

# HYPACK is the Choice Acquisition Software for an Oyster Habitat Study in Rappahannock River, Virginia

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In Fall 2013, HYPACK® 2013 provided the ideal acquisition platform for a pilot oyster habitat monitoring and delineation side scan survey. The software was ideal for survey setup, survey site planning and modification as well as integrating the navigation data of a Trimble DSM232. Non-profit organization, Ocean Research Project is committed to data collection projects for a sustainable future for the Chesapeake Bay's ecosystem biodiversity. Our team sought HYPACK® out as a project sponsor in order for us to utilize a proven, reliable and user-friendly hydrographic data collection technology.



Three sites were surveyed aboard the R/V Ault with the Marine Sonic Side Scan Sonar HDS in the Rappahannock, a targeted restoration area. Our objectives included mapping the extents of native oyster habitat area, characterizing the shell content, and gauging the success of the restoration efforts within those sites. HYPACK® features aided the team in identifying the best target sites for ground truthing via ponar grab samples after a preliminary review of the side scan mosaics overlaid in HYPACK®.

*LaSalle University Geology students are completing the grain/shell size analysis of the grab samples. Varying mosaic intensities will be paired with substrate component definitions of the grab samples following the Coastal and Marine Ecological Classification Standard. GIS shape file polygons will then be digitized with ArcGIS Habitat Digitizer Extension and populated with CMECS metadata from the mosaics. All products will then be submitted to the NOAA Chesapeake Bay Office to be incorporated into their bay-wide geologic component map. A brief report will be available at the <http://oceanresearchproject.org/chesapeake-bay-habitat-mapping-survey/> comparing results to Virginia Marine Resource Commission recent stock assessment and historical habitat boundary GIS polygons.*

