



REQUEST FOR PROPOSALS PROGRAM DEVELOPMENT GRANTS

Funding Period: February 1, 2020 to January 31, 2021

FOR THIS SOLICITATION, NJSGC ANTICIPATES FUNDING:

- **Up to four (4) program development (PD) proposals with a maximum budget of \$5,000 for the entire project.**

DEADLINE FOR APPLICATIONS:

- **July 15, 2019 by 5:00pm EDT**
- **Final selection, all PIs notified: On or before August 15, 2019**
- **Funded projects begin: February 1, 2020 (contingent on receipt of federal funding)**

ABOUT NEW JERSEY SEA GRANT CONSORTIUM

New Jersey Sea Grant Consortium (NJSGC) brings together the region's colleges, universities, and other entities with expertise in marine, coastal, and estuarine science and an interest in the policies that govern New Jersey's marine, coastal, and estuarine affairs. Collectively the organization works to advance knowledge and wise utilization of New Jersey's marine, coastal and estuarine resources and make a positive impact on marine and coastal policy for the region. For more information about NJSGC, its programs, and its [current strategic plan](#) go to njseagrant.org.

NJSGC is also the administrator of the National Sea Grant College Program (NSGCP) for the state of New Jersey and is part of a network of 33 programs administered by the National Oceanic and Atmospheric Administration (NOAA) dedicated to wise utilization and well-informed management of the Nation's coastal and Great Lakes resources. NJSGC is funded through NOAA and the NSGCP through a four-year grant to provide research, education, and extension programs that promote sustainable use of New Jersey's coastal and marine resources informed by sound science. Funding for this grant is allocated in the Federal Omnibus Budget and must be approved by Congress annually. NJSGC's current omnibus cycle began February 1, 2018 and will end January 31, 2022. Descriptions of current and past projects can be found [on NJSGC's website](#).

I. GENERAL APPLICATION INFORMATION

NJSGC anticipates having Program Development (PD) funds available to support research on emerging coastal issues or proof of concept studies that have the potential to develop into larger research projects. It is anticipated that up to four (4) one-year projects will be awarded. All PD grant proposals must address at least one of the focus areas as described in [NJSGC's current strategic plan](#) and specific corresponding research priorities listed in [Section II](#) of this RFP.

A. INVESTIGATOR ELIGIBILITY

NSGCP and NJSGC are committed to building an inclusive program that serves all people including those with unique needs, circumstances, perspectives, and ways of thinking. Eligible applicants of all ages, races, ethnicities, national origins, gender identities, sexual orientations, abilities, cultures, religions, citizenship types, marital status, job classifications, veteran status types, and socioeconomic status are encouraged to apply.

To be eligible, project principal investigators (PIs) must be affiliated with a New Jersey university, two or four-year college, research laboratory, or other non-profit or tribal institution with a research or science-based mission (including museums). Project co-principal investigators (Co-PIs) must be affiliated with the aforementioned types of institutions including those located out of state. Investigators may submit multiple applications for PD grants as the PI or co-PI, however successful PI's will ultimately receive a maximum of one PD grant. In addition, each application must describe a clearly distinct project and be prepared and submitted separately.

NJSGC encourages multi-institution, multi-disciplinary, and multi-investigator applications but individuals from state and federal agencies and for-profit and foreign organizations cannot apply for direct support. However, their contribution may qualify as matching funds (see [Section B](#)) for the project. NJSGC also welcomes proposals for cooperative projects that engage eligible research institutions with the private sector.

B. BUDGET and REQUIRED COST SHARE (MATCH)

The duration of the funding period for PD grants is February 1, 2020 to January 31, 2021. Please note your budget may include indirect costs but those are limited to 10% of the total request. All awards are contingent on the availability of federal funds to NJSGC through NOAA/NSGCP from the FY 2020 federal budget.

Federal law requires that NJSGC provide a **non-federal cost share** (match) of at least 50% or \$1 for every \$2 of federal funds it receives. Budgets must include the required 2-to-1 match (for every \$2 requested of federal Sea Grant funds, \$1 in non-federal matching funds must be provided by the proposer). For all awards made through this solicitation, cost share is the applicant's responsibility. Cost share sources must be clearly identified and projects selected for funding will be required to provide documentation that supports the funds claimed on each invoice submitted. Cost share must be expended during the same time period as the project and may be provided as cash or from acceptable in-kind resources. Examples of matching or cost share sources include: non-federally supported salaries wages and benefits of those working on the project; expendable supplies and equipment; ship time; donated volunteer time (calculated at a reasonable hourly rate), supplies, space or equipment; tuition waivers for students involved in the project; and unrecovered indirect costs. Matching funds do not necessarily have to come from the PIs' home institution. Foundation, state or local grants and other non-federal funds,

including funds from private and/or industry sources, are eligible sources of matching funds if documented approval is provided at the time of application from those sources.

C. STUDENT ENGAGEMENT AND WORKFORCE DEVELOPMENT

Workforce development through the involvement (voluntary or compensated) of pre-college, undergraduate or graduate students or post-doctoral researchers is a required component of NJSGC's research program. Although not required, NJSGC will fund successful PD proposals that include financial support for students in proposed budgets.

Furthermore, NJSGC and NSGCP encourages applicants to recruit and to engage students and fellows from under-represented groups, individuals with disabilities, and individuals from economically or educationally disadvantaged backgrounds that may have limited ability to increase their STEM (science, technology, engineering and math) literacy and/or to pursue careers in STEM fields.

D. OUTREACH PLAN

Community engagement and societal relevance are critical to Sea Grant. Each proposal submitted to NJSGC must include an outreach plan that describes how broader audiences can use and benefit from anticipated results. Research projects that offer benefits and societal impacts to coastal communities, including those with stakeholders from under-represented or under-served groups, are strongly encouraged. A strong outreach plan should define the target audience(s), the rationale for choosing the target audience(s), planned activities with the target audience(s), and how the effectiveness of the outreach plan will be evaluated.

Because NJSGC supports scientific excellence that addresses relevant coastal issues and achieves broader impacts including but not limited to policy, management, education (formal and/or informal), and socio-economic impacts, applications of research results through NJSGC's extension, communications and education programs or by other means is a key consideration in selection for funding. PIs are encouraged to meet with [NJSGC extension, communications, and/or education personnel](#) well in advance of the application deadline to help prepare the outreach section of their proposal.

E. DATA SHARING PLAN

All proposals submitted in response to this RFP must include a data sharing plan that describes how the proposer will meet NOAA's data regulations which require all data and information collected and/or created under all Sea Grant-funded projects be made visible, accessible, and independently understandable to general users free of charge or at minimal cost in a timely manner (typically no later than two years after the data are collected or created), except where limited by law, regulation, policy or by security requirements. The requirement has two basic parts: (1) environmental data generated by a grant project must be made available after a reasonable period of exclusive use, and (2) the grant application must describe the plan to make the data available (PIs are expected to execute the plan). If the proposed project will produce environmental data, it must conform to [NOAA's Data Sharing Directive for Grants, Cooperative Agreements, and Contracts](#).

Funds may be budgeted in the project proposal for data management. If the proposed research will not generate environmental data, then a data sharing plan must be included in the proposal that states "This project will not generate any environmental data."

F. POST AWARD REPORTING

Specific reporting is required by the National Sea Grant Office (NSGO) for each NJS GC-funded research project. These reports collect information about project participants, students supported, research activities and outcomes, publications, tools and technologies developed and used, management and decision-making processes influenced, educational products and programs produced, and other metrics critical to NJS GC's own annual performance evaluation. Although not all projects are expected to have information to report in all categories, each funded project is expected to contribute significantly to NJS GC's impacts in New Jersey. It is the responsibility of the funded PI to provide all reports to NJS GC on a timely basis. In turn, NJS GC is obligated to file these reports with NSGO. These reports include a progress report, a final report, and an annual report (also referred to as the PIER [Performance, Implementation, Evaluation and Resources] report). If for any reason the project is terminated before the stated contract date, a final report and an annual report (PIER) is still required. In addition, and in conjunction with the PIs business office, required fiscal reports must be filed with NJS GC's Grants and Contracts Manager on a timely basis.

G. IMPORTANT NOTES

- Investigators are encouraged to contact [NJS GC's Director of Research and Extension](#) to discuss ideas and ask questions including inquiries about the application and review process.
- Deadlines are firm. Late proposals will not be accepted.
- This solicitation contains specific formatting, content, and submission instructions that must be adhered to for each program development proposal submitted. Failure to meet these requirements is possible grounds for rejection of your application without review.
 - Funding of projects is contingent upon federal allocations to NJS GC and NSGCP. Federal allocations are subject to annual approval by the United States Congress.
- A proposal may be removed from further consideration at any point in the process if an investigator has overdue obligations to NJS GC from a previous research contract.

II. RESEARCH PRIORITIES

For this solicitation, NJS GC is seeking proposals that correspond to [its current strategic plan](#). To support the implementation of this plan while best reflecting the current science and policy needs of New Jersey's coast, estuaries, and watersheds, the following research priorities were determined by a diverse group of stakeholders including NJS GC's Sea Grant Advisory Committee, Stakeholder Advisory Board, Board of Trustees, Member Institution Representatives, and other interested partners and stakeholders. These priorities, divided by the strategic focus area they correspond to, are listed below. For detailed information on each of the strategic focus areas, please refer to NJS GC's current strategic plan.

A. HEALTHY COASTAL ECOSYSTEMS

Develop and assess tools and techniques of newly-developed stormwater best management practices that communities can use to reduce stormwater impacts to bays, back-bays, coastal lakes, and lagoon systems in regards to nitrogen reduction, water quality, chemical contaminants, stormwater retention, algal blooms, and/or green infrastructure.

Develop and evaluate models for assessing the joint effects of current and future coastal and rain-driven flooding on stormwater as well as the consequences of different approaches to mitigating stormwater pollution.

Determine the extent of micro-plastic pollution in New Jersey's coastal zone and develop measures to address/prevent such pollution.

Investigate and evaluate the current and future effects of climate change (e.g., temperature, ocean acidification, sea level rise, hypoxia, or their interactions) on coastal, estuarine, and marine organisms (including life history and morphological or physiological responses), their ecology, or their ecosystem, particularly critical habitats for fisheries.

Develop and evaluate tools and techniques for adaptation to climate change or sea level rise (including retreat or adaptation) of environmental infrastructure (human built and natural) that address mitigation, restoration, and response planning for natural systems.

Develop climate change adaptation measures that integrate climate change mitigation in the marine and coastal environment such as blue carbon sequestration including exploratory research to identify lesser known but potentially effective marine carbon sinks such as sea grasses.

Evaluate the impacts of offshore wind farms on local physical oceanography (e.g., current speeds and direction, wave dynamics, seasonal differences, etc.), especially in association with navigation and use changes for the commercial fishing, recreational fishing, and marine shipping and transportation industries.

B. SUSTAINABLE FISHERIES AND AQUACULTURE

Evaluate the current and future impacts of climate change (e.g., temperature increase, sea level rise), ocean acidification (including estuarine and coastal acidification), habitat loss, pollution, hypoxia, or their interactions on wild and/or aquacultured finfish/shellfish or on the commercial/recreational fishing and marine aquaculture industries in New Jersey.

Develop and evaluate innovative technologies for sustainable aquaculture through genetically-improved stocks, alternative species, or new farming/hatchery production technologies that would contribute to the sustainable development of aquaculture in New Jersey including technologies that enhance the resilience of the aquaculture industry, especially in response to diseases and climate change.

Quantify economic impacts of management decisions (e.g., regulatory closures, shortened seasons, size restrictions, reduced bag limits) and regulatory processes on the fishing or aquaculture industry.

Evaluate data gaps or other key uncertainties in finfish and shellfish stock assessment (e.g., population age structure, distribution, sex ratio, and mortality, etc), that can lead to improved strategies for managing fisheries in the face of uncertainty.

Evaluate the impacts of different types of aquaculture equipment and operations on threatened and endangered species, and provide recommendations for specific Best Management Practices to reduce these impacts (e.g., floating vs. bottom cages, microbial contamination, risk of entanglement, etc.).

Develop and evaluate innovative technologies in support of commercial and recreational fishing

in New Jersey, including stock enhancement, increased fecundity and growth, or tools that allow for parallel solutions in similar coastal environments in New Jersey and globally.

C. RESILIENT COMMUNITIES AND ECONOMIES

Assess, evaluate, determine, or model the value of ecological adaptations to: reduce community vulnerability to sea level rise; maintain healthy coastal ecosystems: reduce costs of natural or human-caused disasters; protect critical infrastructure: minimize economic impacts of climate change; reduce the impact of climate stressors on natural systems, or preserve habitat and migration corridors.

Develop and evaluate community-resilience plans and/or tools (at the local, county, or state level) that incorporate informational, educational, and/or communication programs to better deal with more frequent storms, sea level rise, and climate change.

Develop a comprehensive assessment of strategies for adapting New Jersey's harbors to sea level rise and future coastal storms across the urban to suburban spectrum by investigating infrastructure (green and grey), policy (particularly building and zoning), financing programs, or through managed retreat solutions.

Develop beach and natural resource valuation economic models and assess their relationship to the coastal tourism industry.

Develop and assess models that support community and/or economic resilience through engineered systems (e.g., 'green infrastructure,' 'hard infrastructure,' advanced mobility, and shelter technologies), market or governance interventions, or assessment of tradeoffs and synergies between ecological, socio-economic, and engineered approaches.

D. ENVIRONMENTAL LITERACY AND WORKFORCE DEVELOPMENT

Develop and assess appropriate informational, educational, or communication tools for a variety of stakeholders that have the potential to improve understanding of climate change (including ocean acidification), sustainable marine-based energy development (e.g., offshore wind, tidal, and wave), or their interrelationships.

Develop and assess curricula (and methods of dissemination) to increase engagement of New Jersey's PreK-12 communities on the current and future impacts of climate change.

Develop and assess experiential and on-the-job training programs (including certification programs) in commercial and recreation fishing and/or aquaculture by local/regional technical schools, professional associations, community colleges, and four-year colleges/universities.

Examine and assess effectiveness of methods or programs that aim to increase the awareness of school-aged children to ocean, coastal, and estuarine-related careers and higher academic opportunities; develop a compendium of best practices and outreach tools for increasing awareness of career or educational opportunities in these fields.

Identify the existing knowledge systems in diverse communities for accessing information about the ocean and coastal environment; determine the measures required to ensure appropriate and effective participation of diverse populations in ocean and coastal education and research, and

develop methods so that diverse populations and their knowledge systems will be more empowered and engaged in ocean research, monitoring, and management in order to build capacity that is more reflective of New Jersey's diverse populations.

Enhance professional development opportunities for educators through new methods to improve effectiveness in teaching climate science.

Identify the sources of marine biology and oceanography coursework available to New Jersey's students at the high school level. Measure or assess the quality of existing curricula. Conduct a needs assessment of instructors of these courses.

III. PD GRANT SUBMISSION AND SELECTION PROCESS

A. PROPOSAL PREPARATION AND SUBMISSION

Each application for a PD grant must be prepared using the following formatting: Single-spaced, 8.5 x 11 page size, 1" margins, 12 point type, Times New Roman preferred. To apply please submit electronically:

- Standard Sea Grant [Full Proposal Cover Page](#). Please note this form must be signed by the Principal Investigator (PI) and an Authorized Institutional Representative.
- A proposal narrative no longer than two pages outlining the:
 - Statement of the Problem
 - Project Objectives
 - Methodology
 - Expected Results and Rationale (including relevance to strategic plan and research priorities)
 - Prospects for future research.
- Literature Citation (does not count toward two page limit).
- An outreach narrative no longer than one page outlining your extension plan, plan for student involvement and potential to engage diverse/and or under-represented student populations, and data sharing plan.
- A completed [data-sharing plan form](#).
- [90-4 Budget Form](#) and budget justification on separate pages.
- CV not to exceed two (2) pages for PI and co-PI (if appropriate).

Budget should not exceed \$5,000 for any one project. NJSGC will not fund ship time for PD grants but will support the purchase of equipment if it supports new directions in ongoing research. Institutions must provide non-federal matching funds equal to \$1 for every \$2 requested from Sea Grant. For PD grants, indirect cost rate is limited to 10% for Sea Grant dollars. Awards are for one year with a start date of February 1, 2020.

Please submit your proposal electronically as one (1) electronic file (single PDF format only) to: [Lisa Aromando, Sea Grant Program Associate](#) on or before July 15, 2019 at 5:00 pm EDT.

B. REVIEW PROCESS AND EVALUATION CRITERIA

NJSGC's administrative staff will conduct a preliminary review of all PD proposals to ensure completeness and compliance with proposal preparation and submittal instructions including budget. If a PD proposal does not adhere to these instructions it may not move forward to the final review.

Final review and selection will be made by NJSGC's Executive Director and Director of Research and Extension based on the following considerations:

- Technical soundness and scientific merit
- Alignment with NJSGC's strategic plan
- Potential for further development
- Timeliness and urgency of the proposed project or alignment with NJSGC's 2020-2022 research priorities
- Student involvement and potential to engage diverse/and or under-represented student populations
- Professional qualifications of the investigators
- Potential to measurably impact the state of New Jersey

IV. CONTACTS FOR QUESTIONS AND ADDITIONAL ASSISTANCE

Investigators are encouraged to discuss proposal ideas and/or direct questions regarding the application process to the following NJSGC personnel:

For general submission questions: Ms. Lisa Aromando, Sea Grant Program Associate, 732-872-1300, x 10, laromando@njseagrant.org

For questions on collaborations, research priorities, evaluation criteria, extension, and data management: Dr. Peter Rowe, Director of Research and Extension, 732-872-1300, x 31, prowe@njseagrant.org

For questions on budget preparation: Mr. Augustine Anfuso, Fiscal Officer, 732-872-1300, x 26, aanfuso@njseagrant.org