

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14931

GW Reviewer Stacey Garrison Date Review Completed: 10/22/2026

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-14931

Applicant Name: David Leavy

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

Reviewer(s): Stacey Garrison

Date of Review: 10/22/2026

Date Reviewed by GW Mgr. and Returned to WRSD: 10/22/2026

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 add APOAs to 23.1 ac of Claim GR-3355 and changing the POA for 18.9 ac of Claim GR-3355. Claim GR-3355 authorizes MARI 308 to irrigate 143 ac at a maximum rate of 1.0249 cfs (460 gpm). The 23.1 ac is proposed to have 2 APOAs added: MARI 299/Well 2 and MARI 18753/Well 3. The 18.9 ac is proposed to change to MARI 303. An apportioned rate is used for the respective POU acreage. The three wells are also authorized under other water rights: MARI 299/Well 2 and MARI 18753/Well 3 are authorized under Certificate 88738 to irrigate 157.6 ac at a maximum rate of 1.72 cfs (772 gpm) and a maximum annual volume of 394 AF; MARI 303 is authorized under Certificate 60707 to irrigate 45.7 ac at a maximum rate of 0.57 cfs (255.8 gpm) and a maximum annual volume of 114.25 AF. The three wells are also subject to pending application T-14926 on Certificate 88738 which proposes transfer of 18.9 ac of POU from MARI 299/Well 2 and MARI 18753/Well 3 to MARI 303. This review uses the combined, maximum rate possible for each POA, and shown in the tables below.

Rates and Duties		Well 2/MARI 299 and Well 3/MARI 18753
POU (ac)	This transfer, T-14931/GR-3355	23.1 ac
	Certificate 88738*	157.6 ac
	Total	180.7 ac
Authorized duty (AF/year)	This transfer, T-14931/GR-3355	NA
	Certificate 88738*	394 AF
	Total	394 AF
Flow rate CFS (gpm)	This transfer, T-14931/GR-3355	0.1656 cfs (74.3 gpm)
	Certificate 88738*	1.72 cfs (772 gpm)
	Total	1.89 cfs (846 gpm)

* Assumes full allocation of Certificate 88738 absent T-14926.

Rates and Duties		to-well/MARI 303
POU (ac)	This transfer, T-14931/GR-3355	18.9 ac
	T-14926/Certificate 88738	18.9 ac
	Certificate 60707	45.7 ac
	Total	83.5 ac
Authorized duty (AF/year)	This transfer, T-14931/GR-3355	NA
	T-14926/Certificate 88738	47.25 AF
	Certificate 60707	114.25 AF
	Total	161.25 AF
Flow rate CFS (gpm)	This transfer, T-14931/GR-3355	0.129 cfs (57.9 gpm)
	T-14926/Certificate 88738	0.2063 cfs (92.6 gpm)
	Certificate 60707	0.57 cfs (255.8 gpm)
	Total	0.9053 cfs (406.3 gpm)

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: The authorized POA and proposed POAs develop only the alluvial aquifer system.
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: The authorized POA develops only the 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

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: APOA MARI 299/Well 2 is closer to the domestic well serving taxlot 1400 at 10408 Champoeg Rd NE than the authorized POA. APOA MARI 18753/Well 3 and MARI 303/to-POA are both closer to MARI 50620, a POA on Certificate 80433 with priority date of 12/27/1995. The reduced intervening distance is anticipated to result in an increase in interference.

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: Interference from the APOAs and to-POA to the closest groundwater users was analyzed using the Theis (1935) solution for drawdown in a confined aquifer (see attached Well Interference Analyses). Results indicate that the proposed changes are not likely to injure MARI 50620, the TL 1400 well, or similar nearby wells.

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: APOA MARI 299/Well 2 is closer to the Willamette River. APOA MARI 18753/Well 3 and MARI 303/to-POA are both closer to Deer Creek. The reduced intervening distance is anticipated to result in an increase in interference.

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: Deer Creek

☒ Minimal ☐ Significant

Stream: Willamette River

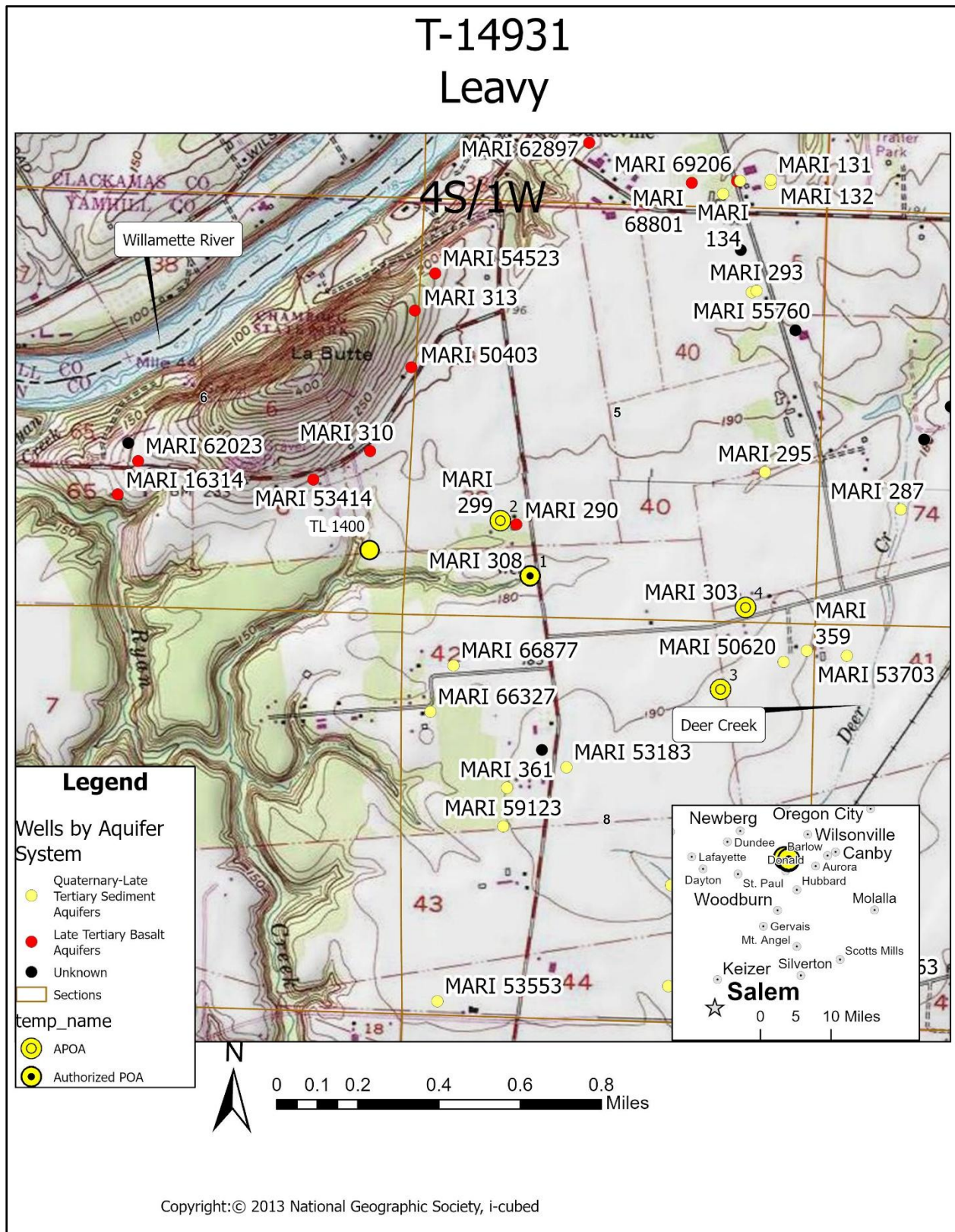
☒ Minimal ☐ Significant

Provide context for minimal/significant impact: Deer Creek has not fully incised through the Willamette Silt. Depletion of Deer Creek from pumping of the authorized POA and proposed APOAs and to-POA is expected to be diffused over a large area and a long period of time (Herrera et al., 2014). Therefore, the increase in interference with Deer Creek is anticipated to be minimal. The Willamette River has fully incised through the Willamette Silt, however, there is an exposure of uplifted Columbia River Basalt (CRB), La Butte, between MARI 308/authorized POA and the APOA MARI 299/Well 2 and the Willamette River that has prevented the deposition of alluvial material in that area (Price, 1967; Gannett and Caldwell, 1998). Thus, the shortest distance with respect to hydraulic connection between the POAs and the Willamette River must route around the CRB exposure. The expected increase in depletion from the Willamette River was assessed using the Hunt (2003) analytical model (see attached Stream Depletion Analysis). Results indicate that stream depletion due to pumping could likely increase by 0.20% of the rate of withdrawal after 245 days of continuous pumping as a result of the proposed change. Assuming that MARI 299/Well 2 were to pump at the maximum allowed rate of 0.1656 cfs (74.3 gpm) over the full 245 days, the proposed change could result in an additional 0.009 cfs (4 gpm) of depletions to the Willamette River by the end of the irrigation season. The Willamette River here is within WAB #182 with the lowest month of natural stream flow in September; the Net Water Available in September is 997 cfs. The change in degree of interference with the Willamette River is anticipated to be minimal.

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: N/A

References:

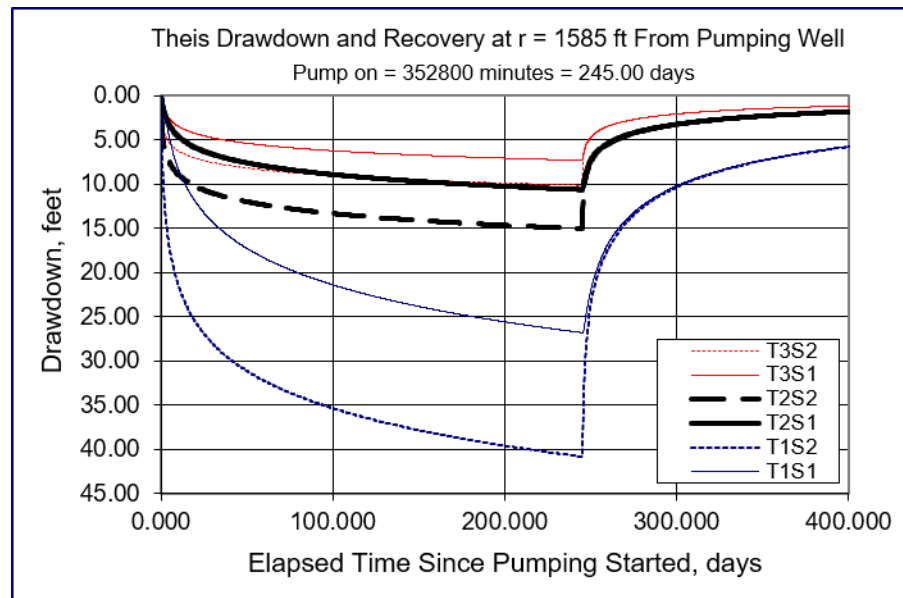
- Pumping test reports: MARI 299, MARI 358, MARI 50008, MARI 50403, MARI 50620, MARI 53183, MARI 56906, MARI 56999
- Conlon, T.D., Wozniak, K.C., Woodcock, D., Herrera, N.B., Fisher, B.J., Morgan, D.S., Lee, K.K., and Hinkle, S.R., 2005, Ground-water hydrology of the Willamette Basin, Oregon, Scientific 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.
- Herrera, N.B., Burns, E.R., and Conlon, T.D., 2014, Simulation of groundwater flow and the interaction of groundwater and surface water in the Willamette Basin and Central Willamette subbasin, Oregon: U.S. Geological Survey Scientific Investigations Report 2014-5136, 152 p.
- Hunt, B. (2003). "Unsteady stream depletion when pumping from semiconfined aquifer." Journal of Hydrological Engineering, 12-19.
- Price, D. 1967. Geology and water resources in the French Prairie area, northern Willamette Valley, Oregon. US Geological Survey Water Supply Paper 1833.
- Theis, C.V., 1935, The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage, American Geophysical Union Transactions, vol. 16, p. 519-524.
- 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

Well Interference Analysis: MARI 299/Well 2-TL 200

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		245		d	
Radial distance from pumped well:	r		1585		ft	Q conversions
Pumping rate	Q		0.976384		cfs	438.20 gpm
Hydraulic conductivity	K	11	35	55	ft/day	0.98 cfs
Aquifer thickness	b		100		ft	58.58 cfm
Storativity	S 1		0.003			84,359.58 cfd
	S 2		0.0003			1.94 af/d
Transmissivity Conversions	T_f2pd	1100	3500	5500	ft ² /day	Recalculate
	T_f2pm	0.76388889	2.43055556	3.81944444	ft ² /min	
	T_gpdft	8228	26180	41140	gpd/ft	

The non-subject application water right rates could not be used for the entire 245-day irrigation season without exceeding the respective maximum annual volumes. The time-averaged rate of 0.810784 (364 gpm) in combination with the subject application rate of 0.1656 cfs (74.3 gpm) is used for a combined rate of 0.976 cfs (438 gpm).

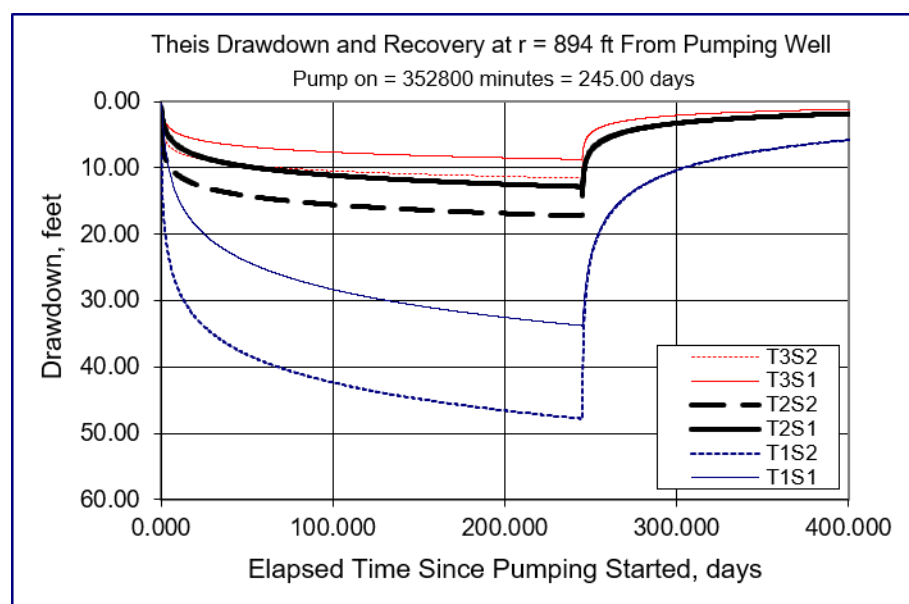


SWL	30	ft bls	Woodward et al., 1998
Aquifer Bottom	195	ft bls	Woodward et al., 1998
Available Water Column	165	ft	Aquifer bottom-SWL
Pump Height Above Bottom	5	ft	Estimate
NPSHa	5	ft	Estimate
Drawdown	10	ft	Estimate
Minimum Water Column	20	ft	Estimated Drawdown + NPSHa + Pump Height
Injury	145	ft	Available Water Column-Minimum Water Column

Well Interference Analysis: MARI 18753/Well 3-MARI 50620

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		245		d	
Radial distance from pumped well:	r		894		ft	Q conversions
Pumping rate	Q		0.976384		cfs	438.20 gpm
Hydraulic conductivity	K	11	35	55	ft/day	0.98 cfs
Aquifer thickness	b		100		ft	58.58 cfm
Storativity	S 1		0.003			84,359.58 cfd
	S 2		0.0003			1.94 af/d
Transmissivity Conversions	T_ftpd	1100	3500	5500	ft ² /day	Recalculate
	T_ft2pm	0.76388889	2.43055556	3.81944444	ft ² /min	
	T_gpdft	8228	26180	41140	gpd/ft	

The non-subject application water right rates could not be used for the entire 245-day irrigation season without exceeding the respective maximum annual volumes. The time-averaged rate of 0.810784 (364 gpm) in combination with the subject application rate of 0.1656 cfs (74.3 gpm) is used for a combined rate of 0.976 cfs (438 gpm).

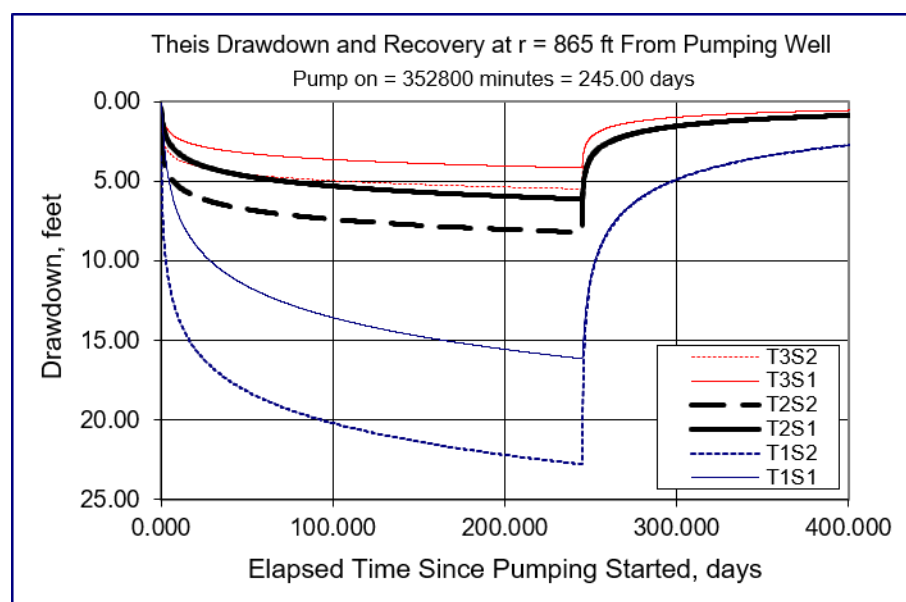


SWL	47.67	ft bls	most recent SWL for MARI 50620
Aquifer Bottom	195	ft bls	Woodward et al., 1998
Available Water Column	147.33	ft	Aquifer bottom-SWL
Pump Height Above Bottom	5	ft	Estimate
NPSHa	5	ft	Estimate
Drawdown	91	ft	MARI 50620/Certificate 80433
Minimum Water Column	101	ft	Estimated Drawdown + NPSHa + Pump Height
Injury	46	ft	Available Water Column-Minimum Water Column

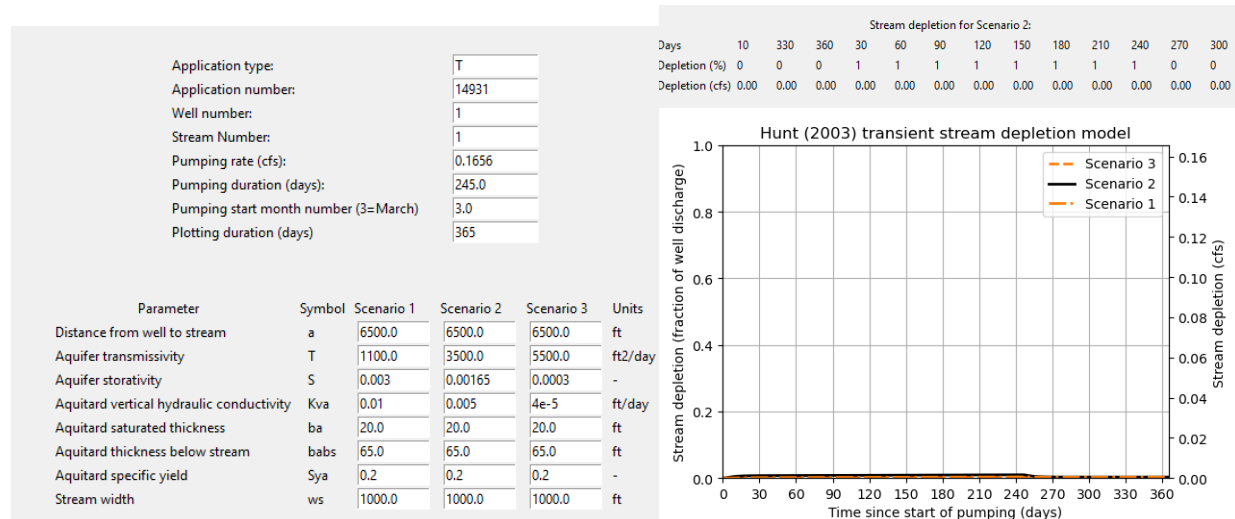
Well Interference Analysis: MARI 303/to-POA- MARI 50620

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		245		d	
Radial distance from pumped well:	r		865		ft	Q conversions
Pumping rate	Q		0.461339		cfs	207.05 gpm
Hydraulic conductivity	K	11	35	55	ft/day	0.46 cfs
Aquifer thickness	b		100		ft	27.68 cfm
Storativity	S 1		0.003			39,859.69 cfd
	S 2		0.0003			0.92 af/d
Transmissivity Conversions	T_ftpd	1100	3500	5500	ft ² /day	Recalculate
	T_ft2pm	0.76388889	2.43055556	3.81944444	ft ² /min	
	T_gpdft	8228	26180	41140	gpd/ft	

The non-subject application water right rates could not be used for the entire 245-day irrigation season without exceeding the respective maximum annual volumes. The time-averaged rate of 0.33 cfs (149 gpm) in combination with the subject application rate of 0.129 cfs (57.9 gpm) is used for a combined rate of 0.461 cfs (207 gpm).



SWL	47.67	ft bls	most recent SWL for MARI 50620
Aquifer Bottom	195	ft bls	Woodward et al., 1998
Available Water Column	147.33	ft	Aquifer bottom-SWL
Pump Height Above Bottom	5	ft	Estimate
NPSHa	5	ft	Estimate
Drawdown	91	ft	MARI 50620/Certificate 80433
Minimum Water Column	101	ft	Estimated Drawdown + NPSHa + Pump Height
Injury	46	ft	Available Water Column-Minimum Water Column

Stream Depletion Analysis: MARI 308/Authorized POA-Willamette RiverStream Depletion Analysis: MARI 299/Well 2-Willamette River