

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14717 (RA) re-review

GW Reviewer Steve Ahlquist Date Review Completed: 6/24/2026

Summary of Same Source Review:

☐ The proposed change in point of appropriation is not within the same aquifer as per OAR 690-380-2110(2).

Summary of Water Level Decline Condition Review:

☐ Water levels at the original point(s) of appropriation have exceeded the allowed decline threshold defined by conditions in the originating water right.

Summary of Injury Review:

☐ The proposed transfer will result in another, existing water right not receiving previously available water to which it is legally entitled or result in significant interference with a surface water source as per 690-380-0100(3).

Summary of GW-SW Transfer Similarity Review:

☐ The proposed SW-GW transfer doesn't meet the definition of "similarly" as per OAR 690-380-2130.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations.



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Ground Water Review Form:

- ☐ Water Right Transfer
☒ Permit Amendment
☐ GR Modification
☐ Other

Application: T-14717 (RA)

Applicant Name: City of Monmouth

Proposed Changes: ☐ POA ☒ APOA ☐ SW→GW ☒ RA
☐ USE ☐ POU ☐ OTHER

Reviewer(s): Steve Ahlquist

Date of Review: 6/24/2026

Date Returned to WRSD: 6/24/2026

The information provided in the application is insufficient to evaluate whether the proposed transfer may be approved because:

- ☐ The water well reports provided with the application do not correspond to the water rights affected by the transfer.
- ☐ The application does not include water well reports or a description of the well construction details sufficient to establish the ground water body developed or proposed to be developed.
- ☐ Other _____

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1. Basic description of the changes proposed in this transfer: This review is for the amended application received on April 15, 2026, and supersedes the previous groundwater review completed on September 11, 2025. The applicant proposes to add three additional points of appropriation (APOAs) for Permit G-12976 which authorizes 6.0 cubic feet per second (cfs) from two POAs (Well A/POLK 50392 & Well B/POLK 50390) for year-round municipal use. The proposed APOAs are POLK 52513, POLK 52861, and POLK 52953, located adjacent to the Willamette River.
 2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: The authorized POAs and proposed APOAs all obtain water from unconsolidated sands and gravels of the Holocene floodplain of the Willamette River (Conlon and others, 2005; Woodward and others, 1998).
 3. a) Is the existing authorized POA subject to a water level decline condition?
☒ Yes ☐ No Comments: POLK 50392 and POLK 50390 are subject to a water level decline condition for Permit G-12976 to allow no more than 25 feet of decline over any period.

4. b) If yes, for each POA identify the reference level, most recent spring-high water level, and whether an applicable permit decline condition has been exceeded: Reference levels have not been set for the POAs. Permit G-12976 includes a condition requiring the water user to submit a monitoring plan that "stipulates a reference water level against which any water-level declines will be compared." A monitoring plan was submitted on May 26, 2005, and approved on July 5, 2005, identifying the reference level as the initial water level measurement to be taken in September 2005. OWRD records indicate the first static water level for POLK 50392 was collected in May 2011 and no water levels have been reported for POLK 50390. Water levels in well POLK 50392 appear to be reasonably stable since 2011, and the permit's decline thresholds have not been exceeded.
5. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
☐ Yes ☒ No Comments: The authorized and proposed POAs develop the Willamette alluvial aquifer system.
- b) If yes, estimate the portion of the right supplied by each of the sources and describe any limitations that will need to be placed on the proposed change (rate, duty, etc.): N/A
6. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another ground water right**?
☒ Yes ☐ No Comments: There are several residential properties located within 500 feet of the proposed APOAs that may have domestic wells.
- b) If yes, would this proposed change, at its maximum allowed rate of use, likely result in another groundwater right not receiving the water to which it is legally entitled?
☐ Yes ☒ No If yes, explain: The proposed APOAs are within 100 feet of the Willamette River and are completed in highly transmissive coarse-grained Holocene flood plain sediments that have an efficient hydraulic connection with the stream. Due to the strong hydraulic connection and proximity to the river, the proposed APOAs will obtain most water from the Willamette River so interference with other groundwater users is expected to be minimal.
7. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another surface water source**?
☒ Yes ☐ No Comments: The proposed APOAs are located within 100 feet of the Willamette River whereas the authorized POAs are over 1-mile from the Willamette River. The reduced intervening distance will result in an increase in interference with the Willamette River.
- b) If yes, at its maximum allowed rate of use, what is the expected change in degree of interference with any **surface water sources** resulting from the proposed change?
Stream: Willamette River ☒ Minimal ☐ Significant
Stream: _____ ☐ Minimal ☐ Significant
Provide context for minimal/significant impact: The Hunt (2003) model, which simulates stream depletion from pumping in a confined aquifer, was used to estimate the change in interference with the Willamette River as a result of the proposed changes. Model results indicate that stream depletion could increase by up to approximately 49% of the average pumping rate after 41 days of continuous pumping, and by 29% after 365 days. To reduce the increase in streamflow depletion associated with the proposed APOAs, the applicant has proposed reducing the authorized diversion rate under permit G-12976 from

6.0 to 4.0 cfs, as proposed in a December 16, 2025 email from the applicant's agent. At this reduced pumping rate, Hunt model results indicate no net increase in streamflow depletion from the Willamette River after 365 days of continuous pumping, and a maximum increase in seasonal streamflow depletion of 1.7 cfs over shorter pumping durations.

For comparison, Watershed ID# 183 WILLAMETTE R > COLUMBIA R – AB MILL CR, which encompasses the adjacent reach of the Willamette River, has an estimated 990 cfs of Net Water Available in August (the month of lowest expected flow) at the 80 percent Exceedance Level (see attached Water Availability Analysis). Therefore, the change in degree of interference with the Willamette River resulting from the proposed change is expected to be minimal.

8. For SW-GW transfers, will the proposed change in point of diversion affect the surface water source similarly (as per OAR 690-380-2130) to the authorized point of diversion specified in the water use subject to transfer?
☐ Yes ☐ No Comments: N/A
9. What conditions or other changes in the application are necessary to address any potential issues identified above: The authorized rate under G-12976 should be diminished from 6.0 to 4.0 cfs to avoid a significant increase in interference with the Willamette River.
10. Any additional comments: Permit G-12976 is subject to Fish Persistence Conditions as stipulated in the last Extension of Time, signed on January 6, 2012. These conditions require water use reductions to maintain minimum fish flow needs in the Willamette River. Water use reductions are to be calculated based on the undeveloped portion of the permit having PSI with the Willamette River (E_{PSI}). Any relocation of POAs under this permit requires a new value of E_{PSI} to be quantified. Because the proposed APOAs are located in close proximity to the Willamette River, the new value for E_{PSI} to be used in water use reduction calculations should equal the full proposed rate of 4.0 cfs.

References:

Application File: T-14717

Permit: G-12976

Conlon, T.D., Wozniak, K.C., Woodcock, D., Herrera, N.B., Fisher, B.J., Morgan, D.S., Lee, K.K., and Hinkle, S.R., 2005. Ground-Water Hydrology of the Willamette Basin, Oregon; U.S. Geological Survey Scientific Report 2005-5168.

Gannett, M.W. and Caldwell, R.R., 1998. Geologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington; U.S. Geological Survey Professional Paper 1424-A.

Hunt, B., 2003. Unsteady stream depletion when pumping from semiconfined aquifer: Journal of Hydrologic Engineering, January/February, 2003.

Woodward, D.G., Gannett, M.W., and Vaccaro, J.J., 1998, Hydrogeologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-B, 82 p.

T-14717 City of Monmouth



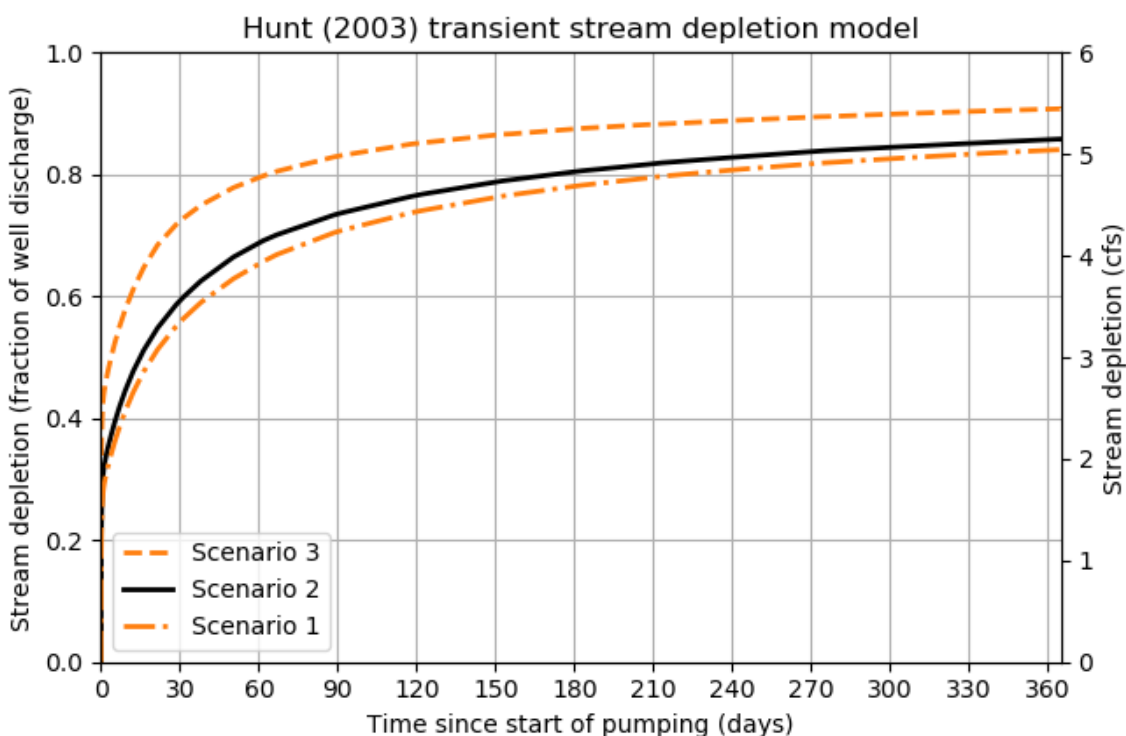
Hunt 2003 Stream Depletion Model Results - Well 2/POLK 52861 with Willamette River

Application type:	T
Application number:	14717
Well number:	2
Stream Number:	1
Pumping rate (cfs):	6
Pumping duration (days):	365
Pumping start month number (3=March)	0
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	40	40	40	ft
Aquifer transmissivity	T	20000	35000	50000	ft ² /day
Aquifer storativity	S	.01	.01	.01	-
Aquitard vertical hydraulic conductivity	Kva	0.1	0.1	0.1	ft/day
Aquitard saturated thickness	ba	5	5	5	ft
Aquitard thickness below stream	babs	3	2	1	ft
Aquitard specific yield	Sya	0.1	0.1	0.1	-
Stream width	ws	500	500	500	ft

Stream depletion for Scenario 2:

Days	1	31	62	92	122	153	183	213	244	274	304	335	365
Depletion (%)	31	60	69	74	77	79	81	82	83	84	85	85	86
Depletion (cfs)	1.89	3.59	4.15	4.43	4.61	4.74	4.84	4.92	4.98	5.03	5.07	5.11	5.15



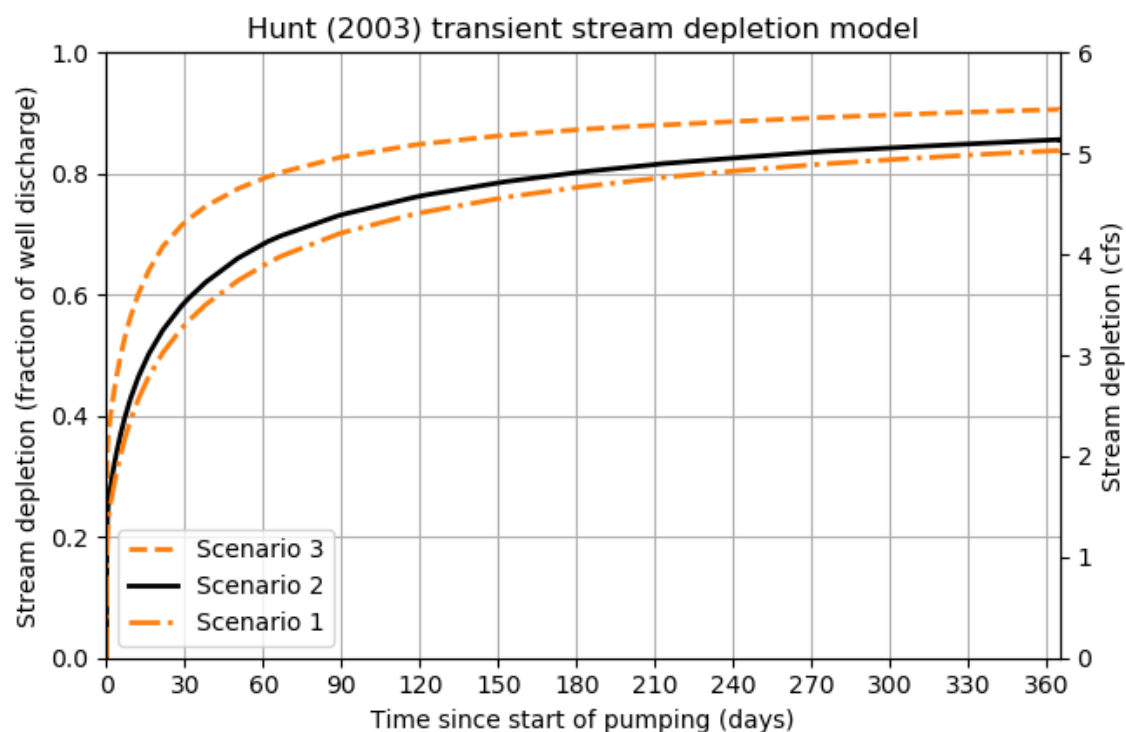
Hunt 2003 Stream Depletion Model Results - Well 3/POLK 52953 with Willamette River

Application type:	T
Application number:	14717
Well number:	3
Stream Number:	1
Pumping rate (cfs):	6
Pumping duration (days):	365
Pumping start month number (3=March)	0
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	80	80	80	ft
Aquifer transmissivity	T	20000	35000	50000	ft ² /day
Aquifer storativity	S	.01	.01	.01	-
Aquitard vertical hydraulic conductivity	Kva	0.1	0.1	0.1	ft/day
Aquitard saturated thickness	ba	3	3	3	ft
Aquitard thickness below stream	babs	3	2	1	ft
Aquitard specific yield	Sya	0.1	0.1	0.1	-
Stream width	ws	500	500	500	ft

Stream depletion for Scenario 2:

Days	1	31	62	92	122	153	183	213	244	274	304	335	365
Depletion (%)	27	59	69	73	77	79	80	82	83	84	84	85	86
Depletion (cfs)	1.60	3.56	4.13	4.41	4.59	4.72	4.82	4.90	4.96	5.02	5.06	5.10	5.14



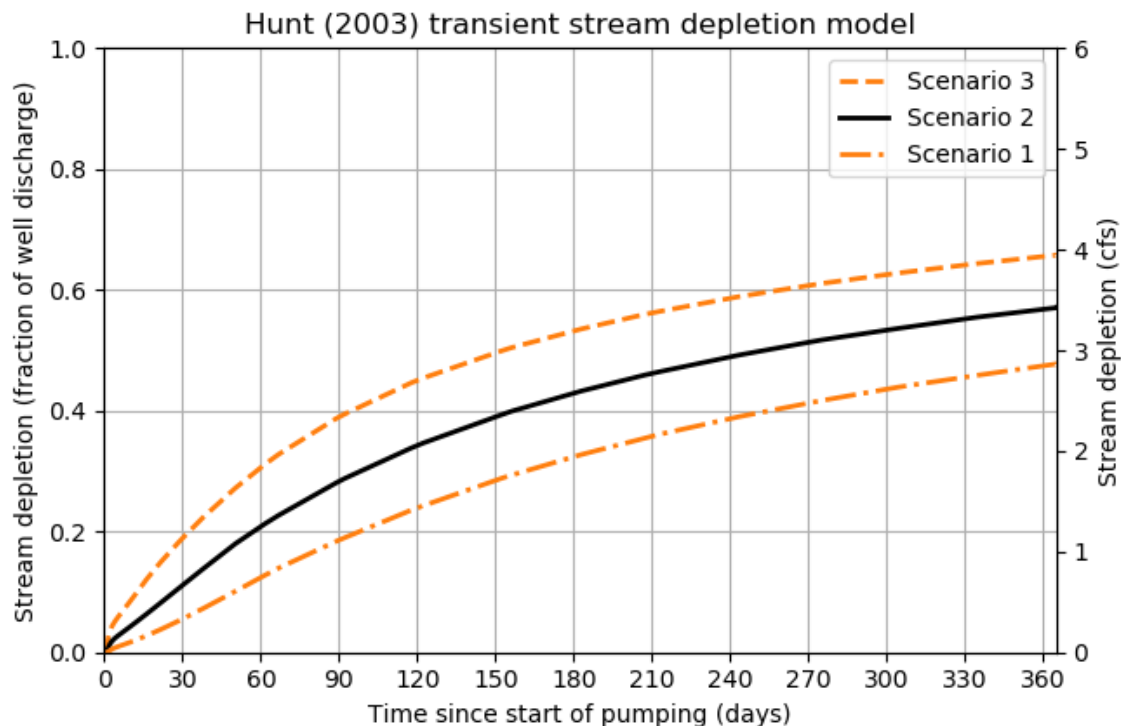
Hunt 2003 Stream Depletion Model Results - Well A/POLK 50392 with Willamette River

Application type:	T
Application number:	14717
Well number:	A
Stream Number:	1
Pumping rate (cfs):	6
Pumping duration (days):	365
Pumping start month number (3=March)	0
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	6000	6000	6000	ft
Aquifer transmissivity	T	20000	35000	50000	ft ² /day
Aquifer storativity	S	.01	.01	.01	-
Aquitard vertical hydraulic conductivity	Kva	0.1	0.1	0.1	ft/day
Aquitard saturated thickness	ba	11	11	11	ft
Aquitard thickness below stream	babs	3	2	1	ft
Aquitard specific yield	Sya	0.1	0.1	0.1	-
Stream width	ws	500	500	500	ft

Stream depletion for Scenario 2:

Days	1	31	62	92	122	153	183	213	244	274	304	335	365
Depletion (%)	0	12	21	29	35	39	43	46	49	52	54	55	57
Depletion (cfs)	0.02	0.69	1.28	1.72	2.08	2.36	2.60	2.79	2.95	3.10	3.22	3.33	3.42



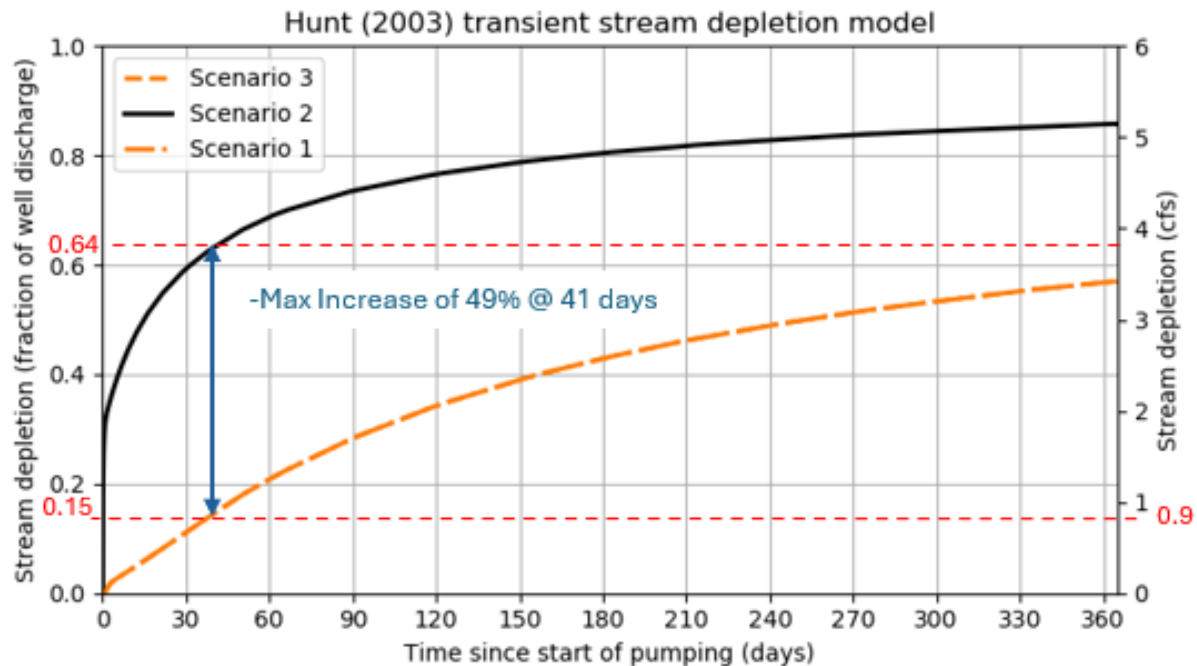
Hunt 2003 Stream Depletion Model Results - Well A(POA) & Well 2(APOA) Comparison

Application type:	T
Application number:	14717
Well number:	
Stream Number:	1
Pumping rate (cfs):	6
Pumping duration (days):	365.0
Pumping start month number (3=March)	0
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	6000	40	6000	ft
Aquifer transmissivity	T	35000	35000	35000	ft ² /day
Aquifer storativity	S	.01	.01	.01	-
Aquitard vertical hydraulic conductivity	Kva	0.1	0.1	0.1	ft/day
Aquitard saturated thickness	ba	11	5	11	ft
Aquitard thickness below stream	babs	2	2	2	ft
Aquitard specific yield	Sya	0.1	0.1	0.1	-
Stream width	ws	500	500	500	ft

Stream depletion for Scenario 2:

Days	1	31	62	92	122	153	183	213	244	274	304	335	365
Depletion (%)	31	60	69	74	77	79	81	82	83	84	85	85	86
Depletion (cfs)	1.89	3.59	4.15	4.43	4.61	4.74	4.84	4.92	4.98	5.03	5.07	5.11	5.15



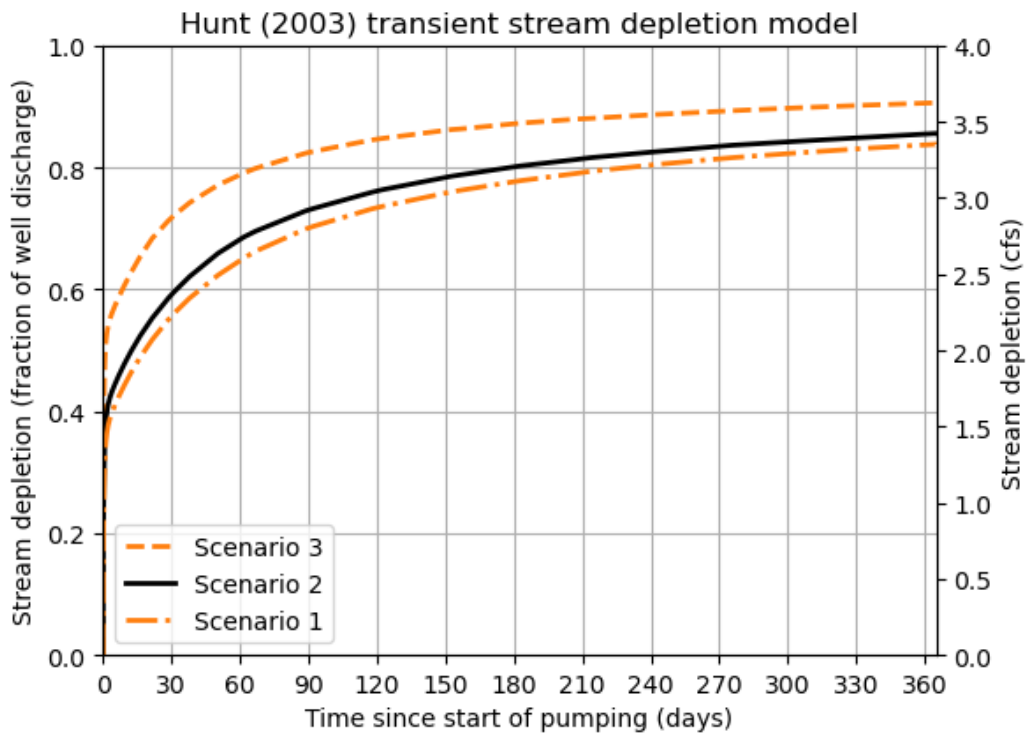
Hunt 2003 Stream Depletion Model Results - Well 2/POLK 52861 Diminished Rate

Application type:	T
Application number:	14717
Well number:	1
Stream Number:	1
Pumping rate (cfs):	4
Pumping duration (days):	365
Pumping start month number (3=March)	0
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	40	40	40	ft
Aquifer transmissivity	T	20000	35000	50000	ft ² /day
Aquifer storativity	S	.01	.01	.01	-
Aquitard vertical hydraulic conductivity	Kva	0.1	0.1	0.1	ft/day
Aquitard saturated thickness	ba	5	5	5	ft
Aquitard thickness below stream	babs	3	2	1	ft
Aquitard specific yield	Sya	0.1	0.1	0.1	-
Stream width	ws	500	500	500	ft

Stream depletion for Scenario 2:

Days	1	31	62	92	122	153	183	213	244	274	304	335	365
Depletion (%)	37	60	69	73	76	79	80	82	83	84	84	85	86
Depletion (cfs)	1.48	2.39	2.74	2.93	3.05	3.14	3.21	3.26	3.31	3.34	3.37	3.40	3.42



Water Availability Analysis for Watershed ID#183

WILLAMETTE R > COLUMBIA R - AB MILL CR AT GAGE 14191000
WILLAMETTE BASIN

Water Availability as of 6/23/2026

Watershed ID #: 183 ([Map](#))

Exceedance Level: 80% ▼

Date: 6/23/2026

Time: 5:24 PM

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	18,400.00	2,250.00	16,200.00	0.00	1,300.00	14,900.00
FEB	20,100.00	7,430.00	12,700.00	0.00	1,300.00	11,400.00
MAR	19,600.00	7,220.00	12,400.00	0.00	1,300.00	11,100.00
APR	18,000.00	6,870.00	11,100.00	0.00	1,300.00	9,830.00
MAY	15,500.00	4,180.00	11,300.00	0.00	1,300.00	10,000.00
JUN	8,310.00	1,690.00	6,620.00	0.00	1,300.00	5,320.00
JUL	4,710.00	1,450.00	3,260.00	0.00	1,300.00	1,960.00
AUG	3,620.00	1,330.00	2,290.00	0.00	1,300.00	990.00
SEP	3,680.00	1,150.00	2,530.00	0.00	1,300.00	1,230.00
OCT	4,650.00	747.00	3,900.00	0.00	1,300.00	2,600.00
NOV	9,400.00	855.00	8,540.00	0.00	1,300.00	7,240.00
DEC	16,700.00	918.00	15,800.00	0.00	1,300.00	14,500.00
ANN	13,500,000.00	2,160,000.00	11,300,000.00	0.00	942,000.00	10,400,000.00