Groundwater Application Review Summary Form

Application # G- <u>19468</u>

GW Reviewer <u>Travis Brown</u> Date Review Completed: <u>5/9/2025</u>

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

MEMO

5/9/2025

TO: Application G-<u>19468</u>

FROM: GW: <u>Travis Brown</u> (Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

- □ YES The source of appropriation is hydraulically connected to a State Scenic Waterway or its tributaries
- □ YES
 □ Use the Scenic Waterway Condition (Condition 7J)
 □ NO
- Per ORS 390.835, the Groundwater Section is **able** to calculate ground water interference with surface water that contributes to a Scenic Waterway. The calculated interference is distributed below
- □ Per ORS 390.835, the Groundwater Section is unable to calculate ground water interference with surface water that contributes to a scenic waterway; therefore, the Department is unable to find that there is a preponderance of evidence that the proposed use will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway

DISTRIBUTION OF INTERFERENCE

Calculate the percentage of consumptive use by month and fill in the table below. If interference cannot be calculated, per criteria in 390.835, do not fill in the table but check the "unable" option above, thus informing Water Rights that the Department is unable to make a Preponderance of Evidence finding.

Exercise of this permit is calculated to reduce monthly flows in <u>[Enter]</u> Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO:	Water Rights Section		Date 5/9/2025
FROM:	Groundwater Section	Travis Brown	
		Reviewer's Name	
SUBJECT:	Application G- 19468	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: Oregon Parks and Recreation Department County: Marion

A1.	Applicant(s) seek(s)	0.45	cfs from	1	well(s) in the	Willamette	Basin,
	Molalla River-Pudding River				subbasin		

A2. Proposed use Commercial (State Park) (323 af/yr) Seasonality: Year Round

A3. Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under logid):

POA 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	MARI 55530	1	Basalt	0.45	8S/1E-26 NENW	1310' S, 1740' E fr NW cor S 26		
* Alluvium CRB Bedrock								

Alluvium, CRB, Bedrock

POA	Well Depth	Seal Interval	Casing Intervals	Liner Intervals	Perforations Or Screens	Well Yield	Drawdown	Test Type
Well	(ft)	(ft)	(ft)	(ft)	(ft)	(gpm)	(ft)	
1	1042	0-96; 96-365; 880-930	1.5-933	NA	NA	200	Unknown	Air

POA	Land Surface Elevation at Well	Depth of First Water	SWL	SWL	Reference Level	Reference Level
Well	(ft amsl)	(ft bls)	(ft bls)	Date	(ft bls)	Date
1	1745	32	690	1/4/2000	TBD	TBD

Use data from application for proposed wells.

Comments: The proposed POA and POU are in Silver Falls State Park, ~7 miles northeast of the City of Stayton, Oregon. A4.

A5. Provisions of the Willamette Basin rules relative to the development, classification and/or

management of groundwater hydraulically connected to surface water \Box are, or \boxtimes are not, activated by this application. (Not all basin rules contain such provisions.) Comments: The proposed POA develops a confined aquifer and is more than 1/4 mile from the nearest hydraulically

connected surface water; per OAR 690-502-0240, the relevant basin rules do not apply.

A6. Well(s) # _____, ____, ____, tap(s) an aquifer limited by an administrative restriction. Name of administrative area:

Comments: The proposed POA is ~1,900 ft east (outside) of the Stayton-Sublimity Groundwater Limited Area.

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

- B1. **Based upon available data**, I have determined that <u>groundwater</u>* 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. \Box will not or \Box 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) <u>7RLN (15 ft, 15 ft); 7t (dedicated measuring tube);</u> <u>large water use reporting</u>;
 - ii. \square The permit should be conditioned as indicated in item 2 below.
 - iii. \Box 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. \square Condition to allow groundwater production from no shallower than <u>930</u> ft. below land surface;
 - c. Condition to allow groundwater production only from the <u>Columbia River Basalt</u> groundwater reservoir between approximately______ft. and______ft. below land surface;
 - d. U 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 proposed POA (MARI 55530) develops a basalt aquifer at substantial depth (>930 ft bls [815 ft ams1]); based on geologic mapping for the area, the developed aquifer is most likely within the Columbia River Basalts (Norman, 1980; Yeats et al., 1996). The developed aquifer is confined, with a reported static water level (690 ft bls, 1/4/2000) several hundred feet above the noted upper water-bearing zone from 995-1000 ft bls (with an additional waterbearing zone noted from 1017-1023 ft bls with the same static water level).

The closest well with any time series water level data is MARI 15579, ~2.5 miles to the southwest of the proposed POA. MARI 15579 exhibited an overall decline in water level of ~56 ft between 1965 and 1989 but showed ~11 ft of recovery between 1989 and 1997, although it was still down ~45 ft from its highest value in 1965; more recent data was not available. The nearest well with recent water level data is MARI 18916, ~2.9 miles northeast of the proposed POA, which has shown an overall decrease in water level of ~8.5 ft since it was drilled in 1994 (see attached Hydrographs). Wells further to the north with current data show relative stability from the early 2000s through 2025 (see attached Hydrographs). However, between 1999 and 2002, MARI 54080 showed an overall decline of ~42.3 ft from the water level reported on its well completion report in 1999. Similarly, between 1999 and 2002, MARI 54278 showed an overall decline of ~31.0 ft from the water level reported on its well completion report in 1999. This pattern of steep initial decline followed by subsequent stabilization may indicate these wells (MARI 54080 and MARI 54278) commingle multiple aquifers. The preponderance of the current water level data indicates the proposed aquifer is not over appropriated.

MARI 68685, ~2 miles southwest of the proposed POA, is the nearest known neighboring well likely to produce from the same aquifer as the proposed POA. Given the substantial intervening distance, it is unlikely that the proposed use will cause injury or exceed the standard permit condition limits on interference with MARI 68685 or similarly located wells.

To protect senior users and the groundwater resource, the conditions specified in B1(d) and B2 are strongly recommended for any permit issued pursuant to this application.

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	Basalt	\boxtimes	

Basis for aquifer confinement evaluation: <u>Columbia River Basalt aquifers (i.e., separate interflow zones) are typically</u> confined by dense flow interiors which restrict vertical movement of groundwater. In addition, the well log for the proposed POA and nearby well logs indicate confined conditions as water levels are rising above the water bearing zones.</u>

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 ¹/₄ 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)		Ċonne	lically cted? ASSUMED	Potential for Subst. Interfer Assumed? YES NO	
1	1	Smith Creek	~1,055ª	~1,360 ^b	5,280		\boxtimes			\boxtimes
1	2	Unnamed Tributary to South Fork Silver Creek	~1,055ª	~1,370 ^b	5,280		\boxtimes			
1	3	Unnamed Tributary to East Fork Drift Creek	~1,055ª	~1,250	5,280		\boxtimes			
1	4	East Fork Drift Creek	~1,055ª	~1,225 ^b	5,280		\boxtimes			\boxtimes
1	5	Unnamed Tributary to West Fork Drift Creek	~1,055ª	~1,235 ^b	5,280					
1	6	West Fork Drift Creek	~1,055 ^a	~1,345 ^b	5,280		\boxtimes			\boxtimes
1	7	Mill Creek	~1,055ª	~815 ^b	~15,000	Χ				\boxtimes

Basis for aquifer hydraulic connection evaluation: <u>The proposed POA is cased to 930 feet bls and sealed to 930 feet bls</u>. None of the surface water sources within 1 mile of the proposed POA have incised to the depth of the water-bearing zone developed by the proposed POA. The nearest surface water that is likely hydraulically connected to the POA is Mill Creek, ~2.8 miles to the southwest.

^a Well report for MARI 55530.

^b LIDAR.

Water Availability Basin the well(s) are located within: <u>SW 1-2: SILVER CR > PUDDING R - AT MOUTH</u> <u>SW 3-6: DRIFT CR > PUDDING R - AT MOUTH</u> SW 7: MILL CR > WILLAMETTE R - AT MOUTH

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 < 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?

C3b. **690-09-040 (4):** Evaluation of stream impacts <u>by total appropriation</u> 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: Based on the existing well construction, no streams within 1 mile of the POA are hydraulically connected.

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
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS												
Distrib	uted Wel	ls						-					
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q	as CFS												
Interfere	ence CFS												
$(\mathbf{A}) = \mathbf{T}_{\mathbf{a}}$	tal Intarf												
. ,	tal Interf.												
$(\mathbf{B}) = 80$	% Nat. Q												
(C) = 1 °	% Nat. Q												
(D) - (A) > (C)					\sim		~	\checkmark	\checkmark		\checkmark	
	$(B) \times 100$	%	%	%	%	%	%	%	%	%	%	%	%

(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: Depletion of the nearest hydraulically connected stream (SW 7/Mill Creek) could not be quantitatively estimated due to the lack of an appropriate analytical model for the hydrogeologic setting.

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. \Box The permit should contain condition #(s)_
 - ii. \Box The permit should contain special condition(s) as indicated in "Remarks" below;

C6. SW / GW Remarks and Conditions: None

References Used: Application File: G-19468

- Norman, E. S., 1980, Geology of the Columbia River Basalt in Silver Falls State Park, Oregon: University Honors Thesis, Portland State University, Portland, OR, 43 p.
- Yeats, R. S., Graven, E. P., Werner, K. S., Goldfinger, C., Popowski, T. A., 1996, Geologic map of the central and southern Willamette Valley, Benton, Lane, Linn, Marion, and Polk Counties, Oregon, USGS Professional Paper 1560, Plate 2B.

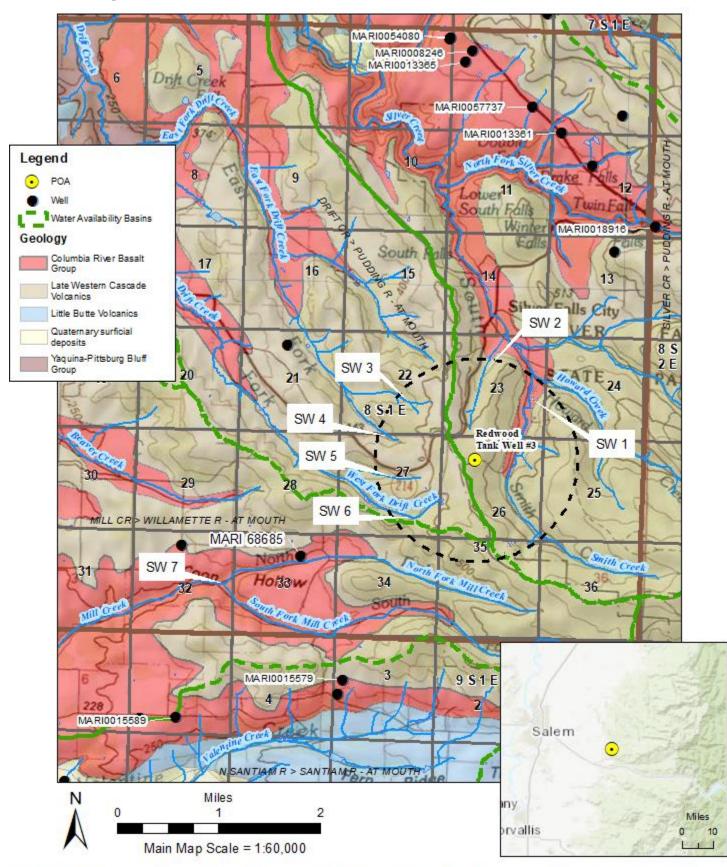
D. WELL CONSTRUCTION, OAR 690-200

D1.	Well #:	Logid:	
D2.	 a. □ review of the r	ot appear to meet current well construction standards base ie well log; tion by WRE ify)	- ; ;
D3.	THE WELL constr	uction deficiency or other comment is described as follows:	:
D4.	□ Route to the Well	Construction and Compliance Section for a review of existi	ing well construction.

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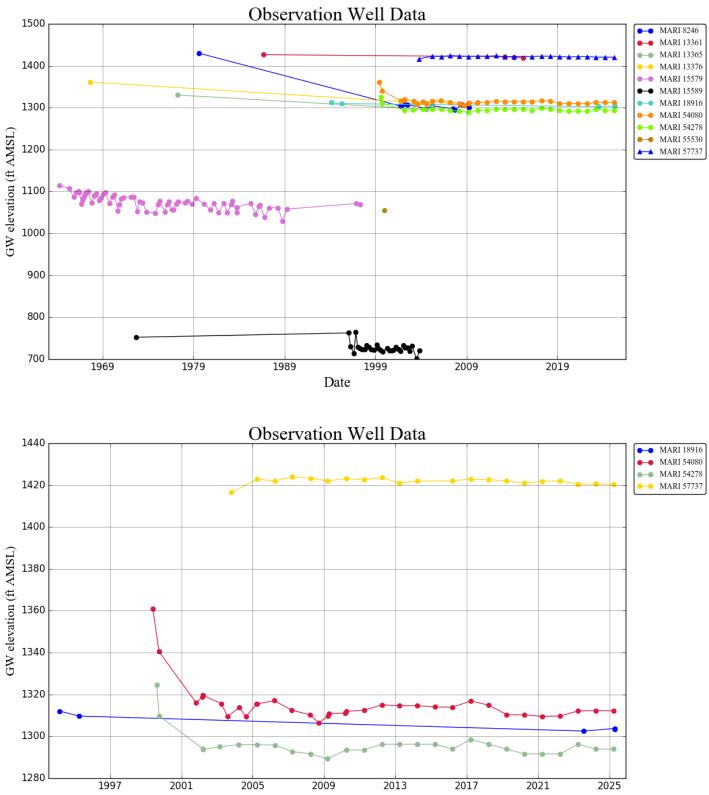
Well Location Map

G-19468



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community Copyright/D 2013 National Geographic Society, i cubed

Hydrographs



Date

Water Availability Tables Water Availability Analysis **Detailed Reports** MILL CR > WILLAMETTE R - AT MOUTH WILLAMETTE BASIN Water Availability as of 5/8/2025 Watershed ID #: 30200701 (Map) Exceedance Level: 80% v Time: 5:06 PM Date: 5/8/2025 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

Annual volume at 30% Exceedance in Acte-reet						
Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	236.00	69.90	166.00	0.00	0.00	166.00
FEB	224.00	67.80	156.00	0.00	0.00	156.00
MAR	206.00	67.60	138.00	0.00	0.00	138.00
APR	155.00	67.50	87.50	0.00	0.00	87.50
MAY	78.30	68.00	10.30	0.00	0.00	10.30
JUN	40.70	66.30	-25.60	0.00	0.00	-25.60
JUL	20.60	65.20	-44.60	0.00	0.00	-44.60
AUG	16.30	70.30	-54.00	0.00	0.00	-54.00
SEP	17.20	69.10	-51.90	0.00	0.00	-51.90
OCT	20.30	66.90	-46.60	0.00	0.00	-46.60
NOV	59.30	67.00	-7.72	0.00	0.00	-7.72
DEC	167.00	69.00	98.00	0.00	0.00	98.00
ANN	135,000.00	49,200.00	96,200.00	0.00	0.00	96,200.00