

Estuary Bathymetry

Background and Need

- Numerical modeling of the estuary requires accurate physical boundaries
- Depth of water (bathymetry) is a key parameter that affects accurate calculation of currents
- There are very limited data for bathymetry of the estuary
 - Stetson 2002 survey is dated with limited spatial extent
 - 2010 LIDAR dataset has a coarse resolution and in most cases does not provide water depth data
- Work has been proposed as a Camp Pendleton stand alone project – Funding Status Is Unknown

Key Question

What is the water depth (mean lower low water) of water throughout the estuary?

Design

Two components:

- 1) Utilize miniature remote control hydrographic survey boat
 - High Spatial Mapping Resolution -1 m along track, 25 m cross-track
 - High Resolution Positioning – 1 m
 - High Resolution Bathymetry – 1-2 cm
- 2) Integrate bathymetry with LIDAR data to develop a fine resolution digital elevation model (DEM)

Budget and Collaborators

| | |
|--------------------|---------|
| Surveying | 57,952 |
| Elevation Modeling | 41,106 |
| Indirect Fees | 9,906 |
| Total | 109,000 |

Products

Technical

- DEM developed for the Estuary
- DEM will be used for TMDL modeling and implementation scenarios

Institutional: