

Groundwater Application Review Summary Form

Application # G- 18483

GW Reviewer Joe Kemper Date Review Completed: 6/11/2018

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).

OK. KJE

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Joel Jeffery, Well Construction Program Coordinator
Subject: Review of Water Right Application G-18483
Date: August 30, 2018

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

Applicant's Well #1(JACK 3458): Based on a review of the Well Report Applicant's Well #1 appears to protect the groundwater resource.

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

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 6/11/2018
 FROM: Groundwater Section Joe Kemper
Reviewer's Name
 SUBJECT: Application G- 18483 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: Sams Valley Farm County: Jackson

A1. Applicant(s) seek(s) 0.025 cfs from 1 well(s) in the Rogue Basin,
Upper Rogue subbasin

A2. Proposed use Nursery (1 acre) Seasonality: Year Round

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 3458	I	Bedrock	0.025	35S/2W-S13 SE-NE	1925' S, 310' W fr NE cor S13
2						
3						
4						
5						

* 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	1376	53	8	5/13/1986	120	0-38	+1 - 39	NA	NA	65		Air

Use data from application for proposed wells.

A4. **Comments:** _____

A5. **Provisions of the Rogue (OAR 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 provision.

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:** _____

The applicant's proposed POA would produce from fractured bedrock of the Payne Cliffs Formation. There are several OWRD observation wells accessing the Payne Cliffs Formation within 1 mile of the proposed POA (see Figure 3). Seasonal and annual water level trends indicate that the resource is not over appropriated.

There are numerous existing POAs within 1 mile of the applicant's well, the closest of which is 500 feet to the south. Houses in the area are predominantly on domestic wells. The Department, however, is currently unaware of resulting well-to-well interference problems. As such, it is unlikely that the proposed use at the rate requested will cause significant interference or injury to existing users.

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	Bedrock of Payne Cliffs Fm.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: The well log for the applicant's well reports "First Water" at 53 feet BLS and a SWL of 8 feet, indicating confined conditions. Well logs for nearby wells report similar confined conditions.

C2. **690-09-040 (2) (3):** Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Constance Creek	1368	1330	~8000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: GW elevations are above SW elevations suggesting that groundwater is flowing towards and discharging to surface water.

*Distance reported is to the nearest point where the creek has been determined to be a relevant surface water source (for the purposes of OAR 690-009).

Water Availability Basin the well(s) are located within: Rogue R > Pacific Ocean - Ab Curry G at Gage #14359000 ID#270

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?
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<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?
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: There are no hydraulically-connected surface water sources within 1 mile

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
1	1	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %
Well Q as CFS		0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Interference CFS		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
(A) = Total Interf.		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
(B) = 80 % Nat. Q		2180	2710	2750	2810	2750	1760	1330	1160	1130	1160	1370	1810
(C) = 1 % Nat. Q		21.8	27.1	27.5	28.1	27.5	17.6	13.3	11.6	11.3	11.6	13.7	18.1
(D) = (A) > (C)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(E) = (A / B) x 100		< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %	< 1 %

(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:

Pumping effects on adjacent surface water sources are estimated using the Hunt (2003) stream depletion model with aquifer parameters representative of the local geology (see Figure 4). The reviewer also notes that 1% of the lowest natural flows in the referenced WAB (11.3 cfs) is much higher than the maximum requested rate (0.025 cfs). As such, the estimated interference in section C4a does not trigger an assumption of PSI.

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 proposed POA would produce from an aquifer that has been determined to be hydraulically connected to surface water. The reviewer has not found a preponderance of evidence for the Potential for Substantial Interference (PSI) per OAR 690-009.

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 6/11/2018.

Wiley, T. J., and Hladky, F. R., 1991, *Geology and mineral resources of the Boswell Mountain quadrangle, Jackson County, Oregon*: Oregon Department of Geology and Mineral Industries Geologic Map Series GMS-70, scale 1:24,000.

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

ROGUE R > PACIFIC OCEAN - AB CURRY G AT GAGE 14359000
ROGUE BASIN

Water Availability as of 6/7/2018

Watershed ID #: 270 (Map)

Exceedance Level: 80% ▾

Date: 6/7/2018

Time: 2:26 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	2,180.00	1,130.00	1,050.00	0.00	1,200.00	-148.00
FEB	2,710.00	2,050.00	665.00	0.00	1,200.00	-535.00
MAR	2,750.00	1,820.00	933.00	0.00	1,200.00	-267.00
APR	2,810.00	1,040.00	1,770.00	0.00	1,200.00	574.00
MAY	2,750.00	368.00	2,380.00	0.00	1,200.00	1,180.00
JUN	1,760.00	343.00	1,420.00	0.00	1,200.00	217.00
JUL	1,330.00	368.00	962.00	0.00	1,200.00	-238.00
AUG	1,160.00	330.00	830.00	0.00	1,200.00	-370.00
SEP	1,130.00	275.00	855.00	0.00	1,200.00	-345.00
OCT	1,160.00	227.00	933.00	0.00	1,200.00	-267.00
NOV	1,370.00	344.00	1,030.00	0.00	1,200.00	-174.00
DEC	1,810.00	562.00	1,250.00	0.00	1,200.00	48.40
ANN	1,900,000.00	529,000.00	1,370,000.00	0.00	869,000.00	532,000.00

Figure 2. Well Location Map

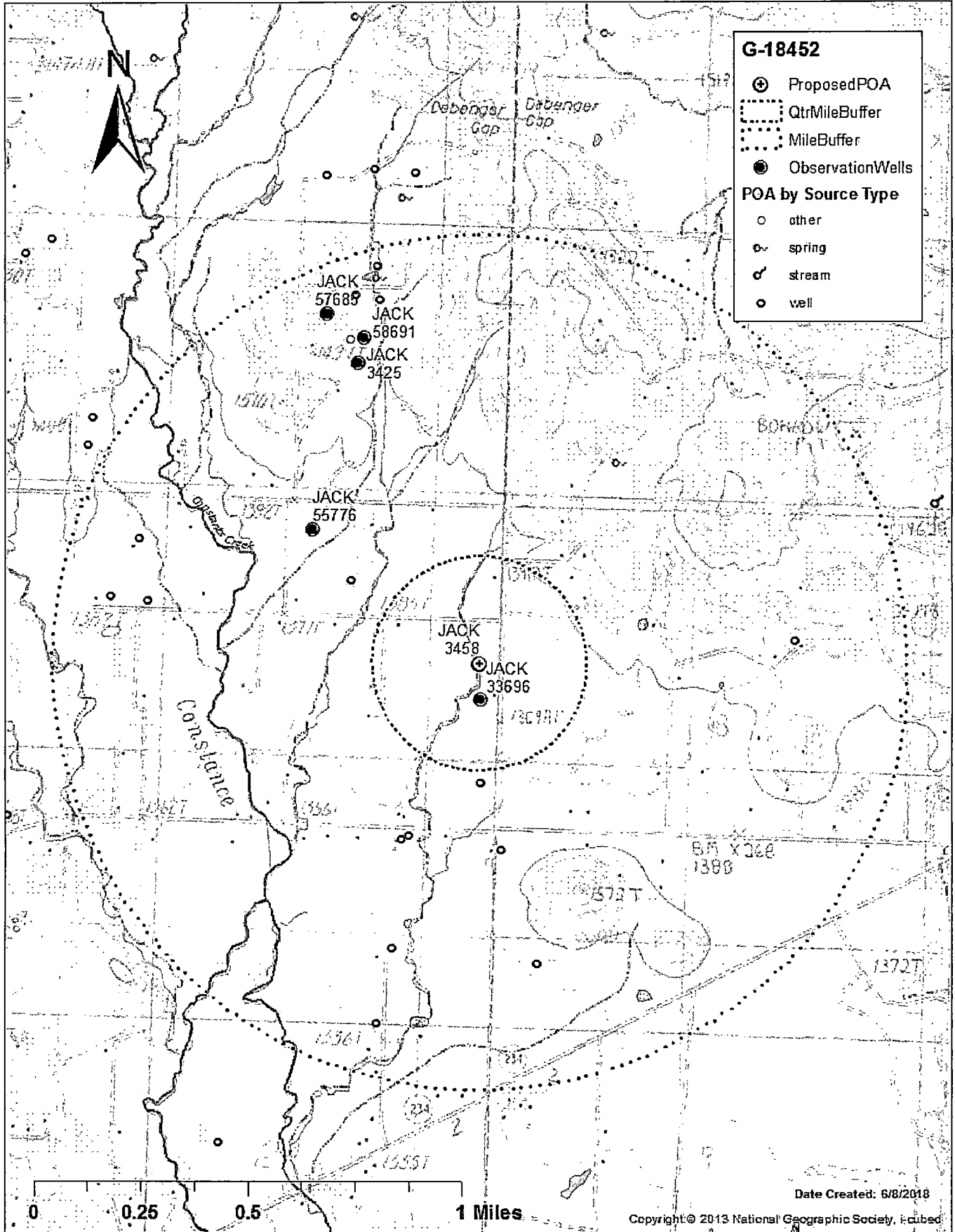


Figure 3. Water-Level Trends in Nearby Wells

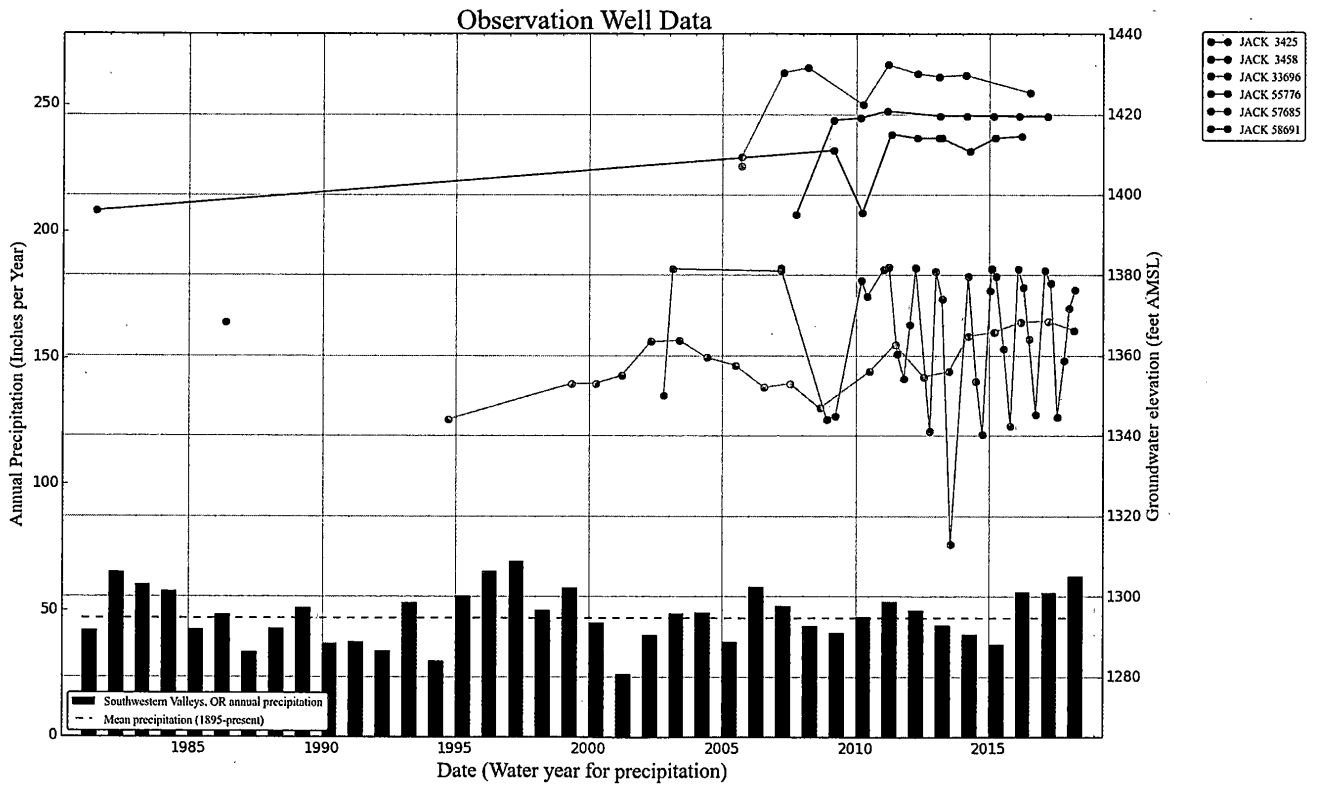


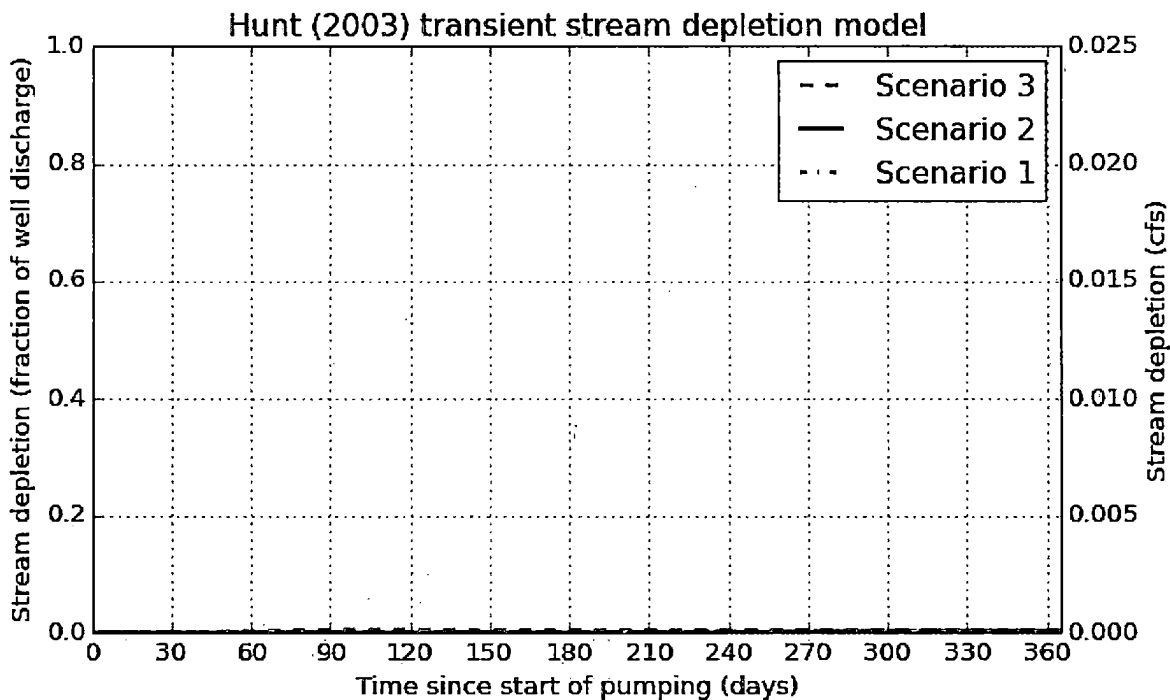
Figure 4. Stream Depletion Model Parameters and Outputs

Application type:	G
Application number:	18483
Well number:	1
Stream Number:	1
Pumping rate (cfs):	0.025
Pumping duration (days):	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	8000	8000	8000	ft
Aquifer transmissivity	T	5000	2500	1000	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	30	60	90	120	150	180	210	240	270	300	330	360
Depletion (%)	0	0	0	0	0	0	0	0	0	0	0	0	0
Depletion (cfs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



RECEIVED JACK 3458

JACK 3458

35S/2W-132a

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

MAY 21 1986

(1) OWNER:

Name John Haworth
Address 7935 Blackberry Circle
City Buena Park State Ca. Zip 90620

(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:

Depth of Completed Well 120 ft.

Special Standards date of approval

Table with columns: HOLE diameter, SEAL Material, Amount sacks or pounds. Row 1: 10" diameter, Cement seal, 11 sacks.

How was seal placed? Method A B C D E

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

Table with columns: Diameter, From, To, Gauge, Steel, Plastic, Welded, Threaded. Row 1: Casing 6" #1 39 .250 Steel checked.

Location of shoe(s) 39'

(7) PERFORATIONS/SCREENS:

Table with columns: From, To, Slot size, Number, Diameter, Tele/pipe size, Casing, Liner. Includes checkboxes for Perforations and Screens.

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

Table with columns: Yield gal/min, Pumping level, Drill stem at, Time 1/2 hr. Row 1: 65, 120, 1 hr.

Temperature of water 54 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 Jackson Latitude Longitude

Township 35S N or S, Range 2W E or W, WM.

Section 13 SE 1/4 NE 1/4

Tax Lot 118 Lot Block Subdivision

Street Address of Well (or nearest address) Corner Beagle & Winnetka Rds. White City, Ore. 97503

(10) STATIC WATER LEVEL:

8 ft. below land surface.

Date 5/13/86

Artesian pressure lb. per square inch. Date

(11) WELL LOG:

Ground elevation

Table with columns: Material, From, To, WB?, SWL. Rows include Soil Brown, Claystone Brown, Gray, Brown, etc.

Date started 5/13/86 Completed 5/13/86

(unbonded) Water Well Constructor Certification:

I constructed this well in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed Date

(bonded) Water Well Constructor Certification:

I accept responsibility for construction of this well and its compliance with all Oregon water well standards. This report is true to the best of my knowledge and belief.

Signed [Signature] Date 5/19/86

Company Gribble Well Drilling Co. Job No.

JACK 3458

For Official Use Only:

Received Date: _____

County Well Log ID #

Well Identification Tag #

Jack 3458

47796

47796

WELL IDENTIFICATION APPLICATION FORM

BUYER/CURRENT WELL OWNER:

PLEASE SEND WELL ID TAG TO ADDRESS ON CARD BELOW.

Name: ESTATE OF MATTIE D. HAYWORTH

Mailing Address: 3357 BEAGLE RD.

City: WHITE CITY State: OR Zip: 97503 Phone: (541) 826-6572

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

WELL LOCATION:

County: JACKSON Owner's Well Number: _____

Township: 35 N or S, Range: 2W E or W, Section: 13 1/4 1/4

Tax Lot Number: 118 Type of Well: water supply monitoring _____

Street Address of Well (if different from above): _____

WELL INFORMATION: (do not complete remainder of application if well log is available)

RECEIVED

Start Card Number: _____ Approx. Construction Date: _____

MAR 15 2001

Well Constructor: _____

WATER RESOURCES DEPT. SALEM, OREGON

Name of Owner at Time of Construction: _____

Well Depth (in feet): _____ Static Water Level (in feet): _____

Diameter of Exposed Well Casing (in inches): _____

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

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

Please Return Completed Form to:

ID TAG TO:

Roger Wright
Well Identification Program
Oregon Water Resources Department
158 12th Street NE
Salem, OR 97301-4172

MAR 15 2001