



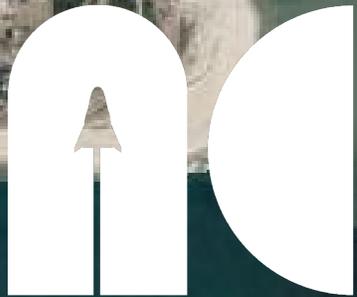
Connecting Sea and Space

Dr. Susan White

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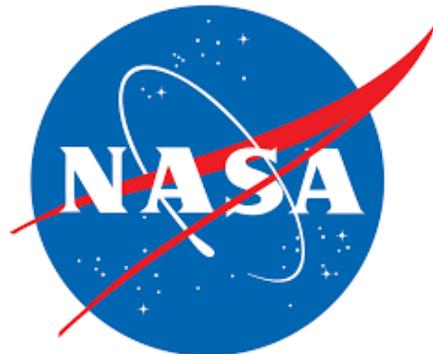
NORTH CAROLINA SPACE GRANT



National Programs – Similar Structure

National Space Grant Program

- Funded by NASA
- Federal/university partnership
- Network of 52 university-based programs
- Focused on student workforce development, research and education



National Sea Grant Program

- Funded by NOAA
- Federal/university partnership
- Network of 34 university-based programs
- Focused on research, extension and education



Examples of NC Sea/Space Collaborative Efforts

- NC Sea/Space Graduate Research Fellowship Program
- Community Collaborative Research Grant Program
- Education initiative connections
- Administrative operations

NC Sea/Space Graduate Research Fellowship Program



Overview: Utilizing data from vast archives and remote-sensing capabilities available through NASA and NOAA, the fellowship will address a high-priority research need within North Carolina's nearshore environs and costal watersheds.

- Measurement instruments and/or remote-sensing data sources from NASA, NOAA or other sources can include, but are not limited to, radiometers, spectroradiometers, satellite sensors, LIDAR, aerial imagery and other data collected from airplanes, unmanned aerial vehicles and/or unpioted submersibles.

Award Term: One year (faculty mentored)

Number of Awards: up to 2 (per FY)

Award Amount: \$10,000 (split between two programs)



NC Sea/Space Graduate Fellows Research Areas

Greenhouse Gas Emissions from Standing Dead Trees Along the Albemarle Pamlico Peninsula, North Carolina

Modeling the effects of saltwater intrusion on the forested wetlands of North Carolina's coastal plain

Using Unmanned Aerial Systems remote sensing imagery to assess oyster reef health before and after commercial harvest

Investigation of Marine Physical-Biogeochemical Interactions During Storm Conditions Off of the North Carolina Coast

Using Repeat Lidar Surveys and Multi-temporal Satellite Data to Evaluate Vegetation Responses to Sea Level Rise and Saltwater Intrusion in the North Carolina Coastal Plain

Integrating Spatial Ecosystem Services Considerations into a GIS-based Decision Support Tool for Oyster Restoration: Application of Remotely-Sensed Chlorophyll a

Community Collaborative Research Grant Program

- CCRG is a program supported by NC Sea Grant and the state's [Water Resources Research Institute](#), in partnership with the [William R. Kenan Jr. Institute for Engineering, Technology and Science](#) based at NC State University.
- The CCRG requires the use of a collaborative research approach that couples the knowledge of community stakeholders with academic experts in the field to address priority coastal issues that align with the mission and strategic plan of Sea Grant.



INSIDE THE RED CIRCLE, THE OAP REGION'S PRISTINE DARKNESS STANDS IN CONTRAST TO THE EAST COAST'S BRIGHT LIGHTS.

NC Space Grant Connection: funding split between Sea/Space to support the [Night Scape Resource Project – Outer Albemarle Peninsula](#) lead by Dr. Stanley Riggs, coastal and marine geologist with NC LOW (“North Carolina Land of Water”)

Education Initiatives



[Scientific Research and Education Network](#)

- Graduate student-led network that connects local STEM researchers and educators
- NC Sea/Space participate in SciREN educator events and share resources/curriculum



[My NASA Data](#)

- K-12 program that analyzes and interprets NASA Earth science mission satellite data (atmosphere, biosphere, cryosphere, geosphere, hydrosphere, Earth as a system)
- NC Space Grant offers educator professional development



[Global Learning and Observations to Benefit the Environment](#)

- An international citizen science program that allowed students and public opportunity to participate in data collection and the scientific process to understand Earth systems
- NC Space Grant offers educator professional development

Administrative Operations

Shared administrative positions:

- Fiscal Manager
- Communications Specialist
- Communication Interns



NORTH CAROLINA SPACE GRANT

QUESTIONS

