

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14854

GW Reviewer Stacey Garrison Date Review Completed: 7/8/2026

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-14854

Applicant Name: Carlton Nursery Co. LLC

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

Reviewer(s): Stacey Garrison

Date of Review: 7/8/2026

Date Reviewed by GW Mgr. and Returned to WRSD: 7/8/2026

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 APOA Unionvale Well 3 (YAMH 59179) to Permit G-18322. Permit G-18322 authorizes Well 1 (YAMH 557), Well 2 (YAMH 6409), and Holbrook Well 2 (YAMH 6439) for Nursery Use on 106.5 ac with a maximum annual volume of 532.5 AF. Well 1 (YAMH 557) and Well 2 (YAMH 6409) are authorized at a max rate of 1.0 cfs from November 1 through June 30, and Holbrook Well 2 (YAMH 6439) is authorized at the 1.0 cfs rate from November 1 through May 31 and a reduced rate of 0.58 cfs from June 1 through June 30. The APOA Unionvale Well 3 (YAMH 59179) is also authorized under Inchoate T-13527 for irrigation of 117.9 ac at a maximum rate of 1.06 cfs and a maximum annual duty of 294.75 AF; this review considers the combined maximum rate of 2.06 cfs and a maximum annual duty of 827.25 AF.
2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: The proposed POA (YAMH 59179) is located on a terrace approximately 60 feet above the adjacent floodplain of the Willamette River. The terrace consists of a thick sequence of predominately fine-grained sediments. The upper 50-100 feet of sediments are likely Willamette Silt. Thin (5-15 feet), discontinuous beds of sands and gravels are observed within this sediment package at depths greater than 50 feet. The water table occurs at shallow depths within the Willamette Silt, which acts as a leaky confining layer for productive sands and gravel at depth (Conlon et al., 2005).

3. a) Is the existing authorized POA subject to a water level decline condition?

☒ Yes ☐ No

Comments: The authorized POAs are subject to water level decline conditions.

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: The reference levels, most recent spring-high water levels, and permit decline condition determination are presented in the table below.

POA	Reference Level (ft bls)	Most recent spring-high water level (ft bls)	Permit decline condition exceeded?
Well 1 (YAMH 557)	22.65	19.2	No
Well 2 (YAMH 6409)	4.45	1.6	No
Holbrook Well 2 (YAMH 6439)	9.25	9.5	No

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 APOA Unionvale Well 3 (YAMH 59179) is closer to **MARI 2888** an authorized POA under Certificate 96102 with priority date 7/14/1959 and **YAMH 6444**. The reduced intervening distance is anticipated to increase the interference with **MARI 2888** and **YAMH 6444**.

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 APOA Unionvale Well 3 (YAMH 59179) is authorized for irrigation use under **Inchoate T-13527**; it is anticipated that the maximum combined rate exceeds the maximum possible physical pumping rate for **YAMH 59179**. It is not likely that the proposed additional pumping will result in **YAMH 6444** or **MARI 2888** not receiving the water to which they are 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 APOA Unionvale Well 3 (YAMH 59179) is closer to Lambert Slough than the authorized POAs. The reduced intervening distance is anticipated to increase the interference with Lambert Slough.

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: Lambert Slough

☒ Minimal ☐ Significant

Provide context for minimal/significant impact: No adequate model exists to quantify stream depletion of Lambert Slough because aquifer conditions change (confined to unconfined and low permeability to high permeability) at the boundary between Pleistocene sediments

penetrated by the wells and the Holocene floodplain gravels to the east. However, if Unionvale Well 3 (YAMH 59179) were evaluated for PSI at the entire combined rate of 2.06 cfs and under the rules in place at the time application G-18502 was evaluated, there would not be a finding of PSI. Therefore, the expected change in degree of interference with Lambert Slough is 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: The same water level decline conditions and Large Water Use Reporting as applied to the authorized POAs should be required for the APOA YAMH 59179.
9. Any additional comments: _____

References

Application File: T-14854

Well logs: YAMH 557, YAMH 6409, YAMH 6439, YAMH 59179, MARI 2888, YAMH 6444

Pump Tests: YAMH 6439, YAMH 6439, YAMH 6409, YAMH 6455, YAMH 6438, YAMH 6426, YAMH 6424, YAMH 6422, YAMH 6502

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.

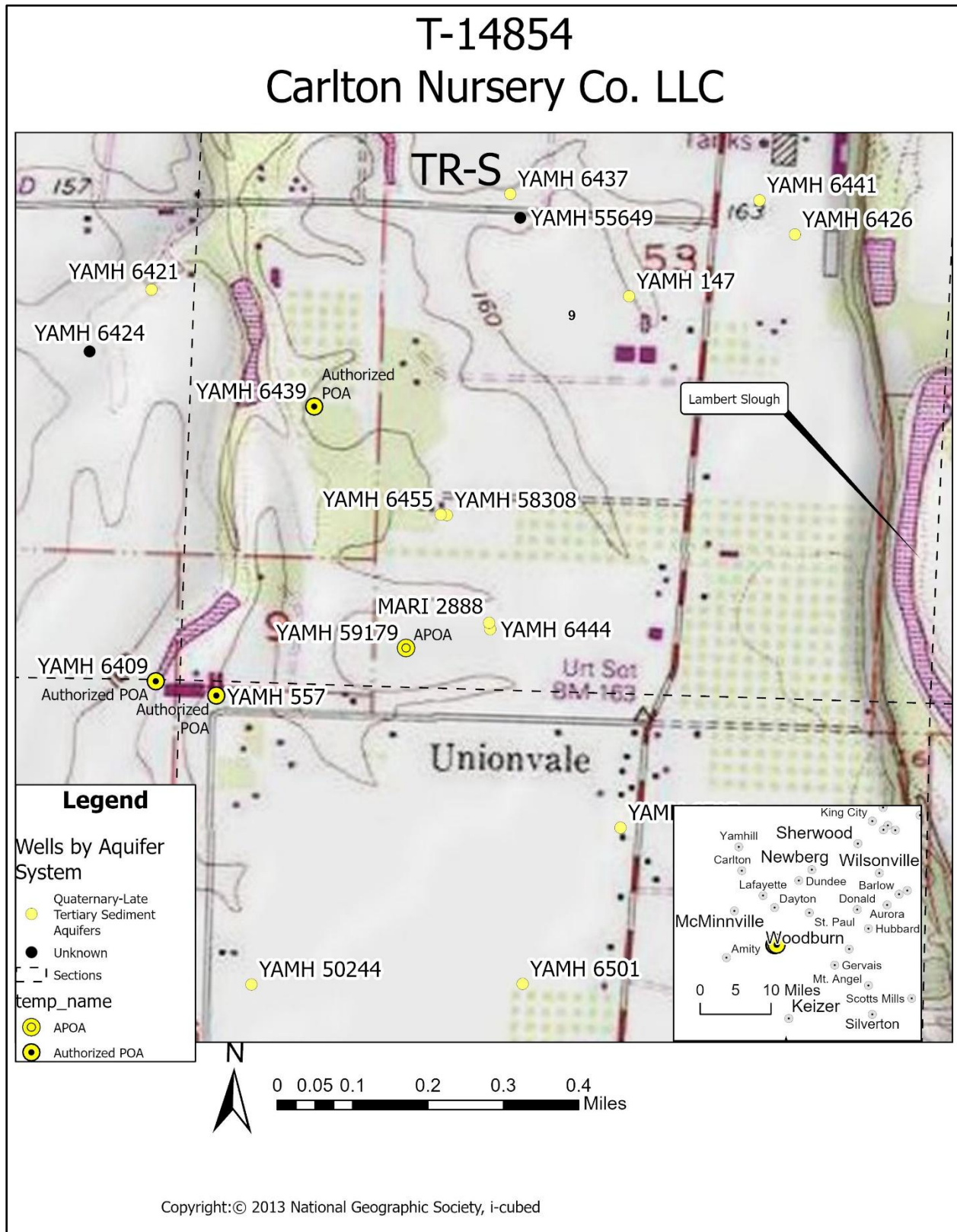
Gannett, M.W. and Caldwell, R., 1998, Geologic framework of the Willamette Lowland aquifer system, Oregon and Washington, Professional Paper 1424-A, 32 p: U. S. Geological Survey, Reston, VA.

O'Connor, J.E., Sarna-Wojcick, A., Woznikak, 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.

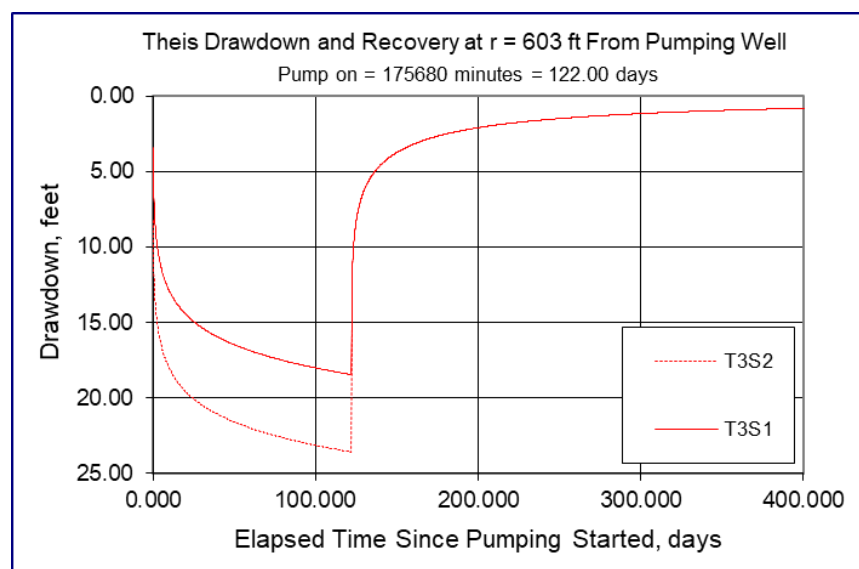
Map

Theis Interference Analysis

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		122		d	
Radial distance from pumped well:	r		603		ft	Q conversions
Pumping rate	Q		1.71592864		cfs	770.11 gpm
Hydraulic conductivity	K	6.8	18.5	132.5	ft/day	1.72 cfs
Aquifer thickness	b		40		ft	102.96 cfm
Storativity	S 1		0.001			148,256.23 cfd
	S 2		0.0001			3.40 af/d
Transmissivity Conversions	T ft ² /pd	272	740	5300	ft ² /day	
	T ft ² /pm	0.18888889	0.51388889	3.68055556	ft ² /min	
	T gpd/ft	2034.56	5535.2	39644	gpd/ft	

The APOA Unionvale Well 3 (YAMH 59179) could not pump the maximum rates for the full duration of the respective authorized time periods: irrigation under Inchoate T-13527 at 1.06 cfs from March 1 through October 31 or Nursery Use under the subject transfer T-14854 at 1.0 cfs from November 1 through June 30. The average rate under Inchoate T-13527 that could be used for the entire 245 days of use is 0.607 cfs; the average rate under the subject transfer T-14854 that could be used for 242 days is 1.109 cfs. In addition, there are only 122 days during which both uses are authorized. The combined rate of 1.72 cfs over 122 days is used.

Scenarios T1S1, T1S2, T2S1, and T2S2 are anticipated to dewater the pumping well, APOA Unionvale Well 3 (YAMH 59179), and are not shown below.



SWL	22.3	ft bls	YAMH 6444
Aquifer Bottom	165	ft bls	Woodward et al., 1998
Available Water Column	142.7	ft	Aquifer bottom-SWL
Pump Height Above Bottom	5	ft	Estimate
NPSHa	5	ft	Estimate
Drawdown	3	ft	Theis, 1935 and pump test data
Minimum Water Column	13	ft	Estimated Drawdown + NPSHa + Pump Height
Injury	130	ft	Available Water Column-Minimum Water Column



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Water Availability Analysis

Detailed Reports

WILLAMETTE R > COLUMBIA R - AB MOLLAR

WILLAMETTE BASIN

Water Availability as of 6/2/2026

Exceedance Level: 80%
Time: 4:46 PM

Watershed ID #: 182 [\(Map\)](#)
Date: 6/2/2026

Water Availability Calculation

Water Rights

Consumptive Uses and Storages

Instream Flow Requirements

Watershed Characteristics

Reservations

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	21,400.00	2,310.00	19,100.00	0.00	1,500.00	17,600.00
FEB	23,200.00	7,490.00	15,700.00	0.00	1,500.00	14,200.00
MAR	22,400.00	7,260.00	15,100.00	0.00	1,500.00	13,600.00
APR	19,900.00	6,910.00	13,000.00	0.00	1,500.00	11,500.00
MAY	16,600.00	4,250.00	12,300.00	0.00	1,500.00	10,800.00
JUN	6,740.00	1,960.00	6,760.00	0.00	1,500.00	5,260.00
JUL	4,980.00	1,810.00	3,170.00	0.00	1,500.00	1,670.00
AUG	3,830.00	1,650.00	2,180.00	0.00	1,500.00	680.00
SEP	3,890.00	1,390.00	2,500.00	0.00	1,500.00	997.00
OCT	4,850.00	753.00	4,100.00	0.00	1,500.00	2,600.00
NOV	10,200.00	887.00	9,310.00	0.00	1,500.00	7,810.00
DEC	19,300.00	975.00	18,300.00	0.00	1,500.00	16,800.00
ANN	15,200,000.00	2,250,000.00	13,000,000.00	0.00	1,090,000.00	11,900,000.00

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