

## **Short-term Response and Long-term Sustainability of an 8-acre Pilot Marsh Creation Project at Blackwater National Wildlife Refuge**

David M. Nemerson  
National Aquarium in Baltimore  
Pier 3/501 E. Pratt Street  
Baltimore, MD 21202-3194  
(410) 659-4236  
[dnemerson@aqua.org](mailto:dnemerson@aqua.org)

Donald R. Cahoon  
U.S. Geological Survey, Patuxent Wildlife Research Center  
C/o BARC-East, Bldg 308  
10300 Baltimore Avenue  
Beltsville, MD 20705  
(301) 497-5523  
[dcahoon@usgs.gov](mailto:dcahoon@usgs.gov)

In May 2003, in partnership with the US Fish and Wildlife Service and the US Army Corps of Engineers, the National Aquarium in Baltimore led community volunteers in planting 8 acres of created marsh at Blackwater National Wildlife Refuge. The marsh was created using locally dredged material placed within straw bale diked cells as well as in potholes in existing degraded marsh, using both traditional and thin layering placement techniques, and planted with *Spartina* and *Scirpus* species. Aquarium staff and volunteers have been monitoring these sites since their creation. On-the-ground vegetation surveys, ground-level, sequential photo-station images and aerial photography all reveal that the sites continue to support robust and dense stands of native vegetation two years after their creation. Additionally, the Aquarium, in partnership with the US Geological Survey and NOAA's National Geodetic Survey, installed surface elevation tables (SETs) at one of the created sites, at another site created in the early 1980s using similar techniques, and at a natural reference site. Preliminary data analyses from the first year indicate that the reference site and older created marsh are losing elevation while the 2003 created marsh appears to be gaining elevation. Further data from these SETs will be needed to better define the elevational dynamics and partition the effects among accretion, erosion or subsidence.