



North Carolina Sea Grant

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North Carolina Sea Grant Research Opportunity for Resource Management Needs

Submission Deadline: 5 p.m. Monday, December 6, 2021.

North Carolina Sea Grant (NC Sea Grant), a multi-campus center of the University of North Carolina System, seeks to support our partnering State Agencies in their missions. As such, this request for proposals (RFP) is aimed at bringing the excellent research talent contained within our State's public and private colleges and universities to bear on the identified research needs of our State Agencies. We encourage a wide range of applicants.

We recognize up front that this RFP is only able to cover a small percentage of the overall vast list of needs from our Agency partners. These particular RFP focus areas were chosen based on correspondence with Agency Directors, research needs identified by the Coastal Habitat Protection Plan, and NC Sea Grant funding levels available to support this opportunity. It is our hope that needs not included this time will be addressed in future research competitions.

Research Needs:

Blue Crab

Results from the most recent stock assessment, which included data from 1995-2016, indicate that the stock was overfished and that overfishing was occurring. Model estimates also show an overall declining population size. Research is needed to understand these trends and help provide the data/findings needed to help reverse it. Specifically, projects are sought that:

- Identify key environmental factors that significantly impact North Carolina's blue crab populations, juvenile recruitment, and spawning success.
- Develop better estimates of life-history parameters, especially growth and natural mortality as it relates to the overall stock.
- Collect information on diamondback terrapin interactions with the crab pot fishery statewide.
- Conduct gear research to minimize bycatch of prohibited blue crabs and other species.

Oysters

The oyster population in North Carolina remains low compared to historical perspective. Research is needed to understand the lack of recovery for this species. Specifically, projects are sought that:

- Use existing water quality data sources (i.e.: NOAA, USGS, FerryMon, Shellfish Growing Areas and Recreational Water Quality Programs, meteorology sources, etc.) to examine environmental variables (pH, temperature, salinity, emerging contaminants, etc.) on oyster population dynamics.
- Assess the impacts of recreational oyster harvest to population dynamics.
- Quantify the impacts of mechanical harvest gear on oyster cultch habitat quality.
- Adapt novel methods to monitor oyster reef metrics (e.g., height, area, and condition) and compare to traditional methods.
- Assess the current distribution and productivity of oyster sanctuaries to provide guidance for future sanctuary construction and overall species recovery.

Other Shellfish

Several other shellfish species have specific research questions that managers need addressed. Specifically, projects are sought that:

- Examine the factors impacting the spatial and temporal variability of bay scallops within and between North Carolina's sounds.
- Identify the role water quality and nutrient loading has in bay scallop recruitment and growth.
- Identify and understand the causes and impact of natural mortality events in hard clams.
- Assess the impacts of recreational hard clam harvest to population dynamics.
- Design and pilot test innovative gears or modifications to existing gears to reduce bycatch in the commercial and recreational harvest of shrimp.
- Quantify the cumulative impacts of shrimp trawl bycatch on fish population dynamics.

Habitat

Healthy habitat is critically important to the vitality of all our coastal species. Specifically, projects are sought that:

- Examine the ecosystem benefits and tradeoffs to blue crabs, oysters, and other shellfish of oyster shell, granite, marl, and other alternative shoreline stabilization materials used in the construction of living shorelines; and compare these relationships across various environmental settings.
- Quantify the beneficial habitat relationships that exist between oyster reefs and estuarine fish species of interest to NC-DMF (i.e., Black Drum, Red Drum, Sheepshead, etc.)
- What are the impacts of inlet dredging (direct and indirect) on blue crabs, oysters, and other shellfish?
- Investigate and determine the magnitude and change in sedimentation rates and sources, especially in the upper estuaries and tidal creeks, relative to their possible impacts on blue crabs, oysters, and other shellfish.
- Quantify the impact of water quality degradation (including Harmful Algal Blooms) and habitat loss on blue crabs, oysters, and other shellfish.

We invite proposals for **one-year projects**, with budgets up to \$60,000 in grant funds. Projects will be funded with state dollars, which do not allow indirect costs to be charged. Matching funds are not required but are encouraged, especially for full-budget request proposals.

Proposals must include a hypothesis-based research question and a strong outreach/extension component. Sea Grant is not able to fund monitoring only projects and ones that involve human subjects.

To ensure that the proposed research is usable and readily transferred to agencies, projects must demonstrate that significant coordination has occurred with the management agencies during proposal development. This coordination must be documented on the required [agency concurrence letter \(Attachment 1\)](#). Agency concurrence letters are provided directly to NC Sea Grant and will not be shared with PI teams. This will allow agency staff to freely express their thoughts on the proposed work. Submitted proposals must justify how the proposed work meets at least one of the research needs identified above and also has relevancy to one or more Sea Grant Strategic Plan (go.ncsu.edu/Sea-Grant-Plan) focus areas. This RFP is geared toward addressing current/pressing needs and as such, projects that deliver rapid results will review better than ones that have longer term returns on investment. Proposals that provide student training opportunities and that align with NC Sea Grant's vision statement for Diversity, Equity, and Inclusion (go.ncsu.edu/DEI) are also strongly encouraged. Proposal start dates are flexible to best align with biological cycles, but should occur between March and May 2022.

Eligibility

Projects must be led by an academic faculty member principal investigator. Principal investigators are allowed only one submission, and must be from an accredited North Carolina-based University/College. There is no limitation on Co-investigator affiliation. Co-investigators can be on multiple submissions. Partnerships with local knowledge experts are encouraged. Out-of-State Co-investigators are allowable, but the majority of the project's funding should remain within North Carolina. Investigators with incomplete reporting from previous NC Sea Grant-funded opportunities are not eligible to apply.

We encourage proposals from investigators at Historically Black Colleges and Universities (HBCUs), Minority Serving Institutions (MSIs), and/or from traditionally underserved and underrepresented communities. Research teams that include co-leadership and strong collaboration with investigators affiliated at HBCUs, MSI, and/or underrepresented and underserved communities are also encouraged.

Proposal Submission

All proposal submissions will occur through the eSeaGrant portal. Please click this link to access the portal: go.ncsu.edu/ncesg. The portal will also give you access to all required forms.

Detailed submission instructions are contained in the portal. The portal will close down precisely at **5 pm Monday, December 6, 2021**. Only complete proposal packages will be considered eligible. A complete proposal package consists of the following elements, which the portal will guide you through including. Proposals should be succinct, but sufficiently detailed for review by peers, potential users of results and program advisors.

- PI/Co-PI information

- PI/Co-PI curricula vitae (2-page max)
- Signed title page (1 page)
- [Proposal narrative \(8-page max\)](#)
- Proposal budget/budget justification
- Project Timeline (1-page max)
- [Agency Concurrence Letter \(Attachment 1\)](#)
- A data management plan
- Letters of Support or Collaboration (optional, as needed)

University-approved and signed copies of your proposal narratives must be submitted using the supplied [proposal narrative form \(Attachment 2\)](#). The system will prompt you to input the remaining elements of the application package. Letters of support from stakeholders (if appropriate for your project) may be submitted through the portal as part of your application. Stakeholder letters must be received prior to the submission deadline for us to include them in the package that reviewers will see. All attachments and instructions can be downloaded from within the eSeaGrant system (go.ncsu.edu/ncesg). Proposals that do not utilize these forms or that lack campus approvals and signatures will not be eligible for funding.

Available Funding:

North Carolina Sea Grant expects to be able to fund 2 to 4 projects out of this solicitation, depending upon requested budgets and quality of the proposals received. Maximum budget request is \$60,000 in grant funds. Applicants should be aware that not all highly rated projects will be funded. NC Sea Grant does not have enough funding to cover all the outstanding applications that we receive.

Review Criteria:

Anonymous reviews will be obtained for all complete applications received. Reviewers will include peer experts, potential users of results, and program advisors. All proposals will be reviewed for relevancy, scientific and technical merit, the ability to address one or more of the specific research needs identified in this RFP, and having a quality outreach component. Project merit will be assessed against the following criteria:

- Addresses one or more of the research needs and is relevant to one or more focus areas in the Sea Grant strategic plan.
- Methods appropriate to complete proposed work. Clear research question included in proposal.
- Includes innovative ideas, approach and/or potential findings.
- Project results obtainable within project timeline, timeliness of application of generated results.
- Robust plan to communicate project results to academic and management stakeholders.
- Degree of coordination with the management agency. Strength of the agency concurrence letter.
- Student training opportunities provided, and alignment with Sea Grant's DEI commitment.
- Qualifications of the applicants.

- Reasonableness of budget for work proposed.

Based on obtained reviews, the most meritorious proposals will be run through a technical panel that will make funding recommendations. Final funding decisions, including the level of funding for each project is at the NC Sea Grant Director's discretion. Funding decisions are expected to be released by February 7, 2022.

Reporting:

Sea Grant requires all fundees to complete annual progress/final reports. These calls for reports occur in the spring of each year. While your project is being conducted, you will submit a "continuing" project report. When your project is finished you will submit a "completion" report that includes your final written summary for your project. Additionally, Sea Grant will follow-up with you for three years after the completion of your project to track longer-term products, like publications and leveraged funding. These "post-completion" reports are very simple and should only take a few minutes to complete. This robust reporting system is necessary to address required national Sea Grant metrics and to ensure continued funding. Investigators that fail to complete the reporting requirements jeopardize not only their on continued funding, but that for all others as well.

Questions?

Research questions should be directed to John Fear, Deputy Director, 919-515-9104, jmfear@ncsu.edu.

Budget assistance can be obtained by contacting Mary Beth Barrow, Fiscal Officer, 919-515-9103, mebarrow@ncsu.edu

For outreach assistance, please contact Frank Lopez, Extension Director, 919-515-3012, fmlopez@ncsu.edu; or Katie Mosher, Communication Director, 919-515-9069, kmosher@ncsu.edu.