

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date September 19, 2013

FROM: Groundwater Section Mike Zwart
Reviewer's Name

SUBJECT: Application G- 17718 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 ground water 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: Greg Sackos County: Baker

A1. Applicant(s) seek(s) 2.5 cfs from one well(s) in the Powder Basin,
 _____ subbasin Quad Map: Baker City

A2. Proposed use Irrigation, 152.23 acres Seasonality: March 1 to October 31

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	BAKE 1136	1	Bedrock	2.5	9S/40E-18 SW-SE	568' N, 671' E fr S ¼ cor S 18
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	3465	?	41.69	3/28/1990	575	?	0-575		Yes	1100	166	?

Use data from application for proposed wells.

A4. **Comments: The well was constructed in 1954-1955 and the log fails to report whether there is a surface seal and the intervals where the casing is perforated. See comments at D3 and attached e-mails.**

A5. **Provisions of the Powder** _____ Basin rules relative to the development, classification and/or management of ground water 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: _____

C. GROUND WATER/SURFACE WATER CONSIDERATIONS. OAR 690-09-040

C1. **690-09-040 (1):** Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	Granite and/or other pre-Tertiary rocks (MzPza), possibly also the overlying terrace gravels (Qtg)	<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: Local well logs appear to indicate that the bedrock aquifer is under 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	Powder River	3423±	3435	7900	<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"/>
						<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"/>

Basis for aquifer hydraulic connection evaluation: The bedrock aquifer is likely discharging to overlying and adjacent younger deposits and therefore is in indirect and likely inefficient hydraulic connection with the river.

Water Availability Basin the well(s) are located within: Powder R > Snake R ab Rock Cr (30902327).

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"/>
		<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: This section does not apply.

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													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)													
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: 1 Logid: BAKE 1136

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: There is no well seal reported on the log. See the attached e-mails for some background information, since this well was recently considered to be converted to a municipal well. It is unknown whether that proposal is still on the table, given the issues regarding its construction.**

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

Wate... ty Table

Mike Zwart

From: Bob Maynard
Sent: Thursday, September 19, 2013 10:22 AM
To: Mike Zwart
Cc: Kris Byrd; Ivan Gall; Jason Spriet
Subject: RE: New Water Right Application

Hi Mike, just so happens I have been to this well a year or so ago. It has a large concrete pad poured around it so I was unable to check for a seal, I told the farmer that was leasing the land at the time that if he wanted to add land to the permit that he would have to remove the pad so I could do a seal check, he passed at that point. This well is also in the light right now as the owner wants to sell it to the city to be used for city drinking water. We also talked about this well back in 8/6/13 (e-mail), the city had asked me about using it so I asked you to take a fast look at it. If I may suggest, I think that if this well is to have new water rights on it (already has existing), I would like to see the pad removed, a seal check performed, and the well camered, if the well is to be used for city drinking water, I want to see where that water is coming from, especially beings I drink it.

Bob

From: Mike Zwart
Sent: Thursday, September 19, 2013 9:36 AM
To: Kris Byrd; Bob Maynard; Ivan Gall
Cc: Mary Rohling
Subject: New Water Right Application

Hello,

I have just begun a review of file G-17718. It proposes to use BAKE 1136, just west of Baker City. This well, known as the Charlie well, was constructed in 1955 and is authorized under U-696 (Certificate 23385). The log is silent as to whether a surface seal was provided. It is cased to the bottom and perforated, but the log fails to provide the perforated interval(s). So, consider this to be a heads-up that I am unable to make a finding as to whether the well meets current standards. I am hoping that there is some past inspection on file that would verify the existence of a well seal. I am not as concerned about the perforations, but it would be good information to know. Thanks.

Mike

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Mike Zwart

From: Mike Zwart
Sent: Tuesday, August 06, 2013 11:07 AM
To: Bob Maynard
Subject: RE: BAKE 1136

Bob,

Thanks for the heads-up.

Looking at the log, I see nothing on it to suggest that the well needs to be sealed to more than the 18-foot minimum. Jen says that the city probably has some data for this well on file as part of their monitoring of their ASR project. Let me know if I need to chime in with anything else.

Mike

From: Bob Maynard
Sent: Tuesday, August 06, 2013 10:05 AM
To: Mike Zwart
Cc: Jason Spriet; Rick Lusk
Subject: BAKE 1136

Hi Mike, hope all is well in your neck of the woods, everything is fine over here as long as you don't drink the water, ha ha!!

I was at a meeting last night with the City of Baker and a landowner, they are proposing to use an old well for part of the city's water supply till they can get their parasite problems figured out. The well is BAKE 1136, the log does not show a seal of any kind and also does not show any perforations or source (depth) of the water bearing zones. The landowner is proposing to go in, remove the building, concrete floor, pumping equipment, camera the well, then have the driller seal the well, if needed, and then develop the well and take water samples. They are meeting with the drinking water division this week to work out some other details. What they have requested from me is to give them a sealing depth if the old well is found not having one. I have been at the well site, there is about an 8 X 8 concrete floor poured around the well casing with a building built on it, so I cannot test for a seal until everything has been removed. I don't see anything in the area that has a seal deeper than say 20 ft, including the wells I drilled. They are also planning to add more acres to the existing water rights permit later on. The permit that they gave me is Application # U-781, Certificate # 23385, and Abstract of Permit # U-696. I am sure you will see this here real soon as they need drinking water bad, and would like to get started on the well yesterday, ha ha!!

Let me know what you think, thanks Bob

Application G-17718, Greg Sackos

