

Groundwater Application Review Summary Form

Application # G- 19450

GW Reviewer Stacey Garrison Date Review Completed: 8/4/2026

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

8/4/2026

TO: Application G- 19450

FROM: GW: Stacey Garrison
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

☐ YES The source of appropriation is hydraulically connected to a State Scenic
☒ NO Waterway or its tributaries

☐ YES
☒ NO Use the Scenic Waterway Condition (Condition 7J)

☐ 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 [Enter] 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 8/4/2026
 FROM: Groundwater Section Stacey Garrison
 Reviewer's Name
 SUBJECT: Application G- 19450 Supersedes review of 12/9/2024
 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: Legacy Valley Farms, Inc. County: LINN

A1. Applicant(s) seek(s) 1.62 cfs from 3 well(s) in the Willamette Basin,
Mainstem Willamette subbasin

A2. Proposed use: Supplemental Irrigation (422.2 ac / 780.8 af/yr) Seasonality: 3/1-10/31

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 ID	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
2	PROP 568	Well 2	Alluvium	0.37	14S/4W-16 NW-SW	1990' N, 1030' E fr SW cor S 16
3	PROP 569	Well 3	Alluvium	0.99	14S/4W-16 SW-SE	890' N, 3900' E fr SW cor S16
4	PROP 570	Well 4	Alluvium	0.26	14S/4W-28 NW-SE	1350' N, 1400' W fr SE cor S 28

* Alluvium, CRB, Bedrock

POA Well	Well Depth (ft bls)	Seal Interval (ft bls)	Casing Intervals (ft bls)	Liner Intervals (ft bls)	Perforations Or Screens (ft bls)	Well Yield (gpm)	Drawdown (ft)	Test Type
2	±100	≥18	TBD	TBD	TBD	TBD	TBD	TBD
3	±100	≥18	TBD	TBD	TBD	TBD	TBD	TBD
4	±100	≥18	TBD	TBD	TBD	TBD	TBD	TBD

POA Well	Land Surface Elevation at Well (ft amsl)	Depth of First Water (ft bls)	SWL (ft bls)	SWL Date	Reference Level (ft bls)	Reference Level Date
2	~278 ^b	TBD	TBD	TBD	TBD	TBD
3	~282 ^b	TBD	TBD	TBD	TBD	TBD
4	~295 ^b	TBD	TBD	TBD	TBD	TBD

Use data from application for proposed wells.

A4. **Comments:** The proposed POA and POU are approximately 3-5 miles north of the city of Harrisburg, Oregon.

^a From LIDAR.

A5. ☐ **Provisions of the** Willamette Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water ☐ **are, or** ☒ **are not,** activated by this application.

(Not all basin rules contain such provisions.)

Comments: The proposed POA are more than ¼ mile from the nearest surface water source. Therefore, the relevant Willamette Basin rules (OAR 690-502-0240) do not apply.

A6. ☐ **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.

Name of administrative area: N/A

Comments: _____

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

B1. **Based upon available data**, I have determined that groundwater* 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. ☒ will not or ☐ 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) 7RLN, large water use reporting;
 - ii. ☒ The permit should be conditioned as indicated in item 2 below.
 - iii. ☐ 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. ☐ **Condition** to allow groundwater production from no shallower than _____ ft. below land surface;
 - c. ☒ **Condition** to allow groundwater production only from the alluvial groundwater reservoir between approximately _____ ft. and _____ ft. below land surface;
 - d. ☐ **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 would produce groundwater from the Willamette alluvial aquifer system (Gannett and Caldwell, 1998). The Willamette aquifer system in this area consists of sands and gravels overlain by ~20-30 ft of clay and silt. The aquifer in this area is semi-confined to confined and receives significant recharge from the overlying fine-grained sediments and nearby streams, including the Willamette River to the west and the Muddy Creek drainage to the east (Woodward et al., 1998).

Water level measurements in nearby wells are generally stable (see attached Hydrograph). Based on these measurements and the hydrogeological conceptual model of the aquifer, the groundwater resource is not over-appropriated.

Reported yields in nearby wells range from 10-750 gpm (~0.02-1.67 cfs), with a median yield of 55 gpm (~0.12 cfs) (see attached Well Statistics). Applicant has requested well-specific rates for the proposed POA, with the highest being ~444 gpm (0.99 cfs) for proposed Well 3, which would be ~59% of the highest reported yield for any well in the area and ~807% of the median reported yield. **Based on the available data, the requested well-specific rate of 0.99 cfs for Well 3 is likely achievable and, therefore, within the capacity of the groundwater resource.** The next highest requested well-specific rate is for proposed Well 2 of 0.37 cfs (~166 gpm); 0.37 cfs is ~22% of the highest reported yield for any well in the area and ~302% of the median reported yield. The well specific rate for Well 4 is 0.26 cfs (117 gpm), which is 16% of the highest reported well yield and 213% of the median. **Therefore, the requested rates for proposed Wells 2 and 4 are within the capacity of the groundwater resource.**

The nearest wells to the proposed POA are: LINN 13793, a domestic well, ~985 ft southwest of proposed Well 3; LINN 13815, a domestic well correlated to Tax Lot 800, ~1,200 ft northwest of proposed Well 4; and LINN 13779, an irrigation well, ~2,100 ft northwest of proposed Well 2. Potential interference with neighboring wells due to the proposed use was analyzed using the Theis (1935) solution for drawdown in a confined aquifer (see attached Well-to-Well Interference Analyses). **Results of the analyses indicate that, at a rate of 0.99 cfs, Well 3 is very likely to exceed 25 ft of interference with neighboring LINN 13793 within several weeks of pumping, which would then require curtailment under the standard**

permit conditions for new alluvial groundwater rights. **As such, the proposed use of Well 3 is not within the capacity of the resource. Furthermore, at a rate of 0.99 cfs, proposed Well 3 would likely cause injury to LINN 13793 before the end of the irrigation season.** Pumping by Well 2 and Well 4 is not anticipated to cause injury and is within the capacity of the resource.

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

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
2	Alluvium	☒	☐
3	Alluvium	☒	☐
4	Alluvium	☒	☐

Basis for aquifer confinement evaluation: Well logs for Well 1 (LINN 13774) and other nearby wells indicate water levels above a layer of clay extends from near land surface to ~20-30 ft bls. The available evidence indicates predominantly confined conditions.

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 ¼ 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)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
2	1	Willamette River	~270-280 ^a	~255-260 ^b	~9,400	☒	☐	☐	☐	☒
2	2	Muddy Creek	~270-280 ^a	~275 ^b	~10,300	☒	☐	☐	☐	☒
3	1	Willamette River	~270-280 ^a	~255-260 ^b	~12,800	☒	☐	☐	☐	☒
3	2	Muddy Creek	~270-280 ^a	~275 ^b	~7,300	☒	☐	☐	☐	☒
4	1	Willamette River	~270-280 ^a	~280-285 ^b	~6,800	☒	☐	☐	☐	☒
4	2	Muddy Creek	~270-280 ^a	~285 ^b	~8,700	☒	☐	☐	☐	☒

Basis for aquifer hydraulic connection evaluation: Groundwater levels near the proposed POA are coincident with or above surface water elevations in the nearest perennial streams: SW 1 (Willamette River) and SW 2 (Muddy Creek). Based on available data, the proposed POA are hydraulically connected to SW 1 and SW 2.

^a From reported water level measurements in nearby wells and Woodward et al. (1998)

^b From LIDAR at nearest point of hydraulic connection.

Water Availability Basin the well(s) are located within:

SW 1: WILLAMETTE R > COLUMBIA R – AB PERIWINKLE CR AT GAGE 14174

SW 2: MUDDY CR > E CHANNEL – AT MOUTH

C3a. **690-09-040 (4):** Evaluation of stream impacts for each well 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?	Q _w > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Q _w > 1% ISWR?	80% Natural Flow (cfs)	Q _w > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
		☐	☐			☐		☐		☐

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation 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: No wells are within 1 mile of a surface water source. Therefore, OAR 690-009-0040 does not apply.

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-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(E) = (A / B) x 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: The requested rate is less than 1 percent of the 80 percent exceedance natural flow for SW 1 (Willamette River) in lowest-flow month (2,540 cfs in September) (see attached Water Availability Analysis). Therefore, since the monthly depletion of SW 1 due to the proposed use is anticipated substantially less than the requested rate given the distance and hydrogeologic setting, the Potential for Substantial Interference (PSI) with SW 1 does not exist per the criteria of OAR 690-009 effective at the time of application.

The Potential for Substantial Interference (PSI) was analyzed for SW 2 due to that stream's 80 percent exceedance natural flow being more comparable to the requested rate (see attached Water Availability Analysis). The Hunt (2003) analytical model was used to estimate the monthly stream depletion of SW 2 due to the proposed use (see attached Stream Depletion Analysis). Results of that analysis indicate that the anticipated stream depletion of SW 2 due to the proposed use within the first year of pumping will be much less than 1 percent of the rate of pumping. Therefore, the Potential for Substantial Interference (PSI) with SW 2 does not exist per the criteria of OAR 690-009 effective at the time of application.

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:
- ☐ The permit should contain condition #(s) _____;
 - ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. SW / GW Remarks and Conditions: _____

References Used: Application File: G-19450

Pumping Test Reports: LINN 13573, 13745, 14182, 51522

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., 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, Scientific Investigations Report 2014-5136: U. S. Geological Survey, Reston, VA.

Hunt, B., 2003, Unsteady stream depletion when pumping from semiconfined aquifer: Journal of Hydrologic Engineering, January/February, Vol 8, p. 12-19.

Iverson, J., 2002, Investigation of the hydraulic, physical, and chemical buffering capacity of Missoula flood deposits for water quality and supply in the Willamette Valley of Oregon: Unpublished M.S. thesis, Oregon State University, 147 p.

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.

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.

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: _____ Logid: _____

D2. **THE WELL does not appear to meet current well construction standards based upon:**

- a. ☐ review of the well log;
- b. ☐ field inspection by _____;
- c. ☐ report of CWRE _____;
- d. ☐ other: (specify) _____

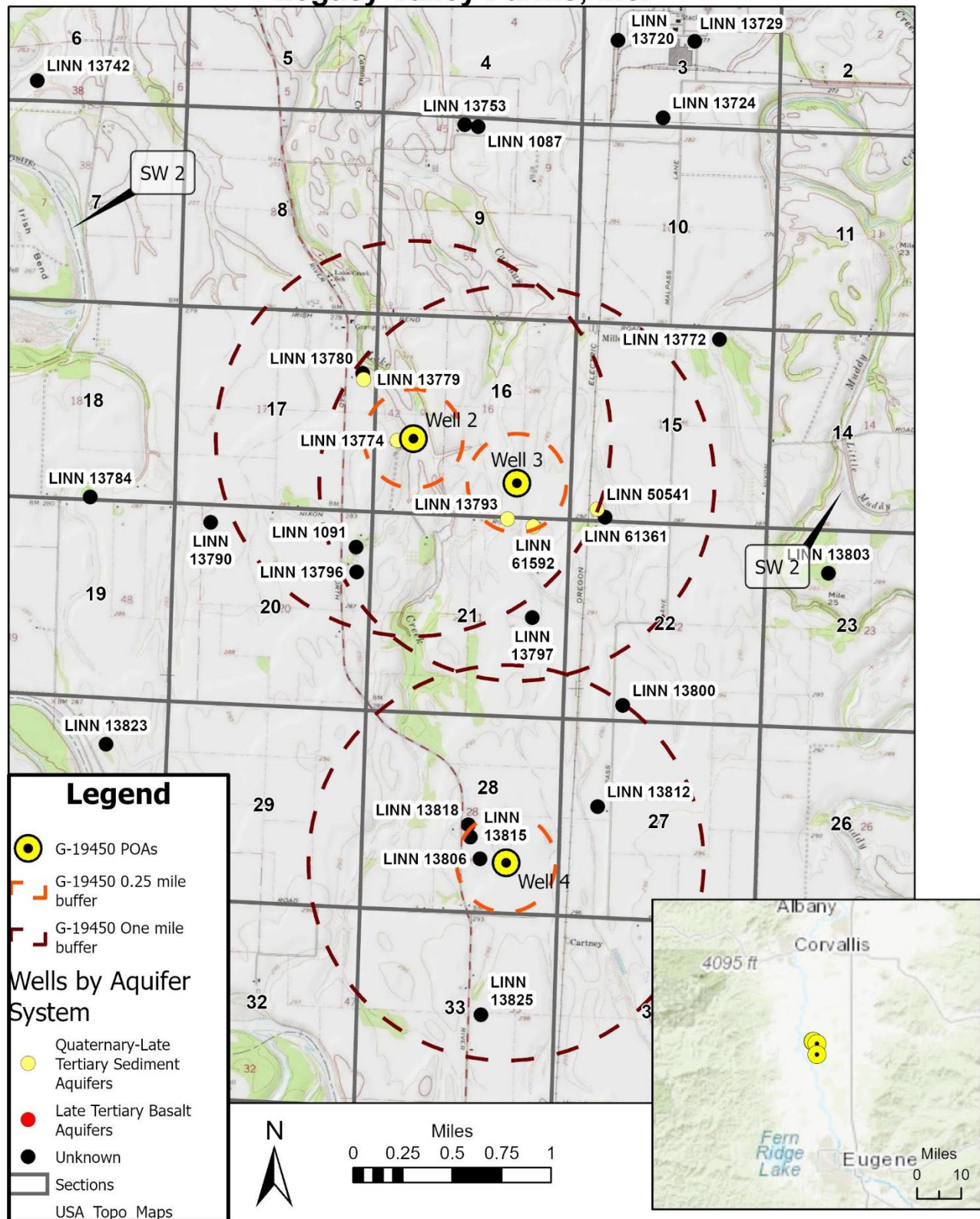
D3. **THE WELL construction deficiency or other comment is described as follows:** _____

D4. ☐ **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Well Location Map

G-19450

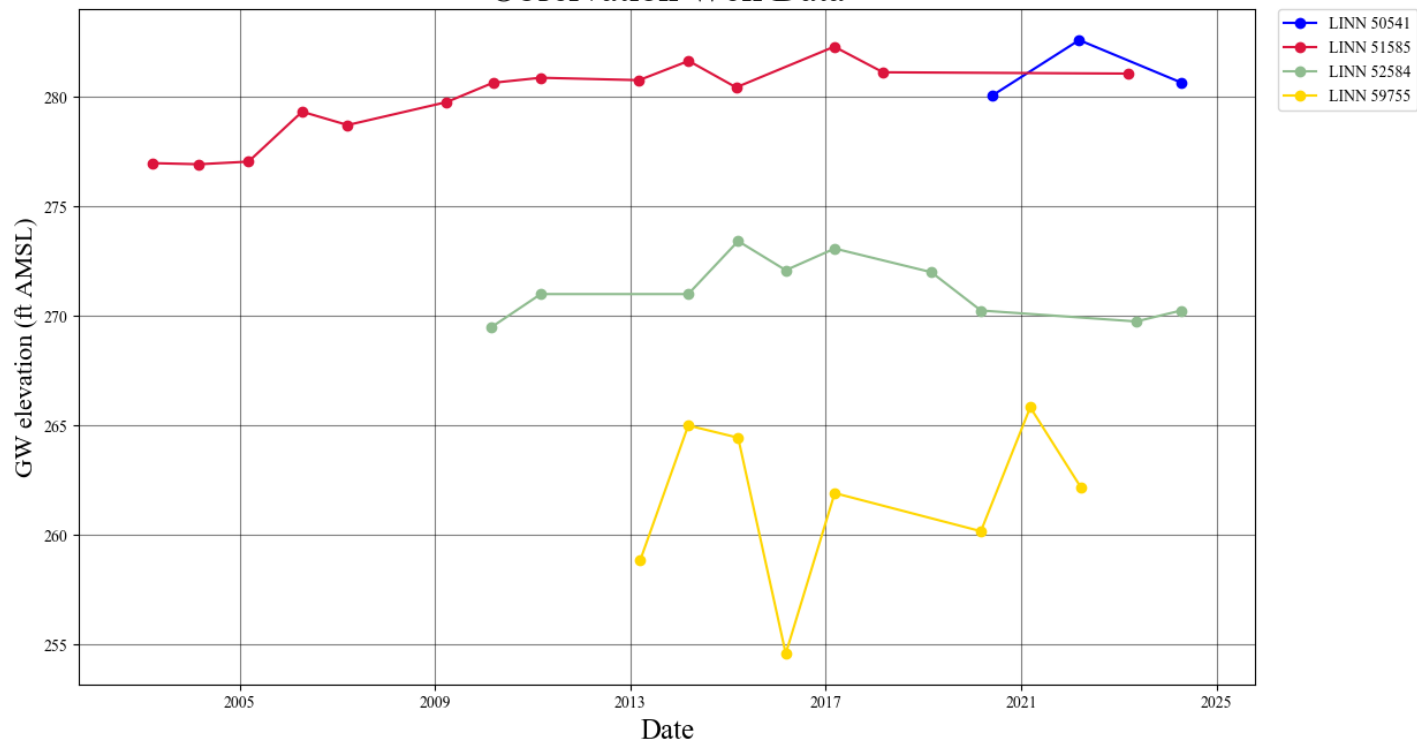
Legacy Valley Farms, Inc.



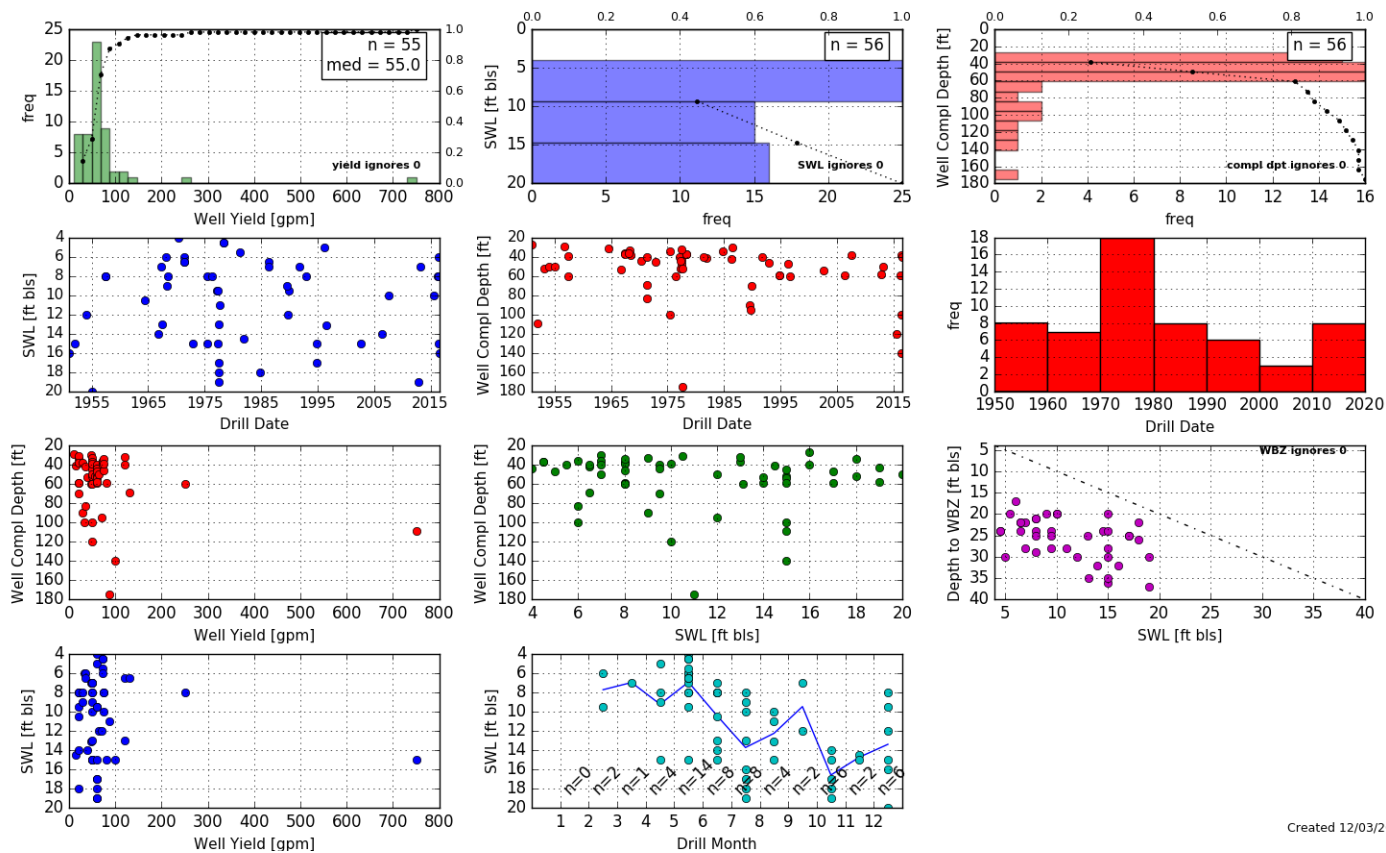
Service Layer Credits: World Topographic Map: Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS

Water-Level Measurements in Nearby Wells

Observation Well Data



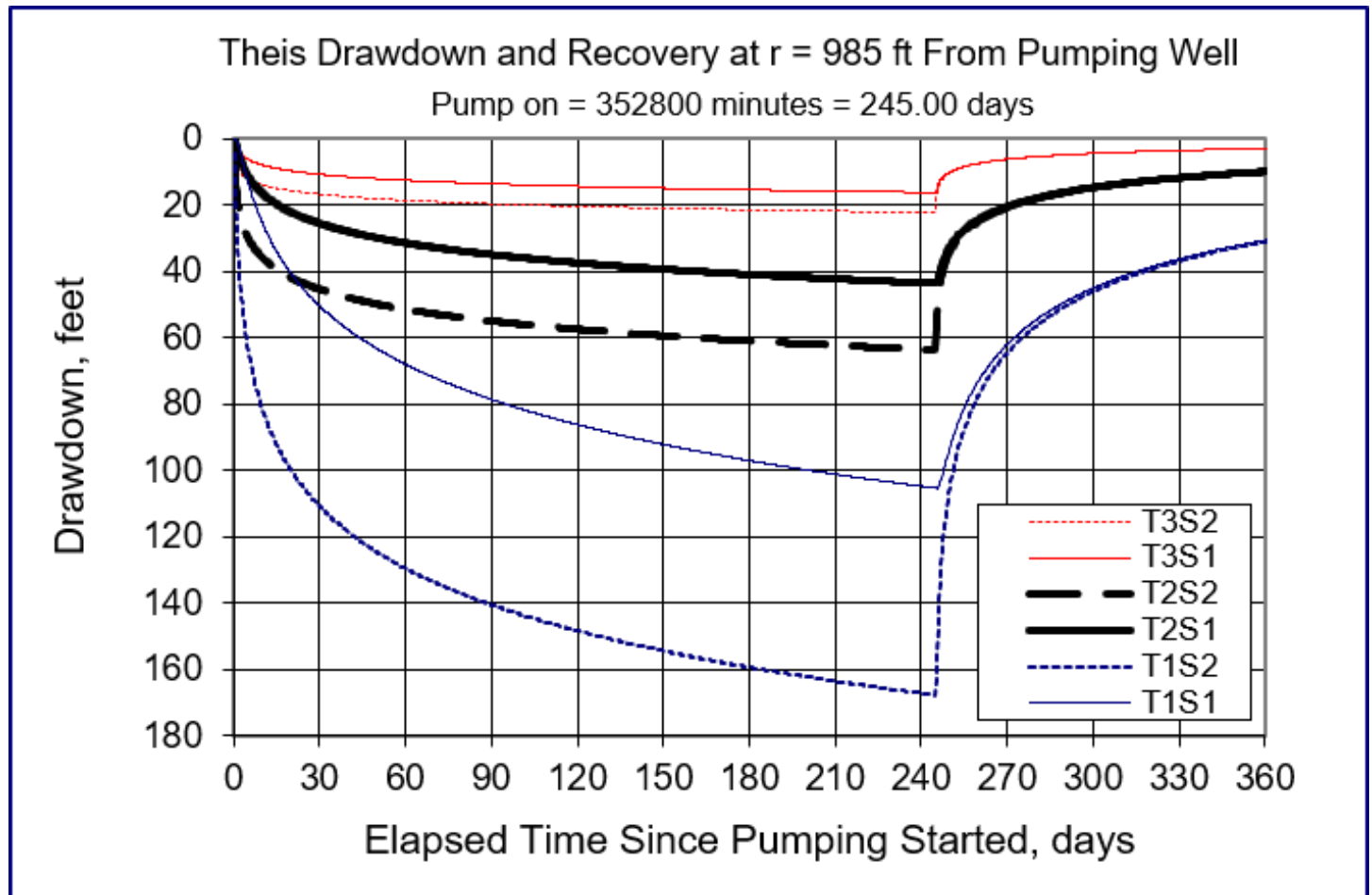
Well Statistics



Created 12/03/2024

Well-to-Well Interference Analyses (Theis, 1935)ParametersTransmissivity: T1 = 250 ft²/day | T2 = 780 ft²/day | T3 = 2,600 ft²/day [Pumping Test Reports]

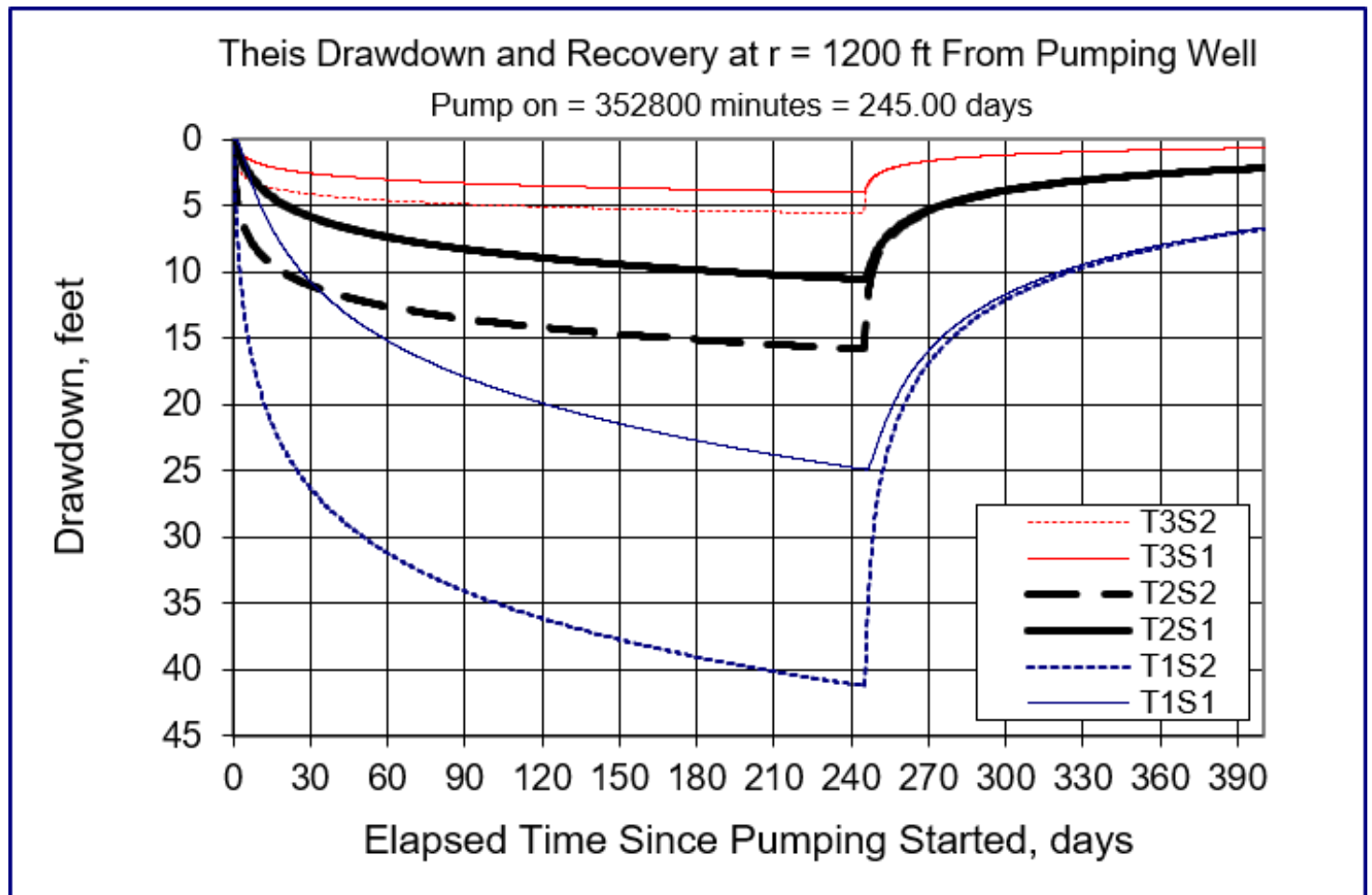
Storativity: S1 = 0.003 | S2 = 0.0003 [Conlon et al., 2005]

Well 3 to LINN 13793

Pumping rate, Q = 0.99 cfs

Pumping time, $t_{\text{pump}} = 245$ days [requested season of use]

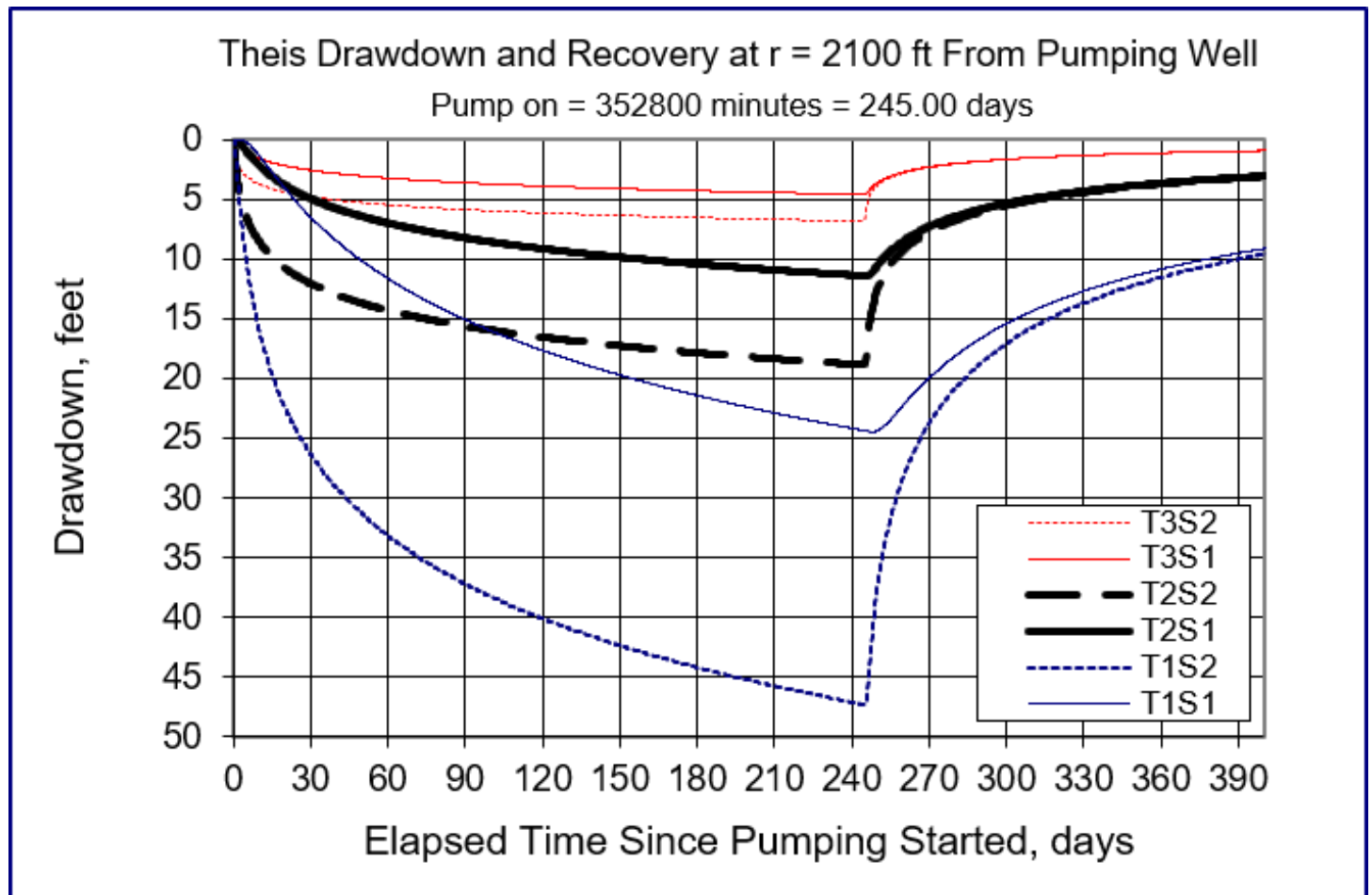
Well 4 to LINN 13815



Pumping rate, $Q = 0.26$ cfs [requested Well-Specific Rate]

Pumping time, $t_{\text{pump}} = 245$ days [requested season of use]

Well 2 to LINN 13779



Pumping rate, $Q = 0.37$ cfs [requested Well-Specific Rate]

Pumping time, $t_{\text{pump}} = 245$ days [requested season of use]

Stream Depletion Analysis – Hunt (2003) – Well 3 to SW 2

Application type:	G
Application number:	19450
Well number:	3
Stream Number:	2
Pumping rate (cfs):	0.99
Pumping duration (days):	245.0
Pumping start month number (3=March)	3.0
Plotting duration (days)	365

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	7300	7300	7300	ft
Aquifer transmissivity	T	250.0	780.0	2600.0	ft ² /day
Aquifer storativity	S	0.003	0.0009	0.0003	-
Aquitard vertical hydraulic conductivity	Kva	0.01	0.003	0.001	ft/day
Aquitard saturated thickness	ba	15.0	10.0	5.0	ft
Aquitard thickness below stream	babs	5.0	3.0	2.0	ft
Aquitard specific yield	Sya	0.2	0.2	0.2	-
Stream width	ws	50.0	50.0	50.0	ft

Stream depletion for Scenario 2:

Days	10	330	360	30	60	90	120	150	180	210	240	270	300
Depletion (%)	0	0	0	0	0	0	0	0	0	0	0	0	0
Depletion (cfs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

