

SEACOOS Users Need Workshop for Georgia
Georgia Coastal Center, Savannah, GA
September 2, 2004

Facilitated and Recorded
By
Community and Regional Development Division
Carl Vinson Institute of Government
University of Georgia

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SEACOOS Users Need Workshop for Georgia

Georgia Coastal Center, Savannah, GA

September 2, 2004

The South Atlantic Coastal Ocean Observing System (SEACOOS) users group held a workshop for Georgia in Savannah on September 2, 2004. The purpose of the workshop was to introduce Georgia's coastal community to existing coastal observing systems and to determine the community's data and product needs as these systems are expanded. In addition to Georgia participants and presenters, presentations and advisement were provided by SEACOOS' members from North Carolina, South Carolina, and Florida. Subjects ranged from surge models, to emergency management applications in the Carolinas, to Florida port applications.

The participants represented the targeted groups of Commercial and Recreational Fishers, Marine Operators, and NGOs (non-governmental/non-profit organizations). The fourth target group, Emergency Managers, were to have participated, however due to the potential arrival of Hurricane Frances, that group remained in their respective counties to prepare for the impending storm.

The facilitated portions of the workshop were conducted by the faculty of the Community and Regional Development Division of the Carl Vinson Institute of Government (CVIOG), a public service and outreach unit of the University of Georgia. The report that follows summarizes the facilitated portions of the workshop. The appendix to the report provides a complete record of the responses provided by each participant.

Sharing Information on Their Agency or Organization

In order for all participants to get to know each other and the agency or organization they represented, each was asked to complete a flip-chart sheet of paper for each of the following questions after they noted the name of their agency or organization at the top of each sheet:

Q. What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

And

Q. What type of information on the coastal environment does your agency use to make those decisions, plans, or assessments?

Upon recording their responses, each participant hung their sheets under the banner of one of three categories (Commercial and Recreational Fishers, Marine Operators, or, NGOs. The following agencies or organizations were represented:

Commercial and Recreational Fishers

- Coastal Conservation Association of Georgia
- Georgia Department of Natural Resources' Coastal Resources Division
- Georgia Coastal Research Council
- Georgia Sea Grant
- University of Georgia Marine Extension Service

Marine Operators

- NOAA Gray's Reef National Marine Sanctuary
- Forensic Meteorologist
- University of Georgia Marine Extension Service

NGOs

- Center for a Sustainable Coast
- North Carolina State University – University of South Carolina – University of North Carolina at Wilmington SEACOOS effort
- University of South Florida – West Florida Shelf
- South Carolina Sea Grant

Expanding Their Agency or Organization Activities/Services

The second segment of the facilitated workshop included the identification of enhancement tools to improve current offerings, additional activities and services that would be helpful to clients, and the most useful and efficient delivery tools of the information. To assist the participants in the development of this information, the following three questions were asked:

- Q. Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?
- Q. Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activity or service?
- Q. What's the most useful way to communicate this information to you?

Each question was individually pre-printed on a flip-chart sheet of paper. Upon recording the responses, the participants hung their sheets adjacent to the first two sheets they had posted.

Prioritization of Needs by Group

Participants divided into their three groups and, with the assistance of a CVIOG facilitator, reviewed the information they had developed. After a thorough discussion, the participants were asked, within their own group, to prioritize what they thought were or should be the highest priorities among the information needs and valuable items to enhance the Georgia system. Upon completion of the exercise, each group presented their findings to the other two groups. The highest priorities of each of three groups are presented below:

Marine Operators

- Long-term land use/water quality and air quality models to predict the impact of current and proposed development on coastal watersheds and estuarine waters. Use information to advise coastal constituencies and decision makers on the impact of land use decisions (3 votes).
- Development of predictive models for living marine resources within Gray's Reef (3 votes).
- Development of water column information on currents, temperature, and dissolved oxygen concentrations (2 votes).
- More spatial coverage: Long-term consistent standardized records for climatology (all data) – instruments and station locations...real time access (3 votes).
- Daily marine ops – wave length, wind speed, and water temperatures (1 vote).

Commercial and Recreational Fishers

- Surface – mid depth – bottom water temperature/salinity/turbidity/dissolved oxygen at stations located in upper, middle, and lower estuary locations of each of Georgia's estuaries and at more locations on continental shelf off Georgia (4 votes).
- Identification and distribution of riverine plumes, including nutrient sensors, O₂, and turbidity (3 votes).
- Biological characteristics, i.e. algal bloom, larval transport characters at critical periods, i.e. white shrimp – June-August; blue crabs – August –October (1 vote).

NGOs

- Relationships between land-based, aquatic, estuarine, marine systems sediments; turbidity; toxic contaminants; D.O.; species diversity/health freshwater flow; and salinity fluctuations/ranges (1 vote).
- Monitoring data that can be linked to specific types of or changes in resources – using activities – e.g. marinas, power plants, impervious surfaces, septic systems, etc. (1 vote).
- Better and more defined customer needs (2 votes).

Complete Combined Participants Priorities

With the completion of the group reports, the participants were asked to review the work of the two other groups' and to vote for what they believed should be a high priority within each of the other two groups, from their group's perspective. The participants could not vote for priorities in their own group again. The results of the combined vote follow:

- Long-term land use/water quality and air quality models to predict the impact of current and proposed development on coastal watersheds and estuarine waters. Use information to advise coastal constituencies and decision makers on the impact of land use decisions (9 votes).
- Surface – mid depth – bottom water temperature/salinity/turbidity/and dissolved oxygen at stations located in upper, middle, and lower estuary locations of each of Georgia's estuaries and at more locations on continental shelf off Georgia (8 votes).
- Identification and distribution of riverine plumes, including nutrient sensors, O₂, and turbidity (4 votes).
- Development of predictive models for living marine resources within Gray's Reef (4 votes).
- Biological characteristics, i.e. algal bloom, larval transport characters at critical periods, i.e. white shrimp – June-August; blue crabs – August -October (4 votes).
- More spatial coverage: Long-term consistent standardized records for climatology (all data) – instruments and station locations...real time access (3 votes).

- Development of water column information on currents, temperature, and dissolved oxygen concentrations (3 votes).
- Relationships between land-based, aquatic, estuarine, marine systems sediments, turbidity; toxic contaminants; D.O.; species diversity/health freshwater flow; and salinity fluctuations/ranges (2 votes).
- Monitoring data that can be linked to specific types of or changes in resources – using activities – e.g. marinas, power plants, impervious surfaces, septic systems, etc. (2 votes).
- Better and more defined customer needs (2 votes).
- Daily marine ops – wave length, wind speed, and water temperatures (1 vote).

The complete record of the facilitation follows in *The Appendix*.

Appendix

SEACOOS
September 2, 2004
(Commercial and Recreational Fishers)
Blue

(6) What decisions, plans or assessments does your agency make that rely on information about conditions in the coastal environment?

Conduct research on larval transport, estuarine models and water quality impacts on fisheries resources.

(6) What type of information on the coastal environment does your agency use to make those decisions, plans, or assessments?

Nutrients – N.P.

Chem & Biological Demand

Salinity

Wave and Surface and Bottom Currents directions and duration

Tidal inputs to circulation

Chlora. a/biological organiz.distribution

(6) Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

Identification and distribution of riverine plumes, including nutrient sensors, O₂, turbidity **(3 Blue Dots, 1 Green Dot)**

Inlet currents (top to bottom, across channel distribution)

Biological characteristics, i.e. algal bloom, larval transport characters at critical periods, i.e. white shrimp – June-Aug.; blue crabs Aug. – Oct. **(3 Green Dots, 1 Blue Dot)**

(6) What's the most useful way to communicate this information to you?

Web site available in real time

(5) What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

Coastal Conservation Association of Georgia

Assessment of Adequacy of Fisheries Rules and Regulations to assure long-term sustainability of fish populations.

Decisions to support or oppose changes in

- a) Fishery Management Plans
- b) Habitat (Including water quality) Enhancement/Preservation measures
- Boating/Fishing trip decisions based on water info

(5) What type of information on the coastal environment does your agency use to make those decisions, plans, or assessments?

CCA – Georgia

- Fisheries Statistical Data
- Ecological and environmental assessments
- Local studies/specific issues
- Survey data
- NOAA real time sea condition reports
- NWS forecasts
- Satellite sea surface conditions (Real-time on line)

(5) Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to you constituencies?

N/A

(5) Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activity or service?

N/A

(5) What's the most useful way to communicate this information to you?

N/A

(4) What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

Georgia DNR Coastal Resources Division

- Jurisdictional: Saltwater demarcation line to territorial sea/EEZ boundary (3 miles)
- Decisions: Management of living marine resources and their habitat
- Plans: State-specific fishery management plan
Coastal Management Program
Interstate Fishery Management Plans
- Assessments: Monitoring of the status of exploited marine fishes, crustaceans and mollusks
Measurement of habitat attributes for exploited marine fishes, crustaceans and mollusks

(4) What type of information on the coastal environment does your agency use to make those decisions, plans, or assessments?

- River flow to coastal estuaries
- Precipitation
- Tidal amyloidal periodicity
- Tidal currents
- Water temperature
- Air temperature
- Salinity
- Nutrient load
- Dissolved oxygen
- Wind speed/direction
- Contaminants concentration
- Sediment type
- Bathymetry (estuary and shelf)

(3) Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

Georgia DNR/CRD

- Surface – mid depth – bottom water temperature/salinity/turbidity/dissolved oxygen at stations located in upper, middle and lower estuary locations of each of Georgia's estuary and at more locations on continental shelf off Georgia. **(4 Blue Dots, 3 Green Dots, 1 Red Dot)**
- Broader spatial scale measurement of wind speed, direction, and event duration on the continental shelf off Georgia on a real time basis
- Water level measurements in upper, middle and lower estuary stations in each Georgia estuary.

(3) Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activity or service?

- Predictions of population status for exploited species and their food organisms
- Site identification for artificial reef development
- Assessment of the impact of reduced river flow on estuarian productivity.
- Assessment of environmental effects on fish habitats

(3) What's the most useful way to communicate this information to you?

- Web-based
- Periodic data summaries (w/metadata)

(2) What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

SEA GRANT

- Fisheries recommendations/Sustainable Fisheries Practices
- Boating Safety
- Marina Development/Policy
- Shellfish Safety > Water Quality
- Coastal Development
- Outreach and Education – Communicating current science
- Recreational swimmers > Rip Current Warnings

(2) What type of information on the coastal environment does your agency use to make those decisions, plans, or assessments?

- Nutrient Loading
- Contaminant levels/Heavy metals
- Wastewater Discharge
- Ocean Circulation Models (surfaces subsurface)
- Salinity/Temperature Profiles
- Beach Profiles
- Turbidity Measurements
- Chlorophyll Data
- Indicator Species (e.g., Fecal Coliforms)
- Weather Forecasts/Wind casts

(2) Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

N/A

(2) Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activity or service?

N/A

(2) What's the most useful way to communicate this information to you?

N/A

1) What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

- Georgia Coastal Research Council (Facilitate interactions between Georgia coastal scientists and resource managers)
- Information on coastal conditions (**and** data gaps) helps us to determine our focus areas (workshops, white papers, funding proposals)

(1) What type of information on the coastal environment does your agency use to make those decisions, plans, or assessments?

- All types of information “big picture” Inshore information is needed.
- Ability to connect physical to biological is lacking and highly desirable.
 - Ex. WQ + fisheries health
 - Weather/flows + beach WQ (fecal coliform, enterococcus)
 - Sedimentation + benthic system health
- We are more of an information clearinghouse than a data user

(1) Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

- Our need is not data specific
- However, many of researchers & managers (~90) could benefit from this OOS info, if we knew what was being generated
- We’d like **summaries** of all the projects...ideally, including:
 - **Who** is talking this information? (agency, contact person)
 - **Where** is data being taken? (GIS-level locational info)
 - Where is the data **available**? (Contact person, website)
 - **What** parameters are being measured? (Surface temp, sediments transport, DO, wave height, whatever)
 - **When?** (Project duration, frequency of measurements)
 - **How?** (Methods, instrumentation)

(1) Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activity or service?

(See above)

(1) What’s the most useful way to communicate information to you?

- Electronic reports for web distribution or links to same.

SEACOOS
September 2, 2004
(Marine Operations)
Green

(A-1) What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

NOAA Gray's Reef Nat. Marine Sanctuary – 17 sq miles Marine protected area off the Georgia Coast

- Daily Marine Operations
 - Do we go for the site?
 - Do we conduct diving ops?

- Longer-Term Concerns
 - Sand movement associated with storm events – Impact Reef?
 - 3-Dimensional Water Quality impacts on sanctuary resources?

(A-2) What type of information on the coastal environment does your agency use to make those decision, plans or assessments?

MARINE OPS – **Green Dot** (Daily)

- Wave Height
- Wind Speed
- Water Temp

- Specific to Diving
 - Visibility
 - Currents

- Longer Term
 - Sediment Movement Prediction Models
 - RealTime 3-D Current Data
 - Nutrient/wQ (O₂, pH) Data
 - For Trends/Changes

(A-3) Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

- Through the water column info on: (One blue dot, two green dots)
 - Currents
 - Temperature
 - Dissolved Oxygen Concentrations
 - Nutrient levels (Chemistry)
 - Larval Transport/Settlement info
 - Turbidity/Visibility
- All Marine Ops
- Info for: Before we leave here is it a good day to dive
- Biological Components

(A-4) Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activities or service?

- In order to develop predictive models for Living Marine Resources within Gray's Reef (Tie-in to #1 of UGA Marex – 3 Dots) **(One Blue Dot)**
- Discreet Depth measurements on a larger scale (South Atlanta Bight) for
 - Dissolved Oxygen
 - pH
 - Nutrients (Chemistry)
 - Currents
 - Temperature
 - Salinity
 - Larval Transport/Settlement/Survival
- Need Long-term Database (currently on baseline)

(A-5) What's the most useful way to communicate this information to you? (Integrate with Land use to tie it to water)

- Web
- Georeferenced Tables
- Needs to be weekly at least

(B-1) What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

- Forensic meteorologists
 - Assess wx/ware conditions near shore for accidents claims

(B-2) What type of information on the coastal environment does your agency use to make those decisions, plans or assessments?

- Weather conditions – T, prec, wind
- Ware heights
- Mean sea level heights

(B-3) Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

- Current variables are OK:
 - Temperature, dew point, pressure, precipitation, wind speed and direction, visibility and **(air quality)**
- More: Spatial coverage **(Green Dot)**
 Frequent measurements – Hourly
 Data **archived** – web based **(Standardized methods)**
 East access to data – web based
Long-term consistent (2 Green Dots) (standardized) records for **climatology** (ALL DATA) – instruments and station locations
 Real time access

(B-4) Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activity or service?

Need total K to one another collaborative discussions on ideas, issues, forums, meetings organized user groups.

- Engineering design of harbors, wind power **along coast**, marine citing
- Need site-specific long-term climatological data from small-scale models – surface to 1000 foot or so
- Localized forecasts

(B-5) What's the most useful way to communicate this information to you? Web based – Easy menu access

- Near real time
- Periodic communications to highlight new data sources, examples of how used by others – specific; how to

(C-1) What decisions, plans or assessments does your agency make that rely on information about conditions in the coastal environment?

- UGA-MAREX (The University of Georgia Marine Extension Service)
- Research
- Planning days at sea. To go or not to go sampling (conducting research by boat)
- Planning days to sample e.g. Water Q. collecting before, during and after a “rain event.”

(C-2) What type of information on the coastal environment does your agency use to make those decisions, plans or assessments?

- Basic wind/wave information
- Collecting basic modeling data from past “events” to correct and strengthen models (provide this information to modules)

(C-3) Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

- To understand river – sound – ocean (e.g. Drought, loss of wetlands-Current, pollution and others) flow/interactions for X,Y,Z,A—Conditions to **explain to the general public** (the voters) **Why** laws or management measures must be (or should be) implemented?

(C-4) Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activity or service?

N/A

(C-5) What’s the most useful way to communication is information to you? (No C-4)

- Through www – w/short “Lag” time for users

(D-1) What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

University of Georgia Marine Extension Service (MAREX)

1. MAREX conducts both long and short-term water quality analyses and supports Coastal Georgia Modeling efforts by University of Massachusetts, Dartmouth
2. MAREX also operates a fishery research vessel – The R/V Georgia Bulldog that primarily conducts fishery gear research including underwater monitoring of TEDs and BRDs.
3. MAREX supplies advice to both commercial and recreational fishermen, including technical assistant training
4. As a coastal facility MAREX has worked with Emergency Managers and First Responders on developing Emergency Management plans. MAREX needs flooding, surge and wind data into evaluate possible threats to our facility.
5. MAREX is working closely with DNR Coastal Resources and EPD on both method developmental sources of bacteria impacting Georgia’s coastal beaches under the new “bathing waters” enter OCOCCI Beach Monitoring Program.
6. MAREX works as technical advisor and as a research arm for Georgia’s Coastal Shellfish Industry. The program needs to identify and trace coastal pollutants that harm shellfish production or impact human health.
7. MAREX is studying the movement of both bacteria and nutrients into Coastal Water from by septic tans and sewage systems.

(D-2) What type of information on the coastal environment does your agency use to make those decisions, plans, or assessments?

1. MAREX Coastal Research operations need real-time wind and wave data to plan sampling operations.
2. Water quality information including nutrient, Chlorophyll, bacterial, temp, salinity, dissolved oxygen and current data are needed for MAREX monitoring and coastal model efforts. Also includes DNR
3. Water quality, fishery and habitat data is needed to better manage and predict recreational and commercial fishery populations and determine “Essential Fish Habitat” for major species.
4. MAREX and other costal entities need wind speed, surge and flooding information to respond to emergency situations.

(D-3) Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

Surface, bottom and mudwater C, %, DO, Nutrient (NO₂, NO₃, NH₄, P)₄) for development of real-time “Essential Fish Habitat” management models

1. Wind and wave forecast and real-time information
2. Water depth, current direction and current speed data in real time for two Coastal Georgia Ports.
3. Couple physical, nutrient and biological models
4. Flooding data – Short and Long-term
 - a. Development planning
 - b. Emergency response
5. Current models and sediment transport models to assist with bacterial source tracking work with DNR, EPD and CZM Programs.
 - a. Apply to recreational bathing waters
 - b. Apply to shellfish growing waters
6. Inclusions of **soil types** and land runoff impacts
 - a. Flood events
 - b. **Septic and sewage systems**
7. Establishments of “PORTS” System for Savannah and Brunswick

(D-4) Are there activities and services that you would like to provide but do not, because the necessary information is not available? What type of information would be needed to provide this activity or service?

1. Long-term land use/water quality and air quality models to predict the impact of current and proposed development on coastal watersheds and estuarine waters. Use information to advise coastal constituencies and decision makers on the impact of land use decisions. **(3 Greens Dots, 3 Red Dots, 3 Blue Dots)**
2. Use integrated “Essential Fish Habitat” information derived from water quality and biological models to effectively manage and preserve major commercial and recreation species.
3. **Provide where to build/not to build** to coastal government and private planners based on storm-surge models.
4. Provide real-time where to fish information service to both commercial and recreational fishermen
5. *Use water quality data to assess potential threats from **invasive aquatic species**.
6. Use predictive models to optimize coastal aqua-culture initiatives.
7. Use land use and water quality data to establish best practices for coastal septic systems.
- 8.

(D-5) What's the most useful way to communicate this information to you?

1. E-mail
2. Listserv
3. Website

SEACOOS
September 2, 2004
(NGOs – Research Institutions)
Red

What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

CENTER FOR A SUSTAINABLE COAST

Primary: Coastal Georgia

Secondary: Coastal Watersheds

Policies and Regulations Affecting:

1. Water quality, sources of improvement
2. Water flow, sources of disruption
3. Land use and relationships with terrestrial and aquatic ecosystems
4. Economic value and coastal resources, functions of ecosystems
5. Public investments, incentives related to economic development, use of national resources
6. Relationships between land-based activities, coastal waters, fresh, intertidal and marine ecosystems
7. Use of science in all permitting decisions, resource management and planning functions

ALSO:

- Comprehensive assessment of region's conditions, trends, future options, and implications of growth
- Transfer of info into policy, decisions, actions at all levels of authority

What type of information on the coastal environment does your agency use to make those decisions, plans, or assessments?

- EPA Toxic Release Inventories
- EPA/EPD Impaired Waters Reports – 303(d)
- CRD/DNR Fishery Landing
- NOAA Coastal Service Center – Various Data
- UGA Georgia County Guide
- Local and Regional Plans
- Various EPA sources on toxics, atmospheric deposition, etc.

Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

Center for Sustainable Coast – D. Kyler

1. Relationships between land-based, aquatic, estuarine, marine systems sediments, turbidity, toxic contaminants, D.O. species diversity/health freshwater flow, salinity fluctuations/ranges **(1 Red Dot, 1 Blue Dot)**
2. “Sustainability indicators” to provide measure of general conditions, specific problems, likely sources of problems – adjusted for seasonality, weather, etc.
3. Existing and potential risk/hazard information, esp. related to land use, nature based economic activities (flooding, storm surge, wind damage, habitat disruption/degradation)
4. Flooding and pollution – from landfills, septic/sewage systems, animal feeding op’s, industrial plants, nuclear power plants, etc.
5. Simulation of alternative development patterns (density, location, buffers, etc.) in relation to resource conditions, ecosystem functions

Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activity or service?

Center for Sustainable Coast

- Specific, credible indication of risk associated with land use, pollutant emission/discharge, etc.
- Monitoring data that can be linked to specific types of or changes in resources-using activities – e.g. marinas, power plants, impermeous surfaces, septic systems, etc. **(1 Green Dot, 1 Red Dot)**
- Cumulative analysis and prediction of aggregate consequences of multiple land uses, permitted decisions

What the most useful way to communicate this information to you?

- Mapping, preferable at resolution to support local land use decisions, include **animations**
- Graphs correlating specific activities/events/actions with resource conditions, ecosystem functions
- Narrative description of data types, sources, frequency accuracy, reliability, transferability, etc.

What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

UNCW
North Carolina State University
University of South Carolina

1. Predict coastal storm surge and land inundation from GA/SC Border to the NC/VA Border (and in due to Tropical Cyclones Chesapeake Bay)
2. Predict further intensification or genesis of Atlanta Low Pressure Systems

What type of information on the coastal environment does your agency use to make those decisions, plans, or assessments?

1. Atmospheric Winds and Pressure Fields
2. Atmospheric Tropical Cyclone – Model Output
3. Coastal Water Level
4. Coastal Currents
5. Estuary Currents
6. River Discharge
7. Waves
8. Temperature
9. Salinity
10. Dissolved Oxygen

Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

1. More coastal offshore meteorological real-time data
2. Much more oceanic, estuary and river mouth data; in general and in near real-time – including currents, water levels, temperatures, salinity dissolved oxygen
3. Ship time support
4. River discharge data at more sites along all watersheds of the U. S. Coastal
5. Water quality data for all watersheds and lakes of the U. S.

Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activity or service?

N/A

What's the most useful way to communicate this information to you?

N/A

What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

University of South Florida – West Florida Shelf

- Decide on locations of future measurement sites
- How to fund these sites

What type of information on the coastal environment does your agency use to make those decision, plans, or assessments?

University of South Florida – West Florida Shelf

- End User Feedback
- Scientific Need

Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

- Better and More Defined Customer Needs (2 Red Dots)

Are there activities and services that you would like to provide but do not, because the necessary information is not available? What type of information would be needed to provide this activity or service?

N/A

What's the most useful way to communicate this information to you?

- Personally
 - One-on-one or small groups

What decisions, plans, or assessments does your agency make that rely on information about conditions in the coastal environment?

Sandy Bernard – S.C. Sea Grant

- Hazards – Coastal Winds/Water/Surge, etc.
- Coastal Erosion
- Land Use Impacts on Coastal Environment and Ecosystems
- Aquaculture
- Fisheries

What type of information on the coastal environment does your agency use to make those decision, plans, or assessments?

- Coastal Climatologies
- Information Products/Analysis using Coastal/Estuarine Monitoring Data
- Model Output – Erosion/Runoff/Storm Surge

Thinking about what you currently do, what additional information on conditions in the coastal environment would allow you to enhance the activities and services that you provide to your constituencies?

N/A

Are there activities and services that you would like to provide but do not, because the necessary information is not available? What types of information would be needed to provide this activity or service?

N/A

What's the most useful way to communicate this information to you?

N/A