



US Army Corps
of Engineers®

Engineer Research and
Development Center

Field Research Facility Duck, NC

Description

The Field Research Facility (FRF), located in Duck, NC, was established in 1977 to support the Corps' coastal engineering mission. The FRF is recognized as a premier location for coastal field studies. Central to the FRF is a 560-m-long steel and concrete *research pier* that extends to the ~7 m water depth contour.



Specifications

Other facilities include a multi-purpose conference room, 40-m observation tower, and specialized vehicles: the *Coastal Research Amphibious Buggy* (CRAB), and *Sensor Insertion System* (SIS). The 10-person staff of computer specialists, technicians, and oceanographers are known for their ability to collect data, design experiments, and conduct research. The CRAB (photo below) is equipped with centimeter-level DGPS and is used for precisely surveying from the beach out to the 9 m depth contour. It also serves as a stable platform for instrument deployments; side-scan sonar studies; vibracoring, sediment sampling; and for towing instrument sleds. The crane-like SIS (right) can operate in 5-m waves, is able to reach 15 to 24 m out from the pier, and is used to deploy instruments anywhere along the pier. The SIS is equipped with wave gauges, current meters, and sediment transport sensors.



Benefits



FRF research into weather, waves, currents, tides and beach change has had international impact. CRAB measurements have defined how beach and nearshore sand bars respond to seasonal and storm changes. Highly resolved wave information has provided new knowledge of the major forces that affect our coasts. Sediment transport data gathered during storms has revealed the strengths and weaknesses of our beach erosion prediction capabilities. These results and those of hundreds of investigators that have experimented at the FRF are used throughout the world.

Application

The FRF is an ideal location for conducting a wide variety of coastal studies. Recent experiments have included such diverse topics as: providing ground-truth for Navy remote sensing and coordinating major surf zone experiments. Potential users from industry, academia or government are encouraged to visit the FRF web site.

Point of Contact

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