

Groundwater Application Review Summary Form

Application # G- 19327

GW Reviewer Phillip I. Marcy Date Review Completed: 07/06/2023

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).

WATER RESOURCES DEPARTMENT

MEMO

July 7, 2023

TO: Application G- 19327

FROM: GW: Phillip I. Marcy
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

- ☐ YES The source of appropriation is hydraulically connected to a State Scenic Waterway or its tributaries
- ☒ NO
-
- ☐ YES Use the Scenic Waterway Condition (Condition 7J)
- ☒ NO
-
- ☐ Per ORS 390.835, the Groundwater 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 Groundwater 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**

DISTRIBUTION OF INTERFERENCE

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 [Enter] Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section
 FROM: Groundwater Section Phillip I. Marcy
 Date 07/06/2023
 SUBJECT: Application G- 19327 Supersedes review of _____
 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: Levi Beelart/Wren Hill Lumber County: Benton

A1. Applicant(s) seek(s) 0.111 cfs from 2 well(s) in the Willamette Basin,
 _____ subbasin

A2. Proposed use Commercial/Industrial Seasonality: Year-round (365 days)

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	BENT 56401	1		0.111	11S/6W-33 NW-NE	450'S, 610'E fr N ¼ cor S 33
2	BENT 4442*	2		0.111	11S/6W-33 NW-NE	900'S, 480'E fr N ¼ cor S 33
3						
4						

* 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	684	100	7	11/09/2021	240	0-18.5	0-18.5	0-100	100-240	40	NA	Air
2	705	Unk.	19	08/26/1965	69	None	0-41	None	41-46	30	21	Pump

Use data from application for proposed wells.

A4. **Comments:** *BENT 4439 is listed on the application but represents a deepening of original well BENT 4442. Therefore, this well shall be referred to as BENT 4442 for the remainder of this review. Note that this well does not report the placement of a surface seal on either of the well reports correlated to it.

The applicant proposes to develop groundwater from the underlying basalt aquifer system (Siletz Volcanics) for year-round use in an industrial commercial application.

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: Proposed wells are not within ¼ mile of a perennial stream reach, and the wells produce from a confined aquifer. Thus, the pertinent rules (OAR 690-502-0240) do not apply.

A6. ☐ **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
 Name of administrative area: _____
 Comments: _____

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:
 - i. ☒ The permit should contain condition #(s) 7N;
 - 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 groundwater production from no deeper than _____ ft. below land surface;
 - b. ☒ **Condition** to allow groundwater production from no shallower than 18 ft. below land surface;
 - c. ☐ **Condition** to allow groundwater production only from the _____ 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): POA well 2 (BENT 4442) does not report placement of a surface seal, which has the potential to commingle the target basalt aquifer system and any overlying sedimentary aquifer, in addition to the potential pollution of the underlying basalt aquifer by surface runoff.

- B3. **Groundwater availability remarks:** There are insufficient water level data available for the area in which the POA wells are located to determine long term aquifer stability. Due to the lack of development in this area, however, the proposed productive aquifer is assumed to be not over-appropriated and the proposed development within the capacity of the resource. If a permit is issued, Condition 7N is recommended to assess the impacts of development on the basalt aquifer here going forward.

There are no senior groundwater rights nearby, and therefore the proposed development is not anticipated to cause injury to any neighboring right with senior priority.

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	Basalts of the Siletz Formation	☒	☐
2	Basalts of the Siletz Formation	☒	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: Static water levels for proposed POA wells are significantly higher than the elevation of productive water-bearing zones reported on well logs.

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	Mary's River	677	444-454	2650	☐	☒	☐	☐	☒
2	1	Mary's River	686	444-454	2700	☐	☒	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: The proposed aquifer is likely to be productive from more discrete zones than indicated on the accompanying well log reports. There are several intermittent streams mapped in the area surrounding the POA wells, many of which emerge from elevations similar to the static water level elevations from within the wells. Thus, the productive aquifer here appears to be perched above the elevation of the Mary's River and contributions of groundwater to the stream within one mile of the proposed POA wells are likely to occur as seasonal overland discharge.

Water Availability Basin the well(s) are located within: MARYS R > WILLAMETTE R - AB BLAKESLY CR
MARYS R > WILLAMETTE R - AB MUDDY CR

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 (SW) source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that SW source, 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?
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

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 #		Q _w > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Q _w > 1% ISWR?	80% Natural Flow (cfs)	Q _w > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
			☐			☐		☐		☐
			☐			☐		☐		☐

Comments: This section does not apply, as it has been determined that the proposed POA wells are not hydraulically connected to surface water within one mile.

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													
(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 groundwater 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: _____

McClaghry, J.D., Wiley, T.J., Ferns, M.L., and Madin, I.P., 2010, Digital Geologic Map of the Southern Willamette Valley, Benton, Lane, Linn, Marion, and Polk Counties, Oregon, Open-File Report O-10-03, Oregon Department of Geology and Mineral Industries,

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.

OWRD Well log database (WLIS)

D. WELL CONSTRUCTION, OAR 690-200

- D1. Well #: 2 Logid: BENT 4442
- 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:** Neither BENT 4442 (Original log) nor BENT 4439 (Deepening) report placement of a surface seal.
- D4. ☒ **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Water Availability Tables

MARYS R > WILLAMETTE R - AB BLAKESLY CR						
Watershed ID #:	70749	Basin: WILLAMETTE				Exceedance Level: 80
Time: 12:10 PM						Date: 07/06/2023
Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirements	Net Water Available
Monthly values are in cfs. Storage is the annual amount at 50% exceedance in ac-ft.						
JAN	214.00	0.65	213.00	0.00	75.00	138.00
FEB	250.00	0.63	249.00	0.00	75.00	174.00
MAR	214.00	0.60	213.00	0.00	75.00	138.00
APR	142.00	0.67	141.00	0.00	75.00	66.30
MAY	74.30	1.38	72.90	0.00	75.00	-2.08
JUN	37.80	2.26	35.50	0.00	40.00	-4.46
JUL	16.20	3.58	12.60	0.00	10.00	2.62
AUG	9.74	2.94	6.80	0.00	6.00	0.80
SEP	8.35	1.69	6.66	0.00	6.00	0.66
OCT	10.70	0.50	10.20	0.00	18.70	-8.50
NOV	35.00	0.51	34.50	0.00	75.00	-40.50
DEC	169.00	0.62	168.00	0.00	75.00	93.40
ANN	137,000	972	136,000	0	36,400	99,800

MARYS R > WILLAMETTE R - AB MUDDY CR						
Watershed ID #:	122	Basin: WILLAMETTE				Exceedance Level: 80
Time: 12:11 PM						Date: 07/06/2023
Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirements	Net Water Available
Monthly values are in cfs. Storage is the annual amount at 50% exceedance in ac-ft.						
JAN	353.00	5.47	348.00	0.00	135.00	213.00
FEB	410.00	5.44	405.00	0.00	135.00	270.00
MAR	350.00	5.43	345.00	0.00	135.00	210.00
APR	229.00	5.55	223.00	0.00	135.00	88.40
MAY	119.00	6.90	112.00	0.00	135.00	-22.90
JUN	57.40	11.10	46.30	0.00	70.00	-23.70
JUL	23.30	13.50	9.81	0.00	20.00	-10.20
AUG	13.80	12.30	1.47	0.00	15.00	-13.50
SEP	11.80	10.00	1.77	0.00	15.00	-13.20
OCT	15.00	5.40	9.60	0.00	38.70	-29.10
NOV	49.70	5.30	44.40	0.00	135.00	-90.60
DEC	271.00	5.43	266.00	0.00	135.00	131.00
ANN	222,000	5,550	217,000	0	66,400	152,000

[illegible]