

Groundwater Application Review Summary Form

Application # G- 18574 2nd review

GW Reviewer Karl Wozniak Date Review Completed: 1-7-2020

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.

POLK 54245 only, as 1/15/20

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

January 7, 2020

TO: Application G- 18574

FROM: GW: Karl Wozniak
(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 _____ 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: January 7, 2020
 FROM: Groundwater Section Karl Wozniak
 Reviewer's Name
 SUBJECT: Application G- 18574 Supersedes review of August 16, 2018
 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: Jack Hempicne, LLC (new owner) County: Polk

A1. Applicant(s) seek(s) 0.0847 cfs from 2 well(s) in the Willamette Basin,
North Fork Ash Creek subbasin

A2. Proposed use Nursery (49.23 acres) Seasonality: 1/1 – 12/31

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

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	POLK 52023	1	Alluvium	0.0446 (20 gpm)	T8S/R4W-18 NW-NW	300'S, 937'E fr NW cor S 18
5	POLK 54245	5	Alluvium	0.0401 (18 gpm)	T8S/R4W-7 SW-SW	890' N, 1160' E fr SW cor S 7

* 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	195	22	12	8/12/2004	260	0-18	+1-61	--	22-30, 40-50	20	--	Air
5	195	31	6	03/01/2019	86	0-50	+1-80	--	57-77	18	--	Air

Use data from application for proposed wells.

A4. **Comments:** A review by the Well Construction and Compliance Section on August 21, 2018 determined that 2 of the 3 wells on the original application, POLK 3227 and POLK 375, did not meet current construction rules and recommended that a permit not be issued until the wells were reconstructed to meet current standards. In response, the applicant filed an amended application which dropped Well 2 (POLK 3227) and Well 3 (POLK 375), added newly drilled Well 5 (POLK 54245), and changed the maximum proposed rate to 0.0847 (38 gpm). This review reflects these changes.

The revised application requests 0.0847 cfs (38 gpm) from 2 existing wells for nursery use on 49.23 acres of land. Table A3 lists the well specific rates shown on the revised application which total 0.0847 cfs (38 gpm).

Most of the lands listed on the application are also listed on existing permit G-15505 for primary irrigation of 92.5 acres (and pond maintenance) from a single well, POLK 52023, at a maximum rate of 0.89 cfs (400 gpm).

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 POAs obtain groundwater from a confined aquifer so the pertinent Basin rules (OAR 690-502-0240) do not apply.

A6. **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.

Name of administrative area: None.

Comments: Not applicable.

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) 7c (7-yrs of measurements), 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 _____ 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 lie on a terrace several miles west of the Willamette River near the town of Monmouth. The terrace is underlain by about 20-30 feet of Willamette Silt. Local streams are incised into, but do not completely penetrate the silt. The principal source of groundwater in the area is the alluvial aquifer system, which consists of multiple thin beds of sand and gravel that occur below or near the base of the silt. The combined thickness of the sands and gravels ranges from 10-40 feet but is difficult to accurately assess as most well logs report various intervals as clay and silt with sand and gravel or sand and gravel with clay and silt. The alluvial aquifer thins to a zero edge about 1 mile to the west where older marine sedimentary rocks outcrop at land surface. The water table appears to occur within the Willamette Silt during most times of the year.

Well density is quite low in the area. The OWRD well log database shows well logs for 19 wells. Well yields range from 1-140 gpm but the median yield is 18 gpm and the distribution is highly skewed toward low yields. Only 3 permitted irrigation wells occur within a 1-mile radius of the proposed wells. This is likely a reflection of the limited thickness of the aquifer and the historic difficulty of drilling wells that can produce quantities of water sufficient for irrigation. Domestic well density is also quite low in the area. Much of the area to the north and west is covered by the footprint (not shown on enclosed map) of a quasi-municipal permit under the Luckiamute Domestic Water Cooperative which provides domestic water to many rural homes in the surrounding area.

Groundwater-level data is sparse in the area. Static water levels reported on well logs show no progressive decline over time but current conditions are difficult to assess because of the absence of current observation wells in the area. Water levels in POLK 3229, an inactive observation well about ½-mile to the southwest, show a stable trend from 1963-1969 and seasonal fluctuations of about 5 feet. Low well density in the area suggests that current withdrawal rates are quite low but the limited

thickness of the aquifer and the proximity of a zero edge immediately to the west indicate that it would be prudent to include water-level and water-use measurement conditions should the Department issue a permit.

Except for wells on the proposed irrigated acreage, the closest potential domestic wells (based on the occurrence of dwellings on aerial imagery) appear to be about ¼ mile away from the proposed POAs. The closest permitted irrigation wells are about ½ mile away. Given these distances and the low proposed rates, the likelihood of injurious interference at this distance is considered to be moderately low but an interference condition (7i) is recommended because of the limited thickness of the aquifer, the limited extent of the aquifer to the west, and uncertainties about the actual locations of domestic wells in the area.

Well logs for the proposed POAs indicate a combined production rate of 38 gpm based on air tests which suggests that the requested rate of 38 gpm is possible. However, air tests tend to overestimate the production of completed wells and it's unlikely that these wells can produce sustained rates of 38 gpm.

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 (Willamette Aquifer system)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	Alluvium (Willamette Aquifer system)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: Water-bearing zones in the proposed POAs are overlain by 20-30 feet of low-permeability silts and clays (Willamette Silt) which act as a confining unit. Well logs for local wells report static groundwater levels that generally rise above the top of reported water-bearing zones in the aquifer. These facts indicate that the local aquifer is 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	North Fork Ash Creek	180-200	180-210	2330	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	1	North Fork Ash Creek	180-200	180-210	2100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: Groundwater elevations in the proposed POAs are coincident with elevations of adjacent reaches of North Fork Ash Creek within one mile of the POAs. A published water table map (Gannett and Caldwell, 1998) shows that groundwater flows toward and discharges into North Fork Ash Creek. These facts indicate that the alluvial groundwater system is hydraulically connected to North Fork Ash Creek. Streams in the basin that are greater than 1 mile from the wells (Middle Fork Ash Creek, for example) were not included in Table C2 since North Fork Ash Creek is the limiting stream due to its proximity to the proposed POAs.

Water Availability Basin the well(s) are located within: WID 183: Willamette R > Columbia R – above Mill Cr at gage 14191000.

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 source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and 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"/>	MF183	1300	<input type="checkbox"/>	3620	<input type="checkbox"/>	<<25	<input type="checkbox"/>
5	1	<input type="checkbox"/>	<input type="checkbox"/>	MF183	1300	<input type="checkbox"/>	3620	<input type="checkbox"/>	<<25	<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?
	1		<input type="checkbox"/>	MF183	1300	<input type="checkbox"/>	3620	<input type="checkbox"/>	<<25	<input type="checkbox"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: The total application rate is 0.0847 cfs, substantially lower than 1% of the instream right and 1% of the 80% natural flow for the water availability basin. The presence of Willamette Silt between the streambed and the productive water-bearing zones in the aquifer is expected to buffer short term impacts to the stream such that stream interference at 30 days is expected to be much less than 25% of the production rate of the well.

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: Not applicable.

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;

C6. **SW / GW Remarks and Conditions:** _____

References Used:

Application file: G-18574

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.

Gonthier, J.B., 1983, Groundwater resources of the Dallas-Monmouth area, Polk, "Benton, and Marion counties, Oregon: Oregon Water Resources Department Ground Water Report No. 28, 50 p.

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

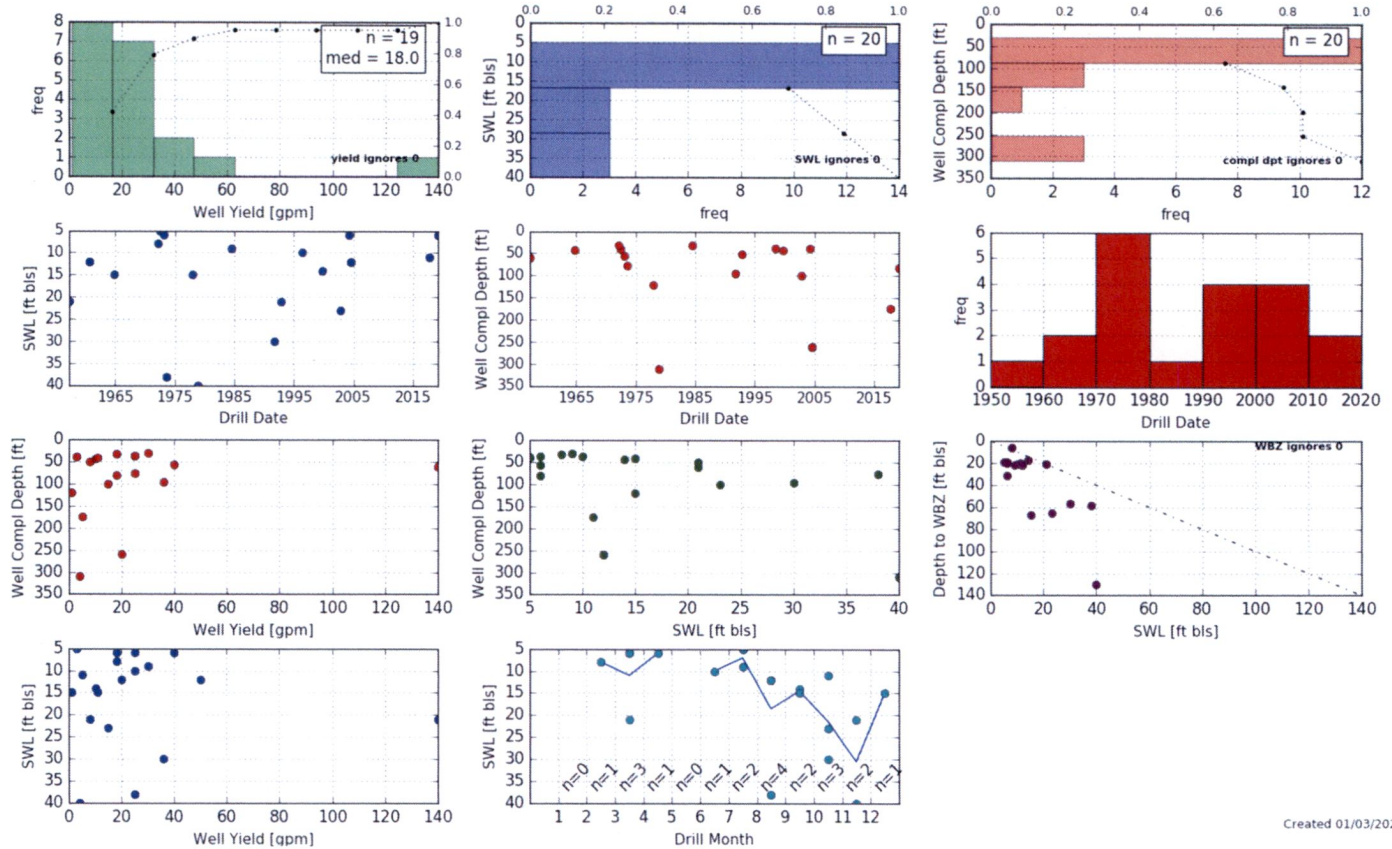
D1. **Well #:** _____ **Logid:** _____

- 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.**

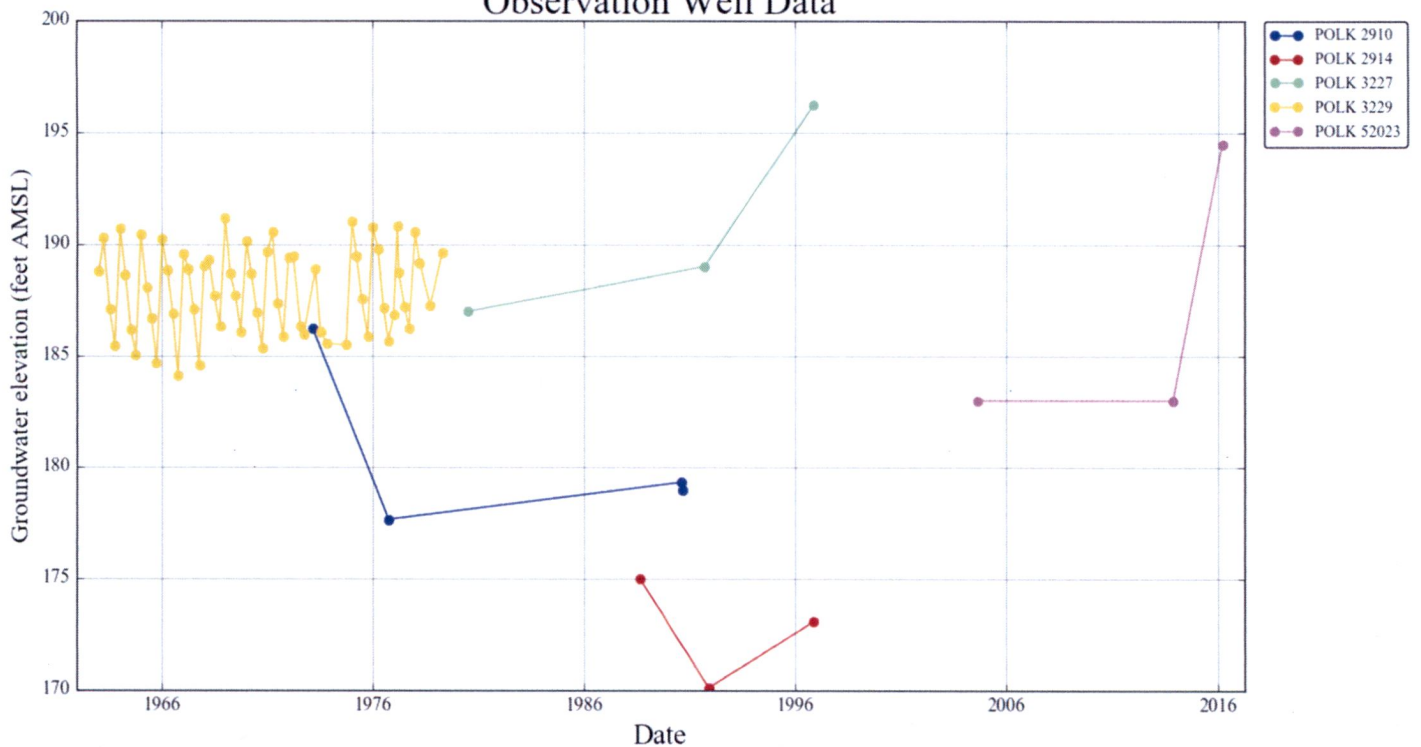
Well Statistics for Sections 7 & 18, T8S, R4W



Created 01/03/2020

Water-Level Trends in Nearby Wells

Observation Well Data



Water Availability Tables

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

WILLAMETTE R > COLUMBIA R - AB MILL CR AT GAGE 14191000
 Basin: WILLAMETTE

Watershed ID #: 183
 Time: 1:03 PM

Exceedance Level: 80
 Date: 01/03/2020

Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirements	Net Water Available
Monthly values are in cfs. Storage is the annual amount at 50% exceedance in ac-ft.						
JAN	18,400.00	2,240.00	16,200.00	0.00	1,300.00	14,900.00
FEB	20,100.00	7,430.00	12,700.00	0.00	1,300.00	11,400.00
MAR	19,600.00	7,220.00	12,400.00	0.00	1,300.00	11,100.00
APR	18,000.00	6,870.00	11,100.00	0.00	1,300.00	9,830.00
MAY	15,500.00	4,180.00	11,300.00	0.00	1,300.00	10,000.00
JUN	8,310.00	1,690.00	6,620.00	0.00	1,300.00	5,320.00
JUL	4,710.00	1,450.00	3,260.00	0.00	1,300.00	1,960.00
AUG	3,620.00	1,330.00	2,290.00	0.00	1,300.00	991.00
SEP	3,680.00	1,150.00	2,530.00	0.00	1,300.00	1,230.00
OCT	4,650.00	748.00	3,900.00	0.00	1,300.00	2,600.00
NOV	9,400.00	857.00	8,540.00	0.00	1,300.00	7,240.00
DEC	16,700.00	918.00	15,800.00	0.00	1,300.00	14,500.00
ANN	13,500,000	2,160,000	11,300,000	0	942,000	10,400,000

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Joel Jeffery, Well Construction Program Coordinator
Subject: Re-Review of Water Right Application G-18574
Date: January 17, 2020

The attached application was forwarded to the Well Construction and Compliance Section by Water Rights. Karl Wozniak reviewed the application. Please see Karl's Groundwater Review and the Well Logs.

Applicant's Well #1 (POLK 52023): Based on a review of the Well Report Applicant's Well #1 seems to protect the groundwater resource

The construction of Applicant's Well #1 may not satisfy hydraulic connection issues.

Applicant's Well #5 (POLK 54245): Based on a review of the Well Report, Applicant's Well #5 seems to protect the groundwater resource

The construction of Applicant's Well #5 may not satisfy hydraulic connection issues.

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

(WELL I.D.)# L 65554

(START CARD) # 166050

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number 1
Name Don & Sharon Roberts - Clay & Rhonda Johnson
Address 3395 Pacific Hwy
City Independence, State OR Zip 97351

(2) TYPE OF WORK
 New Well Deepening Alteration (repair/recondition) Abandonment

(3) DRILL METHOD:
 Rotary Air Rotary Mud Cable Auger
 Other

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Livestock Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes No Depth of Completed Well 260 ft.
Explosives used Yes No Type _____ Amount _____

HOLE SEAL

Diameter	From	To	Material	From	To	Sacks or pounds
10"	0	18	Bentonite	0	18	9 bags
6"	18	260				

How was seal placed: Method A B C D E
 Other Filled to top with dry bentonite
Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing 6"	+1	61	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoot(s) 61'

(7) PERFORATIONS/SCREENS:

Perforations Method down hole perforator
 Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
22	30	.250	120	1" long	6"	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40	50	.250	120	1" long	6"	<input checked="" type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Pump Bailer Air Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
20		60'	1 hr.

Temperature of water 53° Depth Artesian Flow Found _____
Was a water analysis done? Yes By whom _____
Did any strata contain water not suitable for intended use? Too little
 Salty Muddy Odor Colored Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County Polk Latitude _____ Longitude _____
Township 8 S Range 4 W WM.
Section 18 NE 1/4 SW 1/4
Tax Lot 202 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) Same

(10) STATIC WATER LEVEL:
12' ft. below land surface. Date 8/12/2004
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 22'

From	To	Estimated Flow Rate	SWL
22	33	3 GPM	12
40	50	7 GPM	12
63	71	10 GPM	

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
Brown clay - gray blue clay sandy	0	3	
Gravels - sandy gray blue clay - small	3	22	12
Gravels - sandy blue clay small	22	33	
Gray blue clay black sand	33	52	
Gray blue clay sandy	52	63	
Sand blue black pea gravel	63	71	
Gray brown clay firm	71	260	

Ron Robinson Well Drilling
4520 Salem Dallas Hwy NW
Salem, OR 97304
503.371.1844

RECEIVED
AUG 23 2004
WATER RESOURCES DEPT
SALEM, OREGON

Date started 8/9/2004 Completed 8/12/2004

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

WWC Number _____ Date _____

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1585
Signed _____ Date 8/13/2004

ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER

RECEIVED
OVER THE COUNTER

STATE OF OREGON
WATER SUPPLY WELL REPORT
 (as required by ORS 537.765 & OAR 690-205-0210)

POLK 54245

WELL I.D. LABEL# L 132109
 START CARD # 1042061
 ORIGINAL LOG #

(1) LAND OWNER Owner Well I.D. NW
 First Name _____ Last Name _____
 Company Jack Hempicine L.L.C.
 Address 7744 N.W. Mint Ave.
 City Albany State Or Zip 97321

(2) TYPE OF WORK New Well Deepening Conversion
 Alteration (complete 2a & 10) Abandonment (complete 5a)

(2a) PRE-ALTERATION
 Casing: Dia + From To Gauge Stl Plstc Wld Thrd
 Material From To Amt sacks/lbs
 Seal: _____

(3) DRILL METHOD
 Rotary Air Rotary Mud Cable Auger Cable Mud
 Reverse Rotary Other _____

(4) PROPOSED USE Domestic Irrigation Community
 Industrial/ Commercial Livestock Dewatering
 Thermal Injection Other _____

(5) BORE HOLE CONSTRUCTION Special Standard (Attach copy)
 Depth of Completed Well 81 ft.

BORE HOLE			SEAL			Amt	sacks/ lbs
Dia	From	To	Material	From	To		
10	0	62	Bentonite Chips	0	29	34	S
8	62	78	Calculated		12.08		
5.5	78	86	Cement	29	50	9	S
			Calculated		7		

How was seal placed: Method A B C D E
 Other cement tremied
 Backfill placed from 81 ft. to 86 ft. Material cement
 Filter pack from 50 ft. to 62 ft. Material 3/8 Size pea gravel
 Explosives used: Yes Type _____ Amount _____

(5a) ABANDONMENT USING UNHYDRATED BENTONITE
 Proposed Amount Pounds Actual Amount Pounds

(6) CASING/LINER
 Casing Liner Dia + From To Gauge Stl Plstc Wld Thrd
 Shoe Inside Outside Other Location of shoe(s) 80
 Temp casing Yes Dia 10 From + 1 To 42

(7) PERFORATIONS/SCREENS
 Perforations Method _____
 Screens Type milled Material steel

Perf/Screen	Casing/Liner	Screen Dia	From	To	Scrns/slot width	Slot length	# of slots	Tel/pipe size
		6	57	77	.09	3	458	

(8) WELL TESTS: Minimum testing time is 1 hour
 Pump Bailer Air Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)
18		80	4

 Temperature 52 °F Lab analysis Yes By _____
 Water quality concerns? Yes (describe below) TDS amount 310 ppm

From	To	Salinity	Description	Amount	Units
84	86			650	ppm

(9) LOCATION OF WELL (legal description)
 County POLK Twp 8 S N/S Range 4 W E/W WM
 Sec 7 SW 1/4 of the SW 1/4 Tax Lot 502
 Tax Map Number _____ Lot _____
 Lat _____ " or _____ DMS or DD
 Long _____ " or _____ DMS or DD
 Street address of well Nearest address
 3393 S. Pacific Hwy. W Rickreall, Or 97351

(10) STATIC WATER LEVEL

Existing Well / Pre-Alteration	Date	SWL(psi)	+ SWL(ft)
Completed Well	03-01-2019		6

 Flowing Artesian? Dry Hole?

WATER BEARING ZONES Depth water was first found 31

SWL Date	From	To	Est Flow	SWL(psi)	+ SWL(ft)
03-01-2019	31	37	30		
	53	81	18		6
	84	86	5		

(11) WELL LOG Ground Elevation _____

Material	From	To
clay, brown	0	15
clay, grey, w/gravel	15	25
clay, brown, w/gravel	25	31
gravel, brown, black, caving	31	37
clay, grey, sandy	37	53
clay, grey, sandy w/ fine pea gravel	84	86

 RECEIVED
 Dickerson Well Drilling, Inc.
 (503) 623-2664
 MAR 11 2019
 OWRD

Date Started 02-22-2019 Completed 03-01-2019

(unbonded) Water Well Constructor Certification
 I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
 License Number 1574 Date 03-07-2019
 Signed *[Signature]*

(bonded) Water Well Constructor Certification
 I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
 License Number 1571 Date 03-07-2019
 Signed *[Signature]*
 Contact Info (optional) _____