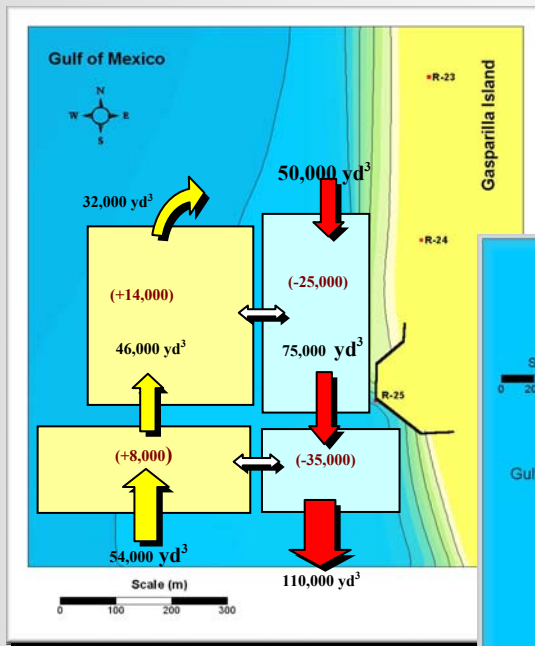


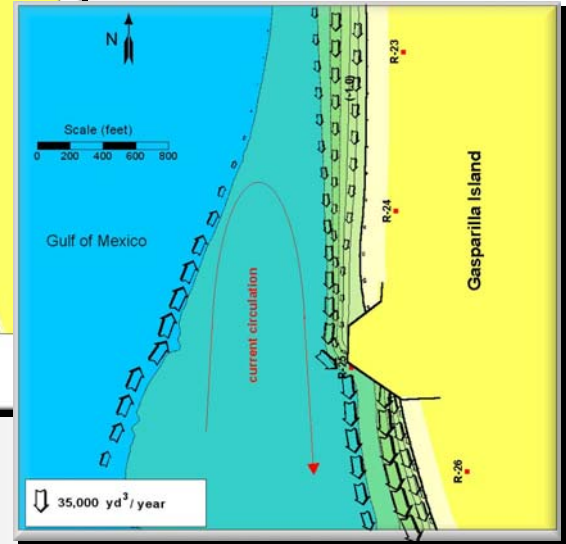
NUMERICAL MODELING AND ANALYSIS

Humiston & Moore Engineers provides an unmatched capability to model sediment transport for complex bathymetries near inlets as well as for open coasts. The contour line change model NLINE overcomes the limitations of the available one-line type models. NLINE is a multiple layer model which provides practical simulations of cross-shore distribution of sediment transport and three dimensional beach change. The application of NLINE is valuable for complex bathymetry such as barrier islands geometry near inlets where other models are restricted. This type of model is not yet available for general practice. H&M has the advantage of this advanced technology through one of its staff, Dr. Dabees, the developer of the NLINE model. Dr. Dabees is an expert in numerical modeling with over 10 years of experience in modeling coastal processes along the Atlantic, Pacific and Gulf coasts. Dr Dabees integrates the NLINE model with other modeling tools to provide a customized effective modeling suite based on each project requirement.

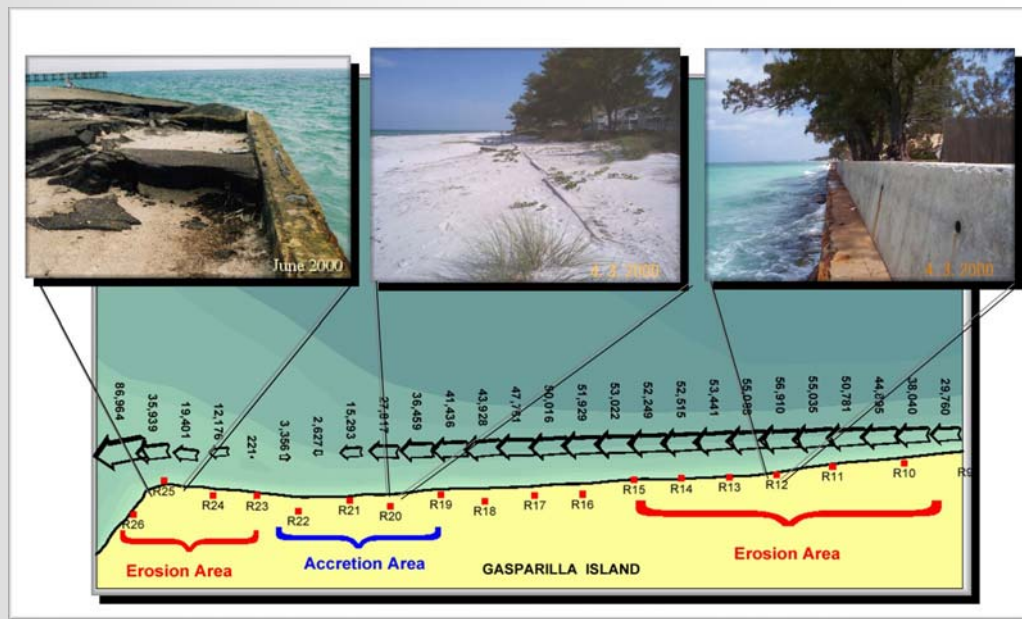
The applications of the NLINE model in project design provides adequate details to quantify sediment transport along the coast and sediment exchange between the nearshore and ebb shoals. The NLINE is also used to optimize beach fill design based on sediment transport gradients. This design tool improves project performance and beach fill longevity.



Detailed Sediment budget



Sediment transport distribution



Sediment transport rates alongshore