

## Sapelo Island National Estuarine Research Reserve (SINERR)

HOST LOCATION: SINERR, Sapelo Island

FELLOWSHIP SUPERVISOR/MENTOR: Doug Samson, Reserve Manager; [doug.samson@dnr.ga.gov](mailto:doug.samson@dnr.ga.gov); 912-485-2251)

### POSITION DESCRIPTION:

Sea Grant State Fellow will advance the following goals at SINERR:

Fellowship Project Goal 1: To develop a multi-partner, collaborative online resource – “Changing Coastal Georgia” – that highlights: a) patterns and trends in climate and sea level data for the Georgia coast; b) known and potential effects of these changes on coastal human communities & development; 3) known and potential effects of these changes on coastal native species, habitats and ecosystems.

Fellowship Project Goal 2: To develop new community resilience projects that will be relevant to, and can be implemented in, the local community (Hog Hammock) on Sapelo Island, as well as local communities on the mainland, especially in McIntosh and Glynn counties.

### Preferred Qualifications:

- Strong familiarity with the science of climate change and sea level rise (SLR), especially in GA.
- Strong familiarity with known and/or potential impacts of climate change & SLR on both human and natural coastal communities.
- Experience planning, leading, or participating in coastal community resilience projects.
- Experience conducting analyses or assessments of climate change and SLR data.
- Familiarity with coastal Georgia landscapes, both human and natural.
- Excellent technical writing, editing skills.
- Self-motivated, ability to work independently.
- Graphics design skills/experience a plus, webpage design experience a plus.
- Prior experience on Sapelo Island a plus.

### *Project Goal 1 Details:*

Develop a design plan for a new “Changing Coastal Georgia” website that would be modeled after the “Changing Chesapeake” website (<http://www.chesapeakeedata.com/changingchesapeake/>). The latter is a public/private partnership between the Chesapeake Bay NERR’s (MD, VA), the National Centers for Coastal Ocean Science, the University of Maryland Center for Environmental Science, and Chesapeake Environmental Communications. It uses local climate data and trends to define the links between climate change and environmental impacts to Chesapeake Bay human and natural systems. The website presents four overarching “Messages” and has sections devoted to “Evidence,” “Submerged Aquatic Vegetation,” “Seasonal Cues,” “Human Health,” and “Nutrient Pollution.” In addition to the website, the Changing Chesapeake partnership produced: 1) a blog targeted at students and teachers that provided a “behind the scenes” look at the analyses presented on the website, and; 2) a new climate change section in the Chesapeake Ecosystem Atlas.

The “Changing Coastal Georgia” project would differ from “Changing Chesapeake” in several important ways. First, sea level rise trends and impacts would be featured, too, in addition to climate change trends and impacts. Second, because the Georgia coast has been much less impacted to date by “environmental degradation” compared to the Chesapeake Bay, the focus here would be on potential impacts to natural habitats and coastal communities. Any known impacts to date that can be documented (e.g., increasing shoreline erosion due to SLR) would be highlighted.

Primary Expected Products:

- draft design plan for the website, incorporating input from potential collaborators.
- commitments (e.g., MOU's, LOI's) from partners to collaborate.
- preliminary data trends & patterns that would be highlighted (do analyses where needed).
- preliminary compilation of impacts (potential, known) that would be featured.
- identification of potential funding sources for implementation stage (draft proposals, if feasible).

*Project Goal 2 Details:*

The local community for the Sapelo Island NERR is the private, residential community of Hog Hammock, which occupies 434 acres on the otherwise state-owned 10,000-acre island. Hog Hammock has been described as the last “Saltwater Geechee” community on the East Coast. There are now fewer than 50 permanent residents, most of whom are descendants of slaves brought to Sapelo in the early 1800's. Most are also retired and elderly. In recent years, an increasing number of non-resident, white, affluent landowners have been building vacation homes in the community. This, in spite of the fact that there is no commercial development on Sapelo. Hog Hammock, then, has a unique and complex history, and is undergoing a major socioeconomic transition. The permanent residents in Hog Hammock are significantly more vulnerable to the impacts of sea level rise and climate change than are the newer property owners, in large part because new homes must be elevated on stilts, while many older homes sit at ground level (Hog Hammock is low-lying and abuts marshland on the east side). Development of a relevant and effective community resilience project (or projects) for Hog Hammock will need to address the diverse and dynamic circumstances present in this unique community.

On the mainland, McIntosh County is one of the least populated, least developed and poorest counties in Georgia. The population of less than 15,000 is concentrated around Darien, the only sizable town (pop. 1700). McIntosh has a notable population of retired, affluent and well-educated whites, as well as many residents (both white and black) who are low-income and poorly educated. Many county residents work in Brunswick (pop. 16,000), 20 minutes to the south in Glynn County (pop. 79,000). Glynn County has a wide variety of low-income, modest, affluent (e.g., St. Simons Is.) and extremely affluent (Sea Island) local communities. Both counties, then, have notable socioeconomic stratification, with the locations and types of residential and commercial neighborhoods reflecting that stratification. Various community resilience projects have been implemented elsewhere in coastal Georgia, but little work has been done to date in either McIntosh or Glynn counties. The Fellow would develop plans for potential community resilience projects that would address the needs and challenges of several communities in one or both counties, taking into account the specific geographic, economic, social, and cultural characteristics of each community targeted.

Primary Expected Products:

- recommendations for communities to target, preliminary assessment of community needs, gaps and challenges.
- design plan for recommended resilience project (Goals, Objectives, Approaches, Outcomes).
- identification of “best” partners for collaboration in each targeted community.
- identification of potential funding sources for implementation stage (draft proposals, if feasible)

***As a federal-state partnership, the Sapelo Island NERR is fully committed to diversity and inclusion in the workplace, and does not discriminate on the basis of race, religion, age, gender identification, abilities or any other factor.***