

Inventory and Monitoring Program Northeast Coastal and Barrier Network



Assateague Island National Seashore
Cape Cod National Seashore
George Washington's Birthplace NM

Colonial National Historical Park
Thomas Stone National Historic Site

Gateway National Recreation Area
Fire Island National Seashore
Sagamore Hill National Historic Site

MONITORING SALT MARSH VEGETATION

Salt marshes are coastal wetlands dominated by grasses and flooded by tides. Within a salt marsh, elevation increases from bay or creek edge to upland. Low portions of the salt marsh along the east coast, which are dominated by smooth cordgrass (*Spartina alterniflora*), receive daily tidal flooding. Higher portions of marsh flood less often and support many plant species. These marshes can vary in form from narrow shoreline fringes to vast meadows. A vital component of estuaries, salt marshes can produce as much plant material as intensively farmed cropland. For this reason, they are a source of food and protection for shellfish and finfish, birds, mammals, reptiles and invertebrates. Salt marshes also filter sediments, nutrients, and contaminants and protect upland property from storm erosion and flooding.

As a result of sea-level rise, some marshes have started to convert to mudflats or open water. In addition, researchers suspect that land practices such as agriculture, industry, and urban and residential development greatly impact the quality of these valuable estuarine resources. Salt marshes within Northeast National Parks have been identified by state Natural Heritage programs as some of the most pristine marsh areas in the United States. It is important to monitor the condition of these valuable resources and continue to identify both potential and existing threats.



Example of Vegetation sampling

Photo by NPS Staff

The objective of the NCBN monitoring program is to monitor salt marsh condition and be able to identify changes in these communities over time. This program is implemented on a biennial basis in seven of the NCBN parks. This information will give us a better understanding of how these systems are changing in terms of species composition, distribution and abundance, the encroachment of invasive species and other important key characteristics. Other variables such as salinity and ground water will be monitored as well. This NCBN program will be complimented with additional monitoring of nekton populations and salt marsh sediment elevation in order to best characterize the existing and future condition of salt marsh within our parks.



Salt Marsh at Assateague Island National Seashore

Photo by Carl Zimmerman



Northeast Coastal and Barrier Network
Inventory & Monitoring Program
University of Rhode Island
Room 105 Coastal Institute
1 Greenhouse Road
Kingston, RI 02881
<http://science.nature.nps.gov/im/units/ncbn/>

April, 2008