



Department of Environmental Conservation

### New York State Department of Environmental Conservation and New York Sea Grant

New York Ocean Action Plan Call for Research 2023-2025 Specifically Addressing Portions of the New York Ocean Action Plan (OAP)

# INVITING PRE-PROPOSALS FOR RESEARCH

# Pre-Proposal Submission Deadline: 4:30 PM Friday, October 14, 2022

Anticipated Funds: approximately \$750,000 over 2 years for projects beginning in 2023

## Introduction:

New York State has made increased funding available through the Environmental Protection Fund to support the restoration, conservation, resiliency, and sustainable use of New York's ocean ecosystem. Through collaboration with municipal, regional, and federal government agencies, scientific and academic partners, industry, the public, and other ocean stakeholders, the implementation of the <u>New York State Ocean Action Plan</u> (OAP) is well underway. The geographic scope of the OAP mirrors that described in the New York State Offshore Atlantic Ocean Study of 2013 and includes portions of the New York Bight from the inshore state waters of the state Marine District (0-3nm from shore) and offshore federal waters out to the outer continental shelf (OCS) break from New York Harbor to Montauk Point (see map below).



Previously, much of marine research focus has been on human impacts on our embayments and estuaries resulting in a lack of data and information on New York's long-understudied inshore and offshore *ocean* waters. Thus, a key element of the OAP is to conduct dedicated research to inform long-term monitoring programs and improve science-based understanding of how interrelated components of the *ocean ecosystem* function off New York's coast. This call identifies prioritized research topics that will enable the State to synthesize what is known about the current status of the ocean ecosystem, understand the interdependence between inshore and offshore systems, and identify the potential ocean use conflicts to ensure sustainable development while maintaining the integrity and resilience of this vital resource. Information derived from this research will be used to directly support management activities undertaken under the OAP to coordinate state, federal, and tribal partnerships in adaptively managing new uses of the ocean planning area. This research will serve as a foundation for further refinement and improvement of the plan itself in implementing Actions to achieve the state's goals to ensure sustainable ocean resources.

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## I. Background

The <u>New York State Ocean Action Plan</u>, (OAP) released on January 23, 2017, is the State's firstever comprehensive 10-year blueprint to guide the protection and conservation of New York's ocean resources to support sustainable development. The Plan provides a framework for an integrated, adaptive approach to management that addresses balancing human needs with the ecological integrity of the ocean ecosystem off New York, including conserving important marine habitat, and maintaining marine biodiversity and healthy waterways. Drawing on input and feedback from the public and a variety of ocean stakeholders, the OAP seeks to promote restoration, conservation, resiliency, and sustainable use of New York's ocean ecosystem by using the best available information for New York State to make sound management decisions on ocean issues, new uses, and the changing environment. Establishing ecological assessment criteria to monitor the effectiveness of actions taken, and incorporating new information gained from expanded or new research and monitoring programs, will allow for coordinated and measurable management actions on ocean issues.

Research will assist in defining the relationship between human use of the ocean and the natural processes that drive the offshore environment. Maritime commerce, commercial and recreational fishing, tourism, and other recreational business are vital components of New York's economy that rely heavily on the health of the State's ocean and estuarine ecosystems. Understanding the baseline conditions of the ocean ecosystem (and how these are changing) is a key factor as new and traditional uses of the offshore area expand with new technologies and new resources. Goals One and Three of the state OAP aim to ensure the ecological integrity of the ocean ecosystem while increasing the resiliency of these resources associated with human-induced impacts including climate change. It is imperative to measure environmental changes occurring with ocean ecosystems to understand the impacts of climate change in the New York Bight, as well as uses designed to reduce those impacts, such as renewable energy in the ocean. Ocean acidification, fisheries dynamics, the effects of renewable energy on wildlife, and understanding trophic interactions with the ocean are among some of the areas where targeted research will enable better ocean resource management decisions.

The OAP calls for an integrated and adaptive approach where ocean management decisions are informed by the best available science. As a partner in the OAP Research Program with the New York State Department of Environmental Conservation (NYSDEC), New York Sea Grant (NYSG) is experienced and qualified to help fund and administer research to fulfill the OAP vision. New York Sea Grant is part of a national network that constitutes NOAA's National Sea Grant College Program. NYSG is a cooperative program of the State University of New York (SUNY), Cornell University, and the National Oceanic and Atmospheric Administration (NOAA), with its main administrative offices located at Stony Brook and Cornell Universities and extension offices located throughout the state. In a time of accelerating economic, environmental, and scientific developments, NYSG's mission is to serve as an important partner in helping New York's diverse coastal communities respond to rapid economic and environmental changes. NYSG has been funding research on issues of critical importance to New York's coastal communities and stakeholders for fifty years. Sea Grant is partnering with NYSDEC in administering this Call.

# **II. Ocean Action Plan Topics for this Call**

The aim of this Call is to support scientific research to address the OAP priority research topics particularly surrounding baseline conditions, environmental changes due to climate change, and renewable energy development. Developmental work on new methods, models, tools, and techniques also qualifies under this call. State-of-knowledge synthesis efforts may also be proposed. Projects proposed under this call should be designed to provide results and information that can be used to inform proactive and responsible management decision-making.

The need, significance, products, usability, target audience (beyond other academics), and expected impact for and of the research must be clearly anticipated and described. Additionally, the proposed research must be clearly linked to issues identified in the OAP (to be used as a resource document). *These will be key factors in the review process.* 

Multi-disciplinary and multi-investigator research is encouraged as are submissions from young investigators. The development of future scientists and decision-makers through student education is also important, and investigators are encouraged to involve graduate and/or undergraduate students in the conduct of their projects, with an active effort to recruit and engage diverse, inclusive, underrepresented students.

Efforts inappropriate for funding under this Call include those directed solely toward monitoring or surveys, or that are merely demonstration projects. Expansion of understanding solely for its own sake is also considered inappropriate for this Call.

Of the **sixty-one related Actions in the OAP**, many projects are underway to address ecosystem health assessment and monitoring. Action topics requiring further investigation, particularly found within the first and third goals of the plan, have been prioritized by the DEC. In this Call, preproposals are invited to describe research projects that support one or more of the specific topics listed below. Note that research in many disciplines (e.g., biology, chemistry, geology, physical oceanography, engineering, and the social sciences) will be necessary to effectively address these topics and a diversity of approaches is anticipated.

- Investigate the impacts of ocean acidification on shellfish, crustaceans, fish, or zooplankton in the New York Bight. Ocean acidification (OA), resulting from increased anthropogenic carbon dioxide emissions over the last several decades, is expected to have profound adverse effects on marine organisms and disrupt entire ocean ecosystems. The OAP identifies the need for further evaluation of OA in state waters to improve New York's understanding of the factors potentially affecting recruitment success and long-term sustainability of fisheries and aquaculture. Topics of most relevance include the investigation of OA impacts on larval survival, dispersal, and settlement for important fisheries in the NY Bight and species of management concern (i.e. Summer flounder, squid, etc.). Projects that build on or extend previous OA research are welcome and encouraged.
- Examine predator-prey dynamics within foraging hotspots located in New York Bight.

The abundance and distribution of large marine predators in the Bight is likely due to prey availability, yet these food-web connections and shifts in response to climate change are poorly understood. Whales, sharks, black sea bass, striped bass, and seabirds for example play a key role in the ocean habitat and ecosystem as do important prey species such as squid, menhaden, and sand lance. A better understanding of different trophic linkages and trends in biomass flow is essential for evaluating the stability of ecological community structure and can be used to assess how certain marine species respond to environmental change, and in the management of these resources.

- *Identify likely species regime shifts of marine life occurring in the New York Bight with an increase in regional temperatures.* The effects of climate change on species composition and interactions in the New York Bight is varied and complex. Monitoring data is showing an exponential increase in black seabass (a southern species) in the New York Bight and a regime shift in species composition in the Peconic estuary (from flatfish to non-targeted species such as dogfish and sea robins). Understanding the role of climate change on predator-prey species interactions (particularly on commercially targeted species) as well as on the spatial shifts on existing resources is critical for developing sustainable fishery management strategies. Additionally, identifying species that may expand their range into the NYB as a result of warming temperatures and the associated impacts on the established NYB trophic interactions is essential to planning efforts. Incorporating this data into ecosystem models will be important for ultimately developing sustainable and adaptive fishery management strategies.
- Assess the effectiveness of Best Management Practices and other measures used to • mitigate adverse effects of underwater noise and/or assess the impacts of electromagnetic frequency (EMF), in relation to the development of offshore wind and supporting activities, on marine mammals and commercially and recreationally important finfish and invertebrates. To combat the effects of climate change, New York is currently focused on incorporating offshore wind (OSW) energy into its electrical grid. While renewable energy resources such as offshore wind have substantial environmental benefits over traditional methods of energy production, the impacts of proposed offshore energy generation and transmission facilities on marine wildlife, and the critical habitats they depend on, must be further studied. With an increase in wind farms, particularly in the New York Bight, solid science-based information will be needed to best site turbines, cables, and other energy infrastructure. Understanding how the construction and operation of offshore wind energy areas impact marine ecosystems in the NYB is an important part of offshore planning. Therefore, projects to investigate the efficacy of efforts to mitigate the deleterious effects of underwater noise on marine species are encouraged. While much research has been conducted on the effects of underwater noise on various species, there is a paucity of research on the impacts of the EMF, produced by the cables supporting OSW transmission, on the species utilizing offshore habitats. Thus, projects to assess the impacts of EMF on a variety of priority species are also encouraged. OSW is undergoing a period of rapid growth in NY and projects proposed under this topic should clearly state intentions to coordinate and collaborate with existing and developing efforts.

- Assess avian and bat species' use of and migration paths through the New York Bight and • investigate hotspots of seabird diversity and abundance to assess relative risk to birds and bats within NY's coastal and offshore areas that can inform offshore planning efforts, particularly the siting of offshore wind facilities and operations. Seabirds are key components of marine ecosystems and are considered indicators of ocean health. In the 2019 Climate Act, NYS committed to ambitious greenhouse gas emission reductions including developing 9,000 megawatts of offshore wind energy. Investigating seabird abundance and distribution is important to inform decisions regarding offshore planning and to guide the development of mitigation measures for minimizing the impacts of ocean-based activities, including displacement, collision, and habitat connectivity changes on seabirds and shorebirds, which may be species-specific. Bats may also be negatively impacted by offshore wind development, both from onshore and offshore components of projects. In the Mid-Atlantic region, this includes migratory tree bats and hibernating bats. Like seabirds, bats are at risk of collision with turbines. Bats may also be attracted to offshore turbines for foraging opportunities, resting, or roosting. For both birds and bats, the effects of wind energy development should be considered alongside the impacts of climate change and shifting prey distributions. OSW is undergoing a period of rapid growth in NY and projects proposed under this topic should clearly state intentions to coordinate and collaborate with existing and developing efforts.
- Evaluate ecosystem services to coastal communities and assess the vulnerability of those services to climate change. Additionally, develop and evaluate alternative future use scenarios and tradeoffs between ocean activities and their associated ecosystem services. An integral part of implementing ecosystem-based management is the understanding that the ocean provides a range of ecosystem services that benefit coastal communities and that human activities both rely on as well as can disrupt the ability of ecosystems to deliver those services. It is also critical to understand the values communities place on the various ecosystem services to implement the best management strategies by coupling socioeconomic data with ecosystem data. Using modeling, monitoring data, and indicators data to assess, forecast, and analyze tradeoffs associated with alternative policy and management actions can benefit ocean ecosystems and coastal communities.

## **III. General Information About Pre-Proposal Submission**

#### A. Who is Eligible to Submit:

Faculty at academic institutions are the main targets and recipients of NYSG's research funds. Nevertheless, proposals from other groups may be accepted and approved for funding, too. Eligible groups are listed below in order of preference for funding under this Call:

- 1. Researchers at universities and colleges.
- 2. Researchers at other not-for-profit research institutions.
- 3. Researchers who are personnel of not-for-profit organizations.
- 4. Researchers at for-profit institutions or companies (with limits).

*Important Notes:* All proposals submitted under this Call must be **led** by an eligible researcher with his or her primary professional base in New York State. Co-PI's from other states are acceptable. State agency employees may participate in projects as collaborators,

but they may not be included in the budget. Graduate students cannot be PIs but the inclusion of students (graduate and/or undergraduate) in research projects is encouraged and can be included in the budget.

#### **B. Duration of Proposed Work:**

Funding under this call will be available for the period May 1, 2023 – April 30, 2025 period. As a rule, projects requiring two years of funding are preferred, although projects of shorter duration are acceptable when they are strongly justified. Annual progress reports must be submitted during the funding period. A draft final report for review and a final report at completion are required.

#### C. Budget Size (total of indirect plus direct costs):

The total budget request (direct + indirect costs) for a project may not exceed \$180,000 in any project year. Budget estimates in pre-proposal submissions are expected to be realistic. A substantial budget increase (greater than 10%) in the full proposal compared to the preproposal will be viewed negatively and may result in either the proposal not being reviewed or budget cuts without changes in the scope of work. Awards under this Call are administered as a Cost Reimbursable Award (CRA) and successful applicants must submit invoices to NYSG for reimbursement. All students must be budgeted for with fringe and IDC. Scholars are not available for this call.

#### **D.** Cost-Share Requirement:

Match funding is not a requirement of awards made under this research program.

#### E. Limit on Salary Requests:

Principal and associate investigators with appointments providing nine (9) or more months of support annually are generally not allowed to receive more than two (2) months' total salary per year. Other eligible principal and associate investigators will generally be allowed to receive only up to six (6) months' salary per year. These limits may be relaxed under exceptional circumstances, with prior approval from NYSG. Under all circumstances, the amount of salary support requested must be warranted by the effort needed to conduct the project.

#### F. Data Management/Sharing Plan:

Data and information collected and/or created under this Call must 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. Further, all data generated by research funded through this Call must be provided to the NYSDEC Division of Marine Resources (DMR).

The requirement has two basic parts: (1) environmental and socio-economic data generated by a grant project must be made available after a reasonable period of exclusive use (two years), and (2) the grant proposal must describe the plan to make the data available.

To comply with this requirement, in the full proposal stage, the principal investigator must include a data management plan that describes how the project's data and metadata will be

made available to others and must be provided to the NYSDEC DMR directly after the project. Deposition of data in standard data archives (e.g., by discipline) or in available university archives is encouraged. This requirement for data archiving is in addition to the expected publication of research results in peer-reviewed journals. If funds are needed for this task, they may be included in the project pre-proposal and full proposal budgets.

#### G. What and When to Submit:

A PC-readable Pre-proposal Submission Form (see Section VII) *must be received by the <u>deadline of 4:30 pm EST on October 14, 2022</u>, at NYSG's electronic submission website: <u>www.NYSGProposal.org</u> Click on "New York Ocean Action Plan Research Call for 2023-2025" under "Current Funding Opportunities" and follow all directions for electronic submission. At the pre-proposal stage, unless required by your institution, signatures of principal investigators or campus officials are not required. Submissions via email or hard copy are not accepted.* 

Do <u>not</u> include information or materials supplemental to the Pre-proposal Submission Form (e.g., full budget, appendices, letters of support, etc.). Such materials will be discarded without review.

#### Important notes about pre-proposal submission:

Submissions that do not include the required information will not be reviewed (see Section VII for Instructions).

- Double-check your Pre-proposal Submission Form file before uploading it at the submission website to make sure it is PC-readable and that it is your final version. *It must be in the form of a single pdf file.* You will receive an auto-receipt from the website confirming your submission, but this is not an indication that your file is readable. If you do not receive an auto-receipt in your email after 10 minutes, check your spam folder and if not there then contact *lane.smith@stonybrook.edu*.
- We recommend submission via a PC at your university office, with a current version of Edge, Firefox, or Google Chrome web browser installed. If you are working from home due to COVID-19 restrictions at your place of work, you are responsible for making sure you have an adequate stable internet connection that will allow for your submission. Early submission will provide a buffer to deal with any unexpected connectivity issues.
- If you have trouble with submission through <u>www.NYSGProposal.org</u>, call NYSG (631- 632-6906) to explain the problem. We will try to help but cannot guarantee that we can solve your problem. In any case, unless the website becomes inoperable, it is *your* responsibility to use equipment that will allow you to meet the deadline. Email submissions or by mail are not accepted.
- All pre-proposals submitted will be checked for compliance with the format, page limits, and completeness of the pre-proposal sections. Any pre-proposals that fail the compliance check will not be reviewed.
- Any submission after the deadline of 4:30 PM on October 14, 2022, will be rejected and its lead investigator so notified. Please be sure to watch the website's (not your computer's) clock! Even if you are on the website before the deadline, if your file is not submitted by 4:30 PM, it will be too late to be accepted.

There are no exceptions to these conditions, so *early submission is very strongly advised*. The official time stamp on the submission is provided by the website's server.

### **IV. The Review Process**

#### A. Pre-Proposals:

Pre-proposals submitted to NYSG in response to this Call will be assessed for compliance with the format, page limits, and completeness of the pre-proposal sections. Late or incomplete pre-proposals will not be considered. Pre-proposals that are judged to comply with the stated standards will be read and will be reviewed and evaluated by a pre-proposal review Panel comprised of NYSG, DEC, and DOS staff. Panel members will score each pre-proposal using the scoring criteria outlined below:

- How well the project responds to one or more of the research priorities contained in Section II (0 to +5)
- Likelihood that the project will be successful in fulfilling its objectives including the soundness of the proposed approach and qualifications of the PIs (0 to +2)
- Expected actionable products, outcomes and anticipated impact(s) from the results including evidence of engagement of end-users (0 to +5)
- Other programmatic considerations such as institutional or topic balance, may result in out of rank order selection

For each pre-proposal, each panel member will provide a score for each criteria and the criteria scores added together to provide a total score. The total scores of each panelist will be averaged to provide a final score for each pre-proposal. Only authors of the most highly-rated pre-proposals will be encouraged to submit full proposals. For this Call, about twice as many full proposals as expected to be funded will be encouraged. Any PI who submits a preproposal is permitted to submit a full proposal. However, though non-encouraged proposal submissions are accepted they historically have had a low chance of success.

#### **B. Full Proposals**:

All submitted full proposals will be assessed for compliance with the format, page limits, and completeness of the proposal sections. Late or incomplete proposals will not be considered. Proposals that are determined as complete and contain all requested components will be read and evaluated by external mail peer review and a Technical Review Panel (TRP). TRP members and peer reviewers will be experts in the field(s) which are covered in the proposals and free from conflicts of interest as documented on the required Conflict of Interest forms for each full proposal.

Each full proposal will receive written peer reviews from three non-conflicted, external peer reviewers. Masked peer reviews will be shared with the TRP and referred to during the panel discussion of the proposals.

Peer reviewers and TRP members will be instructed to evaluate and score proposals based on the following criteria:

- 1) The fit, responsiveness, and how well the proposed work plan addresses the research topics listed in Section II;
- the scientific or technical merit of the project the degree to which the research activity uses appropriate hypotheses and methods; the degree to which it will advance the state of the science or discipline through the development, use, or extension of state-of-theart methods;
- 4) the expected actionable products, outcomes, and anticipated societal benefits of the project results – significance and importance of the products (models, methods, and scientific information) and impacts (change in behavior/policies, economic and/ or social benefits, and environmental benefits) that are expected to result from this project; accessibility of the products and documentable impacts; demonstrated engagement or collaboration with end-users;
- 5) the appropriateness of the budget request the degree to which the requested funding levels are appropriate and reflect reasonable costs for the proposed research;
- 6) the professional qualifications of investigators the degree to which investigators are qualified by education, training, and/or experience to execute the proposed activity; record of achievement with previous funding.

Peer reviewers and TRP members are asked to provide comments under each criterion and provide an overall summary score as follows:

A = 4 = Excellent: Probably will fall among the top 10% of proposals in the area of research; highest priority for support.

B = 3 = Very Good: Probably will fall among the top third of proposals in the area of research; should be supported.

C = 2 = Good: Probably will fall among the middle third of proposals in the area of research; worthy of support.

D = 1 = Fair: Probably will fall among the lowest third of proposals in the area of research.

F = 0 = Poor: Proposal has serious deficiencies; should not be supported.

Final proposal scores and ranking will be based on peer reviews and TRP scoring, and Panel discussion. Final funding decisions are made by the NYSG/NYSDEC senior leadership team and incorporate all peer and panel reviews and rankings, except in instances where the program chooses to select a meritorious project out of rank order based upon the following selection factors:

- Availability of funds;
- Balance of selected projects across strategic priorities;
- Prior award performance; and
- Diversity of institutions, geography, career stage, and engaged stakeholders and partners.

Selected applicants can expect notification in March 2023.

# V. Call Timeline

September 1, 2022	Call for pre-proposals released
October 14, 4:30 pm	Deadline for pre-proposals (must use NYSG submission website)
November 16	NYSG encourages selected PIs to write full proposals
January 23, 2023, 4:30 pm	Deadline for full proposals with all authorized signatures (must use NYSG submission website)
March 10	TRP Meets
March 13	NYSG notifies all investigators of funding decisions
May 15, 2023	Anticipated funding begins for new projects

# VI. New York Sea Grant Staff

**<u>Research Administration</u>** (at Stony Brook University)

Rebecca L. Shuford, Director (631-632-6905, <u>rebecca.shuford@stonybrook.edu</u>) JeanAnn Johnston, Fiscal Officer (631-632-6908, jean.johnston@stonybrook.edu)

Lane Smith, Research Program Coordinator (631-632-9780, *lane.smith@stonybrook.edu*)

## **VII. Pre-Proposal Submission Form Instructions**

Be sure to use the format and provide the information as described below **Every Section (1-9) and all of the information specified within it is required.** Submissions that do not include all of this information will not be reviewed. Use all-around margins of 1" and font and size consisting of #12 Times New Roman.

# **Pre-proposal Submission to the NY Ocean Action Plan Research Call for 2023-2025** Date:

## 1. <u>LAST NAMES OF PRINCIPAL INVESTIGATORS</u>: (e.g., Smith / Doe / Jones)

## 2. BRIEF PROJECT TITLE:

- **3.** <u>INVESTIGATOR(S)</u>: List <u>all</u> principal (PI), co-principal (Co-PI), and associate (AI) investigators, including name, mailing address, telephone, and email for each. *Also* indicate eligibility category (#1, 2, 3, or 4) from the Call's Section III.A for each. The primary professional base of the lead investigator must be in New York State. CO-PIs can be from out of state. State agency employees may participate in projects as collaborators, but they may not be included in the budget. Graduate students cannot be PIs but the inclusion of students (graduate and/or undergraduate) in research projects is encouraged and can be included in the budget.
- 4. <u>PROJECT TOPIC</u>: Briefly describe the topic area of this project using Section II as a guide.

#### 5. <u>BUDGET</u>: Totals of direct plus indirect costs.

A. Estimated Request for Funds from New York Sea Grant Year One \$ Year Two \$\_\_\_\_\_ Total Request \$\_\_\_\_\_

**Note:** Funding for awards made under the Ocean Action Plan Research Program will be provided by the Research Foundation for SUNY at Stony Brook University. Applicants should prepare the pre-proposal budget assuming an Indirect Cost Rate (Total Direct Costs, not Modified) of 18%, with no on- or off-campus disparity.

**B. Data Management Plan:** Indicate your recognition that an acceptable data management/sharing plan will be required as part of a full proposal, that compliance with the plan will be required if the project is funded, and that the preproposal's budget estimate provides for this. \_\_\_\_\_Yes.

6. <u>BRIEF DESCRIPTION OF PROJECT</u>: Starting on a *new* page, **use no more than two pages** with the following a-c headings to describe your proposed project. Anything beyond two pages (or estimated to be beyond if margins or font are incorrect) will be discarded prior to review.

- a) **STATEMENT OF THE ISSUE AND OBJECTIVES:** Explain how the research you propose will address the topic you have chosen from Section II. Present the overall objectives of your proposed study, with a statement of the hypothesis(es) to be tested if applicable. Or, if this is model development, clearly state the intent, intended end-users, and distribution method.
- b) **APPROACH:** Very briefly describe the general approach to be used in accomplishing the objectives.
- c) **EXPECTED ACTIONABLE PRODUCTS AND ANTICIPATED IMPACT(S):** Explain what products (techniques, tools, models, and scientific information) are expected to result from this project, who will use them, and what their anticipated impact(s) will be. *This is one of the most important sections of your submission!*

**7.** <u>LITERATURE CITED</u>: Present the full citations for any work referenced under Section 6, where they may be labeled as (1), (2, 3), etc. The space required for Section 7 is not counted under the 2-page maximum for Section 6. If no references are used in Section 6, state "none".

**8.** <u>CVs</u>: Provide a Curriculum Vita for each listed investigator (Principal Investigator, Co-Principal Investigator, Associate Investigator) with 2 page maximum per person, using the format required by NSF. Contact NYSG if you need instructions.

**9. POSSIBLE PEER REVIEWERS**: Starting on a new page, list the names and affiliations of up to four out-of-state individuals of national standing and pertinent expertise who we might ask to provide peer reviews of your submission. Do *not* include individuals with whom you have worked or collaborated within the last 4 years or who would be considered to have a professional or personal conflict of interest. We may or may not use these individuals, so do not contact them yourself. You may also request for certain individuals not be asked to review your proposal.

The information for Section 9 is for internal NYSG use only. Do not omit this section.