

Geodynamics, based in Morehead City, NC, is an oceanographic and geologic research firm that provides a variety of research services to local, state and federal government agencies and the environmental consulting and research sectors. The firm specializes in the development and execution of scientifically rigorous field programs and advanced processing techniques. We provide the client with useful and accessible reporting and custom Geographic Information Systems (GIS) data and management.

High resolution shoreline mapping

- RTK GPS studies for beach and dune morphology
- Beach and surf-zone mapping for beach re-nourishment studies
- Essential Fish Habitat
- Coastal hazard mapping

Multi-beam swath bathymetry and side-scan sonar studies

- Sediment resources for beach re-nourishment
- Dredge/Fill and disposal monitoring
- Bathymetric change studies (rivers, inlets, ocean, estuaries)



ADCP current meter studies

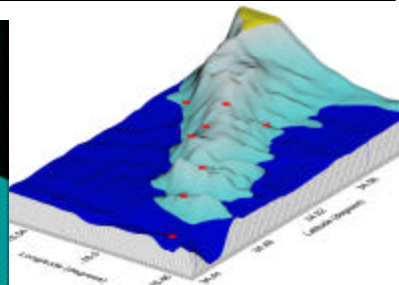
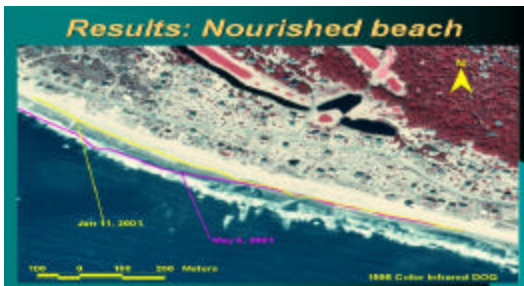
- Tidal inlets and estuaries
- River discharge

Sedimentological analysis

- Coring and core logging
- Sediment distribution

Aerial photography and remote sensing studies

- Geo-rectification
- Comprehensive GIS management
- LIDAR, AVHRR and SeaWiFS analysis



Geodynamics can map the beach and nearshore region with centimeter-scale accuracy, creating 3-dimensional topographic maps or 2-dimensional beach profiles that depict sand retention and erosion over time...often for less than the typical cost of simplistic beach profiles offered by competitors. Offshore, Geodynamics can provide bathymetric mapping services using the latest in high-resolution equipment: a vessel-mounted multi-beam swath bathymetric system. High quality data collected with our Simrad 3000 multi-beam transducer will be invaluable to coastal managers and engineering firms.

Christopher Freeman, President of Geodynamics, has extensive research experience through the University of North Carolina at Chapel Hill's Institute of Marine Sciences. He has actively led and participated in coastal geology and oceanographic research projects in Virginia, North and South Carolina.