



NOAA Sentinel Site Program
FY2014 Annual Accomplishments
Report

North Carolina: Cooperative Clearinghouse

NOAA's Southeast and Caribbean Regional Team (SECART) provided funding in October 2013 for the creation of the NC Sentinel Site Cooperative Clearinghouse. The clearinghouse is an online tool that will provide easy access to both past and ongoing research and monitoring projects that relate to the sea level change within the Cooperative's boundaries.

Expanded Management Team

The NCSSC is happy to announce that the Cooperative's Core Management Team is growing. New members include; Dr. John Fear who represents NC Sea Grant and North Carolina Water Resources Research Institute, Brandon Puckett, NC NERR, Rich Bandy, NOAA's NWS, and Troy Alphin, UNCW.

Living Shoreline Projects lead to Shoreline Stabilization Techniques

Two living shoreline demonstration projects within the NCSSC boundary, one in Rachel Carson Reserve and the second on Camp Lejeune Marine Corp Base, have received a lot of press during summer 2014. Volunteers planted marsh grasses as shoreline stabilization techniques in both locations. Over 5,000 plants were placed within the Rachel Carson Reserve and 2,000 plants were placed along salt marshes on the Marine Corp Base.



One of the biggest successes is getting partners to talk to each other with the promise of no new money, working together on issues important to them and to NOAA in an unprecedented level of collaboration.

- SSP Engagement Survey and Analysis
- Woolpert's Support on the Coastal Inundation Dashboard
- Filled Cooperatives #1 gap with Sea Grant Extension Agents

Chesapeake Bay

Successfully hosted a Sentinel Site Cooperative session at the 2013 Biennial Coastal & Estuarine Research Federation (CERF) Conference in San Diego (Nov 3-7). All 5 NOAA Sentinel Site Cooperatives presented, as well as representatives from other, sentinel-like programs. Talks showed examples of how sentinel data have been used to better understand coastal resiliency to sea level rise. Partners published revised sea level predictions for the state of Maryland (Department of Natural Resources), led a stakeholder engagement session for restoration projects at CERF (Chesapeake Research Consortium).

The CBSSC will soon announce selection of up to four new sites that are human built oriented. Currently all Sentinel Site monitoring stations are located in rural or natural habitat oriented locations. The human community, urban or human built locations will enhance the cooperative's modeling ability and assist in coastal community resilience to sea level changes, coastal storm flooding, and subsidence.

Hawaiian Islands:

He'eia Wetlands, O'ahu, Hawaii.

The He'eia wetlands on the eastern side of O'ahu, Hawai'i, a rich and productive area with taro fields, fishponds and clear streams, is becoming a successful example of restoration. Once supporting large populations, the wetlands have changed dramatically due to sedimentation and invasive species. The Kāko'o 'Ōiwi, a local nonprofit organization, is partnered with The Nature Conservancy, The Ko'olaupoko Hawaiian Civic Club, and the NOAA Office for Coastal Management (Pacific Islands) in this effort. The Hawaiian Islands Sentinel Site Cooperative has played a key role, assisting local coordination and getting everybody on the same page.

https://www.youtube.com/watch?v=BRK8kUMv_Po&feature=youtu.be

The Hawaiian Sentinel Site Cooperative took two interns and one Hollings scholar to work at the Cooperatives in the summer of 2014.

GPS elevation work in Kona. Managers address Sea Level Rise

The Hawaiian Sentinel Site Cooperative completed GPS elevation work in the Big Island. The effort involved partners from NGS, NPS, TNC, local NGOs, and NOAA Coastal Storm Program. Its objective was to assist managers and researchers working on anchialine pools.

<http://oos.soest.hawaii.edu/pacioos/projects/hawaiisentinel/projects.php>

San Francisco Bay:

“Lifting the Fog: Bringing Clarity to Shoreline Change Models and Sea Level Rise Tools”, a workshop for tool and model developers.

The Cooperative partnered with TNC, Tijuana River NERR, and Coravai LLC to hold a workshop on May 22, 2014 in Oakland, CA with the developers of prominent SLR models and tools in California. Participants at the event began to develop a shared communication framework that will help end-users (e.g., local decision-makers) navigate the different SLR planning tools and data available to them. With a plethora of sea level rise tools in development across the state and public discussions of SLR becoming more frequent, clear and consistent messages about tools are more important than ever. The Cooperative and its partners convened sea-level rise modelers, tool developers, and end users to develop communication strategies about tools and their use in adaptation planning. A report was produced summarizing the findings from discussion, and identifying future communication products to be developed.

Our Coast, Our Future and Adaptation to SLR at China Camp (SF Bay NERR)

Cooperative members worked with USGS and others to scope a project using the Our Coast, Our Future SLR scenario-planning tool specifically, the proposed analysis considered future coastal flooding scenarios to determine the economic feasibility of mitigation options to reconnect 2 lobes of historic tidal marsh partially blocked by a segment of county road at China Camp State Park. Initial modeling results have been completed and are currently in review by the project team.

<http://data.prbo.org/apps/ocof/>

Northern Gulf of Mexico:

Expanding partnerships on the Northern Gulf of Mexico Sentinel Site Cooperative Management Team

The Cooperative welcomed three new members from the Department of Interior to the Management Team in FY14, now have representation from U.S. Fish and Wildlife Service and U.S. Geological Survey on our team.

Leveraging resources to address gaps identified by the Northern Gulf of Mexico Sentinel Site Cooperative

The Gulf of Mexico Cooperative is engaged in three new projects that were awarded to partners in FY14. These projects address sea level rise gaps that have been identified as important to our region. Below is a summary of two:

1. *Wetland Migration Corridor Project*-Research dollars from USFWS and USGS are being leveraged to address the need to identify barriers to landward marsh migration from urbanization under a variety of sea-level rise and urbanization scenarios. The Sentinel Site Cooperative Management Team is represented on the technical advisory team for this project.
2. *Connecting Scientists to Citizens*-The Coastal Training Program Coordinators at Grand Bay, Weeks, and Apalachicola NERR received funds from the GOMA to conduct a series of focus groups with residents and local government staff. SLR visualization tools from Cooperative partners were shared, and conversations were designed to learn more about each audience's needs for sea level rise information and tools. Information collected during the focus groups is being used to inform tools emerging from the Ecological Effects of Sea Level Rise (EESLR) project, and it has been shared with NOAA to inform planning for the Sea Level Rise Viewer.

EESLR in the Northern Gulf of Mexico

The Management Team for the EESLR project held its 4th annual meeting in Apalachicola, FL to share results from the project and plans for new tools and products. Hydrodynamic and predictive modeling results from this project have been published in 2 journals, *Natural Hazards* and *Geophysical Research Letters*.

Expanding the SET inventory for the Gulf region

The Gulf of Mexico Cooperative is leveraging the connections of Management Team members and the Gulf of Mexico Alliance to expand the SET inventory that was completed for the Cooperative in FY14 to all five Gulf states.



Sea Grant Coordinators

Five SeaGrant Extension Agents will be serving half time for two years as Sentinel Site Cooperative Coordinators, filling the top gaps identified by each of the Cooperatives. Having a dedicated individual that will expand partnerships, assist in filling gaps, sharing the work that the Cooperative is working on has been a struggle in the past.



PacIOOS Voyager

With the dedicated help of PacIOOS, the Hawaii Cooperative has an interactive map interface for visualizing and downloading oceanographic observations, forecasts, and other geospatial data and information related to the marine environment.



This is only a snapshot of what the Cooperatives have been up to. To find out more visit:

<http://oceanservice.noaa.gov/sentinel/sites/>



Partners

National Ocean Atmospheric Administration
East Carolina University
U.S. Park Service
Virginia Institute of Marine Science
U.S. Integrated Ocean Observations Systems
The Nature Conservancy
Sea Grant
Chesapeake Bay Foundation
City of Oakland
Maryland Department of Natural Resources
U.S. Environmental Protection Agency
Bay Area Rapid Transit
Duke University
Christopher Newport University
Old Dominion University
Florida Department of Environmental Protection
Hawaii Institute of Marine Biology
Bay Area Ecosystem Climate Change Consortium
Smithsonian Environmental Research Center
U.S. Fish and Wildlife Service
U.S. Army Corps of Engineers
University of Maryland
U.S. Navy
Department of Defense
Gulf of Mexico Alliance
Hawaii Department of Aquatic Resources
And many more...



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