NOAA IOOS Program Office
Regional Status Assessment

The SouthEast Coastal Ocean Observing Regional Association (SECOORA)

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Capt. Parker Lumpkin (USN, ret.) – SECOORA Interim Executive Director

Discussion Outline

- Developing the “RA”
- Organizing Process
- Activities to Date
- Status of SECOORA
- The Future and Ongoing Issues

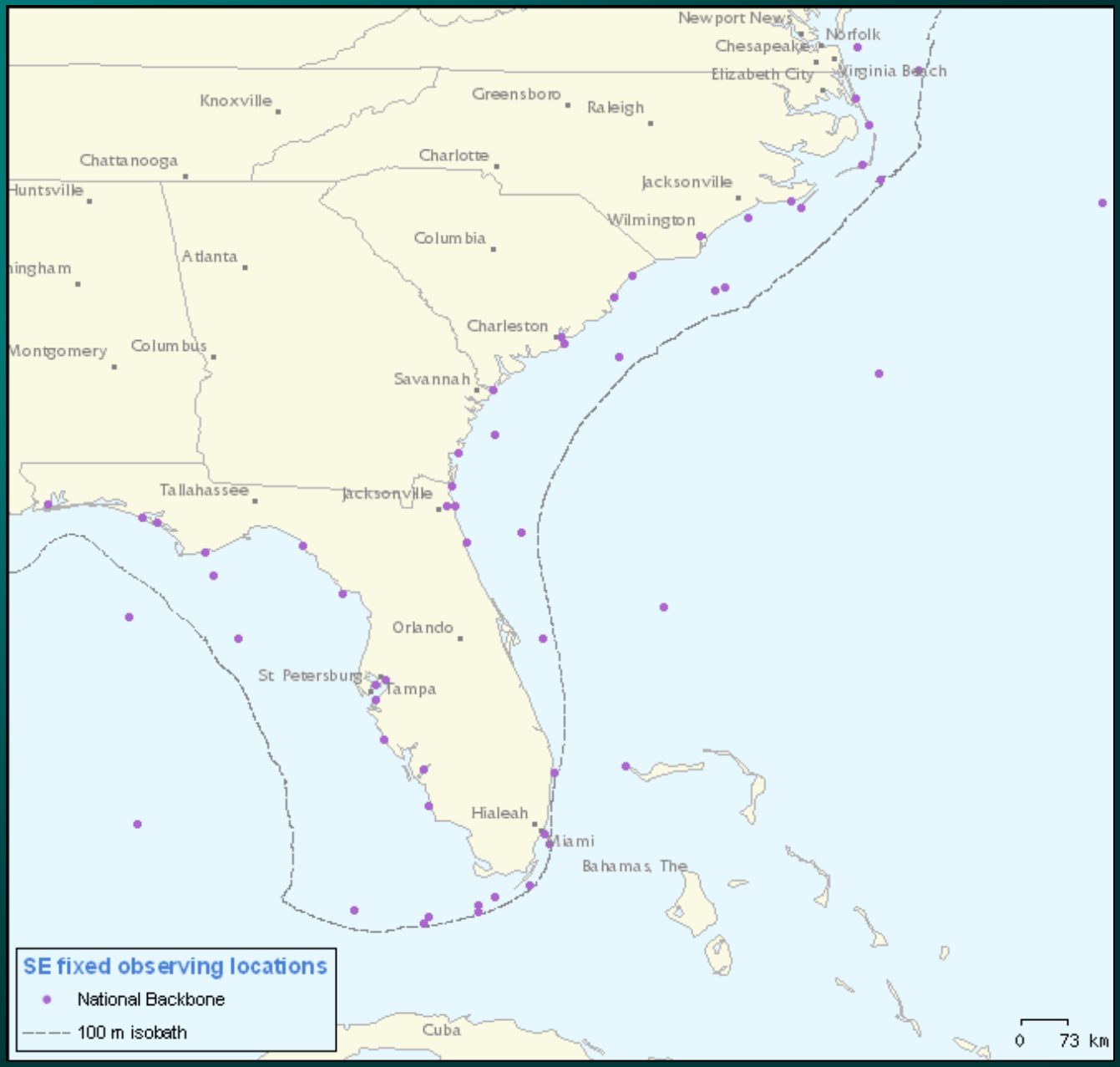
Developing the Regional Association

Partnership Building – A Work in Progress

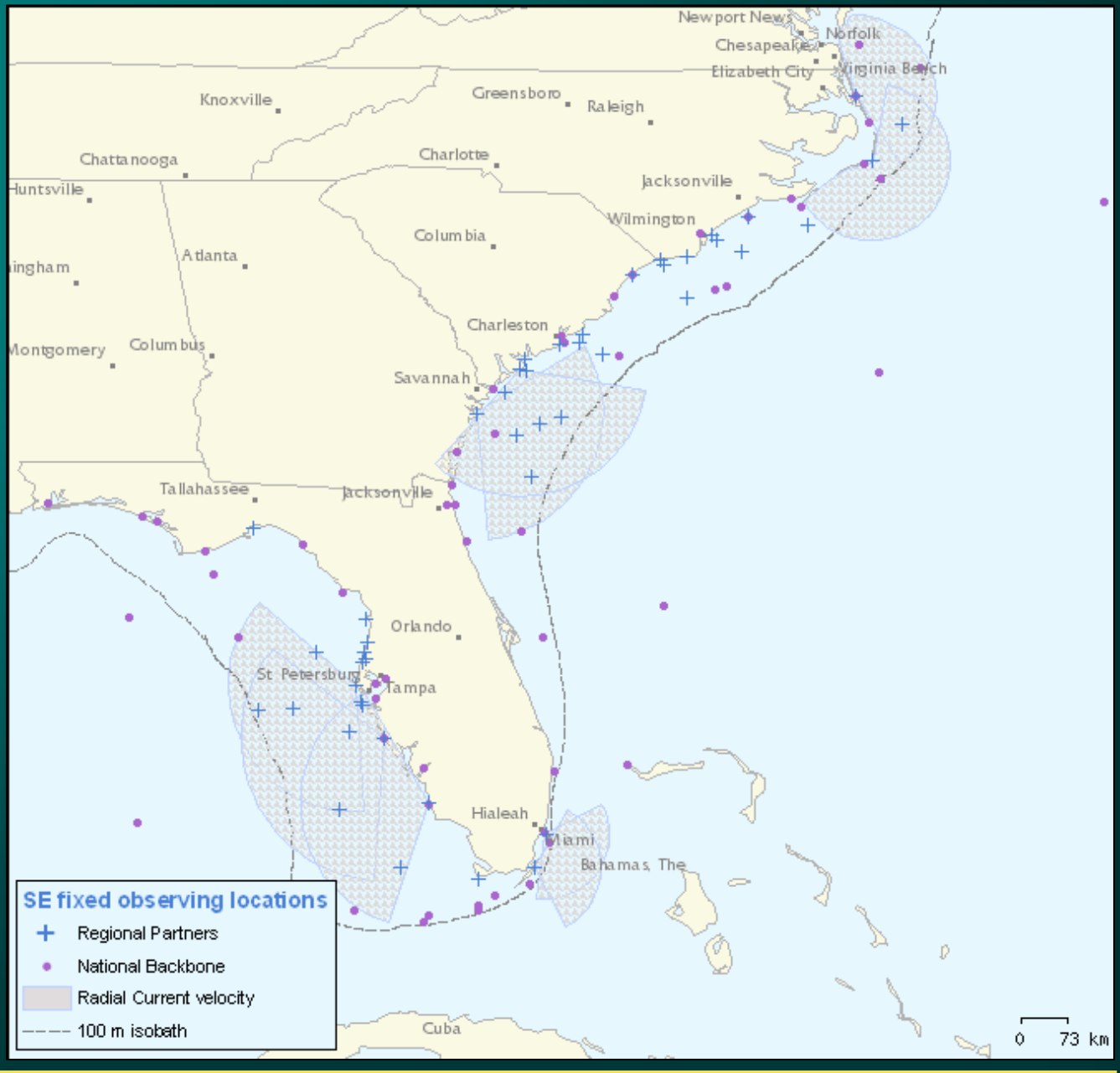
SEACOOS

- Goal
  - "To significantly increase the quantity and quality of environmental information from the coastal ocean of the SE U.S. and facilitate its use in a wide range of societal, scientific, and educational applications"
- ONR funded regional-scale program
- 5 years, $21 million
- 11 funded institutions, 20+ affiliates
- Initiated regional data management program
- Initiated regional-coverage circulation forecasting
- Greatly augmented observing capabilities in SE

Federally-supported fixed observing platforms



Additional fixed observing assets deployed by SEACOOS and friends



Overarching Goal – SECOORA

Develop a functional and cost-effective governance and operational mechanism to ensure that COOS activities in the southeast are:

- Integrated and well-coordinated
- Science-based
- Stakeholder-driven
- Linked to national “backbone”
- Sustainable for the foreseeable future
- Represented through the NFRA

SECOORA is working to link existing observing system assets…

- SEACOOS and the sub-regional coastal ocean observing systems it represented
  - e.g., SABSOON; COMP; PORTS
- Other existing sub-regional observation systems
  - e.g., Caro-COOPS; CORMP
- Near-coastal and estuarine monitoring and observing systems
  - e.g., USGS water level stations; federal and state water quality monitoring programs; southeastern NERRS and National Marine Sanctuary monitoring efforts

…with the needs of diverse users…

- State and federal natural resource agencies
  - Marine resources; coastal zone management; water quality; emergency preparedness; military; weather, etc.
- Public interest/user groups
  - NGOs; municipal governments
- Private sector user groups
  - Marine transportation; fishing; energy; utilities; sand and minerals; weather providers; emergency managers, etc.

Budget & Implementation Planning

- Planning for something new
  - Regionally Operational
  - Research Support
  - Long Term Sustainability
- Identification of Funding Requirements
  - Assets
  - Operations
  - Research
- Managing expectations vis-à-vis unknown funding future

Organizing Process

Realizing a Vision

SECOORA Formation

- Phase I (Years 1-2) Organizing Efforts
  - Proposal submitted by SC Sea Grant with regional Program Team (NC, SC, GA, FL)
  - Funding at <$100K Annually - NOAA CSC
- Year 1 Objectives (Oct 2003 Start):
  - Broaden regional engagement of diverse academic/public/private sectors
  - Form a provisional Regional Association with a signed charter to carry the development of SECOORA forward
- Year 2 Objectives (Oct 2004 Start):
  - Strengthen the partnership by further integration of existing COOS elements and stakeholders in the southeast U.S.
  - Initiate strategic and business planning

SECOORA Formation (cont.)

- Phase II (Years 3-5) Efforts
  - Proposal submitted by SC Sea Grant Consortium with regional Program Team (NC, SC, GA, FL)
  - Funding ~$390K Annually - NOAA CSC

- Year 3-5 Objectives (May 2005 Start):
  - Complete business planning
  - Certification and formal recognition of SECOORA as a Regional Association
  - Regional SECOORA Stakeholder Council
  - Strategies for providing user-defined products and applications
  - Regional DMAC Plan (compliant with the IOOS DMAC Plan)
  - Ocean Data Partnership (modeled after the GoMOOS Ocean Data Partnership Initiative)
  - Pilot programs to integrate and enhance the ability of existing regional (SEACOOS) and sub-regional coastal ocean observations programs

SECOORA Interim Governance Structure

- Nature of Governance
  - Open membership, Not for Profit
  - Membership-driven
  - Ensure diversity of members
  - Cultivate political support
- Membership
  - Direct (with tiers)
  - Focus on Organizations
  - Relevance criteria
  - Fee/Dues-based
  - Advisory committees
- Terms of Reference Framework
  - Transitional governance structure
  - Governance “Steering Committee”
  - 65 members (no dues required)

Objectives under the Terms of Reference

1. Finalize formal governance plan and processes for SECOORA
   - Adoption of initial by-laws
   - Election of initial Board representatives and officers
   - Establishment of annual dues
   - Completion of the legal incorporation process

2. Adopt initial business plan and processes for SECOORA
   - Regional operating plan and marketing plan
   - Governance plan described above

3. Establish initial user-focused regional priorities for IOOS
   - National backbone enhancements
   - Regional observation enhancements
   - Research and development needs
   - Information infrastructure requirements
   - Outreach and education strategies

SECOORA Structure and Governance

SECOORA By-laws

- By-laws required so that SECOORA can incorporate as a non-profit 501(c)3 corporation
- Incorporation is in State of South Carolina
- The approved Governance Framework has been incorporated into By-laws
  - Governance Framework was voted on and approved by SECOORA Steering Committee and Membership in 2006
- SECOORA membership review and approval of the provisional By-laws
- Approved By-laws were reviewed by an attorney
- Final By-laws were submitted with Incorporation paperwork, as required by SC state law
- SECOORA became incorporated September 4, 2007
  - In process of acquiring 501(c)(3) Federal non-profit status.

SECOORA Structure and Governance

- Current membership (paid dues)
  - 41 (plus 2 affiliates) members from academia, business and industry, and state government
- Membership categories
  - Sustaining members
  - Institutional members
  - Individual members
  - Affiliate members
    - Any organization that would qualify as an Institutional Member but whose ability to officially join SECOORA is constrained in some way.

SECOORA Structure and Governance

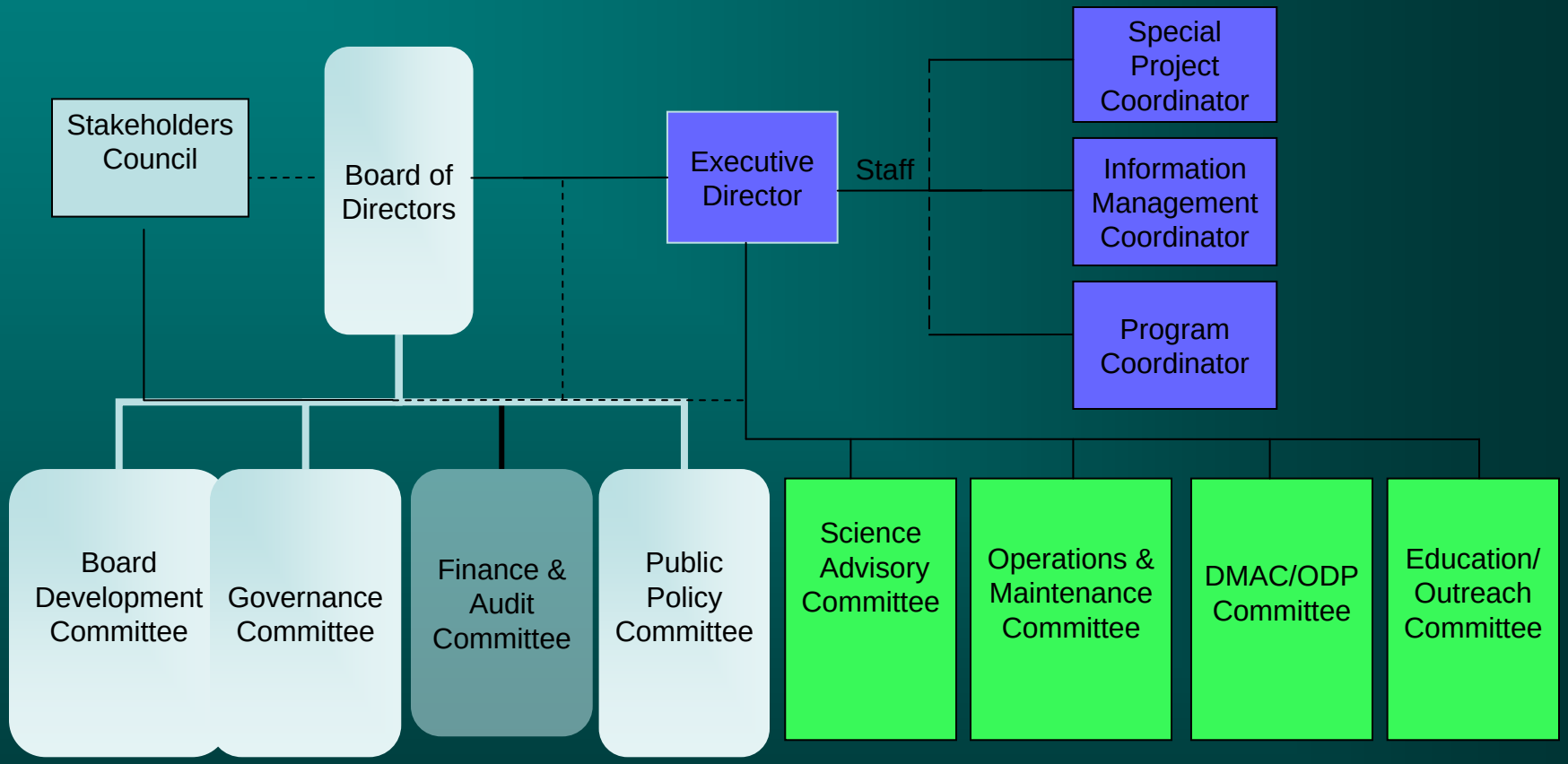
- Board of Directors
  - 21 members
  - Executive Committee
    - Rick DeVoe, Chair
    - Harvey Seim, Ph.D., Vice-Chair
    - Kim Cavendish, Treasurer
    - Dick Dodge, Ph.D., Secretary
    - Mitch Roffer, Ph.D., At-Large

- Staff
  - Capt. Parker Lumpkin (USN, ret.), Executive Director
  - Susannah Sheldon, Program Coordinator
  - Jennifer Dorton, Special Projects Coordinator
  - Sam Walker, Ph.D., IM Coordinator

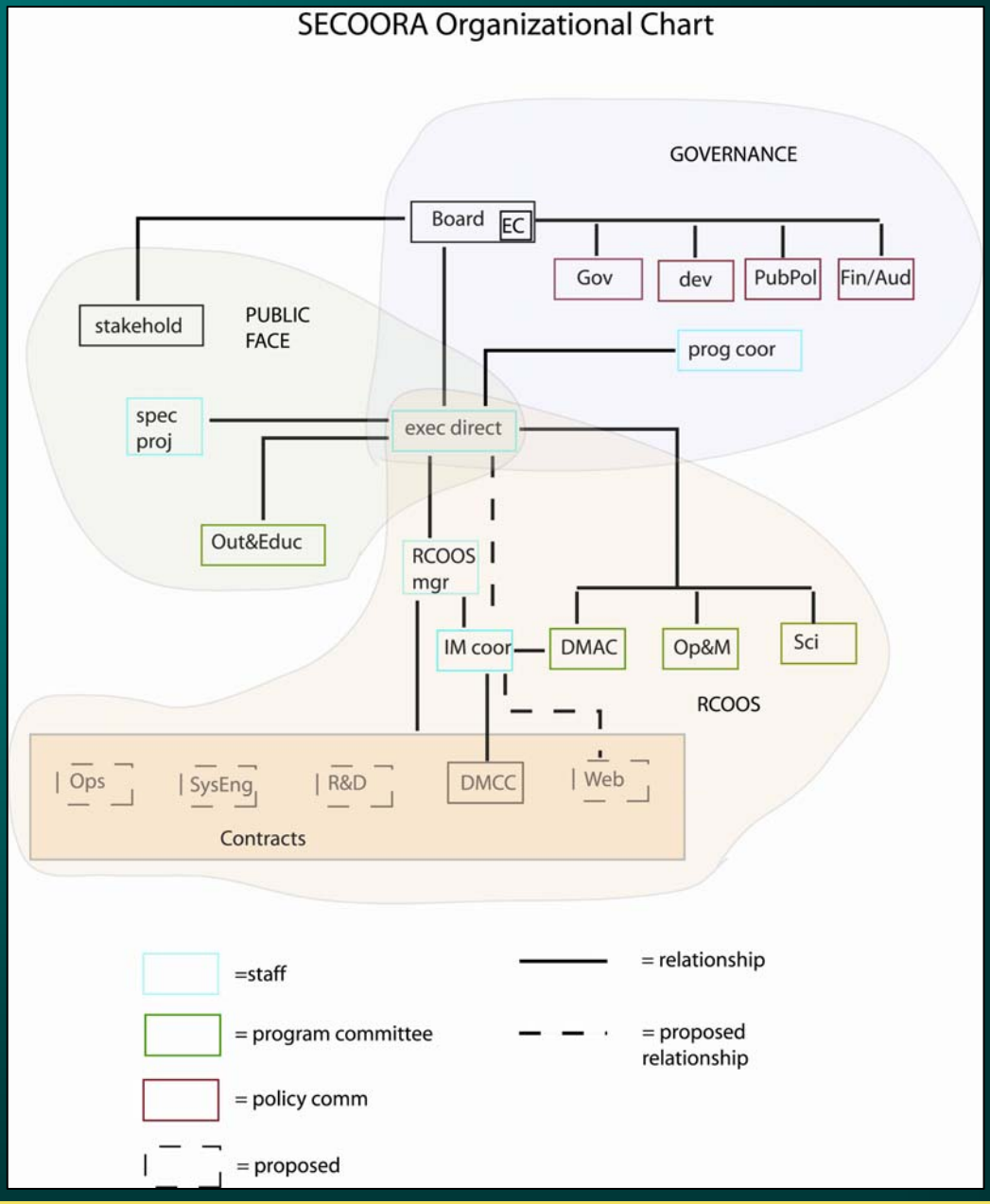
SECOORA Structure and Governance

- Board of Directors
  - 21 members of the Board
    - Three-year terms
    - Each year 1/3 of the Board rotates off and new board members are elected at the Annual meeting.
  - Policy and Program Committees
    - Policy Committees (Board members only)
      - Board Development
      - Governance
      - Finance & Audit
      - Public Policy
    - Program Committees (Board and non-Board members)
      - Science Advisory
      - Operations & Maintenance
      - DMAC/ODP
      - Outreach/Education

SECOORA Administrative Chart



SECOORA Operational Chart



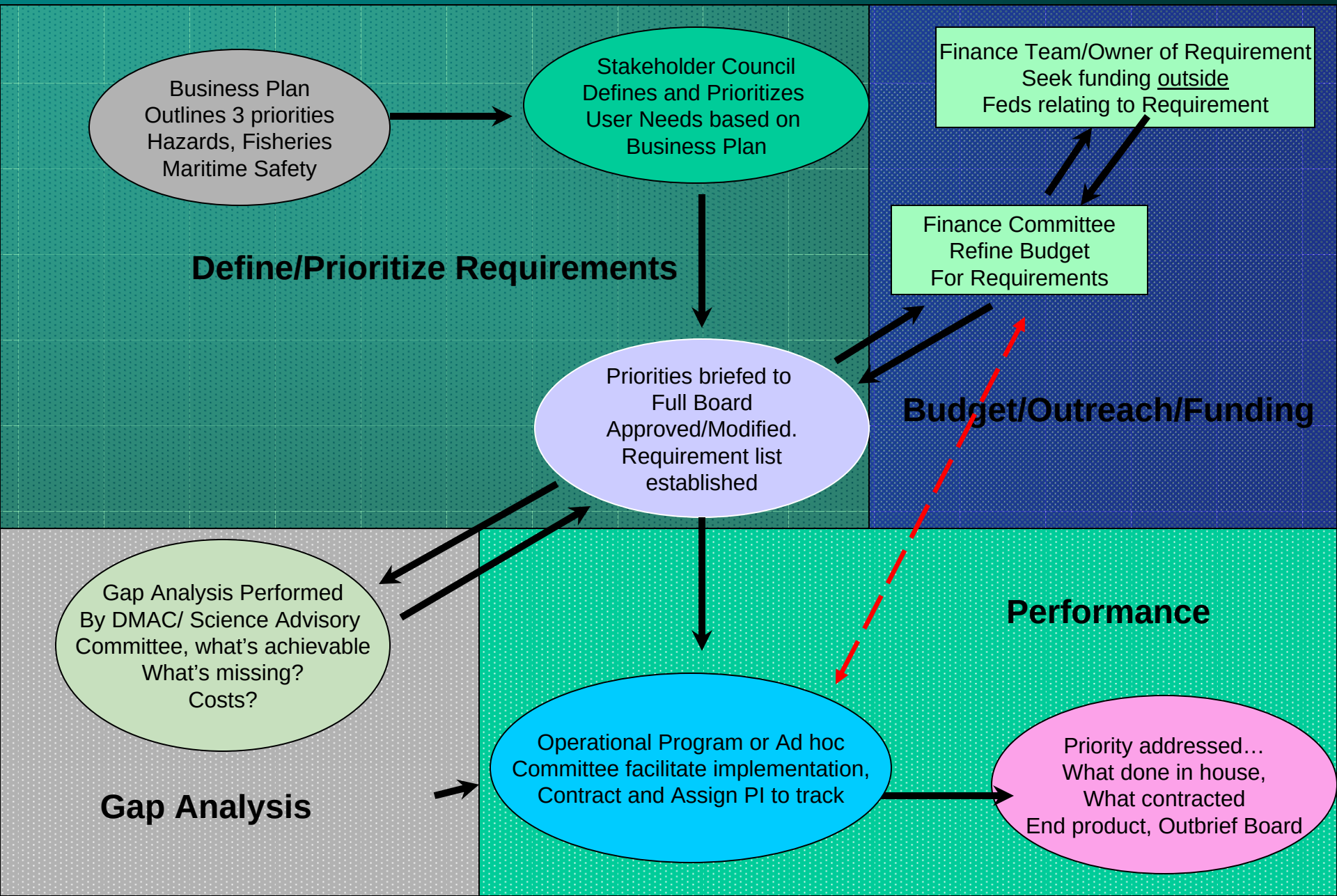
SECOORA Structure and Governance

- Stakeholder engagement
  - Open SECOORA meetings/workshops (2004; 2006; 2007)
  - SECOORA members meeting (first; May 2008)
  - CSO/SECOORA coastal managers workshop (2004)
  - SEACOOS (w/ SECOORA) targeted audience workshops/ white papers (2005; 2006)
    - Fisheries
    - Search and rescue
    - Nearshore processes (waves)
  - Coastal inundation workshop w/ GCOOS (2007)
  - Stakeholders Advisory Council (SAC) formation

SECOORA Structure and Governance

- Stakeholder representation
  - Stakeholders Advisory Council (SAC)
    - Members nominated by members of the Board of Directors.
    - The SAC is:
      - Providing insight into how SECOORA can best serve the region;
      - Helping to identify products & services needed; and
      - Providing feedback on current SECOORA activities as well as input for future funding opportunities.
  - SAC organized in March ’08
    - Met 4X via a series of conference calls
    - Initial review of SECOORA Business Primer underway
    - Survey being developed to query Council members on…
      - Data now being collected
      - Feedback on data/information needs

SECOORA Requirements Process (draft)



Activities to Date

Ensuring “Relevance”

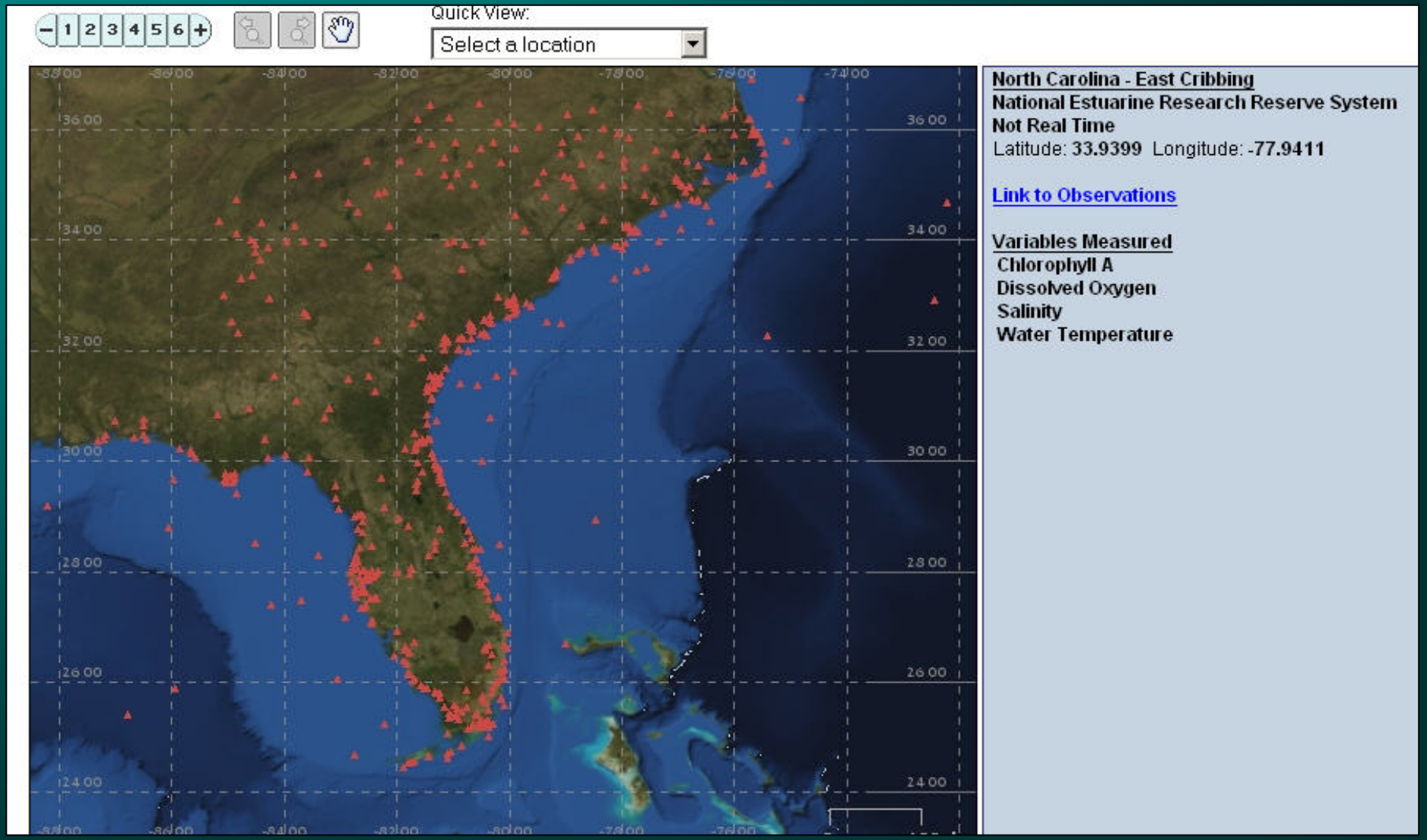
Current Activities and Funding

- A summary of key activities in the region that are related to or support IOOS, including those not funded by NOAA IOOS
  - FL COOS, FY07 NOAA-funded applications (inundation modeling, coupled modeling, Southeast Marine Wx Portal). There are others we need to root out (SEAKEYS, COMPS)
  - Carolinas RCOOS: USACE Coastal Wave Modeling, Rip current component, upgrade of NERR stations to real-time in NC & SC
  - NC EONS: real-time station being deployed in Pamlico Sound
  - Interaction/joint work with other federal agencies - NWS, NDBC, USACE, USCG, NERRs, RENCI and private sector firms
  - HF Radar installations and use
- How can NOAA IOOS best support you in engaging other Federal agencies?
  - Encourage IWGOO agencies to serve on RA Boards
  - Help identify specific user requirements within the region
  - Promote our web sites and applications at intra-agency meetings

SECOORA Regional Successes

- SE IOOS equipment inventory tool
  - Asset mapping
- Significant progress in DMAC development
- Development of a SECOORA Ocean Data Partnership (a la GoMOOS)
- Geographic expansion of “Carolinas Coast”
  - SE IOOS-NWS Joint Effort to Develop WFO Web-based Marine Nowcasts and Forecasts
- Long Bay hypoxia data management study
  - Flounder Jubilee
- Regional education and extension programming
  - Outreach Posters on Waves, Circulation, Hurricanes
- Plone-based SECOORA Web site

Station and Variable Inventory ~546 stations



Southeast Marine Weather Portal

- Project to expand the Carolinas Coast marine portal into Florida, creating a standardized Southeast Marine Weather Portal
- Covers the entire SECOORA domain and a portion of GCOOS
- Project partners
  - UNC-Wilmington
  - University of South Carolina
  - University of South Florida
  - NOAA National Weather Service
  - Second Creek Consulting
- http://sverdrup.marine.usf.edu/wx/index.php

Local weather forecast by "City, St" or zip code
City, St Go

Current Hazards
National

Radar Imagery
Nationwide

Climate
National

Tropical Weather
Hurricane Center

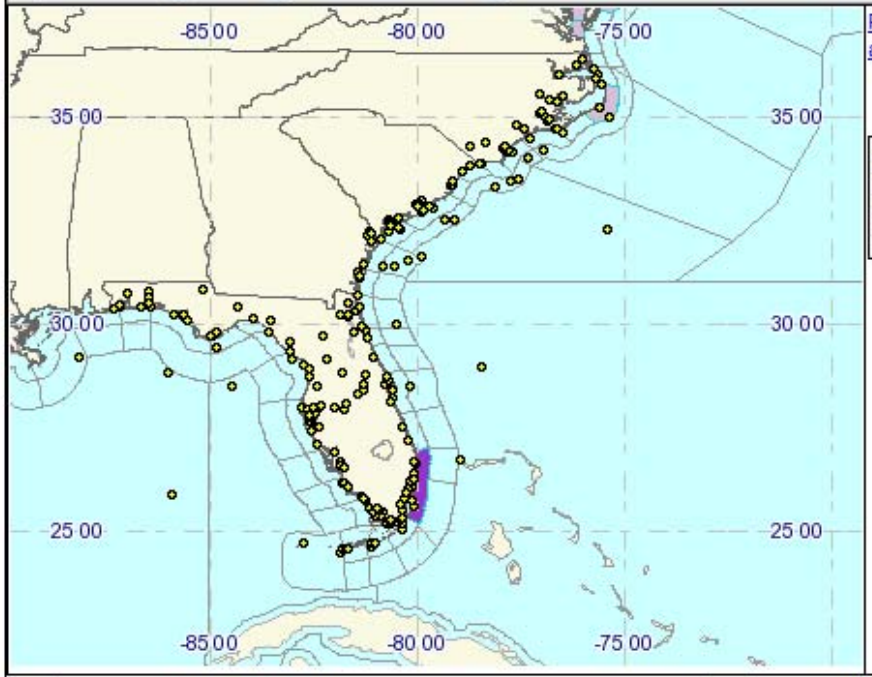
Weather Safety
Storm Ready

Southeastern U.S. Marine Weather (Experimental)

Observations | Forecast

Background Map: Hazards | Sea Surface Temp. | Radar | Radar Loop | Air Pressure | Bathymetry

Map Locations: Cities | Coastal Locations | No labels



Read watches, warnings & advisories.

Zoom Out

Click on a yellow dot on the map to see near-real-time observations for that location.
Click on the latest observation reading to view graphs of previous observations.

Small craft advisory | Marine statement

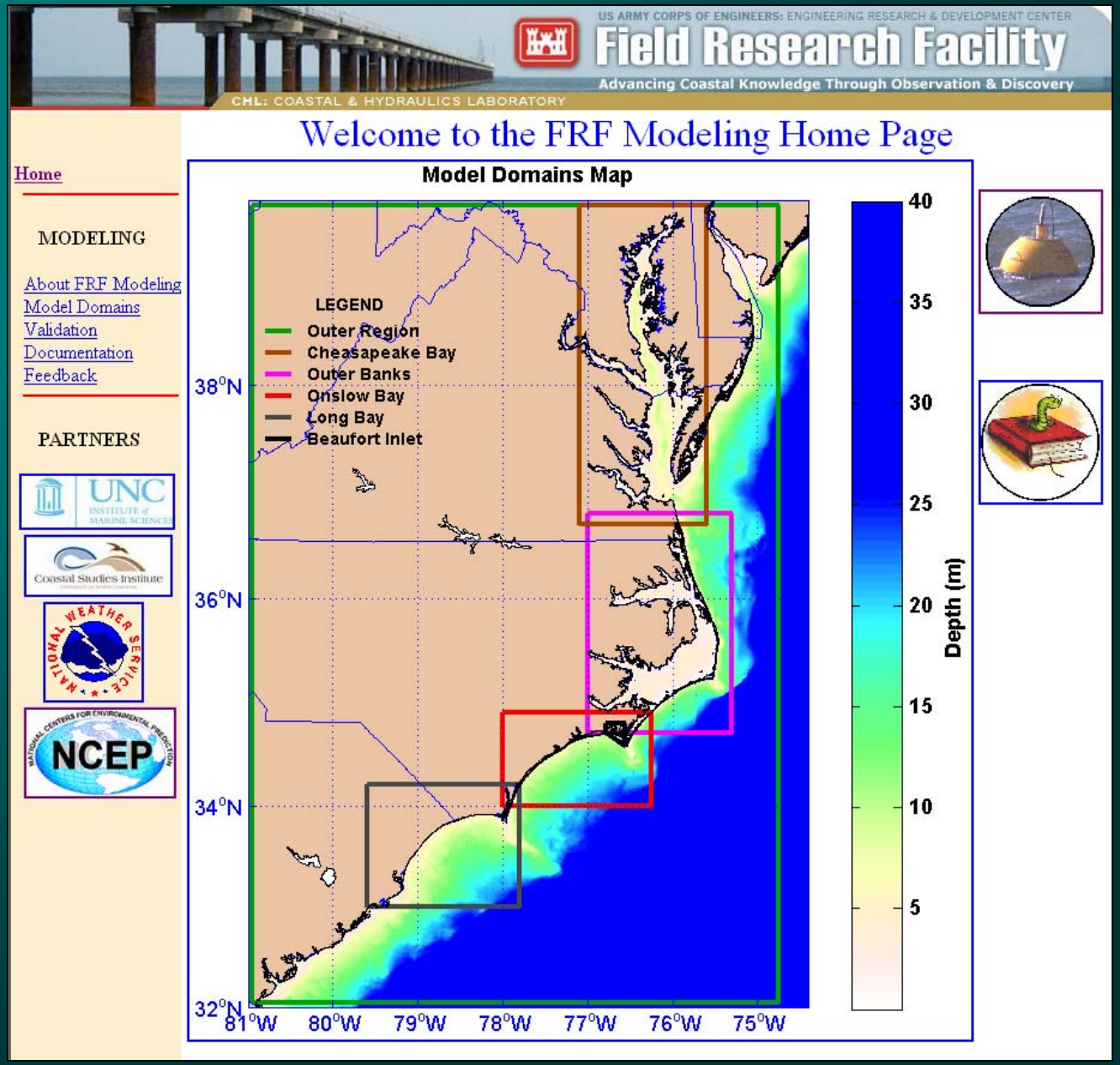
Select a term from the list for more information. get info about...

Carolinas Coast Credits

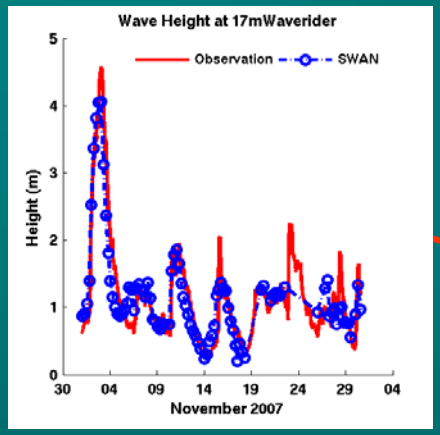
USACE Modeling:

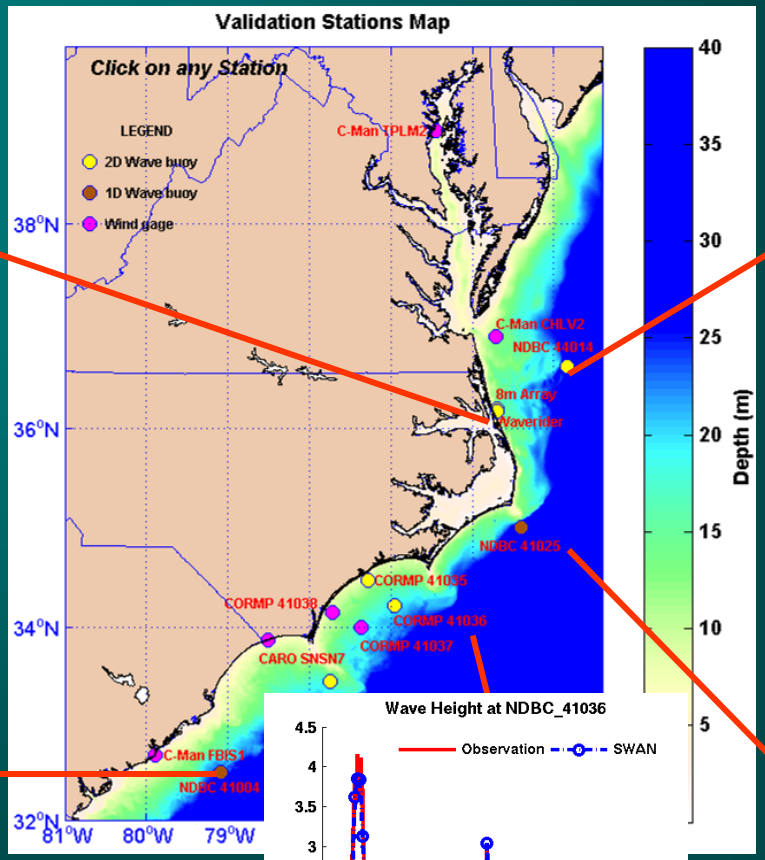
SWAN Nearshore Waves

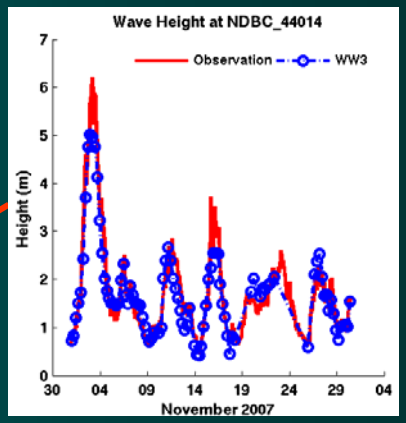
Uses real-time data to validate modeled nearshore waves within the boxed domains

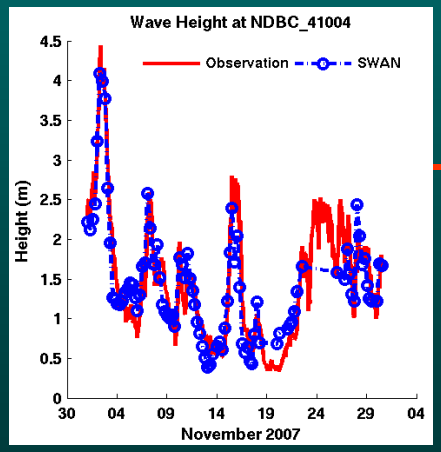


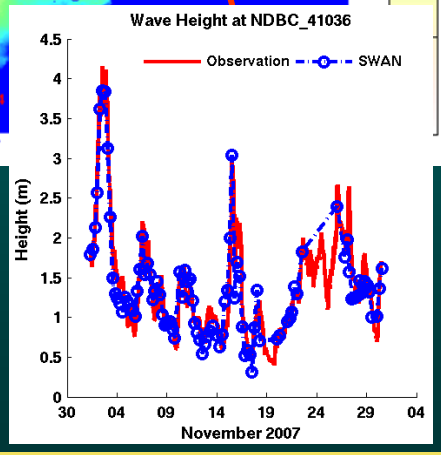
Tropical Storm Noel: USACE - SWAN Model Validation

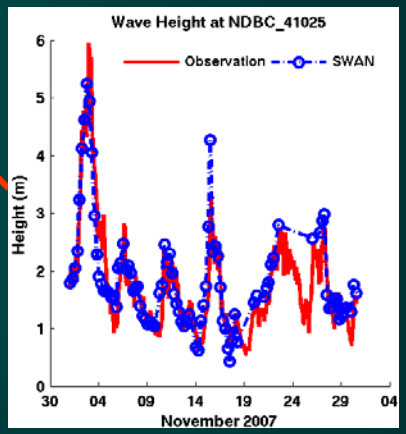




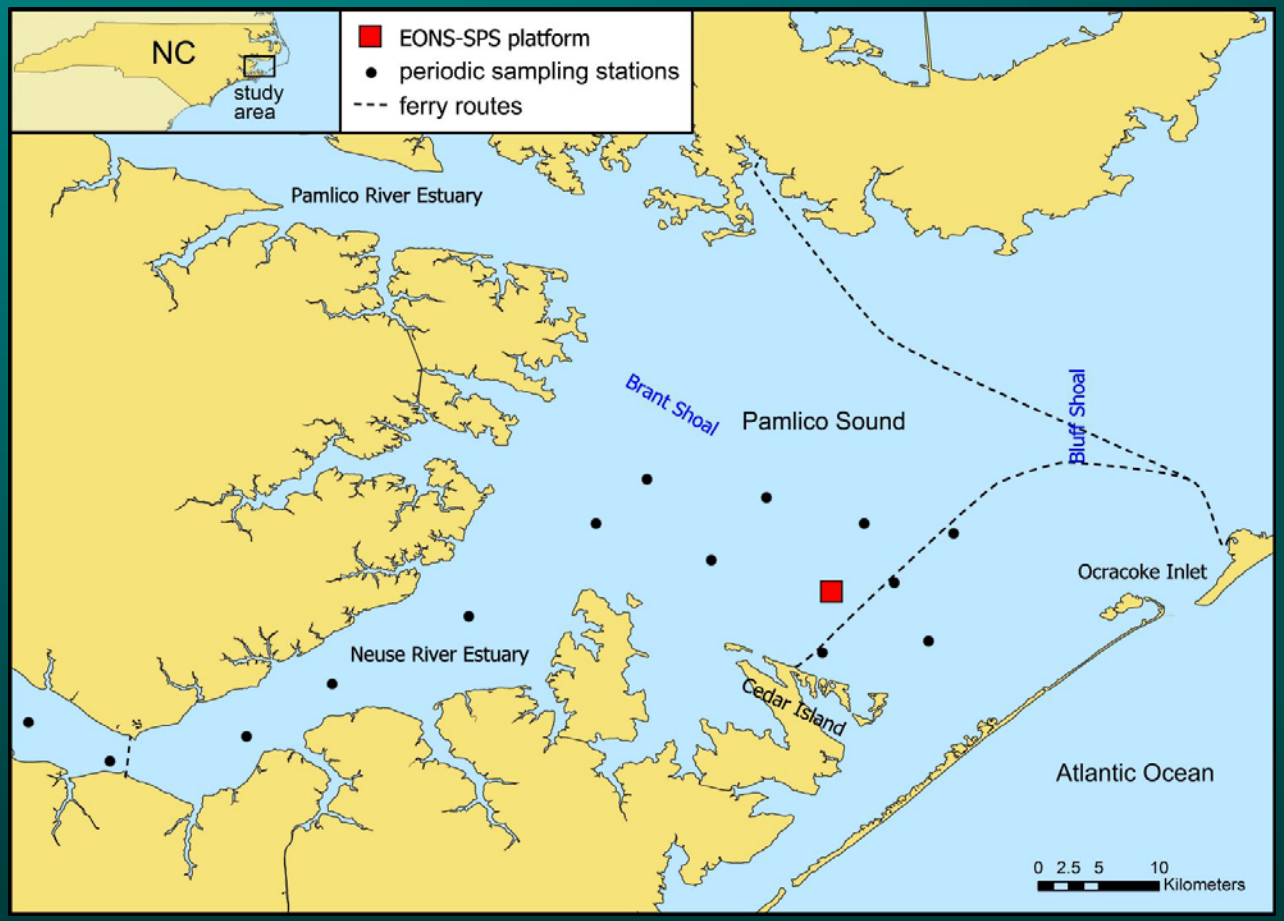








UNC-GA supporting a real-time platform in Southern Pamlico Sound (NC EONS)



Albemarle -Pamlico Sounds comprise the 2nd largest estuary in the US.

This is the first permanent real-time observing station to be deployed in the region.

The Carolinas RCOOS and USACE plan to add a second station in the Albemarle.

Florida COOS

- Has received $1.25M from state of FL, January 2008.
- However, restrictions on funds. Funds cannot be used to:
  - Sustain existing assets
  - All funds have to be spent by June 2008
- What is being funded:
  - New nitrate sensor off of NW Florida, co-located with other MET and oceanographic sensors.
  - Two WERA radars to extend the footprint in the Miami region northwards.
  - Deploy 3 subsurface, non real-time moorings in an across shelf array on the central east Florida shelf.
  - Deploy real-time mooring off NE Florida, between St. Johns River and Nassau River. Includes ADCP and wind sensor.
  - Provide daily high resolution satellite observational analyses of SST, Chl-CDOM, and currents.
  - Develop a high resolution ocean and atmosphere coupled model for the entire region.
  - Develop a high resolution model for northeast FL, from the estuaries out to ~50 km
  - Conduct two stakeholder workshops and develop a DVD

Current Activities and Funding

- Sources of funding
  - NOAA IOOS and other NOAA funds
    - Planning/management grants
    - Modest RCOOS development ($750K – 2007; $400K – 2008)
    - Carolina RCOOS ($1.1M – 2007; 2008)
    - Modeling efforts (Sheng; Luettich)
  - Other Federal:
    - ONR (SEACOOS) Years 2002-2006 (no-cost to 3/08)
  - Non-Federal:
    - FL COOS, NC GA (EONS station)
    - USACE and General Dynamics have supported some CORMP work
    - Caro-COOPS has some joint efforts with Raytheon
    - Seeking domain-wide themes that can be pursued
    - Private donations and membership campaign are being explored

Status of SECOORA

A Work in Progress

RA Coordination: Cooperative Agreements

- Summary of overall progress
  - Moving forward…
    - SECOORA has been created – 501(c)3
    - Board of Directors; ExCom in place
    - Program and Policy Committees formed
    - Stakeholder Advisory Council established
    - 42 dues-paying members
  - Still to be achieved…
    - Inreach/outreach can be improved
    - Stakeholder engagement needs to be strengthened
    - Requirements process not driving program (yet)
    - Sustainable funding yet to be secured

SECOORA – Summary of Progress

- Governance
  - New era for SECOORA
    - First election under provisional By-laws
    - Initial tasks of the SECOORA Board of Directors
      - Elect executive board (Chair, Vice-chair, Secretary, Treasurer) – DONE
      - Establish and populate committees as needed – DONE
      - Finalize the incorporation of SECOORA as a non-profit – DONE
      - Oversee engagement of regional users so that their needs are incorporated into SECOORA strategic direction – IN PROGRESS
      - Guide continuing work on the SECOORA "strategic" plan – IN PROGRESS
      - Assure SECOORA planning grant objectives are met (in consultation with financial agent) – CONTINUOUS

SECOORA – Summary of Progress

- SECOORA Business Plan
  - Business Concept/Mission
  - Governance Plan
  - Operating Plan
  - Marketing and Communications Plan
  - Financial Plan

SECOORA – Summary of Progress

- SECOORA Business Plan
  - SECOORA membership has participated in Business Planning process at each annual meeting
  - At 2006 annual meeting, business plan working groups were formed to write each section of the document.
  - The chair of each WG constitute the Integration Working Group
  - SECOORA has been working on the BP since 2005
  - Work will continue through engagement of recently established SECOORA program committees and Stakeholder Advisory Committee

SECOORA – Summary of Progress

- RCOOS Development
  - SECOORA Design Plan
    - Initial version prepared by SEACOOS Team members
    - Incorporates existing observing activities
    - Preliminary RCOOS Design Plan developed
      - Observing: coastal stations and offshore assets; HF radar; satellite remote sensing; profilers, gliders, and surface drifters; ship transects and volunteer observing ships
      - Data Management – hub architecture
      - Modeling – nested approach
  - SECOORA Conceptual Design document
    - Requested by NOAA IOOS Office
    - Assembled by SECOORA staff
    - Submitted December 19, 2007

The Future and Ongoing Issues

SECOORA Coordination: Cooperative Agreements

What will change with the new RA grant in FY08?

- Completion of initial RA business/strategic plan
- Active Stakeholders Advisory Council
- Work towards full data integration across the region
- Web site update/overhaul so that member data can be accessed through a centralized location

New directions, partners, etc.?

- RA coordination with CaRA and GCOOS
  - Meeting – April 24, 2008
- Concerted effort to link with federal and state agency partners

SECOORA Future Development

RA views on function and performance metrics

- For SECOORA – possible metrics might include
  - Membership (dues paying) growth and engagement
  - Membership diversity (geographic, sector)
  - Stakeholder participation and involvement in planning, priority-setting re: user needs
  - Supplemental sources of support identified/secured
- For the SECOORA RCOOS
  - Data integration across region is progressing
  - Interactive asset mapping is “functional”
  - Design plans (infrastructure) refined and implemented as resources become available
- For stakeholders
  - Data and data products generated and distributed
  - Stakeholder feedback (positive) on utility of data and data products

SECOORA Future Development

2008 Planning Grant Objectives

1. Formalize and implement the governance structure for SECOORA (Year 1)
2. Refine and update SECOORA's operating (i.e., business) plan (Year 1)
3. Conduct and update a needs assessment of SECOORA's stakeholders (Years 1, 2, 3)
4. Document regional priorities for observing system information (Years 1, 2, 3)
5. Prepare a Concept of Operations for the SECOORA Board of Directors (Year 1)

SECOORA Future Development

2008 Planning Grant Objectives

6. Complete RCOOS Design Plan for a regional observing system (Years 1, 2)
7. Improve interoperability of ocean observing data and information generated by ocean observing programs in the region (Years 1, 2, 3)
8. Enhance communications and coordination with other Regional Associations, NFRA, Ocean.US, and federal agencies (Years 1, 2, 3)
9. Develop and refine the SECOORA Web site (Years 1, 2)
10. Disseminate products/services/information/education resources (Years 1, 2, 3)

RA Future Development

Summary of top priorities for development of RCOOS capabilities with cost estimates

1. Data management
   - Strive for DM hubs to aggregate and assimilate IOOS data from the entire region.
2. Survive in the short-term
   - Maintain as many of the real-time observing assets in the region given availability of resources and staff
   - Current emphasis on DMAC and HF radar
3. Maintain/grow in the long-term
   - Expand assets to decrease gaps in coverage
     - e.g., East coast of FL, Raleigh Bay, NC, find new locations for GA assets since towers are being decommissioned.
     - Develop “warehouse” of instruments that can be used by SECOORA members when deployed instruments fail.
   - Modeling/forecasting capabilities

SECOORA Views on Regional & National IOOS

- Direct coordination between feds and regions in development of observing, modeling, and DMAC – cannot continue (or afford) to move forward independently
- Improved communication mechanisms (with teeth) to ensure all are informed of plans and the need for adjustment based on changing internalities and externalities – national facilitation may be the only way
- RA expectations for development of the "national backbone" of observations
  - For modeling, backbone should provide basin-scale representations
  - For DMAC, backbone should enable nation-wide integration
  - For *in situ* observing assets, federal agencies should decide what they need and what they can support (purchase and M&O); trick is federal-RA coordination

SECOORA Views on Regional & National IOOS

- Funding & Political Support
  - Nature of future federal investments in RAs?
  - Expectations of RAs to seek non-federal $$$?
  - "Catch 22" situation with federal recognition of RAs
    - Feds do not recognize RAs as entities eligible for $$
    - RAs not (yet) formally recognized by Congress
  - Challenges in getting IOOS legislation passed in Congress

SECOORA Views – National IOOS

- Funding for all regional IOOS efforts should be distributed through the appropriate RA
  - Enhance coordination of activities
  - Address stakeholder (user) needs
  - Ensure accountability
- Identity a clear chain of communication between the RAs and the national effort
  - Must work both top-down and bottom-up (like a partnership should)
- Clearly articulate funding realities and proposal requirements
  - Manage expectations of all involved in RA activities
  - Improve RA strategic and tactical planning
- Clearly articulate RA formalization (certification) criteria
  - Identify expectations, regardless of level of formality

SECOORA Views - Regional Challenges

- Keeping up with the Feds
  - Federal expectations
    - What will the RA "formalization" criteria be?
  - What is the "National Backbone" and relationship to RAs?
    - What's in; what's out?
    - Role of RAs in influencing backbone decisions?
    - Role of RAs in coordinating backbone and RA observing efforts?
  - Who's in charge? What are the roles of…
    - COP? JSOST? SIMOR?
    - NOAA? NOAA CSC? NOAA NOS? NOAA OAR?
    - Ocean.US? IWGOO? US GOOS Steering Committee? NFRA?
- Transition to operations
  - SECOORA using SEACOOS lessons learned of "collection, aggregation, analysis, and delivery"
  - Big step with no funding; maintenance costs/scheduling

SECOORA Views - Regional Challenges

- Engaging Full Representation
  - Wide variety of stakeholder/user groups
    - Intermediate Users
    - End-users
    - Private Sector
    - Science
  - Stakeholder priorities are diverse
  - Focus still primarily on physical oceanography
  - Sub-regional systems remain University-based
  - Managing expectations
- Decommissioning of Navy Towers significantly impacting region
  - SABSOON

Cross-regional Coordination

- Discuss existing and potential coordination with other IOOS RAs
  - On regional efforts/issues:
    - MACOORA & USCG efforts to make current predictions based on HF Radar data
    - Data mgt coordination with GCOOS, GoMOOS, MACOORA
    - DMCC and Ocean Data Partnership
  - On a national scale:
    - Data management coordination among all RAs (St. Pete; Charleston)

SECOORA – Lessons Learned

- Governance
  - Challenge of finding appropriate representation and altruistic approaches – take it slow, revisit often
- Communications
  - Ever present problem – still seeking solutions
- Observing
  - Really expensive, O&M a huge deal – must be selective
- Date Management
  - How to share – hub structure can work, but requires teamwork and communications; establish key data partners (e.g., RENCI, FWRI)
- Modeling
  - Forecast mode very challenging, need to fund appropriately and have clear outcomes in mind
- Outreach
  - Amazing challenge to do well, consensus on focus areas essential
- Education
  - COSEE partnership excellent idea but again, need understanding of focus areas and availability of appropriate material to support educational activities

SECOORA – Final Thoughts

- What support or information do you need from NOAA that you are not currently receiving?
  - Consistent coordination effort
  - Clear requirements process and guidance
  - RAs need to manage own funds, figure it out
  - Lack of resources is debilitating
    - Cannot do RCOOS on $500K/yr
  - RAs cannot ‘manage expectations’ forever
    - Of those that are part of the enterprise
    - Of those that should benefit from the enterprise
    - Of those that should be engaged in the enterprise

SECOORA - Parting Thoughts

- How can NOAA IOOS best receive regular updates or information from the RAs?
  - Recommend a template…some standard, recurring input to NFRA, then to NOAA
  - Require monthly input to NFRA who collates and distributes to NOAA IOOS Office
  - Newsletters…however difficult to maintain and publish routinely
  - Lastly … Data calls for emergent issues

NOAA IOOS Program Office
Regional Status Assessment

The SouthEast Coastal Ocean Observing Regional Association (SECOORA)

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