

Groundwater Application Review Summary Form

Application # G- 18999

GW Reviewer Travis Brown Date Review Completed: 11/13/2020

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

November 13, 2020

TO: Application G- 18999

FROM: GW: Travis Brown
(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 Date 11/13/2020
 FROM: Groundwater Section Travis Brown
 Reviewer's Name
 SUBJECT: Application G- 18999 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: Orozco, LLC (c/o Juan Orozco) County: CLACKAMAS

A1. Applicant(s) seek(s) 0.30 cfs from 2 well(s) in the Willamette Basin,
Pudding-Molalla subbasin

A2. Proposed use Irrigation (24 acres; 60 af/yr) Seasonality: March 1 – October 30

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

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	PROPOSED	"Well 1"	Marine Sediments	0.30	5S/1E-34 NE-SE	2135' N, 305' W fr SE cor S 34
2	PROPOSED	"Well 2"	Marine Sediments	0.30	5S/1E-34 NW-SE	2385' N, 1295' W fr SE cor S 34

* 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	246 ^a	N/A	N/A	N/A	200 ^b	0-100 ^b	0-100 ^b	N/A	TBD ^b	N/A	N/A	N/A
2	257 ^a	N/A	N/A	N/A	200 ^b	0-100 ^b	0-100 ^b	N/A	TBD ^b	N/A	N/A	N/A

Use data from application for proposed wells.

A4. **Comments:** The proposed POA/POU are ~3 miles north of Scotts Mills, OR.

^a Ground surface elevation at proposed well location, estimated from LIDAR (Watershed Sciences, 2009)

^b Proposed well construction

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 are greater 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 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 (annual measurement), 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 sedimentary (Scotts Mills Formation) groundwater reservoir between approximately 10 ft. and 180 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:** Groundwater for the proposed use cannot be determined to be over-appropriated due to insufficient available data regarding rates of recharge and the current quantity of groundwater withdrawals from the aquifer system.

The applicant intends to complete the proposed POA in the marine sediments (Scotts Mills Formation per Tolan and Beeson, 1999) underlying the surficial Pleistocene alluvial sediments (“Qoal” per Tolan and Beeson, 1999). The Scotts Mills Formation appears to be interbedded with and underlain by the Little Butte Volcanics (Tolan and Beeson, 1999). Nearby well logs (CLAC 2790 and CLAC 19980) indicate alluvial sediments from land surface (elevation ~277-280 ft msl) to ~255 ft msl and indurated marine clay and sand from ~255 ft msl to ~67 ft msl, below which basalts from the Little Butte Volcanics appear to be interbedded with the marine sediments to an indeterminate depth. Based on the proposed construction, the proposed POA (which have lower land surface elevations of ~246-257 ft msl) would extend to ~46-57 ft msl, which could slightly penetrate the interbedded Little Butte Volcanics, though the wells would still mostly produce groundwater from the marine sediments.

The nearest neighboring well to the proposed POA is CLAC 2790, which is ~1,030 ft southwest of proposed Well 2. CLAC 2790 is the sole authorized POA under **Certificate 44929***. Little data is available on the hydraulic properties of the Scotts Mills Formation. However, based on the initial static water level reported for CLAC 2790 (20 ft bls, 6/29/67), the available drawdown in CLAC 2790 is anticipated to be ~100 ft. Given the significant distance between proposed POA Well 2 and CLAC 2790 and the relatively low requested rate of appropriation, the proposed use is not anticipated to cause interference with CLAC 2790 sufficient to meet the definition of injury.

The requested rate of appropriation is 0.30 cfs (~135 gpm). In order to supply the requested rate, each of the proposed POA would have to produce at least 0.15 cfs (~67 gpm). For water wells constructed in T5S/R1E-34 to a depth of between 100 and 250 ft bls, reported yields range from 7-100 gpm, with a median of 25 gpm (see attached Well Statistics). The minimum necessary rate (~67 gpm) for the proposed POA represents ~268 percent of the median reported yield in this area; however, it is still within the range of reported yields. Time series water level data for nearby water well CLAC 19980 indicate stable water levels from 2000-2013 (see attached Hydrograph). While the proposed use may be within the capacity of the groundwater resource, the conditions specified in B1(d)(i) and B2(c) are 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	Marine Sedimentary	☒	☐
2	Marine Sedimentary	☒	☐

Basis for aquifer confinement evaluation: Reported static water levels in nearby wells are substantially above the applicable water-bearing zones. Based on the available information, the proposed aquifer appears to be confined.

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	Garret Creek	~245-260 ^a	~168-350 ^b	~1,500	☒	☐	☐	☐	☒
1	2	Marquam Creek / Dobbies Lake	~245-260 ^a	~169-236 ^b	~2,440	☒	☐	☐	☐	☒
2	1	Garret Creek	~245-260 ^a	~161-304 ^b	~2,390	☒	☐	☐	☐	☒
2	2	Marquam Creek / Dobbies Lake	~245-260 ^a	~169-239 ^b	~1,430	☒	☐	☐	☐	☒

Basis for aquifer hydraulic connection evaluation: Water level elevation in the proposed aquifer is anticipated to be above the elevation of nearby surface water. Based on the available evidence, the proposed POA would be hydraulically connected to SW 1 and SW 2.

^a Based on reported water levels for CLAC 19980.

^b Within 1 mile of proposed POA.

Water Availability Basin the well(s) are located within: WID# 151 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?	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	1	☐	☐	N/A	N/A	☐	67.30	☐	*	☐
1	2	☐	☐	N/A	N/A	☐	67.30	☐	*	☐
2	1	☐	☐	N/A	N/A	☐	67.30	☐	*	☐
2	2	☐	☐	N/A	N/A	☐	67.30	☐	*	☐

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: PSI is not anticipated due to the proposed use.

* Due to the lack of data on the hydraulic properties of the Scotts Mills Formation, the percentage of interference with SW 1 and SW 2 could not be quantitatively estimated. However, given the distance between the POA and the nearest surface water sources, and other hydraulic modeling in similar settings, interference with SW 1 or SW 2 is not anticipated to exceed 25 percent of the rate of withdrawal within the first 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: N/A

- 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:** PSI is not anticipated due to the proposed use.

References Used:

Application File: G-18999

Certificate: 44929*

Tolan, Terry L. and Beeson, Marvin H., 1999, Geologic Map of the Silverton and Scotts Mills NE 7.5 Minute Quadrangles, Northwest Oregon [map], 1:24,000, Open File Report 99-141: U.S. Geological Survey, Reston, VA.

Tolan, Terry L. and Beeson, Marvin H., 1999, Geologic Map of the Scotts Mills, Silverton, and Stayton Northeast 7.5 Minute Quadrangles, Oregon [pamphlet], Open File Report 99-141: U.S. Geological Survey, Reston, VA.

United States Geological Survey, 2017, Scotts Mills quadrangle, Oregon [map], 1:24,000, 7.5 minute topographic series, U.S. Department of the Interior, Reston, VA.

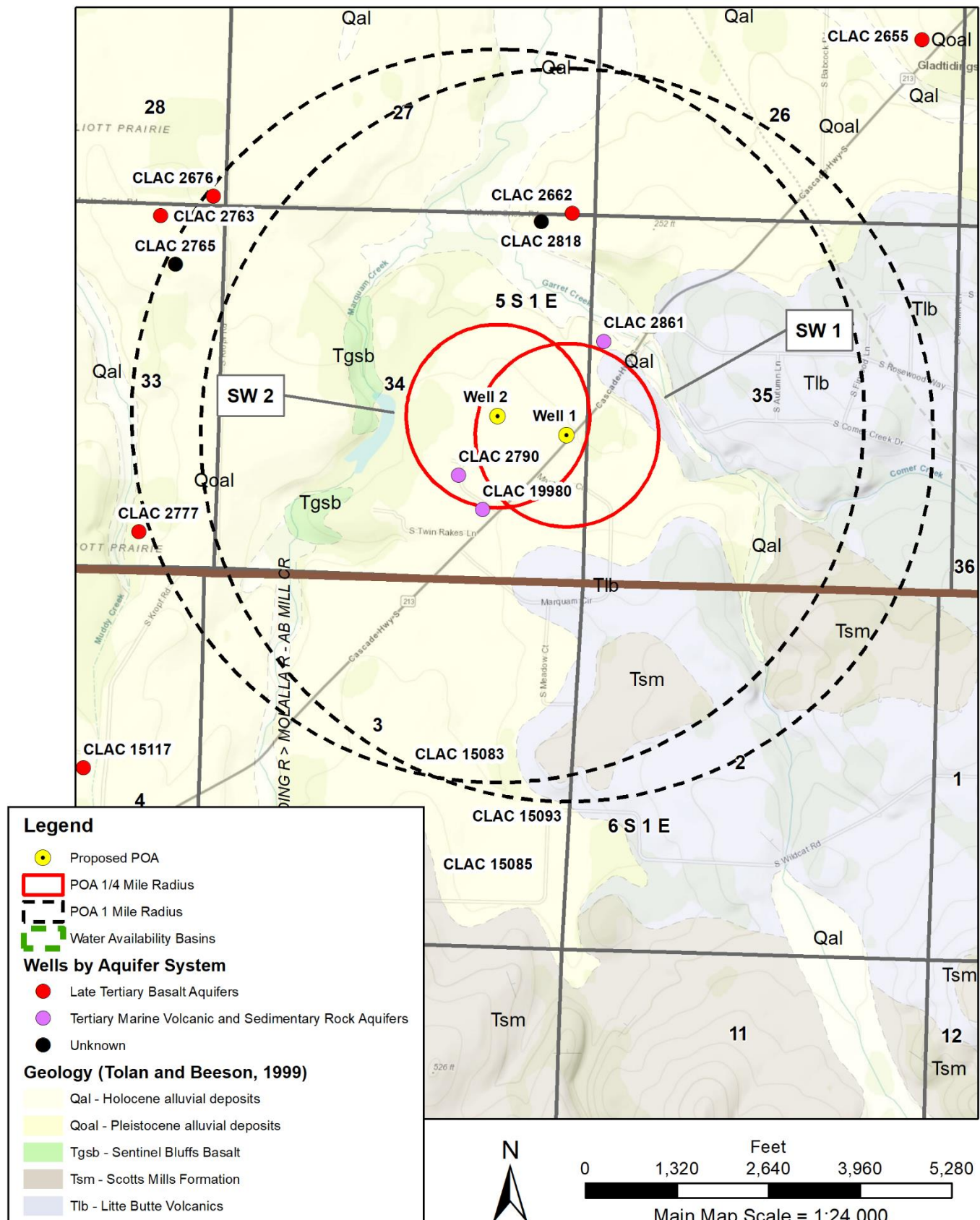
Watershed Sciences, 2009, LIDAR remote sensing data collection, Department of Geology and Mineral Industries, Willamette Valley Phase I, Oregon: Portland, OR, December 21.

D. WELL CONSTRUCTION, OAR 690-200

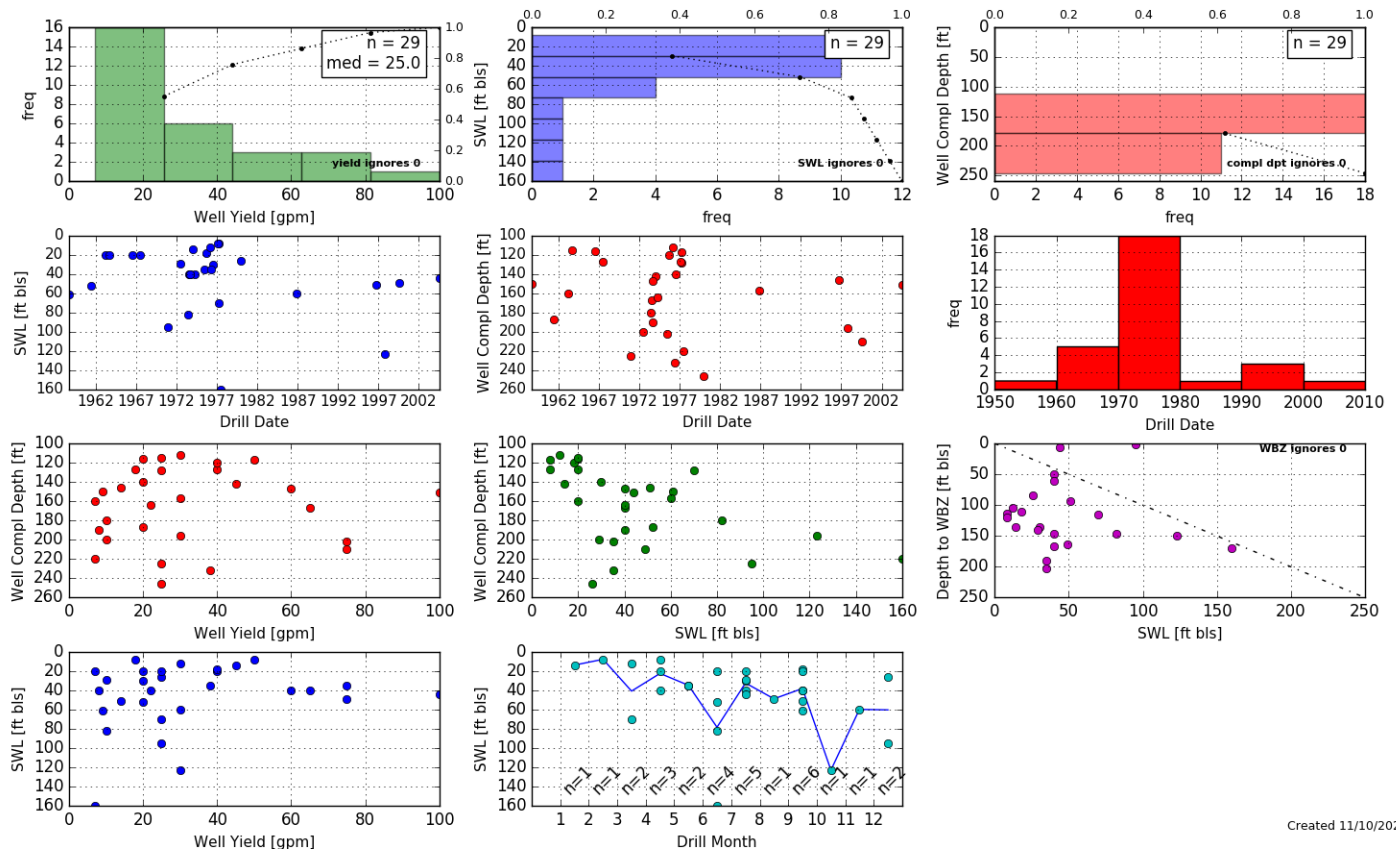
- D1. **Well #:** _____ **Logid:** _____
- D2. **THE WELL does not appear to meet current well construction standards based upon:**
- a. ☐ review of the well log;
 - b. ☐ field inspection by _____;
 - c. ☐ report of CWRE _____;
 - d. ☐ other: (specify) _____
- D3. **THE WELL construction deficiency or 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

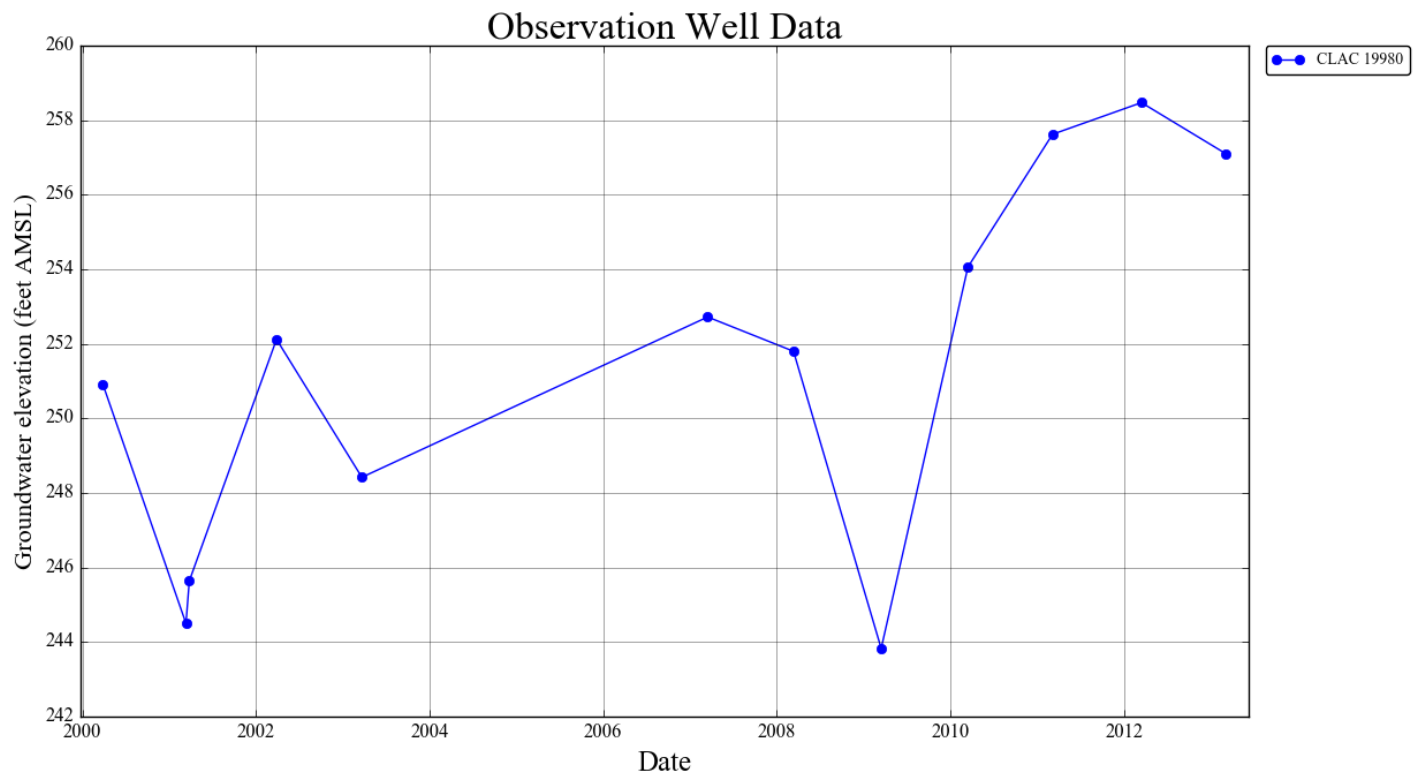
G-18999 Orozco, LLC



Well Statistics – T5S/R1E-34



Hydrograph



Water Availability Tables

Water Availability Analysis Detailed Reports

PUDDING R > MOLALLA R - AB MILL CR

WILLAMETTE BASIN

Water Availability as of 11/13/2020

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

Exceedance Level: 80%

Date: 11/13/2020

Time: 12:25 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	1,040.00	125.00	915.00	0.00	36.00	879.00
FEB	1,180.00	115.00	1,070.00	0.00	36.00	1,030.00
MAR	1,010.00	77.00	933.00	0.00	36.00	897.00
APR	787.00	52.80	734.00	0.00	36.00	698.00
MAY	425.00	50.90	374.00	0.00	36.00	338.00
JUN	224.00	72.60	151.00	0.00	36.00	115.00
JUL	109.00	114.00	-4.70	0.00	36.00	-40.70
AUG	71.00	93.30	-22.30	0.00	36.00	-58.30
SEP	67.30	53.20	14.10	0.00	36.00	-21.90
OCT	91.60	12.00	79.60	0.00	36.00	43.60
NOV	363.00	48.60	314.00	0.00	36.00	278.00
DEC	957.00	119.00	838.00	0.00	36.00	802.00
ANN	706,000.00	56,200.00	650,000.00	0.00	26,100.00	626,000.00