

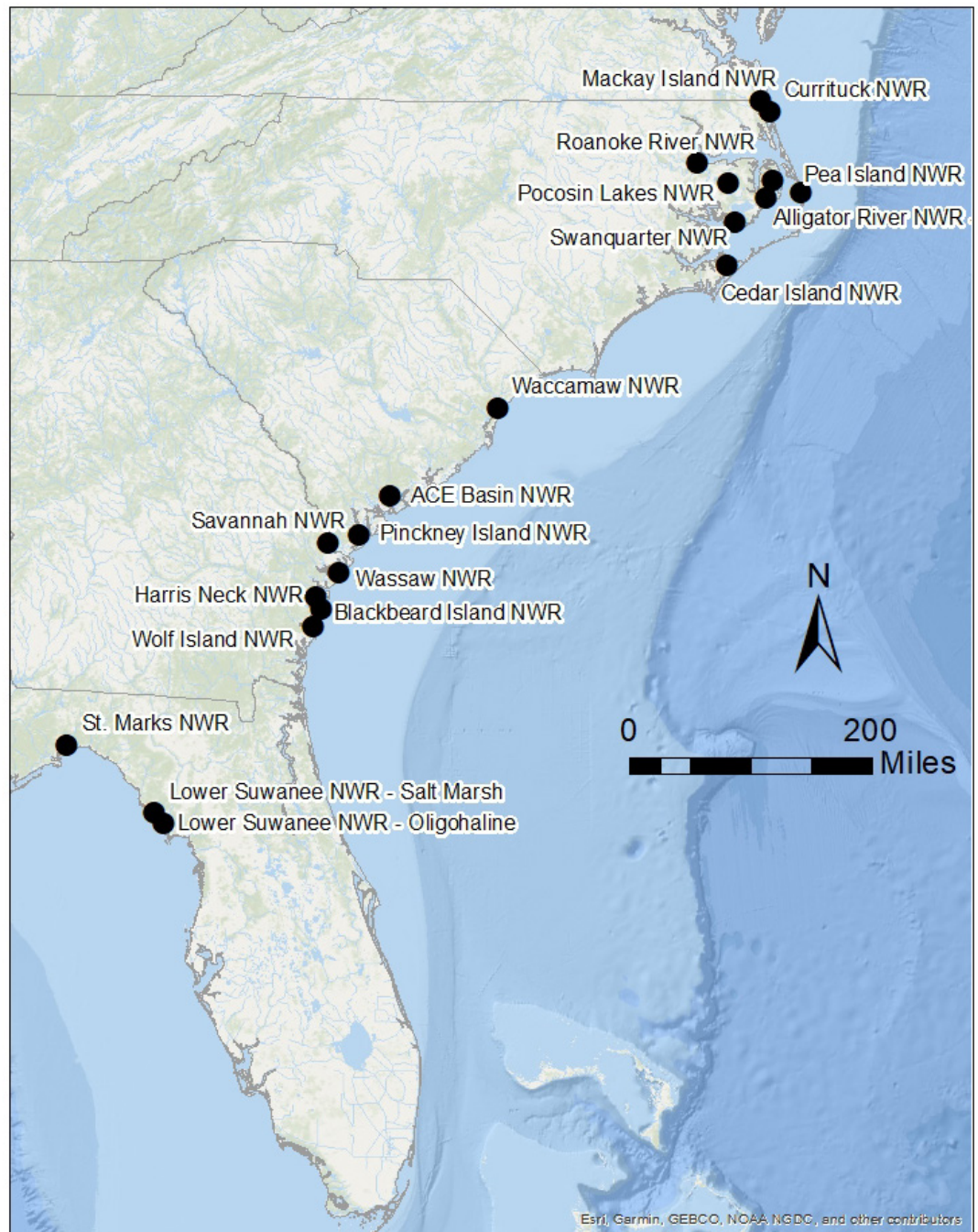


# Coastal Wetland Elevation Monitoring Program

*on National Wildlife Refuges of the South Atlantic Geography*

## What is the Coastal Wetland Elevation Monitoring Program?

The effects of sea level rise to coastal habitats and associated species are a major concern for the National Wildlife Refuges (NWRs) as sea level rise can cause vegetation dieback. The Coastal Wetland Elevation Monitoring Program (ServCat Link: <https://ecos.fws.gov/ServCat/Reference/Profile/34452>) is a network of 20 monitoring sites on 18 NWRs in the southeast designed to assess how wetland habitats in tidal freshwater and saltwater marshes, peatland pocosins, and forested wetlands on NWRs are changing with sea level rise along the Atlantic and Gulf Coasts (Figure 1). This program is just one of many NWR Inventory and Monitoring (I&M) programs across the country following similar protocols to evaluate changes in marsh elevation on NWRs and other conservation lands.



*Location of coastal wetland elevation monitoring stations on NWRs in the South Atlantic Geography*

Esri, Garmin, GEBCO, NOAA NGDC, and other contributors



### Why monitor coastal wetlands?

Marshes and their tidal creeks provide critical habitat for species such as king rail, black rail, least bittern, American coot, ducks, herons, white and brown shrimp, blue crabs, Atlantic croaker, bay anchovy, red drum and Atlantic menhaden. As sea level rise occurs, wetland vegetation diebacks can occur if marsh soil building processes cannot keep pace with sea level rise and local subsidence rates. This can result in wetland loss, habitat conversion, and saltwater intrusion into these ecosystems.

### What information does this monitoring effort provide?

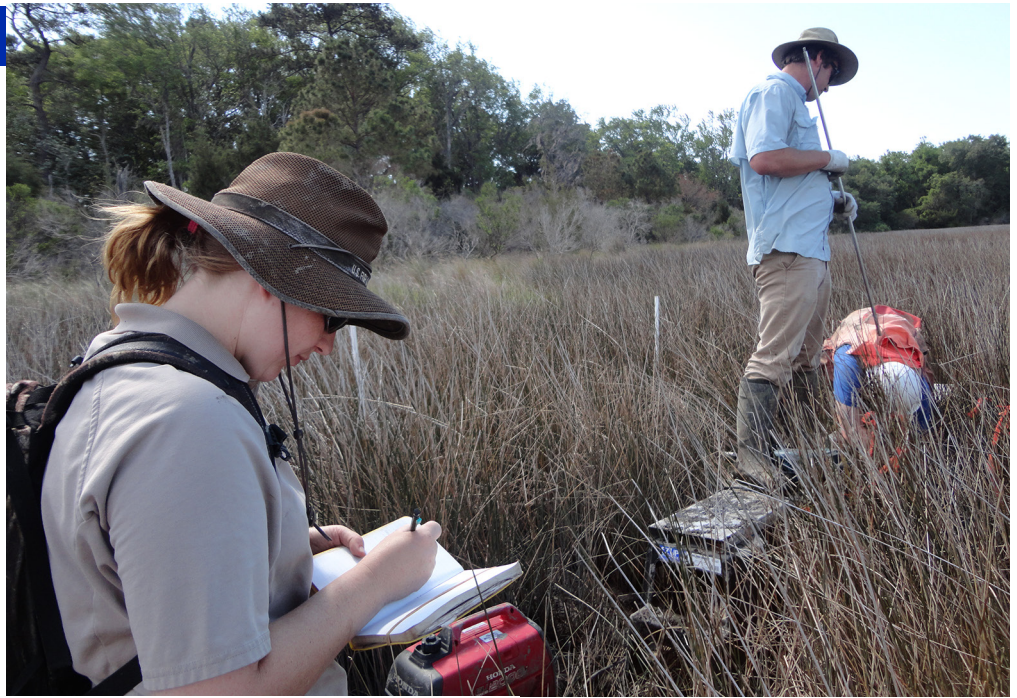
The overarching objective of the I&M Coastal Wetland Elevation Monitoring program is to describe potential effects of sea level rise on priority habitats, determine rates of wetland elevation change, and forecast longevity of these habitats in refuges within the South Atlantic geography. Understanding refuge-specific rates of wetland elevation change and relative sea level rise is important to help refuge managers answer critical questions and adjust management techniques of wetlands towards future conditions.

The program has been monitoring rod surface elevation tables (SET), marker horizon plots, and porewater salinities in the South Atlantic geography since 2012. A series of Refuge specific summaries have been produced as a companion to this program fact sheet to provide a synthesis of all Refuge-specific monitoring to date. These summaries can be accessed in the Service Catalog (ServCat Link: <https://ecos.fws.gov/ServCat/Reference/Profile/34452>).

Additionally, a national database has been developed and all data has been migrated into this database and reviewed. Moving forward, this will allow for improved retrieval and analysis of information collected by the program. In 2019, a regional synthesis report based on all data collected between 2012 and 2018 will be produced.

### For more information, contact

Michelle Moorman, PhD  
Inventory and Monitoring Ecologist  
[michelle\\_moorman@fws.gov](mailto:michelle_moorman@fws.gov)



*Installing and monitoring the SET Benchmarks, credit: USFWS*

