



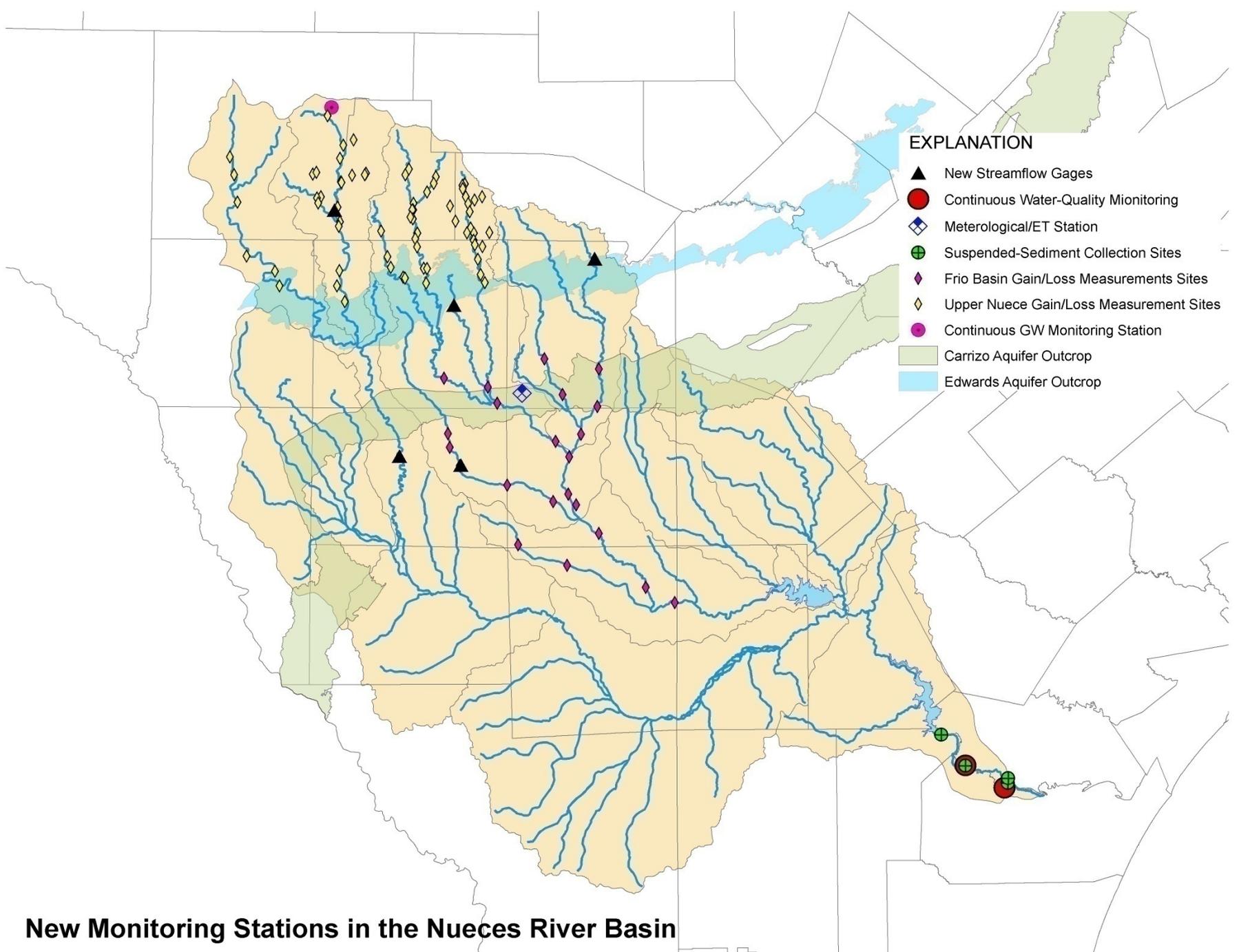
Upper Nueces Watershed Streamflow Measurements

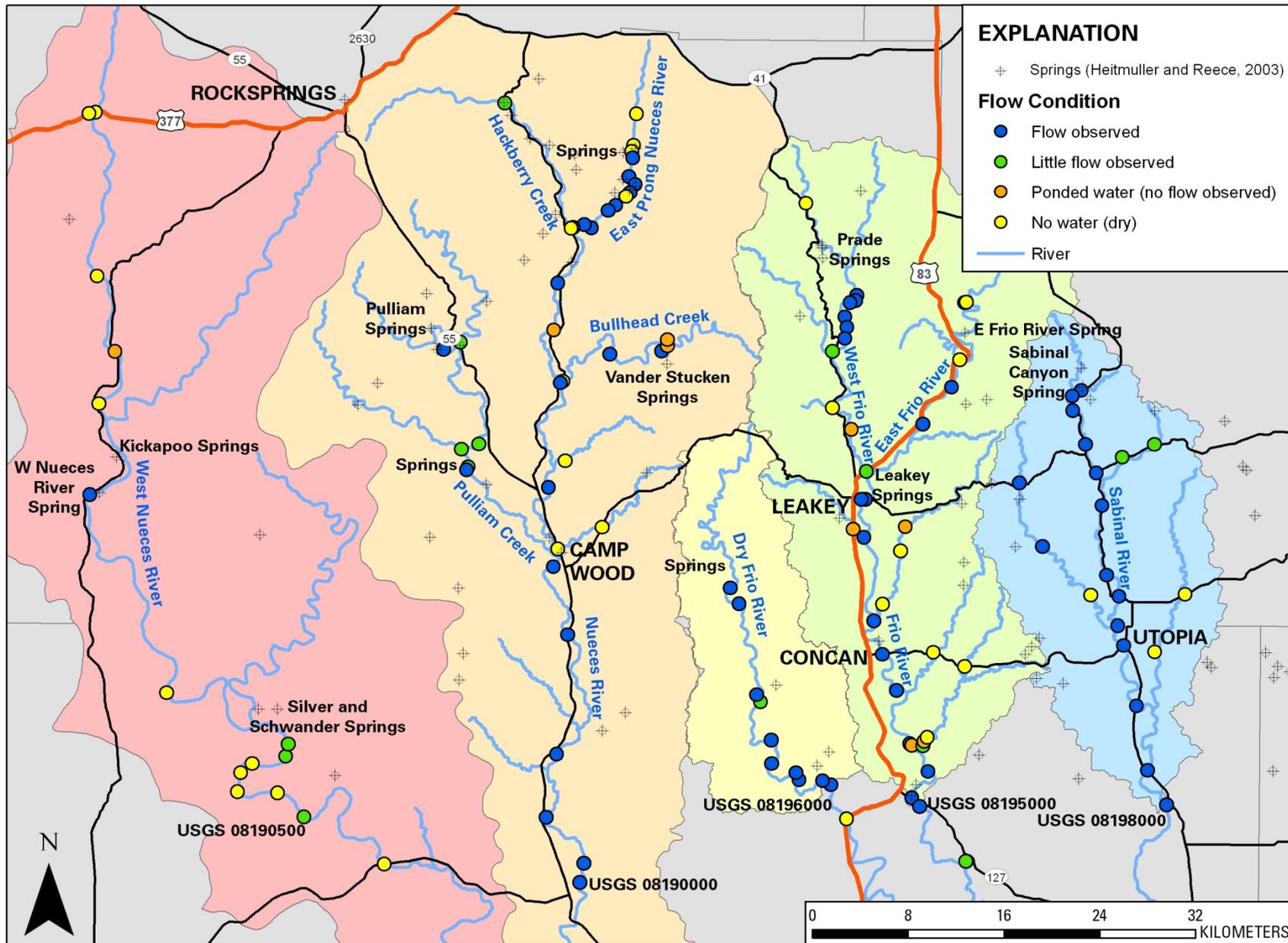
Nueces Basin and Bay Area Stakeholders Committee Mtg
April 21, 2010

U.S. Department of the Interior
U.S. Geological Survey

Upper Nueces Streamflow

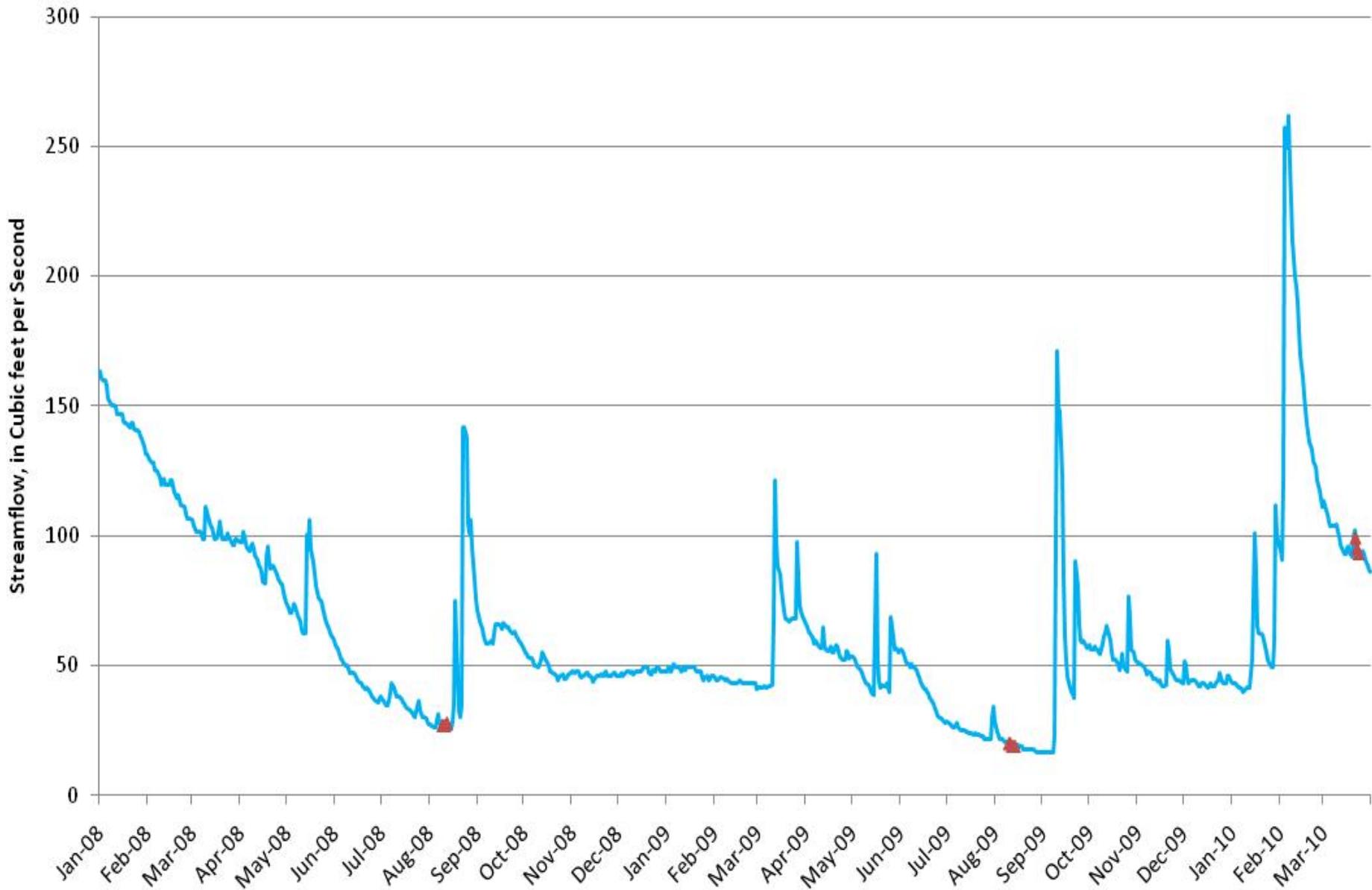
- Corps of Engineers and The Nature Conservancy
- Characterize sources and quantities of streamflow in the upper Nueces/Frio/Sabinal watersheds.
- Conduct gain/loss measurements and sample springs, wells, and surface water for major ions and selected stable isotopes
- Install new streamflow gaging station and GW level station
- Synoptic Measurements during August 2008, August 2009, and March 2010
- Draft report by Sept 30, 2010





Nueces River at Laguna

Daily Streamflow



Questions?



Sabinal River at RM187 below Mill Creek

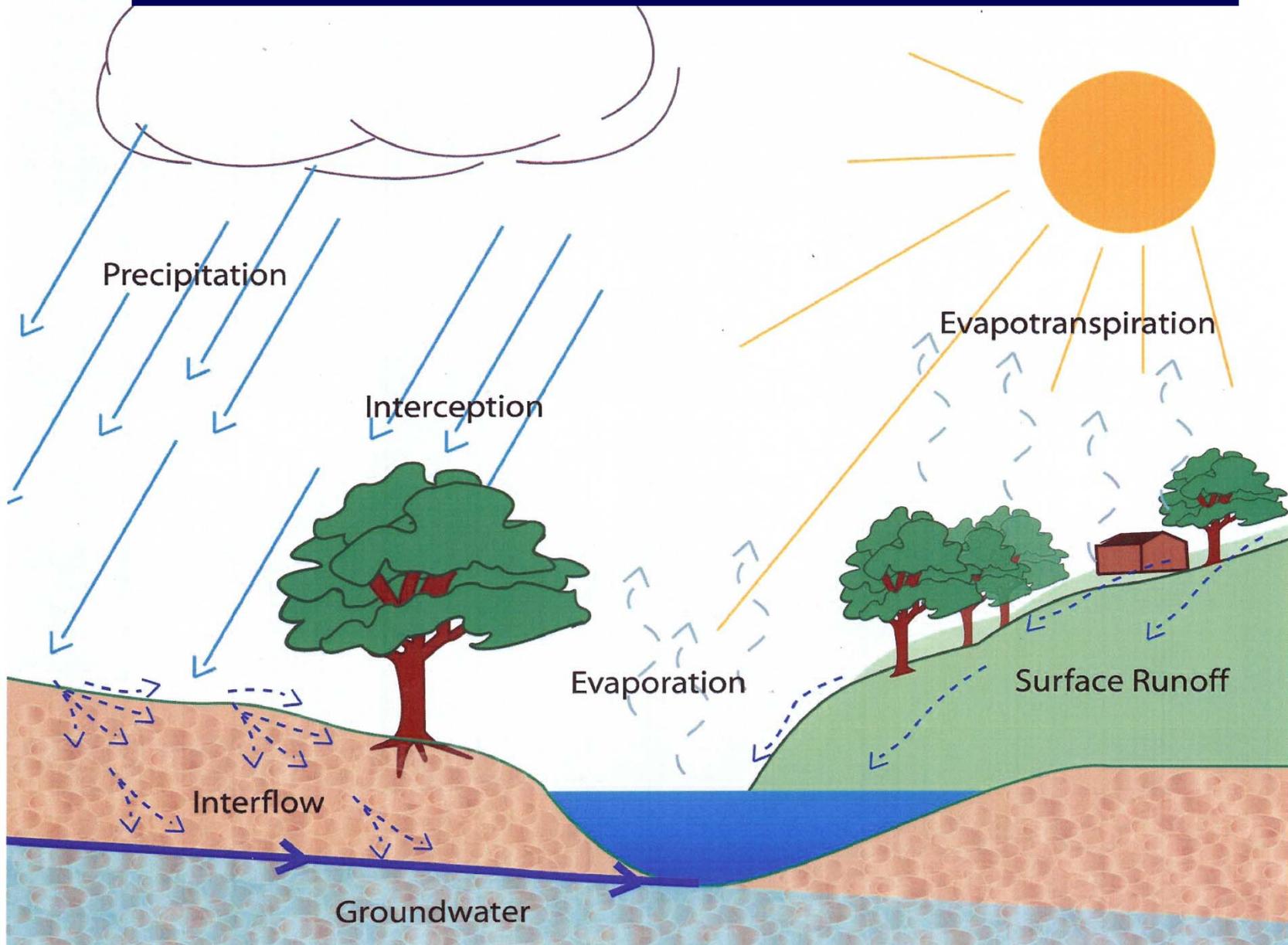
Questions?

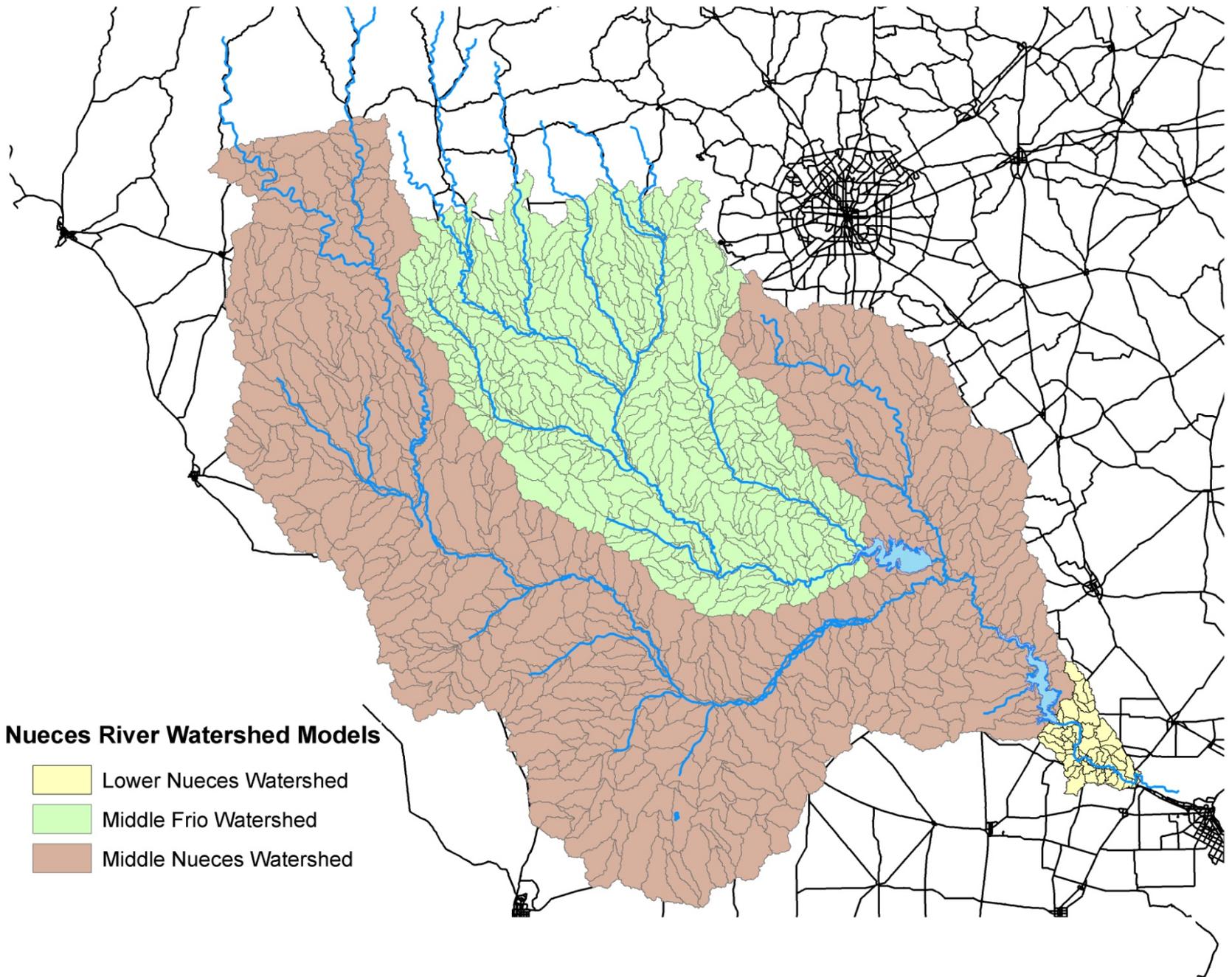
USGS Activities in the Nueces Watershed

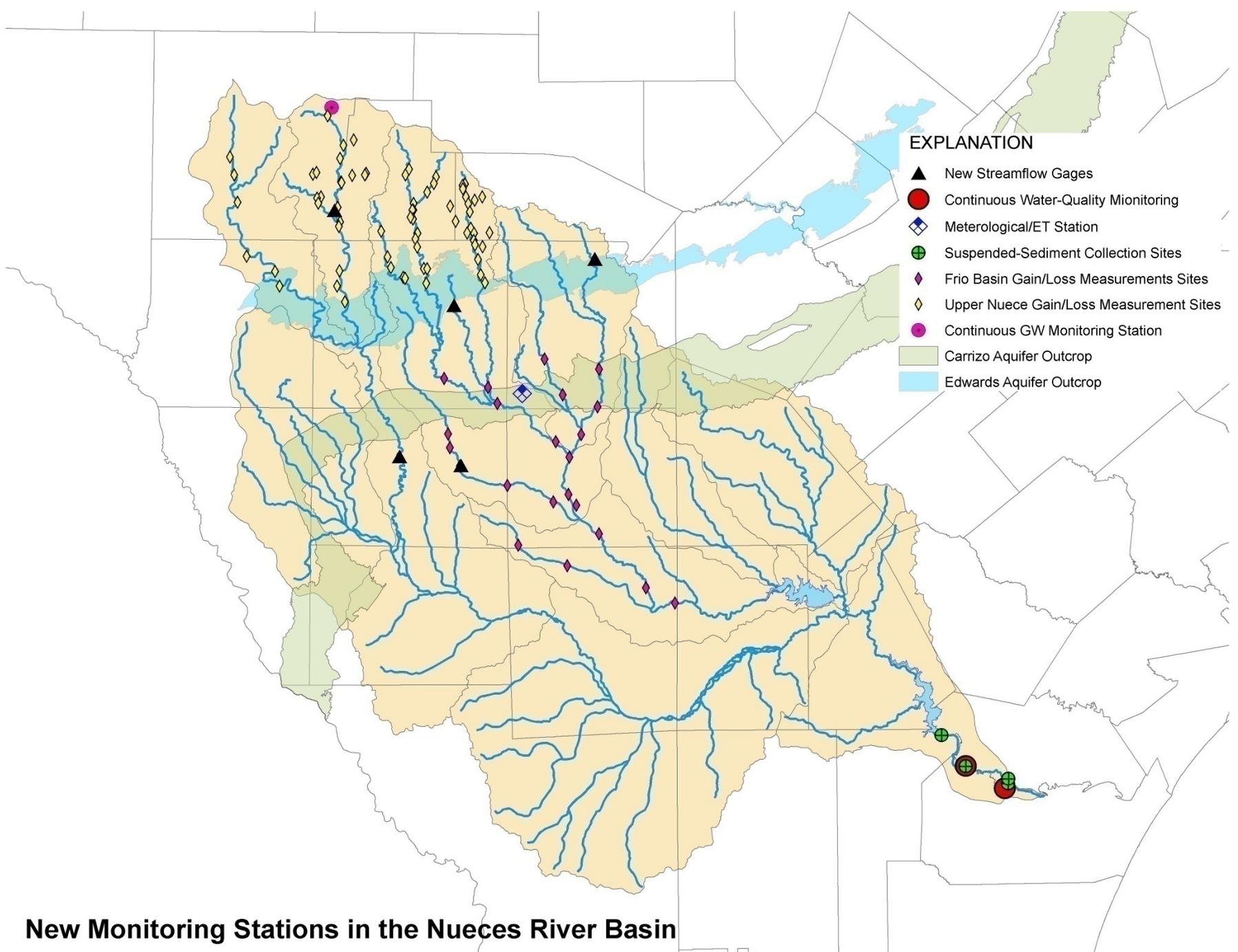


- **Nueces HSPF Watershed Models**
- **New Gaging Stations/Gain/Loss Studies**
- **ET station in Medina County**
- **Nature Conservancy Work in Upper Frio/Nueces Basins**
- **Suspended-Sediment Project in Lower Nueces**

Watershed Modeling – HSPF



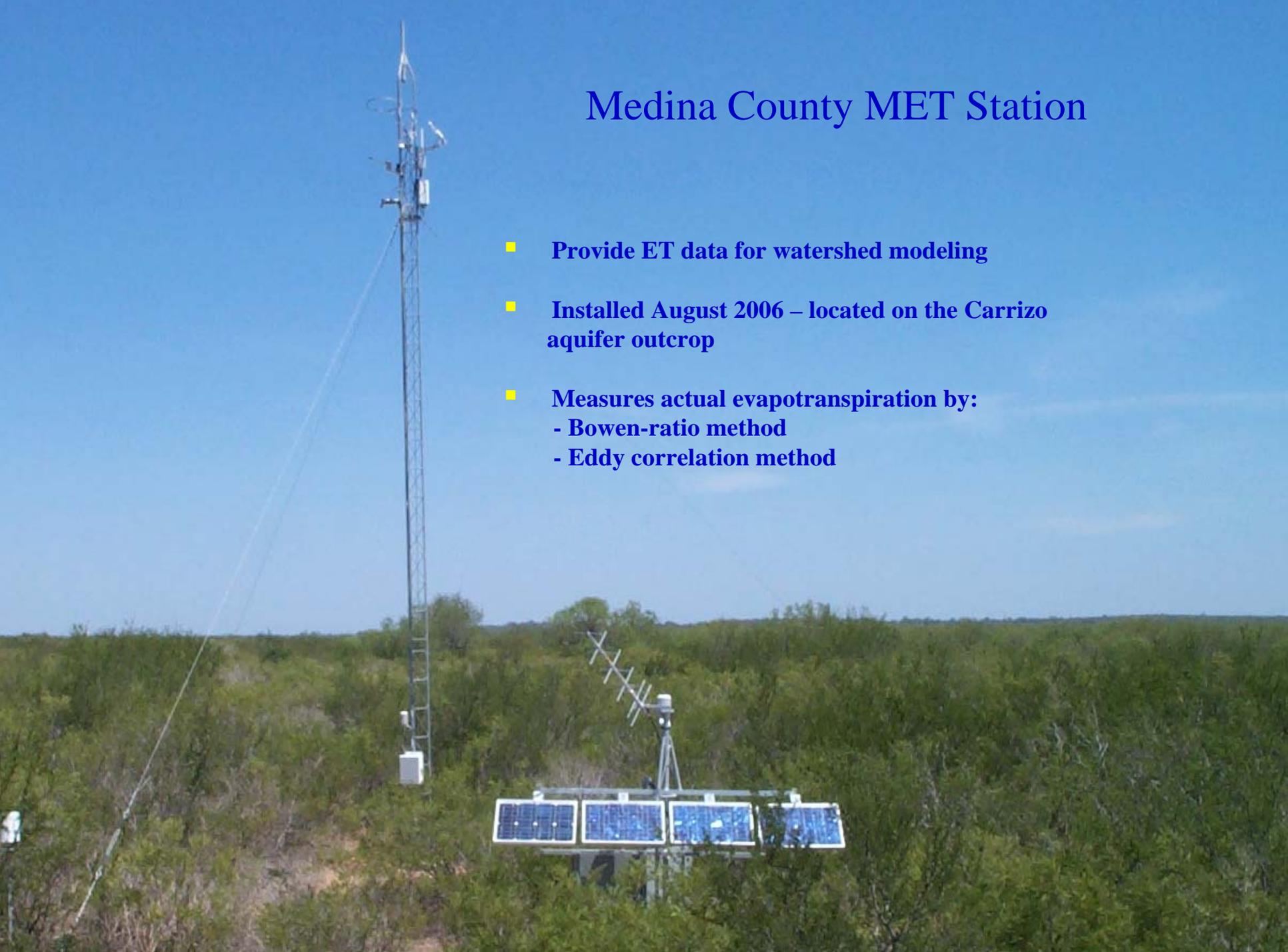




New Monitoring Stations in the Nueces River Basin

Medina County MET Station

- **Provide ET data for watershed modeling**
- **Installed August 2006 – located on the Carrizo aquifer outcrop**
- **Measures actual evapotranspiration by:**
 - **Bowen-ratio method**
 - **Eddy correlation method**



An aerial photograph of the Lower Nueces River delta, showing a complex network of water channels and wetlands. The river flows from the top left towards the bottom right, eventually emptying into a large body of water. The surrounding landscape is a mix of green wetlands and brownish sediment deposits. A multi-lane highway is visible in the bottom right corner. Three lines of blue text are overlaid on the image, providing information about a sediment project.

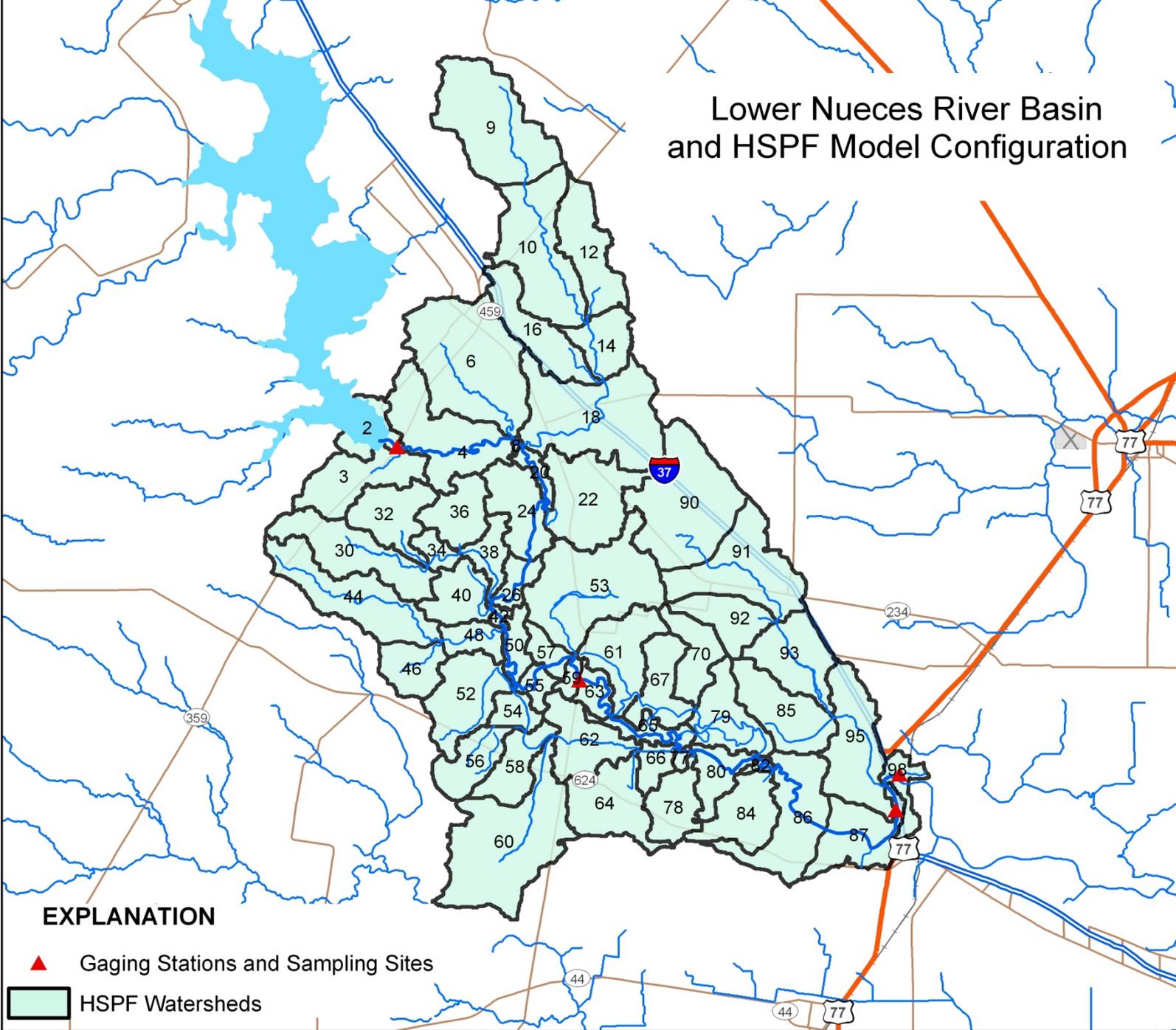
Suspended-Sediment Project on the Lower Nueces River

Collected suspended-sediment data at four sites in 2006-07

Compiled historic suspended-sediment data

Developed suspended-sediment model of Lower Nueces River

Lower Nueces River Basin and HSPF Model Configuration



EXPLANATION

- ▲ Gaging Stations and Sampling Sites
- HSPF Watersheds

Sources of Sediment to the Nueces River Delta, 2001–08

