



Sentinel Site Quarterly

*North Carolina
Sentinel Site Cooperative*

Happy Spring from the N.C. Sentinel Site Cooperative!

The North Carolina Sentinel Site Cooperative (NCSSC) was established in 2012 as part of a NOAA-wide effort to provide coastal communities and resource managers with information on the potential impacts of sea-level rise on coastal habitats.

For more information about anything in this newsletter, contact [Whitney Jenkins](#).

Be Part of the Quarterly!



This newsletter was a priority item that came out of the 2013 [Research and Monitoring Coordination workshop](#) as a way to communicate and collaborate among Sentinel Site partners in North Carolina.

Have an interesting project related to the Cooperative? [Let us know!](#)

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New Database Facilitates Analysis of Surface Elevation Trends in Coastal Wetlands

From our partners at The National Centers for Coastal and Ocean Science (NCCOS), research office of the NOAA National Ocean Service:

Predicting future patterns of coastal inundation related to sea level rise requires knowledge of changes in sea level *and* in elevation of land surface. Surface elevation tables (SETs) are mechanical devices which are permanently installed in wetlands to allow scientists to measure small changes in surface elevation precisely and accurately. SETs have been installed in coastal wetlands across the U.S. by a variety of academic, governmental, and private entities, but with little coordination of efforts among these various groups and no national database of SETs.



Researcher using Surface Elevation Table to monitor elevation changes in a North Carolina salt marsh.

NCCOS researchers Carolyn Currin and Jenny Davis, in support of the NOAA Sentinel Site Program, recently conducted an inventory of all SETs installed within each of the five NOAA Sentinel Sites (San Francisco Bay, Chesapeake Bay, Central Coast North Carolina, Hawaii and the Northern Gulf of Mexico). The data collected include locations of SETs as well as information about the ecology and hydrology at each location. These data have been compiled into a single database that can be used to identify gaps in spatial coverage and to facilitate coordinated monitoring efforts. Such coordination of efforts will allow for a comprehensive analysis of surface elevation trends in each region. Coastal resource managers can use these regional trends to determine areas

most vulnerable to sea level rise and support efforts to predict and mitigate impacts of climate change on coastal habitats. A summary report is available on the NOAA Sentinel Site Program website: [NOAA Sentinel Site Program - SET Inventory](#).

For more information, contact [Carolyn Currin](#).

From our Sister Cooperative in the Northern Gulf of Mexico -

Connecting Scientists to Citizens:

Making Better Decisions to Address the Effects of Sea-Level Rise

Connecting Scientists to Citizens: Making Better Decisions to Address the Effects of Sea-Level Rise will benefit communities along the north-central Gulf of Mexico by linking decision-makers to locally relevant sea-level rise science and tools to enhance coastal management decisions.



Partners in this effort include the Weeks Bay, Grand Bay, and Apalachicola National Estuarine Research Reserve's Coastal Training Programs (CTPs) as well as the Alabama Coastal Foundation (ACF). Through this effort, the partners will engage focus groups to examine needs for sea-level rise science and tools. This information will be used to connect audiences with existing tools, and it will inform tool development associated with the Gulf Ecological Effects of Sea Level Rise project. Focus groups will be followed by workshops designed to present a suite of sea-level rise tools that meet audience needs and provide an opportunity for hands-on training in their use.

Stay tuned for the next Issue of the Quarterly for an update on the Gulf Ecological Effects of Sea Level Rise project.

Thanks to [Marian Hanisko](#), with NOAA's Gulf Coast Services Center, and [David Kidwell](#), with NOAA's Center for Sponsored Coastal Ocean Research, for this article.

Still time to register!

2014 North Carolina Sea Grant Research Symposium

The **2014 North Carolina Sea Grant Research Symposium: Investments and Opportunities** will be April 16 at North Carolina State University's McKimmon Center in Raleigh.



"We are excited to highlight examples of a select set of research results and associated impacts from investments by North Carolina Sea Grant over the past decade. With our partners, we also will identify shifting and emerging needs in coastal science," notes Executive Director Susan White.

"Our audience will be a mix of researchers, resource managers, elected and appointed officials, and other community leaders with an interest in the current state of coastal science, as well as individuals looking to establish strategic partnerships to achieve a variety of desirable goals related to our coastal resources."

The free event will highlight the program's wide range of research and extension efforts in:

- *Healthy Coastal Ecosystems*
- *Sustainable Coastal Development*
- *Safe and Sustainable Seafood Supply*
- *Hazard Resilience in Coastal Communities*

White is working with a steering committee of marine research leaders and other partners. "We could fill several days," she notes, "but the panels will highlight topics and put impacts into perspective."

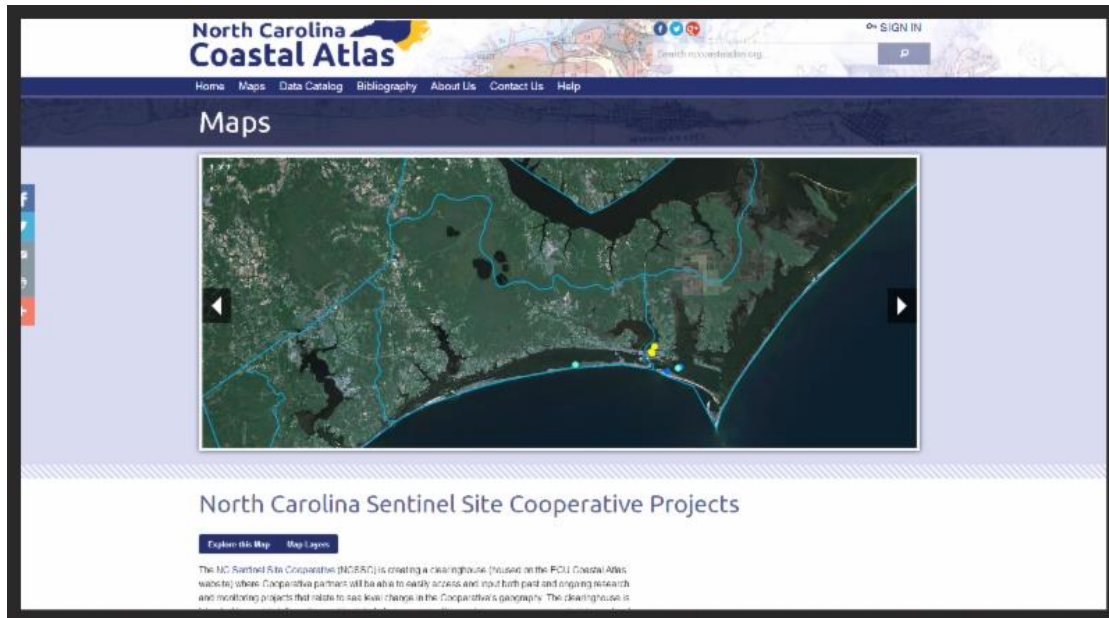
Presentations will include past and future effects of hurricanes, as well as public understanding of coastal storm warnings and other hazards. Seafood topics will include finfish tagging, oyster aquaculture and local catch marketing. Water quality, ecosystem services and effects of long-term beach nourishment are also on the agenda.

Symposium participants will assist Sea Grant to identify strategic new arenas for applied-science investment and collaborative partnerships to address coastal needs.

While the event is free, and includes lunch, registration is needed by **March 31**. Please visit www.ncseagrant.org/ncsgday2014 for additional information, including a hotel group rate.

Clearinghouse Update

The N.C. Sentinel Site Cooperative is partnering with the North Carolina Coastal Atlas at East Carolina University (ECU) to develop a clearinghouse of research projects related to sea-level rise and inundation in the Cooperative's geography. The clearinghouse is intended as a mechanism to foster collaboration among researchers and organizations within the Cooperative's boundary to increase the understanding of sea-level rise impacts on coastal ecosystems.



This past winter, members of the Cooperative were asked to complete a survey that asked how they would like to see the clearinghouse structured, and what data would be useful. The survey was completed by Cooperative members from government, academia, and non-profit organizations. The results of the survey will inform the creation of the clearinghouse as it is developed in conjunction with the Coastal Atlas at ECU.

The Cooperative members that completed the survey overwhelmingly desired both a bibliography and map of projects related to sea-level rise in our Cooperative as the format for the clearinghouse. These members want a broad array of project types included in the clearinghouse, including natural and social sciences, management, communication, and education projects. Survey respondents also indicated that it is important to include a broad array of information about the projects in the clearinghouse, including geographic location, dates of the project, abstract, links to peer reviewed publications, and contact information. Less than half of those surveyed indicated that it is important for the clearinghouse to house the actual data. Moreover, most people agreed that they would list their contact information for the purpose of data sharing, and that most of their data is available for dissemination, or could be requested from the researcher.

The next steps for the clearinghouse include a user experience study being

conducted by the Coastal Atlas, as well as a test case of projects in preparation for allowing all researchers to add their projects to the clearinghouse. **Interested in being one of the test case projects? Let us know!**

You can view the map of [Cooperative boundary on the Coastal Atlas website](#).

For more information contact [Sarah Spiegler](#).

The [NOAA Sentinel Site Program](#) leverages existing research and monitoring resources to ensure resilient coastal communities and ecosystems in the face of changing conditions. The program's place-based approach focuses on issues of local, regional, and national significance that impact habitats and species managed by NOAA as well as surrounding coastal communities.