

# Groundwater Application Review Summary Form

Application # G- 19455

GW Reviewer James Hootsmans Date Review Completed: 12/18/2024

## 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

December 18, 2024

TO: Application G- 19455

FROM: GW: James Hootsmans  
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

☐ YES The source of appropriation is hydraulically connected to a State Scenic  
☒ NO Waterway or its tributaries

☐ YES  
☒ NO Use the Scenic Waterway Condition (Condition 7J)

☐ 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 Date 12/18/2024  
 FROM: Groundwater Section James Hootsmans  
 Reviewer's Name  
 SUBJECT: Application G- 19455 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 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: Blue Line Farms Inc. c/o Karl Dettwyler County: Marion

A1. Applicant(s) seek(s) 0.21 cfs from 3 well(s) in the Willamette Basin,  
 \_\_\_\_\_ subbasin

A2. Proposed use Irrigation Seasonality: March 1 to October 31

A3. Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under logid):

POA 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	MARI 6957	1	Alluvial	0.21	7S/2W-11 SESE	750' N, 525' W fr SE cor S 11*
2	PROP 582	2	Alluvial	0.21	7S/2W-11 SESE	510' N, 490' W fr SE cor S 11*
3	PROP 583	3	Alluvial	0.21	7S/2W-11 SESE	775' N, 500' W fr SE cor S 11*
4						

\* Alluvium, CRB, Bedrock

POA Well	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Drawdown (ft)	Test Type
1	141	0 - 20	0 - 141		N/A			
2	175	0 - 20	0 - 175		TBD			
3	175	0 - 20	0 - 175		TBD			
4								

POA Well	Land Surface Elevation at Well (ft amsl)	Depth of First Water (ft bls)	SWL (ft bls)	SWL Date	Reference Level (ft bls)	Reference Level Date
1	210	79	46	9/19/1978		
2	212					
3	211					
4						

Use data from application for proposed wells.

A4. **Comments:** \_\_\_\_\_  
 \*Please note the application map appears to have the eastern side of the section 11 line in the incorrect spots, so the POA locations are closer to the section line than indicated on 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: The well will produce from a confined aquifer 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. 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) 7RLN, water use reporting;
  - 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 \_\_\_\_\_ ft. below land surface;
  - c. ☒ **Condition** to allow groundwater production only from the alluvial 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 application proposes three wells (MARI 6957, PROP 582 and PROP 583) that will produce from the alluvial aquifer. The aquifer is overlain by about 60 feet of Willamette Silt (saturated to within 5-10 feet of land surface) at the proposed location and is comprised of an upper section of sand and gravel that is about 100 feet thick and a lower section of mostly silt and clay that is several hundred feet thick. Water-level trends in nearby wells appear to be related to decadal climatic trends and show no obvious progressive declines (see Observation Well Data). This indicates that the alluvial aquifer is not likely to be over appropriated in the area. However, because of the short period of record and limited overall data, water-level monitoring is recommended in the proposed wells.

Interference in nearby domestic wells (approximately 900 feet away) is not expected to be excessive if those wells fully penetrate the aquifer. Theis (1935) drawdown analyses in similar circumstances indicate that, at the maximum rate, well-to-well interference is unlikely due to the low pumping rate.

Reported yields from regional wells (7S 2W Section 11) range from less than 1 to ~ 650 gpm, with a median of 44 gpm (see attached Well Statistics). The requested rate of 0.21 cfs (~94 gpm) therefore represents ~14 percent of the maximum yield reported for water wells in this area, and ~210 percent of the median reported yield. Therefore, it is likely the applicant will be able to achieve the requested pumping rate with the proposed POA.

**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	Alluvium	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Alluvium	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Alluvium	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

**Basis for aquifer confinement evaluation:** Literature and general knowledge indicates that the alluvial aquifer is confined by the Willamette Silt in the vicinity of the proposed wells. In the central Willamette Valley, Conlon and others (2005) report that fine-grained deposits (silt and clay) of more than 40 ft thickness typically create confined conditions in the underlying water-bearing sand/gravel deposits. Additionally, water levels in nearby wells and in proposed POA 1 (MARI 6957) rise above the level of water-bearing layers. These factors suggest that proposed wells will produce from a confined aquifer.

**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	Little Pudding			6230	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Pudding River			7420	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Little Pudding			6320	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Pudding River			7350	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	1	Little Pudding			6220	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	1	Pudding River			7130	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Basis for aquifer hydraulic connection evaluation:** Water level elevations in the alluvial aquifer are essentially equivalent to the elevations of both nearby perennial creeks (SW1 and SW2). Furthermore, U.S. Geological Survey water table maps in the area indicate that groundwater in the alluvial aquifer system flows towards and discharges into local streams incised in the Howell Prairie plateau (Conlon and others, 2005; Gannett and Caldwell, 1998). These facts indicate that the alluvial aquifer and local streams are hydraulically connected.

The applicant references an unnamed creek to the east, which is Hollow Prairie Creek, however this creek is only perennial greater than one mile away from the POAs at a distance greater than the Pudding and Little Pudding River.

**Water Availability Basin the well(s) are located within:** 151 Pudding River > Molalla River – ab Mill Creek

**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?
		<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"/>

**Comments:** Both SW1 (Little Pudding River) and SW2 (Pudding River) are greater than one mile from the proposed POA locations. Therefore, those streams were not evaluated in section C3, but instead in section C4.

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		1040	1180	1010	787	425	224	109	71	67.30	91.60	363	957
(C) = 1 % Nat. Q		10.40	11.80	10.10	7.87	4.25	2.24	1.09	0.71	0.673	0.916	3.63	9.57
(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:** Analytical modeling completed in nearby similar circumstances at varying pumping rates indicate that the low pumping will create interference much less than 1% of natural flow at any given month during pumping. Even in conservative one-year long analysis, the total estimated interference is far less than 25%. The proposed pumping rate of 0.21 cfs, at its maximum rate, is far less than the 1% of natural flow for lowest month of water (September).

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;

[illegible]

**References Used:** Application files: G-17290, G-18365, G-19455

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.

Gannett, M.W. and Caldwell, R., 1998, Geologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-A, 32 p.

Hunt, B., 2003, Unsteady stream depletion when pumping from semiconfined aquifer: *Journal of Hydrologic Engineering*, January/February, 2003.

Woodward, D.G., Gannett, M.W., and Vaccaro, J.J., 1998, Hydrogeologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-B, 82 p.

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

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

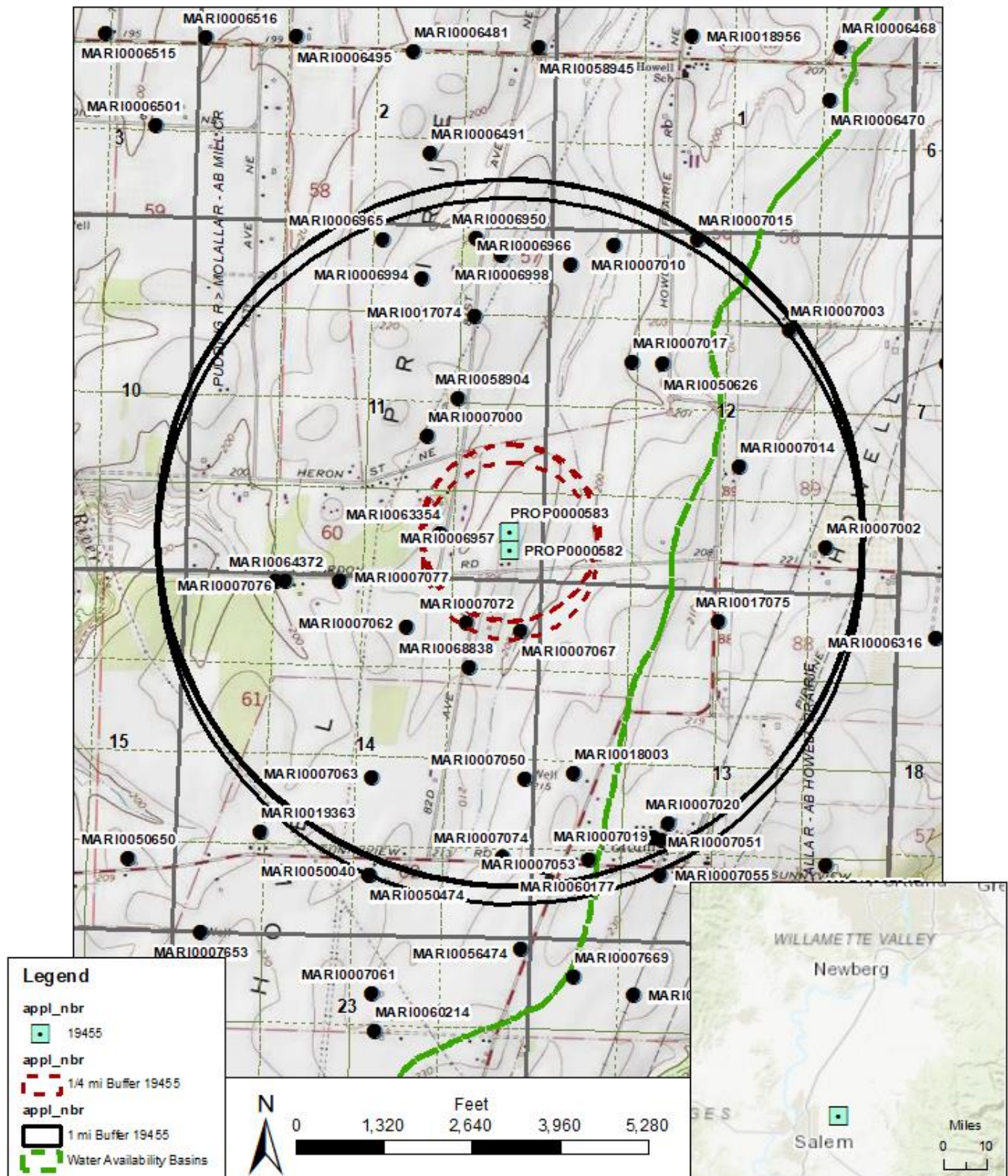
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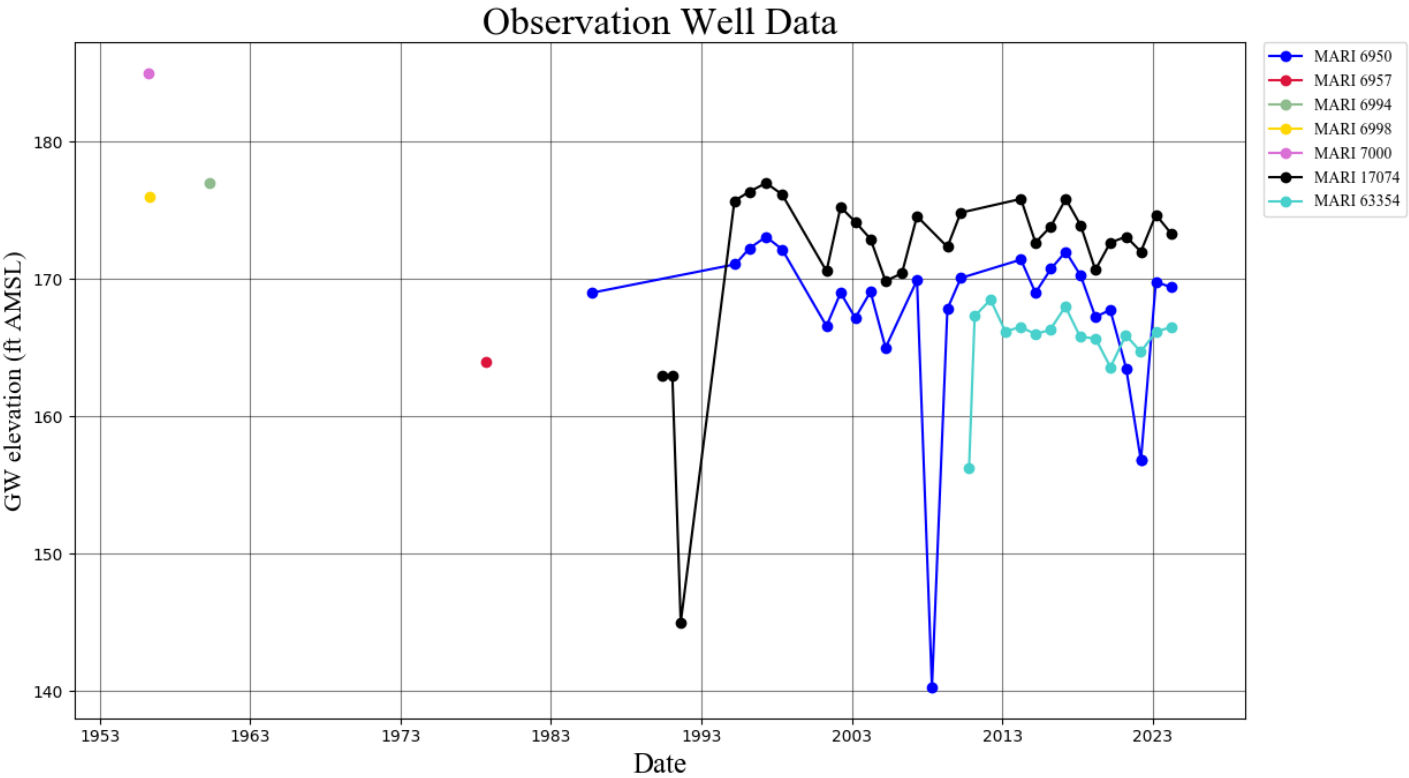
## Well Location Map

## G19455 Blue Line Farms Inc

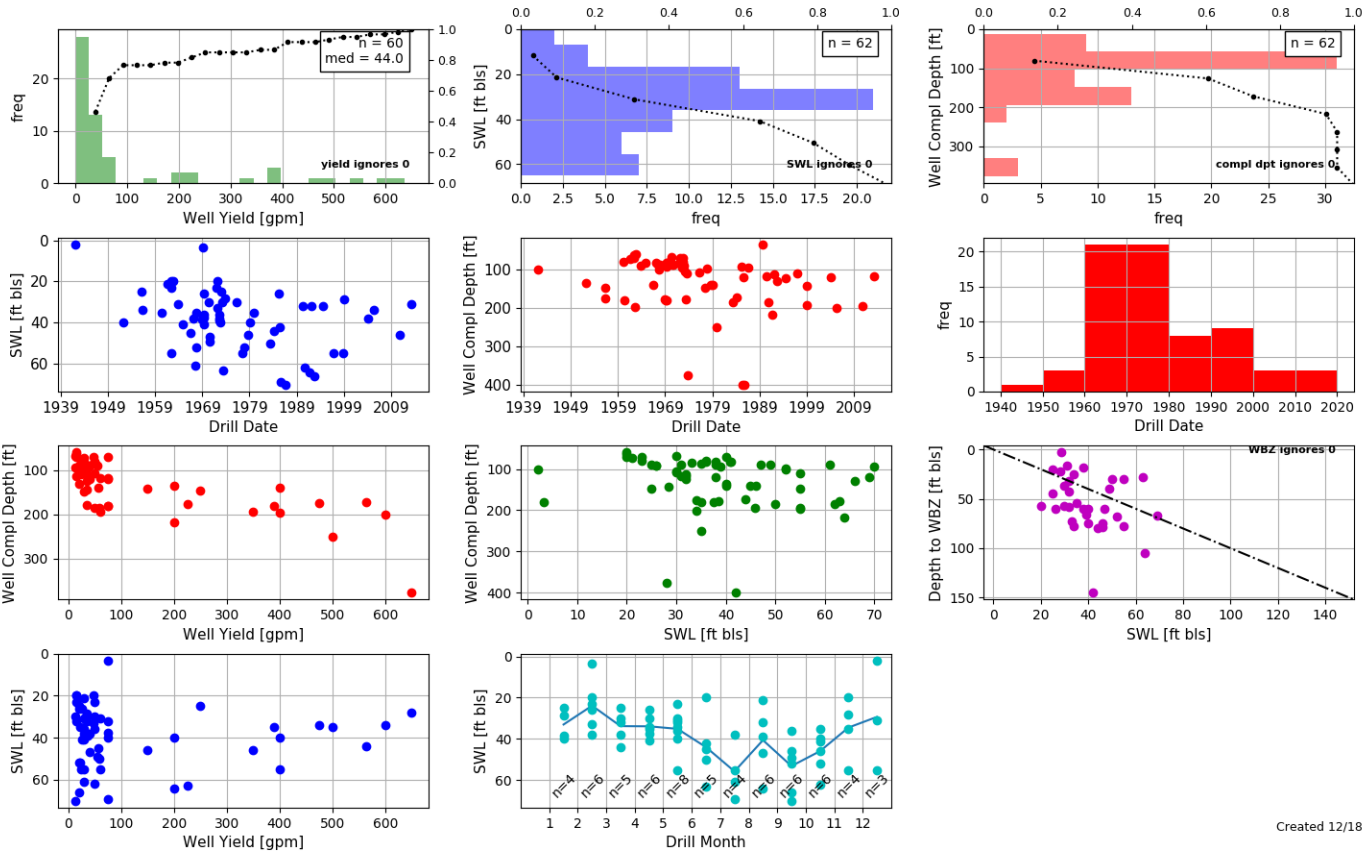


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Water-Level Measurements in Nearby Wells



Well Statistics



Created 12/18/2024

Water Availability Tables

Water Availability Analysis  
Detailed Reports

PUDDING R > MOLALLA R - AB MILL CR  
WILLAMETTE BASIN

Watershed ID #: 151 [\(Map\)](#)  
Date: 12/18/2024

Water Availability as of 12/18/2024

Exceedance Level: 80%  
Time: 10:36 AM

Water Availability Calculation

Consumptive Uses and Storages

Water Rights

Instream Flow Requirements

Watershed Characteristics

Reservations

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	1,040.00	125.00	915.00	0.00	80.00	835.00
FEB	1,180.00	114.00	1,070.00	0.00	80.00	986.00
MAR	1,010.00	76.50	934.00	0.00	80.00	854.00
APR	787.00	52.40	735.00	0.00	80.00	655.00
MAY	425.00	51.00	374.00	0.00	80.00	294.00
JUN	224.00	73.20	151.00	0.00	50.00	101.00
JUL	109.00	115.00	-6.28	0.00	40.00	-46.30
AUG	71.00	94.50	-23.50	0.00	36.00	-59.50
SEP	67.30	53.60	13.70	0.00	36.00	-22.30
OCT	91.60	11.50	80.10	0.00	50.00	30.10
NOV	363.00	48.50	314.00	0.00	80.00	234.00
DEC	957.00	118.00	839.00	0.00	80.00	759.00
ANN	706,000.00	56,300.00	650,000.00	0.00	46,500.00	606,000.00