PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

| TO: | Water Rights Section | | | | | | Date | Date <u>August 8, 2005</u> | | | | | | |
|-----------------------------------|---|---|--|---|---|---|---------------------------|----------------------------------|---|------------------------------|--|--|---|------------------|
| FROM | : | Groun | d Water/ | Hydrology | Section | | | Zwart_ | | | | | | |
| SUBJE | CT: | Appli | cation G- | 16470 | | Reviewer's Name Supersedes review of N/A Date of Review(s) | | | | | | | | |
| OAR 69 welfare, to deter the pres | 90-310-1 , safety a mine who umption | 30 (1) 7 and healt ther the criteria. | he Depart h as descr presumpt This revi | ment shall p ibed in ORS ion is establ ew is based | resume the 537.525. ished. OAl upon ava | at a propos Departmen R 690-310- ilable infor | sed g t staf 140 a | f review allows th ion and | ground wate ne proposed agency poli | er ap _l use b | re the press plications u e modified in place at | ervation of the condition of the conditi | of the pub R 690-31 tioned to of evalu | 0-140 meet |
| | | | | | | | | | | | | unty. <u> </u> | изсо | - · |
| A1. | | | | 14 cfs from | m <u>3</u> | well | | | Hood ad Map: D | | Foot and V | West | | _ Basin, |
| A2. A3. | Propose | Ground Water/Hydrology Section CT: Application G16470 CINTEREST PRESUMPTION; GRO 0-310-130 (1) The Department shall presume safety and health as described in ORS 537.5, time whether the presumption is established. Imption criteria. This review is based upon a stablished state of the proposed upon a stablished state. This review is based upon a stablished state of the proposed upon a stablished state of the proposed upon a stablished state of the proposed upon a state of t | | | | | sonal | ity: | April 1 to | Octo | ber 31 | | gid): | |
| Well | Logid WASC 51020 | | Well# | plicant's Proposed Vell # Aquifer* | | Rate(c | Proposed Rate(cfs) (T/ | | Location //R-S QQ-Q) | | 2250' N | i, metes a | fr NW co | S 36 |
| 2 | | | | _ | | | | | 3E-36 NW-NE 3E-35 NE-SE | | 2090' N, 630' E fr Ctr S 36 660' S, 2630' E fr Ctr S 35 | | | |
| 3 | | | | CRB | 1.114 | | | 13E-26 SE-SE | | 2000' S, 2350' E fr Ctr S 26 | | | 26 | |
| 4 | | | | | | | | | | | | | | |
| 5 * Alluvi | um, CRB. | Bedrock | | | | | | | | | 1 | | | |
| Well | Elev | Water | | | Well Depth (ft) | Seal Intervai (ft) | | Casing tervals (ft) | Liner Intervals (ft) | | rforations r Screens (ft) | Well Yield (gpm) | Draw Down (ft) | Test Type |
| 1 | 1300 | | | | ÷ | 0-176 | | 176 | None | No | | 40 | | Air |
| 3 | 1370 | | _ | | 1 | 0-173 0-36 | 0-1 | 173 36 | None None | No | | 120 325 | | Air Air |
| Use data | | | | | | | | | | | | | | |
| A5. 🛛 | manage (Not all | ment of basin r | ground wa | ater hydraul in such prov | ically com isions.) | nected to su | rface | water | are, or 🗵 |] are | not, activ | ent, class | ification : | and/or ation. |
| A6. 🗌 | Well(s) | f admin | istrative a | , , rea: | , | | , | , ta | p(s) an aquif | er lin | nited by an | administ | rative res | triction. |

| В. <u>G</u> Р | ROUN | ND WATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070 |
|---------------|--------------------|---|
| B1. | Bas | sed 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. | \square will not or \square 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) |
| 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 water reservoir between approximately ft. and ft. below land surface; basalt ground 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): |
| | | |
| В3. | <u>evei</u> sma | bund water availability remarks: Potential for water-level declines and overdraft of the resource exists virtually rywhere the Columbia River Basalt aquifers are developed, especially east of the Cascades where recharge is all. If no measurement/decline condition is used, as recommended above, then I would need to re-review the file, in the likely result being that one or both of the boxes 'will not likely be available' being checked under B1b or it. |
| | | |
| | | |
| | - | |

Date: August 8, 2005

Application G-16470 continued

| Δт | ากใ | ica | tion | G_{-1} | 64" | 7 0 |
|----|-----|-----|------|----------|-----|------------|
| Λı | וטכ | ıca | uwi | U-1 | U41 | / U |

| CO | ntın | 1100 |
|----|------|------|
| LU | | ucu |

| Date: | August 8. | 2005 |
|-------|-----------|------|

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 |
|------|---|-------------|------------|
| All | Basalt of the Columbia River Basalt Group | \boxtimes | |
| | | | |
| | | | |
| | | | |
| | | | |

Basis for aquifer confinement evaluation: <u>This aquifer is typically confined in this area; two of the three wells have significant shut-in pressure.</u>

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? YES NO ASSUMED | Potential for Subst. Interfer. Assumed? YES NO |
|------|---------|--------------------|----------------------|----------------------|------------------|---|---|
| 1 | 1 | Pine Creek | 1392 | 1295 | 100 | | |
| 1 | 2 | Fifteenmile Creek | 1392 | 1250 | 1600 | | |
| 2 | 1 | Pine Creek | 1421 | 1365 | 100 | | |
| 2 | 2 | Fifteenmile Creek | 1421 | 1320 | 4350 | | |
| 3 | 2 | Fifteenmile Creek | 1330 | 1310 | 600 | | |
| | | | | | | | |
| | | | | i | | | |
| | | | | | | | |

Basis for aquifer hydraulic connection evaluation: The surface water sources do not incise below the water-bearing zones developed by the wells. The head relationship also suggests a poor local hydraulic connection.

Water Availability Basin the well(s) are located within: Pine Cr > Fifteenmile Cr at mouth (30410542); Fifteenmile Creek > Columbia River above Jameson Can (30410548).

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 < 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? |
|------|---------|------------------|-------------|----------------------------------|---------------------------------------|--------------------|---------------------------------|---------------------------------------|----------------------------------|--|
| | | | | | | | | | | |
| | | | | | | _ | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | *** | | <u></u> | | | |

| Application | G-16470 | continued |
|-------------|---------|-----------|
| | | |

Date: August 8, 2005

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.

| | | III Cou abov | | | | | | |
|---------|-------------|----------------------------------|---------------------------------------|--------------------|---------------------------------|---------------------------------------|----------------------------------|--|
| 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? |
| | | | | | | | | |
| | | | | | | | | |
| | | | · | | | | | |
| | | | | | | | | |

| 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), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

| Well | stributed SW# | Jan | Feb | Mar | A | Mari | Jun | Jul | Asses | Com | Oct | Nov | Dec |
|-------------------------------|------------------|--------------------|------|----------|----------|----------|----------|-------------------|----------|-----|-------|-------|----------|
| Well | 3 W # | Jan % | % | Mar % | Apr % | May % | 3un % | Jui % | Aug % | Sep | % | NOV % | Dec % |
| | | 70 | 70 | 76 | 70 | 70 | 70 | "/" | 70 | 70 | 70 | 70 | 7 |
| Well Q a | | | | | | | | | | | | | |
| Interferer | ice CFS | | | | | | | | | | | | |
| Distribu | ited Well: | s | | | | | | | | | | | |
| Well | SW# | Jan | Feb | Маг | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| | | % | % | % | 9/4 | % | % | % | 9/11 | % | 9/0 | % | 9/1 |
| Well Q a | s CFS | | | | | | | | | | | | |
| Interferer | ice CFS | | | | | | | | | | | | |
| | ·- | % | % | % | % | % | 1/0 | 9/0 | % | 9/0 | % | % | 9/0 |
| Well Q a | s CFS | | | | | | | | | | | | |
| Interferer | | | | | | | | | | | | | |
| | | 9/0 | % | ⁰⁄n | % | % | n/a | 0/a | % | "/a | % | º/a | 0/ |
| Well Q a | s CFS | | | | | | | | | | | | |
| Interferer | ice CFS | | | | | | | | | | | | |
| | | 9/4 | % | 1/6 | 1/0 | % | n/o | º/o | % | 9/0 | °/o | 0/o | 0/0 |
| Well Q a | s CFS | | | | | | | | | | | | |
| Interferer | | | | | | | | | | | | | |
| | | % | % | 1/0 | 4/0 | % | % | 0/10 | % | 9/0 | % | % | 0/0 |
| Well Q a | s CFS | | | | | | | | | | | | |
| Interferer | | | | | | | | | | | | | |
| | | % | % | 1/6 | 9/0 | % | º/a | 0/n | % | % | % | ⁰/₀ | 0/ |
| Well Q a | s CFS | | | | _ | | | | | | | | |
| Interferer | ice CFS | | | 1 | | | | | | | | | |
| (A) = Tota | al Interf | | | | | | | | | | | | |
| (B) = 80 % | | | | | | | | | | | | | |
| (C) = 1 % | | | | | · | | | | | | | | |
| | | | | | | | | 4 | 40.0 | | | - /6 | |
| $(\mathbf{D}) = (\mathbf{A})$ | | _ 6 ^A 3 | rê. | 16-5 | 124 | A | 10-1 | 16 ² 7 | - | hÃ. | 50° 1 | BAT . | 1073 |
| (E) = (A / | B) x 100 | % | 11/0 | 1/0 | % | % | 9/6 | 1/0 | 9/4 | % | 9/0 | % | 9/ |

(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.

Version: 08/15/2003

| ileation 0-104/0continued | Date: August 6, 2005 |
|--|--|
| | |
| Basis for impact evaluation: | |
| | |
| | |
| | |
| | |
| | |
| The state of the s | |
| | |
| 24033462 | |
| | |
| | |
| | |
| | |
| 690-09-040 (5) (b) The potential to impair or detrime Rights Section. | entally affect the public interest is to be determined by the Wat |
| under this permit can be regulated if it is found to substan | be adequately protected from interference, and/or ground water use tially interfere with surface water: |
| i. The permit should contain condition #(s) | s) as indicated in "Remarks" below |
| ii. The period should contain special condition(| s) as indicated in Kemarks below, |
| | |
| SW / GW Remarks and Conditions | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| 165 | |
| | |
| | |
| References Used: <u>Nearby well logs; nearby previous rev</u> eologic maps. | iews, especially G-16486, G-15738 and G-16026; regional |
| | |
| | |
| 28. 2007 2007 2007 2007 2007 | |
| | |
| | |
| | |

| D. <u>\</u> | <u>VEI</u> | L CON | STRUCTION, OAR 690-200 |
|-------------|------------|-----------|--|
| D1. | | Well #: _ | Logid: |
| D2. | | a. | LL does not meet current well construction standards based upon: eview of the well log; field inspection by |
| D3. | | a. | CLL construction deficiency: constitutes a health threat under Division 200 rules; commingles water from more than one ground water reservoir; commits the loss of artesian head; cormits the de-watering of one or more ground water reservoirs; other: (specify) |
| D4. | | THE WE | LL construction deficiency is described as follows: |
| D5. | | THE WE | 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. | | | the Enforcement Section. I recommend withholding issuance of the permit until evidence of well reconstruction ith the Department and approved by the Enforcement Section and the Ground Water Section. |
| TH | IS S | ECTIO | N TO BE COMPLETED BY ENFORCEMENT PERSONNEL |
| D7. | | Well con | struction 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). |
| | | | |

Date: August 8, 2005

Application G-16470

____continued

Water Resources Department

| M | ЕМО | | | | | | | Aughs | t 8 | 2 | 005 | | |
|---|---|---------|---------|-----------------|----------------------|---------------------|---------|--------------------|----------|---------|------------|------------------|-----------|
| T | 0_ | A | pplicat | ion G | 164 | 70 | | | 17 | | | 1.0 | |
| F | ROM | G | :W: | Micha (Revie | el z | 2wart | | | | | | | |
| SI | SUBJECT Scenic Waterway Interference Evaluation | | | | | | | | | | | | |
| | Yes The source of appropriation is within or above a Scenic Waterway No | | | | | | | | | | | | |
| | Yes Use the Scenic Waterway condition (Condition 7J). | | | | | | | | | | | | |
| | | | | | | | | | | | | | 13 |
| PR | EPOND | ERAN | CE OF | EVIDE | NCE F | INDINC | 6: (Che | eck box | only if | stateme | ent is tru | e) | |
| PREPONDERANCE OF EVIDENCE FINDING: (Check box only if statement is true) At this time the Department is unable to find that there is a preponderance of evidence that the proposed use of ground water will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway in quantities necessary for recreation, fish and wildlife. | | | | | | | | | | | | | |
| | | | | | | | ı | | | | | | |
| FLC |)W REI | DUCTI | ON: (T | o be fille | ed out o | nly if <u>Pı</u> | epondo | erance o | of Evide | nce box | is not c | checked) | |
| vat | rcise of erway b ace wate | y the f | ollowin | g amou | ed to rec nts exp | fuce mo ressed a | nthly f | lows in portion | of the c | onsum | otive us | Scer e by whi | nic ch |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| - | | | | | | | | | | | | | |



