

# Groundwater Application Review Summary Form

Application # G- 18746

GW Reviewer Joe Kemper Date Review Completed: 6/7/2019

## 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.*

*jt 6/10/16*

*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).*



OK  
JH

# MEMO

**To:** Kristopher Byrd, Well Construction and Compliance Section Manager  
**From:** Joel Jeffery, Well Construction Program Coordinator  
**Subject:** Review of Water Right Application G-18746  
**Date:** June 21, 2019

The attached application was forwarded to the Well Construction and Compliance Section by Water Rights. Joe Kemper reviewed the application. Please see Joe's review and the Well Logs.

Applicant's Well #1 (JACK 14419): Based on a review of the Well Report, Applicant's Well #1 seems to protect the groundwater resource.

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

Applicant's Well #2 (JACK 58188): Based on a review of the Well Report, Applicant's Well #2 does not appear to comply with current minimum construction Standards (See OAR Division 210). This is a flowing artesian well. In order to meet minimum well construction standards, the well must be continuously cased and continuously sealed to a minimum depth of 125 feet below land surface. In addition, flowing artesian wells shall be equipped with a control valve and a water tight mechanical cap threaded or welded, so that all flow of water from the well can be completely stopped. Also, the well shall be equipped with a pressure gauge on a dead end line with a petcock valve placed between the gauge and the well casing.

My recommendation is that the Department **not issue** a permit for Applicant's Well #2 (JACK 58188) unless it is brought into compliance with current minimum well construction standards or information is provided showing it is in compliance with current minimum well construction standards.

Bringing Applicant's Well #2 into compliance with minimum well construction standards may not satisfy hydraulic connection issues.

Applicant's Well #3 (JACK 33910): Based on a review of the Well Report, Applicant's Well #3 does not appear to comply with current minimum well construction standards (See OAR 690 Division 210). The Well Report indicates that the top terminal height of the well casing is at land surface. In order to meet minimum well construction standards, the top terminal height of the well casing must be at least one foot above land surface, the pump house floor, or the local surface run off level.

My recommendation is that the Department **not issue** a permit for Applicant's Well #3 (JACK 33910) unless it is brought into compliance with current minimum well construction standards or information is provided showing that it is in compliance with current minimum well construction standards.

Bringing Applicant's Well #3 (JACK 33910) into compliance with minimum well construction standards may not satisfy hydraulic connection issues.



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

WELL I.D. # L 82374  
START CARD # 190798

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

(1) LAND OWNER Name Larry Martin Well Number \_\_\_\_\_  
Address 13696 North Applegate RD  
City Grants Pass State OR Zip 97527

(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 360 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 sacks
6	18	360				

How was seal placed: Method  A  B  C  D  E  
 Other Dry Poured  
Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Casing/Liner	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	0	98	450	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:	4	0	336	160	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	340	360	160	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Drive Shoe used  Inside  Outside  None  
Final location of shoe(s) 98

(7) PERFORATIONS/SCREENS:

Perforations Method \_\_\_\_\_  
 Screens Type Sand Blocker Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
336	340					<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Yield gal/min	Drawdown	Drill stem at	Time
22		355	1 hr.

Pump  Bailer  Air  Flowing Artesian

Temperature of water 55 Depth Artesian Flow Found 130  
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 Jackson Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 38 S N or S Range 4 W E or W. WM.  
Section 6 NE 1/4 SW 1/4  
Tax Lot 600 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 13696 N. Applegate

(10) STATIC WATER LEVEL:  
85 ft. below land surface. Date \_\_\_\_\_  
Artesian pressure \_\_\_\_\_ lb. per square inch Date 10/16/06

(11) WATER BEARING ZONES:  
Depth at which water was first found 130

From	To	Estimated Flow Rate	SWL
130	134	12	85
146	160	3	85
207	212	3	85
236	240	2	85
285	290	2	85

(12) WELL LOG:  
Ground Elevation \_\_\_\_\_

Material	From	To	SWL
Brown Clay	0	83	
Consolidated Brown Black and white Decomposed Granite	83	120	
Consolidated Black White Tompostone Granite	120	360	

RECEIVED  
OCT 16 2006  
WATER RESOURCES DEPT SALEM, OREGON  
DEC 18 2006  
WATER RESOURCES DEPT SALEM, OREGON

Date started 10/6/06 Completed 10/6/06

(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.  
Signed Phil Gaster WWC Number 1847 Date 10/10/06

(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.  
Signed Michael Treese WWC Number 1251 Date 10/10/06



JACK 33910

For Official Use Only:

Received Date:

8-11-03

County Well Log ID #

JACK 33910

Well Identification Tag #

L-666133

L-666133

WELL IDENTIFICATION APPLICATION FORM

RECEIVED

AUG 11 2003

BUYER/CURRENT WELL OWNER:

Name: Richard Troon

WATER RESOURCES DEPT. SALEM, OREGON

Mailing Address: 1475 Kubli Road

City: Grants Pass State: OR Zip: 97527 Phone: (N/A)

NOTE: Well Identification Tag will be sent to the above address unless otherwise specified.

WELL LOCATION:

County: Jackson Owner's Well Number (1st or 2nd well on property, etc) #2

Township: 37 N or (S) Range: 4 E or (W) Section: 31 SW 1/4 SW 1/4

Tax Lot Number: 1200 Type of Well: water supply X monitoring

Address of Well (if different from above): 1475 Kubli Rd., Grants Pass 97527

Does this well have a formal water right associated with it? Yes: No: X

If Yes: Application #: Permit #: Certificate #:

(Optional): Latitude Longitude (May sometimes be obtained from Well Log Report)

WELL INFORMATION: (do not complete remainder of application if drillers well report is attached)

See "Dear Landowner" letter for instructions in completing this portion of the application, or contact the Well Identification Program at (503) 378-8455, extension 260.

Start Card Number: Approx. Well Construction Date:

Well Constructor: Paquin

Name of Land Owner at Time of Construction:

Well Depth (in feet): 220' Static Water Level (in feet): 20' 6"

Diameter of Exposed Well Casing (in inches): 8"

Please Return Completed Form to: Well ID Program @ Oregon Water Resources Department 158 12th Street NE - Salem, OR 97301-4172

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"/>	NA	NA	<input type="checkbox"/>	45.80	<input checked="" type="checkbox"/>	<5%	<input checked="" type="checkbox"/>
	2	<input type="checkbox"/>	MF249A	120	<input type="checkbox"/>	45.80	<input checked="" type="checkbox"/>	<5%	<input checked="" type="checkbox"/>

**Comments:** Streamflow depletion is estimated using an analytical stream depletion model (Hunt, 2003) using bulk aquifer parameters representative of the local geology. Model parameters and results for the closest well-stream combination are shown in Figure 4.

The wells on this application serve as POAs on current valid water rights. In addition to this application, application G-18745 was submitted sequentially by the adjacent landowner with the same three wells as proposed POAs. Application materials indicate that the three wells supply a common irrigation system and more acreage than is claimed on this application. As such, this review considers all current and proposed rates (G-18745 and G-18746) for each well for the purposes of the Division 9 review (see table below).

Summary of Permitted Rates by Well

Water Right	JACK 14419	JACK 58188	JACK 33910	Total
Cert. 89333 Rate (cfs)	N/A	N/A	0.18	0.18
Cert. 89334 Rate (cfs)	0.116	0.08	N/A	0.196
App G-18475 Rate (cfs)	0.116	0.058	0.078	0.174
App G-18476 Rate (cfs)	0.078	0.058	0.078	0.078
<b>Combined Rate (cfs)</b>	<b>0.310</b>	<b>0.196</b>	<b>0.336</b>	<b>0.628</b>

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													
(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:** Streams beyond 1 mile were not evaluated for PSI as per OAR 690-009.

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**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	Fractured Bedrock of Grayback Pluton	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Fractured Bedrock of Grayback Pluton	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Fractured Bedrock of Grayback Pluton	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Basis for aquifer confinement evaluation:** The applicant's POAs access fractured bedrock of the Grayback Pluton overlain by fine-grained fluvial terrace sediments. Water level data indicates that water rises well above water bearing zones in wells and, in the case of JACK 58188 and JACK 14419, can raise above ground level (flowing artesian). This indicates that the fractured bedrock aquifer system is confined by the overlying fluvial terrace.

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	Slagle Creek	1297	1253	2150	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Slagle Creek	1260	1247	1660	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	1	Slagle Creek	1295	1253	1525	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Applegate River	1297	1550	4240	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Applegate River	1260	1550	3470	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	2	Applegate River	1295	1550	4550	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Basis for aquifer hydraulic connection evaluation:** Observed water level elevations are higher than or coincident with stream elevations, indicating that groundwater is flowing towards and discharging to surface water.

**Water Availability Basin the well(s) are located within:** APPELGATE R > ROGUE 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 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"/>	NA	NA	<input type="checkbox"/>	45.80	<input type="checkbox"/>	<5%	<input type="checkbox"/>
2	1	<input type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	45.80	<input type="checkbox"/>	<5%	<input type="checkbox"/>
3	1	<input type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	45.80	<input type="checkbox"/>	<5%	<input type="checkbox"/>
1	2	<input type="checkbox"/>	<input type="checkbox"/>	MF249A	120	<input type="checkbox"/>	45.80	<input type="checkbox"/>	<5%	<input type="checkbox"/>
2	2	<input type="checkbox"/>	<input type="checkbox"/>	MF249A	120	<input type="checkbox"/>	45.80	<input type="checkbox"/>	<5%	<input type="checkbox"/>
3	2	<input type="checkbox"/>	<input type="checkbox"/>	MF249A	120	<input type="checkbox"/>	45.80	<input type="checkbox"/>	<5%	<input type="checkbox"/>

**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-yr SWL); 7J; 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:** Water level data from wells adjacent to the applicant’s proposed POA indicate that aquifer levels are relatively stable; fluctuations track with climatic and seasonal precipitation trends. There are several groundwater rights within 1 mile of the applicant’s proposed POA, posing the risk of well-to-well interference so water-level reporting and standard interference conditions in B1(d) should be applied. At this time, the Department is unaware of well-to-well interference complaints in the immediate vicinity. Considering stable water level measurements, the low requested rate, and lack of known interference issues, it is unlikely that the proposed use/rate would result in injury to other permitted water rights with the appropriate permit conditions applied.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 6/7/2019  
 FROM: Groundwater Section Joe Kemper  
 Reviewer's Name  
 SUBJECT: Application G- 18746 Supersedes review of NA  
 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: Kubli Bench Vineyards County: Josephine

A1. Applicant(s) seek(s) 0.078 cfs from 1 well(s) in the Rogue Basin,  
Applegate subbasin

A2. Proposed use Irrigation (6.3 acres) Seasonality: April 1<sup>st</sup> to November 1<sup>st</sup>

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	JACK 14419	1	Bedrock	0.078	37S/4W-S31 SE-SW	1085' N, 1615' E fr SW cor, S 31
2	JACK 58188	2	Bedrock	0.058	37S/4W-S31 SW-SW	270' N, 1280' E fr SW cor, S 31
3	JACK 33910	3	Bedrock	0.078	37S/4W-S31 SE-SW	680' S, 540' W fr NE DLC39

\* 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	1306	60	9	3/20/19	250	0-20	0-85	Na	60-85	60	na	air
2	1258	130	-1.75	3/20/19	360	0-18	0-98	0-360	340-360	22	na	air
3	1313	105	17.45	3/21/18	200	0-95	0-100	Na	Na	60	60	air

Use data from application for proposed wells.

A4. **Comments:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

A5.  **Provisions of the** Rogue (690-515) 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 Rogue Basin rules contain no such provisions.  
 \_\_\_\_\_  
 \_\_\_\_\_

A6.  **Well(s) #** \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, tap(s) an aquifer limited by an administrative restriction. Name of administrative area: \_\_\_\_\_  
 Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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:** The applicant's wells access an aquifer that has been determined to be hydraulically connected to Slagle Creek and the Applegate River. The combined rate of appropriation on the applicant's wells (0.628 cfs) is greater than 1% of the 80% exceedance flows in the relevant Water Availability Basin (1% of 45.8 or .458 cfs). As a result, the proposed uses have the Potential for Substantial Interference (PSI) as per OAR 690-009.

The applicant can reduce the overall rate of appropriation on the proposed POAs to less than 0.458 cfs (~205 gpm) to avoid a finding of PSI.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**References Used:**

Hunt, B. 2003. Unsteady Stream Depletion when Pumping from a Semiconfined Aquifer. Journal of Hydrologic Engineering. Vol 8(1), pp 12-19

OWRD Groundwater Site Information System Database – Accessed 9/25/2018.

Ramp, L. and Peterson, N. 2004. Geologic Map of Josephine County, Oregon. Oregon Dept. of Geol. and Mineral Industries, OFR O-04-13.

Wiley, T. J. 2006. Preliminary Geologic Map of the Sexton Mountain, Murphy, Applegate, and Mount Isabelle 7.5' Quadrangles, Jackson and Josephine Counties, Oregon. Oregon Dept. of Geology and Mineral Industries. OFR O-06-11

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**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.

Figure 1. Water Availability Tables

## Water Availability Analysis Detailed Reports

APPLEGATE R > ROGUE R - AT MOUTH  
ROGUE BASIN

Water Availability as of 6/4/2019

Watershed ID # 249 ([Map](#))

Exceedance Level: 80% ▾

Date: 6/4/2019

Time: 9:52 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	373.00	5.55	367.00	0.00	300.00	67.40
FEB	674.00	439.00	235.00	0.00	300.00	-64.80
MAR	792.00	438.00	354.00	0.00	340.00	14.00
APR	662.00	460.00	202.00	0.00	340.00	-138.00
MAY	591.00	42.20	549.00	0.00	360.00	189.00
JUN	222.00	57.40	165.00	0.00	360.00	-195.00
JUL	91.80	76.00	15.80	0.00	120.00	-104.00
AUG	59.00	63.20	-4.16	0.00	120.00	-124.00
SEP	45.80	42.30	3.49	0.00	120.00	-117.00
OCT	56.00	15.60	40.40	0.00	360.00	-320.00
NOV	146.00	3.70	142.00	0.00	360.00	-218.00
DEC	244.00	4.61	239.00	0.00	300.00	-60.60
ANN	421,000.00	97,800.00	323,000.00	0.00	204,000.00	160,000.00



Figure 3. Water-Level Trends in Nearby Wells

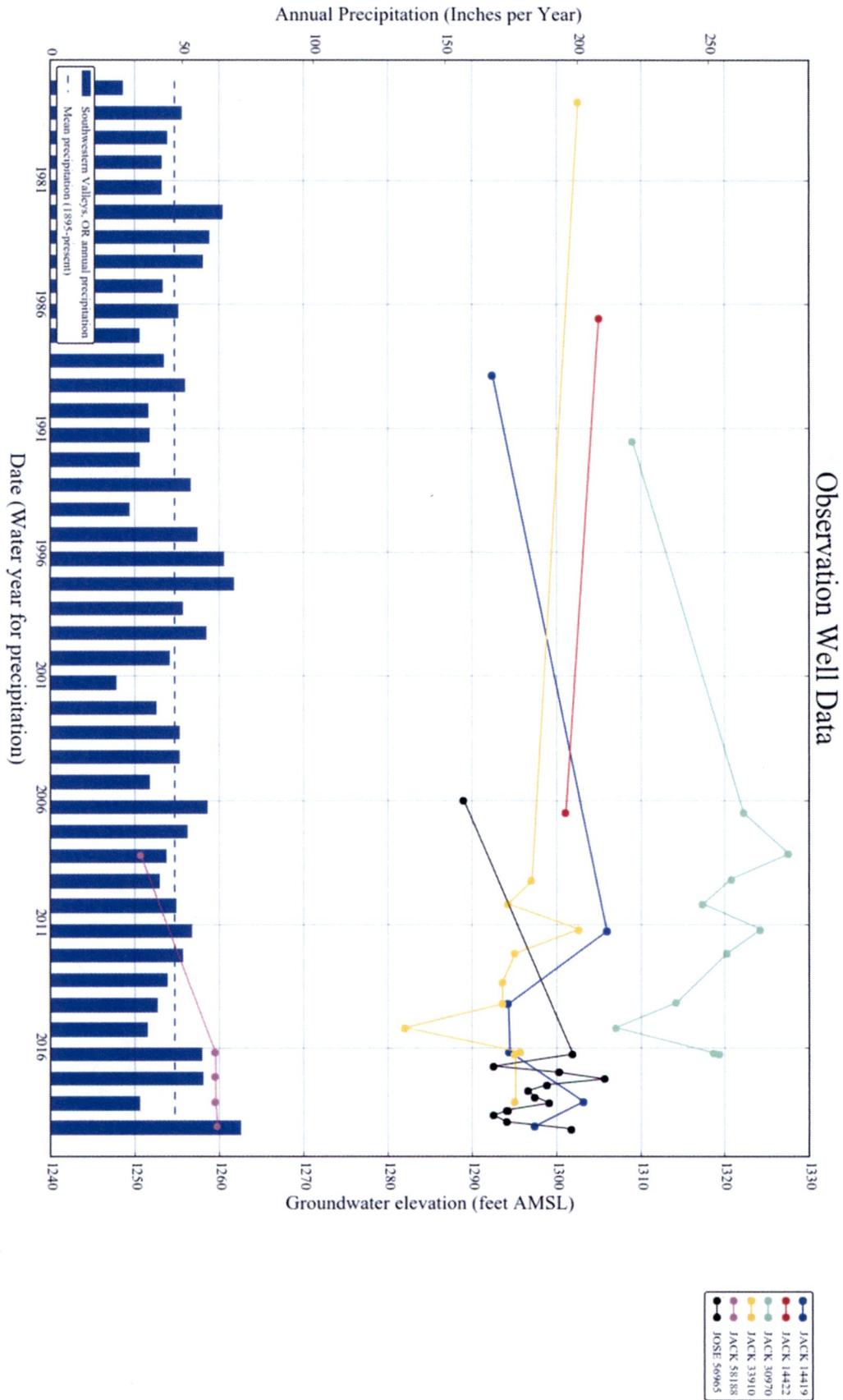


Figure 4. Stream Depletion Model Results (Hunt, 2003)

Application type:	G
Application number:	18476
Well number:	3
Stream Number:	1
Pumping rate (cfs):	0.354
Pumping duration (days):	214
Pumping start month number (3=March)	4

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	1525	1525	1525	ft
Aquifer transmissivity	T	500	1000	1500	ft <sup>2</sup> /day
Aquifer storativity	S	0.10	0.01	0.001	-
Aquitard vertical hydraulic conductivity	Kva	0.01	0.05	0.1	ft/day
Aquitard saturated thickness	ba	10.0	20.0	30.0	ft
Aquitard thickness below stream	babs	4.0	3.0	2.0	ft
Aquitard specific yield	Sya	0.2	0.2	0.2	-
Stream width	ws	20	20	20	ft

Stream depletion for Scenario 2:

Days	10	30	330	360	30	60	90	120	150	180	210	240	270
Depletion (%)	1	4	4	4	1	2	2	3	3	4	5	4	4
Depletion (cfs)	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01

