

# Regional Coastal Wetlands Monitoring Workgroup: Multi-state collaboration on data and assessment methodologies



Workgroup members meeting in the South Carolina Division of Natural Resources facility in Charleston, SC.

## Background

Monitoring the coastal wetlands of North Carolina, South Carolina, Georgia, and Florida is necessary to understand the current extent, condition, and function of these important natural resources and to begin to predict how these ecosystems will respond to changes in land use, climate, sea level, and water quality. Currently, there is no standardized or widely accepted monitoring program within these South Atlantic states. Instead, various federal, state, and local agencies, in addition to universities and nongovernmental organizations, are monitoring different aspects of coastal wetlands and their associated waters. However, there is little coordination among these agencies and organizations and there is limited sharing of data and information and leveraging of resources.

## Purpose and Goals

The Governors' South Atlantic Alliance (GSAA) has established a workgroup to facilitate communication about coastal wetland science in the South Atlantic and to collaboratively develop and enhance complementary monitoring programs. The goals of this workgroup are:

1. to develop a catalog of available coastal wetlands monitoring data,
2. assess the comparability of state wetland monitoring efforts, and
3. evaluate existing state methodologies to improve the consistency of monitoring efforts across the South Atlantic region.

## Methods – Formation of the Workgroup

**Workgroup Membership** - The responsibility of monitoring wetlands often falls to multiple state agencies; therefore to be successful, the workgroup needs to be inclusive of all state agencies with an interest in coastal waters. To provide the expertise and experience to develop and conduct effective wetland monitoring programs, the workgroup also includes practitioners from federal agencies and universities.

**Active Participation/Engagement Process** – Members participate in monthly webinars and in-person meetings (twice a year) with remote participation possible for members who can not travel. Utilization of online polls and chat functions ensures equal participation among members.

**Feedback Loop** - Workgroup re-evaluates decisions made at previous meetings through distribution of meeting minutes and through presentations at the next monthly meeting.

**Ownership of Process** – Key decision points are discussed by workgroup members and determined by the majority of the members.

## Geographic Extent and Scope

### Geographic Scope:

- Located within North Carolina, South Carolina, Georgia, and Florida
- Located within watersheds designated by 8-digit hydrologic unit codes (HUCs) that drain to the Atlantic Ocean



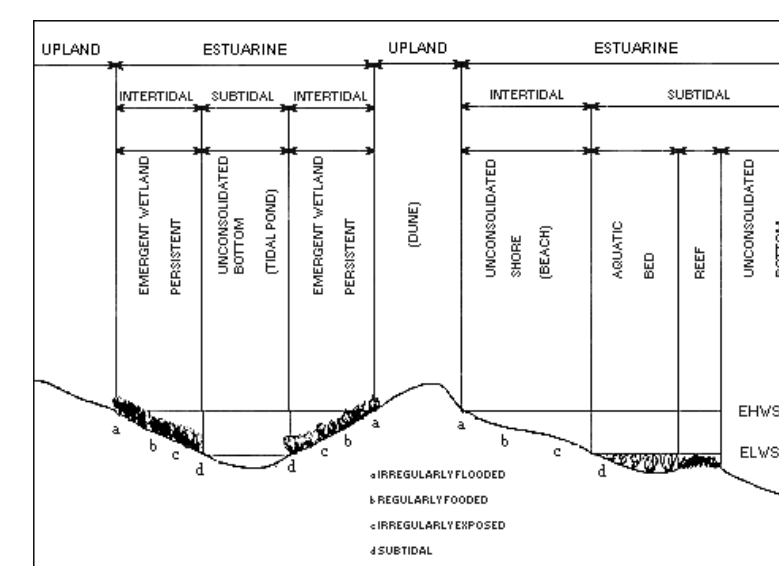
### Definition of a wetland:

**Wetlands** are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Wetlands must have one or more of the following three attributes:

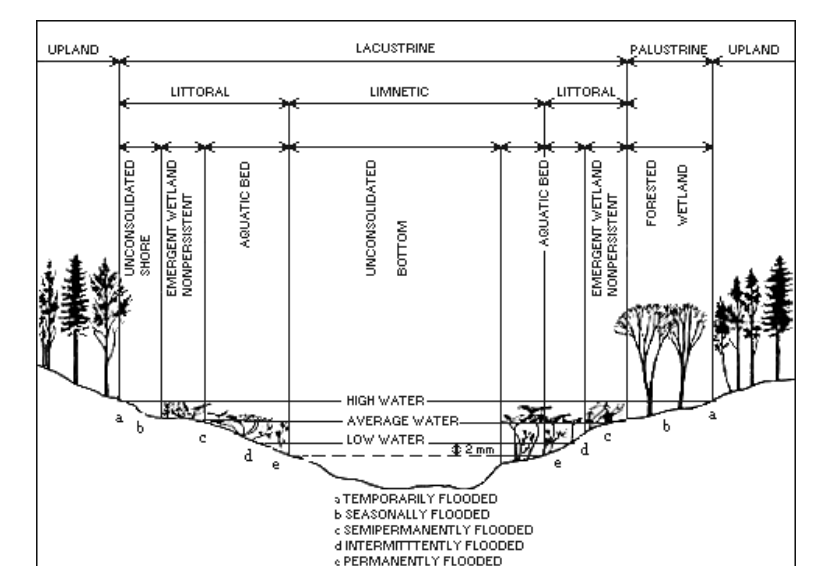
- at least periodically, the land supports predominantly hydrophytes;
- the substrate is predominantly undrained hydric soil; and
- the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

The **upland limit of a wetland** is designated as (1) the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover; (2) the boundary between soil that is predominantly hydric and soil that is predominantly nonhydric; or (3) in the case of wetlands without vegetation or soil, the boundary between land that is flooded or saturated at some time during the growing season each year and land that is not.

The **boundary between wetland and deepwater habitat** in *Marine and Estuarine Systems* coincides with the elevation of the extreme low water at spring tide; permanently flooded areas are considered deepwater habitats in these Systems. The boundary between wetland and deepwater habitat in the *Riverine and Lacustrine Systems* lies at a depth of 2 m (6.6 feet) below low water; however, if emergents, shrubs, or trees grow beyond this depth at any time, their deepwater edge is the boundary.



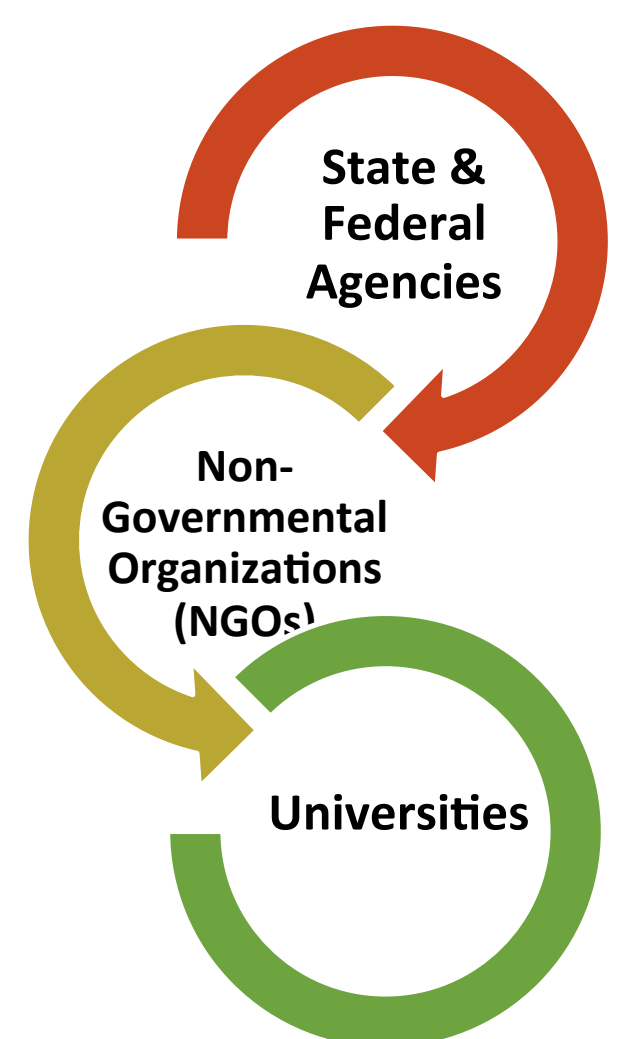
Estuarine System



Lacustrine System

## Comparability of State Monitoring Programs

We will evaluate monitoring methodologies for coastal wetlands across the South Atlantic region and identify gaps in current programs and make recommendations for potential program enhancements based on wetland type and program objectives. We will prepare a report that identifies priority data that should be collected to improve comparability of wetland results across the region. In addition to data collection methods, we will identify potential partnerships among state and federal programs, universities, and other organizations to leverage resources, outcomes, and outreach activities. The report will also discuss how these data can be used to communicate the condition and functions of coastal wetlands and their role in achieving Clean Water Act goals.



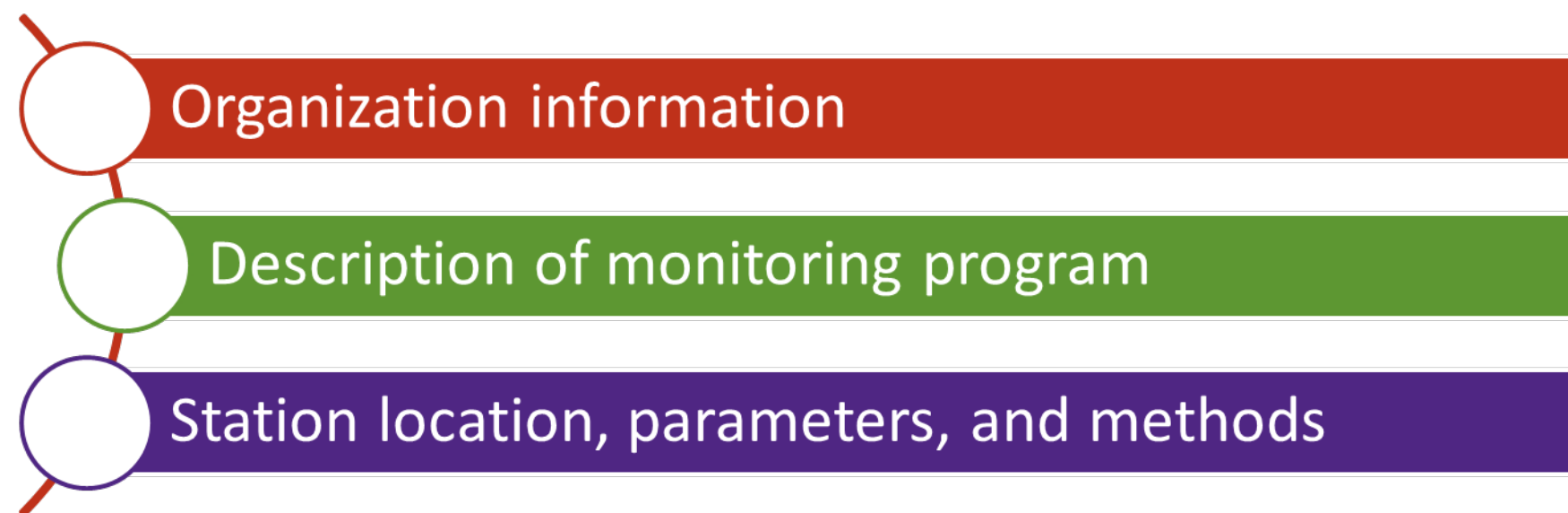


## Coastal Wetlands Data Catalog

We are developing a catalog of stations and available monitoring data for coastal wetlands in the South Atlantic states. The design of the data catalog and user interface is being developed based on input from the Coastal Wetlands Monitoring Workgroup.

The Coastal Wetlands Data Catalog will be easy to access and query information. The data catalog is being created using Microsoft Access and will be available at the GSAA website (<http://southatlanticalliance.org/>).

The Data Catalog provides a centralized location to access information about coastal wetland monitoring programs and station information including geographic location, wetland type, parameters monitored, and sampling methods used. If available, web links will be provided for the user to access the data and the monitoring program.



### Components of the Coastal Wetlands Data Catalog

The user will be able to query on each component variable and find information based on location, watershed, wetland type, or monitoring parameter. The data catalog will increase collaboration and sharing of data and information to better assess the condition and function of coastal wetlands in the South Atlantic region of the United States.

## More than just Coastal Wetlands

The workgroup decided that the Data Catalog can include more than just wetland data. It may contain stations for nearby surface water quality stations or upland terrestrial sites that may influence nearby wetlands. The database can also include oyster reefs, submerged aquatic vegetation, and impoundments.



Examples of coastal wetland types. Forested wetland (top left); oyster reef bed (top right); estuarine marshes (bottom left); and planted marsh (bottom right).

## Workgroup Members

## Affiliation

North Carolina	Affiliation
Cyndi Karoly & Kristie Gianopoulos	NC Dept. of Environmental Quality (DEQ) Division of Water Resources
Marcelo Ardon-Sayao	East Carolina University
Mike Burchell	North Carolina State University
Dean Carpenter	Albemarle-Pamlico National Estuary Partnership
Brandon Puckett	NC National Estuarine Research Reserve (NERR)
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Christine Pickens	The Nature Conservancy
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Georgia	Affiliation
Jan Mackinnon & Dominic Guadagnoli	GA Department of Natural Resources
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C.J. Jackson	Georgia Southern University
Nicole Rankin	US Fish and Wildlife Service
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Mark Brown	University of Florida
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Laura Geselbracht	The Nature Conservancy
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Pete Kalla	EPA Region 4

## Contact Us

Do you participate in or know of a monitoring program in North Carolina, South Carolina, Georgia, or Florida that could be included in this data catalog?

If you do or if you want to find out more about this project, please contact us:

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