

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14850

GW Reviewer Stacey Garrison Date Review Completed: 5/20/2026

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-14850

Applicant Name: Premiere Forestry, LLC c/o Nathan D. Birkey

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

Reviewer(s): Stacey Garrison

Date of Review: 5/20/2026

Date Reviewed by GW Mgr. and Returned to WRSD: 5/20/2026

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 _____

-
1. Basic description of the changes proposed in this transfer: Applicant proposes to change 25.3 ac of POU and a different POA for Claim GR-2857. Claim GR-2857 authorizes irrigation of 41 ac from POA Pump Well (LINN 9988). The rate and duty assigned to the to-POA (LINN 6963) should be apportioned to a maximum rate of 0.48 cfs (216 gpm) and a maximum annual duty of 75.9 AF. The to-POA (LINN 6963) is also authorized under Claim GR-2530 to irrigate 66.1 ac at a maximum rate 1.671 cfs (750 gpm) and a maximum annual duty of 198.3 AF. This review uses the combined maximum rate of 2.15 cfs (966 gpm) and combined maximum duty of 274.20 AF.
 2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: The to-POA (LINN 6963) is greater than five miles north of the from-POA (LINN 9988) and within a different Water Availability Basin, WAB. However, both POAs develop the unconfined alluvial Willamette aquifer.
 3. a) Is the existing authorized POA subject to a water level decline condition?
☐ Yes ☒ No Comments: _____
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: N/A
 4. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
☐ Yes ☒ No Comments: _____

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

5. 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: The to-POA (LINN 6963) is closer to several other groundwater users, the closest of which is likely the exempt domestic well serving tax lot 2200 at 33823 Santiam Highway.

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 to-POA (LINN 6963) is approximately 1,280 ft from the likely location of the TL 2200 well. The Theis (1935) solution for drawdown was used to assess the potential for injury to the TL 2200 well from the proposed changes (see attached Theis Interference Analysis). Results indicate the proposed change is unlikely to result in the TL 2200 well not receiving the water to which it is legally entitled.

6. 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 to-POA (LINN 6963) is closer (7,520 ft) from the South Santiam River and within the S Santiam R>Santiam R-At Mouth (Watershed ID # 30200601). The from-POA (LINN 9988) is in the Calapooia R>Willamette R-AB Mouth (Watershed ID # 14173500) but is closer to the South Santiam River (11,000 ft) than the nearest perennial surface water in the Calapooia River WAB (15,000 ft, Butte Creek). The reduced intervening distance is likely to result in an increase in interference with the South Santiam 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: South Santiam River ☒ Minimal ☐ Significant

Provide context for minimal/significant impact: The expected increase in depletion from the South Santiam River was assessed using the Hunt (1999) analytical model for stream depletion due to pumping in an unconfined aquifer (see attached Stream Depletion Analysis). Results indicated that stream depletion due to pumping could likely increase by 2% of the rate of withdrawal after 245 days of continuous pumping as a result of the proposed change. Assuming that the to-POA (LINN 6963) was to pump at the maximum rate of 0.156 cfs (70 gpm)* over the full 245 days, the proposed change could result in an additional 1.277 cfs (573 gpm) of depletions to the South Santiam River by the end of the irrigation season. The South Santiam River WAB with the lowest month of natural stream flow is 253 cfs in September; the Net Water Available in September is -224 cfs. The to-POA (LINN 6963) is located closer to the mouth of the South Santiam River than the from-POA (LINN 9988). The change in degree of interference with the South Santiam River by the to-POA (LINN 6963) is anticipated to be minimal.

*The full pumping rate could not be utilized continuously for the entire 245-day period of use without exceeding the maximum allowed duty. For the maximum allowed duty of 75.9 AF at a rate of 0.156 cfs (70 gpm).

7. 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
8. What conditions or other changes in the application are necessary to address any potential issues identified above: N/A
9. Any additional comments: _____

References

Application File: T-14850

Well logs: LINN 9988, LINN 6963, LINN 9980, LINN 6973, LINN 62129

Pump Tests: LINN 56567, LINN 8010, LINN 7665, LINN 50290

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*, Scientific Investigations Report 2005-5168: U. S. Geological Survey, Reston, VA.

Gannett, M.W. and Caldwell, R., 1998, *Geologic framework of the Willamette Lowland aquifer system, Oregon and Washington*, Professional Paper 1424-A, 32 p: U. S. Geological Survey, Reston, VA.

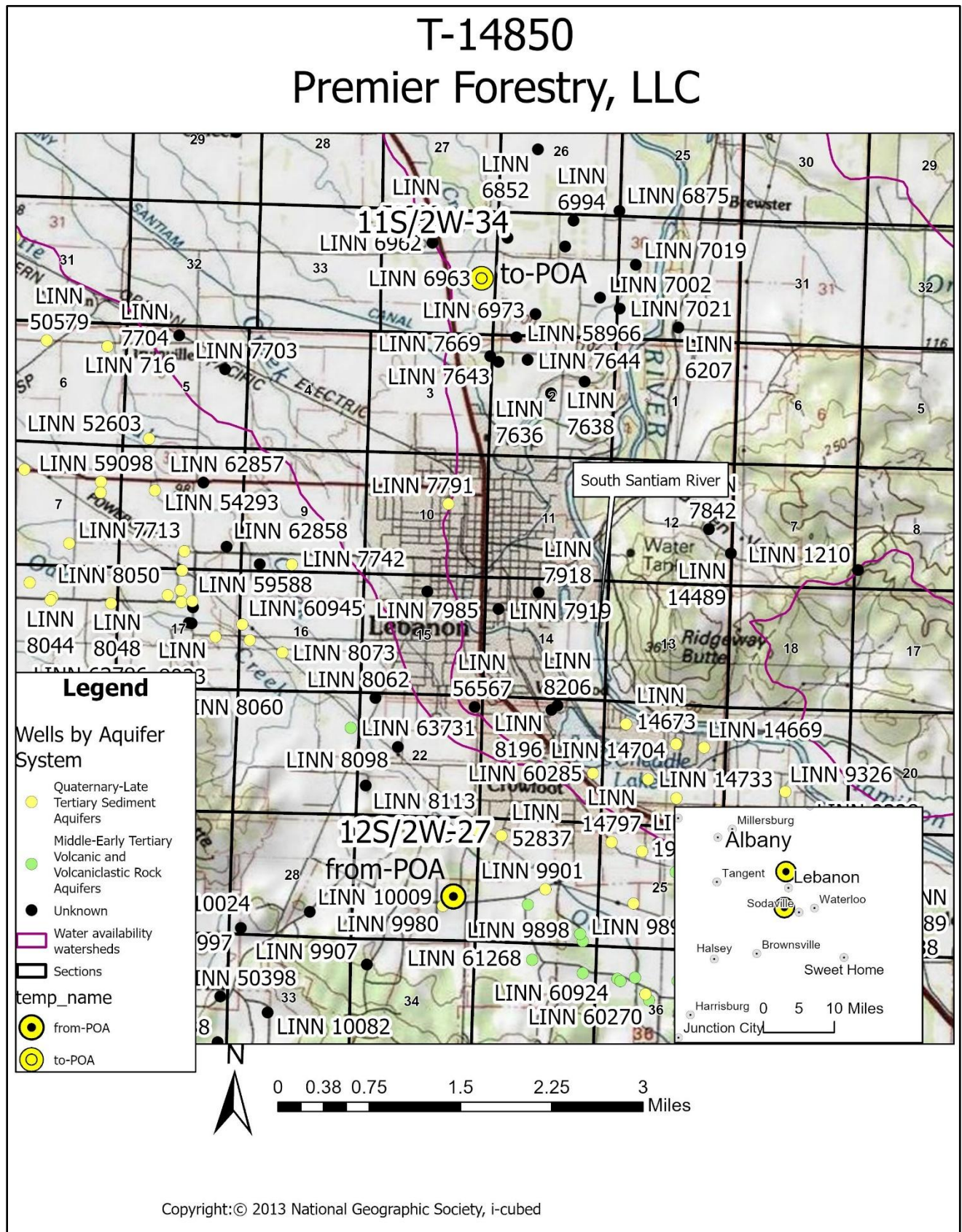
McCloughry, J. D., T. J. Wiley, M. L. Ferns, and I. P. Madin. 2010. Digital Geologic Map of the Southern Willamette Valley, Benton, Lane, Linn, Marion, and Polk Counties, Oregon. Oregon Dept. of Geology and Mineral Industries. Open File Report O-10-13

O'Connor, J.E., Sarna-Wojcick, A., Wozniak, K.C., Polette, D.J., Fleck, R.J., 2001, Origin, Extent, and Thickness of Quaternary Geologic Units in the Willamette Valley, Oregon; U.S. Geological Survey, Professional Paper 1620, 51 p.

United States Geological Survey, 2013, National Elevation Dataset (NED) [DEM geospatial data]. 1/9th arc-second, updated 2013.

Watershed Sciences, 2009, LIDAR remote sensing data collection, Department of Geology and Mineral Industries, Willamette Valley Phase I, Oregon: Portland, OR, December 21.

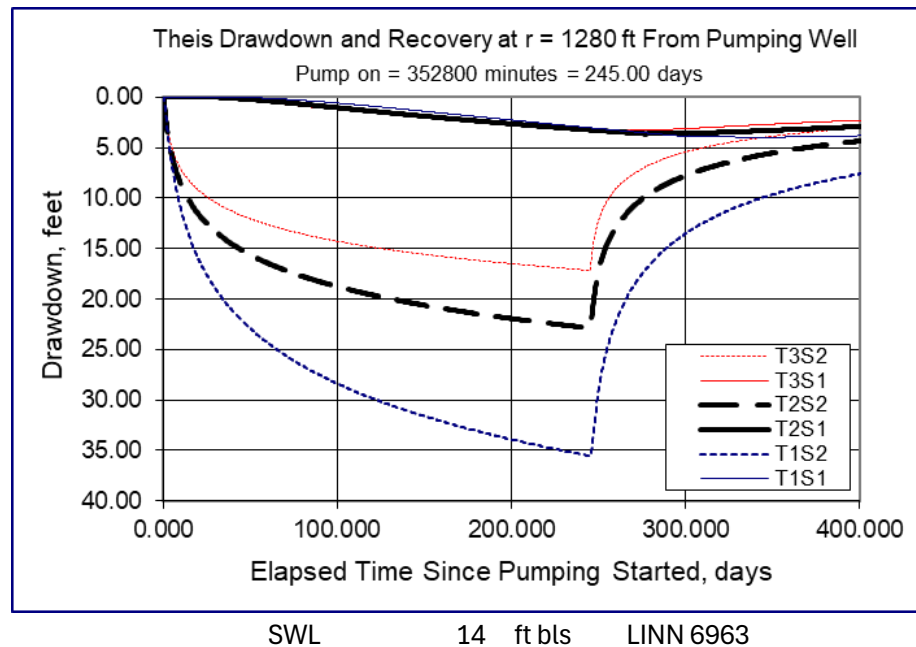
Woodward, D.G., Gannett, M.W., and Vaccaro, J.J., 1998, Hydrogeologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-B, 82 p.

Map

Theis Interference Analysis

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		245		d	
Radial distance from pumped well:	r		1280		ft	Q conversions
Pumping rate	Q		0.564256		cfs	253.24 gpm
Hydraulic conductivity	K	16	28	40	ft/day	0.56 cfs
Aquifer thickness	b		30		ft	33.86 cfm
Storativity	S 1		0.2			48,751.72 cfd
	S 2		0.002			1.12 af/d
Transmissivity Conversions	T_f2pd	480	840	1200	ft ² /day	Recalculate
	T_ft2pm	0.33333333	0.58333333	0.83333333	ft ² /min	
	T_gpdft	3590.4	6283.2	8976	gpd/ft	

The to-POA (LINN 6963) could not pump the combined rate for the full 245-day irrigation season without exceeding the combined duty. For the maximum combined duty of 274.2 AF, the maximum combined rate is 0.564256 cfs (253 gpm).



Aquifer Bottom	80	ft bls	Woodward et al., 1998
Available Water Column	66	ft	Aquifer bottom-SWL
Pump Height Above Bottom	5	ft	Estimate
NPSHa	5	ft	Estimate
Drawdown	2	ft	Theis, 1935 and pump test data
Minimum Water Column	12	ft	Estimated Drawdown + NPSHa + Pump Height
Injury	54	ft	Available Water Column-Minimum Water Column

Stream Depletion Analysis

**Oregon Water Resources Department**
Water Availability Analysis

Water Availability Calculation

Water Rights

Consumptive Uses and Storages

Water Availability Calculation

Instream Flow Requirements

Watershed Characteristics

Reservations

Water Availability Analysis
Detailed Reports

S SANTIAM R > SANTIAM R - AT MOUTH
WILLAMETTE BASIN

Watershed ID #: 30200601 (Map)
Date: 5/18/2026

Water Availability as of 5/18/2026

Exceedance Level: 100%
Time: 2:15 PM

Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	3,090.00	266.00	2,823.00	0.00	500.00	2,323.00
FEB	3,360.00	1,530.00	1,830.00	0.00	500.00	1,330.00
MAR	3,170.00	1,260.00	1,910.00	0.00	500.00	1,410.00
APR	2,950.00	1,050.00	1,900.00	0.00	500.00	1,400.00
MAY	2,050.00	711.00	1,340.00	0.00	500.00	839.00
JUN	966.00	182.00	786.00	0.00	400.00	386.00
JUL	450.00	204.00	246.00	0.00	300.00	-54.50
AUG	275.00	169.00	85.70	0.00	200.00	-114.00
SEP	253.00	159.00	94.20	0.00	318.50	-224.00
OCT	363.00	138.00	225.00	0.00	500.00	-275.00
NOV	1,450.00	140.00	1,310.00	0.00	500.00	810.00
DEC	3,040.00	143.00	2,900.00	0.00	500.00	2,400.00
ANN	2,330,000.00	365,000.00	1,960,000.00	0.00	315,000.00	1,670,000.00

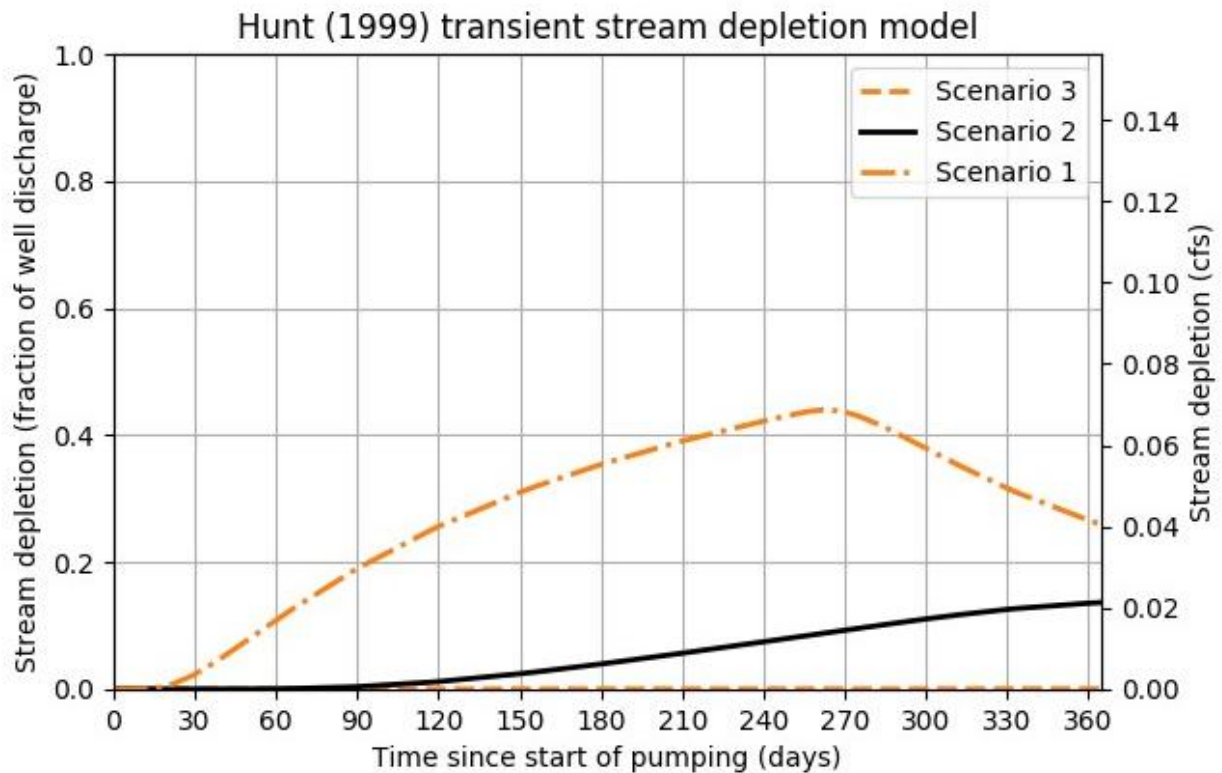
Monthly Streamflow in Cubic Feet per Second
Annual Volume at 50% Exceedance in Acre-Feet

From-POA (LINN 9988) to South Santiam River

		Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Application type:	T	Distance from well to stream	a	11000.0	11000.0	11000.0	ft
Application number:	14850	Aquifer transmissivity	T	784.0	1592.0	2400.0	ft ² /day
Well number:	1	Aquifer storativity	S	0.002	0.02	0.2	-
Stream Number:	1	Aquitard vertical hydraulic conductivity	Kva	0.1	0.1	0.1	ft/day
Pumping rate (cfs):	0.156189	Not used		10.0	20.0	30.0	
Pumping duration (days):	245.0	Aquitard thickness below stream	babs	0.25	0.25	0.25	ft
Pumping start month number (3=March)	3.0	Not used		0.2	0.2	0.2	
Plotting duration (days)	365	Stream width	ws	360.0	360.0	360.0	ft

Stream depletion for Scenario 2:

Days	10	330	360	30	60	90	120	150	180	210	240	270	300
Depletion (%)	0	13	14	0	0	0	1	2	4	6	7	9	11
Depletion (cfs)	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02



To-POA (LINN 6963) to South Santiam River

Application type:	T	Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Application number:	14850	Distance from well to stream	a	7520.0	7520.0	7520.0	ft
Well number:	2	Aquifer transmissivity	T	480.0	840.0	1200.0	ft ² /day
Stream Number:	1	Aquifer storativity	S	0.002	0.02	0.2	-
Pumping rate (cfs):	0.156189	Aquitard vertical hydraulic conductivity	Kva	0.1	0.1	0.1	ft/day
Pumping duration (days):	245.0	Not used		10.0	20.0	30.0	
Pumping start month number (3=March)	3.0	Aquitard thickness below stream	babs	0.25	0.25	0.25	ft
Plotting duration (days)	365	Not used		0.2	0.2	0.2	
		Stream width	ws	360.0	360.0	360.0	ft

Stream depletion for Scenario 2:													
Days	10	330	360	30	60	90	120	150	180	210	240	270	300
Depletion (%)	0	15	16	0	0	1	2	3	5	7	9	11	13
Depletion (cfs)	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02

