

## Resume



### **STEVEN B TRAYNUM, MS** **Coastal Physical Scientist**

#### **Education**

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

#### **Professional Highlights**

Mr. Traynum specializes in coastal hydrodynamics and estuarine processes for Coastal Science & Engineering (CSE) (2007-present). Prior to employment with CSE, he studied with Dr. Richard Styles at the University of South Carolina (USC) Boundary Layer, Stress, and Sediment Transport (BLaSST) laboratory, focussing on estuarine and inlet processes in South Carolina. As a graduate student, Mr. Traynum published two refereed journal articles based on flow and transport in estuaries. His expertise has led to cooperative work with several professional researchers on various topics dealing with the biological, chemical, and geophysical coastal environment. He has also worked cooperatively with the SC Department of Natural Resources in a study to evaluate the possible impacts of the removal of a causeway on Edisto Island.

#### **Technical Experience**

Mr. Traynum has extensive experience working in estuarine 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, coupling these with GPS and historical and real-time tide and meteorological data to model estuarine hydrodynamics. Mr. Traynum is proficient in data analysis of oceanographic data and has produced methods for correlating short-term

measurements of channel discharge with long-term profile data to produce long-term estimates of discharge. These analyses have been used to determine tidal and subtidal effects on estuarine flow and sediment/contaminant transport. Additional technical experience includes sampling for suspended sediment concentration, particle size analysis using a Laser In Situ Scanning Transmissometer (LISST), core collection using vibracore, high frequency (HF) radar installation and maintenance, biological oxygen demand (BOD) experimentation, and Lagrangian and Eulerian geophysical studies. He has broad experience operating small craft in tidal creeks as well as open bays, and was certified by the Baruch Institute (USC) for unrestricted operation of all vessels. Mr. Traynum is a certified (SSI) open-water diver.

#### **Contributions**

Peer-reviewed articles:

Traynum and Styles (in press). Exchange flow between two estuaries connected by a shallow tidal channel. *Jour of Coastal Research*.

Traynum and Styles. 2007. Flow, stress, and sediment resuspension in a shallow tidal channel. *Estuaries and Coasts*, Vol 30(1), pp 94-101.

Mr. Traynum has presented his research endeavors at professional meetings and educational events, including the 2006 Oceans (AGU) meeting in Honolulu (HI) and the 2005 ERF meeting in Norfolk (VA). Mr. Traynum has also been active in promoting science education and, in 2006-2007, received a "Partners in Inquiry" (Pi) fellowship from USC to assist a middle school class in science activities one day a week for the school year. In 2004, Mr. Traynum received the Presidential Volunteer Service Award for volunteering over 200 hours at a local hospital and free medical clinic.

#### **Software Program Capabilities**

- MatLab
- ArcGIS
- Adobe Photoshop
- Microsoft Excel