

Groundwater Application Review Summary Form

Application # G- 18745

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.

or 6/10/19

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
JKO

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Joel Jeffery, Well Construction Program Coordinator
Subject: Review of Water Right Application G-18745
Date: June 20, 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.

The original and first copy of this report are to be filed with the

WATER WELL REPORT

STATE OF OREGON

Please type or print

(Do not write above this line)

State Well No. 375/4W-310

State Permit No.

WATER RESOURCES DEPARTMENT, SALEM, OREGON 97310 within 30 days from the date of well completion.

RECEIVED

NOV 14 1977

(1) OWNER:

Name Dick Troon WATER RESOURCES DEPT.
Address 1475 Kubli Road SALEM, OREGON
Grants Pass, OR 97526

(2) TYPE OF WORK (check):

New Well [x] Deepening [] Reconditioning [] Abandon []
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary [x] Driven [] Cable [] Jetted [] Dug [] Bored []

(4) PROPOSED USE (check):

Domestic [x] Industrial [] Municipal [] Irrigation [] Test Well [] Other []

CASING INSTALLED:

Threaded [] Welded [x] 0" Diam. from 0 ft. to 100 ft. Gage 2.50

PERFORATIONS:

Perforated? [] Yes [x] No. Type of perforator used. Size of perforations in. by in. perforations from ft. to ft.

(7) SCREENS:

Well screen installed? [] Yes [x] No. Manufacturer's Name. Type Model No. Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level. Was a pump test made? [] Yes [x] No If yes, by whom? Yield: gal./min. with ft. drawdown after hrs. Air test 60 gal./min. with 60 ft. drawdown after 1 hrs. Artesian flow g.p.m. Temperature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used Cement Grout. Well sealed from land surface to 95 ft. Diameter of well bore to bottom of seal 10 in. Diameter of well bore below seal 6 in. Number of sacks of cement used in well seal 24 sacks. How was cement grout placed? Grout pump and drop pipe. Was a drive shoe used? [x] Yes [] No Plug Size: location ft. Did any strata contain unusable water? [] Yes [x] No Type of water? depth of strata Method of sealing strata off Was well gravel packed? [] Yes [x] No Size of gravel: Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County JACKSON Driller's well number NE 1/4 SW 1/4 Section 31 T. 37 R. 4w W.M. Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 105 ft. Static level 10 ft. below land surface. Date 10/31/77 Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6. Depth drilled 200 ft. Depth of completed well 200 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

Table with columns: MATERIAL, From, To, SWL. Rows: Clay, brown & decomposed granite (0-90), Granite, brown med hard w/fractures (90-125), Granite, gray hard w/fract. (125-200), 10.

Work started 10/31 1977 Completed 11/2 1977 Date well drilling machine moved off of well 11/2 1977

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] [Signature] Date 11/3, 1977 (Drilling Machine Operator)

Drilling Machine Operator's License No. 695

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name McClanahan Well Drilling (Person, firm or corporation) (Type or print)

Address 141 NE Beacon Drive, Grants Pass, OR

[Signed] [Signature] (Water Well Contractor)

Contractor's License No. 614. Date November 3, 1977

L-666133

JACK 33910

For Official Use Only:

Received Date:

8-11-03

County Well Log ID #

JACK 33910

Well Identification Tag #

L-666133

WELL IDENTIFICATION APPLICATION FORM

RECEIVED

AUG 11 2003

WATER RESOURCES DEPT.
SALEM, OREGON

BUYER/CURRENT WELL OWNER:

Name: Richard Troon

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

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

WELL I.D. # L 81374
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 _____

Casing/Liner	Diameter	From	To	Gauge	Material			
					Steel	Plastic	Welded	Threaded
Casing:	6	18	98	150	<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
 Pump Bailer Air Flowing Artesian
Yield gal/min 22 Drawdown _____ Drill stem at _____ Time 1 hr.

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 Tombstone Granite	120	360	

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RECEIVED

DEC 18 2006

WATER RESOURCES DEPT
SALEM, OREGON

RECEIVED

OCT 16 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 Treene WWC Number 1251 Date 10/10/06

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

BACK RECEIVED
 12419

DEC 19 1988 (START CARD) # 8541

37S/4W/31
8541

(1) OWNER: Well Number: _____
 Name Bill Sears WATER
 Address 13696 N. Applegate Rd
 City Granville Pass State OR Zip 97527

(9) LOCATION OF WELL by legal description:
 County Clatsop Latitude _____ Longitude _____
 Township 37 N of S Range 4 E of W W.M.
 Section 31 1/4 _____ 1/4 _____
 Tax Lot 800 Lot _____ Block _____ Subdivision _____
 Street Address of Well (or nearest address) Same

(2) TYPE OF WORK:
 New Well Deepen Recondition Abandon

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

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

(5) BORE HOLE CONSTRUCTION:
 Special Construction approval Yes No Depth of Completed Well 250 ft.
 Yes No
 Explosives used Type _____ Amount _____

(10) STATIC WATER LEVEL:
14' ft. below land surface. Date 11-22-88
 Artesian pressure _____ lb. per square inch. Date _____

HOLE		SEAL		Amount sacks or pounds
Diameter	From To	Material	From To	
10"	0' 20'	CEMENT	0' 20'	8 sacks
6"	20' 250'			

(11) WATER BEARING ZONES:
 Depth at which water was first found 60'

From	To	Estimated Flow Rate	SWL
60'	90'	15+-	84'
150'	160'	44+-	14'

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

(12) WELL LOG: Ground elevation _____

Material	From	To	SWL
Brown Clay	0	15'	14'
Gray sandstone	15'	250'	

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
6"	0'	85'	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Liner: _____

Final location of shoe(s) 85'

Date started 11-21-88 Completed 11-22-88

(7) PERFORATIONS/SCREENS:
 Perforations Method Air perforator
 Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
60	85	1/8"	500	1 1/2"	6"	<input checked="" type="checkbox"/>	<input type="checkbox"/>

(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 well construction standards. Materials used and information reported above are true to my best knowledge and belief.

(8) WELL TESTS: Minimum testing time is 1 hour
 Pump Bailor Air Flowing Artesian
 Yield gal/min _____ Drawdown _____ Drill stem at _____ Time _____
60+- _____ 245 _____ 1 hr.

Signed [Signature] WWC Number 1449
 Date 12-13-88

Temperature of water _____ 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: _____

(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 well construction standards. This report is true to the best of my knowledge and belief.

Signed Dan Dale E. Avelin WWC Number 1379
 Date 12-14-88

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- 18745 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: White Family Vineyards LLC County: Josephine

A1. Applicant(s) seek(s) 0.174 cfs from 3 well(s) in the Rogue Basin, Applegate subbasin

A2. Proposed use Irrigation (15.1 acres) Seasonality: April 1st to November 1st

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	0.116	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: _____

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.

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: APPLEGATE 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"/>

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"/>	na	<input checked="" type="checkbox"/>
	2	<input type="checkbox"/>	MF249A	120	<input type="checkbox"/>	45.80	<input checked="" type="checkbox"/>	na	<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-18746 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
Combined Rate (cfs)	0.310	0.196	0.336	0.628

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.

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 6/7/2019.

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

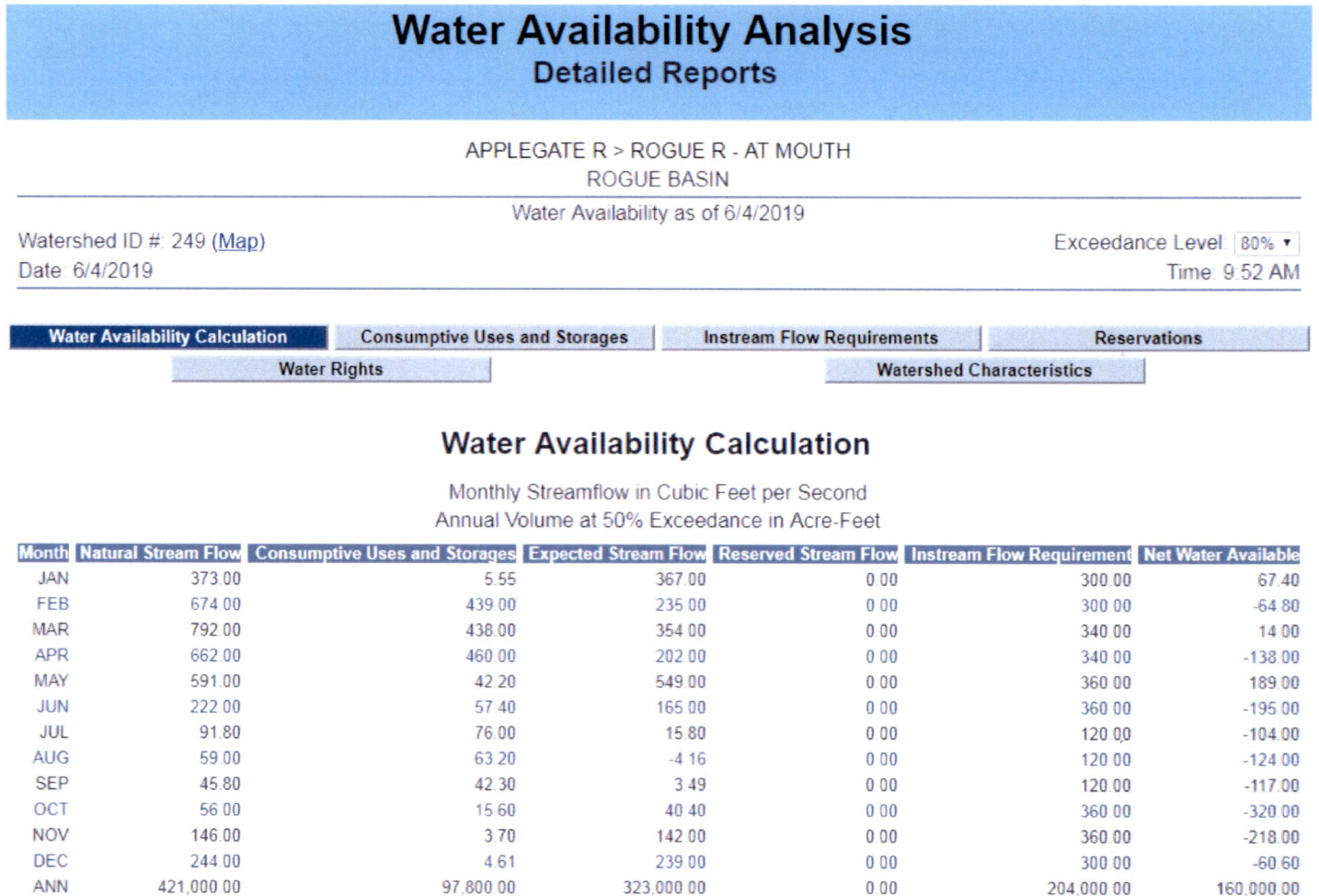


Figure 3. Water-Level Trends in Nearby Wells

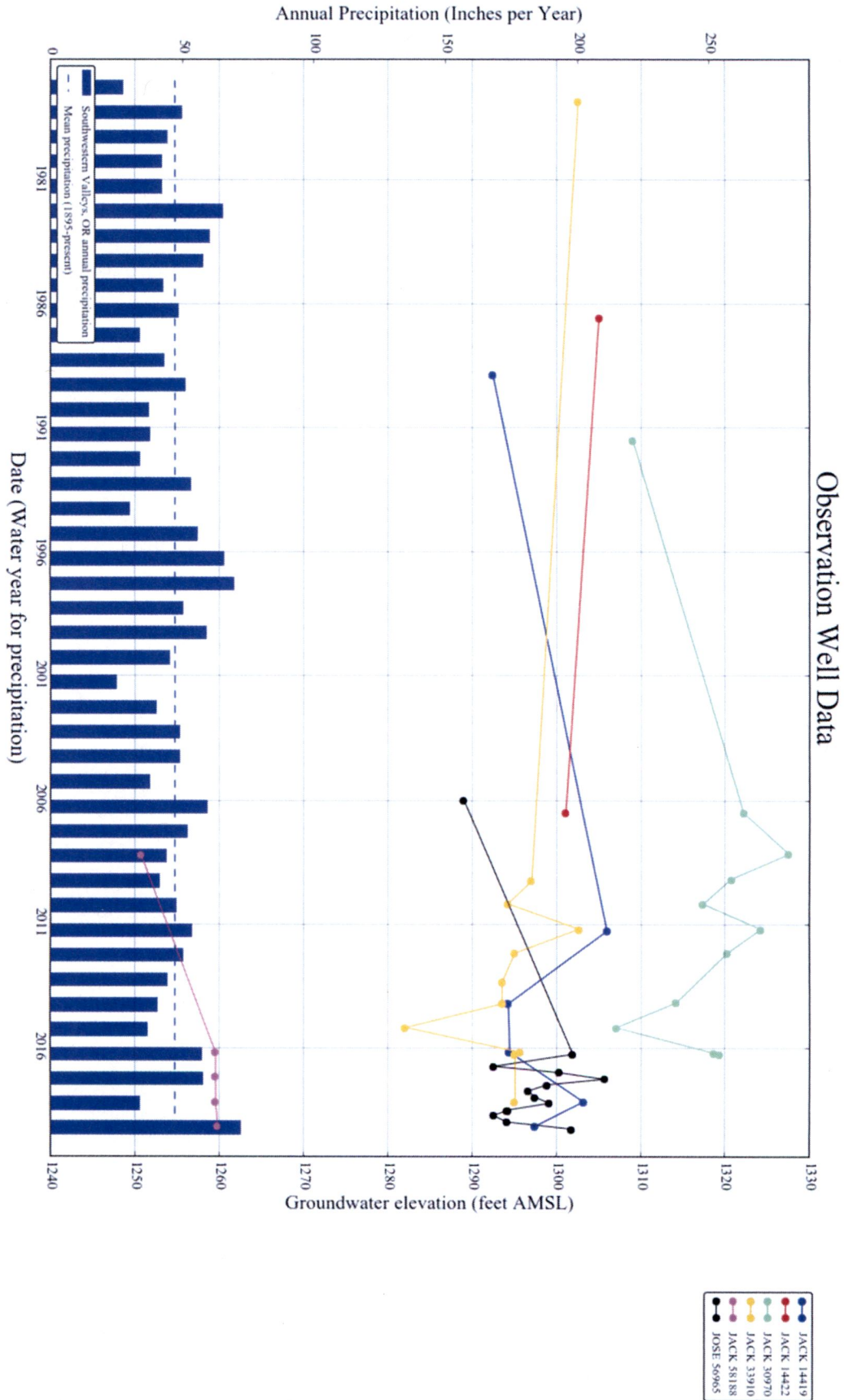


Figure 4. Stream Depletion Model Results (Hunt, 2003)

Application type:	G
Application number:	18745
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 ² /day
Aquifer storativity	S	0.1	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	300	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

