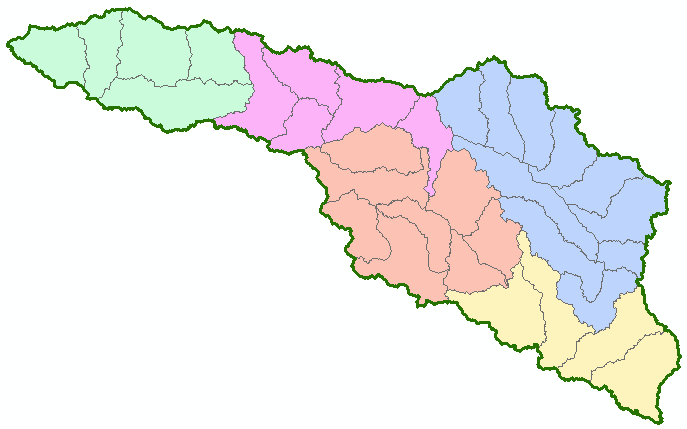
**Exercise 2 Solution**

**GIS in Water Resources**

**Fall 2012**

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1. *A screen capture of the San Marcos basin with its HUC-10 and HUC-12 watersheds and subwatersheds.*

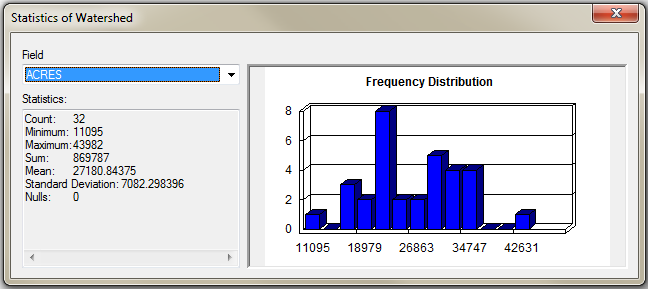


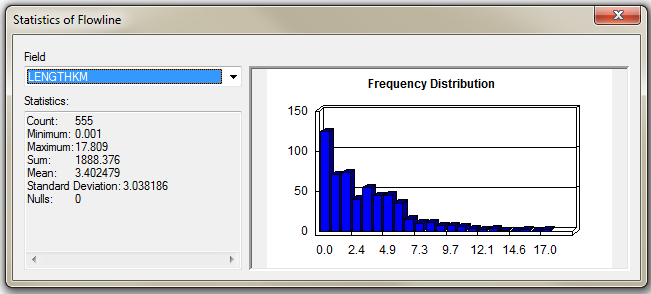
1. *What is the average available water storage (cm) in the San Marcos basin? If the area of the basin is 3520 square kilometers, what volume of water (km3) could potentially be stored in the top 1m of soil in the San Marcos basin if the soil were fully saturated with water?*

Average Available Water Storage

Potential Storage:

1. *How many HUC12 subwatersheds are there in the San Marcos Basin? What is their average area in acres and in km2? What is the total area of this basin in km2? What is the ratio of the length of the streamlines to the area of the HUC12 subwatersheds (called the drainage density) in km-1?*





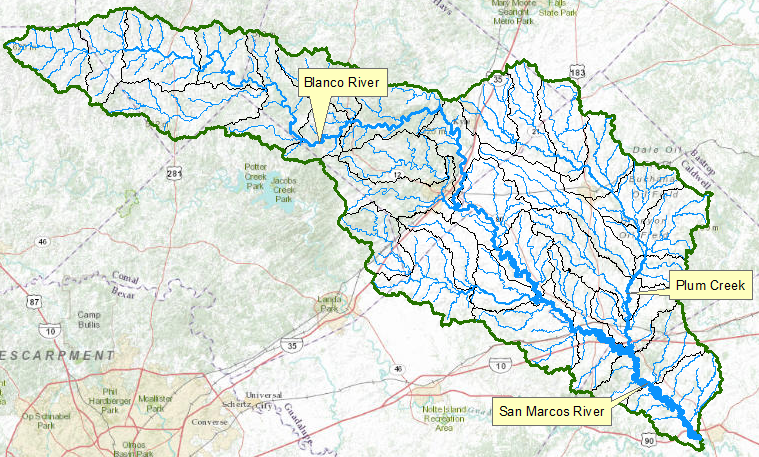
There are HUC12 subwatersheds in the San Marcos Basin.

The average area is or

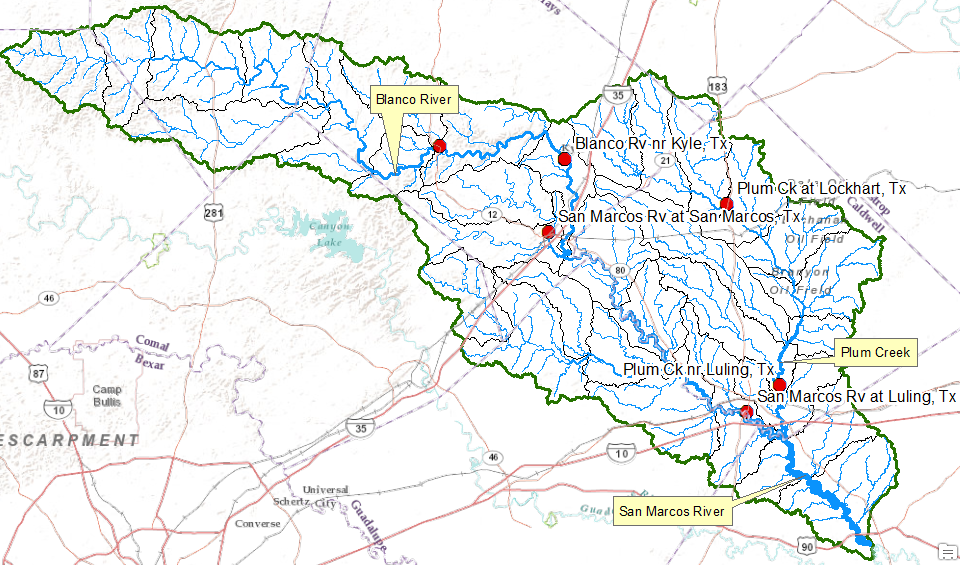
The total area of the basin is

The drainage density is

1. *To be turned in: A map (a screen capture is ok) of the San Marcos Basin and streams. Add labels to show the San Marcos River, the Blanco River and Plum Creek.*



1. *A map showing the labeled streams and streamgages for the San Marcos Basin*



1. *A map showing the Edwards aquifer and the San Marcos basin*

