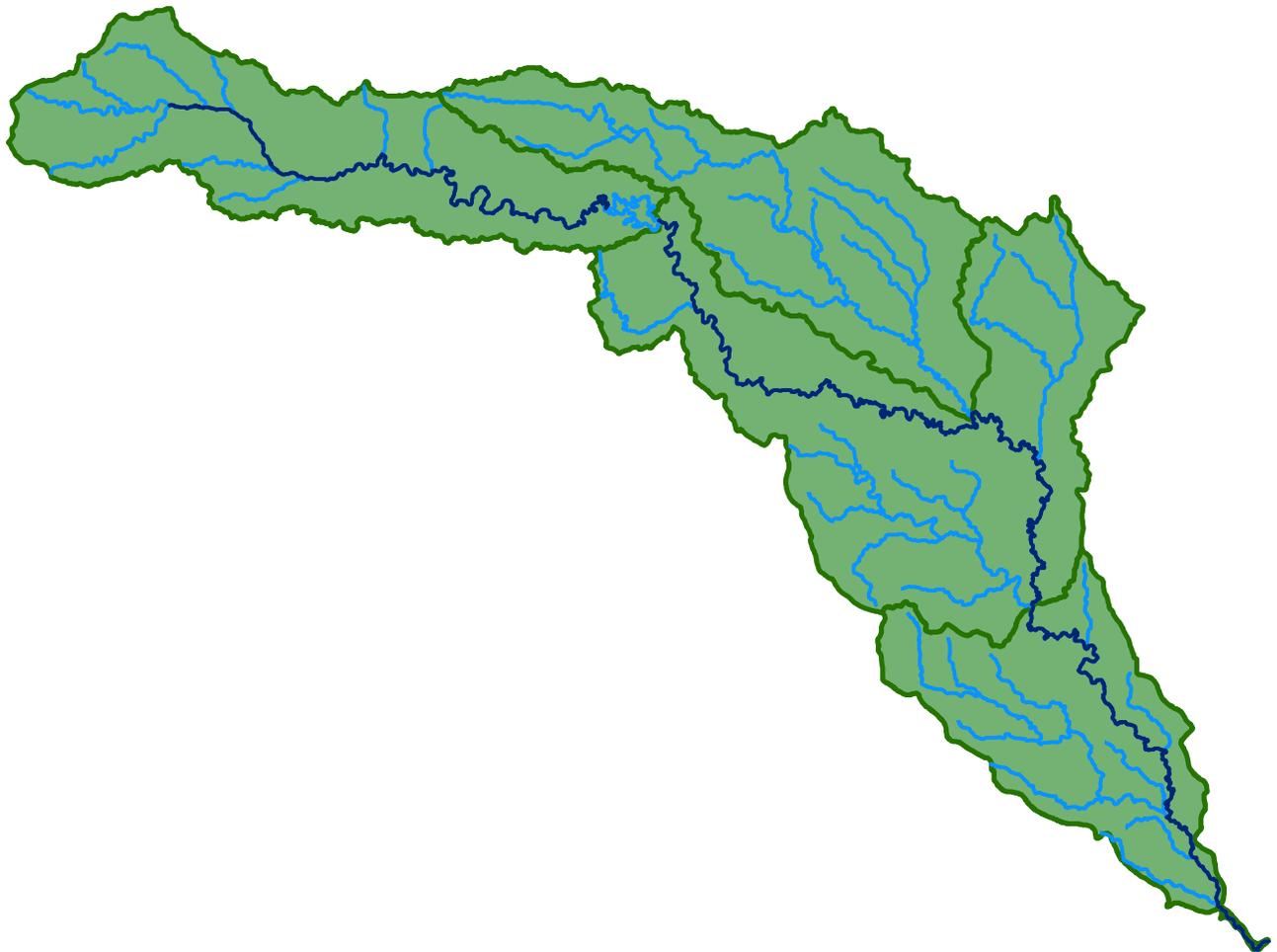


1. A layout of the Guadalupe Basin streams and watersheds.



**Legend**

- Guadalupe River
- HydroEdge
- Watershed



**Guadalupe Basin Streams and Watersheds**

**FIGURE 1**

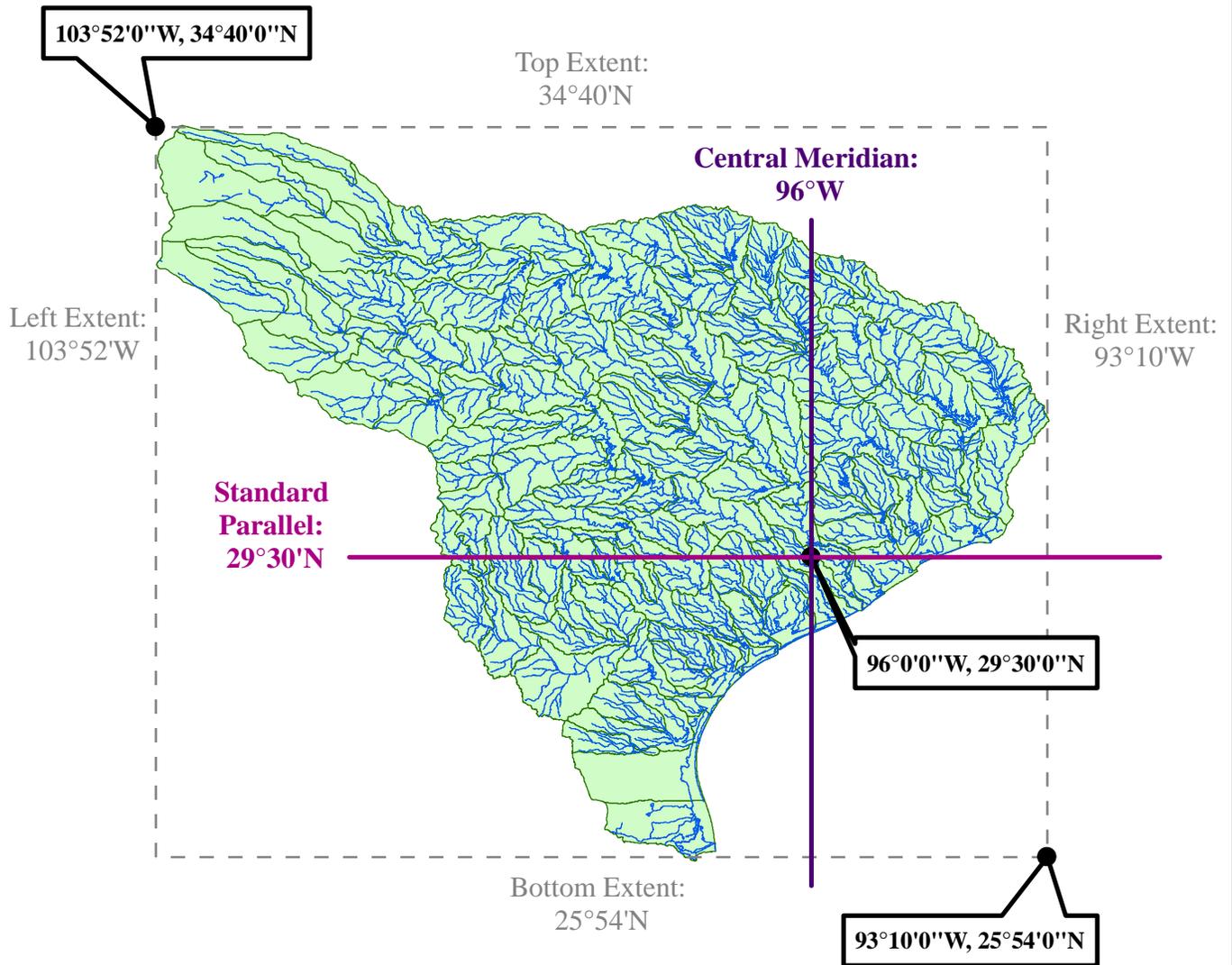
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2. What is the approximate map extent of these data in geographic coordinates?  
 Use the Draw Tools in ArcMap to draw a line on the map showing the Central Meridian of the projection at 96°W and another line showing the Standard Parallel at 29° 30' N. Screen capture the resulting map display and include it in your solution.



**Legend**

- rf1reg12geo
- hucreg12geo



**Region 12 Geographic Coordinates**

**FIGURE 2**

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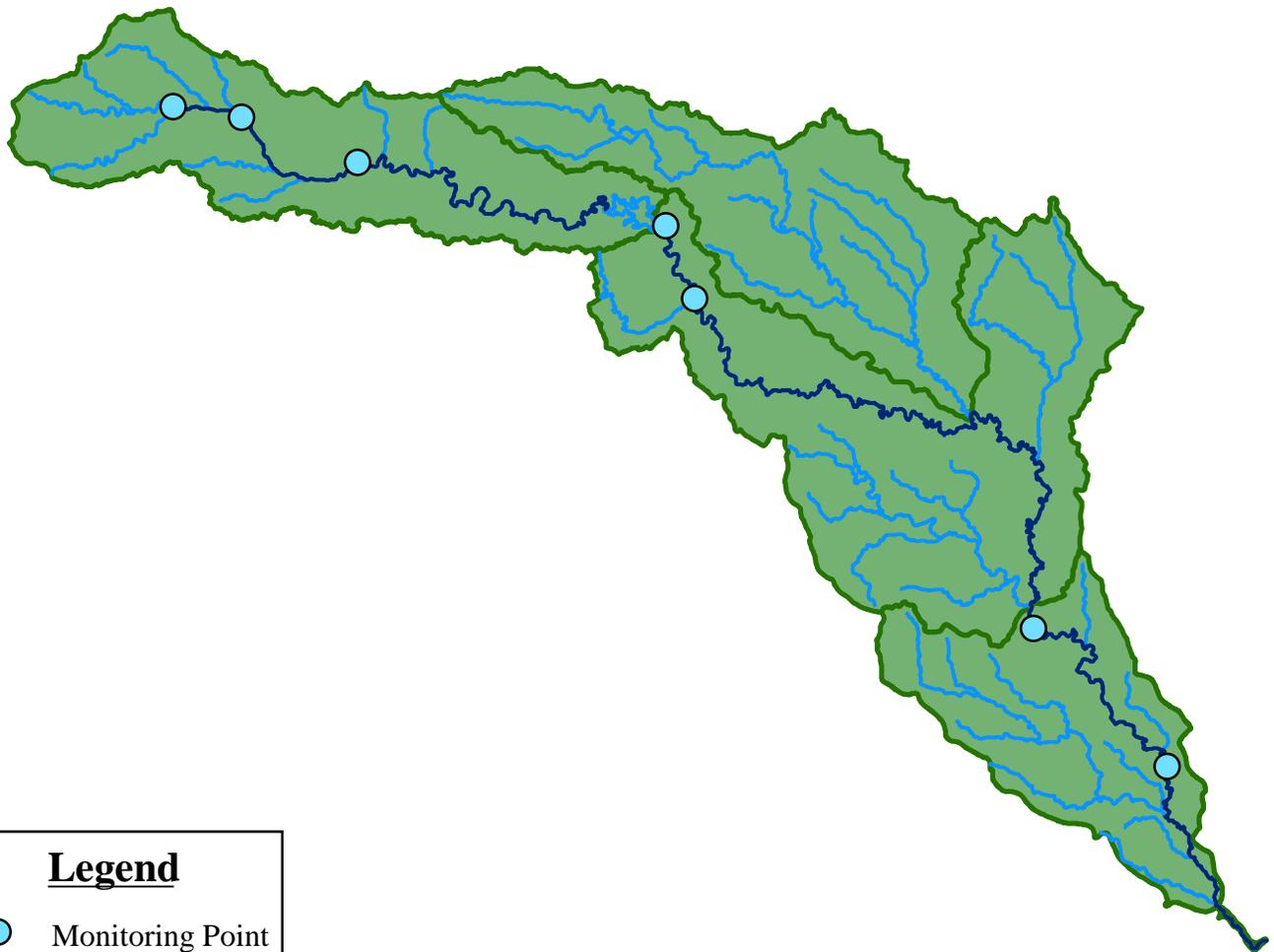
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3. A layout or screen capture of the MonitoringPoint attribute table with the map.

OBJECTID ^	GAGENO	LONGDEG	LONGMIN	LONGSEC	LATDEG	LATMIN	LATSEC	LONGDD	LATDD	Shape ^
1	1	97	0	46	28	47	34	-97.012778	28.792778	Point
2	2	97	19	16	29	3	57	-97.321111	29.065833	Point
3	3	98	6	35	29	42	53	-98.109722	29.714722	Point
4	4	98	10	47	29	51	32	-98.179722	29.858889	Point
5	5	98	53	33	29	58	10	-98.8925	29.969444	Point
6	6	99	9	47	30	3	11	-99.163056	30.053056	Point
7	7	99	19	17	30	4	11	-99.321389	30.069722	Point

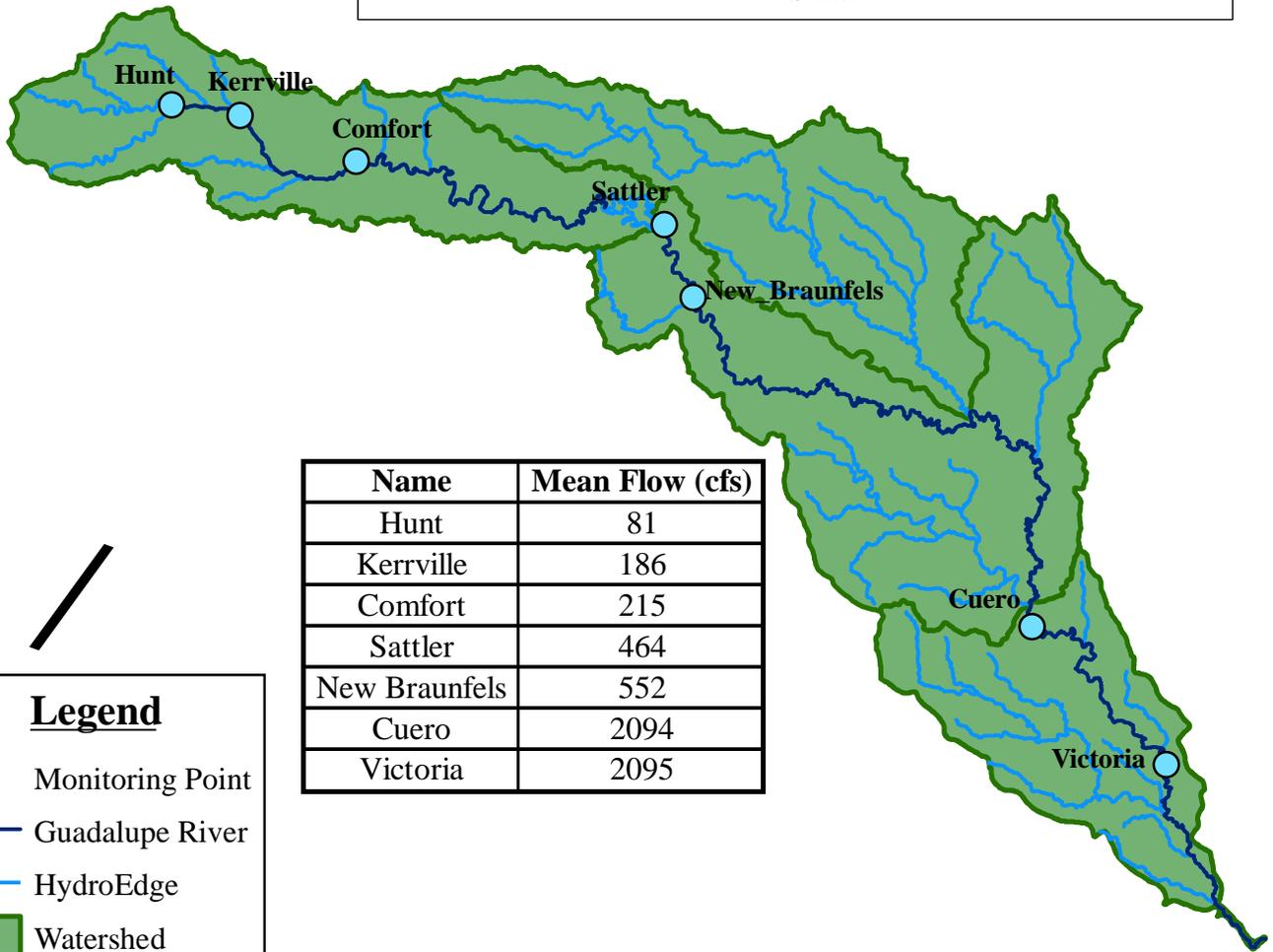
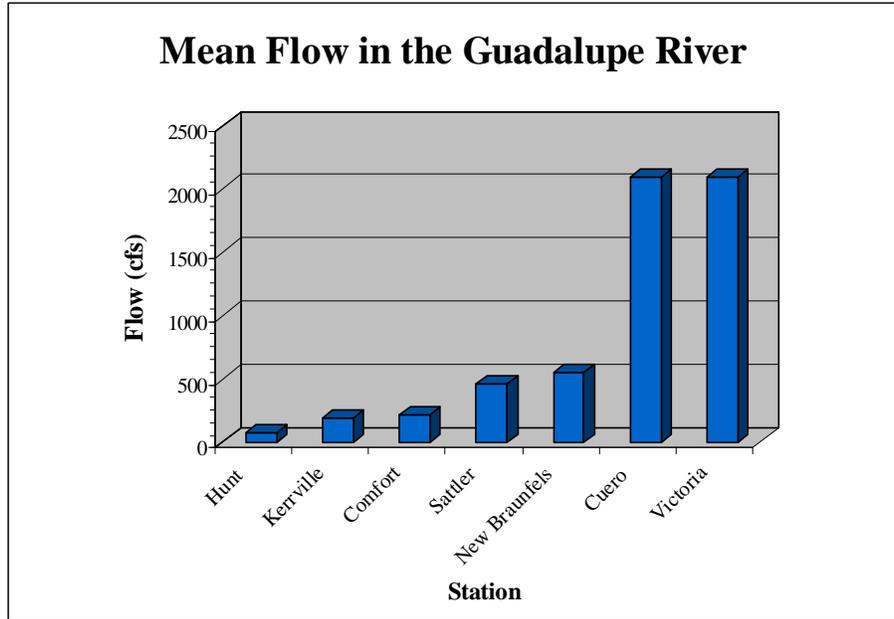
Record: 1 Show: All Selected Records (0 out of 7 Selected) Options



**Legend**

-  Monitoring Point
-  Guadalupe River
-  HydroEdge
-  Watershed

4. A layout showing the base map, chart and data table for the Guadalupe River flows.



Name	Mean Flow (cfs)
Hunt	81
Kerrville	186
Comfort	215
Sattler	464
New Braunfels	552
Cuero	2094
Victoria	2095

**Legend**

- Monitoring Point
- Guadalupe River
- HydroEdge
- Watershed



**Flow in the Guadalupe River**

**FIGURE 4**

Exercise 2  
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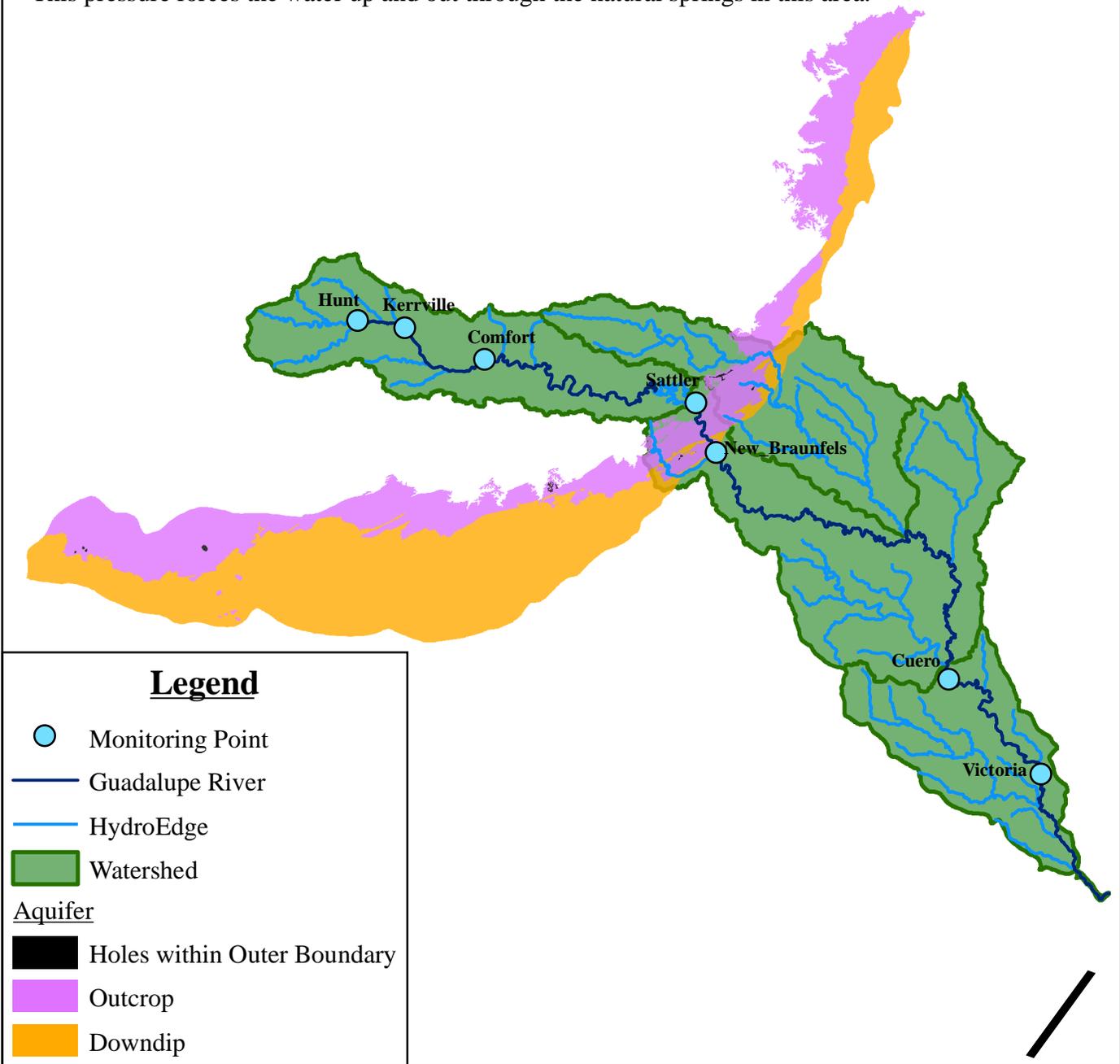
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5. Between which two gaging stations does the Edwards aquifer outcrop area occur?  
 What is the difference in mean annual flow at these two gages?  
 Comment on these data. Do they seem correct to you?

The Edwards aquifer outcrop area occurs between the Sattler and New Braunfels gaging stations. The difference in the mean annual flow at these two gages is 88 cfs. The increase in flow seems to be a little high for the small distance between the gage stations. However, in this area there are natural springs that are adding additional flow from the groundwater. As new water enters through the recharge zone, it increases the hydraulic pressure in the aquifer. This pressure forces the water up and out through the natural springs in this area.

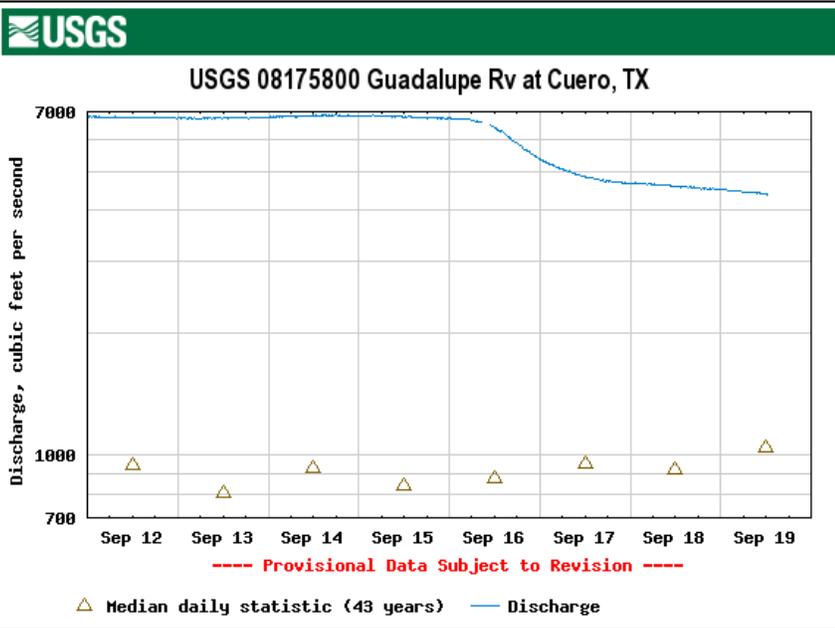
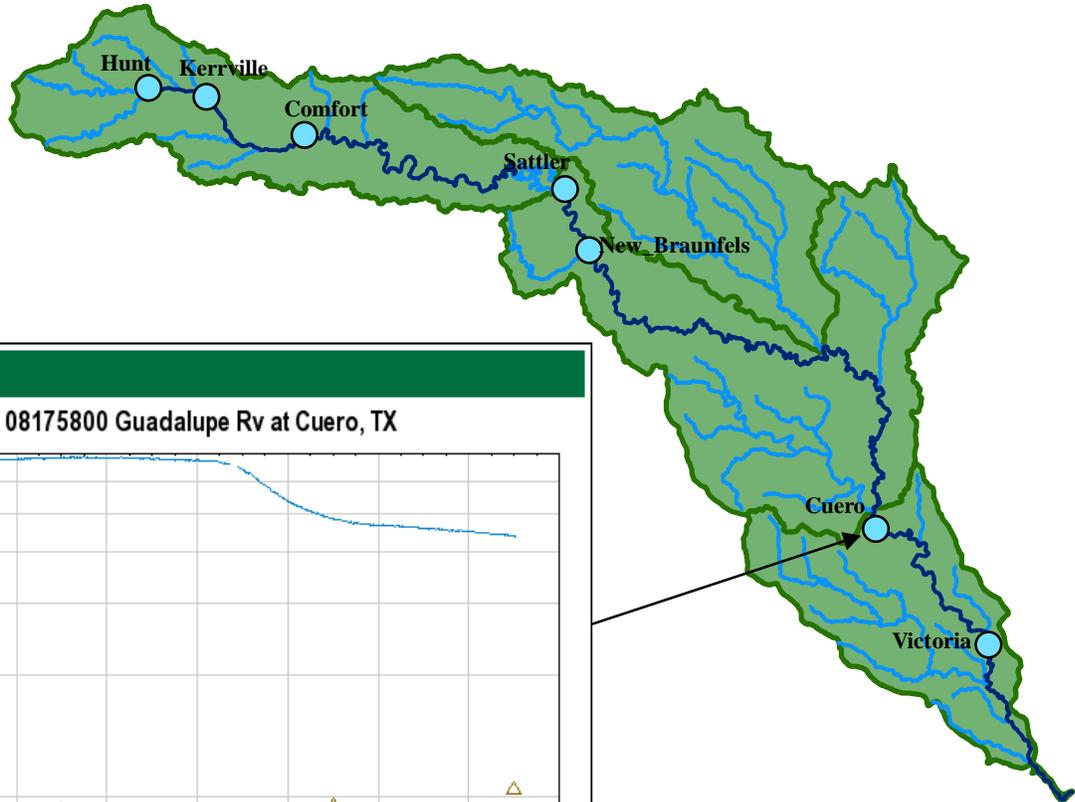


	<b>Edwards Aquifer Gaging Stations</b>		<b>FIGURE 5</b>
	Exercise 2 CE 394K.3	September 20, 2007	Prepared By: Chelsea Cohen

6. The graph of flow of the Guadalupe River at Cuero printed from the NWIS website. What are the 20%, 50%, and 80% cumulative probability flows for the calendar day on which you do the download? Approximately what % cumulative probability is the flow currently?

**Daily Discharge Statistics for September 19, 2007 based on 43 years of record**

Percent Cumulative Probability			Most Recent Instantaneous Value	Max (1971)	% Currently
20%	50%	80%			
543	1520	1780	4380	6880	64%



**Legend**

- Monitoring Point
- Guadalupe River
- HydroEdge
- Watershed



**Cuero Cumulative Probability Flows**

**FIGURE 6**

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