

Coastal Observation Technology System Project Summary – 2004

Project Name/Title: Support and Development of Real Time Ocean Observing Systems off Louisiana Coast: Wave Current Surge Information System (WAVCIS)

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Recipient Institution: Louisiana State University

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Brief Project Summary: The objective of WAVCIS is to provide wave information (sea state), including wave height, period, direction of propagation, water level, surge, near surface current speed and direction, and climatological conditions (wind speed and direction, barometric pressure, air temperature), on a real-time basis for the entire Louisiana coast. The program is designed to provide critical information offshore during hurricanes and offshore accidents. The information is archived or used in real time for many hydrodynamic modeling applications dealing with process-linked studies on coastal erosion and model skill assessment between output and field measurement.

Accomplishments to Date:

- Successful deployment of prototype station off Mississippi coast.
- Successful refinement of connectivity using satellite communications.
- Deployment and maintenance of six stations off Louisiana coast.
- Development of advanced software for comprehensive wave and current analysis.
- Development of new databases for streamlining archival retrieval.
- Development of protocols for data standardization.
- Sharing of data with National Data Buoy Center program.
- Development of work bench for numerical model skill assessment.

Current Year Objectives:

- Continued refinement of interactive geographic information system (GIS).
- Continued refinement of model skill assessment work bench.
- Continued refinement of integration with the National Data Buoy Center.
- Installation of additional stations.
- Continued efforts to integrate WAVCIS with Integrated Ocean Observing System and Gulf of Mexico observatories.

Partners: Minerals Management Service, Office of Naval Research, Naval Research Laboratory, Louisiana Department of Natural Resources.