Proceedings of Coastal Zone 09
Boston, Massachusetts
July 19 to 23, 2009

SEAMLESS NETWORK CONCEPT SPURS USE OF REMUS IN ENVIRONMENTAL DATA GATHERING FOR DOCK-SITE PLANNING AT SANDY HOOK (NJ), GATEWAY NATIONAL RECREATION AREA, NPS

Norbert P. Psuty, Rutgers University
Barry Sullivan, Gateway National Recreation Area, National Park Service
Lisa Auermuller, Jacques Cousteau National Estuarine Research Reserve
Mark Christiano, Gateway National Recreation Area, National Park Service
Michael DeLuca, Rutgers University
Joseph Dobarro, Rutgers University
Tom Grothues, Rutgers University
Charles T. Roman, National Park Service
Tanya Silveira, Rutgers University

KEYWORDS: seamless network, autonomous underwater vehicle, Gateway NRA

Plans to construct a ferry dock at the Sandy Hook Unit of Gateway National Recreation Area provided the basis for an interaction among the National Park Service, NOAA, and Rutgers University under the auspices of a seamless network concept aimed at facilitating partnerships to enhance marine resource management. Rutgers deployed its autonomous underwater vehicle, REMUS, to collect a suite of environmental information at the proposed dock site. Planning for the REMUS mission, including an educational component for middle and high school students, was led by the Jacques Cousteau National Estuarine Research Reserve and involved a broad collaboration of federal agency and university personnel with research, management, and education expertise.

Part of the NOAA National Undersea Research Program and administered by the Institute of Marine and Coastal Sciences at Rutgers University, REMUS is one of the undersea research platforms provided by the Mid-Atlantic Bight Center for supporting research in waters of the Mid-Atlantic Region. REMUS is equipped with two Acoustic Doppler Current Profilers (ADCP), two side-scan sonars, a Conductivity-Temperature-Depth sensor, and a Dissolved Oxygen sensor. Outcomes of the mission include side-scan sonar high-resolution imagery of bottom features covering the entire survey area; water parameters, such as temperature, salinity and dissolved oxygen; and depth and altitude measurements, providing for bathymetric reconstruction of the underwater topography. Utilization of the REMUS vehicle represents an initial cooperative effort under the newly-conceived NY/NJ Bight seamless network concept and it demonstrates the positive role of institutional leadership in fostering teamwork toward a common objective.

Norbert P. Psuty
Sandy Hook Cooperative Research Programs, Rutgers University
74 Magruder Road, Sandy Hook, New Jersey 07732
psuty@marine.rutgers.edu,

(732) 708-1462