

## PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date November 17, 2009

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

SUBJECT: Application G- 17231 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: Ted Moore County: Deschutes

A1. Applicant(s) seek(s) (28 gpm) 0.062 cfs from 1 well(s) in the Deschutes Basin,  
Deschutes subbasin Quad Map: Cline Falls

A2. Proposed use: Irrigation (5 acres 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<br>1 | Logid            | Applicant<br>Well # | Proposed<br>Aquifer* | Proposed<br>Rate(cfs) | Location<br>(T/R-S QQ-Q) | Location, metes and bounds, e.g.<br>2250' N, 1200' E fr NW cor S 36 |
|-----------|------------------|---------------------|----------------------|-----------------------|--------------------------|---------------------------------------------------------------------|
| 1         | <b>Desc 2091</b> | <b>1</b>            | <b>Deschutes Fm</b>  | <b>0.062</b>          | <b>14S/12E-27 NE-SE</b>  | <b>11370' N &amp; 94' W fr SE cor S 27</b>                          |
| 2         |                  |                     |                      |                       |                          |                                                                     |
| 3         |                  |                     |                      |                       |                          |                                                                     |
| 5         |                  |                     |                      |                       |                          |                                                                     |

\* Alluvium, CRB, Bedrock

| Well | Well<br>Elev<br>ft msl | First<br>Water<br>ft bls | SWL<br>ft bls | SWL<br>Date | Well<br>Depth<br>(ft) | Seal<br>Interval<br>(ft) | Casing<br>Intervals<br>(ft) | Liner<br>Intervals<br>(ft) | Perforation<br>s<br>Or Screens<br>(ft) | Well<br>Yield<br>(gpm) | Draw<br>Down<br>(ft) | Test<br>Type |
|------|------------------------|--------------------------|---------------|-------------|-----------------------|--------------------------|-----------------------------|----------------------------|----------------------------------------|------------------------|----------------------|--------------|
| 1    | 2745                   | 202                      | 76            | 03/22/1981  | 230                   | 0-21                     | +2 – 21                     |                            |                                        | 15                     | 0                    | P            |
|      |                        |                          |               |             |                       |                          |                             |                            |                                        |                        |                      |              |
|      |                        |                          |               |             |                       |                          |                             |                            |                                        |                        |                      |              |
|      |                        |                          |               |             |                       |                          |                             |                            |                                        |                        |                      |              |

Use data from application for proposed wells.

A4. Comments: \_\_\_\_\_

**Well is constructed into water bearing zones within the Deschutes Fm. Ground water flow is towards the north with the nearest probable discharge area (Deschutes River) about 1.25 miles distance. Water level in the well is coincident with the elevation of the nearest surface water source (also Deschutes River). Well is located within the Deschutes Ground water study area and subject to division 690-505-0500 to 0620.**

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: Within USGS Study Area Boundary.

A6. ☐ Well(s) # \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, tap(s) an aquifer limited by an administrative restriction.

Name of administrative area: \_\_\_\_\_

Comments: Not Applicable

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 \_\_\_\_\_;

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.

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[illegible]

## 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               |
|------|-----------------------------|--------------------------|--------------------------|
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <input type="checkbox"/> | <input type="checkbox"/> |
|      |                             | <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: \_\_\_\_\_

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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                       |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input type="checkbox"/> |
|      |      |                    |                   |                   |                  | <input type="checkbox"/> | <input type="checkbox"/> | <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: \_\_\_\_\_

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Water Availability Basin the well(s) are located within: \_\_\_\_\_

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.

[illegible]

**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.

[illegible]

(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.

[illegible]

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**\_\_\_\_\_

**Permit Conditions: If a permit is issued, it should include conditions 7B, and 7J**

References Used: \_\_\_\_\_

Gannett, M.W., Lite, K.E., Jr., Morgan, D.S., and Collins, C.A. 2001. Ground-water hydrology of the upper Deschutes basin, Oregon: U.S. Geological Survey Water-Resources Investigations Report WRI 2000-4162, 77 p.

Lite, K.E., Jr. and Gannett, M.W. 2002. Geologic framework of the regional ground-water flow system in the upper Deschutes Basin, Oregon: U.S. Geological Survey Water-Resources Investigations Report WRI 2002-4015, 44 p.

Gannett, M.W. and Lite, K.E., Jr. 2004. Simulation of regional ground-water flow in the Upper Deschutes Basin, Oregon: U.S. Geological Survey Water-Resources Investigations Report WRI 2003-4195, 95 p.

Application File: G-17231

Water well report for: DESC 2091

Hydrographs for: State Observation Well 1302 (DESC 8626)

Maps: Cline Falls & Steelhead Falls Quad Maps

Oregon Administrative Rules: OAR 690-505

**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:** \_\_\_\_\_

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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: \_\_\_\_\_

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\_\_\_\_\_, 200\_\_\_\_.  
(Enforcement Section Signature)

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

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## G-17231: Cline Falls Quadrangle

