

Groundwater Application Review Summary Form

Application # G- 18716

GW Reviewer Joe Kemper Date Review Completed: 6/3/2019

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.

6/14/2019

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).

MEMO

June 3, 2019

FROM: GW: Joe Kemper
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

☒ YES☐ NO

The source of appropriation is within or above a Scenic Waterway

☒ YES☐ NO

Use the Scenic Waterway condition (Condition 7J)

☒ 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 Rogue Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

[illegible]

MEMO

OK
[Signature]

To: Kris Byrd, Manager Well Construction and Compliance Section
From: Joel Jeffery, Well Construction Coordinator
Subject: Review of Water Right Application G-18716
Date: June 7, 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 Groundwater Review and the Well Logs.

Applicant's Well #1 West Well (JACK 58020): 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 #2 East Well (JACK 57772): Based on a review of the Well Report, Applicant's Well #2 does not appear to comply with current minimum well construction standards (See OAR 690 Division 210). According to the Water Supply Well Report, only 15 sacks of bentonite chips were used to fill the well seal void, a calculated 21 sacks of bentonite chips should have been used.

In order to meet minimum well construction standards, Applicant's Well #2 must be completely resealed by a licensed and bonded driller with the correct amount of grout.

My recommendation is that the Department **not issue a permit** for Applicant's Well #2 East Well (JACK 57772) 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 #2 into compliance with minimum well construction standards may not satisfy hydraulic connection issues.

JACK 58020

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

WELL I.D. # L 81911

START CARD # 168343

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

(1) LAND OWNER Well Number _____
Name Craig Weiburn
Address 7887 Andrea Dr
City White City State Or 97503 Zip _____

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

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

(4) PROPOSED USE
☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other _____

(5) BORE HOLE CONSTRUCTION Special Construction: ☐ Yes ☒ No
Depth of Completed Well 140 ft.
Explosives used: ☐ Yes ☒ No Type _____ Amount _____

BORE HOLE			SEAL		
Diameter	From	To	Material	From	To
10"	0	19	Cement	0	19
8"	19	140			

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 _____

CASING/LINER			Gauge	Steel	Plastic	Welded	Threaded
Diameter	From	To					
Casing: 6"	+1	19	250	☒	☐	☒	☐
				☐	☐	☐	☐
				☐	☐	☐	☐
Liner: 4"	0	140	160	☐	☒	☒	☐
				☐	☐	☐	☐

Drive Shoe used ☐ Inside ☒ Outside ☐ None
Final location of shoe(s) 19

(7) PERFORATIONS/SCREENS
☒ Perforations Method Saw
☐ Screens Type _____ Material _____

From	To	Slot Size	Number	Diameter	Tele/pipe size	Casing	Liner
80	140	1/8x8	60			☐	☒
						☐	☐
						☐	☐
						☐	☐

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

Yield gal/min	Drawdown	Drill stem at	Time
3 GPM		140	1 Hr

Temperature of water 58° 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 (legal description)

County Jackson
Tax Lot 201 Lot _____
Township 34 S Range 1 E WM
Section 21 SE 1/4 NW 1/4
Lat _____ " or _____ (degrees or decimal)
Long _____ " or _____ (degrees or decimal)

Street Address of Well (or nearest address) 2181 Crowfoot Rd.,
Eagle Point, Or

(10) STATIC WATER LEVEL

90 ft. below land surface. Date 6-22-06
_____ ft. below land surface. Date _____
Artesian pressure _____ lb. per square inch Date _____

(11) WATER BEARING ZONES

From	To	Estimated Flow Rate	SWL
93	97	3 GPM	90

(12) WELL LOG

Material	From	To	SWL
Soil, Brown	0	3	
Volcanic Tuff, Brown	3	7	
Volcanic Tuff, Grey	7	47	
Volcanic Tuff, Grey/Red	47	53	
Volcanic Tuff, Grey	53	68	
Volcanic Tuff, Grey/Soft	68	77	
Volcanic Tuff, Grey	77	93	
Volcanic Tuff, Grey/Fractured	93	97	
Volcanic Tuff, Grey	97	133	
Volcanic Tuff, Grey/Red	133	140	90

Date Started 6-22-06 Completed 6-22-06

(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.

WWC Number 1857 Date 6-23-06

Signed Ronald J. Martenson

(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.

WWC Number 1207 Date 6-23-06

Signed Yogini Medina

RECEIVED

ORIGINAL - WATER RESOURCES DEPARTMENT

FIRST COPY - CONSTRUCTOR

SECOND COPY - CUSTOMER

06/16/2004

JUL 11 2006

WATER RESOURCES DEPT
SALEM, OREGON

JACK 57772
RECEIVED

**STATE OF OREGON
WATER SUPPLY WELL REPORT**

NOV 10 2005

WELL ID.# L 80500

(as required by ORS 537.765)

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

WATER RESOURCES DEPT

START CARD #

171885

(1) LAND OWNER

Well Number

Name CHRIS HOLTE

Address 2000 CROWFOOT RD

City State Zip EAGLE POINT, OR 97524

(2) TYPE OF WORK

New Well

(3) DRILL METHOD

Rotary air

(4) PROPOSED USE

Domestic

(5) BORE HOLE CONSTRUCTION

Special Construction ☐

Depth of completed well 400

Explosives used ☐

Type

Amount

BORE HOLE

SEAL

Diameter	From	To	Material	From	To	Sacks / Pound
10	0	45	Bentonite dry granular	0	45	750 Pounds
6	45	400				

How was seal placed:

Method

Other

POURED DRY

Backfill placed from

ft. To

ft. Material

Gravel placed from

ft. To

ft. Size of gravel

(6) CASING/LINER

	Diameter	From	To	Gauge	Material	Joints
Casing	6	1	47	0.25	Steel	Welded
Liner	4	0	400	0.188	Plastic	Welded

Drive Shoe used Outside

Final Location 47

(7) PERFORATIONS/SCREENS

☒ Perforations

Method

☐ Screens

Type

PVC-saw cut

From	To	Slot Size	Number	Diam	Tele-Pipe Size	Casing/Liner
160	180	10	90	0.125		Liner
260	280	10	90	0.13		Liner
360	380	10	90	0.13		Liner

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

Method Air

Yield gal/min	Drawdown	Drill Stem at	Time
3		400	1

Temperature of Water 55F degrees Depth Artesian Flow Found

Was a water analysis done? ☐ 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 (legal description)

County JACKSON

Tax Lot 201

Lot

Township 34.00S Range 1.00E WM Section 21 1/4 1/4

Latitude 423627

Longitude -1224247

Street Address / Nearest Address 2000 CROWFOOT RD EAGLE POINT, OR 97524

(10) STATIC WATER LEVEL

50 ft. below land surface.

Date 9/15/2005

ft. below land surface.

Date

Artesian pressure

lb per square inch.

Date

(11) WATER BEARING ZONES

Depth at which water was first found 175

From	To	Estimated Flow Rate	SWL
175	180	1	50
260	265	1	50

(12) WELL LOG

Ground Elevation

1985

Material	From	To	SWL
Blue Claystone	0	22	
Red Clay	22	35	
Gray Claystone	35	75	
Red Claystone	75	77	
Gray Claystone	77	130	
Gray Hard Claystone	130	175	50
Red Claystone	175	185	50
Gray Claystone	185	260	50
Gray Broken Claystone	260	265	50
Red Claystone	265	335	50
Gray Claystone	335	400	50

Date started

9/15/2005

Completed

9/15/2005

(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.

WWC Number

Date

Signed

(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.

WWC Number 1661

Date 10/7/2005

Signed

Bradford J. Milkowski

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 6/3/2019
 FROM: Groundwater Section Joe Kemper
 SUBJECT: Application G- 18716 Reviewer's Name
 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: Erika M. Binion County: Jackson

A1. Applicant(s) seek(s) 0.098 cfs from 2 well(s) in the Rogue Basin,
Upper Rogue subbasin

A2. Proposed use Nursery (2.5 acres) 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 58020	#1 (West Well)	Bedrock	0.098	34S/1E-21 NENW	988'S, 3011'W fr NE cor S 21
2	JACK 57772	#2 (East Well)	Bedrock	0.098	34S/1E-21 NENW	955'S 2688'W fr NE cor S 21

* 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	1,986	93	90	6/22/2006	140	0-19	-1-19	0-140	80-140	3	-	A
2	1,988	175	26	5/31/2018	400	0-45	-1-47	0-400	160-180, 260-280, 360-380	3	-	A

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 contains 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 (Scenic); 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:** There are limited water level data from wells adjacent to the applicant's proposed POA so Capacity of the Resource cannot be determined and water-level reporting conditions in B1(d) are recommended. There are no groundwater rights within 1 mile of the applicant's proposed POA, and it is unlikely that the applicant's use would result in injury to other permitted water rights given the low requested rate. However, standard interference conditions should be 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	Bedrock of Little Butte Volcanics	☐	☒
1	Bedrock of Little Butte Volcanics	☐	☒
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: In fractured-bedrock aquifer systems, water is stored and transmitted primarily by discrete but connected fracture sets. These fractures generally extend to near the surface, so water within these fractures is likely under atmospheric pressure (unconfined) despite an overall low storage coefficient for the aquifer system as a whole and static water levels often reported above water-bearing zones on driller's logs.

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	Big Butte Creek	1895	1610	11450	☒	☐	☐	☐	☒
2	1	Big Butte Creek	1963	1610	11200	☒	☐	☐	☐	☒
1	2	Indian Creek	1895	1880	~8200*	☒	☐	☐	☐	☒
2	2	Indian Creek	1962	1880	~8500*	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: Groundwater elevations are above or coincident with the elevation of nearby streams, indicating that water is flowing towards and discharging to surface water. Distance to Indian Creek is measured to the point where the stream is assumed to receive native groundwater.

Water Availability Basin the well(s) are located within: BIG BUTTE CR > ROGUE R - AT MOUTH; PSI also evaluated for INDIAN CR > 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?
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

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?
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐

Comments: There are no hydraulically connected surface water sources within 1 mile of the applicant's proposed POAs.

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
2	2	0 %	0 %	0 %	1 %	1 %	2 %	3 %	4 %	5 %	6 %	7 %	9 %
Well Q as CFS		0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
Interference CFS		0.0	0.0	0.0	0.0002	0.0002	0.0003	0.0005	0.0007	0.0009	0.0010	0.0012	0.0015
(A) = Total Interf.		0.0	0.0	0.0	0.0002	0.0002	0.0003	0.0005	0.0007	0.0009	0.0010	0.0012	0.0015
(B) = 80 % Nat. Q		4.02	8.25	5.8	3.76	1.77	0.92	0.49	0.4	0.35	0.43	0.57	2.05
(C) = 1 % Nat. Q		0.0402	0.0825	0.058	0.0376	0.0177	0.0092	0.0049	0.004	0.0035	0.0043	0.0057	0.0205
(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: Streamflow depletion is estimated using an analytical stream depletion model (Hunt, 1999) using bulk aquifer parameters representative of the local geology. A rate of 0.017 cfs is used to approximate the total requested volume (12.5 AF/yr) expressed as a constant rate for the year. The analysis uses the closest well/stream combination to consider the highest estimate of stream depletion for the purposes of 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:

- ☐ The permit should contain condition #(s) _____;
- ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** The applicant's well is found to be hydraulically connected to the Big Butte Creek and Indian Creek. However, there is not a preponderance of evidence that the proposed use/rate has the Potential for Substantial Interference (PSI) as per OAR 690-009.

References Used:

Hunt, B. 1999. Unsteady Stream Depletion from Ground Water Pumping. Journal of Hydrologic Engineering, Vol 8(1), pp 12-19.

OWRD Groundwater Site Information System Database – Accessed 5/17/2019.

Wilkinson, W. D. 1941. Reconnaissance geologic map of the Butte Falls quadrangle, Oregon. Oregon Dept. of Geol. and Mineral Industries.

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.**

Water Availability Tables

Water Availability Analysis Detailed Reports

BIG BUTTE CR > ROGUE R - AB MOUTH
ROGUE BASIN

Water Availability as of 1/30/2019

Watershed ID #: 31530710 (Map)

Exceedance Level: 80% ▾

Date: 1/30/2019

Time: 4:35 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	137.00	326.00	-189.00	0.00	0.00	-189.00
FEB	229.00	396.00	-167.00	0.00	0.00	-167.00
MAR	251.00	430.00	-179.00	0.00	0.00	-179.00
APR	205.00	390.00	-185.00	0.00	0.00	-185.00
MAY	145.00	280.00	-135.00	0.00	0.00	-135.00
JUN	113.00	202.00	-88.90	0.00	0.00	-88.90
JUL	105.00	194.00	-88.80	0.00	0.00	-88.80
AUG	98.50	180.00	-81.10	0.00	0.00	-81.10
SEP	90.30	162.00	-71.30	0.00	0.00	-71.30
OCT	96.90	189.00	-91.80	0.00	0.00	-91.80
NOV	91.60	182.00	-90.60	0.00	0.00	-90.60
DEC	125.00	305.00	-180.00	0.00	0.00	-180.00
ANN	158,000.00	195,000.00	0.00	0.00	0.00	0.00

Water Availability Analysis Detailed Reports

INDIAN CR > ROGUE R - AT MOUTH
ROGUE BASIN

Water Availability as of 5/17/2019

Watershed ID #: 71033 (Map)

Exceedance Level: 80% ▾

Date: 5/17/2019

Time: 10:38 AM

Water Availability Calculation

Consumptive Uses and Storages

Instream Flow Requirements

Reservations

Water Rights

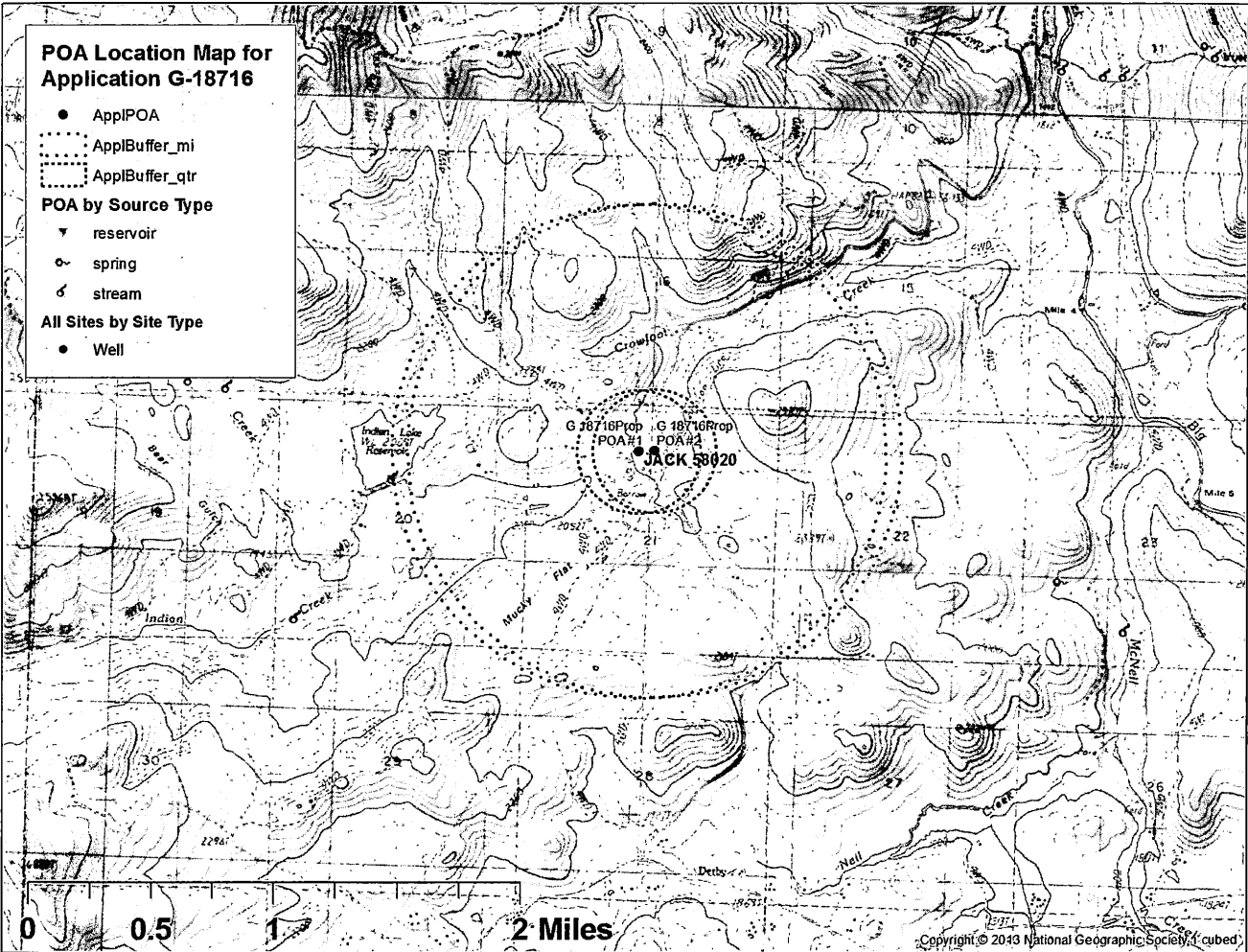
Watershed Characteristics

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	4.02	5.42	-1.40	0.00	13.50	-14.90
FEB	8.25	6.23	2.02	0.00	15.50	-13.50
MAR	5.80	4.38	1.42	0.00	10.90	-9.48
APR	3.76	0.13	3.63	0.00	6.11	-2.48
MAY	1.77	0.29	1.48	0.00	2.84	-1.36
JUN	0.92	0.47	0.45	0.00	1.35	-0.90
JUL	0.49	0.67	-0.18	0.00	0.63	-0.81
AUG	0.40	0.54	-0.14	0.00	0.41	-0.55
SEP	0.35	0.34	0.01	0.00	0.41	-0.40
OCT	0.43	0.03	0.40	0.00	0.58	-0.18
NOV	0.57	0.57	0.00	0.00	1.42	-1.42
DEC	2.05	2.77	-0.72	0.00	6.89	-7.61
ANN	3,620.00	1,310.00	2,320.00	0.00	3,620.00	0.00

Well Location Map



Stream Depletion Model

Application type:	G
Application number:	18716
Well number:	2
Stream Number:	2
Pumping rate (cfs):	0.017
Pumping duration (days):	365
Pumping start month number (3=March)	1

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	8200	8200	8200	ft
Aquifer transmissivity	T	100	500	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
Not used		0	0	0	
Aquitard thickness below stream	babs	4.0	3.0	2.0	ft
Not used		0	0	0	
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	1	1	2	3	4	5	6	7	9
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

