

Groundwater Review Summary Form

Application # G- 18404

GW Reviewer Thoma Date Review Completed: 12-22-16

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).

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with

RECEIVED WATER WELL REPORT

Jose
8620

State Well No. 385/7W-10^d

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

STATE OF OREGON
(Please type or print)

State Permit No. _____

SEP 19 1978

COCHRAN WATER RESOURCES DEPT. Do not write above this line

UPPER DEER CR

(1) OWNER:

Name **BOB COCHRAN**
Address **6350 UPPER DEER CR**
SEMA OREGON

(2) TYPE OF WORK (check):

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

(3) TYPE OF WELL:

Rotary Driven
Cable Jetted
I Bored

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other

(5) CASING INSTALLED:

6" Diam. from 0 ft. to 159 ft. Gage 250
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

(6) PERFORATIONS:

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

(7) SCREENS:

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

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level
Was a ^{AIR} pump test made? Yes No If yes, by whom? **DRILLER**
12 gal./min. with ft. drawdown after 1 hrs.
" " " " " "
" " " " " "
Baller test gal./min. with ft. drawdown after hrs.
lan flow g.p.m.
Temperature of water 49° Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used **CEMENT**
Well sealed from land surface to 18 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 6 sacks
How was cement grout placed? **POURED**
Was a drive shoe used? Yes No Plugs _____ Size: location ft.
Did any strata contain unusable water? Yes No
Type of water? _____ depth of strata _____
Method of sealing strata off _____
Was well gravel packed? Yes No Size of gravel: _____
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County **JOSEPHINE** Driller's well number _____
NE 1/4 SE 1/4 Section 10 T. 38 R. 7W W.M.
Bearing and distance from section or subdivision corner
TAX LOT 1002

(11) WATER LEVEL: Completed well.

Depth at which water was first found 164 ft.
Static level 48 ft. below land surface. Date 9/12/78
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.

MATERIAL	From	To	SWL
CLAY, BROWN	0	39	
CLAY, BROWN, GRAVEL, SMALL	39	92	
CLAY, BROWN	92	111	
CLAY, BRN, GRAVEL, SMALL	111	164	
GRAVEL, SMALL, SANDY	164	192	48'
SHALE BEDROCK	192	200	
AQUIFER	164	192	12gpm

Work started 9/11 1978 Completed 9/12 1978
Date well drilling machine moved off of well 9/12 1978

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] **D. L. Orant** Date 9/12, 1978
(Drilling Machine Operator)
Drilling Machine Operator's License No. 810

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 **PAGUIN Well Drilling**
(Person, firm or corporation) (Type or print)
Address **1840 Willow Ln. GRANTS PASS, ORE**
[Signed] **Robert E. Quinn**
(Water Well Contractor)
Contractor's License No. 675 Date 9-12, 1978

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date December 22, 2016
 FROM: Groundwater Section Michael Thoma
Reviewer's Name
 SUBJECT: Application G- 18404 Supersedes review of _____
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: Weedbucks Farms County: Josephine

A1. Applicant(s) seek(s) 0.03 cfs from 1 well(s) in the Rogue Basin,
Illinois River subbasin

A2. Proposed use Nursery (1 ac) 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	JOSE 8620	1	Bedrock	0.03	38S/07W-10 SESE	1050' N, 520' W of SE cor S10
2						

* 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	1530	164	48	09/12/78	200	0-18	0-159*	-	-	12		A

Use data from application for proposed wells.

A4. **Comments:** *The casing interval described on the well log does not appear to meet minimum well construction standards – see Section D

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: _____

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) 7J (Scenic); 7C (7-yr SWL); 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 no OWRD Observation Well data in the area of the proposed POA so groundwater over-appropriation cannot be determined. There are also no permitted groundwater POAs within several miles of the proposed POA so injury to existing permitted groundwater users is unlikely, but standard interference conditions should be applied to any permit dependent on this review.

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 Galice Fm	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: the well log for the applicant's proposed POA reports SWL considerably above First Water indicating confined conditions. Additionally, the well log report "clay" materials for approx. 164 ft below land surface

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	Deer Creek	1480	1460-1520	2300	<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"/>

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

Water Availability Basin the well(s) are located within: Deer Cr > Illinois R – AB McMullin Cr (ID# 70991)

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"/>	IS70991	3.64	<input type="checkbox"/>	3.11	<input type="checkbox"/>	**	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: Interference @ 30 d could not be estimated because the terrain (high-relief slopes) and geology (fractured bedrock aquifer juxtaposed with alluvial sediments) do not meet model assumptions of the widely accepted techniques for determining stream depletion (e.g., Hunt 1999, 2003).

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"/>

Comments: _____

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	No surface water sources beyond 1 mile were evaluated												
Interference CFS													
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: _____

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 well would be producing from an aquifer that has been found to be hydraulically connected to surface water at a distance of < 1 mile. However, the reviewer is unable to find a preponderance of evidence that the proposed use will have the Potential for Substantial Interference (PSI) with surface water.

References Used:

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
Oregon Department of Geology and Mineral Industries, *Geologic Map of Oregon*. <http://www.oregongeology.org/geologicmap/>
OWRD Well Log Database – Accessed 12/22/2016.

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: 1 Logid: JOSE 8620

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:**
The well log reports casing interval beginning at 0 ft (land surface). It is the understanding of the reviewer that Well Construction Rules require casing to extend at least 1 ft above land surface. Well Construction staff should review the well log.

D4. **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Water Availability Tables

Water Availability Analysis Detailed Reports

DEER CR > ILLINOIS R - AB MCMULLIN CR
ROGUE BASIN

Water Availability as of 12/22/2016

Watershed ID #: 70991 [\(Map\)](#) Exceedance Level: 80% ▾

Date: 12/22/2016 Time: 4:01 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	70.00	0.14	69.90	0.00	120.00	-50.10
FEB	105.00	0.17	105.00	0.00	120.00	-15.20
MAR	86.90	0.14	86.80	0.00	120.00	-33.20
APR	72.60	0.79	71.80	0.00	120.00	-48.20
MAY	39.40	1.23	38.20	0.00	64.20	-26.00
JUN	13.50	1.71	11.80	0.00	21.60	-9.81
JUL	6.60	2.28	4.32	0.00	8.21	-3.89
AUG	4.11	1.89	2.22	0.00	5.07	-2.85
SEP	3.11	1.25	1.86	0.00	3.64	-1.78
OCT	3.31	0.43	2.88	0.00	5.16	-2.28
NOV	7.34	0.08	7.26	0.00	28.50	-21.20
DEC	35.80	0.12	35.70	0.00	107.00	-71.30
ANN	50,500.00	620.00	49,900.00	0.00	43,500.00	6,950.00

Well Location Map

