



NATIONAL *fish, wildlife & plants*  
CLIMATE ADAPTATION STRATEGY

Project Title: Using sentinel sites to manage natural resources in a changing climate

Headline Title (2-5 words):

Brief Summary (Abstract): The National Estuarine Research Reserve System (NERRS) is a place-based network of 28 reserves located in estuaries along the nation's coasts and Great Lakes. Each reserve implements standardized monitoring protocols to examine short term variability and long-term changes in estuarine ecosystems. The NERRS Sentinel Sites initiative combines the monitoring, outreach and training capacity at each reserve into networks that address questions of impacts of climate change and anthropogenic stressors on estuarine ecosystems and coastal communities. The current focus of NERR Sentinel Sites is to assess the impacts of sea level change and inundation on tidal wetlands, submerged aquatic vegetation (SAV), and mangroves to inform coastal management. By linking NERRS ecosystem monitoring to geospatial infrastructure of the National Spatial Reference System (NSRS) and National Water Level Observation Network, reserves can inform and develop robust tools such as inundation maps, integrated ecosystem models, and vulnerability assessments to assist coastal managers in adapting to climate change. The NERR Sentinel Sites are a foundational element of the larger NOAA Sentinel Sites Program, which is a partnership between NOAA and other Federal, local and regional partners focused on leveraging networks of environmental observations to address coastal management issues of local and regional concern. At coastal locations—particularly in places with dense populations and bustling maritime activity—the number of regional NOAA assets are particularly dense. These Sentinel Site Cooperatives bring to bear the full force of NOAA coastal and ecosystem monitoring, measurement, and tools in partnership with federal, state, and local efforts to help solve concrete problems that people are facing in coastal communities.

Project Location:

Partners: NOAA and other Federal, local and regional partners

Background:

Project Goals: To assess the impacts of sea level change and inundation on tidal wetlands, submerged aquatic vegetation (SAV), and mangroves to inform coastal management.

Strategy Goals Implemented: 4

Climate Impacts Addressed: sea level rise

Status of Project Implementation (Timeline, Milestones, Next Steps):

Project Outcomes:

Funding Sources:

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