

### Texas Campus Water Conservation Efforts

The drought in Texas has affected the way water suppliers consider water sources. In many areas in the state, water conservation is considered a source of water. I am involved in a project with the Texas Regional Alliance for Campus Sustainability, surveying water conservation methods and techniques taking place on campuses of higher education throughout Texas. The goal of the project is to categorize institutes of higher education by size, hydrologic region, water sources, public versus private institutions, and to create a database of best practices for water conservation. There is a substantial spatial component to the project due to the varying drought conditions and water supplies throughout the state.

The Texas Higher Education Coordinating Board has divided the state into ten regions which we are using for the survey analysis. I could not find a shapefile of this map (fig. 1), but it is delineated by counties so I can make my own version of the map based on

counties. I found data for statewide precipitation, evapotranspiration, soil

saturation, groundwater availability, and reservoir storage on the Texas Water Development Board's website, but none of it was very recent and none included data from 2011, when the

drought was the most severe. The USDA's drought monitor has shapefiles for its drought maps so



Figure 1. Map of Texas including the ten Texas Higher Education Coordinating Board's regions.

I've downloaded the shapefiles for around the date July 20<sup>th</sup> of the years 2003-2013. I still need to get the coordinates of the participating campus locations in order to show the effective water conservation techniques used on the campuses. So far 26 out of the 176 campuses of higher education in Texas have responded to the water conservation survey. This week we are really pushing the survey, specifically to the top ten largest public, private and community colleges in the state, so hopefully I'll have more sites to add to the map soon. I may end up plotting all of the schools, with symbolism reflecting the size of enrollment, and highlight the campuses participating in the survey.