distance<br>(ft) | Hydraulically Connected?            |                                     |                          | Potential for Subst. Interfer. Assumed? |                                     |
|------|------|--------------------|-------------------|-------------------|------------------|-------------------------------------|-------------------------------------|--------------------------|-----------------------------------------|-------------------------------------|
|      |      |                    |                   |                   |                  | YES                                 | NO                                  | ASSUMED                  | YES                                     | NO                                  |
| 1    | 1    | Rock Creek         | 160               | 230-430           | 3700             | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input checked="" type="checkbox"/> |
| 1    | 2    | McCarthy Creek     | 160               | 150-380           | 4000             | <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: The applicant's well produces from water-bearing zones in the Winter Water Member of the Columbia River Basalt Group. Locally, the Winter Water Member is exposed in the bed of McCarthy Creek. Also, the static water level in the applicant's well is coincident with the elevation of McCarthy Creek. These factors suggest a hydraulic connection between the applicant's well and McCarthy Creek. The static water level in the applicant's well is approximately 70 feet below the elevation of Rock Creek, suggesting the two are not hydraulically connected locally.

Water Availability Basin the well(s) are located within: NO WAB: Columbia River Drainage

**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? |
|------|------|--------------------------|--------------------------|-------------------------|------------------------------|--------------------------|------------------------|------------------------------|----------------------------|-----------------------------------------|
| 1    | 2    | <input type="checkbox"/> | <input type="checkbox"/> |                         |                              | <input type="checkbox"/> |                        | <input type="checkbox"/>     | <25%                       | <input type="checkbox"/>                |
|      |      | <input type="checkbox"/> | <input type="checkbox"/> |                         |                              | <input type="checkbox"/> |                        | <input type="checkbox"/>     |                            | <input type="checkbox"/>                |
|      |      | <input type="checkbox"/> | <input type="checkbox"/> |                         |                              | <input type="checkbox"/> |                        | <input type="checkbox"/>     |                            | <input type="checkbox"/>                |
|      |      | <input type="checkbox"/> | <input type="checkbox"/> |                         |                              | <input type="checkbox"/> |                        | <input type="checkbox"/>     |                            | <input type="checkbox"/>                |
|      |      | <input type="checkbox"/> | <input type="checkbox"/> |                         |                              | <input type="checkbox"/> |                        | <input type="checkbox"/>     |                            | <input type="checkbox"/>                |
|      |      | <input type="checkbox"/> | <input type="checkbox"/> |                         |                              | <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:** The elevation of McCarthy Creek is coincident with the static water level elevation in the applicant's well at a distance of 4000 feet from the well. Due to this distance, pumping impacts will likely be < 25% after 30 days of pumping.

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      |     |     |     |     |     |     |     |     |     |     |     |     |     |
| (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:**

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:**

Conlon, T.D., Wozniak, K.C., Woodcock, D., Herrera, N.B., Fisher, B.J., Morgan, D.S., Lee, K.K., and Hinkle, S.R., 2005, Ground-water hydrology of the Willamette Basin, Oregon: U.S. Geological Survey Scientific Investigations Report 2005-5168.

Tolan, T.L., and Beeson, M.H., 2000, Geologic map of the Sidney quadrangle, Marion County, Oregon: Oregon Water Resources Department, unpublished map, 1:24,000 scale.

**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.

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**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).**

Well Location Map

G-17456, Orlando

1:24,000

