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 hydro-dynamics 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. Mr. Traynum is experienced in critical area permitting, including analysis of environmental impacts and preparation of biological assessments and EIS documents. He serves as a liaison between resource agencies and clients and assists in developing appropriate monitoring plans to determine project impacts to endangered and threatened species. His coastal engineering project experience includes design of coastal erosion mitigation projects, 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 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. 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 cubic yards (cy) of sand along ~2 miles of beach and removal of temporary sandbags.

- Critical area permitting for projects in SC and NC, including production of Biological Assessments, Essential Fish Habitat Reports, EIS documents, and monitoring programs in coordination with USFWS, USACE, NMFS, and state agencies.

- Collection and analysis of over 1,000 sediment samples including creation of MatLab® scripts for automatic generation of sediment grain-size distributions.

Specialties

- Environmental Impact Assessments
- Coastal and estuarine processes
- Collection and analysis of beach profile data
- Collection and analysis of coastal sediments
- Hydrographic instrument deployment
- Beach nourishment design and monitoring

Software Program Capabilities

· MatLab®
· ArcGIS®
· Global Mapper
· Microsoft Office

Select Publications

Traynum, SB, T Kana and DR Simms. 2010. Construction and performance of six template groins at Hunting Island, South Carolina. Shore & Beach, Vol 78, No. 3, pp 21-32.

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