

NC Space Grant – NC Sea Grant
Ghost Forest Research
Special Request for Proposals



Overview

[North Carolina Space Grant](#) (NC Space Grant) in collaboration with [North Carolina Sea Grant](#) (NC Sea Grant) is accepting applications for a special call for proposals focused on Ghost Forest Research. Coastal North Carolina is extremely vulnerable to the impacts of Sea Level Rise. One of the impacts of rising water levels and altered salinity regimes is conversion of coastal forest to wetlands and eventually open water. This process proceeds through a “ghost forest” stage characterized by still-standing dead trees surrounded by more water-tolerant species. The loss of forest has many implications from decreased carbon storage, increased greenhouse gas emissions, altered habitat availability, and changed hydrologic cycles. Ghost forest are readily discernable through digital imagery interpretation. Tracking the loss of forest and the resulting effects is a sentinel tool in understanding and responding to how our coastal habitats are changing due to climate change. **Proposals responding to this call can address any research aspect related to the “ghost forest” process, and/or our ability to understand, predict, and model these systems.**

We strongly encourage proposals from graduate students at historically black colleges and universities (HBCUs) and minority serving institutions (MSIs) and/or from traditionally underserved and underrepresented communities, as well as from graduate students who can demonstrate how their work and related outreach will benefit underserved and underrepresented communities.

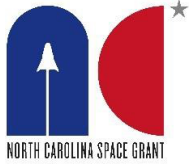
Regional Approach

NC Space Grant and Sea Grant programs have partnered with our sister organizations in Louisiana to jointly promote this opportunity. Like North Carolina, Louisiana is also experiencing a ghost forest expansion. Thus, the Louisiana Sea Grant and Space Grant programs plan to fund a student concurrently to study the ghost forest phenomenon in their state. The four programs together will ensure the two students, while working independently in their own states on their own projects, will collaborate and work with each other as a cohort. This will allow the students to consider the regional implications for their work, and will promote unique professional development opportunities for the students, as well as ensure that lessons learned in both states are transferred broadly across each region. The sponsoring agencies (all four programs) will help ensure that this collaboration occurs.

Requirements

Students responding to this RFP must:

- Be United States citizens.
- Be a full-time, enrolled graduate student at an accredited college or university within North Carolina.
- In good academic standing with a GPA of 3.0 (out of 4.0) or higher.



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- Adeptly utilize relevant measurement instruments and/or remote-sensing data sources from NASA, NOAA, or other sources that 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 unpiloted submersibles in the execution of the proposed work.
- Have their proposed research supervised by a faculty mentor.
- Be willing to present their research findings at a meeting, conference, or other formal gathering of professional organization(s), association(s), etc. among peer researchers, policymakers, or another relevant audience.
- Be willing to present their project at the 2024 NC Space Grant symposium.

Funding

- The funding amount is \$10,000.
- Project performance period is 9-1-2023 through 9-30-2024.
- Funding will be provided via direct student stipend installments allocated across the performance period pending project milestones are being met.
- Additional travel support to encourage cohort development/regional collaboration is available.

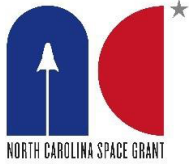
Application

Students should submit a complete proposal package (see below) via email to debra@ncsu.edu by 8-11-2023. Late applications will not be accepted. **All elements should be submitted as a single combined Adobe pdf.** Note: If the faculty advisor wants to keep their letter of support confidential, it can be emailed directly by the letter writer to debra@ncsu.edu.

Required Proposal Elements:

A complete proposal package must include the following:

- 1) **Title Page:** Include student name and contact information, academic institution, major, and faculty mentor contact information.
- 2) **Description of Proposed Research Project:** A statement written by the student in consultation with a faculty mentor should describe: (1) The key elements of the proposed research and plan of study, including stated research question/s related to ghost forest **and** remotely sensed data/instruments and/or sources to be used; (2) What the student intends to accomplish, and (3) Clear description of how the proposed work is related to the interest of all of the following: NASA/NC Space Grant, NOAA/NC Sea Grant, and the State of North Carolina. The strategic plans for [NC Space Grant](#) and [NC Sea Grant](#) are available as hyperlinked above.
- 3) **Materials and Methods:** Detailed enough to ensure reviewer confidence in the ability of the project to answer the stated research questions. Be sure to include any needed statistical methods.
- 4) **Timeline:** Provide a clear timeline of all project activities.



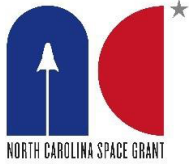
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(Items 1-4 are limited to 4 pages.)

- 5) **Outreach Plan (maximum of 1 page):** A detailed plan of how the project results will be disseminated. This should include your plan to present research methodology and/or research findings at a meeting, conference, or other formal gathering of professional organization(s), association(s), etc. among peer researchers, policymakers, or another relevant audience (presentation of research at the 2024 NC Space Symposium is required). Also, be sure to discuss how your work can be translated to managers if applicable and/or local government and landowners. Finally, given the regional approach desired by the four partnering entities, please include some thoughts on how you foresee working with the Louisiana student and how your work might be applicable to that region.
- 6) **Data Management Plan (limited to two pages):** In addition to the above application, to comply with NOAA's data and publication sharing directive for grants and contracts, [version 3.0](#), each applicant must develop and submit with their application a data management plan (DMP). The DMP does not count toward the four-page limit, described above. Guidance for developing data management plans is provided on the National Sea Grant Program [website](#). Plans should be no more than two pages and should include: descriptions of the types of environmental data and information expected to be created during the course of the project; the tentative date by which data will be shared; the standards to be used for data/metadata format and content; methods for providing data access; approximate total volume of data to be collected; and prior experience in making such data accessible. If your project is not expected to develop any environmental data, then your DMP may simply include the declaration: "This proposal is not expected to generate environmental data. Therefore, a Data Management Plan is not required."
- 7) **Budget Plan (limited to one page):** This award will be distributed via direct student stipend installments allocated across the performance period pending project milestones are being met. It is the graduate student's responsibility to manage their budget and determine if any of the funds will be used to cover fieldwork expenses, conference travel, materials & supplies, or undergraduate assistants. Please include a statement here as to how you intend to spend your \$10,000. This is not meant to be a detailed project budget, just your current vision for how this funding would help you complete this project.
- 8) **Current student CV** (limited to two pages).
- 9) **Letter of support** from the applicant's faculty mentor.

Proposals may also contain a Literature Cited section, and up to two additional stakeholder letters of support if needed. These elements do not count toward the page limits described above.



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Review Process

Each received complete application will be reviewed by a technical review panel. The panel will be made up of participating program staff and other experts as needed. Proposals will be ranked based on the quality of the proposed work, adherence to the instructions provided in this request for proposals, clear use of remote sensed data, relevance of potential project findings, thoughtfulness of the outreach plan, and the strength of the faculty support letter.

Contacts

Please send any questions about this opportunity to:

- John Fear, North Carolina Sea Grant, jmfear@ncsu.edu.
- Jobi Cook, North Carolina Space Grant, jobi_cook@ncsu.edu.