



NOAA Sentinel Site Program Brown Bag Seminar February 5, 2013





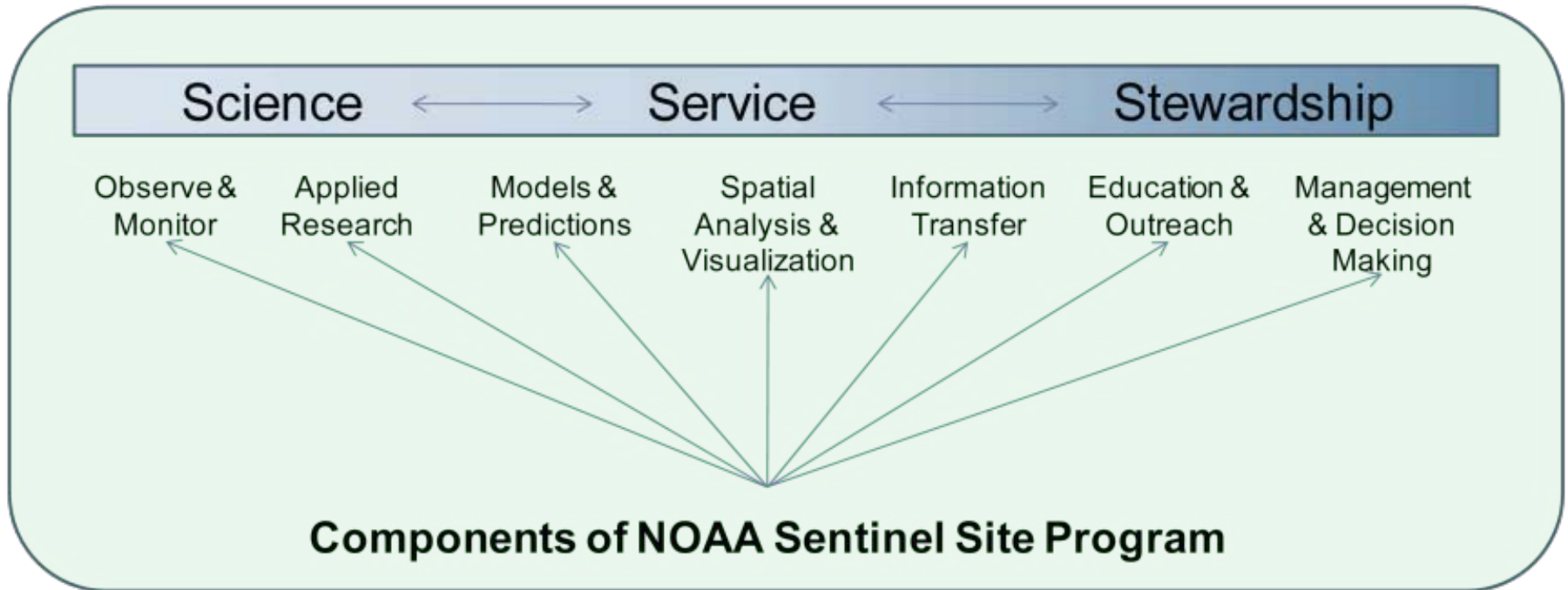
Outline

- Overview
- History
- Connections to Other NOAA/Federal Initiatives
- Accomplishments
- Next Steps
- The Cooperatives
- Questions and Discussion





Overview: Science to Stewardship Continuum



The NOAA Sentinel Site Program provides 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**. The program will leverage existing assets and resources and inform planning.



Overview: Concept

- Sentinel Site concept
 - Leverages existing investments in places (e.g. Sanctuaries and NERRS)
 - Engages managers from the beginning
 - Coordinates/informs planning and execution
 - Focuses on issues - initially climate change impacts, specifically sea level change and coastal inundation
 - Fosters innovation
- Assumptions
 - Limited new resources
 - Gaps filled, to the extent possible, by refocusing of resources by participating programs





Overview: Why Sea Level Change?

- Sea level change impacts are far reaching (e.g., coastal inundation and diminished ecosystem services)
- Significant impacts on the people and economies of coastal communities that are associated with NOAA protected areas
- Coastal decisions-makers need local information to prepare and adapt to anticipated changes

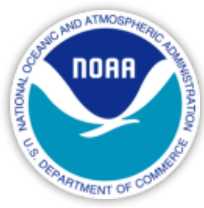




Overview: Management Outcomes

- NOAA Trust Resources better protected
- Coastal communities more resilient and better prepared for impacts of sea level change
- More effective planning at the local, regional, and national level
- Transfer of best practices information between Cooperatives
- Extrapolation of results to surrounding areas





History

- Highest priority NOS budget alternative FY 2009 and FY 2010
- Dr. Lubchenco's attention led to request: "Present a strategy for Sentinel Sites and their locations through time"
- Working group formed (NOS, OAR, NWS)
 - Concept matured and defined
 - Components identified
 - Criteria for evaluation of Sentinel Site Cooperatives established





History

- Engaged Regional Teams, Regional Climate Services Directors, ONMS and NERRS Research Coordinators with request for narratives that describe how a Sentinel Site Cooperative might work in their region
- Decisional Criteria
 - Self-scoring reviewed for consistency
 - Inclusion of Cooperatives at multiple geographic scales and locations





History: SSP Criteria

Scientific Rationale and Ecological Significance

- High likelihood of detecting change
- Key physical and biological attributes representative of the larger ecosystem
- High ecological value (often characterized by biological hotspots, and presence of key species related to ecosystem function that would be impacted)

Practicality and Leveraging

- Documented local stakeholder need with interested and engaged management community
- Existing monitoring/observing infrastructure, data availability and support for continuity of activities and investments
- Existing capabilities for data analysis, synthesis and translation
- Existing NOAA and non-NOAA scientific research activities / capacities that complement and strengthen the thematic goals, objectives and priorities of the SSP

Relevance to Program Objectives and Responsiveness to Management Actions

- Ability of ecosystem to adapt to change and maintain or enhance services provided
- Likelihood of SSP information being used to reduce vulnerabilities of ecosystems and communities
- Ability to document changes in local populations and economies
- Utility of lessons learned to other areas with comparable governance and issues



History

- Five (of 11 submissions) recommended for initial implementation
- NOAA Sentinel Site Strategy document developed
- NOAA Executive Panel approval
 - 1) Strategy for implementation
 - 2) Proposed role and structure of a DAA-level Steering Committee
 - 3) Coordination Committee made up of AA/DAA appointees to provide day-to-day guidance and coordination
 - Formation of SSP Coordination Committee (Dec 2011)





History:

Coordination Committee

Representatives (AA and DAA appointees)

- Jim Sullivan (Chair)
- Allison Allen (NOS)
- *Michelle Harmon (NOS; Northern GoM)*
- Ginger Hinchcliff (NOS)
- *Laurie McGilvray (NOS; Chesapeake Bay)*
- Roger Griffis (NMFS)
- Dan Farrow (NMFS)
- *Nicole Kurkowski (NWS; San Francisco Bay)*
- *Tracy Rouleau (PPI; Hawaiian Islands)*
- *Karsten Shein (NESDIS; North Carolina)*
- Jen Faught (OAR)
- Amanda Hunter (NOS)

**Names in italics are Coordination Committee POCs to a Cooperative as indicated*



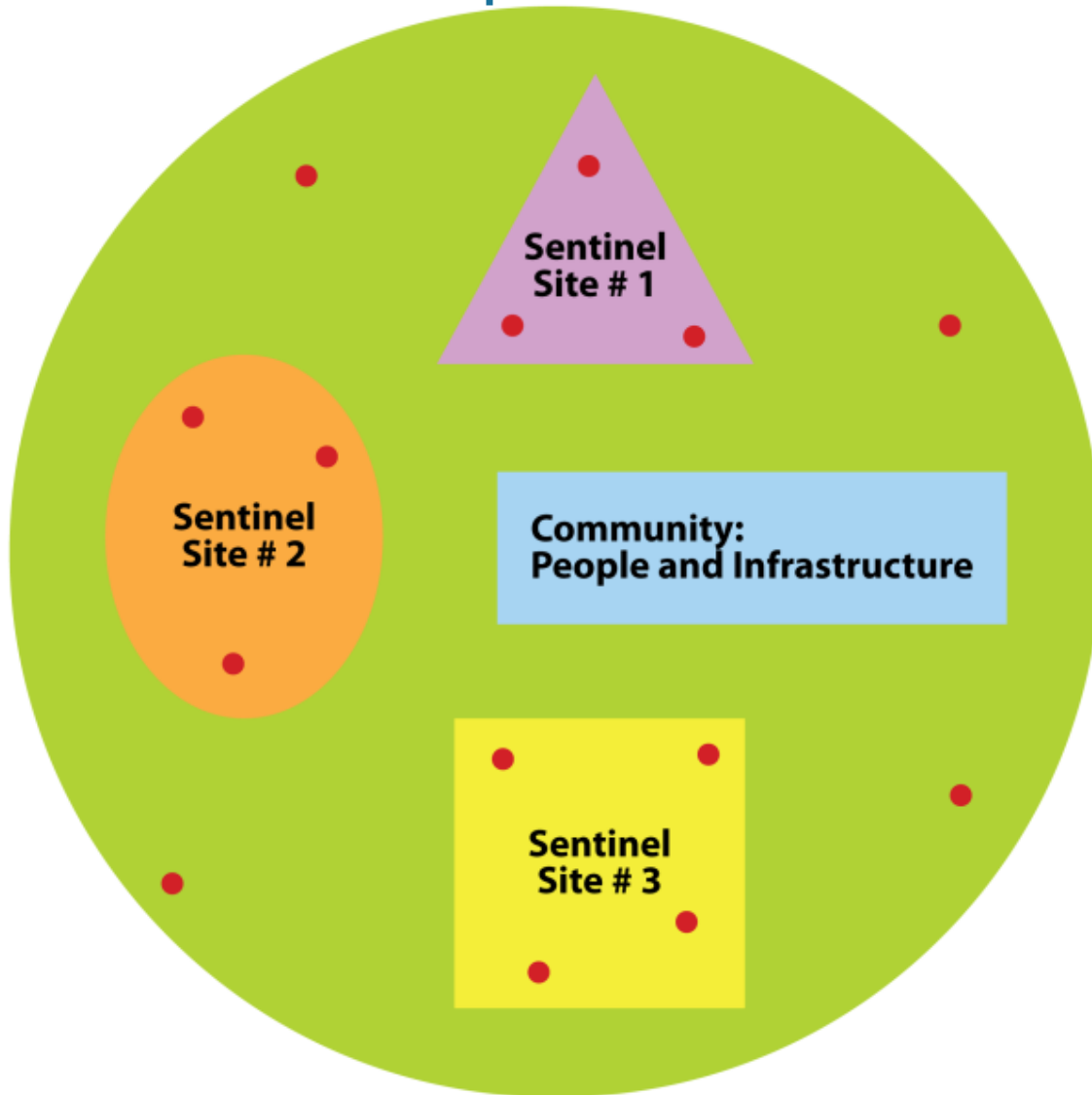


Sentinel Site Cooperatives





What is a NOAA Sentinel Site Cooperative?



- Sentinel Site Cooperative**
Spatial extent within which the lessons learned are relevant and the socioeconomic impacts are measurable
- Community**
Social and economic systems associated with local communities
- Sentinel Site**
Managed, protected areas (including, but not limited to, NERR and NMS sites)
- Sentinel Station**
Instrument and measurement platforms



Who is Involved?

- NOAA
- Coordination Committee is comprised of all 5 Line Offices and PPI
- Participants include:
 - NOS: OCRM, ONMS, CO-OPS, NGS, CSC
 - NWS: OST
 - OAR: CPO
 - NESDIS: NCDC
 - NMFS: OHC, OST
 - NOAA Regional Teams
- States, Academia, NGOs





Connections to other NOAA Initiatives

- NERRS Sentinel Sites
- Habitat Blueprint
- AA Climate Board Societal Challenges
 - One of four focus areas is **Coastal Inundation**
- Ecological Forecasting Roadmap
- National Ocean Policy



Connections to other Federal Initiatives

- Department of Interior's Landscape Conservation Cooperatives
 - Current connections to Sentinel Site Cooperatives include Hawaii and the Northern Gulf of Mexico
 - In the process of developing national level engagement



Accomplishments





Accomplishments

- National Workshop held March 5-6th 2012
 - 35 attendees representing 4 NOAA LOs and 8 agencies/NGOs
- Draft Implementation Plans for each Cooperative developed (Mar-Sept)
 - Introduction with mission/vision statement
 - Goals and Objectives
 - Key Players
 - Resource/Gap Identification
 - Actions to Achieve Goals, Milestones, and Next Steps
 - Evaluation Process





Accomplishments

Home > Sentinel Site Program

NOAA Sentinel Site Program

Sentinel Site 'Cooperatives' Corral NOAA Resources to Tackle Coastal Problems

To date, there are five NOAA Sentinel Sites. Select a marker on the map to learn more about each location. NOAA Sentinel Sites will provide tools and resources that people in coastal areas can use to adapt to a rapidly changing environment. Send us an email if you're interested in learning more about the program.

WHAT ARE SENTINEL SITES? FIRST UP: SEA LEVEL CHANGE TYING IT ALL TOGETHER LINKS AND DOWNLOADS

Have you heard the expression that the 'whole is greater than the sum of its parts?' That's the idea behind NOAA's new **Sentinel Sites Cooperative Program**. Here's how it works.

NOAA has coastal monitoring and data collection tools, sanctuaries, estuarine reserves, marine protected areas, and other assets located in coastal areas around the nation. These places and equipment serve a variety of functions, such as protecting natural resources, measuring tides, and establishing accurate height measurements. At coastal locations—particularly in places with dense populations and bustling maritime activity—the number of regional NOAA assets are particularly dense and bustling, too!

The NOAA Sentinel Site Program capitalizes on these activities, tying together existing NOAA tools and services in select areas into regional **'Cooperatives.'** These 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.

Sentinel Sites bring to bear the full force of NOAA data monitoring and measurement to help solve concrete problems that people are facing in local communities.

such as coastal personnel; members of economic development boards.

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



Next Steps





Common Goals & Objectives in Implementation Plans

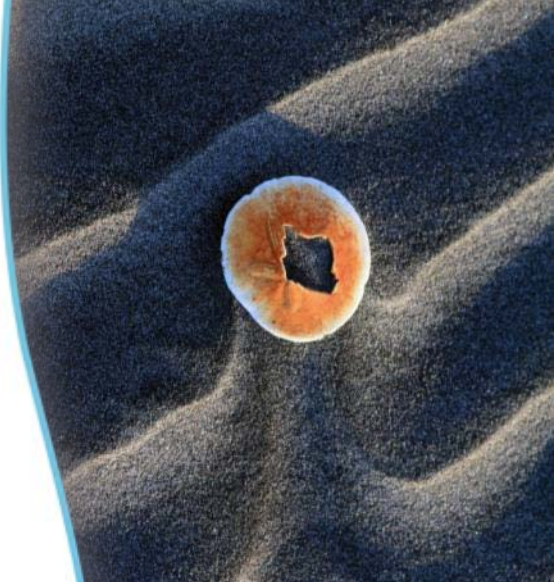
- Enhanced partnerships and collaboration
- Community access to observations, models, and state-of-the-art tools
- Know and understand vulnerabilities to sea level change
- Foster science-based decision support
- Prepare for and take actions to improve resilience to sea level change

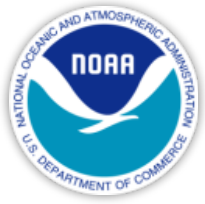




Next Steps

- Cooperative IPs finalized (Feb 8)
- Initial gaps analysis for each Cooperative will be completed
- Programmatic Implementation Plan will be developed (mid-Feb)
- Evaluation and Performance Metrics will be developed
- Implementation of plans





Next Steps

- Develop plans for filling priority gaps at the Cooperatives
- Assist in finding staffing assistance for Cooperatives through:
 - NOAA LCDP,
Hollings/Foster/Knauss/Presidential
Management Fellows, etc
- Meetings with Program Offices to discuss gaps





The Cooperatives





The Diversity of the Sentinel Site Cooperatives

	Urbanized Bay	Large Estuary	Barrier Islands	Archipelago	Rocky Coastline	Marshes	Coral Reefs
Chesapeake Bay	✓	✓				✓	
North Carolina		✓	✓			✓	
Northern Gulf of Mexico	✓		✓			✓	
Hawaiian Islands				✓	✓		✓
San Francisco Bay Area	✓	✓			✓		



Chesapeake Bay Cooperative

- Landscape Type: Large estuary
- The Chesapeake Bay area, located in NOAA's Northeast Region, showcases the benefit of integrating existing sentinel stations and sentinel sites into NOAA's Sentinel Site Program. The Chesapeake Bay Sentinel Site Cooperative functions within a coherent geography providing integrated observations across a host of environmental monitoring programs.





Who is Involved?

NOAA:

NCCOS, OCS, CSC, OCRM, OR&R-ERD, NERRS, NOAA Chesapeake Bay Office, NESDIS; CoastWatch, CO-OPS

Other Agencies:

- U.S. Fish and Wildlife Service,
- National Park Service,
- U.S. Geological Survey,
- U.S. Army Corps of Engineers,
- State of Maryland,
- Commonwealth of Virginia

Academia:

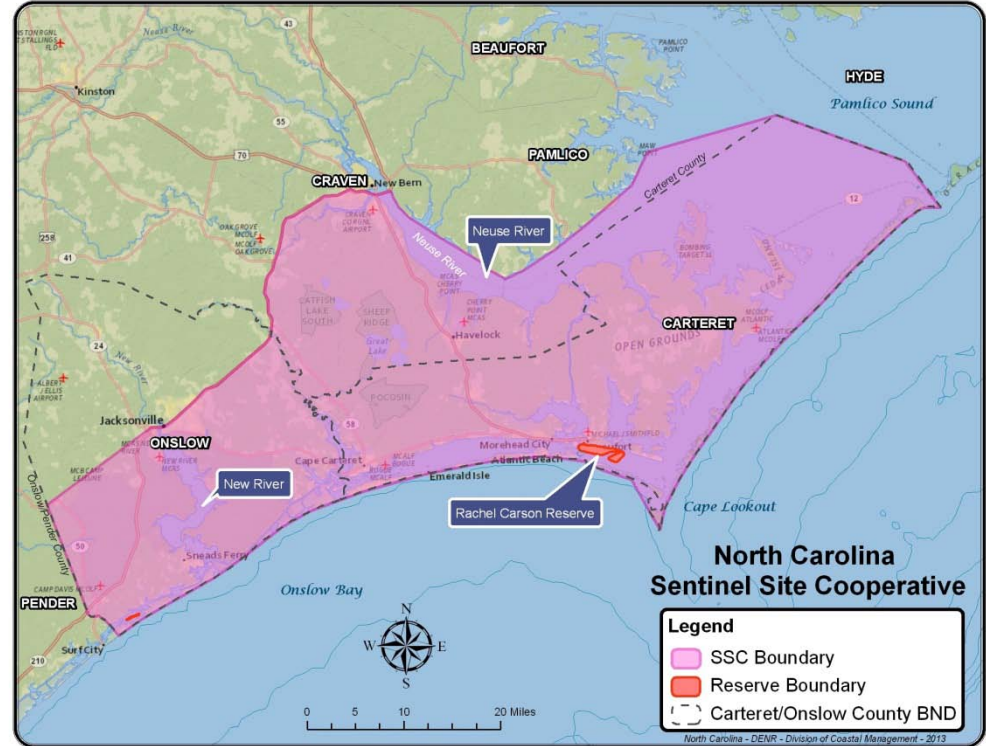
- University of Maryland,
- Virginia Institute of Marine Science
- Old Dominion University





North Carolina Cooperative

- Landscape Type: Barrier island
- Area Encompasses: Central NC coast, near the multi-partner NOAA laboratory in Beaufort, NC





Who Is Involved?

NOAA:

NESDIS-NCDC, OCRM-NERRS, CO-OPS, NCCOS, NGS, NMFS

Other Agencies:

- Department of Defense
- North Carolina Aquarium
- NC Department of Environment & Natural Resource
- North Carolina Division of Coastal Management
- North Carolina Maritime Museum
- National Park Service
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- Albemarle-Pamlico National Estuary Program
- Croatan National Forest

Academia:

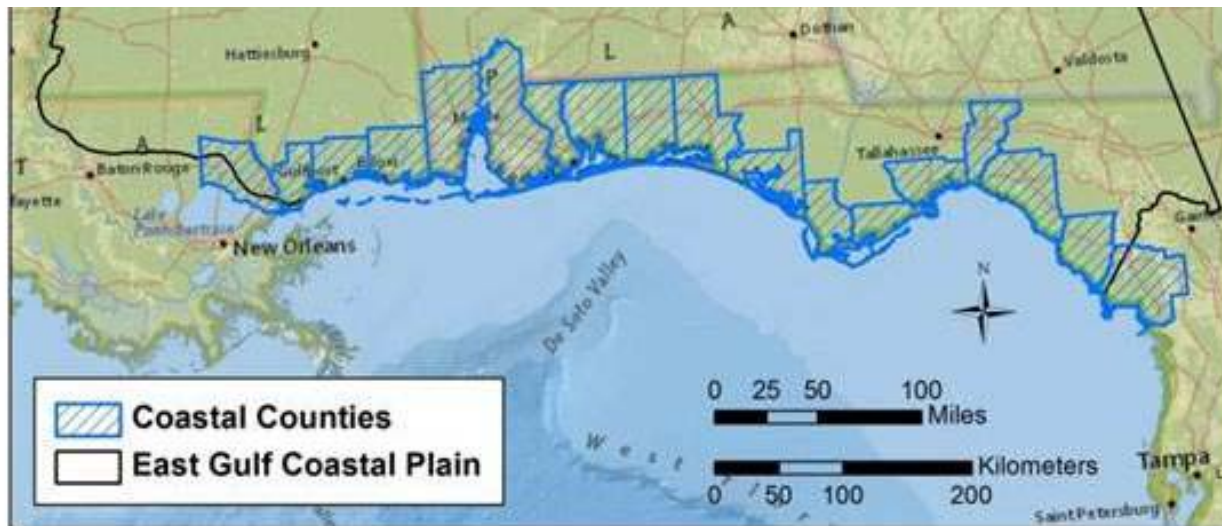
- Duke Marine Lab





Northern Gulf of Mexico Cooperative

- Landscape Type: Salt marsh, barrier island
- Area Encompasses: coastline & barrier islands from the Suwannee River, FL west to the MS/LA state line.





Who is Involved?

NOAA:

NCCOS, NGS, CSC, CO-OPS, OCRM-NERRS
(Apalachicola, Grand Bay, and Weeks Bay),
SeaGrant (MS, AL, FL)

Other Partners:

- Gulf of Mexico Alliance
- Northwest Florida Water Management District
- County planners (Wakulla, Escambia, Bay)
- Mobile Bay National Estuary Program (NEP)

Academia:

- University of Central Florida
- University of Florida
- Florida State University
- University of South Carolina





San Francisco Bay & Outer Coast

- Landscape Type:
- Area Encompasses: SF Bay and Outer Coast comprise, includes Gulf of Farallones and Cordell Bank NMS & the San Francisco Bay NERR.





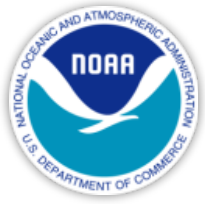
Who is Involved?

NOAA: OAR- CPO, CSC, ONMS (Cordell Bank, Gulf of the Farallones), NGS, OCS, OCRM-NERRS (San Francisco Bay), NMFS-OHC, SW Restoration Center, SW Science Center, NWS,

Other Agencies:

- Bay Conservation and Development Commission
- Bay Area Ecosystems Climate Change Consortium
- Point Reyes Bird Observatory (PRBO) Conservation Science
- National Park Service
- U.S. Geological Survey
- U.S. Fish and Wildlife Service





Hawaiian Islands Cooperative

- Landscape Type: Island Chain
- Encompasses: Midway and French Frigate Shoals in the Papahānaumokuākea Marine National Monument in the Northwestern Hawaiian Islands (NWHI), He'eia Wetland Restoration project (He'eia) on the island of O'ahu, and Kona Coast on the Big Island of Hawai'i.





Who is Involved?

NOAA:

OCRM, ONMS, CSC-PSC, NGS, IOOS, CO-OPS, NMFS-PIFSC

Other Agencies:

- U.S. Fish and Wildlife Service,
- U.S. Geological Survey
- U.S. Army Corps of Engineers
- State of Hawaii
- The Nature Conservancy
- Koolaupoko Hawaiian Civic Club
- Bishop Museum

Academia:

- University of Hawaii





Questions and Discussion





Back-up Slides

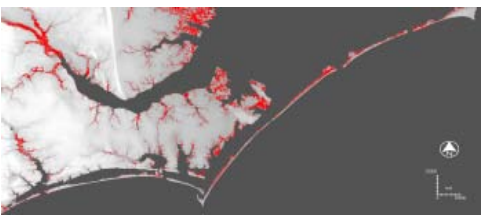


NOAA Sentinel Program: Local Responses to Global Change

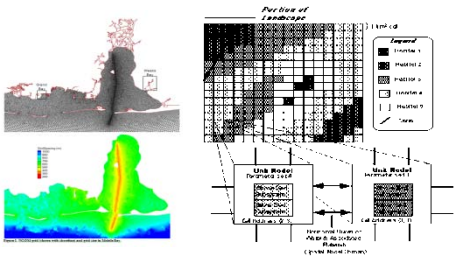
A cross-NOAA suite of services for understanding and responding to sea level change impacts on coastal ecosystems and surrounding communities.



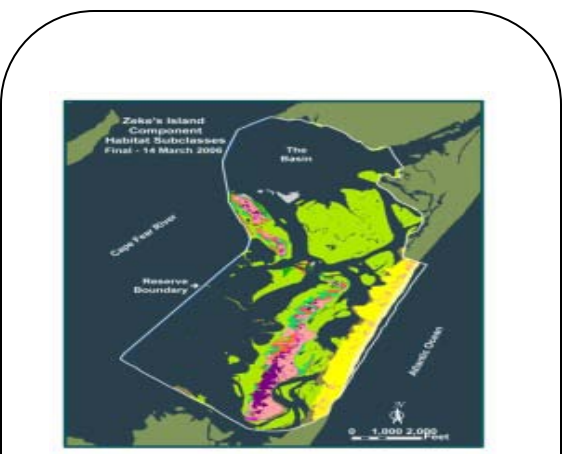
Observe & Monitor



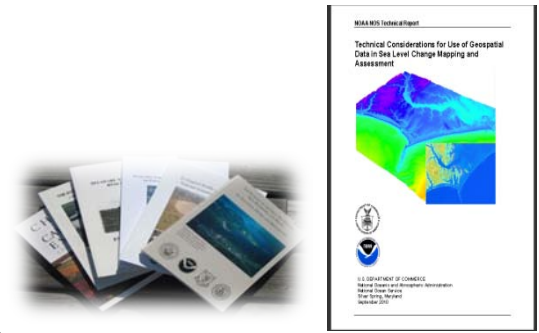
Applied Research



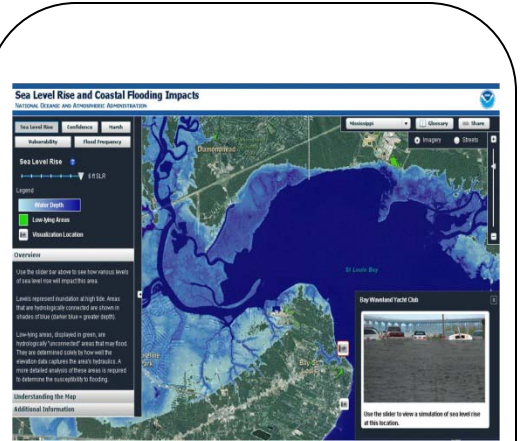
Models & Predictions



Spatial Analysis & Visualization



Information Transfer



Management & Decision Making



Education & Outreach

Science

Service

Stewardship