

Assessment of Seagrass Health Along the Texas Coast

Objective:

This project looks to compile water quality parameters with seagrass species composition and percent cover to evaluate the health of seagrass ecosystems along 350 km of the Texas Coast.

Methods:

This research project, headed up by Ken Dunton PhD of the University of Texas Marine Science Institute and partnering with many state and federal agencies, looks to characterize sea grass communities by measuring both abiotic and biotic factors at over 500 sampling sites on the Texas coast. I will analyze water quality parameters such as chlorophyll concentration, total suspended solids (TSS), turbidity, nutrient concentrations, temperature, salinity, pH and dissolved oxygen data in order to describe both the physical and biogeochemical environment in which these species live. I will use this data to draw connections to the percent cover, shoot density, biomass, and canopy height data recorded for the five different seagrass species native to the Texas coast. I hope to be able to make conclusions about how these abiotic factors influence the health of this both economically and ecologically important ecosystem.

Seagrass Beds along Texas Coast



Data:

I will obtain all of my initial data from the research team under Dr. Ken Dunton at the Marine Science Institute who have collected extensive measurements on all of these sites during August and September of 2011. After preliminary analysis of the data, I hope to draw connections between the seagrass beds in Texas coastal estuaries and the current drought and reduced river flow regimes Texas is experiencing this year. I will get data about precipitation levels from the National Weather Service, and I will get information about stream flow from the United States Geological Survey.