

## NOAA SENTINEL SITE PROGRAM

### Northern Gulf of Mexico Sentinel Site Cooperative

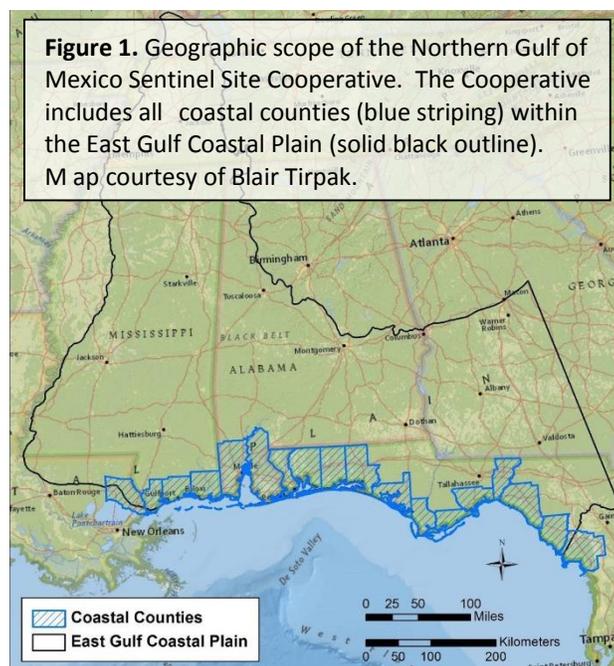
<http://oceanservice.noaa.gov/sentinelsites/gomex.html>

**NOAA Sentinel Site Program:** The NOAA Sentinel Site Program (SSP) utilizes existing assets, programs, and resources in a place-based, issue-driven approach to ask and answer questions of local, regional, and national significance that affect both NOAA Trust Resources and the surrounding communities.

**Mission Statement:** *The Gulf of Mexico Sentinel Site Cooperative will improve integration, translation, and transition of coastal data and research products in the northern Gulf of Mexico for application by regional and local resource managers, scientists, and community leaders for adaptation to sea level rise (SLR) and coastal inundation.*

#### Goals:

- Enhance and expand SLR partnerships to maximize effectiveness of data collection, modeling, and response to this information through increased coordination and collaboration
- Improve science-based capabilities for understanding SLR and its impacts
- Foster science-based decisions to support SLR and coastal inundation planning and adaptation efforts



#### Internal and External Partners

- Florida Fish and Wildlife Conservation Commission
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- Northern Gulf Institute
- Gulf Coast Vulnerability Assessment
- The Nature Conservancy
- Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative (LCC)
- U.S. National Park Service
- NOAA National Centers for Coastal and Ocean Science (NCCOS)
- National Geodetic Survey (NGS)
- Center for Operational Products and Services (CO-OPS)
- National Estuarine Research Reserves (NERRs; Apalachicola, Grand Bay, and Weeks Bay)
- NOAA Gulf Regional Collaboration Team
- Sea Grant (Mississippi-Alabama, Florida)
- Mobile Bay National Estuary Program (NEP)
- NOAA Office for Coastal Management
- Gulf of Mexico Alliance (GOMA)
- Gulf of Mexico Climate Community of Practice
- Academia
  - University of Central Florida
  - University of Florida
  - Florida State University
  - University of South Carolina
  - Louisiana State University
  - University of South Alabama

## Available Assets

The Sentinel Site Cooperative (SSC) is comprised of engaged local, state, and federal stakeholders, including resource managers and coastal planners that collaborate to disseminate information, products, and capabilities through partnerships. These include:

- **Surface Elevation Table (SET) Inventory:** Metadata for SETs in the Cooperative geographic area
- **Inventory of SLR Research and Management Needs Assessments:** Compilation of needs assessments for the cooperative geographic area
- **Coastal Change Hazards Portal:** Information on hazards associated with severe storms, shoreline erosion, and sea level rise
- **Coastal Resilience:** Suite of GIS-based tools to visualize flood risks from SLR and storm surge
- **Sea Level Trends:** View regional trends showing the direction and magnitude of sea level change around the world and access detailed time-series graph and long-term linear trend
- **Dynamic Hydro-Marsh Model:** Couples Marsh Equilibrium Model with ADCIRC to simulate sedimentation and sediment organic matter profiles and interactions with tides, waves, and sea-level.
- **United States Interagency Elevation Inventory:** View nationwide listing of known high-accuracy topographic and bathymetric data, with metadata including direct links or contact information.

## Associated Projects

The Northern Gulf Sentinel Site Cooperative combines and enhances efforts on key climate change projects and programs underway in the Gulf of Mexico Region, including:

- **Ecological Effects of Sea Level Rise (EESLR) in the Northern Gulf of Mexico.** A field observation and modeling project that will provide coastal managers with the knowledge and tools to prepare for the impacts of tides and storm surge from SLR with increased certainty.
- **Gulf Coast Vulnerability Assessment (GCVA).** The GCVA is a collaborative project to enhance conservation and restoration planning by providing an understanding of the effects of SLR
- **Management Outcomes of Sea – Level Rise Modeling through Standardized Sampling of a Key Model Input: Total Suspended Solids (TSS).** The focus of this project is to develop a standardized protocol for collecting TSS data above the marsh plain and to evaluate the utility of these data in improving currently available marsh accretion models.
- **Coastal Wetland Migration Corridors.** This is a collaborative effort by the four Gulf LCCs and USGS to identify future coastal wetland migration corridors under various SLR and urbanization scenarios across the US Gulf coast.
- **Connecting Scientists to Citizens.** The Coastal Training Program Coordinators at the NERRS conducted a series of focus groups with residents and local government staff to learn more about stakeholder needs for SLR information and tools.
- **Will Reintroduction of Fire along Coastal Gradients Promote Lateral Migration of Marsh and Enhance Biodiversity?** The cooperative partner Grand Bay NERR is conducting a study to determine the importance of fire in facilitating the landward migration of marsh plants in response to SLR

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