

Groundwater Application Review Summary Form

Application # G- 18469

GW Reviewer Joe Kemper Date Review Completed: 7/9/2018

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).

[illegible]

OK. RJQ

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Joel Jeffery, Well Construction Program Coordinator
Subject: Review of Water Right Application G-18469
Date: September 18, 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 62826): 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.

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 7/4/2018
 FROM: Groundwater Section Joe Kemper
 Reviewer's Name
 SUBJECT: Application G- 18469 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: Dimitrios Varelzdis County: Jackson

A1. Applicant(s) seek(s) 0.22 cfs from 1 well(s) in the Rogue Basin,
Little Butte Creek subbasin

A2. Proposed use Nursery (120 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 62826	1	Bedrock	0.22	36S/1E-S2 NE-NE	875' S, 1040' W fr NE cor, S2
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	1652	240	46	10/7/2016	260	0-19	0-19	0-260	200-260	40	NA	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 plan has 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:** There are very little OWRD Observation Well data in the area of the proposed POA so groundwater over-appropriation cannot be determined. There are no permitted groundwater POAs within 1 mile of the proposed POA and adjacent taxlot density is low, so injury to existing groundwater users is unlikely.

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 the Roxy Formation	☒	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: The well log for the applicant's well reports "First Water" at 240 feet BLS and a SWL of 60 feet below land surface 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	Lick Creek	1592	1595	1790	☒	☐	☐	☐	☐
1	2	Unnamed trib. To Lick Creek	1592	1592	1700*	☒	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: Groundwater elevation is coincident with surface water elevation.

*Distance from the applicant's well to the unnamed tributary to Lick Creek is calculated to where the elevation of the creek bed is equivalent to the well's reported SWL.

Water Availability Basin the well(s) are located within: LITTLE BUTTE CR > ROGUE R - AT MOUTH; ID #: 263

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	☐	☐	NA	NA	☐	23.3	☐	*	☐
1	2	☐	☐	NA	NA	☐	23.3	☐	*	☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

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:

*Interference at 30 days could not be estimated because the complex geology (high relief slopes, complex fractured bedrock aquifer) do not meet model assumptions of the widely accepted techniques for determining stream depletion (e.g., Hunt 1999, 2003)

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: No streams beyond 1 mile were evaluated for 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:
- ☐ The permit should contain condition #(s) _____;
 - ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

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

LITTLE BUTTE CR > ROGUE R - AT MOUTH
ROGUE BASIN

Water Availability as of 6/22/2018

Watershed ID #: 263 ([Map](#))

Date: 6/22/2018

Exceedance Level: 80% ▼

Time: 11:05 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	133.00	45.00	88.00	0.00	100.00	-12.00
FEB	206.00	56.40	150.00	0.00	100.00	49.60
MAR	236.00	60.00	176.00	0.00	100.00	76.00
APR	297.00	19.10	278.00	0.00	100.00	178.00
MAY	141.00	31.70	109.00	0.00	60.00	49.30
JUN	82.50	48.90	33.60	0.00	20.00	13.60
JUL	73.90	69.80	4.05	0.00	20.00	-15.90
AUG	70.70	56.70	14.00	0.00	20.00	-6.03
SEP	45.90	35.40	10.50	0.00	120.00	-109.00
OCT	23.30	12.00	11.30	0.00	120.00	-109.00
NOV	34.40	22.10	12.30	0.00	100.00	-87.70
DEC	60.80	38.30	22.50	0.00	100.00	-77.50
ANN	153,000.00	29,900.00	123,000.00	0.00	57,800.00	82,500.00

C6. **SW / GW Remarks and Conditions:** The applicant's proposed well would be producing from an aquifer that has been found to be hydraulically connected to surface water at distances of < 1 mile. The reviewer, however, has not found a preponderance of evidence to assume the Potential for Substantial Interference (PSI) with surface water as per OAR 690-009.

References Used:

Hladky, F. R., 1999, *Geology and mineral resources map of the Brownsboro quadrangle, Jackson County, Oregon*: Portland, OR. Oregon Department of Geology and Mineral Industries Geological Map GMS-109, scale 1:24,000.

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

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 7/6/2018.

Figure 2. Well Location Map

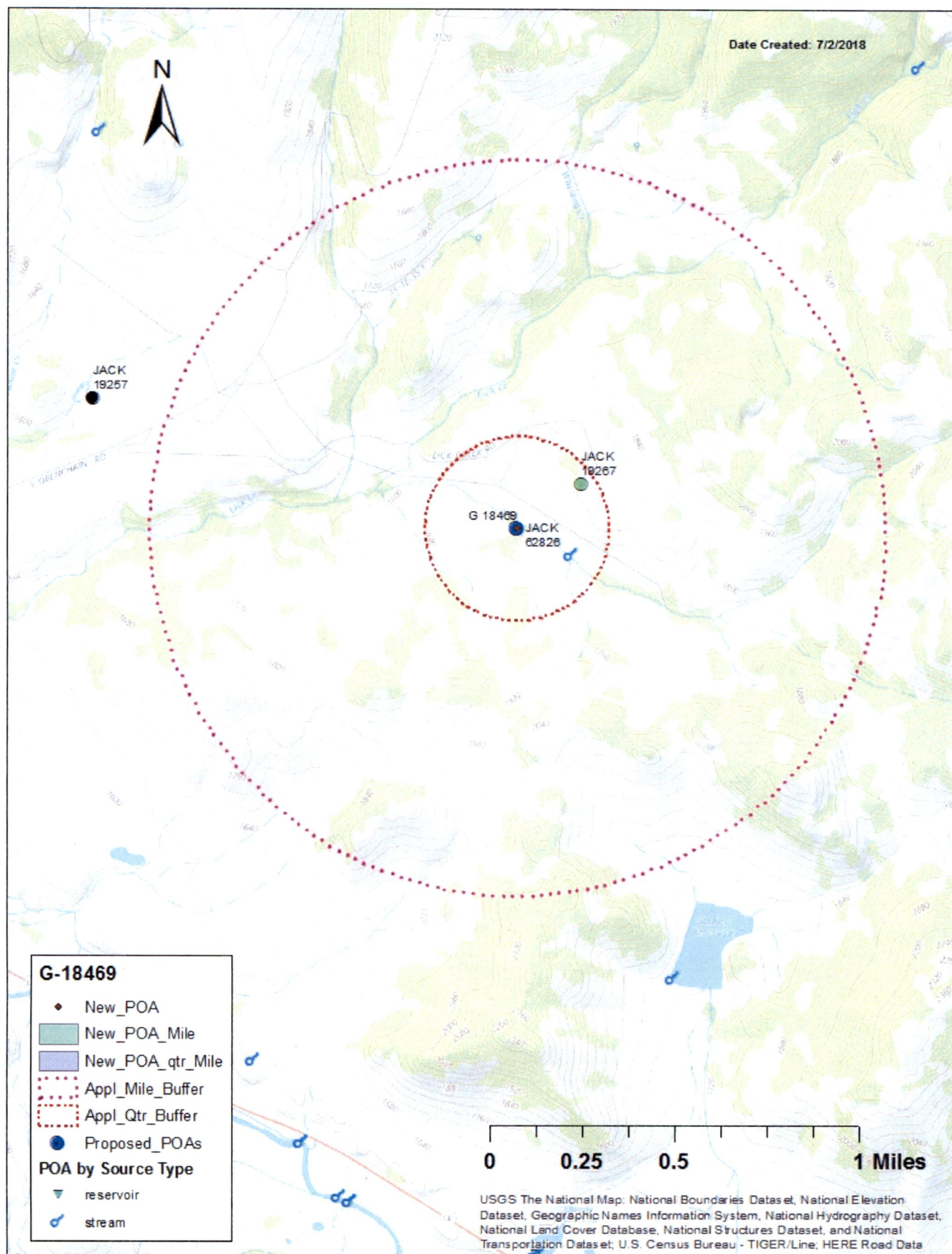
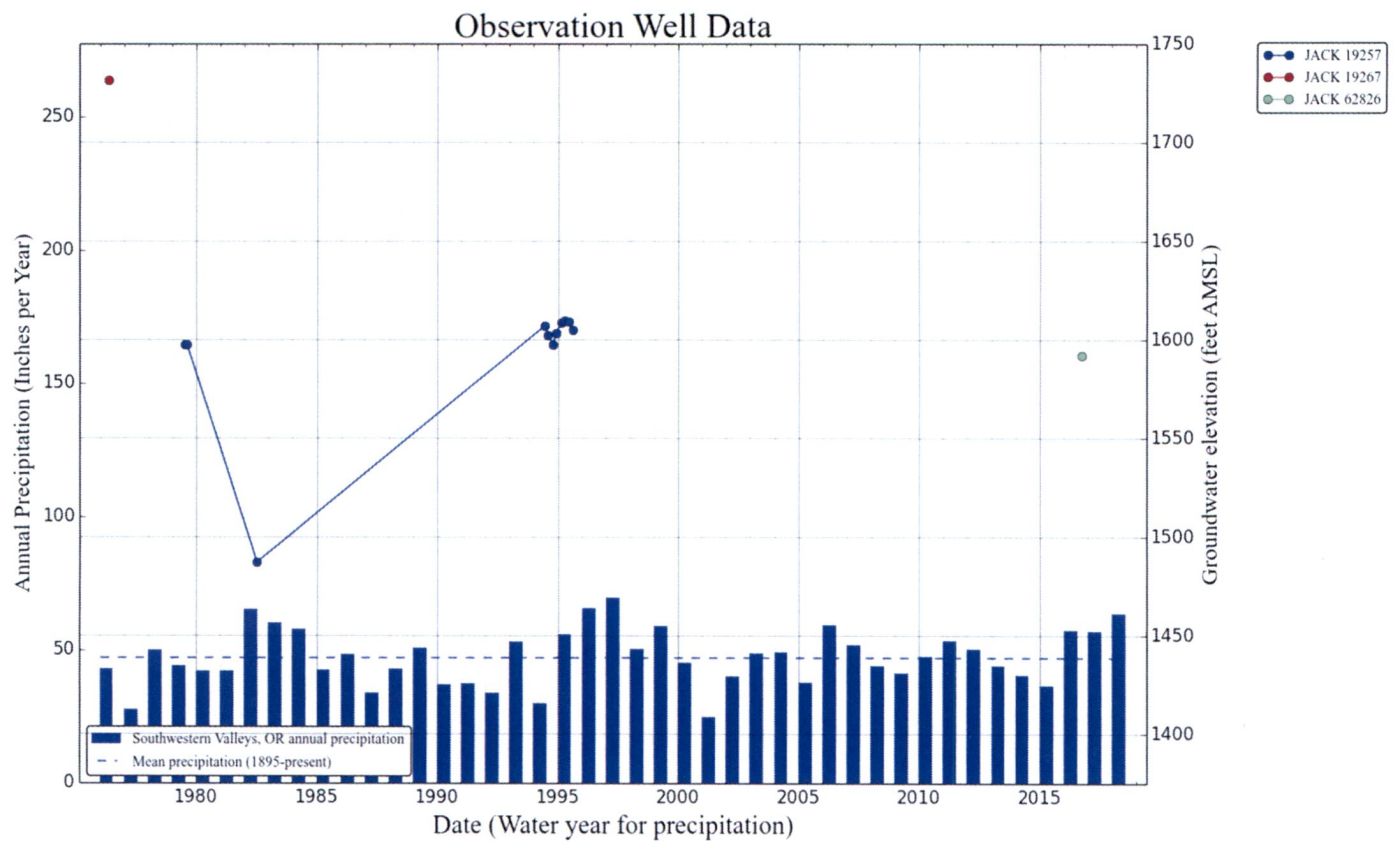


Figure 3. Water-Level Trends in Nearby Wells

E-2

Standard Application Completeness Checklist

Minimum Requirements (OAR 690-310-0040)(ORS 537.400)

This is the checklist used by WRD staff

Yes No

Application 6-18469 County JACKSON Priority Date 2.27.17

Township 36S Range 1E Section 2

Amount 100 gpm Use NURENTY WM Dist. # 13

Applicant Name DIMITRIOS VARELDZIS

Receipt No. 122700 Caseworker Assigned: ☐ Barbe ☐ Kim ☒ Lisa ☐ Scott

☒ Contact info: Applicant/Organization Name and Mailing Address

☒ Signature (in ink) of *all* applicants or the applicant's authorized agent (include title or authority if for an organization or corporation).

☒ Property ownership: Does the applicant own all the land for the proposed project? Y / N

If No:

☐ The affected landowner's name and mailing address must be listed

☐ A signed statement declaring the existence of either written authorization or an easement permitting access to land crossed by the proposed ditch canal or other work must be submitted.

☒ For a SW Application: Source of water must be indicated.

☐ If the source is stored water, is the stored water component filled out and does the applicant own the reservoir or include a non-expired agreement for stored water? (ORS 537.400)

NOTE: A surface water application cannot be filed at the same time as a Reservoir or Alt Reservoir if it will be for the use of the stored water under the PROPOSED Reservoir application, Exp. Secondary (E2)(ORS 537.147).

☐ If for stored water not under contract, is the source authorized under a permit, certificate, or decree?

Permit or Certificate issued? Y / N Permit or Certificate # _____

☒ For a GW Application: Well Development Tables completed and/or a well log report included (if existing)

☒ Proposed water use

☒ Amount of water from *each* source in GPM, CFS, or AF

☒ Period of use indicated

☐ If for supplemental irrigation, primary acreage or underlying permit or certificate number listed (Primary and Supplemental Irrigation counts as 2 uses)

☒ Water Management Section (Estimates if the water system has not been designed)

☒ Resource Protection Section (N/A for Groundwater)

☒ For all standard reservoir applications: Preliminary plans and specifications including dam height, width, crest width and surface area for each reservoir.

☒ Project schedule (If system is already completed, indicate "existing.") "ASAP"

☒ Supplemental data sheets enclosed (if needed)

☐ Form M (Municipal or Quasi-Municipal)

☐ Spring Description Sheet (if source is a spring)

☒ A completed **Land-Use Form** or receipt signed and dated by the appropriate planning department officials. *Please be certain that the Land-Use form lists all lands involved and all uses proposed. Date of signature must be within the past 12 months.*

☒ A **Legal Description** of all the properties involved where water is diverted, crossed, and used. The Legal description includes a metes and bounds or other government survey description. A copy of the deed, land sales contract or title insurance policy can provide this information, or applicant may submit a lot book report prepared by a title company. Copies of tax bills are not acceptable.

☒ The proposed source **IS / IS NOT** (circle one) restricted or withdrawn from further appropriation.

NOTE: If it is withdrawn under ORS 538, then return application and fees. If it is withdrawn by other means, accept the application and a negative IR will be issued.

☒ The **map** must meet all the minimum requirements of OAR 690-310-0050.

☒ Township, Range, Section

☒ Location of main canals, ditches, pipelines or flumes (if POA/POD is outside of POU)

☒ Place of use, 1/4-1/4's and tax lot clearly identified

☒ Even map scale not less than 4" = 1 mile (1" = 1320 ft.); examples: 1" = 100 ft., 1" = 200 ft.

☒ Location of *each* diversion point, well or dam by reference to a recognized public land survey corner. Multiple wells shall be uniquely labeled, and identified on well logs if existing.

☒ Reference corner on map

☒ North Directional Symbol

☒ Number of acres per 1/4-1/4 if for irrigation, nursery, or agriculture

☒ For a standard reservoir application to store ≥ 9.2 acre feet AND having a dam height ≥ 10 feet, map must be prepared by a CWRE

☒ **Fees:**

Base Fee

\$ _____

Permit Recording Fees \$ 450

1st CFS @ \$300

\$ _____

Mitigation Fee \$ _____

___ add'l CFS @ \$300 ea

\$ _____

Rec Fee Total \$ _____

___ AF up to 20 AF @ \$30 ea

\$ _____

Rec Fee Paid \$ _____

___ add'l AF @ \$1 ea

\$ _____

___ add'l ☐ pod/poa ☐ use @ _____ ea

\$ _____

___ add'l res @ \$125 ea

\$ _____

Exam Fee Total

\$ 1450

Total Fees \$ 1900

Exam Fee Paid

\$ 1450

Paid \$ 1900

Amount Due \$ _____

Reviewed by: FB

Date: 2.23.2017