



# **Albemarle-Pamlico National Estuary Program**

*North Carolina Department of Environment and Natural Resources*

Beverly Eaves Perdue, Governor  
Bill Crowell, Director

Dee Freeman, Secretary



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## **Submerged Aquatic Vegetation Mapping Project North Carolina and Back Bay Virginia Mapping Procedures**

The submerged aquatic vegetation (SAV) mapping project was completed by Atkins North America, Inc. in August 2011, building on the initial mapping of a significant portion of the target area by Dr. Don Field at NOAA-Beaufort. Dr. Field mapped SAV between Bogue Sound and Oregon Inlet from 2006 aerial images.

Atkins staff thus mapped SAV in coastal waters north from Oregon Inlet to Back Bay Virginia based on fall 2007 imagery and remaining areas south of Oregon Inlet based on spring 2008 imagery.

SAV was mapped at a minimum map unit of 15 meters on the longest axis. The digitizing scale was set between 1:2000 and 1:2500. The aerial images were viewed in a false-color scheme that depicted the red band (band 1) as red, the green band (band 2) as green and the red band (band 1) again as blue. The blue band (band 3) was omitted. Images were stretched to 2 standard deviations and statistics were set "From the Current Display Extent." If necessary, the photo interpreter (PI) utilized the infrared band and displayed images using the infrared band (band 4) as red, the red band (band 1) as green, and the green band (band 2) as blue.

The SAV was mapped using lines to draw the boundaries and points to classify the SAV based on density. All lines created by Atkins staff were smoothed and then generalized using a maximum allowable offset of 0.01 meters and 0.5 meters, respectively. The density of the SAV was classified as Dense: 70-100% coverage, Patchy: 5-70% coverage or Absent: 0-5% coverage. SAV was also mapped inside of waterfowl impoundments, but was given an impounded modifier (DENSE\_I or PATCHY\_I) to distinguish it from other SAV. Additionally, aquaculture vegetation was mapped and classified as such. The classification system is based on a modified version of the US Fish and Wildlife Service's National Wetland Inventory (NWI) Verification Tool.

The Atkins delineated polygons were merged with Dr. Field's polygons to create the final SAV map.

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