

Groundwater Application Review Summary Form

Application # G- 19446

GW Reviewer Travis Brown Date Review Completed: 11/22/2024

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

11/22/2024

TO: Application G- 19446

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 11/22/2024
 FROM: Groundwater Section Travis Brown
 Reviewer's Name
 SUBJECT: Application G- 19446 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: Molalla Nazarene Church County: Clackamas

A1. Applicant(s) seek(s) 0.054 cfs from 2 well(s) in the Willamette Basin,
Molalla-Pudding subbasin

A2. Proposed use Irrigation (4.3 ac, 10.75 af/yr) 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 ID	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	PROP	Well 1	Alluvium	0.054	5S/2E-9 SE-SE	1215' N, 965' W fr SE cor S 9
2	PROP	Well 2	Alluvium	0.054	5S/2E-9 NE-SE	1440' N, 390' W fr SE cor S 9

* 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	280	0-75	0-280	TBD	TBD	TBD	TBD	TBD
2	280	0-75	0-280	TBD	TBD	TBD	TBD	TBD

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		TBD	TBD	TBD	TBD	TBD
2		TBD	TBD	TBD	TBD	TBD

Use data from application for proposed wells.

A4. **Comments:** The proposed POA and POU are within the city limits of Molalla, OR.

^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 wells would develop a confined aquifer and are more than ¼ mile from the nearest surface water source. Per OAR 690-502-0240 the relevant Willamette 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 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 Troutdale Fmn (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 proposed POA would produce groundwater from unconsolidated to weakly-consolidated alluvial sediments of the Troutdale Formation (Gannett and Caldwell, 1998; O'Connor et al., 2001). Within several years at most, the alluvial aquifer system is likely to yield water to wells primarily from capture of surface water, particularly from the nearby Molalla River. The nearest available alluvial aquifer water level measurements do not indicate groundwater levels that are excessively declining or declined excessively (see attached Hydrograph). **Based on the available evidence, the subject groundwater reservoir is not over-appropriated.**

The requested rate of 0.054 cfs (~24 gpm) is less than the median yield of 26 gpm reported for alluvial wells in T5S/R2E-S9 (see attached Well Statistics). The requested rate is likely achievable with the proposed POA wells.

The nearest neighboring well to the proposed POA is CLAC 10084, domestic well on TL 3103. The exact location of CLAC 10084 is not known, but the nearest edge of TL 3103 is ~590 ft east of proposed POA Well 2 and ~1,190 ft east of proposed POA Well 1. Given those minimum distances, the relatively low requested rate, and the substantial water column in the alluvial aquifer system, interference with CLAC 10084 due to the proposed use is unlikely to exceed either the standard permit condition for new alluvial wells or the threshold for injury.

To protect senior water rights and the groundwater resource, the conditions specified in B1(d)(i) 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	Troutdale Formation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Troutdale Formation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: The proposed POA would be completed in the unconsolidated to weakly-consolidated alluvial sediments of the Troutdale Formation, near the head of a substantial alluvial fan associated with the Molalla River and incorporated as part of the broader Willamette Aquifer as identified by Gannett and Caldwell, 1998. Nearby water well logs indicate variable and likely discontinuous coarser-grained sediment (sand and gravel) layers interbedded with finer-grained sediments (silt and clay). Water levels noted for the various water-bearing zones are generally above overlying confining units, indicating predominantly 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	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Unnamed tributary to Molalla River	~380-400 ^a	~339-367 ^b	~2,940	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Bear Creek	~380-400 ^a	~377-411 ^b	~4,300	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	3	Molalla River	~380-400 ^a	~343-346	~5,600	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Unnamed tributary to Molalla River	~380-400 ^a	~339-367 ^b	~2,700	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Bear Creek	~380-400 ^a	~383-411 ^b	~4,780	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	3	Molalla River	~380-400 ^a	~343-346 ^b	~4,960	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: Water table elevations at the proposed POA are estimated to be coincident or above the elevation of SW 1, 2, and 3. The alluvial system appears to be hydraulically connected to these surface water sources.

^a Estimated from Woodward et al., 1998.

^b From LIDAR within 1 mile of proposed POA.

Water Availability Basin the well(s) are located within: SW 1, 3: MOLALLA R > WILLAMETTE R – AB MILK CR
SW 2: PUDDING R > MOLALLA R – AB MILL 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?
1	1	<input type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	<input type="checkbox"/>	54.50	<input type="checkbox"/>	<25% ^a	<input type="checkbox"/>
1	2	<input type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	<input type="checkbox"/>	67.30	<input type="checkbox"/>	<25% ^a	<input type="checkbox"/>
2	1	<input type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	<input type="checkbox"/>	54.50	<input type="checkbox"/>	<25% ^a	<input type="checkbox"/>
2	2	<input type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	<input type="checkbox"/>	67.30	<input type="checkbox"/>	<25% ^a	<input type="checkbox"/>
2	3	<input type="checkbox"/>	<input type="checkbox"/>	IS 70747	78.70	<input type="checkbox"/>	54.50	<input type="checkbox"/>	<25% ^a	<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 #		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?
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: The potential for substantial interference (PSI) is not assumed for the proposed POA and nearby surface water.

^a Interference with surface water was not modeled. Based on modeling in similar settings, and given the substantial fine-grained sediment thicknesses underlying SW 1 and 2 and the substantial distance between the POA and SW 3, interference with surface water within 1 mile of the POA is unlikely to exceed 25 percent of the rate of pumping within 30 days of continuous pumping.

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:** _____

References Used:

Application File: G-19446

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

O'Connor, J. E., Sarna-Wojcicki, A., Wozniak, K. C., Polette, D. J., Fleck, R. J., 2001, Origin, Extent, and Thickness of Quaternary Units in the Willamette Valley, Oregon, Professional Paper 1620: U. S. Geological Survey, Reston, VA.

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:**

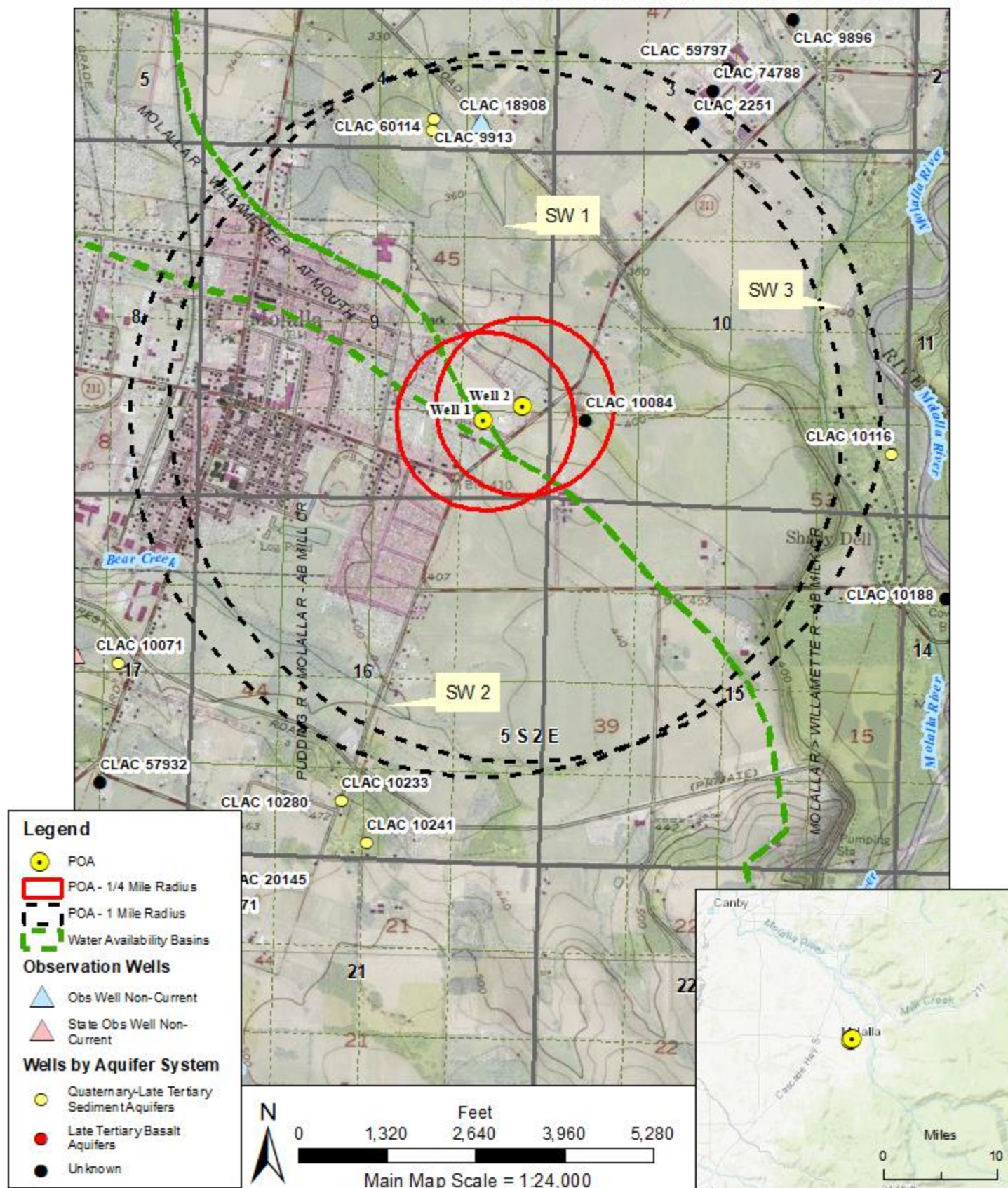
- a. ☐ review of the well log;
- b. ☐ field inspection by _____;
- c. ☐ report of CWRE _____;
- d. ☐ other: (specify) _____

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.**

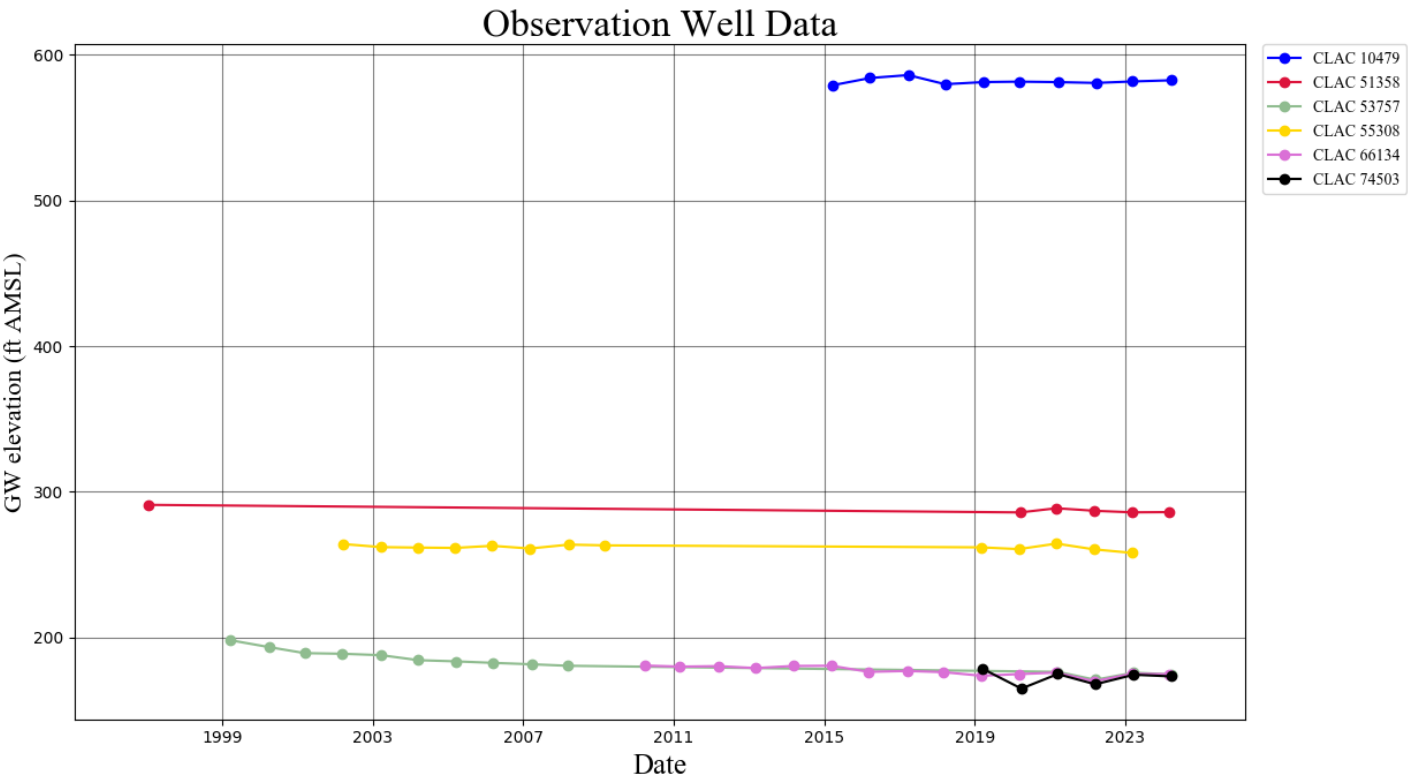
Well Location Map

G-19446 Molalla Nazarene Church

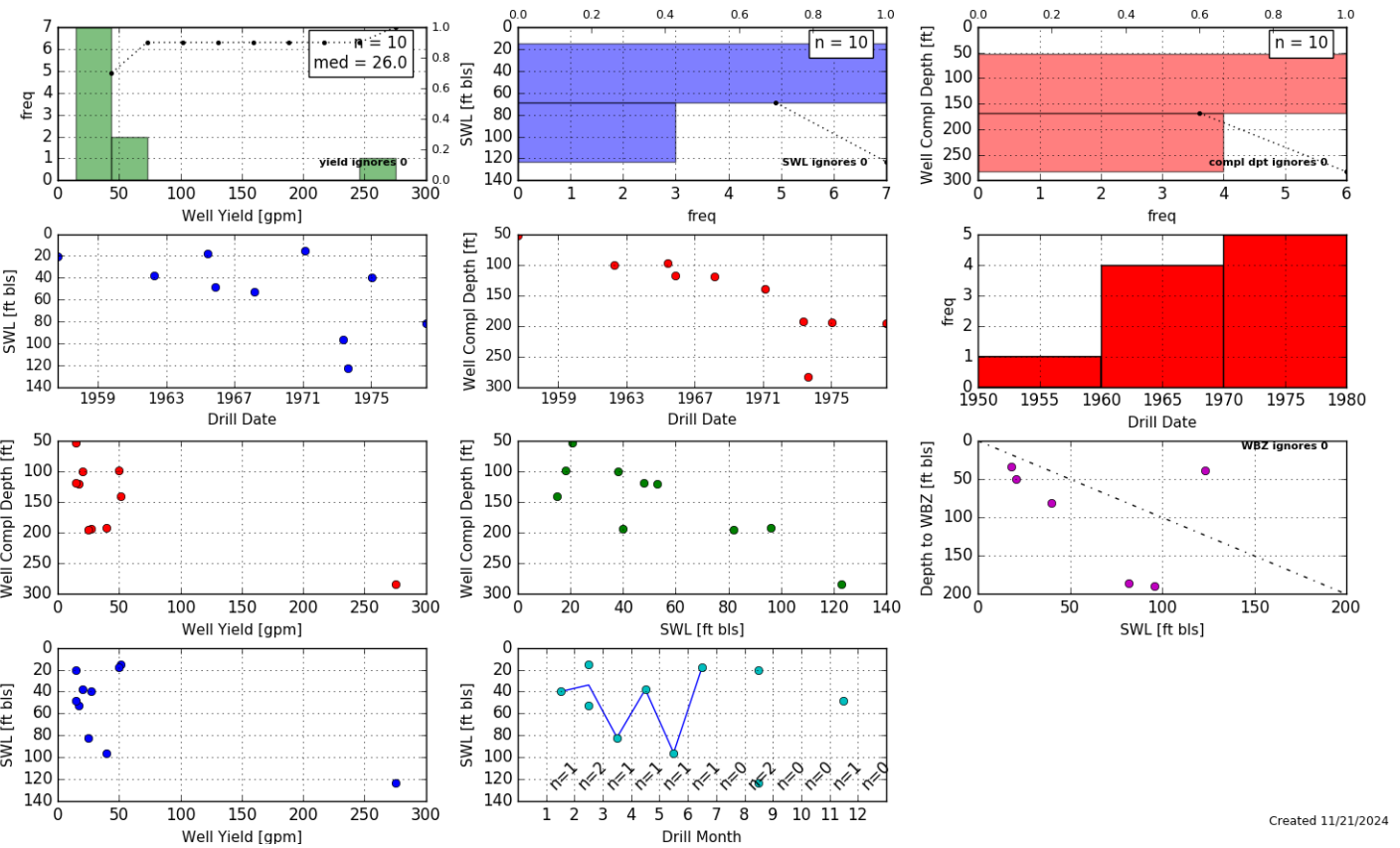


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Hydrograph



Well Statistics



Water Availability Tables

MOLALLA R > WILLAMETTE R - AB MILK CR
WILLAMETTE BASIN

Water Availability as of 11/22/2024

Watershed ID #: 70747 ([Map](#))

Exceedance Level: 80% ▾

Date: 11/22/2024

Time: 10:50 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	531.00	1.33	530.00	0.00	300.00	230.00
FEB	541.00	1.32	540.00	0.00	300.00	240.00
MAR	569.00	1.35	568.00	0.00	300.00	268.00
APR	591.00	1.64	589.00	0.00	300.00	289.00
MAY	466.00	5.15	461.00	0.00	300.00	161.00
JUN	207.00	7.28	200.00	0.00	200.00	-0.28
JUL	85.90	12.80	73.10	0.00	100.00	-26.90
AUG	55.70	10.40	45.30	0.00	78.70	-33.40
SEP	54.50	4.24	50.30	0.00	88.90	-38.60
OCT	90.40	1.45	89.00	0.00	166.00	-77.00
NOV	273.00	1.30	272.00	0.00	300.00	-28.30
DEC	560.00	1.34	559.00	0.00	300.00	259.00
ANN	454,000.00	3,020.00	451,000.00	0.00	165,000.00	287,000.00

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
IS70747A	CERTIFICATE	300.00	300.00	300.00	300.00	300.00	200.00	100.00	78.70	88.90	166.00	300.00	300.00
IS89607A	APPLICATION	5.00	5.00	5.00	5.00	4.60	2.63	1.14	0.63	0.72	1.23	3.70	5.00
IS89606A	APPLICATION	5.00	5.00	5.00	4.85	3.32	1.90	0.80	0.44	0.49	0.86	2.48	5.00
Maximum		300.00	300.00	300.00	300.00	300.00	200.00	100.00	78.70	88.90	166.00	300.00	300.00

PUDDING R > MOLALLA R - AB MILL CR
WILLAMETTE BASIN

Water Availability as of 11/22/2024

Watershed ID #: 151 ([Map](#))

Exceedance Level: 80% ▾

Date: 11/22/2024

Time: 10:51 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	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	73.10	151.00	0.00	50.00	101.00
JUL	109.00	115.00	-6.14	0.00	40.00	-46.10
AUG	71.00	94.30	-23.30	0.00	36.00	-59.30
SEP	67.30	53.50	13.80	0.00	36.00	-22.20
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