

Groundwater Application Review Summary Form

Application # G- 18615

GW Reviewer Aurora Bouchier Date Review Completed: 4/5/2018

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).

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 4/5/2018
 FROM: Groundwater Section Aurora C Bouchier
 Reviewer's Name
 SUBJECT: Application G- 185615 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: Waibel Properties, LLC County: Crook

- A1. Applicant(s) seek(s) 0.67 cfs from 2 well(s) in the Deschutes Basin,
Crooked River subbasin (Arrowwood Point quad)
- A2. Proposed use irrigation (75.5 acres) Seasonality: April 15 to October 1
- 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	CROO 54130	L-111980	Vol Seds and Lava	0.67	17S/21E-12 SW-NW	1400' S, 1150' E fr NW cor S 12
2	CROO 54129	L-111979	Vol Seds and Lava	0.67	17S/21E-12 SE-NW	1600' S, 2000' E fr NW cor S 12
3						
4						

* 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	3555	146	31	3/21/2014	510	0-33	-3-33	10-310	140-180, 270-310	300	na	A
2	3560	150	31	3/19/2014	740	0-37	-3-37	0-480	150-190, 390-420	350	na	A

Use data from application for proposed wells.

- A4. **Comments:** The wells appear to be constructed into water bearing zones within the middle to late Miocene volcanoclastic sediment and lava flows (units Tts and Tcp) (Swanson, 1969). Groundwater flow is likely towards the river.
- A5. **Provisions of the** Deschutes 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 site is located outside the USGS Deschutes Groundwater Study Area.
- 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) 7N and 7J;
 - 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:** _____

Condition with 7N and 7J. _____

A large amount of groundwater has been, and is being, permitted in the region. In 2015 OWRD began collecting quarterly water level measurements at nearby wells CROO 2834 and CROO 2835 (see hydrograph below). The period of record for these two wells is insufficient to assess the sustainability of the resource given the recent groundwater development.

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	Volcaniclastic Sediment and Lava Flows	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Volcaniclastic Sediment and Lava Flows	<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"/>

Basis for aquifer confinement evaluation: Groundwater flow systems in the volcaniclastic sediments and lava flows likely semi-confined given the heterogeneity of the deposits and spatial variability in permeability inherent to the lava flows. The applicant well logs report static water levels approximately 115-120 feet above the first water bearing zones listed on the well logs (CROO 54130 and CROO 54129).

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	Crooked River	~3520	3515-3540	2550	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Crooked River	~3530	3515-3540	3290	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Camp Creek	~3520	3535-3570	2130	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Camp Creek	~3530	3535-3570	1480	<input type="checkbox"/>	<input checked="" 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: The elevation of the hydraulic head in the applicant’s wells is coincident or above the elevation of the Crooked River within a mile, and below the elevation of Camp Creek. The Crooked River likely represents a regional hydrologic sink as evidenced by base flow in the streamflow record and the hydraulic head measurements in area wells.

Water Availability Basin the well(s) are located within: 70353: CROOKED R> DESCHUTES R- AB SAND CR

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"/>	38.70	<input checked="" type="checkbox"/>	See comments	<input checked="" type="checkbox"/>
2	1	<input type="checkbox"/>	<input type="checkbox"/>	na	na	<input type="checkbox"/>	38.70	<input checked="" type="checkbox"/>	See comments	<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"/>

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: The wells are likely in hydraulic connected with the Crooked River. Interference with the river was not calculated since an appropriate model is not available for this analysis. The water bearing zones identified on the well logs for this application are at 146 and 150 feet below land surface. The overlying units consist of relatively fine-grained (low permeability) material which likely results in an inefficient hydraulic connection.

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													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
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:** _____

If a permit is issued, condition with 7N and 7J.

Groundwater/surface water interaction with the nearest reach of the Crooked River is unknown. Wells on nearby applications (CROO 54563 and CROO 52331 on G-18605 and G-16212 respectively) have water-bearing zones which are separated from the surface water sources by more than 400 feet of fine-grained, low permeability material. Despite the close proximity of CROO 52331 and CROO 54563 to surface water sources (1500-1600 feet), and the static water levels in the wells being at an elevation coincident with or above the adjacent reach of the surface water sources, the thick sequence of low permeability material resulted in a determination of no hydraulic connection with the surface water sources. The wells on this application (CROO 54130 and CROO 54129) have less than 150 feet of fine-grained, low permeability material above the water-bearing zones.

References Used: _____

Application File: G-186154.

Arrowwood Point quadrangle map (USGS map, 1:24,000 scale).

Gonthier, J.B. 1985. A description of aquifer units in eastern Oregon: U.S. Geological Survey Water Resources Investigations Report 84-4095, 39 p., maps.

OWRD Groundwater Review for Application File: G-16212, G-G17067 and G-18605.

OWRD well log and water level database: specific attention to CROO 2834, CROO 2835, CROO 52331, CROO 54129, CROO 54130 and CROO 54563.

Swanson, D.A. 1969. Reconnaissance geologic map of the east half of the Bend quadrangle, Crook, Wheeler, Jefferson, Wasco, and Deschutes Counties, Oregon: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-568.

Walker, G. W. (editor) 1990. Geology of the Blue Mountains region of Oregon, Idaho, and Washington; Cenozoic geology of the Blue Mountains region: U.S. Geological Survey Professional Paper 1437, 135 p.

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:** _____

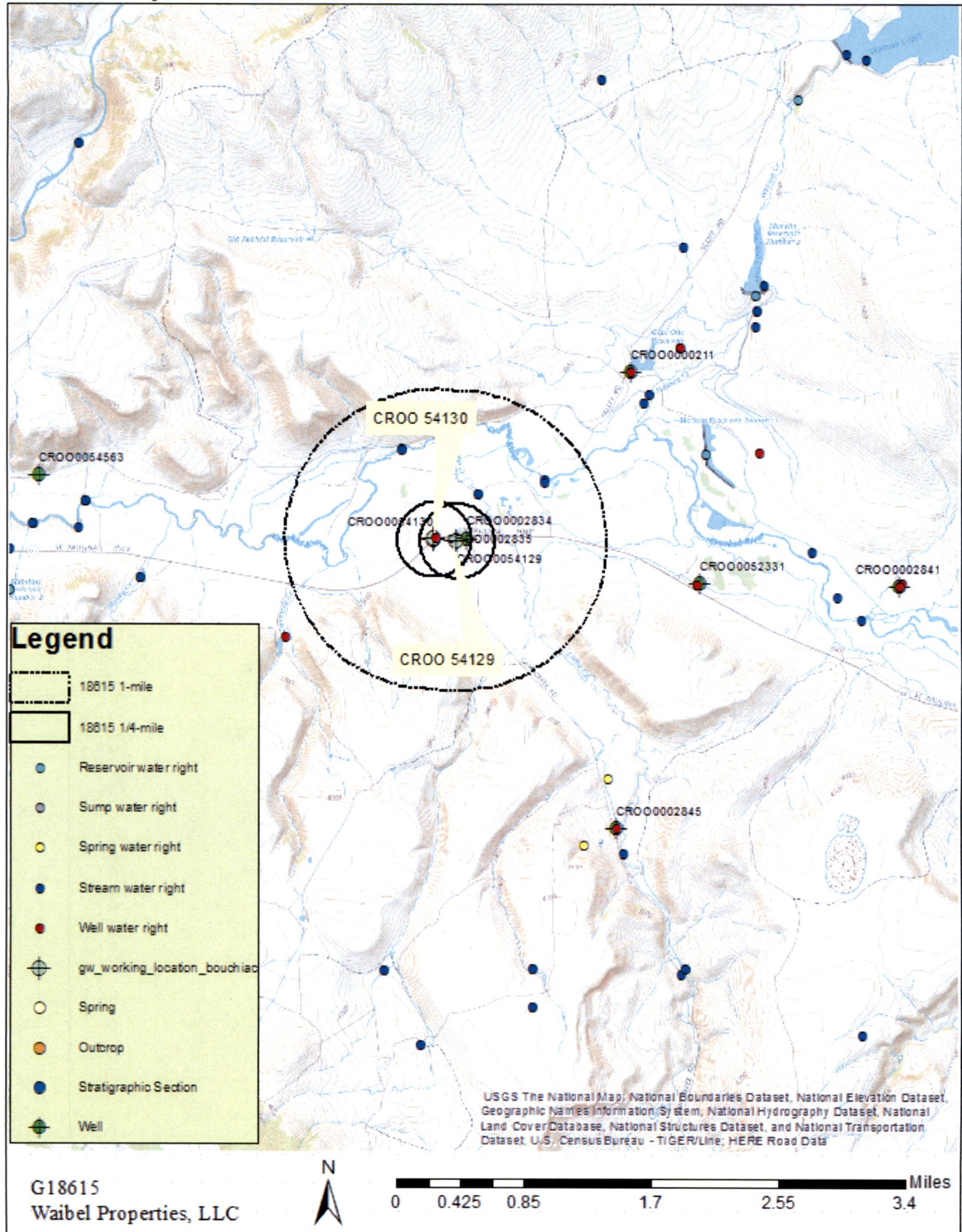
D4. **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Water Availability Tables

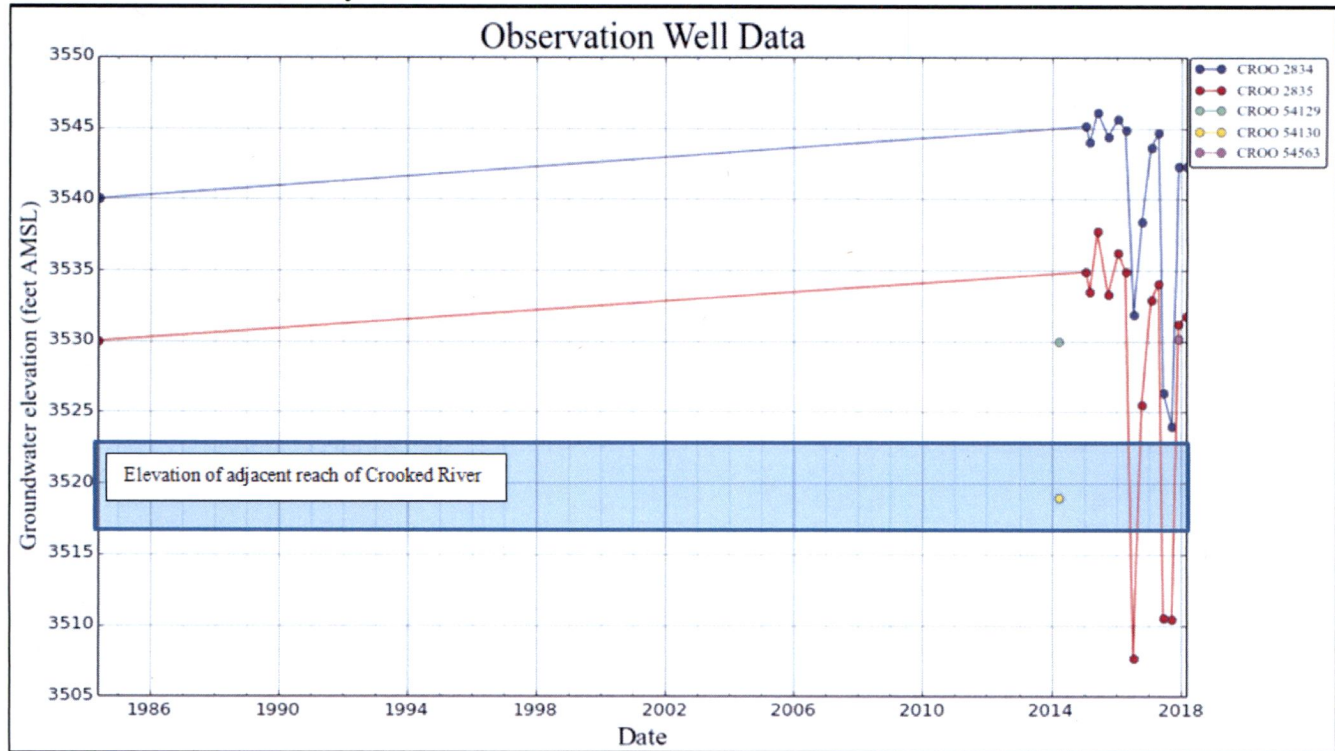
WATER AVAILABILITY TABLE															
Watershed ID #: 70353		CROOKED R > DESCHUTES R - AB SAND CR								Exceedance Level: 80					
Time: 1:23 PM		Basin: DESCHUTES								Date: 03/30/2018					
# watershed	Nest ID	Stream Name	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	STOR
1	70087	DESCHUTES R > COLUMBIA R - AB MOUTH AT GAGE 14103000	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES
2	30530627	DESCHUTES R > COLUMBIA R - AB EAGLE CR	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES
3	30530643	DESCHUTES R > COLUMBIA R - AB SHITIKE CR	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES
4	30530508	CROOKED R > DESCHUTES R - AB OSBORNE CAN	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
5	30530507	CROOKED R > DESCHUTES R - AB DRY R	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
6	70353	CROOKED R > DESCHUTES R - AB SAND CR	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION							
Watershed ID #: 70353		CROOKED R > DESCHUTES R - AB SAND CR				Exceedance Level: 80	
Time: 1:24 PM		Basin: DESCHUTES				Date: 03/30/2018	
Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirements	Net water Available	
Monthly values are in cfs. Storage is the annual amount at 50% exceedance in ac-ft.							
JAN	78.90	7.74	71.20	0.00	50.00	21.20	
FEB	175.00	15.50	160.00	0.00	75.00	84.50	
MAR	337.00	145.00	192.00	0.00	113.00	79.10	
APR	598.00	332.00	266.00	0.00	113.00	153.00	
MAY	404.00	370.00	34.20	0.00	113.00	-78.80	
JUN	261.00	295.00	-34.50	0.00	75.00	-109.00	
JUL	80.10	85.00	-4.86	0.00	50.00	-54.90	
AUG	38.70	43.20	-4.47	0.00	47.80	-52.30	
SEP	45.20	44.80	0.37	0.00	50.00	-49.60	
OCT	47.30	22.90	24.40	0.00	50.00	-25.60	
NOV	60.60	3.44	57.20	0.00	50.00	7.16	
DEC	76.50	5.50	71.00	0.00	50.00	21.00	
ANN	223,000	82,800	140,000	0	50,500	101,000	

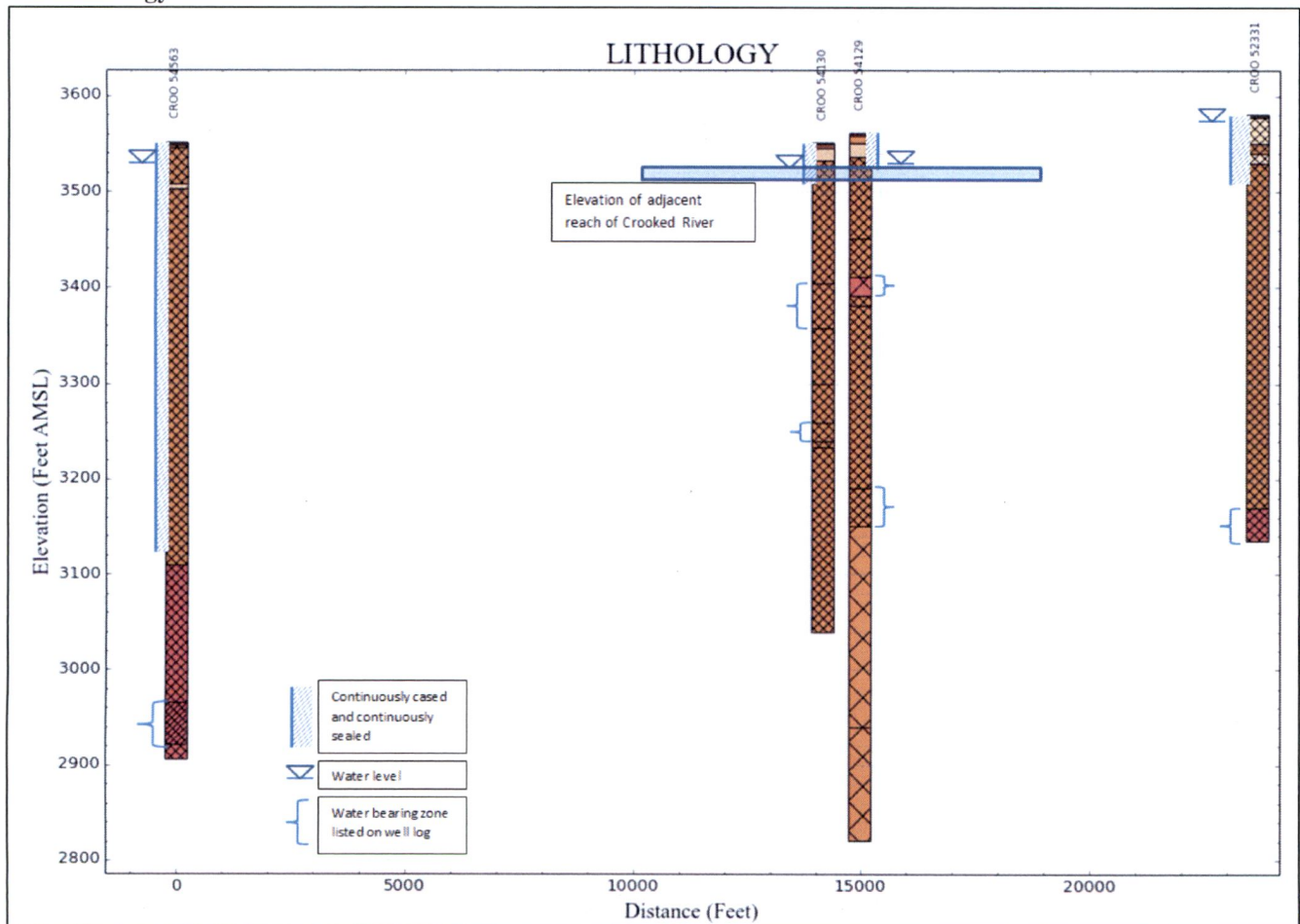
Well Location Map



Water-Level Trends in Nearby Wells



Well Lithology



MEMO



To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Joel Jeffery, Well Construction Program Coordinator
Subject: Review of Water Right Application G-18615
Date: December 23, 2019

The attached application was forwarded to the Well Construction and Compliance Section by Water Rights. Aurora Bouchier reviewed the application. Please see Aurora's Groundwater Review and the Well Log.

Applicant's Well #L-111980 (CROO 54130): Based on a review of the Well Report, Applicant's Well #L-111980 seems to protect the groundwater resource.

The construction of Well #L-111980 may not satisfy hydraulic connection issues.

Applicant's Well #L-111979 (CROO 54129): Based on a review of the Well Report, Applicant's Well #L-111979 seems to protect the groundwater resource.

The construction of Well #L-111979 may not satisfy hydraulic connection issues.

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765 & OAR 690-205-0210)

CROO 54129
4/17/2014

WELL I.D. LABEL# L 111979
START CARD # 1022226
ORIGINAL LOG #

(1) LAND OWNER
Owner Well I.D.
First Name
Last Name
Company WAIBEL PROPERTIES, LLC
Address 8055 SW POWELL BUTTE HWY
City POWELL BUTTE State OR Zip 97753

(9) LOCATION OF WELL (legal description)
County CROOK Twp 17.00 S N/S Range 21.00 E E/W WM
Sec 12 NE 1/4 of the NW 1/4 Tax Lot 700
Tax Map Number Lot
Lat
Long
Street address of well
Nearest address
OFF CAMP CREEK RD BY PAULINA HWY

(2) TYPE OF WORK
[X] New Well [] Deepening [] Conversion
[] Alteration (complete 2a & 10) [] Abandonment (complete 5a)

(10) STATIC WATER LEVEL
Date SWL(psi) + SWL(ft)
Existing Well / Pre-Alteration
Completed Well 3/19/2014 31
Flowing Artesian? Dry Hole?

(2a) PRE-ALTERATION
Dia + From To Gauge Stl Plstc Wld Thrd
Casing:
Material From To Amt sacks/lbs
Seal:

WATER BEARING ZONES
Depth water was first found 150.00
SWL Date From To Est Flow SWL(psi) + SWL(ft)
3/14/2014 150 180 150 31
3/17/2014 370 410 200 31

(3) DRILL METHOD
[X] Rotary Air [] Rotary Mud [] Cable [] Auger [] Cable Mud
[] Reverse Rotary [] Other

(4) PROPOSED USE
[] Domestic [X] Irrigation [] Community
[] Industrial/ Commercial [] Livestock [] Dewatering
[] Thermal [] Injection [] Other

(5) BORE HOLE CONSTRUCTION
Special Standard (Attach copy)
Depth of Completed Well 740.00 ft.
BORE HOLE SEAL sacks/lbs
Dia From To Material From To Amt lbs
18 0 37 Bentonite 0 37 30 S
14 37 480
6 480 740
How was seal placed: Method [] A [] B [] C [] D [] E
[X] Other POURED IN DRY
Backfill placed from ft. to ft. Material
Filter pack from ft. to ft. Material Size
Explosives used: Yes Type Amount

(11) WELL LOG
Ground Elevation
Material From To
Top Soil 0 3
Yellow Clay Stone 3 10
Brown Sand & Gravel 10 25
Hard Green Clay Stone 25 110
Hard Green & Grey Clay Stone 110 150
Soft Grey Basalt 150 170
Hard Green Clay Stone 170 370
Hard Grey Clay Stone 370 410
Soft Green Clay Stone 410 621
Soft Green & Grey Clay Stone 621 740

(5a) ABANDONMENT USING UNHYDRATED BENTONITE
Proposed Amount Actual Amount

(6) CASING/LINER
Casing Liner Dia + From To Gauge Stl Plstc Wld Thrd
14 3 37 250
12 0 480 250
Shoe Inside Outside Other Location of shoe(s)
Temp casing Yes Dia From To

(7) PERFORATIONS/SCREENS
Perforations Method Factory
Screens Type Material
Perf/ Casing/ Screen Dia From To Scrn/slot Slot # of Tele/ Screen Liner Dia From To width length slots pipe size
Perf Liner 12 150 190 .13 3 912
Perf Liner 12 390 420 .13 3 912

Date Started 2/17/2014 Complete 3/19/2014

(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.
License Number Date
Signed

(8) WELL TESTS: Minimum testing time is 1 hour
[] Pump [] Bailer [X] Air [] Flowing Artesian
Yield gal/min Drawdown Drill stem/Pump depth Duration (hr)
350 420 4
Temperature 53 °F Lab analysis Yes By
Water quality concerns? Yes (describe below) TDS amount
From To Description Amount Units

(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.
License Number 1583 Date 4/17/2014
Signed DAVID A SCHLICHTING (E-filed)
Contact Info (optional)

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765 & OAR 690-205-0210)

CROO 54130

WELL I.D. LABEL# L 111980
START CARD # 1022206
ORIGINAL LOG #

4/17/2014

(1) LAND OWNER

Owner Well I.D.
First Name Last Name
Company WAIBEL PROPERTIES, LLC
Address 8055 SW POWELL BUTTE HWY
City POWELL BUTTE State OR Zip 97753

(2) TYPE OF WORK

[X] New Well [] Deepening [] Conversion
[] Alteration (complete 2a & 10) [] Abandonment (complete 5a)

(2a) PRE-ALTERATION

Casing: Dia + From To Gauge Stl Plstc Wld Thrd
Material From To Amt sacks/lbs
Seal:

(3) DRILL METHOD

[X] Rotary Air [] Rotary Mud [] Cable [] Auger [] Cable Mud
[] Reverse Rotary [] Other

(4) PROPOSED USE

[] Domestic [X] Irrigation [] Community
[] Industrial/ Commercial [] Livestock [] Dewatering
[] Thermal [] Injection [] Other

(5) BORE HOLE CONSTRUCTION

Special Standard [] (Attach copy)

Depth of Completed Well 510.00 ft.

Table with columns: Dia, From, To, Material, SEAL, To, Amt, sacks/lbs. Row 1: 18, 0, 33, Granular Bentonite, 0, 33, 35, S

How was seal placed: Method [] A [] B [] C [] D [] E

[X] Other POURED IN DRY

Backfill placed from ft. to ft. Material

Filter pack from ft. to ft. Material Size

Explosives used: [] Yes Type Amount

(5a) ABANDONMENT USING UNHYDRATED BENTONITE

Proposed Amount Actual Amount

(6) CASING/LINER

Table with columns: Casing, Liner, Dia, +, From, To, Gauge, Stl, Plstc, Wld, Thrd. Row 1: 14, 3, 33, 250, 3, 912

Shoe [] Inside [] Outside [] Other Location of shoe(s)

Temp casing [] Yes Dia From To

(7) PERFORATIONS/SCREENS

Perforations Method Factory

Screens Type Material

Table with columns: Perf/ Screen, Casing/ Liner, Dia, From, To, Scrn/slot width, Slot length, # of slots, Tele/ pipe size. Row 1: Perf, Liner, 12, 140, 180, .13, 3, 912

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

[] Pump [] Bailer [X] Air [] Flowing Artesian

Yield gal/min Drawdown Drill stem/Pump depth Duration (hr)

Table with 4 columns: Yield gal/min, Drawdown, Drill stem/Pump depth, Duration (hr). Row 1: 300, 300, 3

Temperature 54 °F Lab analysis [] Yes By

Water quality concerns? [] Yes (describe below) TDS amount

Table with columns: From, To, Description, Amount, Units

(9) LOCATION OF WELL (legal description)

County CROOK Twp 17.00 S N/S Range 21.00 E E/W WM
Sec 12 NW 1/4 of the NW 1/4 Tax Lot 700
Tax Map Number Lot
Lat " or " DMS or DD
Long " or " DMS or DD
[] Street address of well [X] Nearest address

CORNER OF PAULINA HWY BEFORE CAMP CREEK RD

(10) STATIC WATER LEVEL

Table with columns: Existing Well / Pre-Alteration, Date, SWL(psi), +, SWL(ft). Row 1: Completed Well, 3/21/2014, 31

Flowing Artesian? [] Dry Hole? []

WATER BEARING ZONES

Depth water was first found 146.00

SWL Date From To Est Flow SWL(psi) + SWL(ft)

Table with columns: SWL Date, From, To, Est Flow, SWL(psi), +, SWL(ft). Row 1: 2/12/2014, 146, 192, 125, 31

(11) WELL LOG

Ground Elevation

Table with columns: Material, From, To. Row 1: Top Soil, 0, 5

Date Started 2/12/2014 Complete 3/21/2014

(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.

License 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.

License Number 1583 Date 4/17/2014

Signed DAVID A SCHLICHTING (E-filed)

Contact Info (optional)

INTEROFFICE MEMORANDUM

TO: Joel Jeffrey, Well Construction and Compliance Section

FROM: Kim French, Water Rights Section

DATE: 12/19/19

RE: G-18615 – Waibel Properties LLC- request for determination of compliance with minimum well construction standards

Please review the well logs for Well 1 (CROO 54130) and Well 2 (CROO 54129) proposed for use in the application and make a determination regarding compliance with minimum well construction compliance.

Please route your review and the file back to me.

Thanks.

