



TREY HAIR

ENGINEERING TECHNICIAN

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PROFILE

Mr. Hair is an engineering technician with 20 years of experience who supports CSE's professional engineers and geologists in projects pertaining to beach nourishment, groin and jetty design, revetments and seawalls, inlet relocations, as well as waterfront and marina designs. He performs profile analysis from collected and/or existing data, historical shoreline assessments, topographic and bathymetric data compilation, volume calculations, erosion assessments, and sediment transport studies.

As CSE's CAD manager, Mr. Hair utilizes numerous data-based, land-development software programs in the design of coastal engineering projects including beach nourishment, groins, jetties, seawalls, and inlet relocations. He maintains CSE's database of beach monitoring projects in numerous southeastern locations including South Carolina sites (Seabrook Island, Folly Beach, Kiawah Island, Myrtle Beach, Hunting Island, Edisto Island, Isle of Palms) and North Carolina sites (Bogue Banks, Ocean Isle Beach, Nags Head, Kitty Hawk, Buxton, Hatteras Is). He uses ArcMap GIS software to assess shoreline changes, to support FEMA flood studies, to conduct spatial analysis, and to determine changes in the shoreline and littoral zones. Mr. Hair has also served as an expert CAD/survey analyst in support of court cases involving erosion.

TECHNICAL EXPERIENCE

Extensive data collection experience including field investigations of project sites, installation of coastal engineering instrumentation, and collection of samples for testing. Mr. Hair is proficient in survey processes from the initial setup of projects to data reduction and map production utilizing the latest technology and software.

Responsibilities include obtaining state and federal permits, production of all of CSE's construction plans/specifications and processing collected data. He has extensive experience in large projects, including two of the largest locally funded beach nourishment projects ever completed along the U.S. East Coast at Bogue Banks (NC) and Nags Head (NC) involving volume placement of ~10 million cubic yards of nourishment fill.

Mr. Hair has performed underwater assessments of revetments, seawalls, and coastal structures, as well as reconnaissance surveys for a directional-drilling project. He is a master diver with hundreds of dives logged in support of project design; collecting sediment samples and setting coastal analysis instrumentation for the study of tides, waves, and currents (ADP, MD, XR, mini-wave, etc).

EDUCATION

AS. Engineering Technology, Midlands Technical College

PROFESSIONAL CERTIFICATIONS

PADI Open-Water Certified Diver/ TDI Nitrox
Engineering Graphics (MTC)
3-D Design (MTC)
Civil Design (AutoDesk® University)
AutoCAD Civil 3D Certified Professional

MEMBERSHIPS

AUGI AutoDesk® User Group International
AutoDesk® Certified Professionals
American Shore & Beach Preservation Association

SOFTWARE PROGRAM CAPABILITIES

- AutoDesk® Civil 3D/Map/Raster Design
- AutoDesk® Infrastructure Design Suite
- ESRI ArcMapGIS
- Trimble®/HYPACK®
- Global Mapper® (Blue Marble)

MAJOR PROJECTS

Cooper River Bridge Hydrographic Study
Asharoken (NY) Erosion Case
Bogue Banks (NC) Nourishment
Hunting Island (SC) Nourishment
Edisto Beach (SC) Nourishment and Groin Repair
Nags Head Beach (NC) Nourishment
Folly Beach (SC) Groin Design
Al Khiran Monitoring (Kuwait)
Kiawah Island (SC) Beach Restoration
Edisto Island (SC) Nourishment
Isle of Palms (SC) Beach Restoration
Seabrook Is (SC) Capt Sams Inlet Relocation
Sagaponack Beach (NY)
Bridgehampton Beach (NY)
Buxton, Dare County (NC)
Arcadian Shores, Horry County (SC)