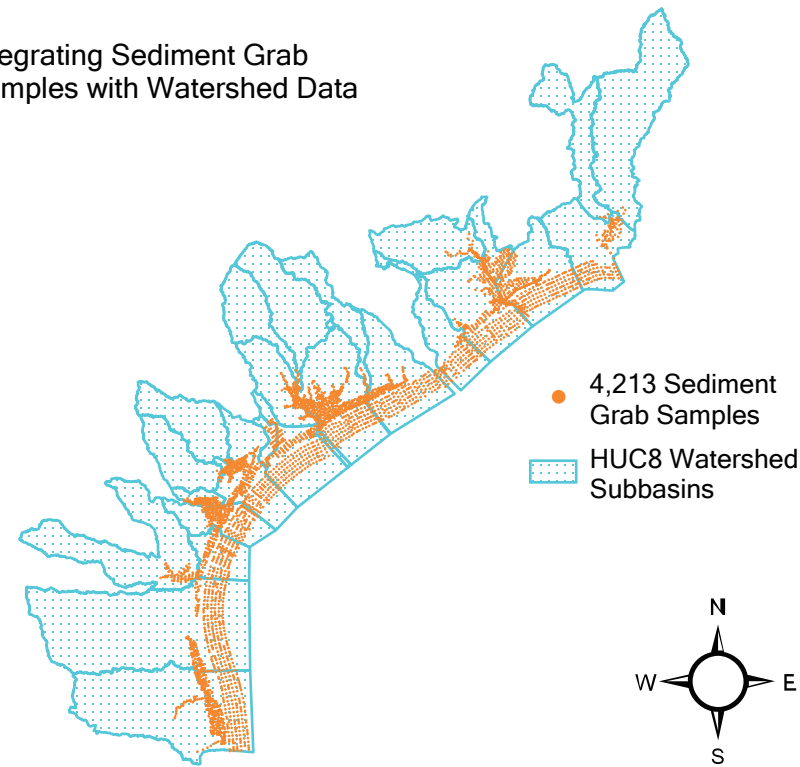


TEXAS COASTAL SEDIMENT COMPOSITION

Coastal projects are designed to enhance and strengthen Texas beaches and dune systems. An important part of these projects is understanding sediment composition in areas where beach quality sand can potentially be borrowed. Sediment grab samples along the coast can be interpreted and analyzed to aid in this process. Analyzing grab samples by sediment type and percentages help locate areas for sand borrowing and dredging. Sediment for enhancing and nourishing Texas beaches needs a sand content of 70 percent or greater. This analysis aims to identify potential sand sources and visually display these areas on a GIS map. Point data was obtained from the Texas General Land Office and used to create raster layers based on interpolation.

Overlaying the Watershed data with the sediment data helps to see patterns in sediment composition. The HUC8 Watershed subbasin polygon data were overlaid and analyzed with the sediment grab sample data. The differences in sediment composition can be observed in the upper, middle and lower coastal areas. This analysis found that sand composition is higher along the middle and lower coast of Texas. After calculating the average sand percentage per watershed subbasin, the highest average sand percentage was 73 percent and the lowest average sand percentage was 18 percent. The North Laguna Madre subbasin located in the lower coastal region has the highest average sand percentage.

Integrating Sediment Grab Samples with Watershed Data



Average Sand Percentage per Watershed Subbasin

