

GMA 12 S-12 Simulation 2020 to 2040 Pumping Effects for the Sparta, Carrizo and Simsboro Aquifers

Presented to

BVGCD Board of Directors

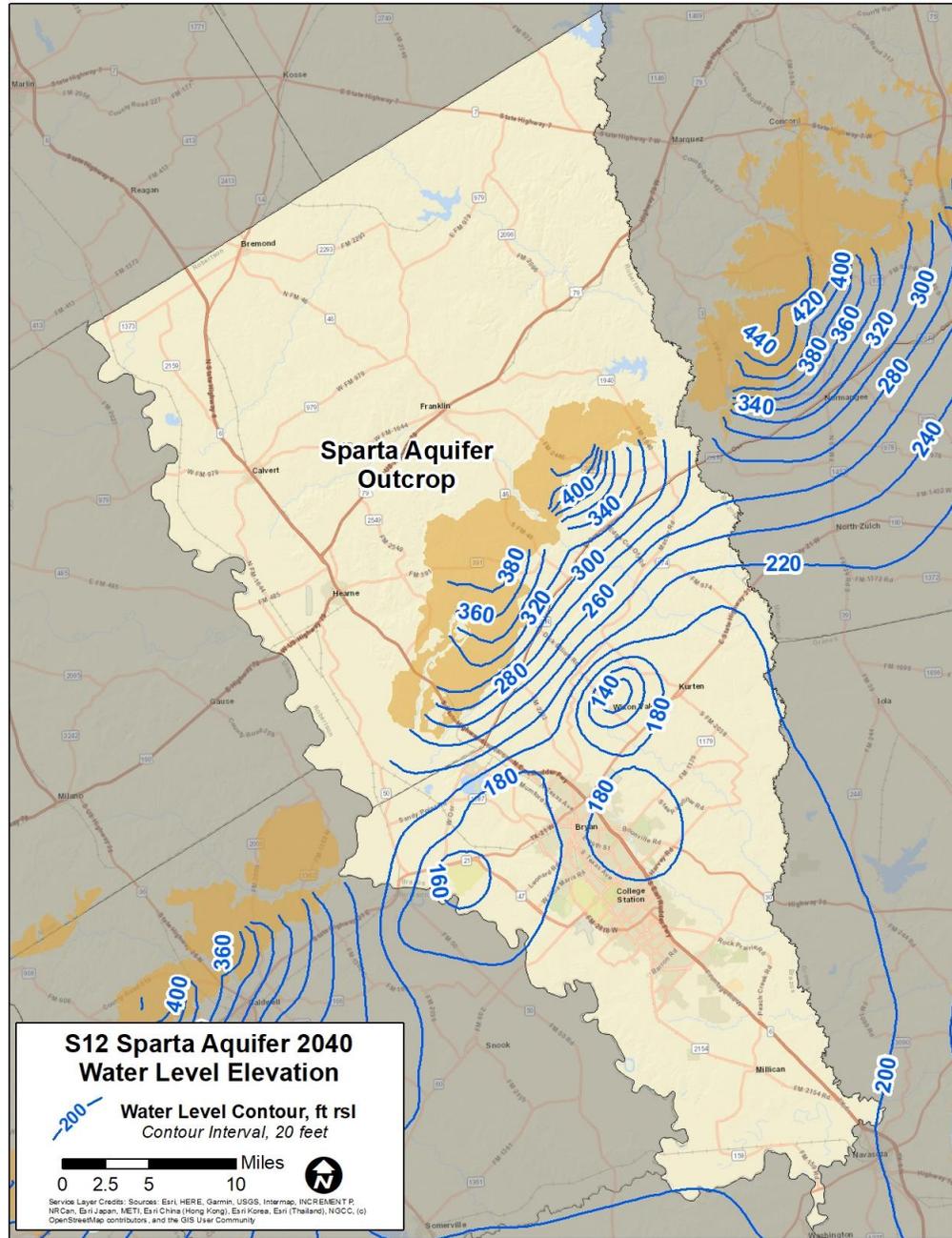
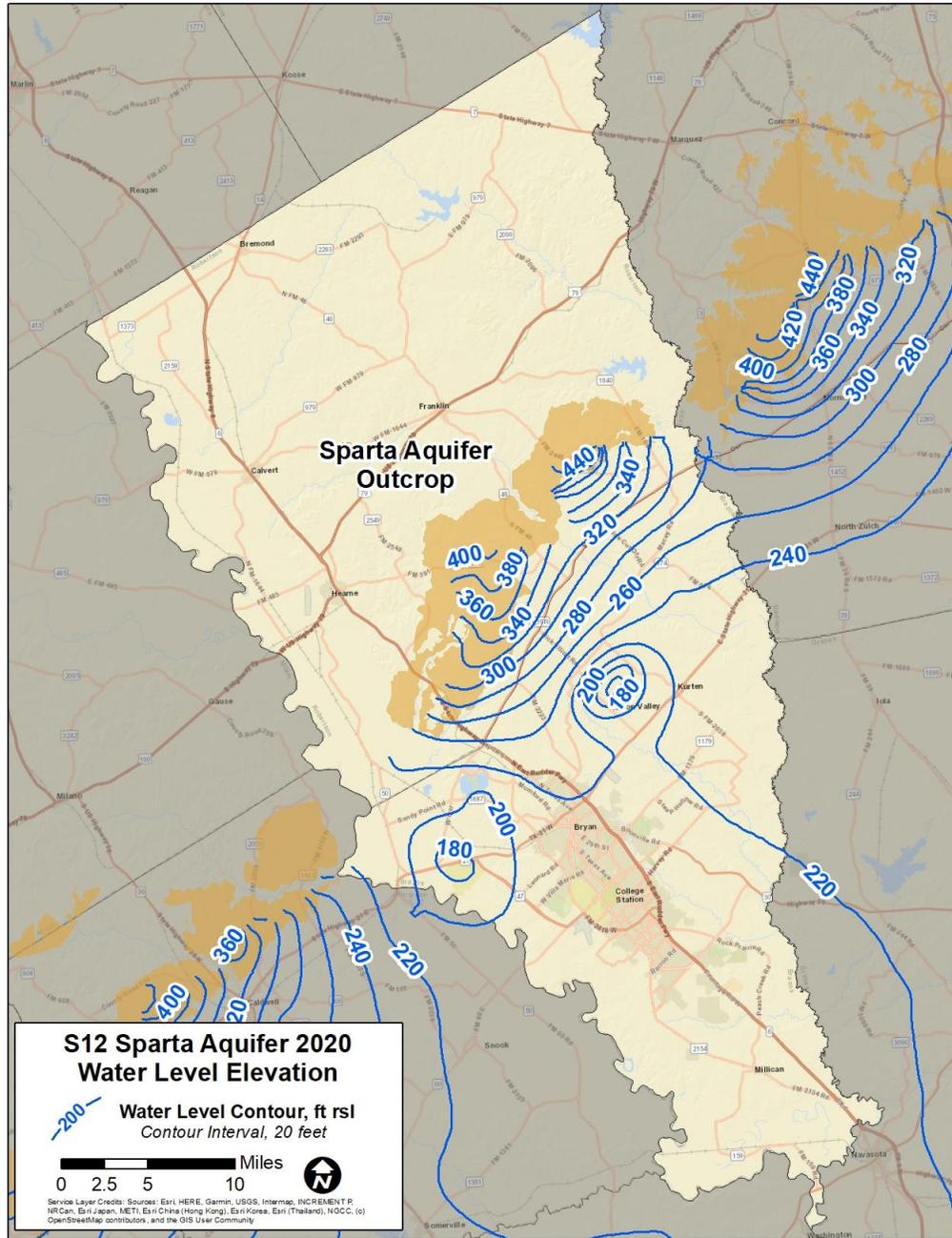
By

Ground Water Consultants, LLC

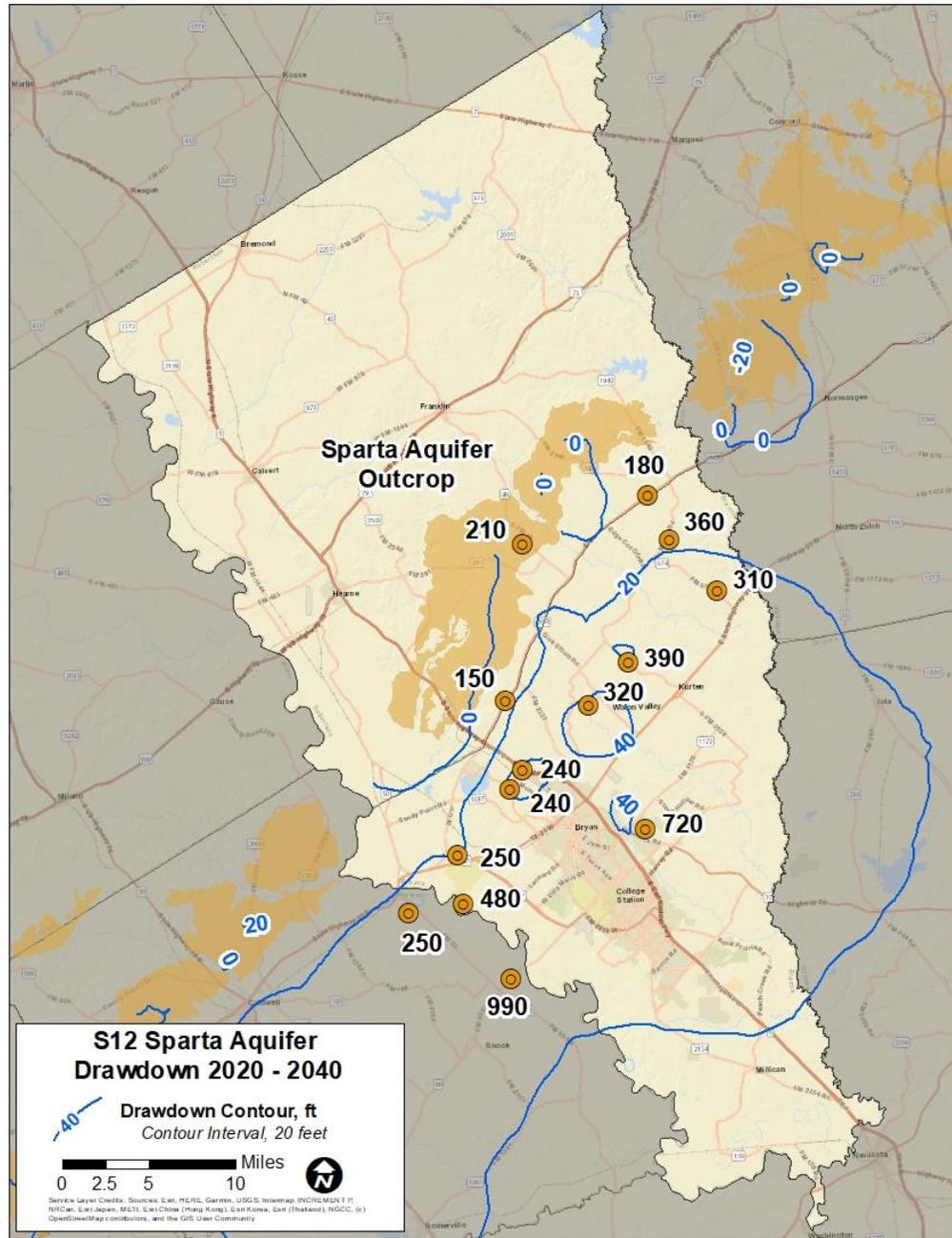
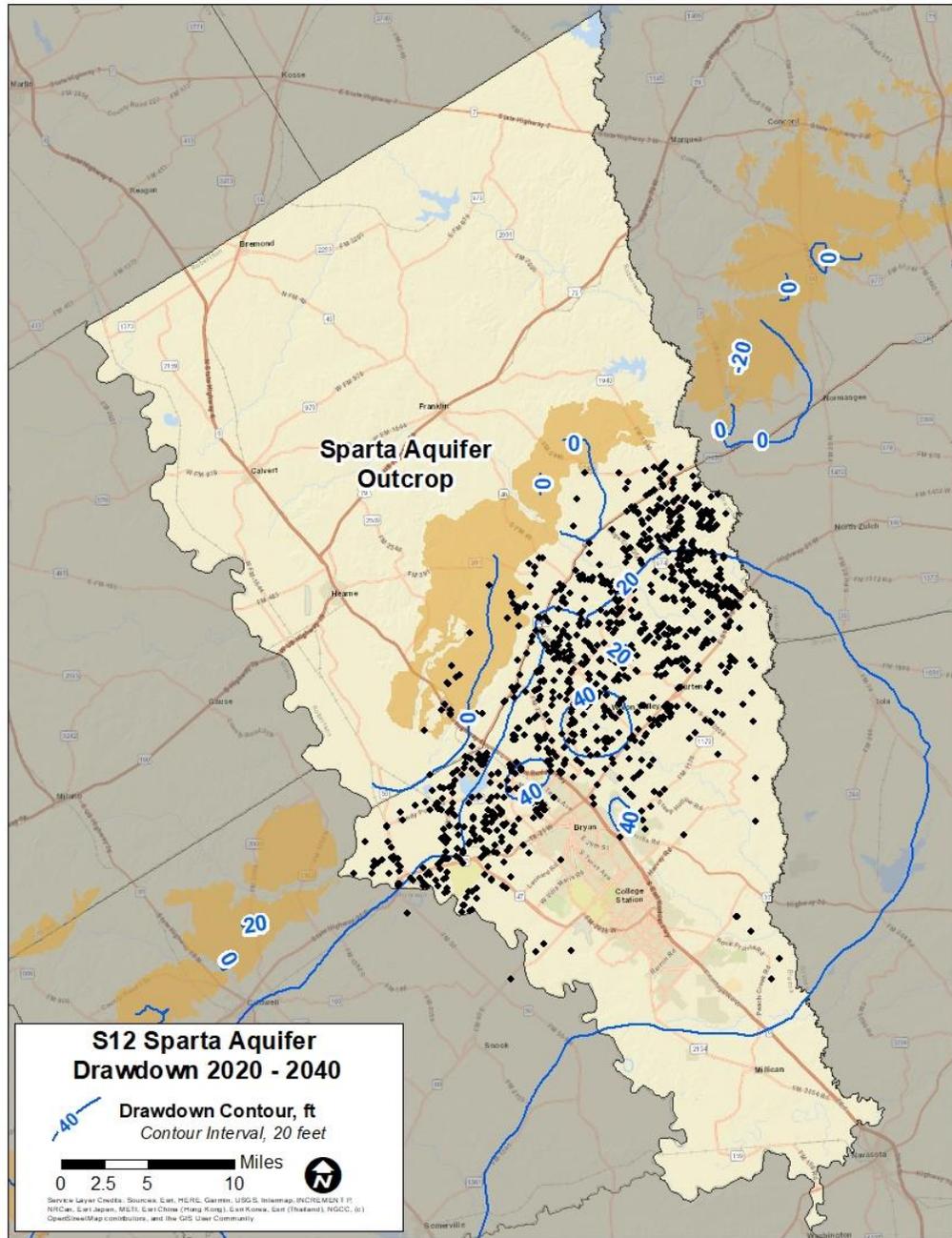
July 8, 2021

Changes In Aquifer Pumping From 2020 to 2040 For GMA 12 S-12 Simulation

District	Aquifer	2020 Pumping, Acre-Feet	2040 Pumping, Acre-Feet	Change in Pumping, Acre-Feet
Brazos Valley GCD	Sparta	3,400	5,900	+2,500
	Carrizo	1,100	2,100	+1,000
	Simsboro	77,500	103,000	+25,500
Post Oak Savannah GCD	Sparta	1,000	3,400	+2,400
	Carrizo	11,000	18,000	+7,000
	Simsboro	30,000	74,000	+44,000
Mid East Texas GCD	Sparta	1,900	2,300	+400
	Carrizo	5,500	7,500	+2,000
	Simsboro	3,500	5,000	+1,500

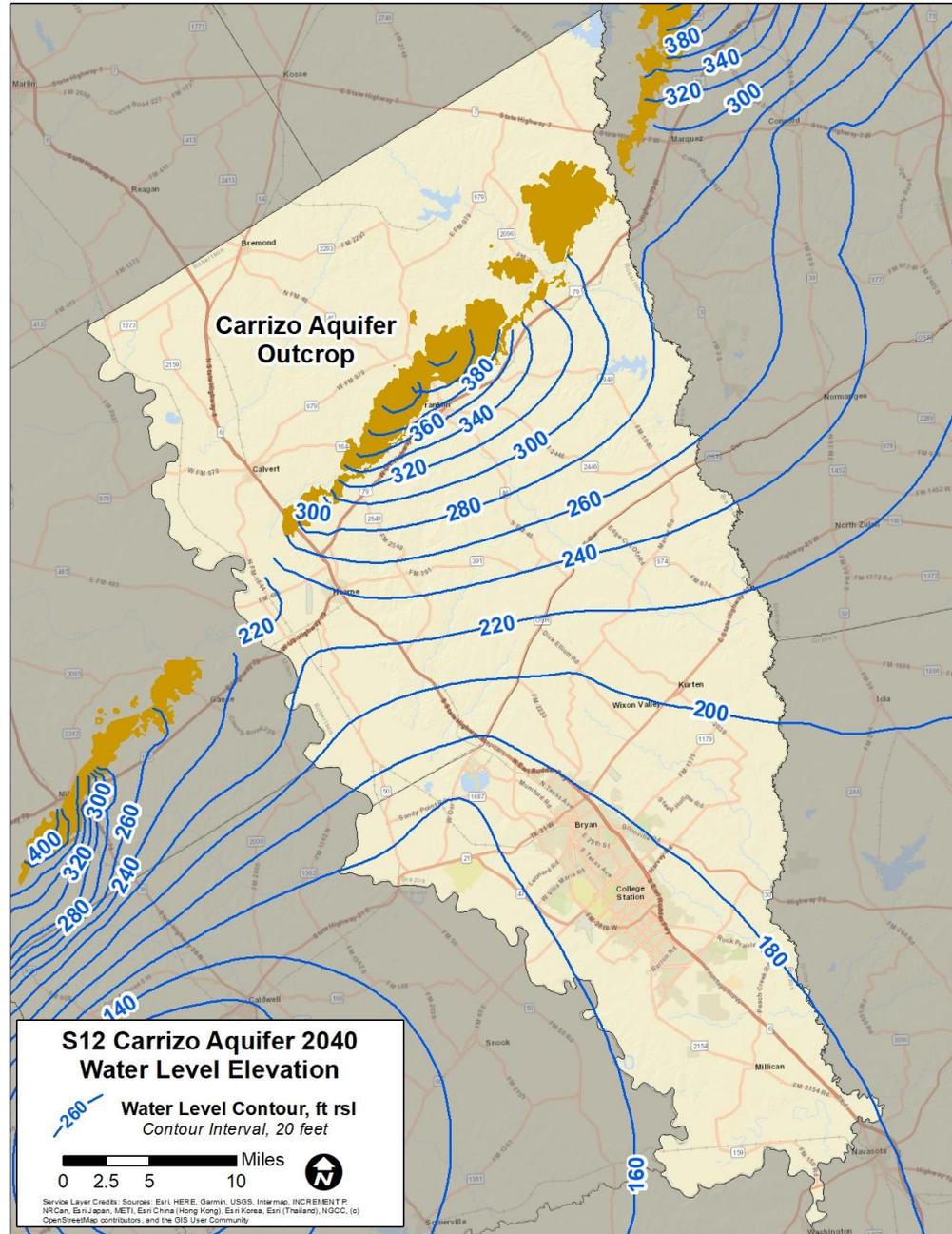
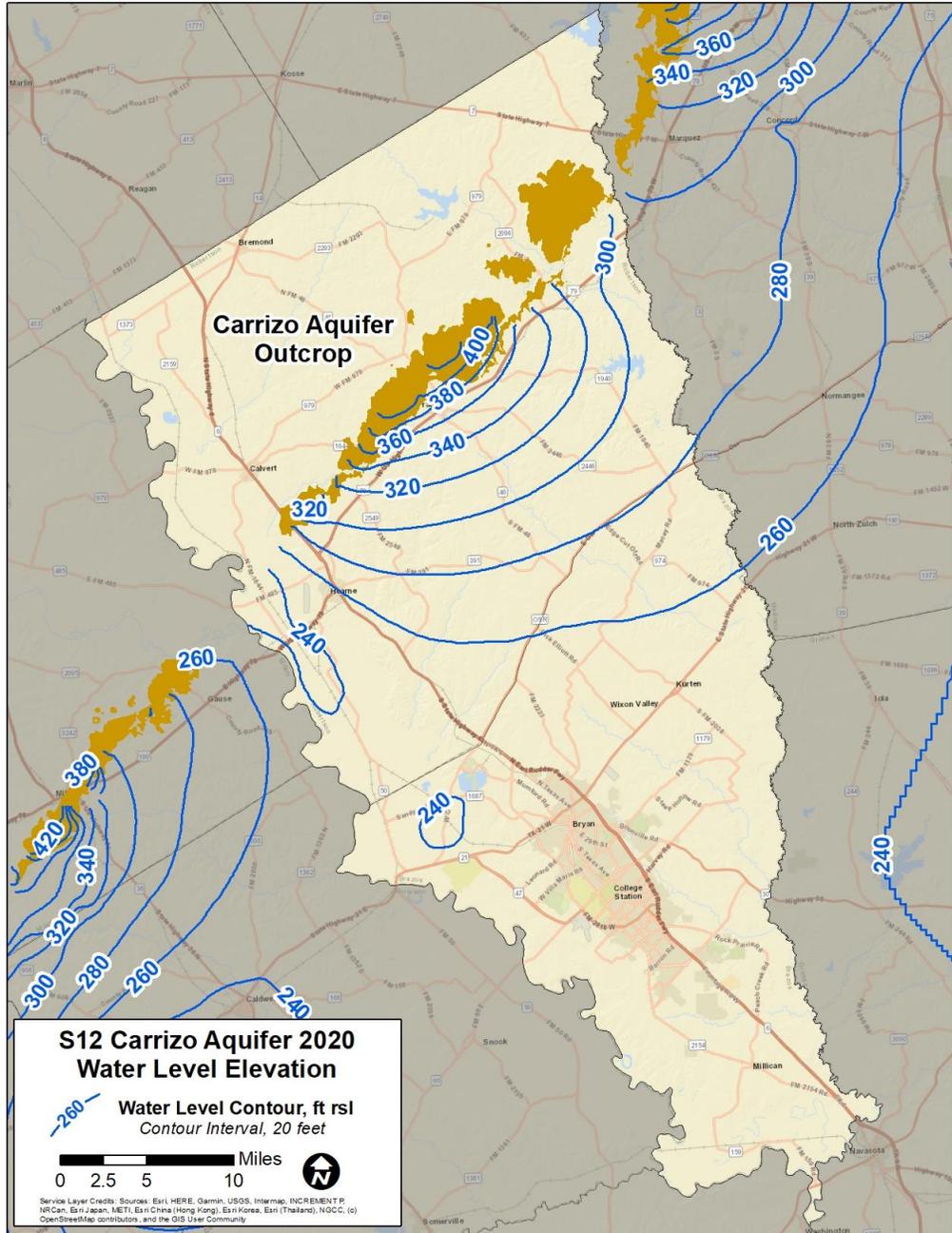


**S-12
Sparta Aquifer
2020 and 2040
Water
Level/Artesian
Head
Elevation Maps**

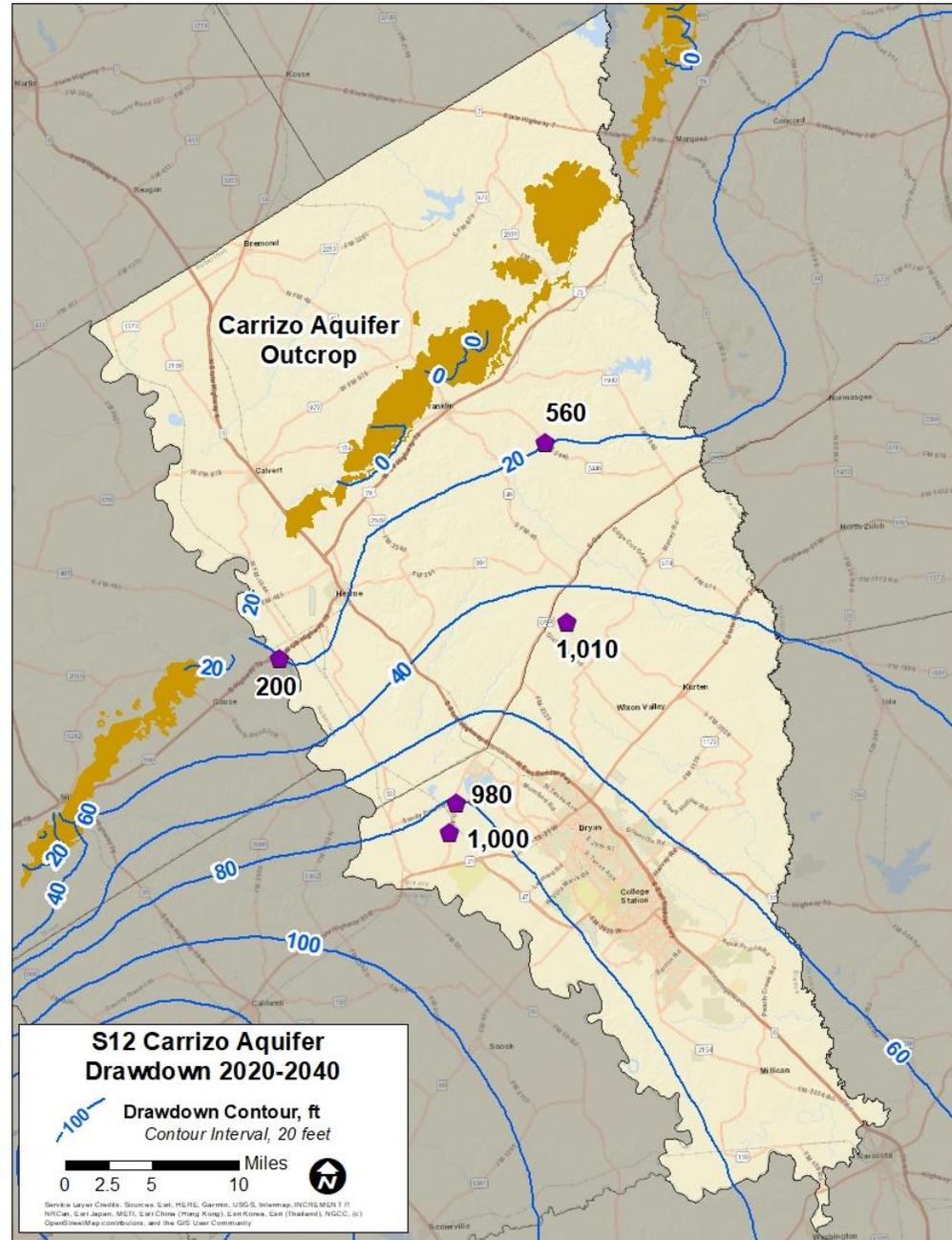
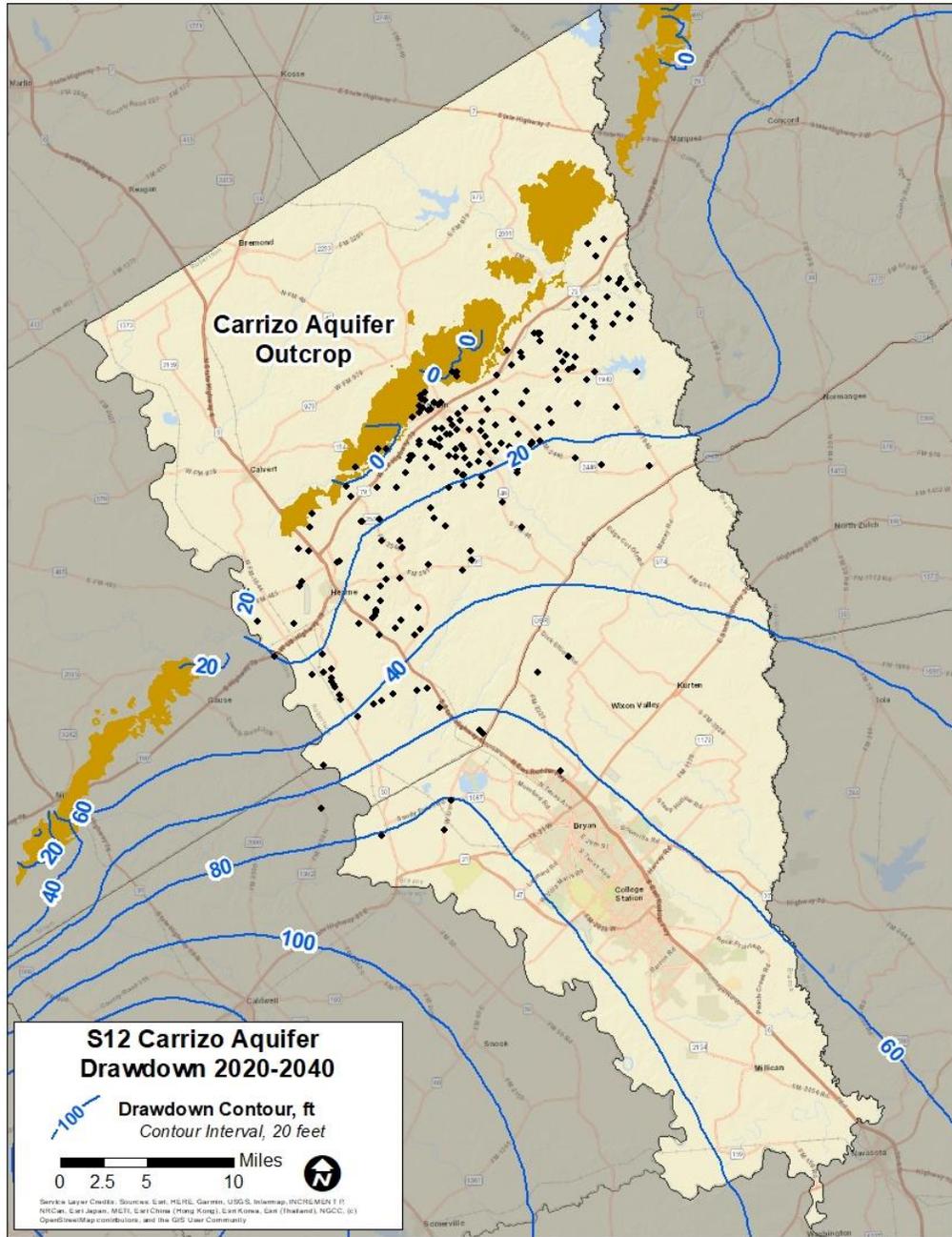


**Sparta Aquifer
Screened Wells and
Estimated 2020 to
2040
Drawdown and
Artesian Head
Remaining Above Top
of Well Screened
Interval**

390 Feet of Artesian Head
Above Top of Well Screened
Interval in 2040

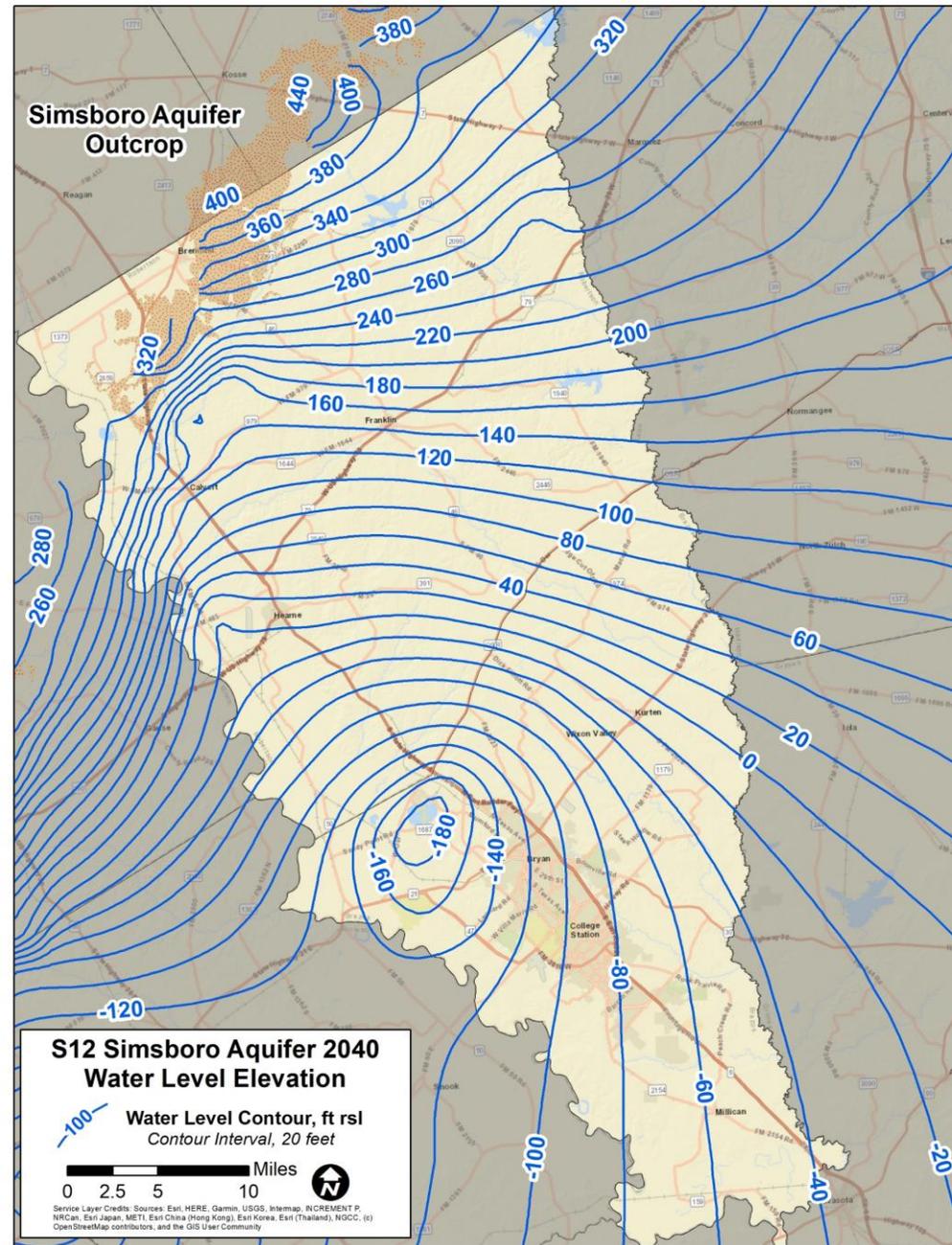
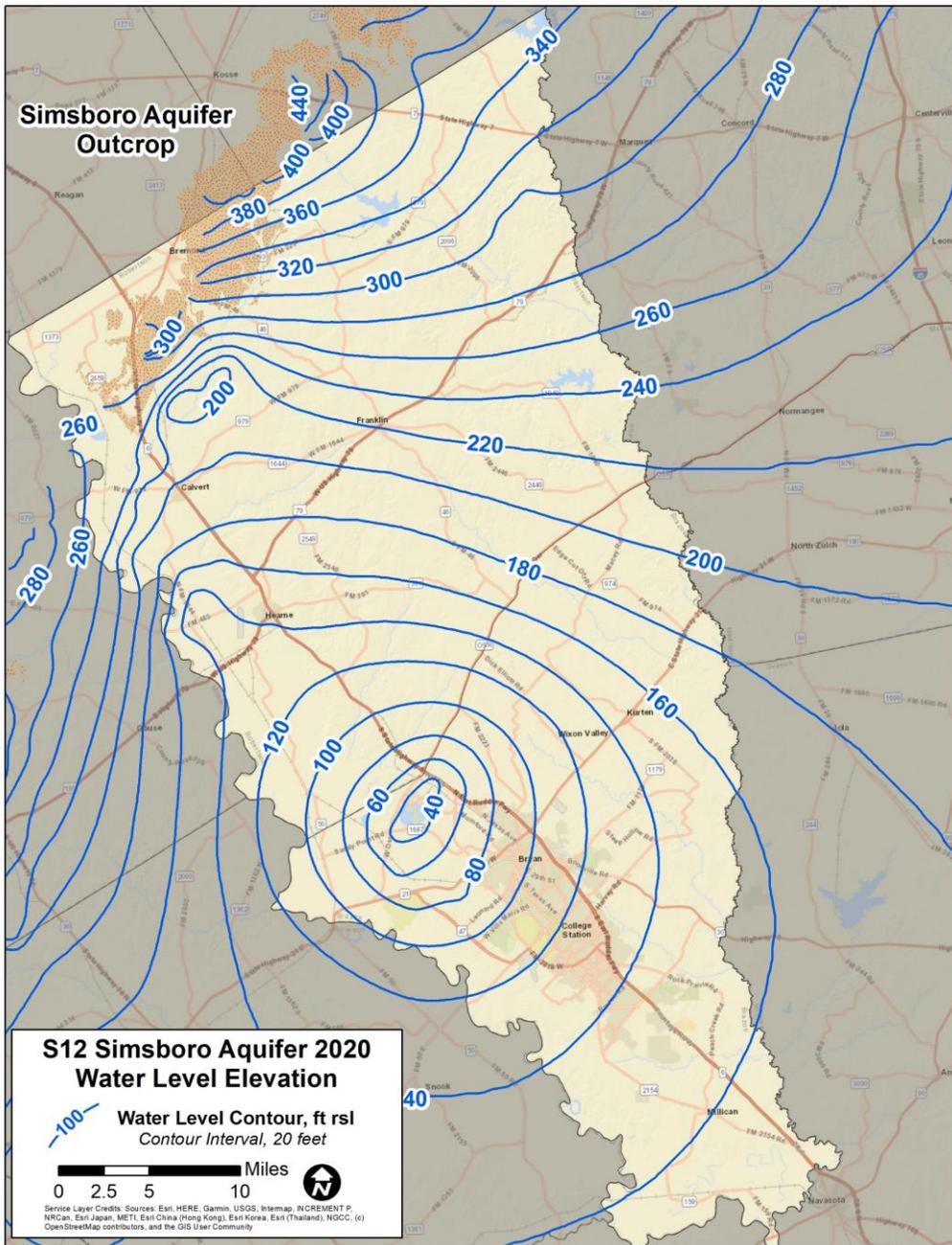


**S-12
Carrizo Aquifer
2020 and 2040
Water
Level/Artesian
Head
Elevation Maps**

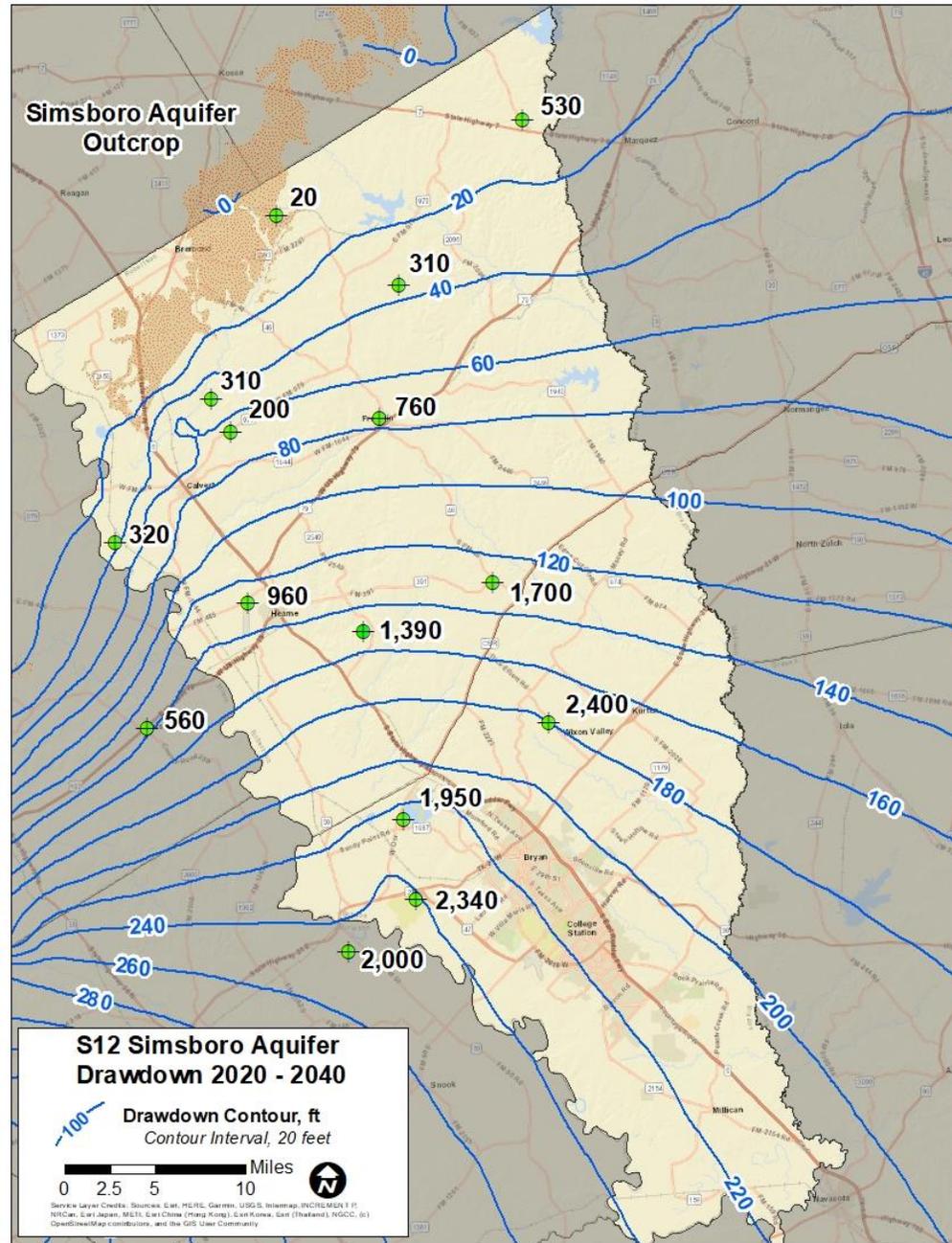
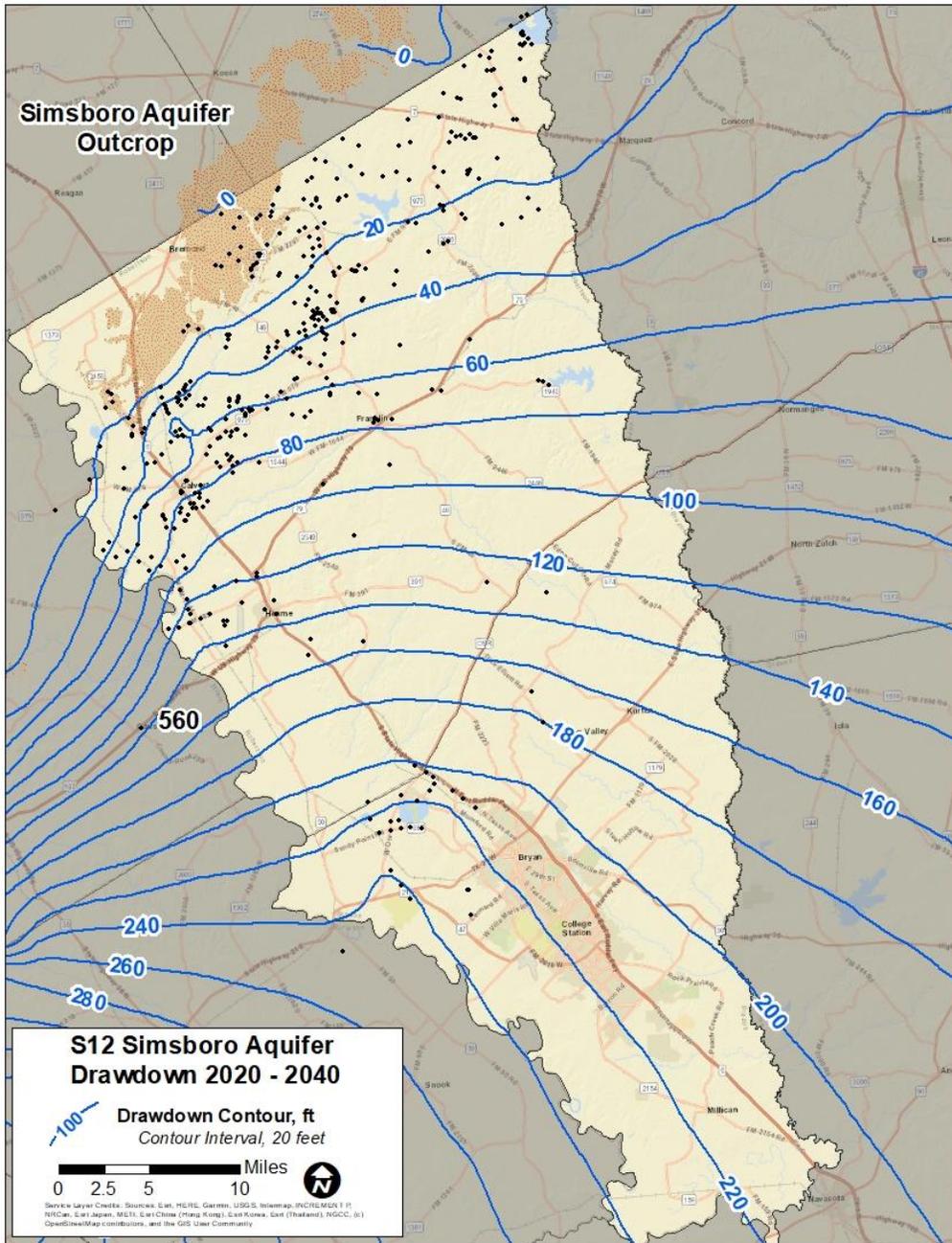


**Carrizo Aquifer
Screened Wells and
Estimated 2020-2040
Drawdown and
Artesian Head
Remaining Above Top
of Well Screened
Interval**

980 Feet of Artesian Head
Above Top of Well Screened
Interval in 2040



S-12
Simsboro Aquifer
2020 and 2040
Water Level/
Artesian Head
Elevation Maps



Simsboro Aquifer Screened Wells and Estimated 2020-2040 Drawdown and Artesian Head Remaining Above Top of Well Screened Interval

760 Feet of Artesian Head Above Top of Well Screened Interval in 2040

Summary and Conclusions

- ❖ Pumping Changes in the District Are Limited From 2020 to 2040 Except for the Simsboro Aquifer
- ❖ Pumping Changes In Areas Outside the District Occur Mainly in Counties to the West
- ❖ Artesian Head Changes for the Sparta Aquifer From 2020 to 2040 Are Limited to About 40 feet and Adequate Artesian Heads Remain In Sparta Aquifer Screened Wells in 2040 to Facilitate Continuing Use
- ❖ Carrizo Aquifer Artesian Head Changes Are Estimated to be Influenced By Increases In Pumping in West Burleson County During Upcoming Years

Continued,

- ❖ The Estimated Artesian Head Declines for the Carrizo Aquifer Are Greatest In The West Part of Brazos County and Decrease to the East
- ❖ Adequate Artesian Heads Remain Above the Top of the Aquifer in 2040 to Facilitate Continuing Use of Carrizo Aquifer Screened Wells
- ❖ Increased Pumping From the Simsboro Aquifer is Estimated to Occur in the District and Outside the District Over the Next 20 Years
- ❖ A Vast Majority of the Artesian Head Declines Estimated to Occur in the District are the Result of an Estimated Increase in Pumping in the District of About 25,500 acre feet per year From 2020 to 2040
- ❖ Adequate Artesian Heads Remain In Wells Above the Top of the Aquifer in 2040 to Facilitate Continuing Use of Simsboro Aquifer Screened Wells

An aerial photograph of a large, snow-covered mountain peak. The mountain's surface is textured with shadows and highlights from the snow. In the foreground, there are dark, forested hills with patches of snow. A dark, rectangular object, possibly a window or part of a vehicle, is visible in the upper right corner. The sky is a pale, hazy blue.

Thank you!

Questions?