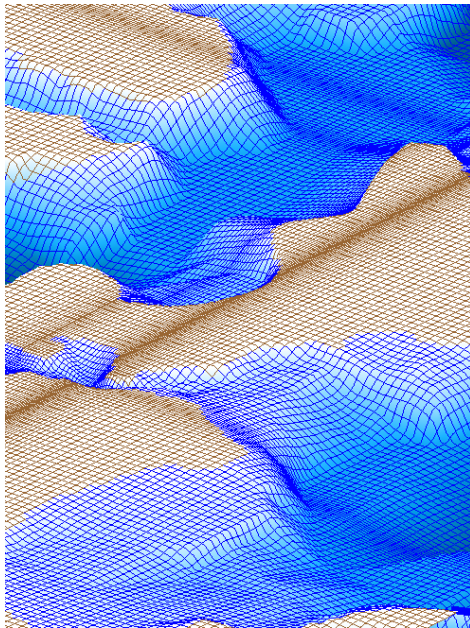


# Beef Island Runway Extension

Tortola, British Virgin Islands



## Overview

- Regional circulation model
- Local circulation and flow models
- Model calibration

## Applied Software

- SMS (ADCIRC, CMS-Flow, CMS-Wave)

## Problem

Beef Island is located in the British Virgin Islands adjacent to the island of Tortola. The two islands are connected by a bridge that allows traffic to get from Tortola to a small airport on Beef Island. Plans to expand the airport runway into the harbor to allow larger jets to land have raised the need for an environmental impact study to determine the effect of proposed runway alignments on nearby bays and harbors.



## Solution

Aquaveo was contracted by St. Jean Engineering to develop regional and local flow and circulation models for the area immediately surrounding Beef Island. The models helped determine the effect of the proposed runway alignments on circulation in Trellis Bay and

flow through Beef Island channel, in addition to impacts on beach areas. Several models were developed for the study including ADCIRC, CMS-Flow, and CMS-Wave.

## **Benefits**

The models played an important role in determining the runway configuration with the least negative impact to the current flow and circulation patterns in and around the island.