

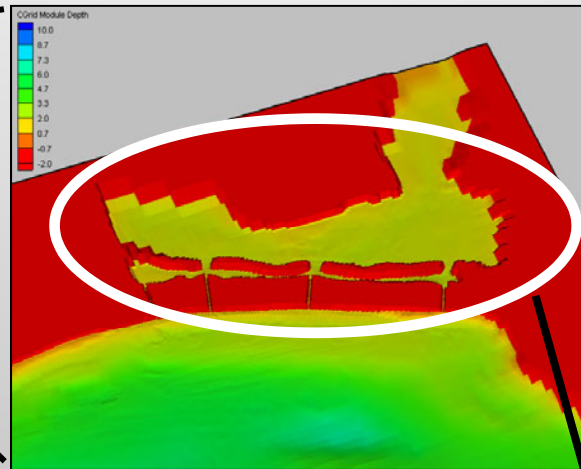


# Hydrodynamic Modeling for Coastal Impact Analysis: A Case Study Examining Flushing Dynamics and Beach Morphology Change

Rendezvous Bay, Anguilla



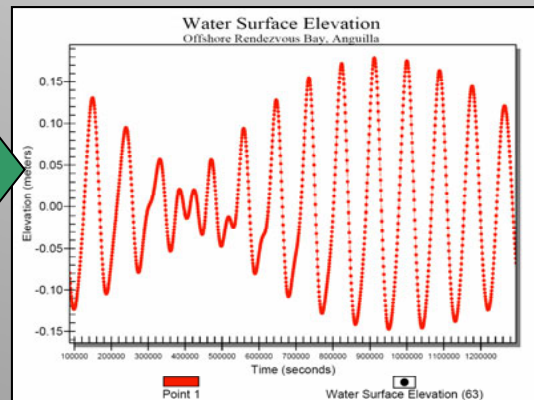
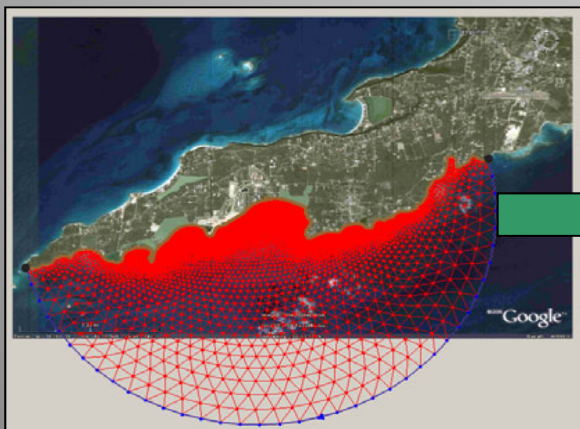
Local M2D Hydrodynamic Model



A high resolution 2-Dimensional Cartesian Grid M2D hydrodynamic model was utilized to examine local flushing patterns, sediment transport, and the predicted effect of the flushing channel construction

Our company has utilized computer hydrodynamic modeling along a section of coastline in Anguilla, BWI, in order to examine the potential impacts of a marina and resort construction on local flushing characteristics and beach morphology. The project planned to develop structures along the coastline, as well as to establish flushing channels connecting a hypersaline salt pond to the open ocean and developing a pristine marine habitat. The modeling helped to quantify the degree of flushing that would occur due to the channel construction, as well as quantifying the hydrodynamics and sediment transport within the adjacent bay.

Regional ADCIR Model



A large-scale 2-Dimensional finite element hydrodynamic model was initially constructed using tidal constituent data in order to examine regional tidal flux and generate boundary conditions for the site-specific model

Flushing Analysis Results

