

Groundwater Application Review Summary Form

Application # LL- 1991

GW Reviewer Stacey Garrison/James Hootsmans Date Review Completed: 9/30/2024

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

9/30/2024

TO: Application LL- 1991

FROM: GW: Stacey Garrison/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 9/30/2024
 FROM: Groundwater Section Stacey Garrison/James Hootsmans
 Reviewer's Name
 SUBJECT: Application LL- 1991* 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: Frank Foti County: Marion

A1. Applicant(s) seek(s) 0.078 cfs from 3 well(s) in the Willamette Basin,
Coast Range subbasin

A2. Proposed use Irrigation to establish vineyard Seasonality: March – September (2025), April – September (2026-2029)

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	YAMH 55946	1	Marine Volcanic/ Sedimentary Bedrock	0.009	3S/5W-22 SW NE	593'N, 842'W fr SE cor S 22
2	YAMH 59500	2	Marine Volcanic/ Sedimentary Bedrock	0.013	3S/5W-22 SW NE	802'N, 339'W fr SE cor S 22
3	YAMH 59518	3	Marine Volcanic/ Sedimentary Bedrock	0.056	3S/5W-22 NW SE	874'N, 1058'W fr SE cor S 22

* 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	305	0-39	0-39	0-305	185-205, 285-305	2	unknown	Air
2	441	0-98	(-)2 - 98	21 - 401	401-441	6	unknown	Air
3	402	0-121	(+)2-121	2-345, 362-382	342-362, 382-402	31	unknown	Air

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	562.50	21	83	6/15/11		
2	505	20	80	5/31/2024		
3	502	24	117	7/24/2024		

Use data from application for proposed wells.

A4. **Comments:** *This application is the replacement application for LL-1984 which was withdrawn.
 **The applicant proposes discharge rates of 4 gallons per minute (gpm, 0.009 cfs) from existing well YAMH 55946, 6 gpm (0.013 cfs) for existing well YAMH 59500, and 25 gpm (0.056) for existing well YAMH 59518. The total rate for the three wells will not exceed 35 gpm (0.078 cfs).

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 produces from a confined aquifer, therefore the pertinent rules (OAR 690-502-240) to not apply.

A6. ☐ **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
 Name of administrative area: NA
 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, Medium 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 marine volcanic/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 proposed POAs are located in the foothills of the Coast Range, which are characterized by low-yielding Tertiary Marine and Volcaniclastic Sedimentary (TMVS) aquifers. A survey of well logs in T3S/R5W-Section 22 produced 23 well logs, with reported yields ranging from 0 to 85 gpm (See Well Statistics). The median yield is 7 gpm and most logs report claystone or siltstone with occasional sandstone or basalt. This is typical of the low-yield bedrock hydrogeologic unit identified at this location by Conlon et al., (2005).
A review of statistics for nearby well records was completed and compared with the proposed maximum individual rate of 0.0557 cfs (25 gpm) for this application (see Well Statistics). The median reported well yield is 7 gpm, and the maximum reported yield is 100 gpm. The proposed rate for this application is 500% of the median and 35% of the maximum reported yield. Within a mile of the proposed POA, well yields range from less than 1 gpm to 88 gpm with a median of 6.5 gpm; it should be noted that all the well tests within a mile of the POAs were air tests, which are not as reliable as pumping tests. The proposed maximum individual rate of 0.0557 cfs (25 gpm) is likely within the capacity of the groundwater resource. Water level trends for wells that utilize the TMVS aquifer near POAs (1 to 2 miles from POAs) appear to be stable (see Water Levels Measurements in Nearby Wells). There are no groundwater POAs within 1 mile of the subject POAs. The steady trends in water levels in the closest TMVS observation wells and the lack of water rights within a mile of the POAs indicate that the groundwater resource is not likely over appropriated and the proposed use is within the capacity of the resource.
The nearest groundwater user to one of the POAs is likely the domestic well serving tax lot 400 at 16361 NW Red Shot Lane, with an estimated location 730 ft northeast of POA 3 (YAMH 55946), at an elevation of 415 ft amsl. It is likely the proposed use would cause some degree of well-to-well interference with the domestic well serving tax lot 400. To assess the degree of drawdown, a Theis drawdown analysis was conducted for the proposed use (see Theis Drawdown Analysis). Results indicate

that the proposed use is not likely to cause well-to-well interference with the domestic well serving tax lot 800 that exceeds the threshold under the standard condition for aquifers in the Willamette Basin. Because only the distance varies between the POAs and each respective closest groundwater user, only the pair with the shortest distance was modeled (POA 3 and tax lot 400); drawdown between all other POAs and the respective closest groundwater user is anticipated to be less than modeled. Based on this analysis of the available data and under the assumptions previously identified, groundwater for the proposed use will likely be available in the amounts requested and within capacity of the resource. The conditions specified in B1(d)(i) and B2(c) are recommended to protect senior users and the groundwater resource.

NOTE: This evaluation considers a conservative scenario for the nearest authorized POA not owned by the applicant. Other authorized POAs in the area may also experience an increase in interference as a result of this application, although to a lesser extent than the scenario evaluated here.

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 Volcanic/Sedimentary Bedrock Aquifer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Marine Volcanic/Sedimentary Bedrock Aquifer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Marine Volcanic/Sedimentary Bedrock Aquifer	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: Nearby well logs in the marine sedimentary bedrock aquifer show static water levels rise above water-bearing zone. This indicates confined aquifer conditions.

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 ^a	SW Elev ft msl ^b	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Beaver Creek	479.5	188-426	2,063	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Beaver Creek	424	195-443	1,502	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	1	Beaver Creek	385	185-332	3,250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Panther Creek	479.5	175-204	2,873	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Panther Creek	424	175-201	3,318	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	2	Panther Creek	385	168-204	1,311	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	3	Kane Creek	479.5	204-248	3,352	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	3	Kane Creek	424	204-234	3,928	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	3	Kane Creek	385	204-266	2,712	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	4	Russel Creek	479.5	204-250	3,352	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	4	Russel Creek	424	204-233	3,928	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	4	Russel Creek	385	204-270	2,712	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: Groundwater SWLs in nearby wells ranges from 6 ft above to 255 ft below land surface [196 to 536 ft amsl] with confined and unconfined WBZs within a mile of the POAs. POA 1 (YAMH 55946) has a SWL of 479.5 ft amsl and WBZ from 180 to 200 ft bls [362.5 to 382.5 ft amsl], POA 2 (YAMH 59500) has a SWL of 424 ft amsl and WBZ from 380 to 438 ft bls [67 to 125 ft amsl], and POA 3 (YAMH 59518) has a SWL of 385 ft amsl and WBZ from 344 to 370 ft bls [132 to 158 ft amsl]. Within a mile of the POAs, the streambed of SW 1 (Beaver Creek) is 185 to 443 ft amsl, of SW 2 (Panther Creek) is 168 to 201 ft amsl, of SW 3 (Kane Creek) is 204 to 266 ft amsl, and of SW 4 (Russel Creek) is 204 to 270 ft amsl. Water-table maps, where they exist, generally show flow paths that converge on local perennial streams. The water level at the existing wells is above perennial reaches of the nearby creeks, and the creeks have incised through several hundred feet of marine sediments. Groundwater from the uplands likely discharges to surface water down-gradient, providing baseflow or spring flow to sustain nearby perennial reaches of the creeks.

^a Groundwater elevation calculated from static water level reported in well logs and/or static water level(s) reported for: YAMH 55411, YAMH 56060, YAMH 55946, YAMH 57079, YAMH 59097, YAMH 59500, YAMH 59502, YAMH 59501, YAMH

59518, YAMH 50674, YAMH 3213, YAMH 50436, YAMH 58761, YAMH 58762, YAMH 51337, YAMH 52193, YAMH 57556, YAMH 58001.

^b Surface water elevations were estimated from land surface elevations along stream reaches (Watershed Sciences, 2009; USGS, 2013).

Water Availability Basin the well(s) are located within: 70745 PANTHER CR > N YAMHILL R - AT MOUTH

- 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?
1	1	<input type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	5.18	<input type="checkbox"/>	*	<input type="checkbox"/>
2	1	<input type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	5.18	<input type="checkbox"/>	*	<input type="checkbox"/>
3	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	5.18	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>
1	2	<input type="checkbox"/>	<input type="checkbox"/>	IS70745 A	3.00	<input type="checkbox"/>	5.18	<input type="checkbox"/>	*	<input type="checkbox"/>
2	2	<input type="checkbox"/>	<input type="checkbox"/>	IS70745 A	3.00	<input type="checkbox"/>	5.18	<input type="checkbox"/>	*	<input type="checkbox"/>
3	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	IS70745 A	3.00	<input checked="" type="checkbox"/>	5.18	<input type="checkbox"/>	*	<input checked="" type="checkbox"/>
1	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	5.18	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>
2	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	5.18	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>
3	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	5.18	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>
1	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	5.18	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>
2	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	5.18	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>
3	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	5.18	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>

Comments: The individual pumping rate (0.009 cfs) for POA 1 (YAMH 55946) and (0.013 cfs) POA 2 (YAMH 59500) are less than the 1% (0.0518 cfs) of the 80% exceedance natural flow (5.18 cfs), so PSI is not assumed per 690-009-0040(4)(d) for SW 1 (Beaver Creek) and SW 2 (Panther Creek). **The proposed individual pumping rate (0.056 cfs) for POA 3 (YAMH 59518) is greater than 1% (0.0518 cfs) of the 80% exceedance natural flow (5.18 cfs), so PSI is assumed per 690-009-0040(4)(d) for SW 1 (Beaver Creek), SW 2 (Panther Creek), SW 3 (Kane Creek), and SW 4 (Russel Creek). POA 3 is within 0.25 miles of SW 2 (Panther Creek).**

The individual pumping rate (0.009 cfs) for POA 1 (YAMH 55946) and (0.013 cfs) POA 2 (YAMH 59500) are less than the 1% (0.03 cfs) of the Instream Water Right (3.0 cfs), so PSI is not assumed per 690-009-0040(4)(c) for SW 2 (Panther Creek). **The proposed individual pumping rate (0.056 cfs) for POA 3 (YAMH 59518) is greater than 1% (0.03 cfs) of the Instream Water Right (3.0 cfs), so PSI is assumed per 690-009-0040(4)(c) for SW 2 (Panther Creek).**

* There is no appropriate model to estimate stream depletion from pumping in fractured rock that is incised by streams or discharges to point sources such as springs. Therefore, the percentage of interference at 30 days is not calculated.

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?
	1		<input type="checkbox"/>	NA		<input type="checkbox"/>	5.18	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>
	2		<input type="checkbox"/>	IS70745 A	3.0	<input checked="" type="checkbox"/>		<input type="checkbox"/>	*	<input checked="" type="checkbox"/>

Comments: **The proposed combined pumping rate (0.078 cfs) is greater than 1% (0.0518 cfs) of the 80% exceedance natural flow (5.18 cfs), so PSI is assumed per 690-009-0040(4)(d) for SW 1 (Beaver Creek), SW 2 (Panther Creek), SW 3 (Kane Creek), and SW 4 (Russel Creek).**

The proposed combined pumping rate (0.078 cfs) is greater than 1% (0.03 cfs) of the Instream Water Right (3.0 cfs), so PSI is assumed per 690-009-0040(4)(c) for SW 2 (Panther Creek).

* There is no appropriate model to estimate stream depletion from pumping in fractured rock that is incised by streams or discharges to point sources such as springs. Therefore, the percentage of interference at 30 days is not calculated.

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: N/A-streams within 1 mile evaluated above.

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: **The applicant may remove POA 3 (i.e., withdrawn application LL-1984) to avoid PSL**

References Used:

Application File: LL1977, LL1984, and LL1991

Pumping Test Files: YAMH 53996, YAMH 6035, YAMH 55391

Well Reports: YAMH 55411, YAMH 56060, YAMH 55946, YAMH 57079, YAMH 59097, YAMH 59500, YAMH 59502, YAMH 59501, YAMH 59518, YAMH 50674, YAMH 3213, YAMH 50436, YAMH 58761, YAMH 58762, YAMH 51337, YAMH 52193, YAMH 57556, YAMH 58001.

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O'Connor, J.E., Sarna-Wojcick, A., Wozniak, K.C., Polette, D.J., Fleck, R.J., 2001, *Origin, Extent, and Thickness of Quaternary Geologic Units in the Willamette Valley, Oregon*; U.S. Geological Survey, Professional Paper 1620, 51 p.

Theis, C.V., 1935, *The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using ground-water storage*: American Geophysical Union transactions, v. 16, p. 519-524.

United States Geological Survey, 2013, National Elevation Dataset (NED) [DEM geospatial data]. 1/9th arc-second, updated 2013.

Watershed Sciences, 2009, LIDAR remote sensing data collection, Department of Geology and Mineral Industries, Willamette Valley Phase I, Oregon: Portland, OR, December 21.

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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: _____

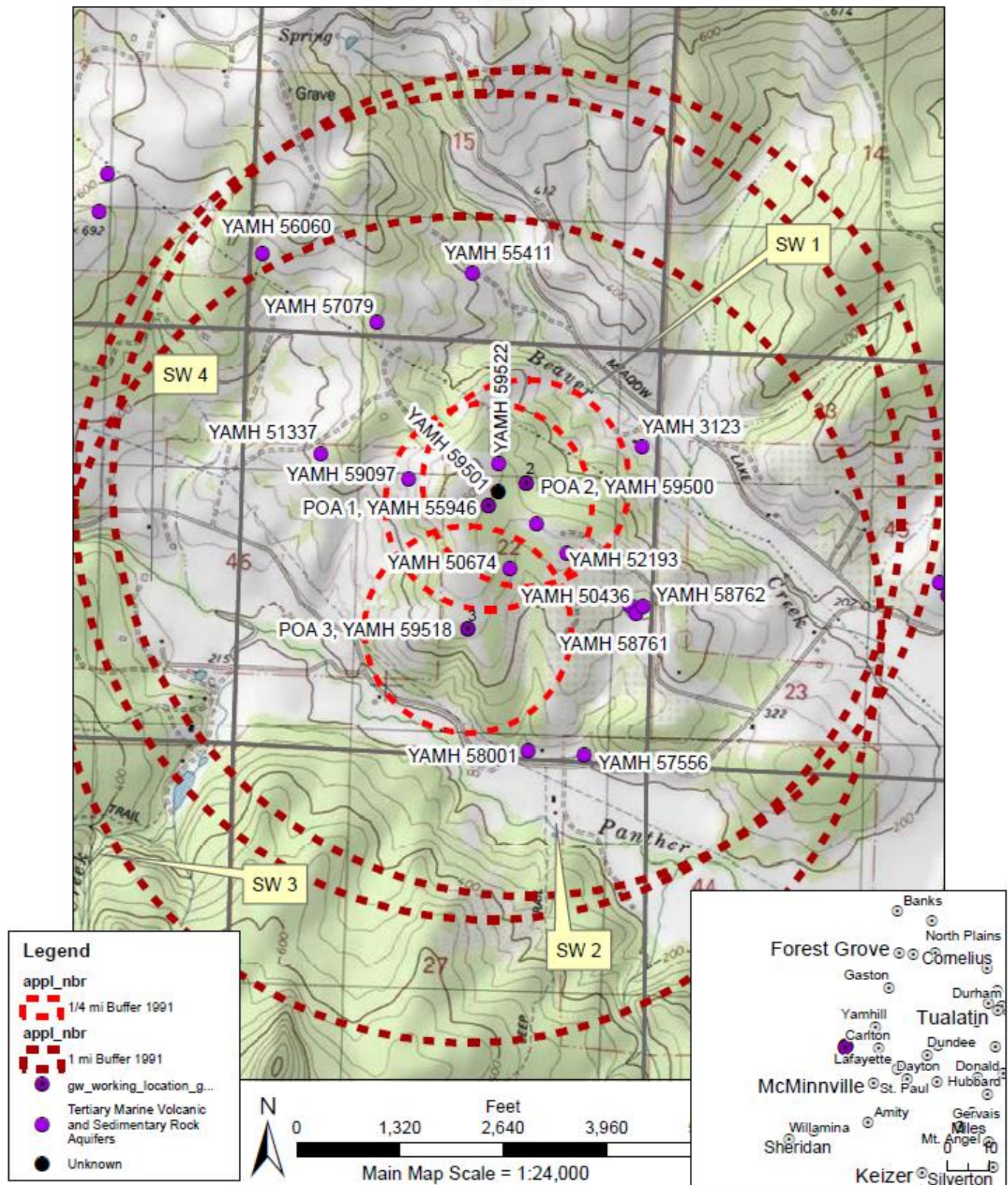
D2. **THE WELL does not appear to meet current well construction standards based upon:**

- 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:** _____

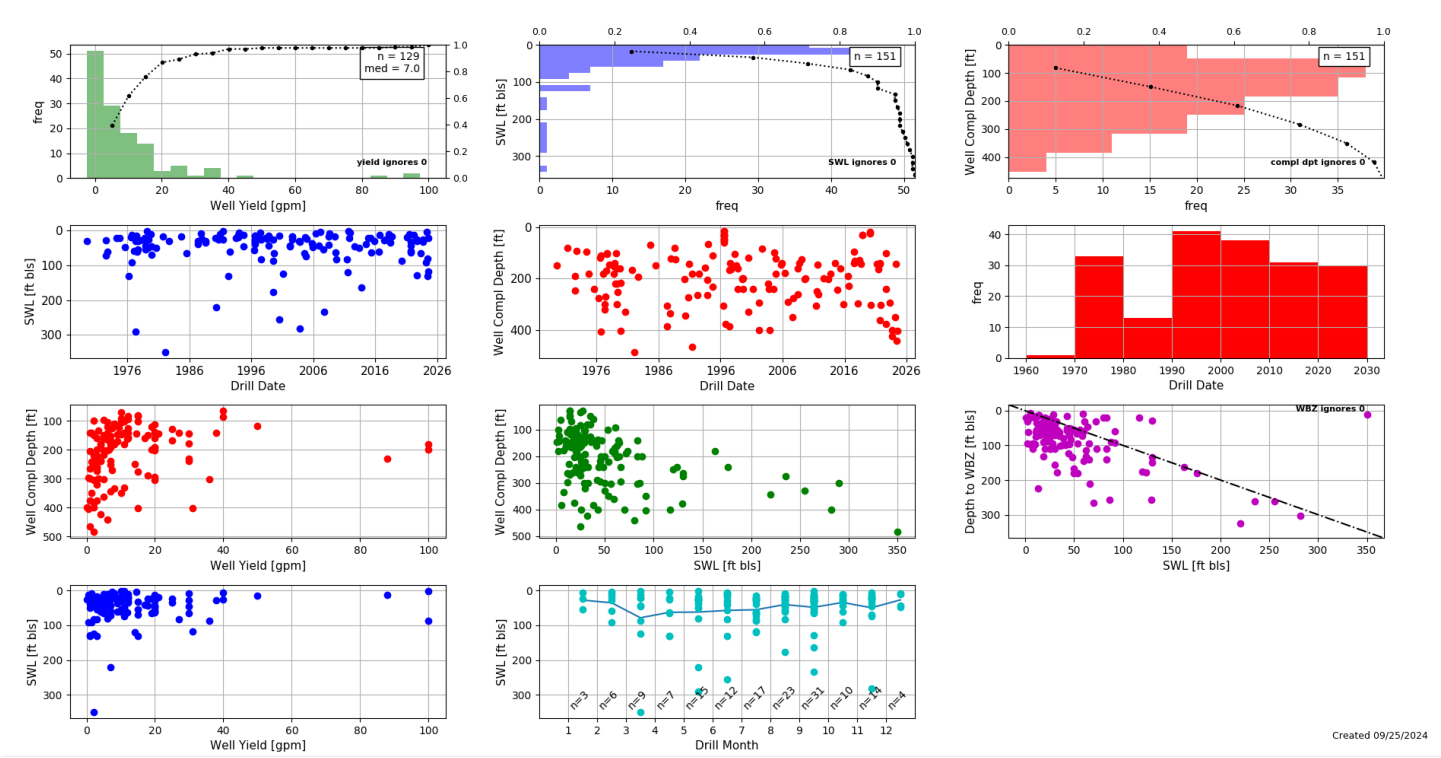
D4. ☐ **Route to the Well Construction and Compliance Section for a review of existing well construction.**

LL 1991 Foti

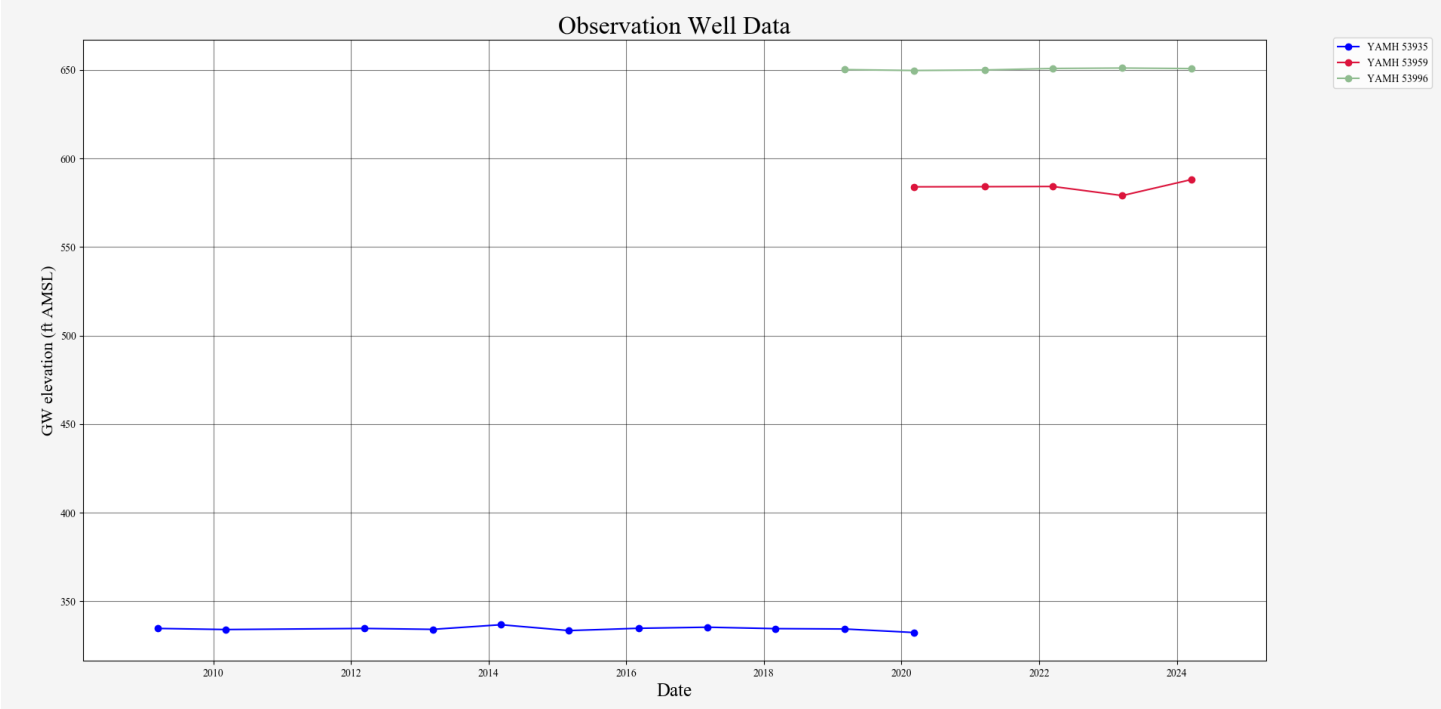


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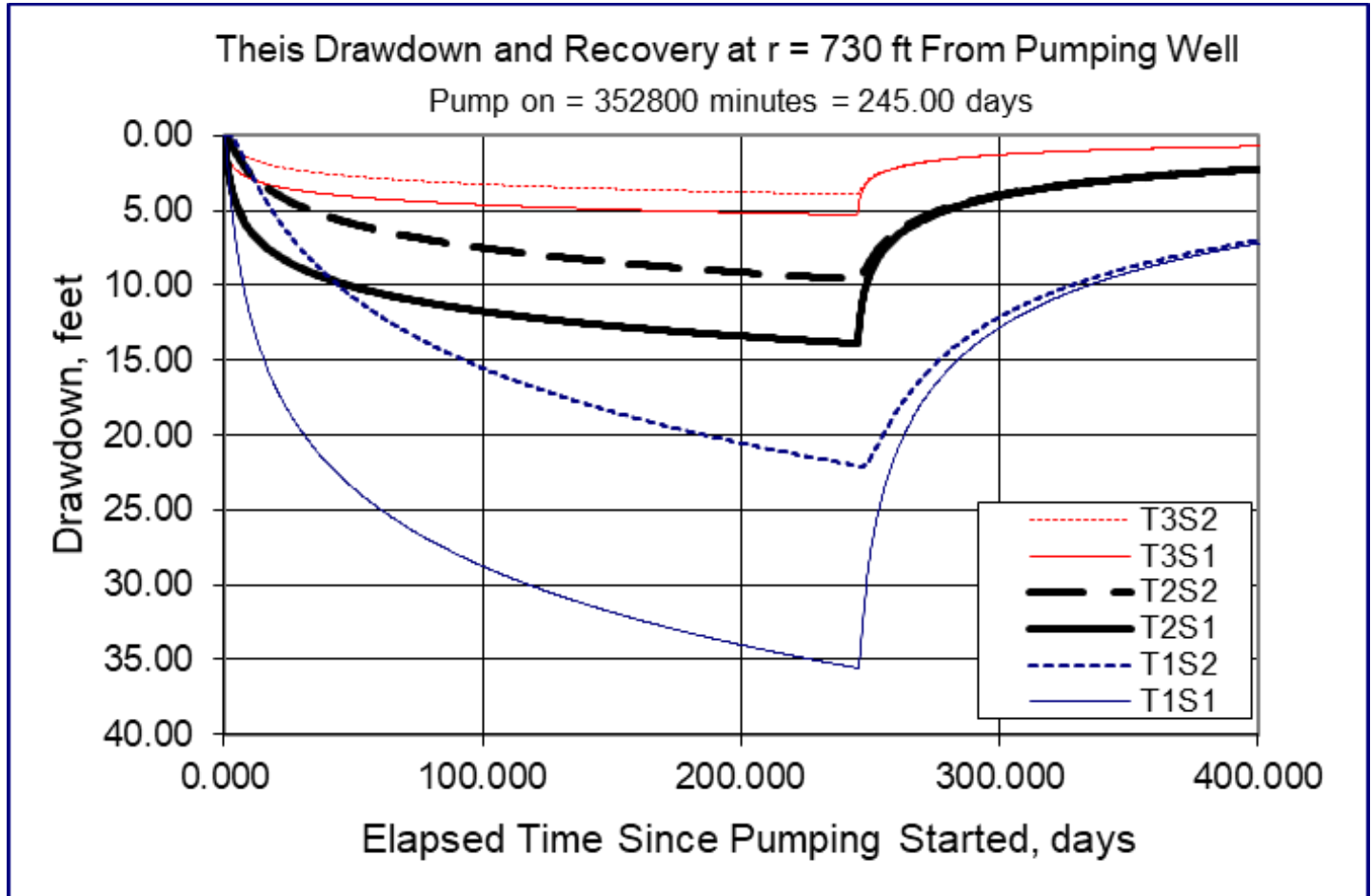
Well Statistics



Water-Level Measurements in Nearby Wells



Theis Drawdown



Radial distance from pumping well (r)=730 ft [estimated radial distance to nearest user, 16361 NW Red Shot Lane, TL 400]

Pumping Rate (Q)= 0.0557 cfs (~25 gpm)

Aquifer Transmissivity (T1)= 3,74 gpd/ft (50 ft²/day), (T2)= 1,197 gpd/ft (160 ft²/day), (T3)= 3,740 gpd/ft (500 ft²/day)

Storativity (s1) = 0.00005, (s2) = 0.003 [Conlon et al 2005, Table 1 and 2 values for BCU]

Total pumping time=245 days [Irrigation March 1 through October 31]

Water Availability Tables

PANTHER CR > N YAMHILL R - AT MOUTH
WILLAMETTE BASIN

Water Availability as of 5/28/2024

Watershed ID #: 70745 ([Map](#))
Date: 5/28/2024

Exceedance Level: 80%
Time: 12:52 PM

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	117.00	5.13	112.00	0.00	25.00	86.90
FEB	150.00	5.19	145.00	0.00	25.00	120.00
MAR	119.00	4.23	115.00	0.00	25.00	89.80
APR	72.10	4.46	67.60	0.00	25.00	42.60
MAY	33.20	5.86	27.30	0.00	25.00	2.34
JUN	16.10	6.53	9.57	0.00	6.00	3.57
JUL	8.77	8.05	0.72	0.00	4.00	-3.28
AUG	6.10	7.27	-1.17	0.00	3.00	-4.17
SEP	5.18	5.06	0.12	0.00	3.00	-2.88
OCT	8.85	3.00	5.85	0.00	5.00	0.85
NOV	19.60	3.21	16.40	0.00	25.00	-8.61
DEC	92.20	4.89	87.30	0.00	25.00	62.30
ANN	72,200.00	3,800.00	68,400.00	0.00	11,800.00	56,600.00