GAM run 04-04

by Shirley Wade
> Texas Water Development Board
> Groundwater Availability Modeling Section
> (512) 463-7847
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REQUESTOR:

Gary Westbrook, Post Oak Savannah Groundwater Conservation District.

DESCRIPTION OF REQUEST:

Post Oak Savannah Groundwater Conservation District requested the following information from the Central Carrizo-Wilcox Groundwater Availability Model (GAM):

- Mean value of Simsboro aquifer storage coefficient for (1) all grid cells in Burleson County and (2) all grid cells above 3,000 feet depth.

- Histogram of Simsboro aquifer storage coefficient for (1) all grid cells in Burleson County and (2) all grid cells above 3,000 feet depth.

- Map of Simsboro aquifer storage coefficient for Burleson County.

METHODS:

To address the request, we:
- Extracted storage coefficient values from the Central Carrizo-Wilcox GAM.
- Calculated statistics and plotted histograms.
- Plotted map of grid cell storage in GIS.

PARAMETERS AND ASSUMPTIONS:

None: Data request

RESULTS:

Storage Coefficient Statistics for the Simsboro Aquifer

Mean and median values of storage from the Central Carrizo-Wilcox aquifer in Burleson County are shown in Table 1. Values are listed for all cells and for all cells above 3,000 feet depth.

Histograms

Histograms for Simsboro storage coefficients in Burleson County are shown in Figures 1 and 2. The histograms show the total number of cells within each range of storage values.

Storage Map

A map showing the distribution of storage coefficients from the model is shown in Figure 3.

REFERENCES:

Dutton, A. R., Harden, R., Nicot, J. P., and O' Rourke, D., 2003, Groundwater Availability Model for the Central part of the Carrizo-Wilcox Aquifer in Texas: Final Report prepared for the Texas Water Development Board.

Table 1. Summary of Storage Coefficient for Simsboro aquifer in Burleson County from Central Carrizo-Wilcox GAM.

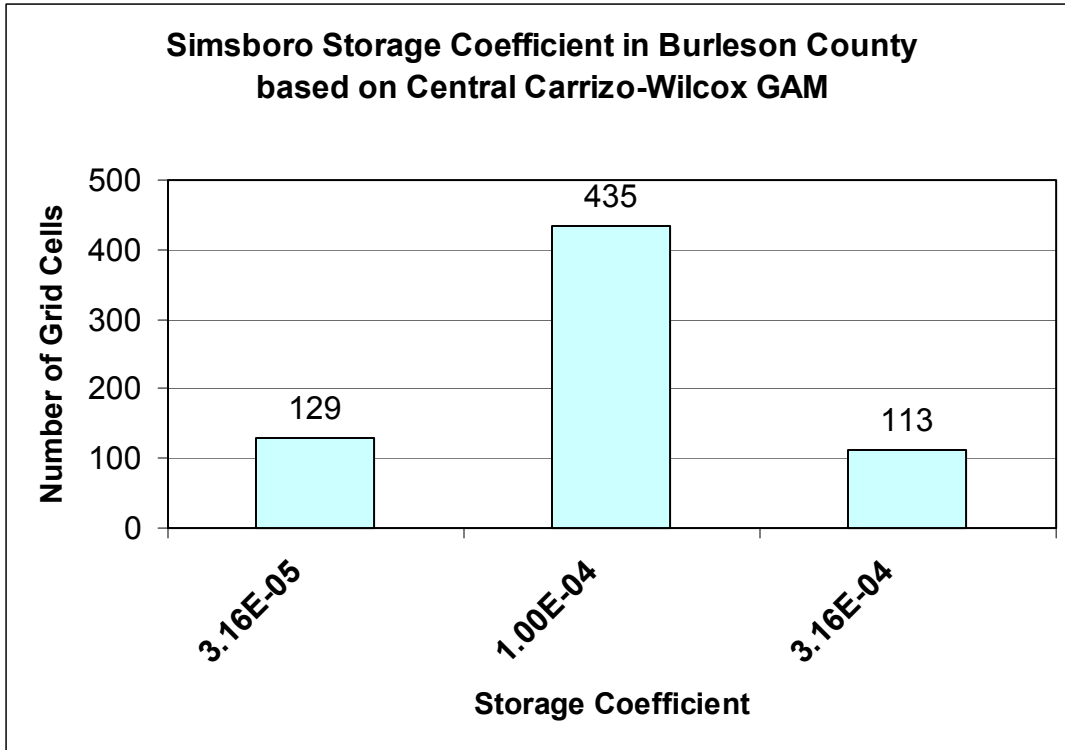| Parameter	All grid cells in Burleson County	Grid cells above 3,000 feet depth
Mean	7.42×10^{-5}	9.03×10^{-5}
Median	7.1×10^{-5}	8.5×10^{-5}
Minimum	3.16×10^{-5}	5.45×10^{-5}
Maximum	1.82×10^{-4}	1.82×10^{-4}
Count	677	261

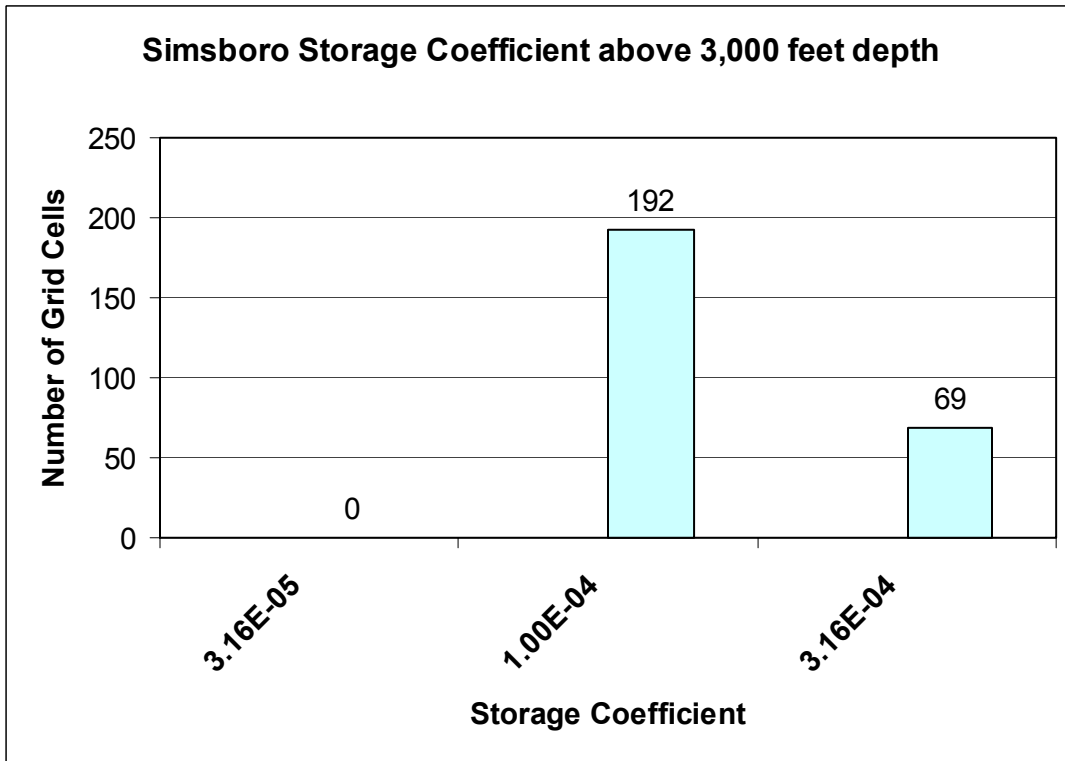Figure 1. Histogram of Simsboro storage from the Central Carrizo-Wilcox GAM for all grid cells in Burleson County.

Figure 2. Histogram of Simsboro storage in Burleson County above 3,000 feet depth.

Storage Coefficient from Central Carrizo-Wilcox GAM

Simsboro Storage Coefficient

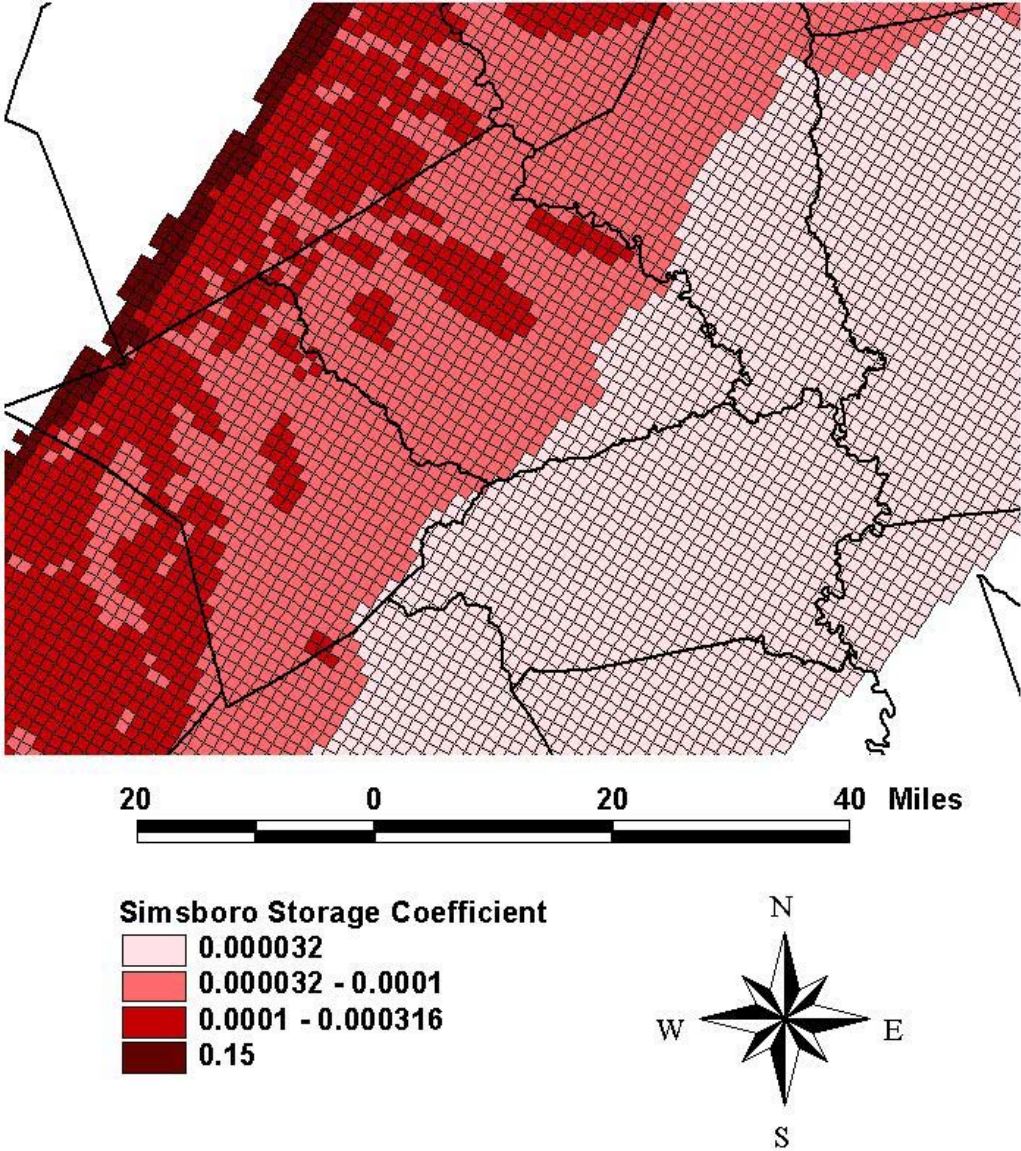|	
	0.000032
	0.000032 - 0.0001
	0.0001 - 0.000316
	0.15

20   0   20   40   **Miles**

Figure 3. Map of Simsboro Storage Coefficients from Central Carrizo-Wilcox GAM