Groundwater Application Review Summary Form

Application # G- 18298 Re-Review GW Reviewer <u>James Hootsmans</u> Date Review Completed: 8/1/2025 **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).

WATER RESOURCES DEPARTMENT

MEM	Ю				_August 1, 2025_								
TO:		Applica	Application G- <u>18298 Re-Review</u>										
FRO	M:		GW: James Hootsmans (Reviewer's Name)										
SUBJ	ECT: S	Scenic W	aterway	y Interf	erence l	Evaluat	ion						
	YES NO		source o		-	is hydr	aulically	y connec	cted to	a State S	Scenic		
	YES NO	Use	the Scen	nic Wat	erway C	Conditio	n (Cond	ition 7J)				
	interfe	RS 390.3 Frence with trence is contact.	h surfac	e water	that con					_			
	interfe Depar propo	RS 390.8 rence with timent is sed use ain the fi	th surfac unable will me	e water to find easurab	that cor that the ly redu	ntributes ere is a ice the	to a sce prepone surface	enic wat derance e water	erway; e of evi o	therefo dence tl	re, the		
Calculo per crit	ate the pe teria in 3	ON OF I rcentage of 90.835, do is unable to	f consump not fill in	tive use b the table	y month o but check	k the "und	ıble" opti						
Water	way by	is permit the follo flow is r	wing an			-		_			use by	which	
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	7	

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: FROM		r Rights Secti ndwater Secti	on on	Date8/1/2025 J. Hootsmans Reviewer's Name						
SUBJE	CT: Appli	cation G- 18	3298 Re-Review_							
SCBIL	тррп		<u></u>	Superseucs	10,10	,, or <u>1/21/2010</u>		Dat	te of Review	(s)
OAR 69 welfare, to determ	90-310-130 (1) To safety and heal mine whether the	The Department th as described e presumption	TION; GROUN t shall presume that in ORS 537.525. It is established. OAR s based upon avail	t a proposed go Department sta 2 690-310-140	iff rev	iew groundwater a	pplicat e be mo	ions undo	er OAR 69 condition	90-310-140 led to meet
A. <u>GE</u>	NERAL INFO	RMATION	Applicant's I	Name: W	ell Sp	orings Ranch		Cou	inty: <u>Um</u>	atilla
A1.	Applicant(s) se	ek(s) <u>0.288</u>	cfs from 1	well(s) i	n the	Umatilla Basi	n			Basin,
				subbasii	1					
A2.	Proposed use _	Irrigati	on and Domestic	Seasona	ality:	March 1 – Octob	er 31 a	nd year-r	ound	
A3.	Well and aquife	er data (attach	and number logs	for existing w	vells;	mark proposed w	ells as	such und	der logid):	, •
POA Well	Logid	Applicant's Well #	Proposed Aquifer	Rate(CIS	ed s)	Location (T/R-S QQ-Q))			bounds, e.g. NW cor S 36
2	UMAT 54259	1	CRB	0.288		1S/33E-7 NW-NE				
3 4										
* Alluviu	ım, CRB, Bedrock	ζ								
POA Well	Well Depth (ft) 230	Seal Interval (ft) 0-21	Casing Intervals I (ft) +1-21	Liner Intervals (ft)	Perfo	orations Or Screens (ft)	(gpn	Well Yield Draw (gpm) (f		Test Type A
3										
4										
POA Well	Land Surface Ele (ft an	nsl)	Depth of First Water (ft bls)	SWL (ft bls)		SWL I Date 04/24/2001		Reference Level (ft bls)		erence Level Date
2 3										
4										
A4.	Comments: This review is following the July 21, 2016 review in relation to the OWRD issued memo on the previous review's determination on "cannot be determined to be over appropriated". No new information was provided by the applicant since the original application. The proposed POA is for domestic use annually and irrigation use during the March to October irrigation season.									
A5. 🗆	Provisions of the Umatilla 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:									
А6. 🗆	Well(s) #		,,	,	,	tap(s) an aquifer l	limited	by an ad		/e restriction.

B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070

BI.	Bas	Based upon available data, I have determined that groundwater* for the proposed use:											
	a.	\square is over appropriated, \boxtimes is not over appropriated, or \square 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.	\square will not or \square 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.	\square will not or \square 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) 7RLN; Large 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: The applicant's well is located in an area that contains basalt flows of the Columbia River Basalt Group (CRBG) from land surface to depths of several thousand feet. Within the CRBG, most water occurs in confined aquifers that occupy thin rubble zones (interflow zones) at the contacts between lava flows. The interiors of the basalt flows generally have low porosity and permeability and act as confining beds. This geometry generally produces a stack of thin aquifers (interflow zones) separated by thick confining beds (flow interiors). The low permeability of the basalt flow interiors limits the natural vertical connection between overlying aquifers.

Surficial geologic mapping (Madin and Geitgy, 2007) and geochemical analysis of rock chip samples collected during drilling of the applicant's well indicates that it penetrates multiple flows of the Winter Water Member of the Grande Ronde Basalt Formation.

The proposed rate is 0.288 cubic feet per second (cfs) which is approximately 129 gallons per minute (gpm). Well statistics of 12 wells in T1S 33 E sections 5, 6, 7 and 8 indicate that the median well yield is 100 gpm and the maximum is approximately 500 gpm (see Well Statistics below). Therefore the proposed use is within the capacity of the resource.

Water level data is sporadic in the region. Where there is data, water levels have remained fairly constant. At the time of this review, groundwater for the proposed use is determined to be not over appropriated (See Water Level Measurements below).

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	CRB	\boxtimes	

Date: 8/1/2025

Basis for aquifer confinement evaluation: The Columbia River basalt aquifers are confined by the dense flow zones that
restrict vertical movement of groundwater. Nearby CRBG well logs report static water levels above the water-bearing zone,
indicating a confined aquifer or series of aquifers.

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)		Hydraul Connec NO A	Subst. Int	Potential for Subst. Interfer. Assumed? YES NO	
1	1	McKay Creek	1655	1600- 1540	3050	×			×	

Basis for aquifer hydraulic connection evaluation: Hydraulic connection between CRBG aquifers and local streams typically occurs where the streams have eroded through water-bearing interflow zones in the basalts. Locally, the basalts dip approximately 3-5 degrees to the west; water-bearing zones in the applicant's well are coincident in elevation with the local reach of McKay Creek. It is likely that these water-bearing zones are truncated by McKay Creek and are hydraulically connected to the creek. The water level elevation in the applicant's well is higher than the elevation of McKay Creek, this also indicates groundwater flow is toward the creek.

Water Availability Basin the well(s) are located within: 70682: MCKAY CR > UMATILLA R - AB SPRING HOL

C3a. **690-09-040** (4): Evaluation of stream impacts for <u>each well</u> that has been determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water (SW) source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that SW source, 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 < 1/4 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			IS70682A	4.20	⊠	1.90	\boxtimes	<25%	\boxtimes

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: The presence of fine-grained material in the streambed of McKay Creek will delay pumping impacts so that interference after 30 days of pumping will not exceed 25% of the pumping rate.

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-Di	istributed	Wells											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	9/
Well Q	as CFS												
Interfere	ence CFS												
D: 4 11	4 1 777 11	•								•			
Well	uted Well SW#	s Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	9/
Well Q	as CFS												
Interfere	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	9/
Well Q	as CFS												
Interfere	ence CFS												
(A) - To	tal Interf.												
	% Nat. Q												
$(\mathbf{C}) = 1$	% Nat. Q												
(D) = ($(\mathbf{A}) > (\mathbf{C})$	√	√	✓	✓	✓	√	√	√	√	√	✓	√
$(\mathbf{E}) = (\mathbf{A})$	/ 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:

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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.

"Columbia River Basalt Stratigraphy in the Pacific Northwest". USGS – Oregon Water Science Center website.

http://or.water.usgs.gov/projs_dir/crbg/. Accessed July 2016.

Date: 8/1/2025

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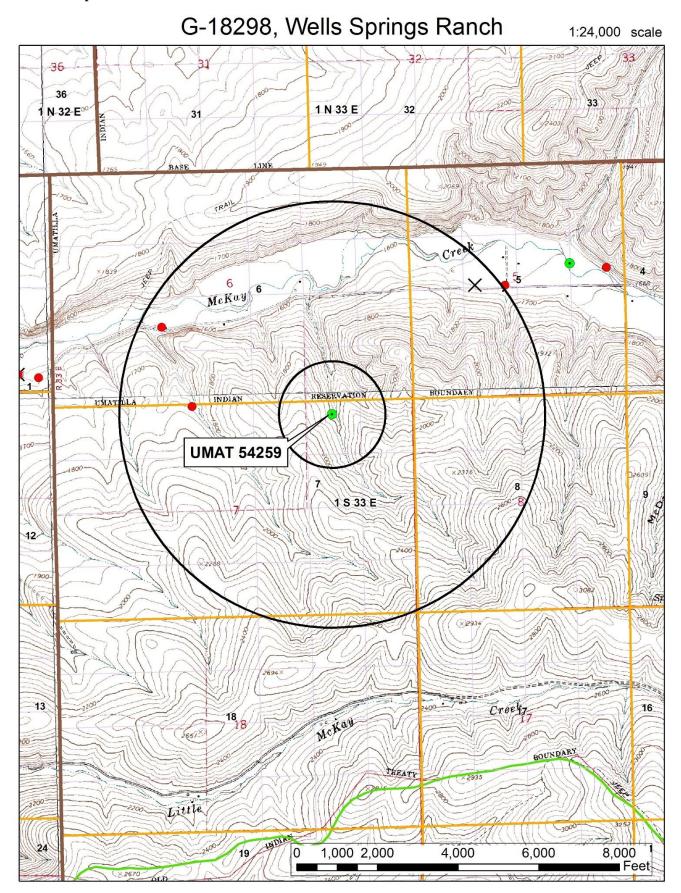
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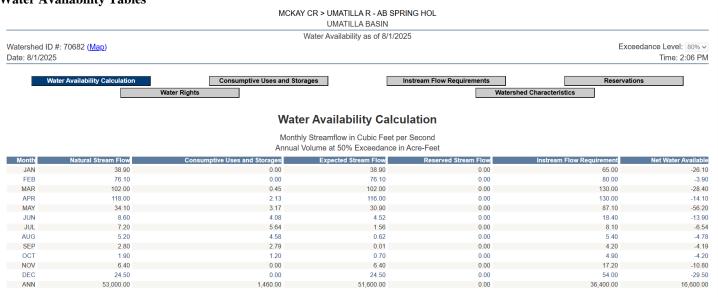
D. WELL CONSTRUCTION, OAR 690-200

D1.	Well #: _	Logid:									
D2.	THE WELL does not appear to meet current well construction standards based upon:										
	a. 🗆 1	review of the well log;									
	b. 🗆 1	field inspection by									
		report of CWRE									
	d. 🗆 d	other: (specify)									
D3.	THE WE	ELL construction deficiency or other comment is described as follows:									
D4. [Route to	o the Well Construction and Compliance Section for a review of existing well construction.									

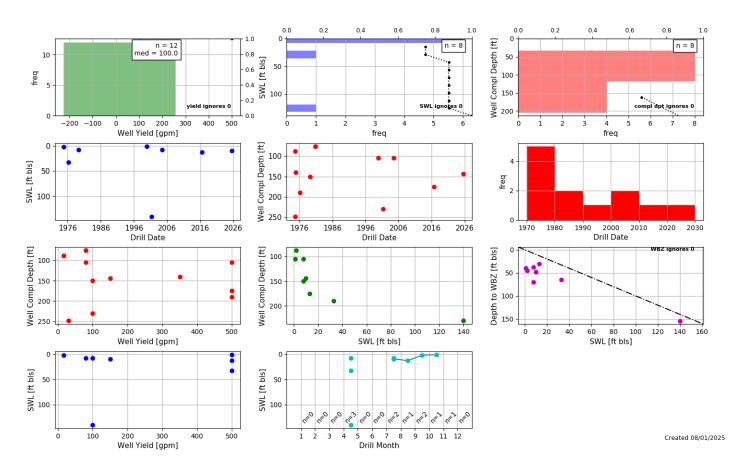
Well Location Map



Water Availability Tables



Well Statistics



Water-Level Measurements in Nearby Wells

