Model Attributes and Calibration

A three-dimensional hydrodynamic model known as Benthic-3D was applied in the San Francisco Estuary with the main goal of understanding the transport processes in the estuary. The model simulates the tidal flow and salt transport accurately, as shown in the figures below.

The model was calibrated using hydrodynamic data and salinity data to simulate the transport of estuarine biota. The model was applied to investigate the transport mechanisms in San Francisco Bay. This model is a three-dimensional approach that captures the variability in space and time.

Introduction

The purpose of this modeling effort is to investigate the potential mechanisms underlying the relationships of fish abundance to flow. The model was calibrated using hydrodynamic data and salinity data to simulate the transport of estuarine biota.

Salinity Simulation

Salinity in the San Francisco Estuary was predicted during spring-neap cycle. The tidal cycle variability in salinity and the degree of stratification are predicted accurately. The model was calibrated using hydrodynamic data and salinity data to simulate the transport of estuarine biota.