

## Groundwater Application Review Summary Form

Application # G- 18836 RR

GW Reviewer J. Woody Date Review Completed: 01-21-2020

### Summary of GW Availability and Injury Review:

[ ] Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.

### Summary of Potential for Substantial Interference Review:

[ ] There is the potential for substantial interference per Section C of the attached review form.

### Summary of Well Construction Assessment:

[ ] The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

*This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).*

[illegible]

# PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 01/21/2020  
 FROM: Groundwater Section Jen Woody  
 SUBJECT: Application G- 18836 Supersedes review of 01/03/2020, 10/17/2019  
 Reviewer's Name  
 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 groundwater 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: Barrett Brown, Avventura LLC County: Washington

A1. Applicant(s) seek(s) 0.085 up to 6.6 Acre-feet cfs from 2 well(s) in the  
Willamette Basin,  
East Fork Dairy Creek subbasin

A2. Proposed use Irrigation (6.6 AF/yr )and Agricultural Use 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    | WASH 57754 | 1                  | Sandstone         | 0.085              | T3N/R3W-32 NW ¼ NE ¼  | 190'S, 2060'W fr NW cor S 33*                                    |
| 2    | Proposed   | 2                  | Sandstone         | 0.085              | T3N/R3W-32 NW ¼ NE ¼  | 115'S, 1190'W fr NW cor S 33*                                    |
| 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    | 932              | 320                | 278        | 09/25/2001 | 421             | 0-160, 260-299     | 0-299                 | unknown              | 391-421                      | 36               |                | air       |
| 2    | 940              | 320**              | 278**      | **         | 440             | 0-300              | 0-300                 | unknown              | 400-440                      |                  |                |           |
|      |                  |                    |            |            |                 |                    |                       |                      |                              |                  |                |           |
|      |                  |                    |            |            |                 |                    |                       |                      |                              |                  |                |           |
|      |                  |                    |            |            |                 |                    |                       |                      |                              |                  |                |           |

Use data from application for proposed wells.

A4. **Comments:** \*The application describes metes and bounds from the NW corner of Section 32, but the map shows the metes and bounds should be measured from the NW corner of Section 33. This review is based on locating the wells in Section 32.  
 \*\*Conditions at the proposed well are assumed to be similar to WASH 57754.  
**This re-review is for a reduced rate of 0.085 cfs and a total annual volume of 6.6 acre-feet (AF) to irrigate 71 acres. If 71 acres are irrigated, 0.09 AF can be applied per acre.**

A5. ☒ **Provisions of the** Willamette Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water ☐ are, or ☒ are not, activated by this application. (Not all basin rules contain such provisions.)  
 Comments: The proposed POAs will produce groundwater from a low-yield bedrock aquifer. Therefore, the pertinent rules (OAR 690-502-240) do not apply.

A6. ☐ **Well(s) #** \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, tap(s) an aquifer limited by an administrative restriction.  
 Name of administrative area: \_\_\_\_\_  
 Comments: N/A

**B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070**

B1. **Based upon available data**, I have determined that groundwater\* 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 groundwater 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 groundwater 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 groundwater resource; or
- d. ☒ **will, if properly conditioned**, avoid injury to existing groundwater rights or to the groundwater resource:
- ☒ The permit should contain condition #(s) 7C, Medium Water use reporting;
  - ☒ The permit should be conditioned as indicated in item 2 below.
  - ☒ The permit should contain special condition(s) as indicated in item 3 below;

- B2. a. ☐ **Condition** to allow groundwater production from no deeper than \_\_\_\_\_ ft. below land surface;
- b. ☐ **Condition** to allow groundwater production from no shallower than \_\_\_\_\_ ft. below land surface;
- c. ☒ **Condition** to allow groundwater production only from the marine sedimentary rock groundwater 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 Groundwater 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. **Groundwater availability remarks:** \_\_\_\_\_

The surrounding area is underlain by sedimentary rock of the Yamhill Formation, part of the low-yield bedrock aquifer system found in the Coast Ranges. Production is likely from fractures. The permeability and porosity of the unit are generally low which results in well yields generally only suitable for domestic use. There are no nearby, long-term groundwater level data available. Well logs in T3N/R3W-Section 32 report yields ranging from 0-98 gpm, with a median yield of 8 gpm. This aquifer system is generally not capable of irrigation of large acreages. The application has been amended to request a maximum volume of 6.6 acre-feet per year. This volume of water is within the capacity of the resource.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040**

C1. **690-09-040 (1):** Evaluation of aquifer confinement:

| Well | Aquifer or Proposed Aquifer     | Confined                            | Unconfined               |
|------|---------------------------------|-------------------------------------|--------------------------|
| 1    | Marine Sedimentary Rock Aquifer | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2    | Marine Sedimentary Rock Aquifer | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|      |                                 | <input type="checkbox"/>            | <input type="checkbox"/> |
|      |                                 | <input type="checkbox"/>            | <input type="checkbox"/> |

**Basis for aquifer confinement evaluation:** Well logs indicate confined conditions: the static water level rises above the water-bearing zone.

- 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    | Unnamed tributary to East Fork Dairy Creek | 654               | 360-440           | 3490             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input checked="" type="checkbox"/> |
| 2    | 1    | Unnamed tributary to East Fork Dairy Creek | 654               | 360-440           | 2790             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input checked="" type="checkbox"/> |
| 1    | 2    | Whiskey Creek                              | 654               | 480-640           | 4240             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input checked="" type="checkbox"/> |
| 2    | 2    | Whiskey Creek                              | 654               | 480-640           | 3110             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input checked="" type="checkbox"/> |
| 1    | 3    | Fern Spring                                | 654               | 650               | 2220             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input checked="" type="checkbox"/> |
| 2    | 3    | Fern Spring                                | 654               | 650               | 1870             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                | <input checked="" type="checkbox"/> |

**Basis for aquifer hydraulic connection evaluation:** Groundwater elevation is coincident or above the elevations of Whiskey and East Fork Dairy Creek in adjacent reaches. This indicates groundwater flows toward, and likely discharges to, perennial reaches of nearby creeks and springs.

**Water Availability Basin the well(s) are located within:** #94: E FK DAIRY CR > DAIRY CR - AB UNN STR

- 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    | 1    | <input type="checkbox"/> | <input type="checkbox"/> | Cert 59525              | 12                           | <input type="checkbox"/> | 8.59                   | <input type="checkbox"/>     | *                          | <input type="checkbox"/>                |
| 2    | 1    | <input type="checkbox"/> | <input type="checkbox"/> | Cert 59525              | 12                           | <input type="checkbox"/> | 8.59                   | <input type="checkbox"/>     | *                          | <input type="checkbox"/>                |
| 1    | 2    | <input type="checkbox"/> | <input type="checkbox"/> | Cert 59525              | 12                           | <input type="checkbox"/> | 8.59                   | <input type="checkbox"/>     | *                          | <input type="checkbox"/>                |
| 2    | 2    | <input type="checkbox"/> | <input type="checkbox"/> | Cert 59525              | 12                           | <input type="checkbox"/> | 8.59                   | <input type="checkbox"/>     | *                          | <input type="checkbox"/>                |
| 1    | 3    | <input type="checkbox"/> | <input type="checkbox"/> | Cert 59525              | 12                           | <input type="checkbox"/> | 8.59                   | <input type="checkbox"/>     | *                          | <input type="checkbox"/>                |
| 2    | 3    | <input type="checkbox"/> | <input type="checkbox"/> | Cert 59525              | 12                           | <input type="checkbox"/> | 8.59                   | <input type="checkbox"/>     | *                          | <input type="checkbox"/>                |
|      |      | <input type="checkbox"/> | <input type="checkbox"/> |                         |                              | <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:** \* No suitable method for calculating stream interference is readily available for fractured bedrock systems. Given the distance from the streams and the nature of the aquifer, interference at 30 days is likely to be much less than 25%.

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      |     |     |     |     |     |     |     |     |     |     |     |     |     |
| (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:** N/A

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 groundwater use under this permit can be regulated if it is found to substantially interfere with surface water:
- ☐ The permit should contain condition #(s) \_\_\_\_\_;
  - ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** \_\_\_\_\_

**References Used:** Gannett and Caldwell, 1998, Geologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington, USGS Professional Paper 1424-A

Woodward, Gannett and Vaccaro, 1998, Hydrogeologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington, USGS Professional Paper 1424-B

Conlon and Others, 2005, Ground-Water Hydrology of the Willamette Basin, Oregon, Scientific Report 2005-5168, USGS.

USGS Topographic maps, Meacham Corner Quadrangle.

**D. WELL CONSTRUCTION, OAR 690-200**

D1. Well #: \_\_\_\_\_ Logid: \_\_\_\_\_

D2. **THE WELL does not appear to 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 or other comment is described as follows:** \_\_\_\_\_

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

D4. ☐ **Route to the Well Construction and Compliance Section for a review of existing well construction.**

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

## Water Availability Tables

## Water Availability Analysis Detailed Reports

E FK DAIRY CR > DAIRY CR - AB UNN STR  
WILLAMETTE BASIN

Water Availability as of 10/17/2019

Watershed ID #: 94 ([Map](#))

Exceedance Level: 80% ▼

Date: 10/17/2019

Time: 8:47 AM

Water Availability Calculation

Consumptive Uses and Storages

Instream Flow Requirements

Reservations

Water Rights

Watershed Characteristics

## Water Availability Calculation

Monthly Streamflow in Cubic Feet per Second  
Annual Volume at 50% Exceedance in Acre-Feet

| Month | Natural Stream Flow | Consumptive Uses and Storages | Expected Stream Flow | Reserved Stream Flow | Instream Flow Requirement | Net Water Available |
|-------|---------------------|-------------------------------|----------------------|----------------------|---------------------------|---------------------|
| JAN   | 81.20               | 1.19                          | 80.00                | 0.00                 | 50.00                     | 30.00               |
| FEB   | 102.00              | 1.24                          | 101.00               | 0.00                 | 50.00                     | 50.80               |
| MAR   | 82.30               | 1.12                          | 81.20                | 0.00                 | 50.00                     | 31.20               |
| APR   | 57.10               | 0.99                          | 56.10                | 0.00                 | 50.00                     | 6.11                |
| MAY   | 35.60               | 1.35                          | 34.30                | 0.00                 | 50.00                     | -15.70              |
| JUN   | 20.70               | 1.50                          | 19.20                | 0.00                 | 25.00                     | -5.80               |
| JUL   | 12.00               | 1.80                          | 10.20                | 0.00                 | 25.00                     | -14.80              |
| AUG   | 9.57                | 1.65                          | 7.92                 | 0.00                 | 12.00                     | -4.08               |
| SEP   | 8.59                | 1.22                          | 7.37                 | 0.00                 | 12.00                     | -4.63               |
| OCT   | 10.30               | 0.82                          | 9.48                 | 0.00                 | 12.00                     | -2.52               |
| NOV   | 16.70               | 0.89                          | 15.80                | 0.00                 | 50.00                     | -34.20              |
| DEC   | 60.00               | 1.15                          | 58.90                | 0.00                 | 50.00                     | 8.85                |
| ANN   | 48,200.00           | 902.00                        | 47,300.00            | 0.00                 | 26,300.00                 | 23,000.00           |

## Well Location Map

# G-18836 Avventura 3N/3W- Section 32 NW 1/4 NE 1/4

