Brazos Valley Groundwater Conservation District

Update on Questions from the BVGCD DFC Workshop

March 13, 2025

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Outline

Remaining questions from the BVGCD January 23, 2025 DFCs Workshop:

1. DFCs stated as remaining available drawdown?
   - Calculated from top of aquifer

2. DFC based on “economically feasible” water level?
3. What is the impact to public supply wells?

   - Pinch point analysis – one of many considerations in evaluating “economic feasibility” and socioeconomic impacts

BVGCD Scenarios discussed today

1. S19 – current DFCs

2. S19 + all new permits (BV-Run2)
   - 156,510 AFY additional permits

3. “Best Estimate” provided to GMA 12
   - Intermediate run based on Upwell Transport permit

2070 Remaining Available Drawdown (from top of Aquifer)

2070 Percent Remaining Available Drawdown	S-19					
	Sparta	Queen City	Carrizo	Calvert Bluff	Simsboro	Hooper
FayetteCountyGCD	95	93	93	--	--	--
BrazosValleyGCD	88	92	88	84	82	91
LostPinesGCD	91	92	82	84	85	92
MidEastTexasGCD	90	92	91	90	95	96
PostOakSavannahGCD	95	96	82	83	81	90

2070 Percent Remaining Available Drawdown	BVGCD Best Estimate					
	Sparta	Queen City	Carrizo	Calvert Bluff	Simsboro	Hooper
FayetteCountyGCD	95	93	93	--	--	--
BrazosValleyGCD	88	92	87	81	76	88
LostPinesGCD	92	92	83	83	82	91
MidEastTexasGCD	90	91	90	89	94	95
PostOakSavannahGCD	95	96	83	81	76	87

2070 Percent Remaining Available Drawdown	BVGCD All					
	Sparta	Queen City	Carrizo	Calvert Bluff	Simsboro	Hooper
FayetteCountyGCD	95	93	92	--	--	--
BrazosValleyGCD	87	90	81	73	64	82
LostPinesGCD	91	91	79	80	80	90
MidEastTexasGCD	89	90	89	86	92	93
PostOakSavannahGCD	95	95	77	75	69	83

Pinch Point Analysis of PWS wells

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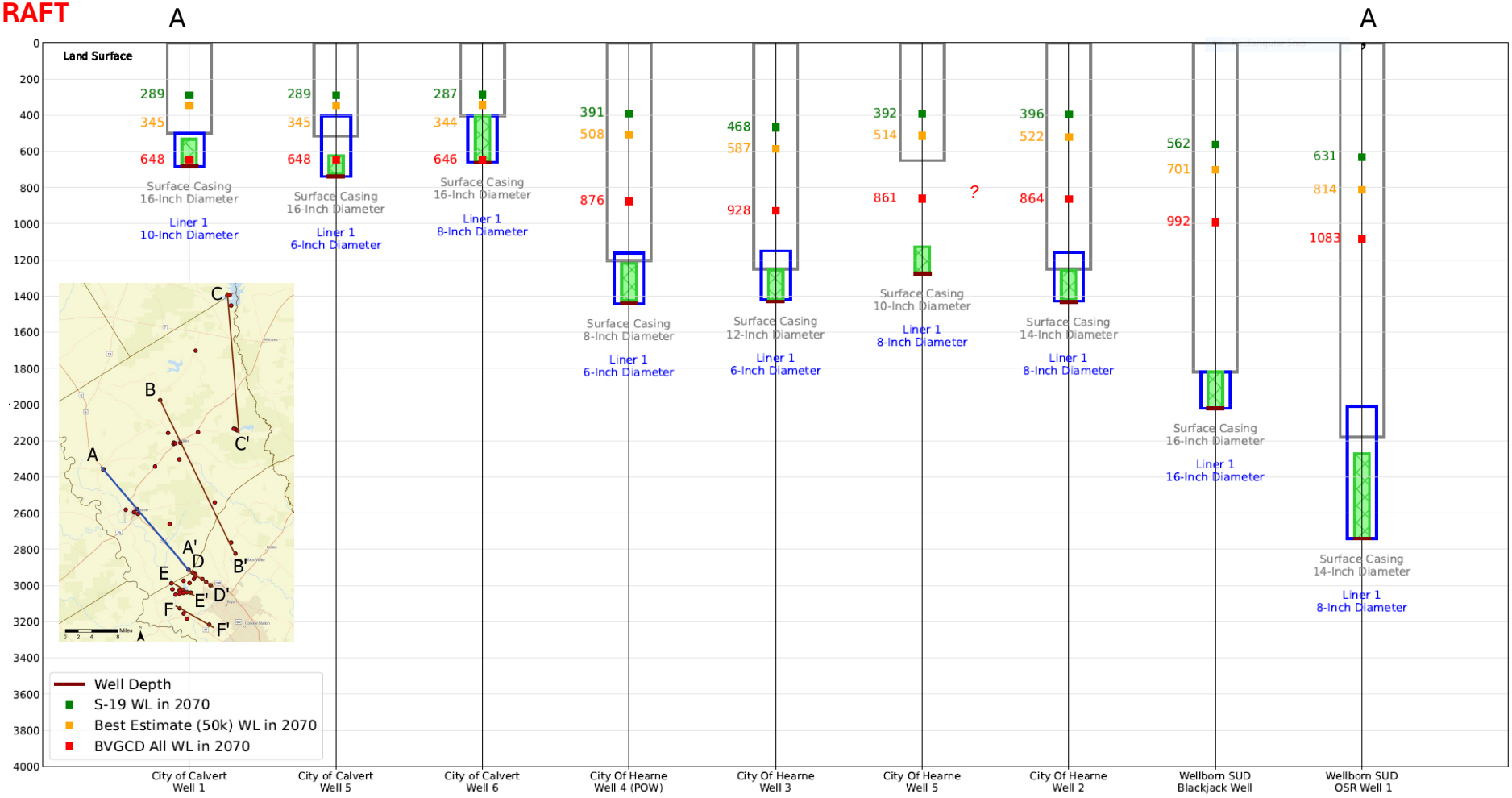

Well material settings and sizes shown are best estimates based on available data

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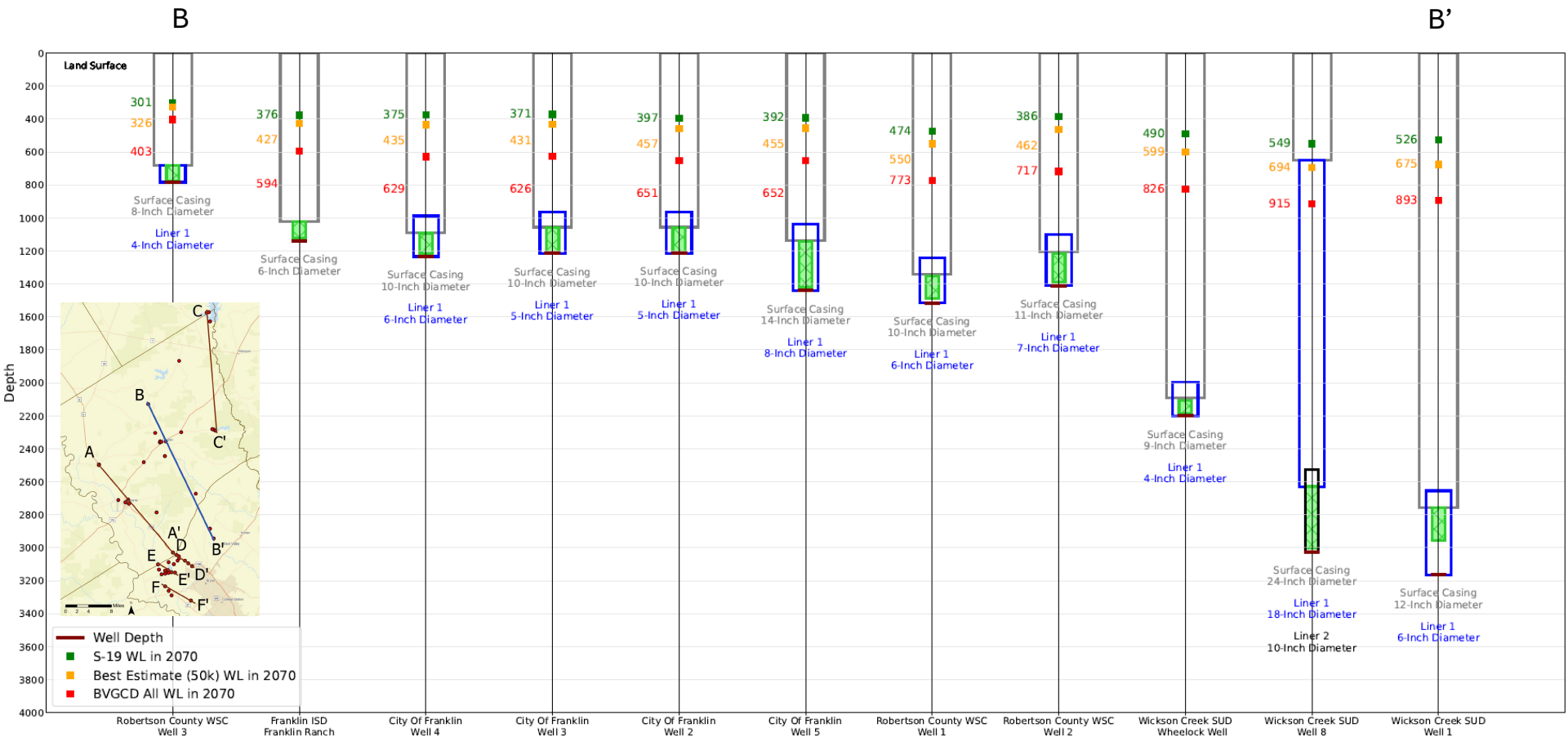

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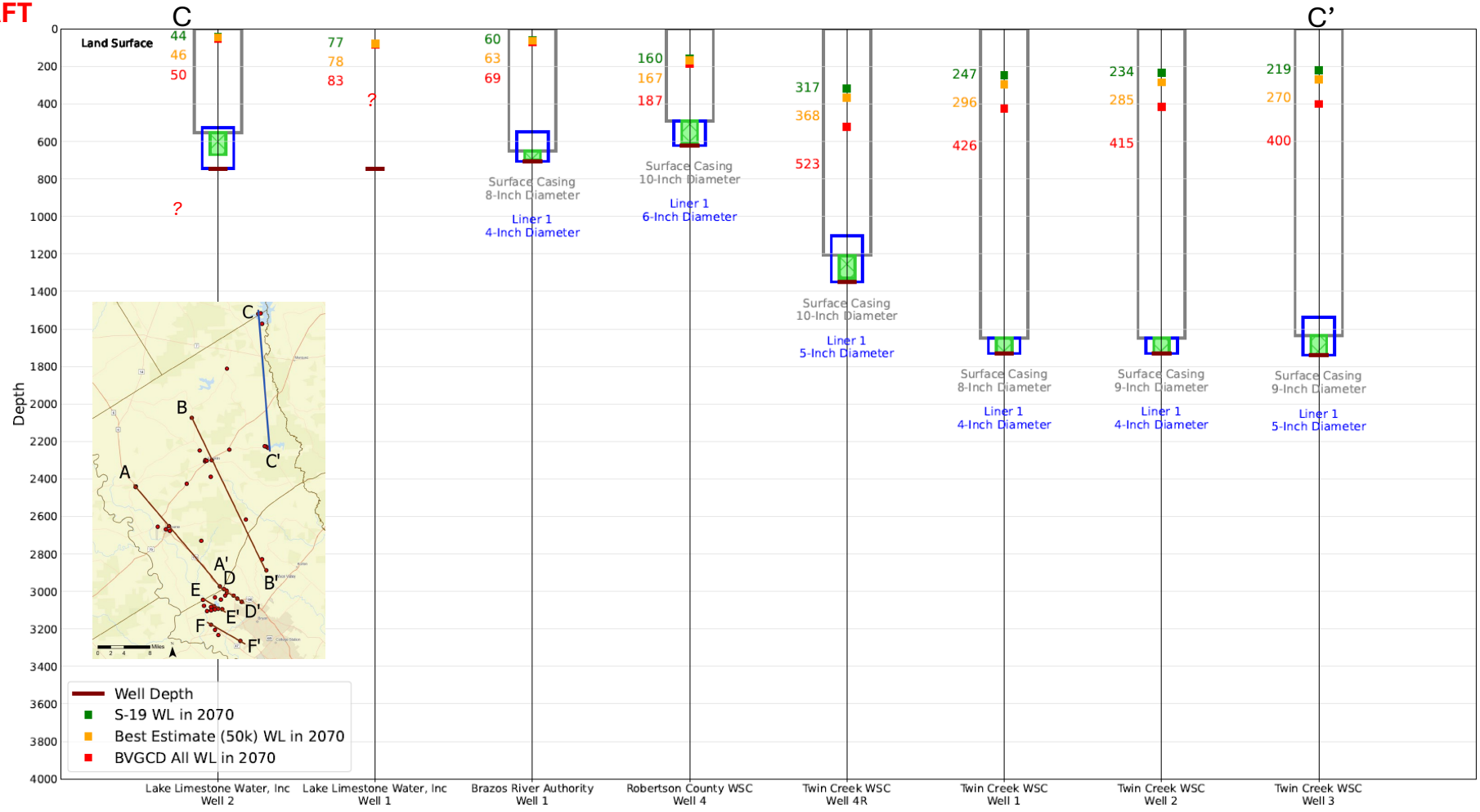

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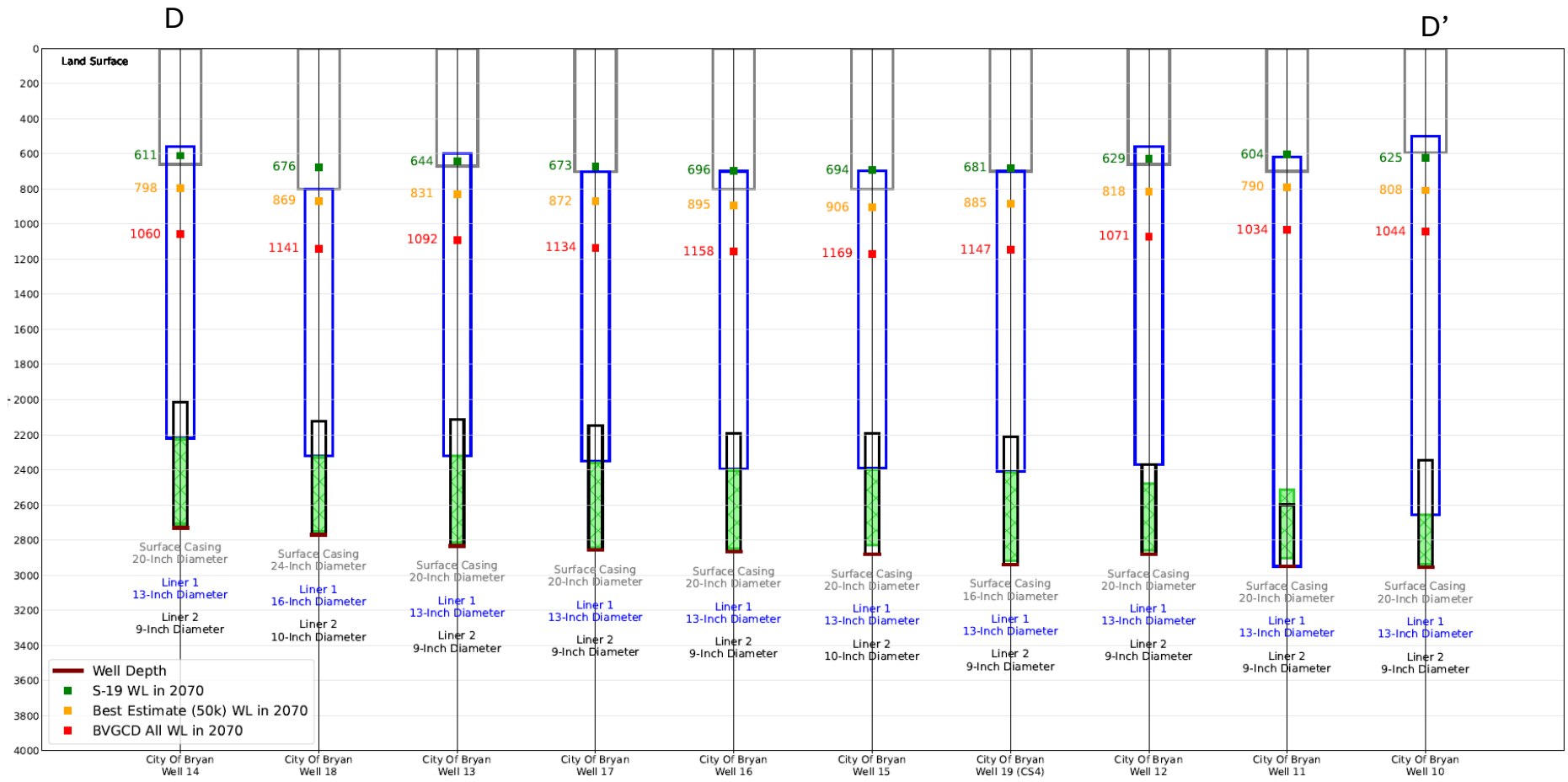

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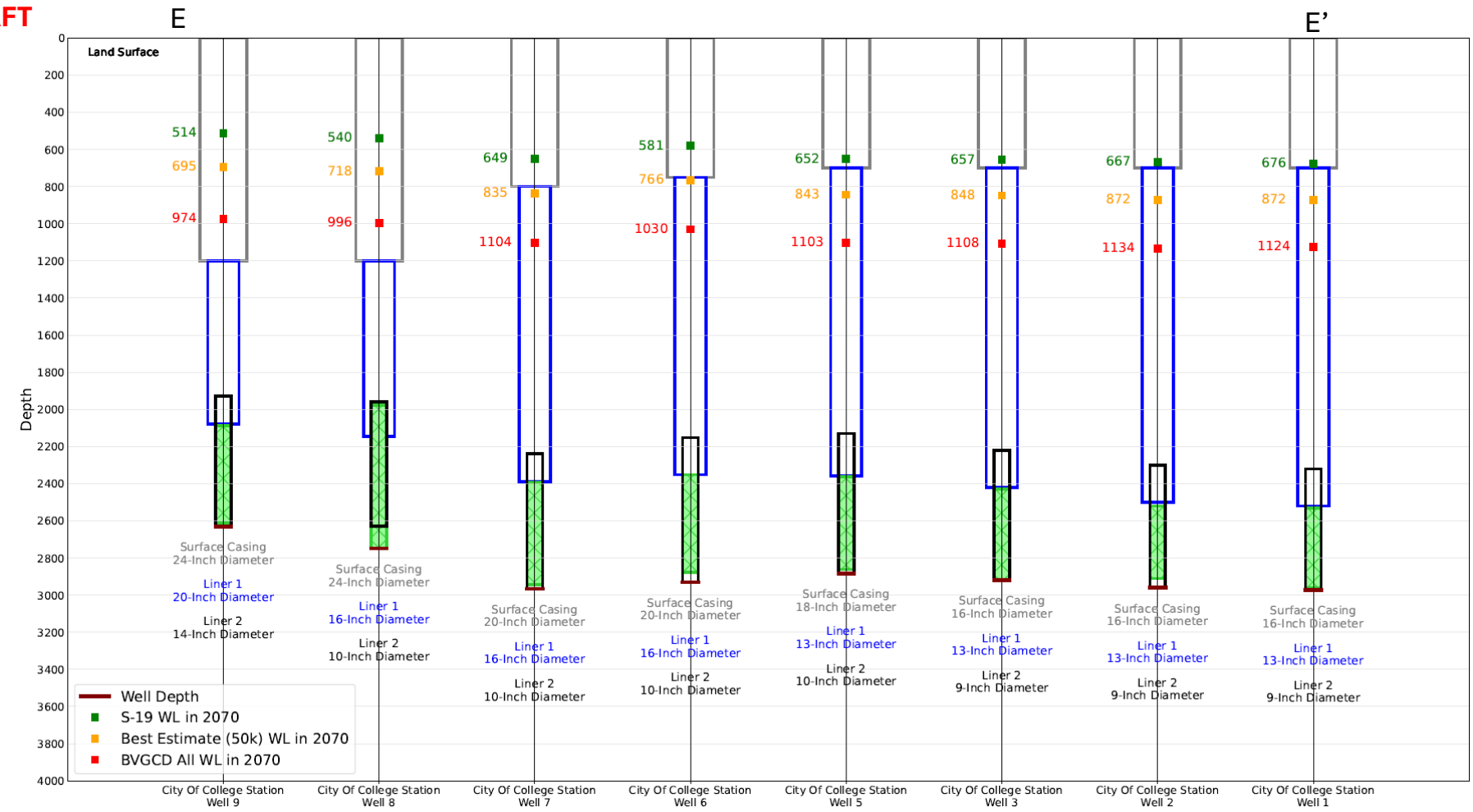

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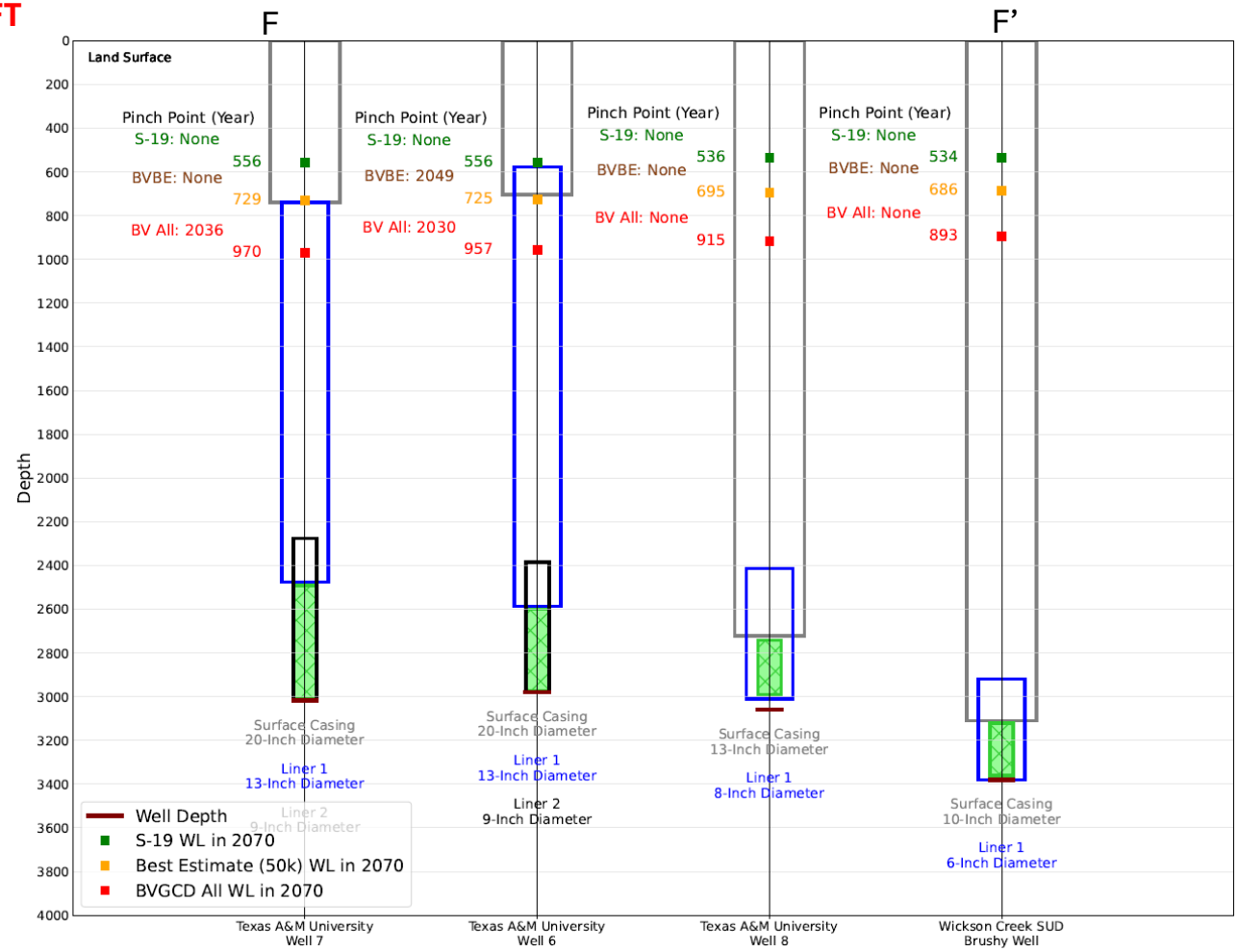

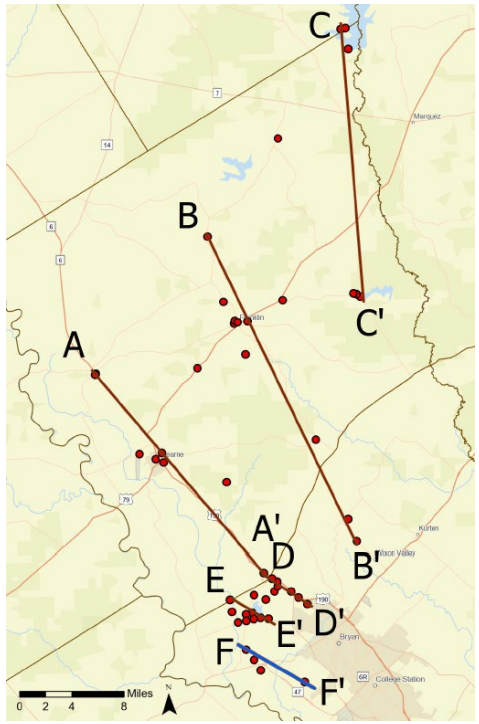

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Support Slides

From Feb 13 meeting

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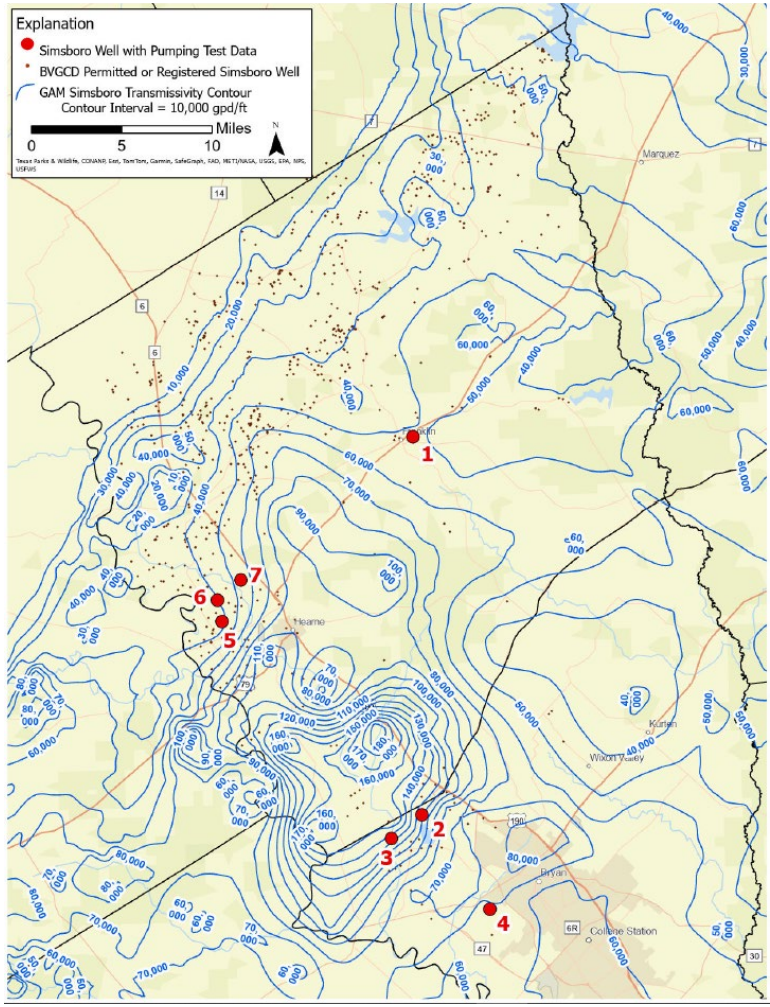
1) Simsboro Aquifer GAM Transmissivity

#	Location	Pumping Test Transmissivity (gpd/ft)	GAM Transmissivity (gpd/ft)
1	City of Franklin Well 5	62,000	52,000
2	City of Bryan Well 18	107,500	108,000
3	City of College Station Well 8	130,000	135,000
4	Sanderson Farms Well 1	111,000	68,000

New data Since GAM was calibrated

#	Location	Pumping Test Transmissivity (gpd/ft)	GAM Transmissivity (gpd/ft)
5	Goodland Farms - CS1	50,000	38,000
6	Goodland Farms – CS2	50,000	39,000
7	Goodland Farms – CS3	86,500	55,000



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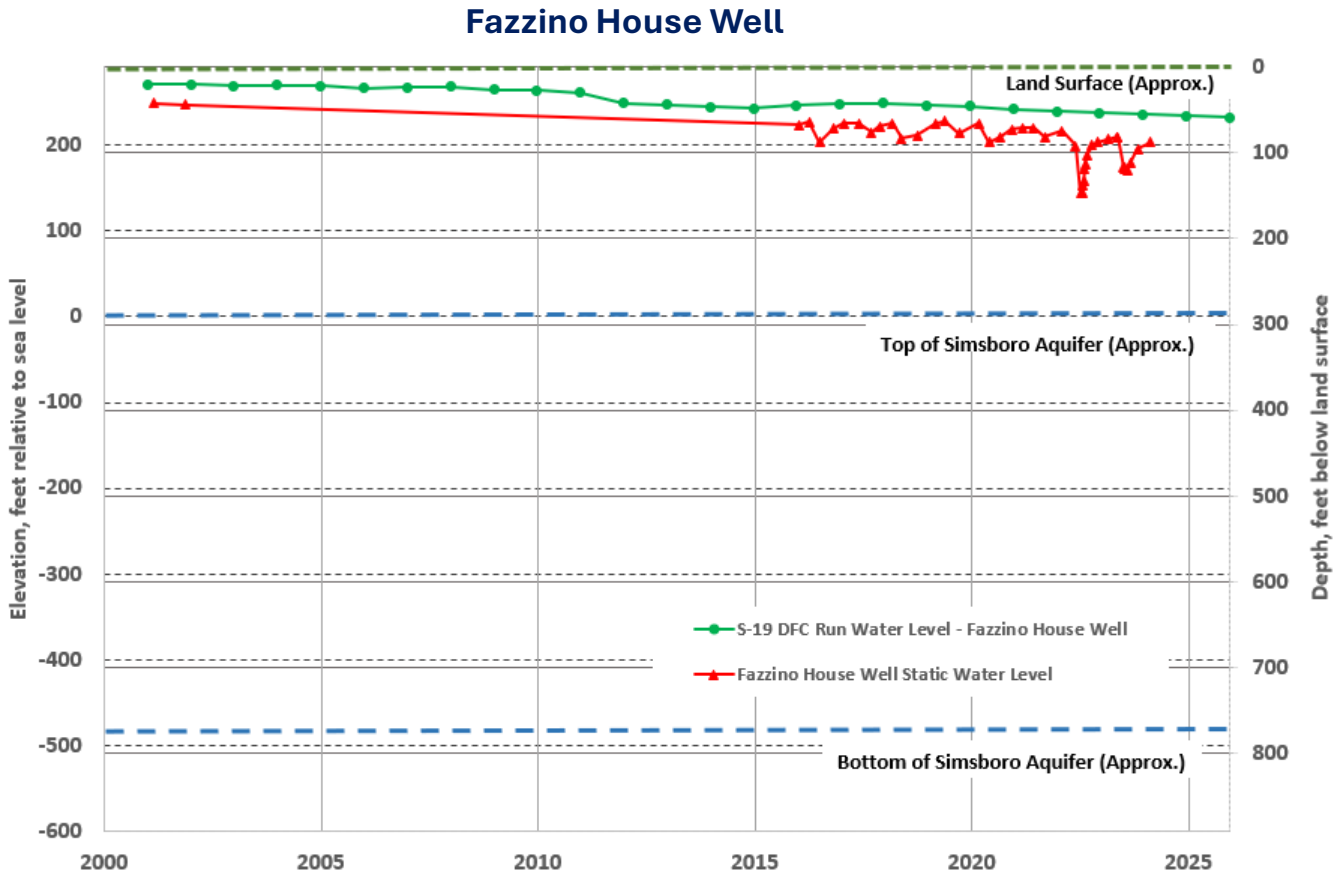
2) Simsboro Aquifer GAM Predictions to Date with S-19



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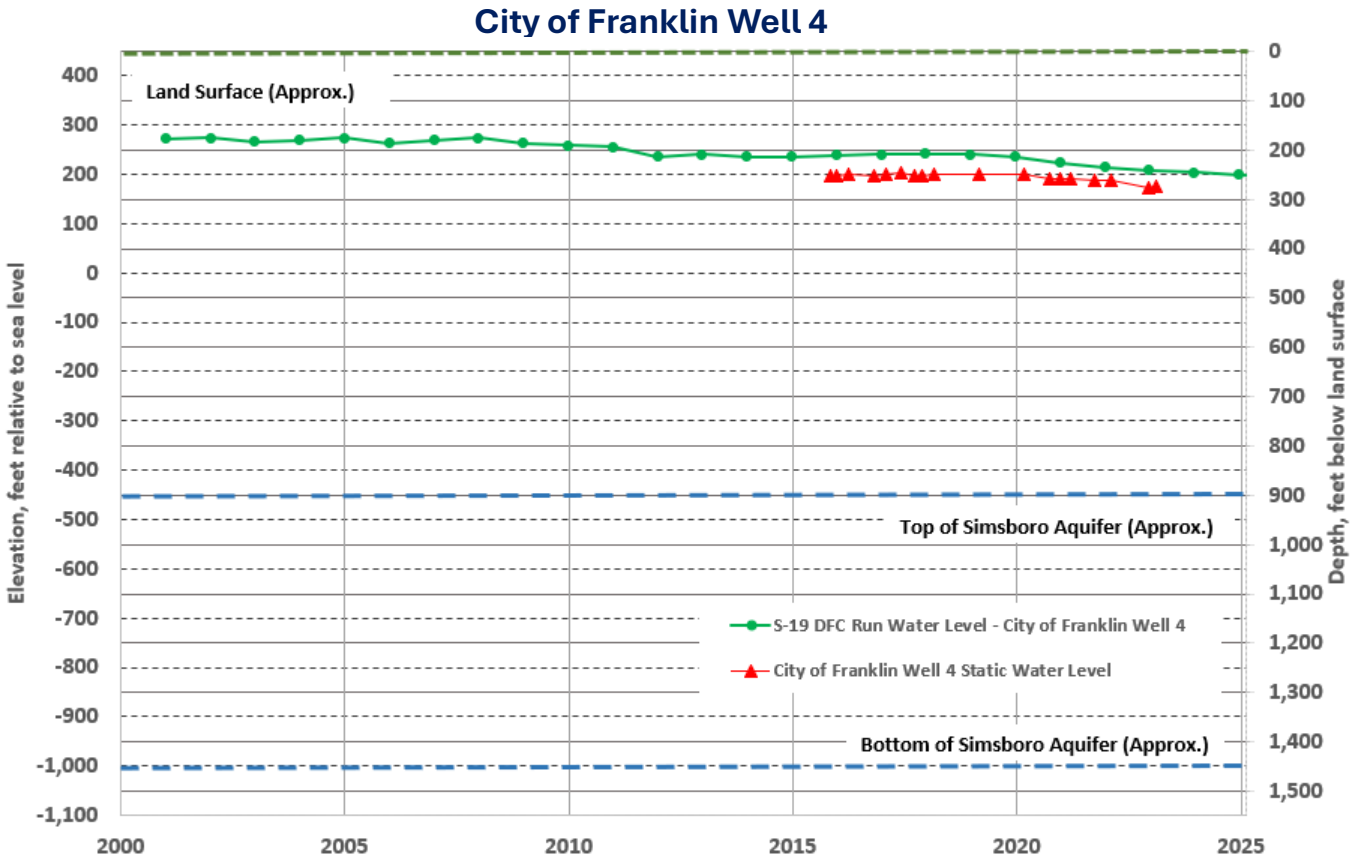

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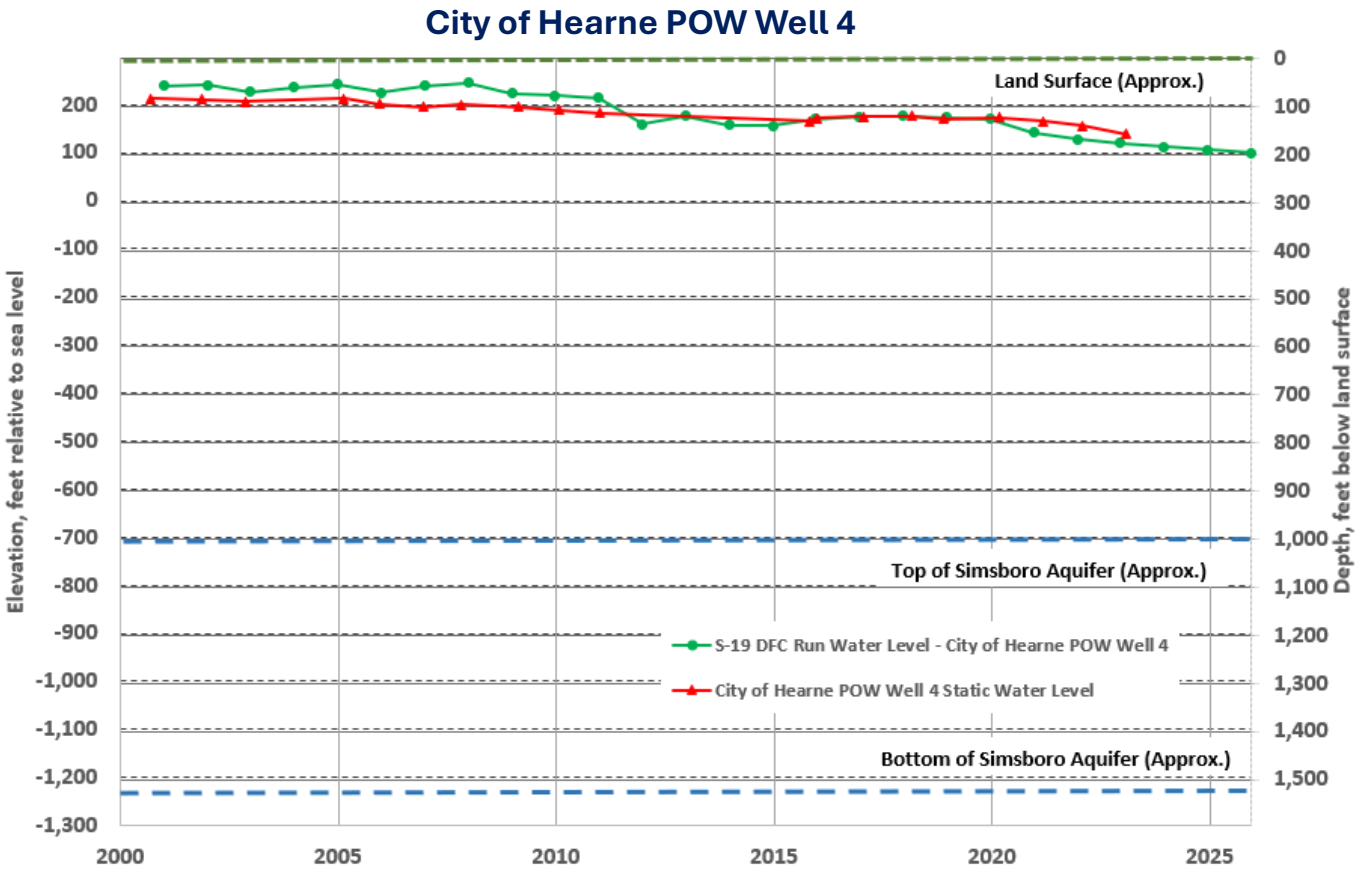

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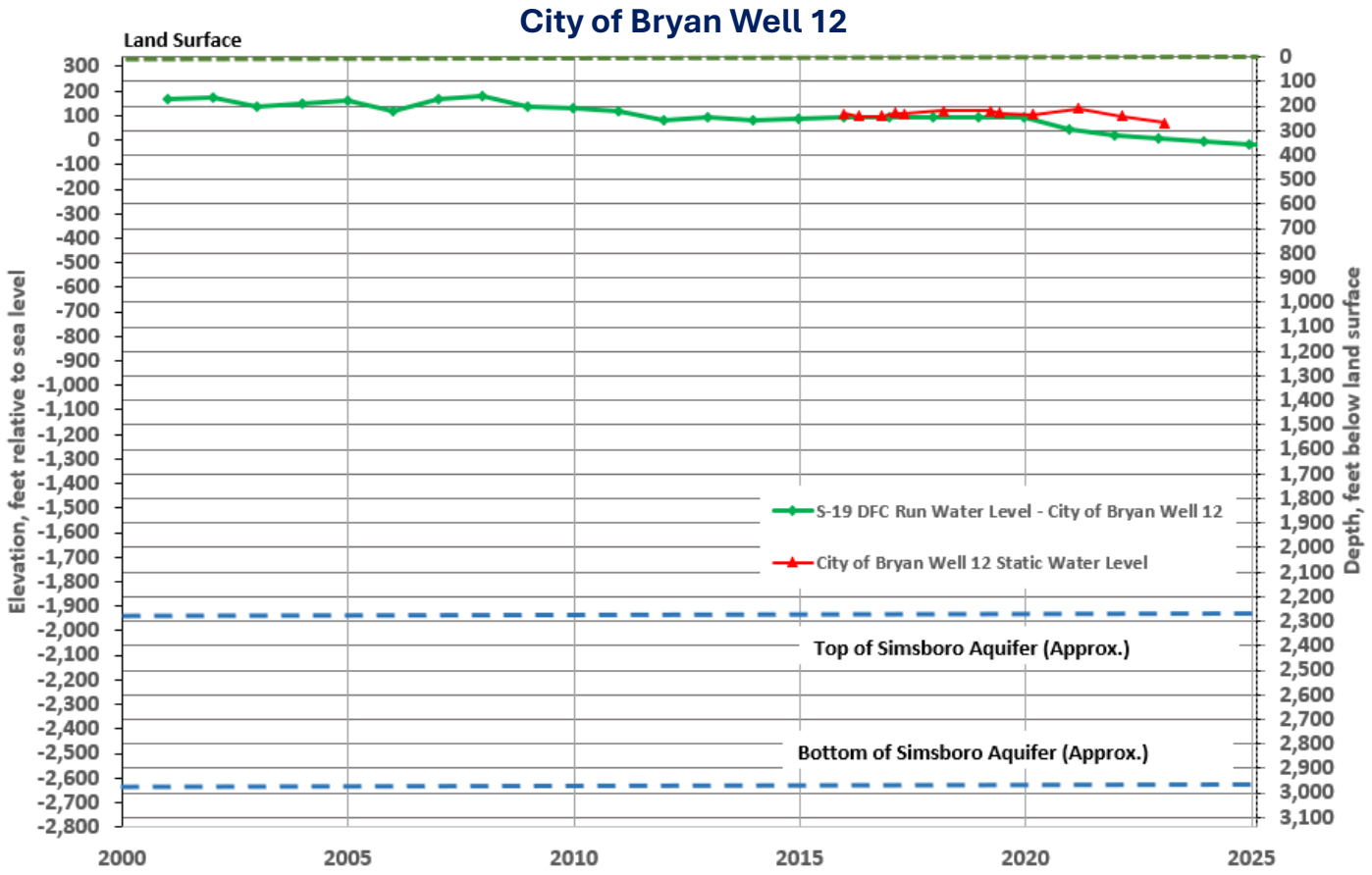

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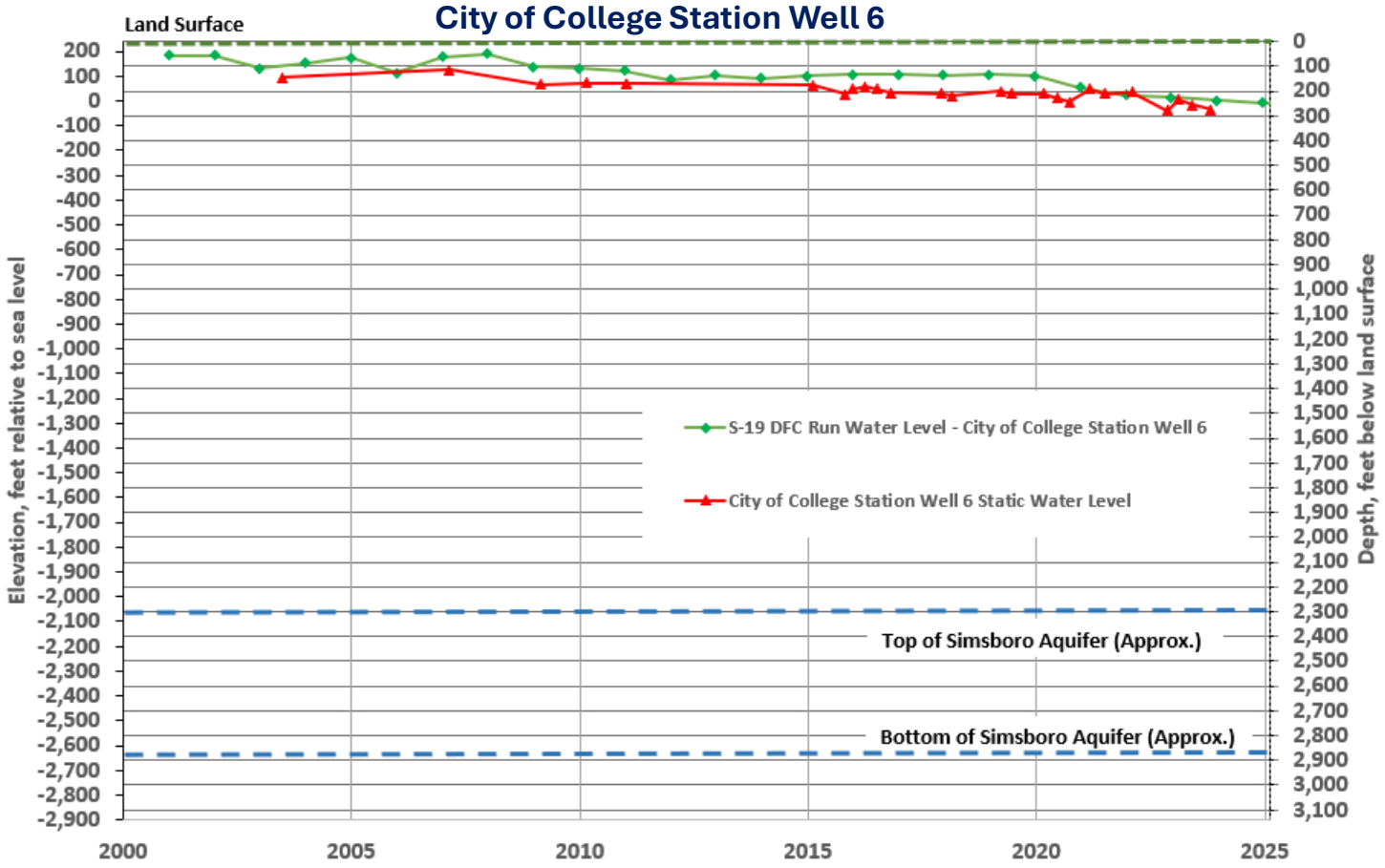

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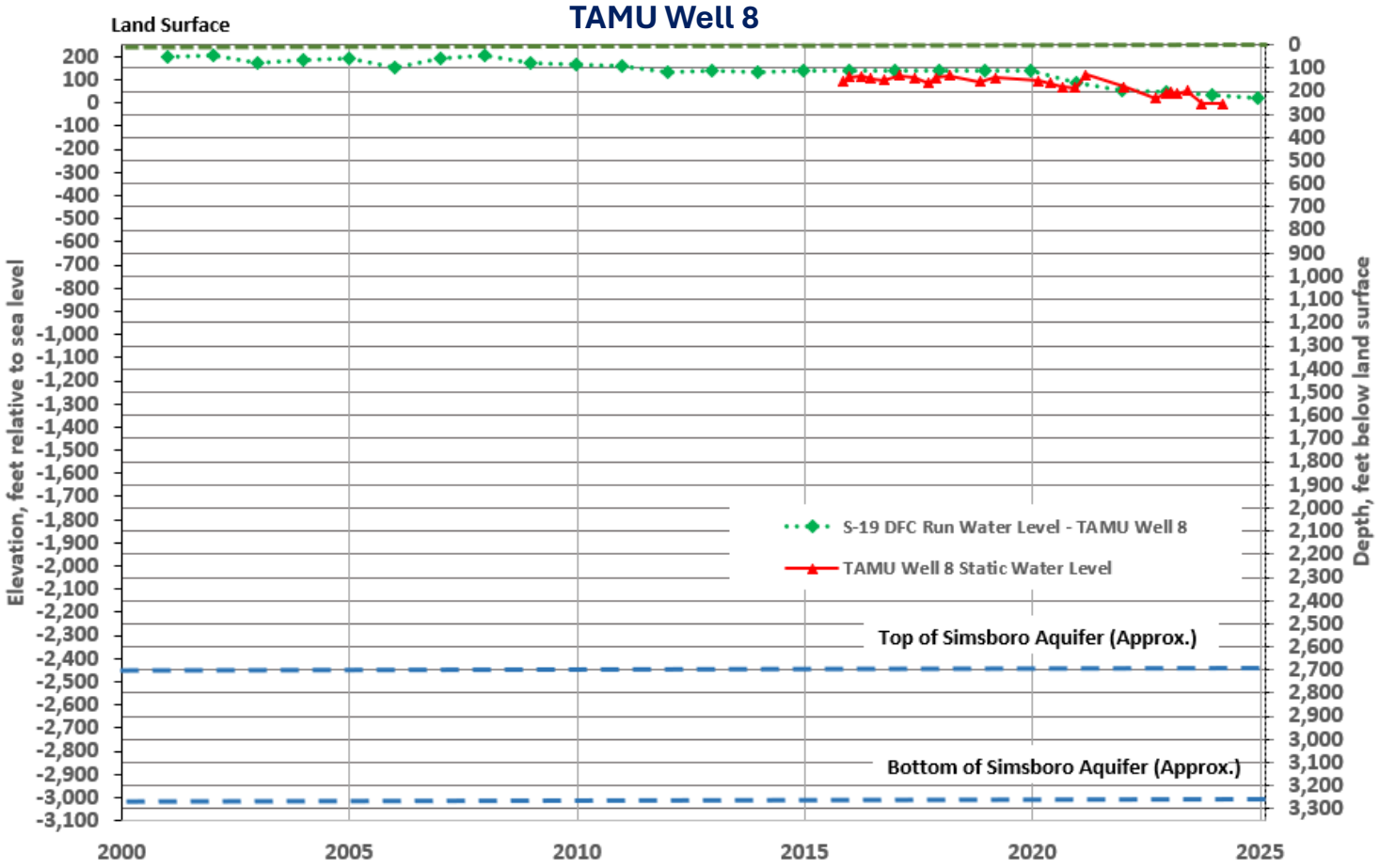

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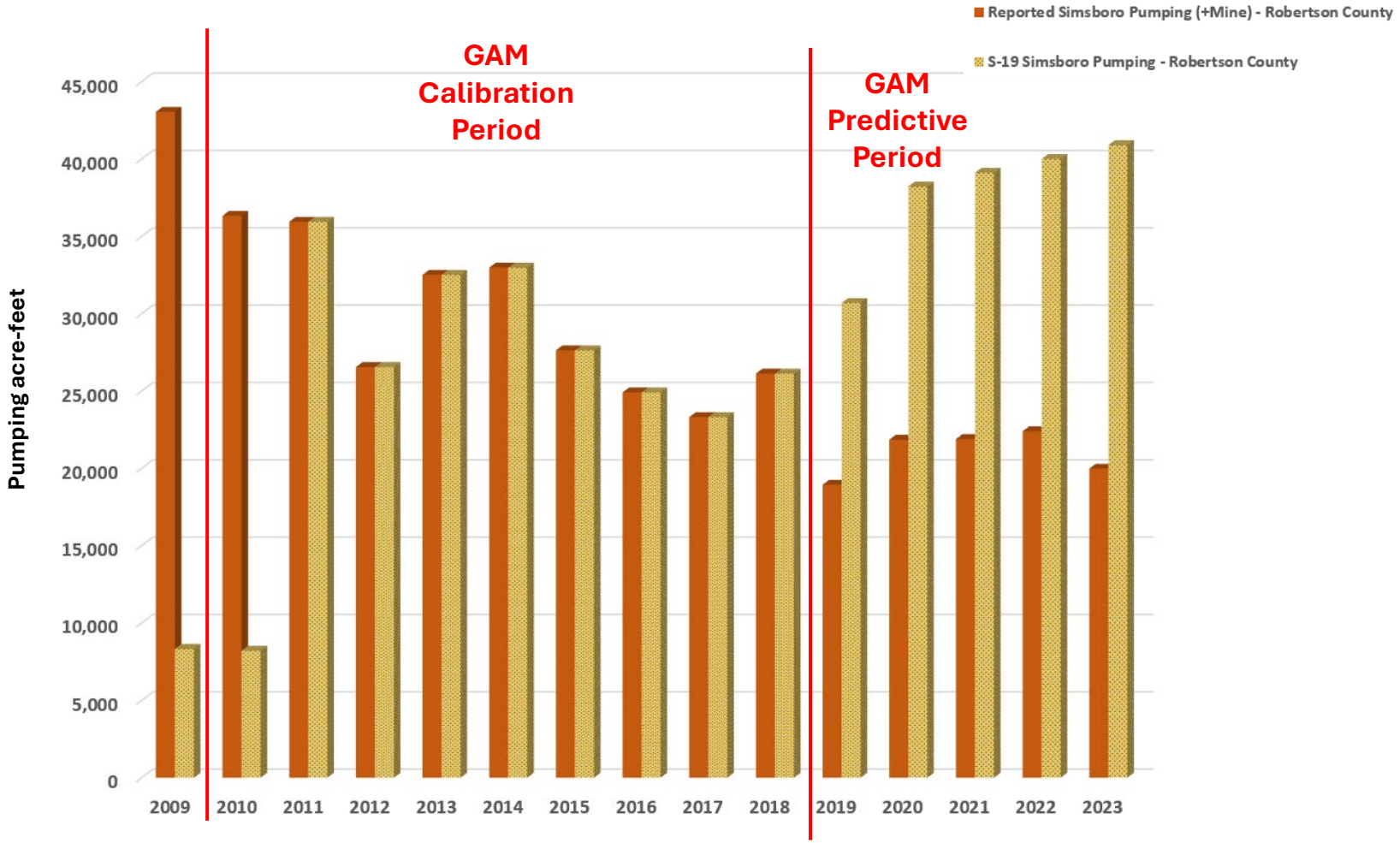
3) Robertson Co. S-19 Predictive Simsboro Aquifer Pumping Comparison



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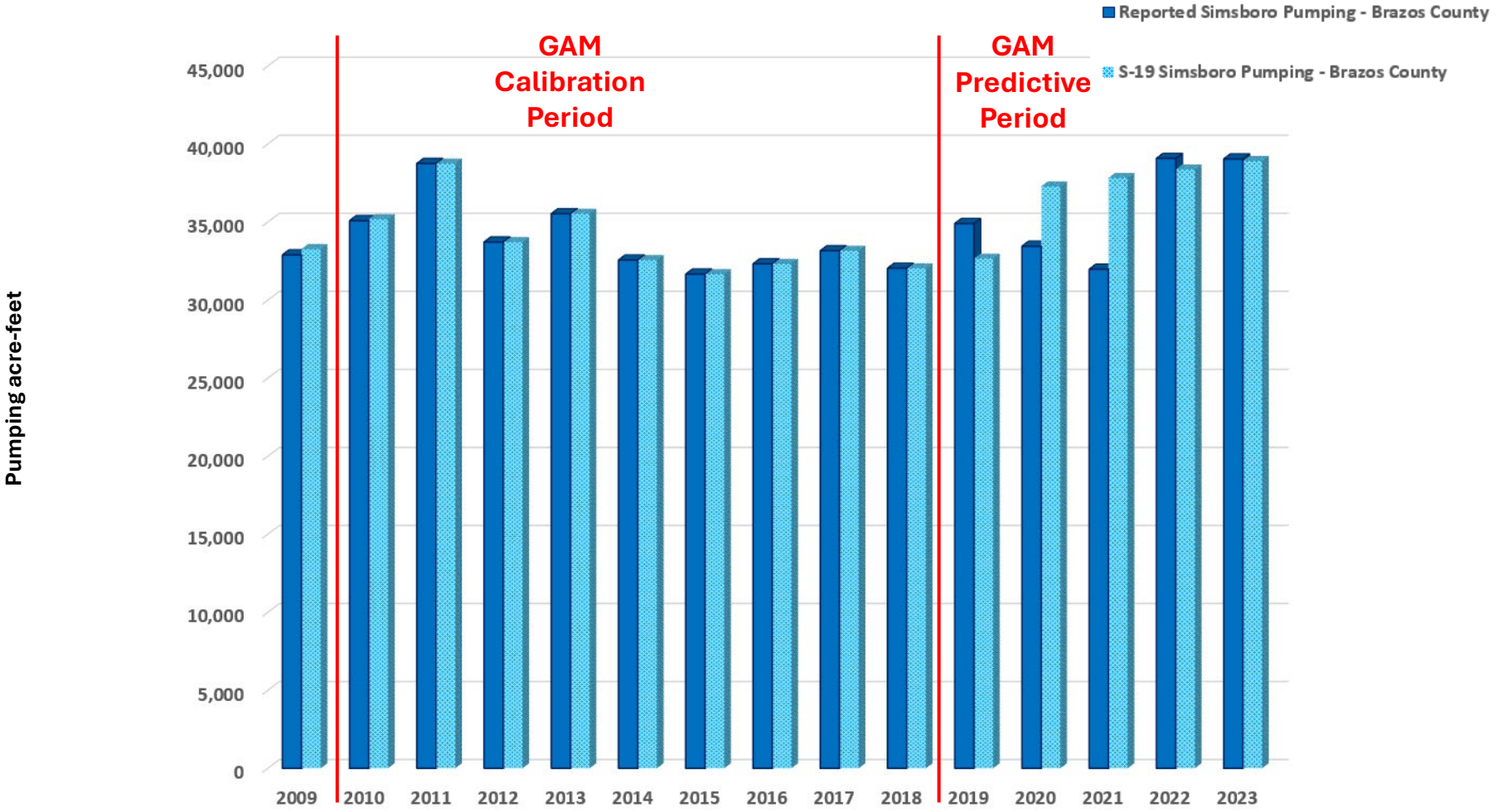
3) Brazos Co. S-19 Predictive Simsboro Aquifer Pumping Comparison



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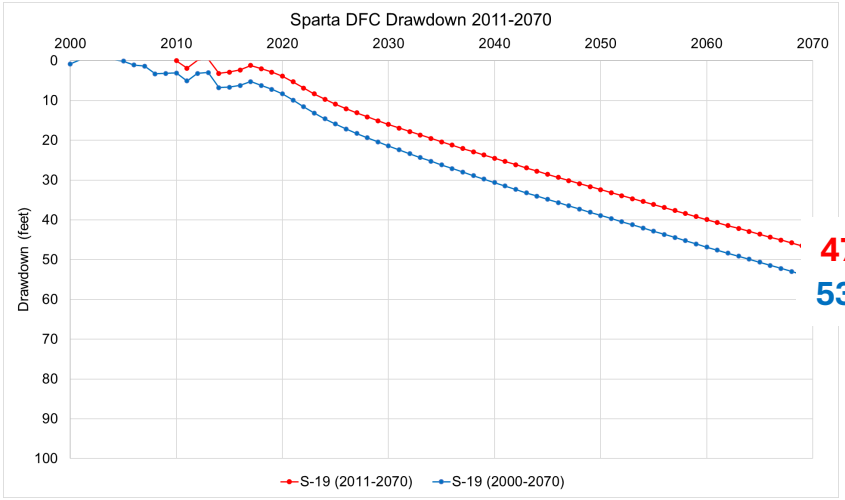
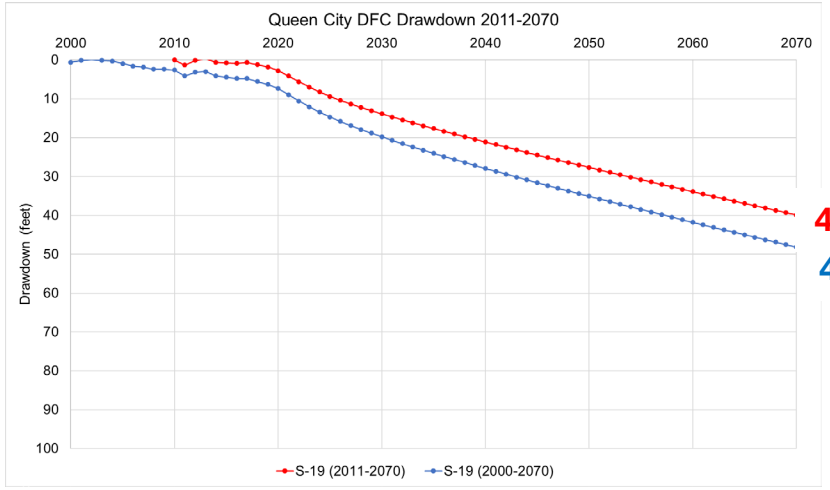
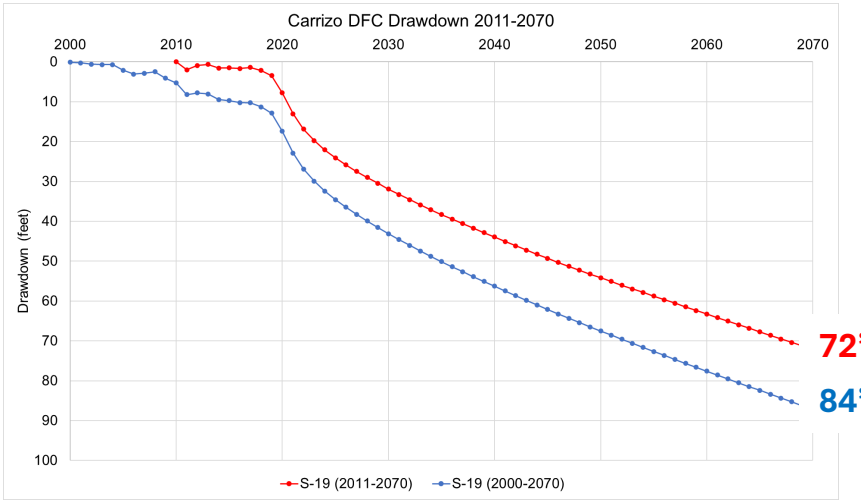
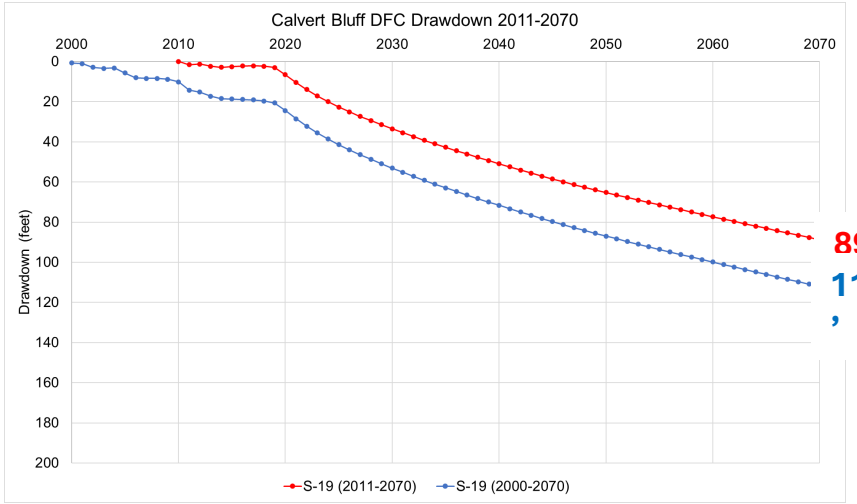
4) Comparison of 2000 to 2010 Start Using S-19









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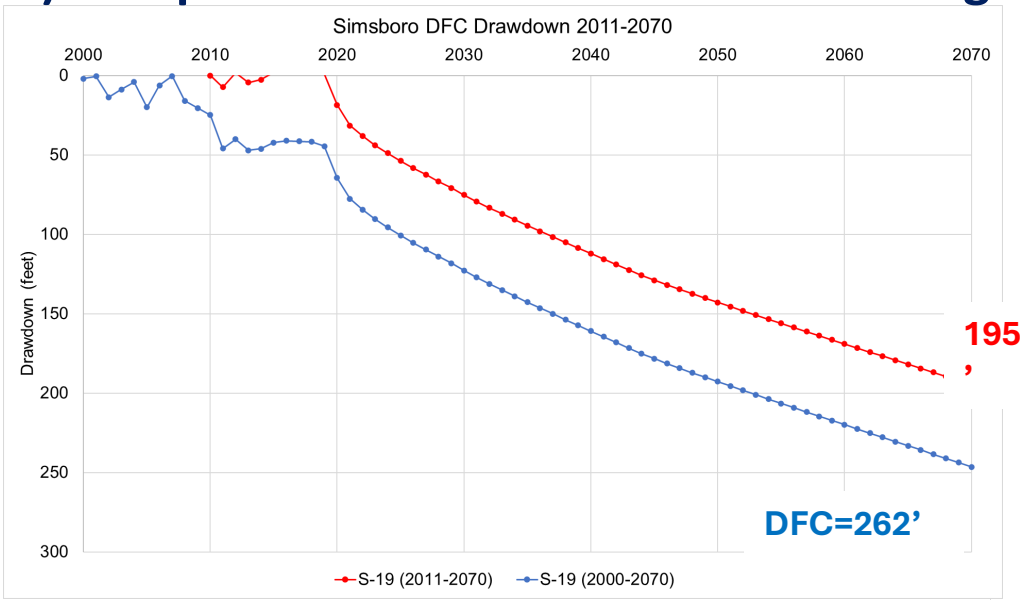
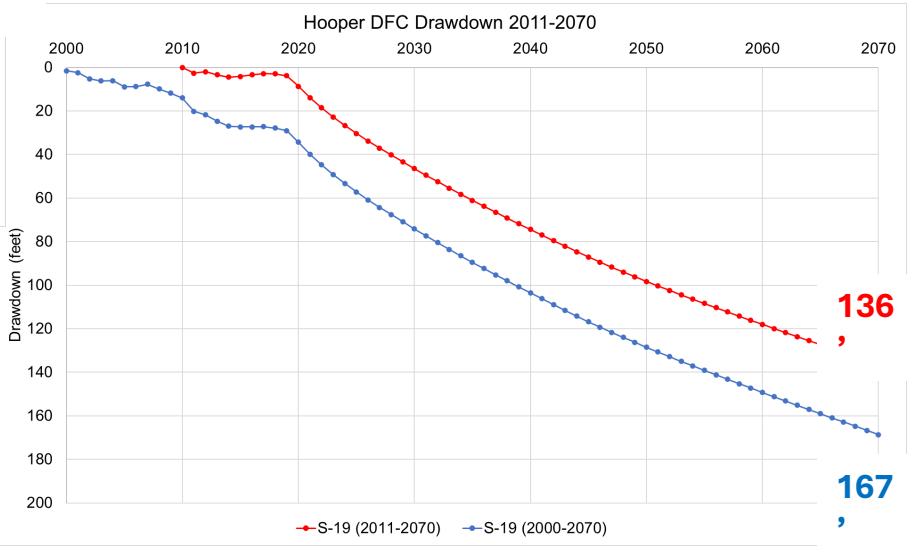


195’

DFC=262’



136’

167’

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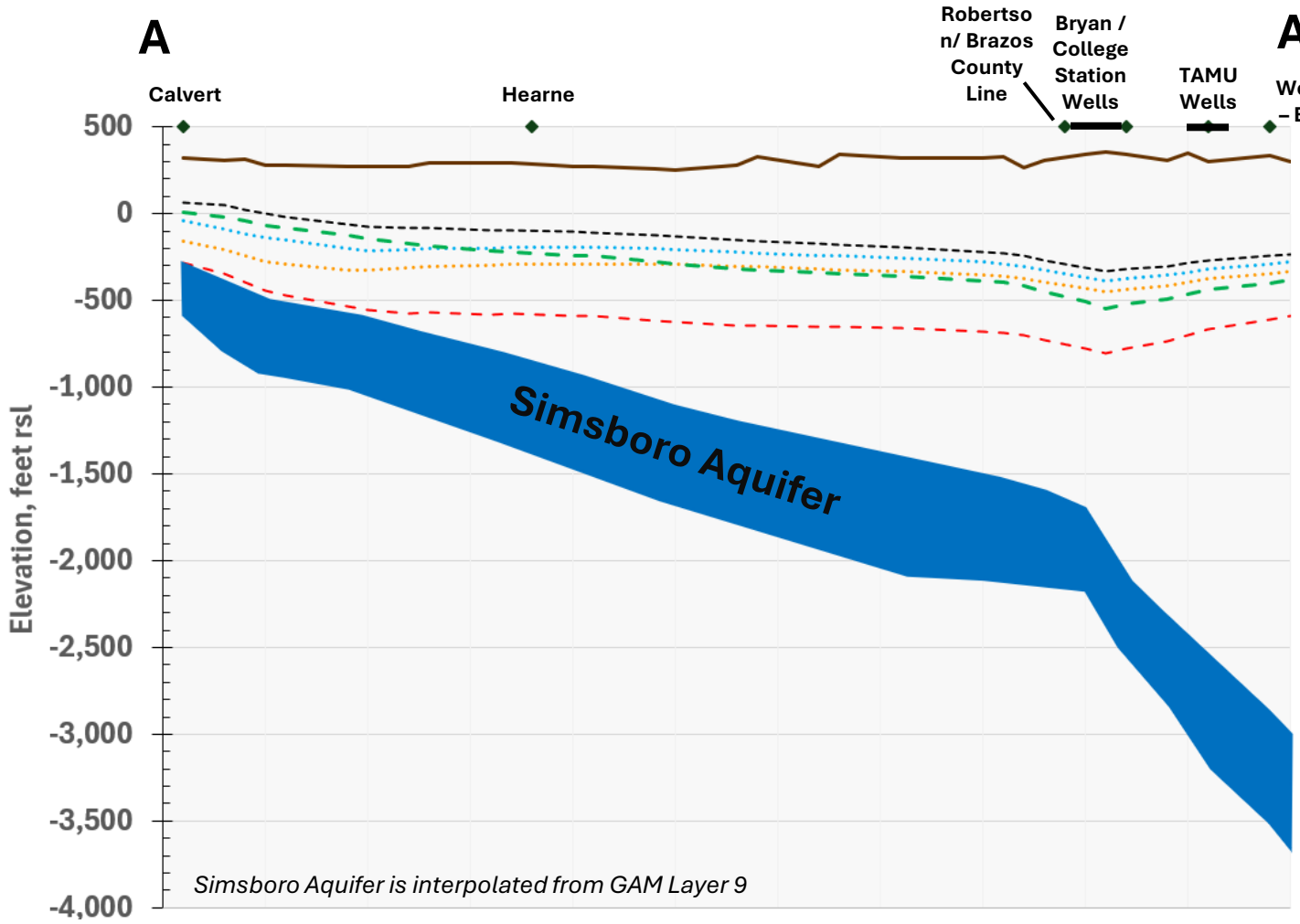
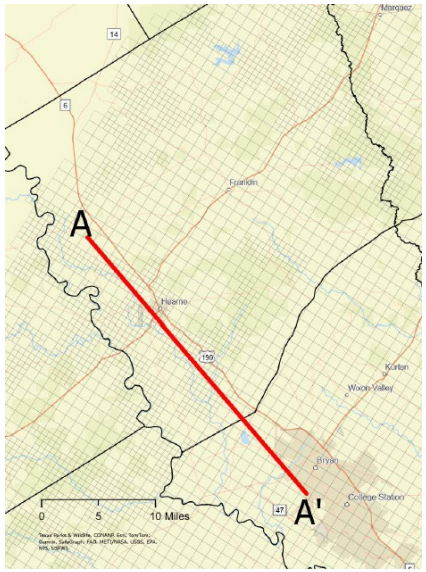
5) Simulated Available Drawdown at 2070

* Slide Updated 02/26/25





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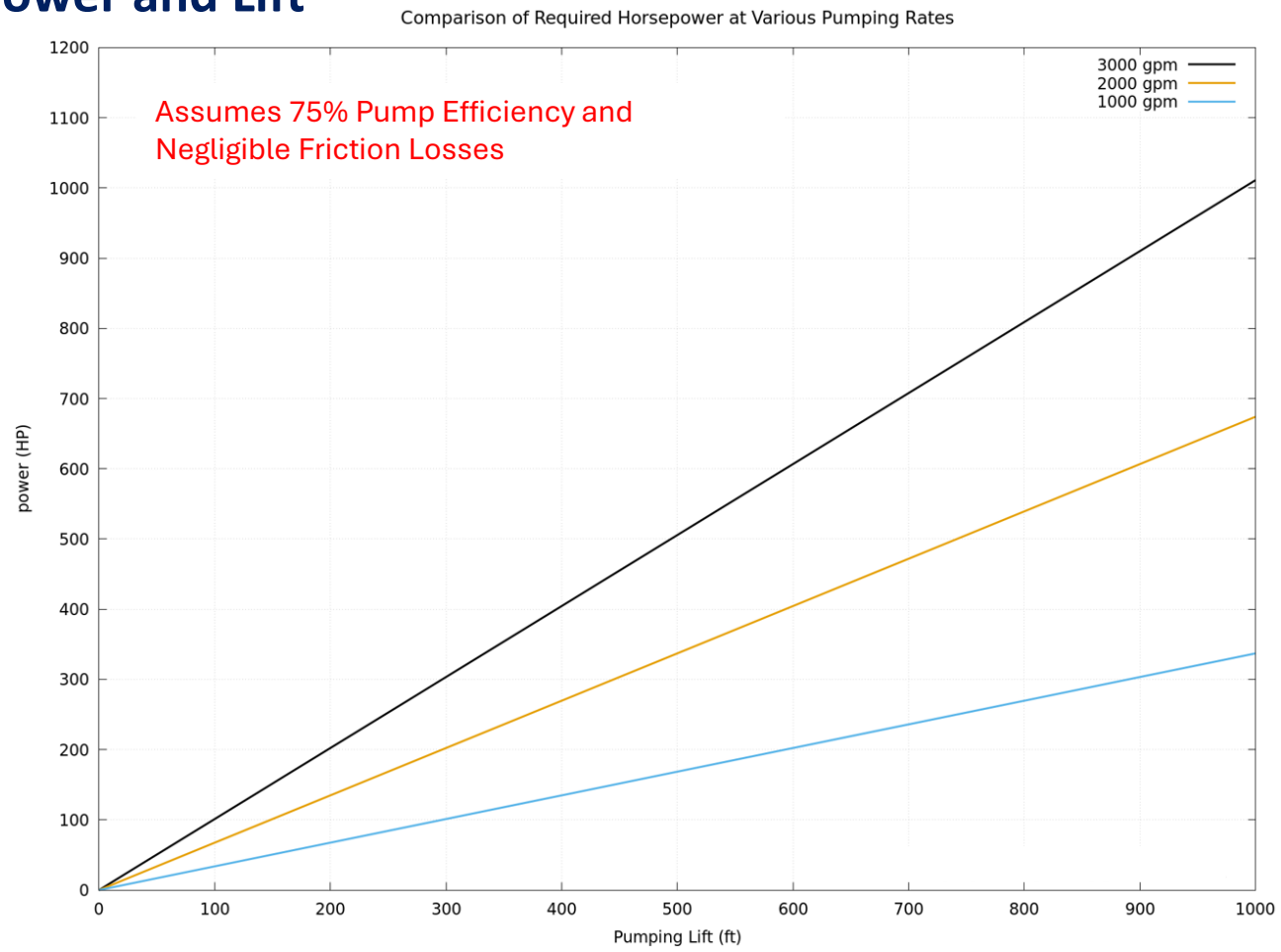
6) Relationship between Power and Lift

- **Chart shows relationship between pumping lift and power (HP)**
- **Does not address practical limits on pumping lifts**
- **Working to gather information on the experience of others who have had pump lifts reach 800 to 1,000 feet.**



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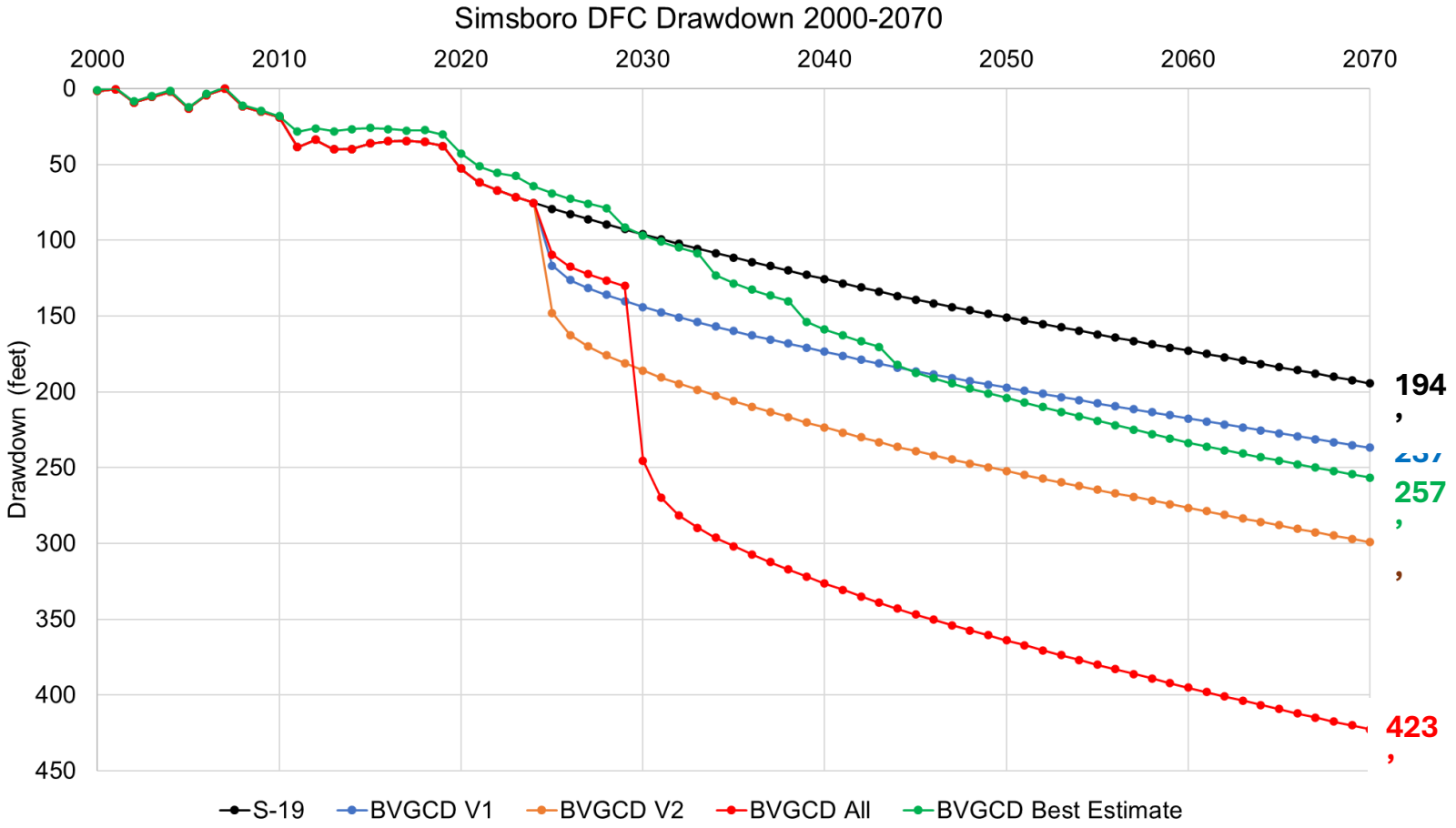
8) Average drawdown calculated for Robertson County only

* Slide Updated 02/26/25



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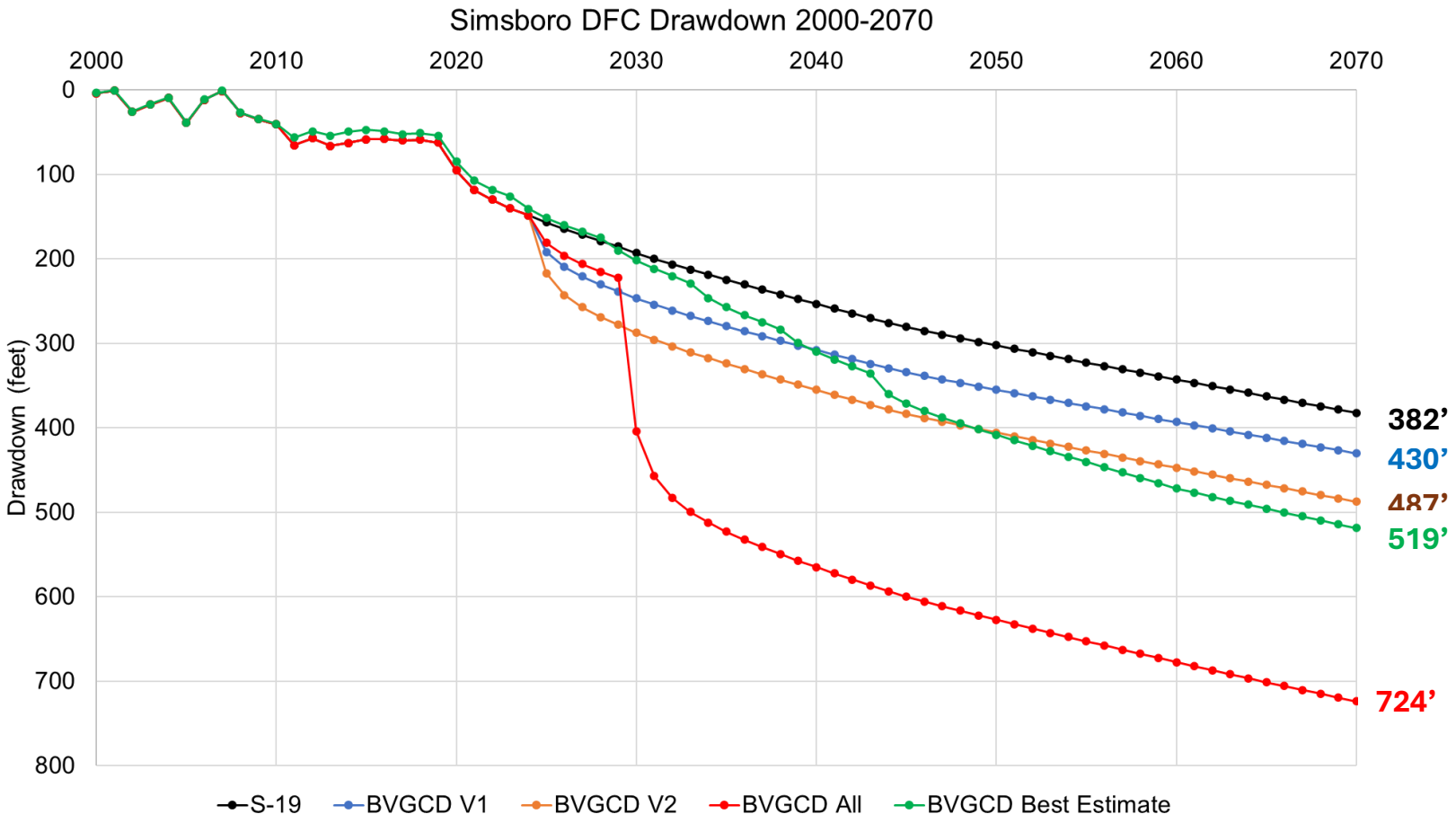
8) Average drawdown calculated for Brazos County only

* Slide Updated 02/26/25



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Clarification / Disclaimer

- GCDs in GMA 12 will determine DFCs, not the hydrogeologic consultant.
- Chapter 36 of the Texas Water Code contains concepts that blend legal and technical issues. AGS is not a law firm and we do not provide legal advice. Any statements relating to regulatory or legal issues shall not be considered legal advice.
- AGS may provide commentary based on our experience working with groundwater conservation districts, permitting, joint groundwater planning, GCD rules and management plans, water supply entities, and our general understanding of industry practices.