



# Benthic Mapping and Habitat Characterization Initiative

The NJDEP and USEPA have identified a critical need to document the condition of benthic communities in New Jersey's estuarine waters (EPA, 2008). Under New Jersey's Benthic Mapping and Habitat Characterization Initiative, we will conduct benthic habitat mapping and collect baseline data on subtidal shallow water.

Habitat mapping is an essential tool for monitoring important habitats over time. It is also used for developing resource management strategies and restoration priorities (NOAA CSC, 2008).

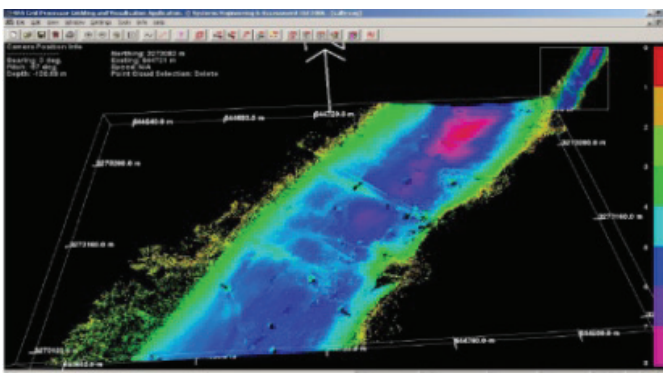
To provide high-resolution multibeam bathymetry and sonar-derived habitat map products, survey data that is collected for all sites will include multibeam bathymetry, side-scan sonar, geo-located video and sediment grabs of two types of communities, substrate and biotic.

Availability of these data will enable Monmouth researchers to work on a continuing basis with local, state and federal resource managers. Regional partners will assess the impacts of runoff from degraded watersheds on benthic habitats and develop restoration strategies to protect the estuarine waters at large.

The high resolution bathymetry data is valuable for many reasons. It is used for navigation, coastal processes, flood monitoring and the development and fine tuning of multiple coastal, tidal and storm surge models.

## Mapping Initiative Targeting the Following Estuaries:

- Manasquan River
- Shark River
- Navesink/Shrewsbury
- Northern Barnegat Bay (future work)
- Raritan Bayshore (future work)



## Vessel Capabilities

- R/V Sea Hawk 27 foot fiberglass hulled survey vessel
- R/V Little Hawk 18 foot fiberglass hulled survey vessel

## Mapping Capabilities

- Single Beam: Odom Dual Frequency 200/33 kHz
- Positioning: Trimble RTK GPS Base and Rover
- Data Collection: Hypack/Hysweep Software
- Sea Bed Classification: Quester Tangent Side View
- Geographic Information System: ESRI ArcMap
- ACSM Certified Hydrographer on staff
- Multibeam: SEA SWATH plus 488 kHz interferometric sonar