

Groundwater Application Review Summary Form

Application # G- 19421

GW Reviewer Travis Brown Date Review Completed: 12/20/2024

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

12/20/2024

TO: Application G- 19421

FROM: GW: Travis Brown
(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 12/20/2024
FROM: Groundwater Section Travis Brown
Reviewer's Name
SUBJECT: Application G- 19421 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: Karla and Robert Hostetler County: LINN

A1. Applicant(s) seek(s) 0.2 cfs from 1 well(s) in the Willamette Basin,
Calapooia subbasin

A2. Proposed use Irrigation (44.0 acres | 110 af/year) Seasonality: 3/1-10/31

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	LINN 62530	Well 1	Bedrock	0.2	T14S/R2W-S11 NE-SE	1850' N, 770' W fr SE cor S 11

* Alluvium, CRB, Bedrock

POA Well	Well Depth (ft bls)	Seal Interval (ft bls)	Casing Intervals (ft bls)	Liner Intervals (ft bls)	Perforations Or Screens (ft bls)	Well Yield (gpm)	Drawdown (ft)	Test Type
1	261.5	0-19	+1-19	1.5-261.5	44-241	8	Unknown	Air (1 hr)

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	~429 ^a	62	13	10/17/2018	TBD	TBD

Use data from application for proposed wells.

A4. **Comments:** The proposed POA/POU is ~1.8 miles northwest of the unincorporated community of Crawfordsville, Oregon.

^a From LIDAR.

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 POA well produces groundwater from a confined aquifer and is more than ¼ mile from the nearest surface water source. Per OAR 690-502-0240, the relevant basin rules do not apply.

A6. ☐ **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
Name of administrative area: N/A
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 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 bedrock 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:** Based on nearby well logs, including the POA well, and geologic mapping by McCloughry et al. (2010), the proposed POA produces groundwater from saturated fractures within the Eocene-Oligocene marine sedimentary Eugene Formation and interbedded Eocene-Miocene Little Butte Volcanics. Static water levels on the POA well report and other nearby well reports are coincident with the Calapooia River. Presumably, the bedrock aquifer fracture network intersects the Calapooia River directly where the river is flowing on exposed Little Butte Volcanic bedrock to the southeast and is hydraulically connected via the surficial alluvial aquifer further downstream. As such, the proposed POA is expected to derive a majority of its pumping from surface water capture relatively quickly (less than a year).

Water level data in nearby wells is limited, with short periods of record (see attached Hydrograph). Furthermore, the wells with available time-series water level data likely do not access the same aquifer as the POA well, instead being open to the alluvial aquifer system (LINN 14614, 61779, 63276, and 63291) or to the more basalt/volcanic-dominated bedrock further upstream to the southeast. However, all of the nearby wells for which water level data is available generally show long term stability, which supports the conclusion that the source of water to wells near the Calapooia River is capture-dominated. Based on the available evidence, the groundwater resource is not over-appropriated.

The nearest neighboring groundwater right to the proposed POA (LINN 62530) is Well 2 on Permit G-18100, ~520 ft northwest of the proposed POA. However, there is no record of either Well 1 or Well 2 on Permit G-18100 having been drilled nor has there been any reported water use under Permit G-18100, for which the completion date passed in 2023 with no record of an extension having been filed. Furthermore, Permit G-18100 was for use of the overlying alluvial aquifer rather than the underlying bedrock tapped by LINN 62530. The only other nearby well known to tap the bedrock aquifer is LINN 62267, a domestic well which also appears to be owned by the applicant, Robert Hostetler. Given the lack of neighboring bedrock wells and the presumed capture-dominated nature of the bedrock aquifer system, injury to other wells seems unlikely.

The applicant has requested a rate of 0.2 cfs (~90 gpm). The well report for the proposed POA well (LINN 62530) reported a yield of only 8 gpm (~0.018 cfs) – less than a tenth of the requested rate. The only other known nearby bedrock well, LINN 62267, reported a yield of only 3 gpm (~0.007 cfs). Based on the available information, the sole proposed POA (LINN

62530) appears unable to supply the requested rate of 0.2 cfs. **Therefore, the proposed use is likely not within the capacity of the groundwater resource.**

The conditions specified in B1(d) and B2(c) are strongly recommended for any permit issued pursuant to this application.

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	Eugene Formation / Little Butte Volcanics	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: Although there does not appear to be a consistent, widespread confining unit of fine-grained sediment or impermeable bedrock overlying the fractured bedrock aquifer, the water-bearing zones (fractures) tapped by the POA well appear to behave predominantly as a confined aquifer system, with reported static water levels rising well above the noted water-bearing zones in nearby 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	Calapooia River	~415-420 ^a	~395-430 ^b	~1,350	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: Reported static water levels in the POA well and other nearby wells are coincident with the Calapooia River. Presumably, the bedrock aquifer fracture network intersects the Calapooia River directly where the river is flowing on exposed Little Butte Volcanic bedrock to the southeast and is hydraulically connected via the surficial alluvial aquifer further downstream.

^a From well reports and LIDAR.

^b From LIDAR within 1 mile of proposed POA.

Water Availability Basin the well(s) are located within: SW 1: CALAPOOIA R > WILLAMETTE R – AB 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"/>	IS 89672	30	<input type="checkbox"/>	22.70	<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"/>

Comments: *The interference with SW 1 (Calapooia River) could not be analyzed due to the lack of an available model suitable for the hydrogeologic setting.

- 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													
(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:
- ☐ The permit should contain condition #(s) _____;
 - ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** None

References Used:

Application File: G-18508 (Permit G-18100), G-19421

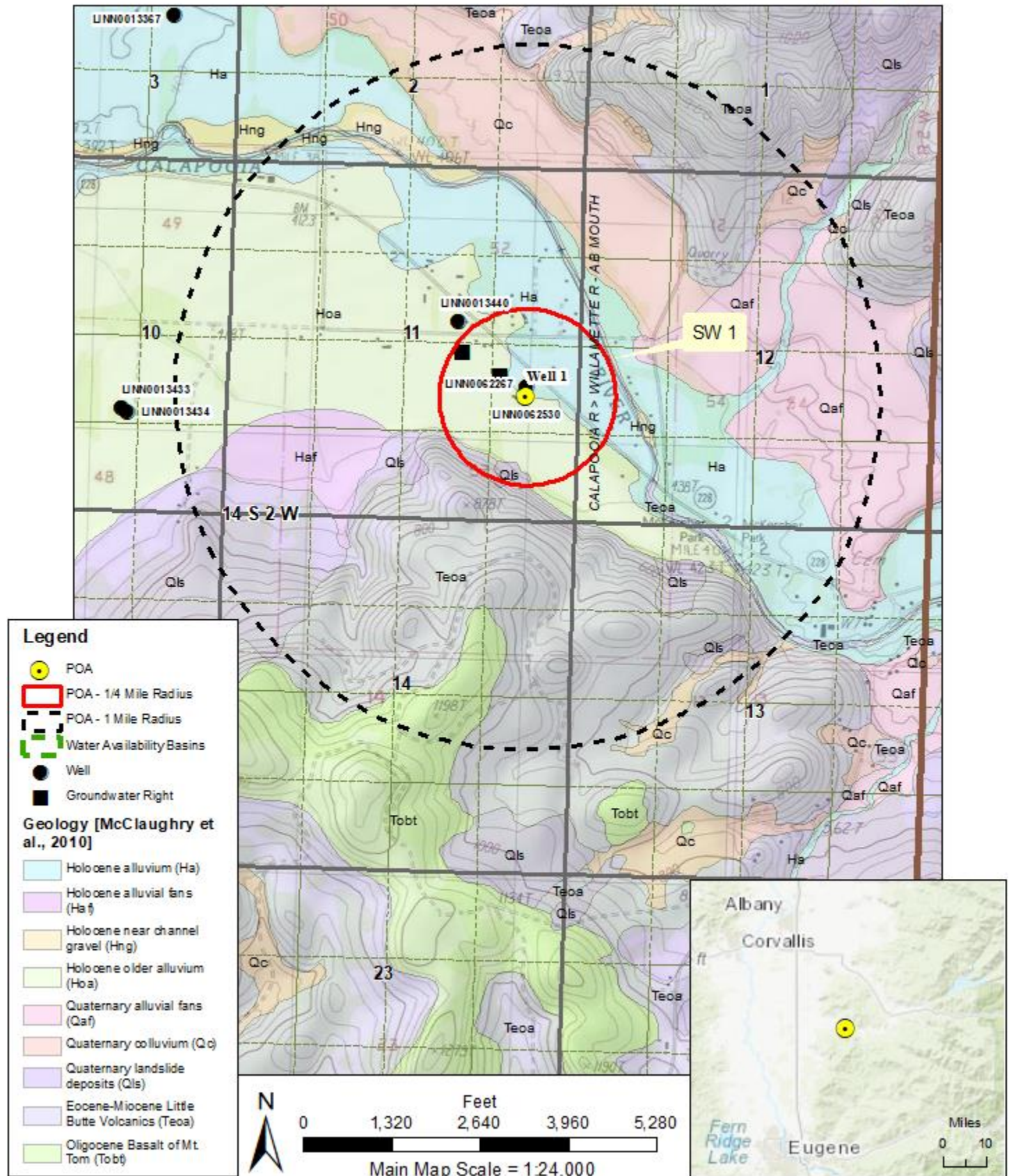
McClaghry, J.D., Wiley, T.J., Ferns, M.L., and Madin, I.P., 2010, Digital geologic map of the southern Willamette Valley, Benton, Lane, Linn, Marion, and Polk Counties, Oregon, Open-File Report O-2010-03, 116 p., 1 pl: Oregon Department of Geology and Mineral Industries, Portland, OR.

D. WELL CONSTRUCTION, OAR 690-200

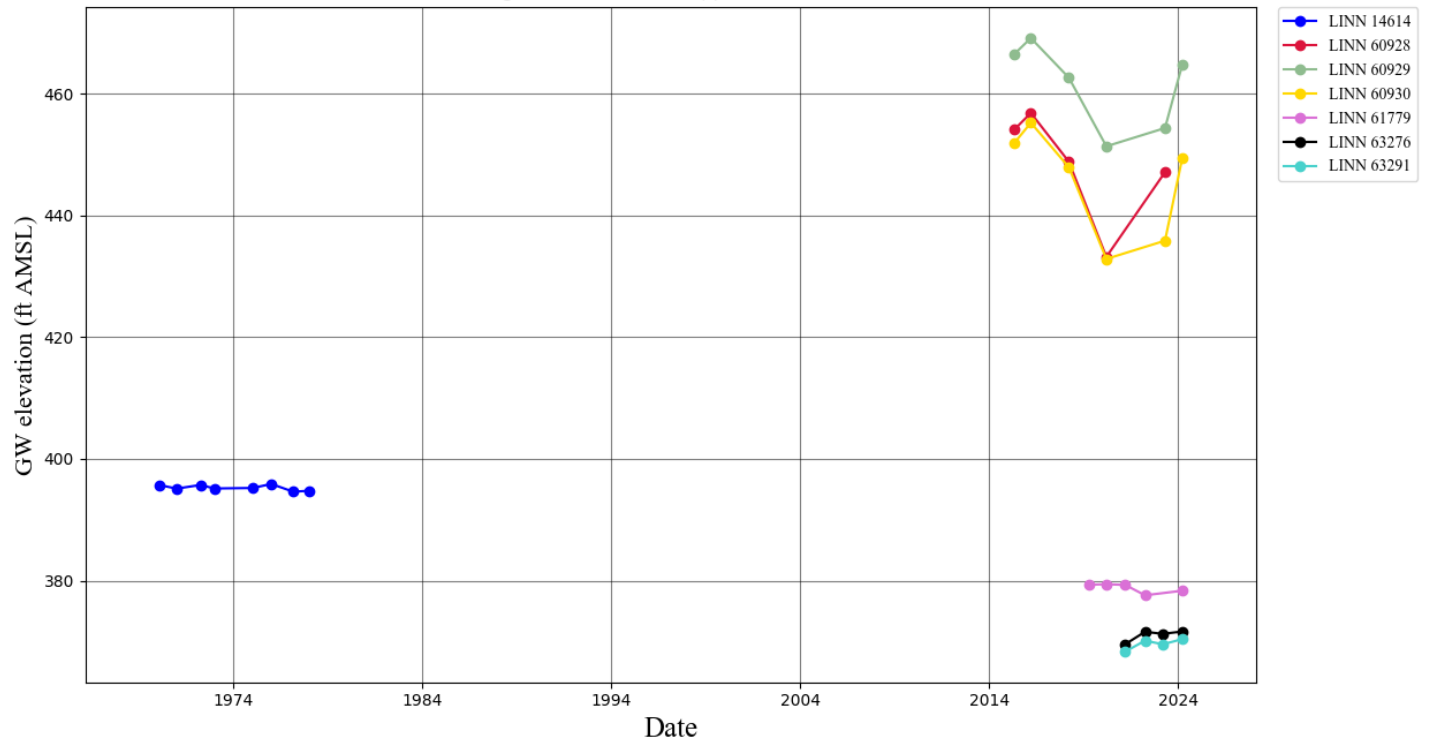
- D1. **Well #:** _____ **Logid:** _____
- D2. **THE WELL does not appear to meet current well construction standards based upon:**
- ☐ review of the well log;
 - ☐ field inspection by _____;
 - ☐ report of CWRE _____;
 - ☐ other: (specify) _____
- D3. **THE WELL construction deficiency or other comment is described as follows:** _____
- D4. ☐ **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Well Location Map

G-19421



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Hydrograph**Observation Well Data**

Water Availability Tables

Water Availability Analysis
Detailed Reports

CALAPOOIA R > WILLAMETTE R - AB MOUTH
WILLAMETTE BASIN

Water Availability as of 12/20/2024

Watershed ID #: 76 [\(Map\)](#)

Exceedance Level: 80% ▼

Date: 12/20/2024

Time: 10:40 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	592.00	4.75	587.00	0.00	140.00	447.00
FEB	650.00	4.68	645.00	0.00	140.00	505.00
MAR	575.00	3.50	571.00	0.00	140.00	431.00
APR	423.00	3.18	420.00	0.00	140.00	280.00
MAY	234.00	19.60	214.00	0.00	140.00	74.40
JUN	111.00	15.30	95.70	0.00	90.00	5.67
JUL	49.00	23.80	25.20	0.00	50.00	-24.80
AUG	26.00	17.20	8.77	0.00	30.00	-21.20
SEP	22.70	8.89	13.80	0.00	39.30	-25.50
OCT	29.60	2.02	27.60	0.00	59.90	-32.30
NOV	133.00	2.53	130.00	0.00	140.00	-9.53
DEC	499.00	4.70	494.00	0.00	140.00	354.00
ANN	404,000.00	6,690.00	397,000.00	0.00	75,200.00	324,000.00

Detailed Report of Instream Flow Requirements

Instream Flow Requirements in Cubic Feet per Second

Application #	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
MF76A	CERTIFICATE	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
IS89672A	APPLICATION	140.00	140.00	140.00	140.00	140.00	90.00	50.00	30.00	39.30	59.90	140.00	140.00
IS89673A	APPLICATION	35.00	35.00	35.00	35.00	35.00	5.00	3.00	1.78	3.00	5.80	33.70	35.00
Maximum		140.00	140.00	140.00	140.00	140.00	90.00	50.00	30.00	39.30	59.90	140.00	140.00