

## Resume



**STEVEN B TRAYNUM**  
**Coastal Physical Scientist**  
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### Education

MS. Marine Science, University of South Carolina  
BS. Marine Science, University of South Carolina Honors College

### Experience Highlights

Mr. Traynum specializes in coastal hydrodynamics and estuarine processes for Coastal Science & Engineering (CSE) (2007-present). He also serves as project manager for several local beach monitoring programs and beach nourishment projects for CSE. Prior to joining CSE, Mr. Traynum worked under Dr. Rich Styles in the Boundary Layer, Stress, and Sediment Transport laboratory at USC where he focused on estuarine hydrodynamics and physical oceanography. His coastal engineering project experience includes monitoring and analysis of erosion and morphological changes of natural and nourished beaches and coastal inlets; measurement and analysis of tidal inlet currents, on-site land and hydrographic surveys, and sediment collection on-land and in deep water.

### Technical Experience

Mr. Traynum has extensive experience working in estuarine and coastal settings, including deployment and recovery of sophisticated hydrographic equipment, such as acoustic Doppler current profilers (SonTek, RDI, Nortek), acoustic Doppler velocimeters, CTDs, and pressure sensors. Mr. Traynum has collected hundreds of beach profiles using the latest surveying techniques (RTK-GPS). Mr. Traynum is a certified (SSI) open-water diver.

## Coastal Erosion/Renourishment Experience

- Project manager for local beach monitoring programs involving collection and analysis of land-based and hydrographic profile data to determine short and long-term erosion rates, as well as underlying causes of erosion. Monitoring sites include:
  - Isle of Palms, SC
  - Edisto Beach, SC
  - Hunting Island, SC
  - Kiawah Island, SC
- Construction observation for a complicated renourishment project at Isle of Palms, SC involving placement of ~850,000 cy of sand along ~ 2 miles of beach and removal of temporary sandbags.
- Data analysis, QA/QC, and erosion calculations of topographic, bathymetric, and sedimentary data along the east coast, including:
  - Nags Head, NC
  - Moriches Inlet, NY
  - Edisto Beach, SC ( for USACE)
- Collection and analysis of over 1,000 sediment samples including creation of MatLab scripts for automatic generation of sediment grain size distributions.

### Specialties

- Collection and analysis of beach profile data
- Collection and analysis of coastal sediments
- Coastal and estuarine processes
- Hydrographic instrument deployment
- Construction observation

### Software Program Capabilities

- MatLab
- ArcGIS
- Adobe Photoshop
- Microsoft Office

### Publications

Traynum and Styles, 2008. Exchange flow between two estuaries connected by a shallow tidal channel. *Journal of Coastal Research*. 24: 1260-1268.

Traynum and Styles, 2007. Flow, stress and sediment resuspension in a shallow tidal channel. *Estuaries and Coasts*. 30: 94-101.