



**New York Sea Grant's
Biennial Call for 2007-2008**

**INVITING PREPROPOSALS FOR RESEARCH
related to
MARINE and GREAT LAKES
ISSUES**

Preproposals Due 5:00 pm Wednesday February 22, 2006
Anticipated Total Funds Available -- Approximately \$1 million per year

The main goal of New York Sea Grant's research program is to provide valid scientific information that will serve as the basis for furthering the sustainable development, use, protection, conservation, and management of our coastal resources. The research must clearly be driven by identified needs and must provide enhanced opportunities for NYSG to 'make a difference' in addressing important coastal issues.

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I. BACKGROUND

New York Sea Grant (NYSG) is part of the national Sea Grant network formed by NOAA's National Sea Grant College Program. In New York, it is a cooperative program of the State University of New York (SUNY) and Cornell University, with its main administrative offices located at Stony Brook University. NYSG's vision is that coastal decision-making will be influenced by science-based information and educated stakeholders. Its mission is to develop and bring science to the shore to protect and enhance the economies, ecosystems, and resources of New York State's coasts.

II. "SEA GRANT" RESEARCH and HIGH PRIORITY TOPICS

While research projects supported through New York Sea Grant must address problems or opportunities important to New York state, their results should also be of significance and generalizable towards addressing regional or national needs.

NYSG supports hypothesis-based research related to marine, Hudson estuary, and Great Lakes topics and issues. Projects must be oriented toward answering "why" or "how," not just describing "what is." Developmental work on new models or techniques also qualifies as Sea Grant research. State-of-knowledge synthesis efforts may also be proposed.

Efforts inappropriate for Sea Grant funding include those directed solely toward monitoring or surveys. Expansion of understanding for its own sake is also considered inappropriate for Sea Grant. The need, expected significance and usability, and target audience (beyond other academics) must be clearly anticipated and described.

NYSG encourages multi-disciplinary and multi-investigator research. NYSG is also interested in helping to foster new research talent, and encourages submissions from young investigators and others who have not previously received NYSG funding. The development of future scientists and decision-makers through student education is also important to NYSG, and investigators are encouraged to involve graduate and/or undergraduate students in the conduct of their projects.

Because the Sea Grant mission includes extension of research and other results to clients, discussions with NYSG extension staff (see list in Section VI) may help hone the focus of research projects towards particularly useful information. ***Researchers are strongly encouraged to contact NYSG staff with their ideas to make sure they are addressing the most critical questions and to improve their understanding of what information and products may be most useful to coastal stakeholders.*** The importance of this is reflected in Section IV, in the description of the evaluation criteria.

An ideal Sea Grant project would attack a well-defined coastal, Great Lakes, or marine problem that society will be or is currently struggling with. The organization or people whose task it will be to make related decisions, or who will be able to make specific use of the project's results, will have been identified and contacted by the Principal Investigators (directly, or via NYSG staff). The project will show an understanding of what constitutes necessary and sufficient information for responsible decision-making or for applied use, and will expect to generate such.

A project also should have sufficient intellectual content (theoretical basis, hypothesis testing) to make it appropriate for university research.

In this Call for Preproposals, NYSG invites projects that will advance any of the specific *Research Objectives from NYSG's Strategic Plan: 2006-2010* (see Section VII).

Appropriate topics for research will address one or more of the specific objectives listed under the themes. Research in many disciplines (e.g., biology, chemistry, geology, physical oceanography, medicine, engineering, and the social sciences) may be appropriate to address the wide range of topics. Preproposals may be submitted that address objectives other than those listed, but they are unlikely to receive top priority ratings for programmatic interest.

III. GENERAL INFORMATION ABOUT PREPROPOSAL SUBMISSION

A. Who is Eligible to Submit:

Sea Grant is a national college program, so faculty at academic institutions are by far the main 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 not-for-profit institutions.
3. Researchers who are personnel of state or local agencies.
4. Researchers at for-profit institutions or companies (with limits).

Important Notes: All proposals submitted under this Biennial Call for 2007-2008 must be **led** by an eligible researcher with his or her primary professional base in New York State. Federal employees may participate in projects as collaborators, but they may not be included in the budget. Federal employees and institutions are *not* eligible for compensation or budget items of any sort, and their contributions cannot be considered a source of cost-sharing.

B. Duration of Proposed Work:

In this Call, most of the funding will cover two years, running from 2/1/2007 through 1/31/2009. While NYSG is accepting proposals for up to two years of work, only one year of support is awarded at a time. Continued support for the second year of a project will be contingent on demonstrated progress and availability of funds. One year projects also are welcome.

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

The total budget request for a project may not exceed \$110,000 for the year. Note that smaller budgets are desirable. The budget estimates (total of direct + indirect costs) provided in preproposal submissions are expected to be realistic. A substantial increase in the final budget request will be viewed negatively.

D. Cost-Share Requirement:

Sea Grant requires that non-federal cost-share (a.k.a. matching funds) support in the amount of at least 50 percent of the Sea Grant funds requested be provided under this Call. For example, if \$50K is requested from Sea Grant, the proposal's budget page should demonstrate an additional

\$25K of non-federal cost-share. Investigators are strongly encouraged to contribute this level of cost-share because the NYSG Director has the authority to reject any proposal that does not do so.

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 from NYSG per year. Other eligible principal and associate investigators will generally be allowed to receive only up to six (6) months' salary from NYSG per year. These limits may be relaxed under exceptional circumstances, with prior approval from NYSG. Under all circumstances, the amount of salary support requested or provided as cost-share must be warranted by the effort needed to conduct the project.

F. Regional or Multi-state Proposals:

Sea Grant programs need to coordinate and work together regarding submissions that have Principal Investigators from multiple states and that can be funded cooperatively by multiple Sea Grant programs. If you are interested in submitting a regional or multi-state proposal, you must contact NYSG's assistant director, Cornelia Schlenk, and your co-PIs must contact their state Sea Grant director(s) prior to submission (see Section VI for Ms. Schlenk's contact information). It is critical that submitters be familiar with, and comply with, the due dates and processes as specified by their state's Sea Grant program.

G. Duplicate Submissions:

New York Sea Grant should be immediately informed by the Principal Investigator if a proposal submitted under this NYSG Call will be also be considered under other Calls, e.g., as released by the National Sea Grant College Program, another state Sea Grant program, or any other funding agency or source. In addition, please note that it is New York Sea Grant's policy to consider only submissions specifically in response to, and within the due dates for, this Call. Proposals will not be considered unless they were in this Call's pool from the start as a preproposal.

H. What to Submit:

The completed PC-readable Preproposal Submission Form (see Section VIII) must be received by the *closing deadline of 5:00 pm on Wednesday, February 22, 2006* at NYSG's electronic submission web site: www.NYSGProposal.org

Navigate to "New York Sea Grant Biennial Call for 2007-2008" and follow all directions for electronic submission. At this stage, signatures of principal investigators or campus officials are not required.

Please double-check your Preproposal Submission Form file before uploading it at the submission web site to make sure it is PC-readable and that it is your final version. It may be either a pdf or a file from a word processing program. You will receive an auto-receipt from the web site confirming your submission, but this is not an indication that your file is readable. For submissions made 48 hours or more before the closing deadline, NYSG staff will email you separately and before the closing deadline to confirm that your file is virus-free and can be opened and read. This check will not be available for submissions (or re-submissions) made less than 48 hours before 5:00 pm on 2/22/06. The lead investigator of a file submitted to the web

site after the closing deadline, that contains a virus, or that is unreadable will be notified that his/her submission cannot be accepted. NYSG will not make exceptions to this, so **early submission is recommended**. The official time stamp on the submission is provided by Stony Brook University's server.

Do *not* include information or materials supplemental to the Preproposal Submission Form (e.g., CV, full budget, appendices, letters of support, etc.). Such materials will be discarded without review.

IV. THE REVIEW PROCESS

All preproposals submitted to NYSG in response to the 2007-2008 Call will be screened by NYSG's program management team, extension specialists, and Program Advisory Council using the following criteria:

- Responsiveness to NYSG's Call for 2007-2008 (i.e., all sections of this document);
- Significance of the problem (rationale); and
- Anticipated usefulness to NYSG Extension Staff and other stakeholders.

Only authors of the most highly-rated preproposals will be invited to submit full proposals. NYSG typically invites about twice as many as it expects to be able to fund. During full proposal development, investigators will be expected to facilitate coordination with, or input from, industry, agency, or private groups as appropriate. NYSG staff will attempt to be of assistance in this process.

Full proposals will be subject to mail peer review and a special technical review panel. Additionally, NYSG's program management team will utilize input from NYSG's staff and Program Advisory Council. The specific projects NYSG includes in its omnibus proposal to the National Sea Grant College Program will be selected primarily on the basis of the following criteria: rationale, scientific or technical merit, innovativeness, professional qualifications of investigators, user relationship, responsiveness to Sea Grant priorities, and programmatic value. Budget considerations will be factored in (see Section III.C-E, above). Also, accomplishments and performance with previous NYSG funding will be considered, as applicable. The National Sea Grant Program Office oversees NYSG's review processes and does not conduct a separate evaluation of individual proposals.

V. 2007-2008 CALL TIMELINE

January 4, 2006	Call for preproposals released
February 22, 5:00 pm	Preproposals due to NYSG submission web site
April 7	NYSG invites selected PIs to write full proposals
June 1, 5:00 pm	Full proposals due to NYSG submission web site (with all authorized signatures)
August 8	PIs receive masked peer reviews for response
August 15	PI responses to reviews due to NYSG

August 30	NYSG notifies successful investigators
September 13	Revisions, final budgets and Word/Excel versions of successful proposals due to NYSG
February 1, 2007	Funding begins for new 2007 projects
February 1, 2008	Funding continues for 2-year projects with satisfactory progress

VI. NEW YORK SEA GRANT STAFF

Research Administration (at Stony Brook University)

Jack Mattice, Director (631-632-6905, jmattice@notes.cc.sunysb.edu)

Cornelia Schlenk, Assistant Director (631-632-6906, cschlenk@notes.cc.sunysb.edu)

Stefanie Massucci, Fiscal Officer and Business Manager (631-632-6908, smassucci@notes.cc.sunysb.edu)

Patrick Dooley, Research Program Coordinator (631-632-9123, pdooley@notes.cc.sunysb.edu)

Lane Smith, Research Program Coordinator (631-632-9780, lsmith@notes.cc.sunysb.edu)

Extension Staff (locations throughout New York State)

Dale Baker, Associate Director for Extension and Extension Program Leader (607-255-2832 at Cornell University, drb17@cornell.edu).

Laura Bartovics (212-637-3816 at the NY/NJ Harbor Estuary Program Office in Manhattan, lmb55@cornell.edu) – harbors; urban estuary issues.

Antoinette Clemetson (631-727-3910 at the Cornell University Research & Extension Center in Riverhead, aoc5@cornell.edu) – marine recreational fisheries; lobsters.

Helen Domske (716-645-3610 at SUNY Buffalo, hmd4@cornell.edu) – coastal education; avian botulism; Great Lakes ecosystems.

Patrick Dooley (631-632-9123 at Stony Brook University, pdooley@notes.cc.sunysb.edu) – brown tide issues.

Ken Gall (631-632-8730 at Stony Brook University, klg9@cornell.edu) – seafood technology; seafood safety; seafood nutrition and utilization; seafood retailing and processing.

Nordica Holochuck (845-340-3983 at Cornell Cooperative Extension of Ulster County in Kingston, nch8@cornell.edu) – Hudson River issues; water quality; sustainable development; habitat restoration.

Eileen Keenan (631-444-0422 at NYS Dept. of Environmental Conservation offices in Stony Brook, ek72@cornell.edu) – water quality, non-point source pollution.

Robert Kent (631-727-3910 at Cornell University Research & Extension Center in Riverhead, rjk13@cornell.edu) – marine education; habitat restoration.

Nim Lee (718-482-4940 at NYS Dept. of Environmental Conservation offices in Long Island City, cl432@cornell.edu) – recreational fishing, youth education.

David MacNeill (315-312-3042 at SUNY College Oswego, dbm4@cornell.edu) – sportfishery development; fisheries biology, management and conservation; aquaculture.

Steve Mikulencak (631-444-0422 at NYS Dept. of Environmental Conservation offices in Stony Brook, sam225@cornell.edu) – water quality, non-point source pollution.

Shana Miller (631-852-2077 at the Peconic Estuary Program Office in Riverhead,

skb8@cornell.edu) – Peconic Estuary resources and issues.
Malynda Nichol (631-444-0283 at NYS Dept. of Environmental Conservation offices in Stony Brook, *mjn36@cornell.edu*) – recreational fishing, youth education.
Diane Oleson (585-395-2638 at SUNY College Brockport, *djo5@cornell.edu*) – aquatic nuisance species.
Chuck O’Neill (585-395-2638 at SUNY College Brockport, *cro4@cornell.edu*) – aquatic nuisance species; coastal resource planning and management; shoreline erosion and lake levels; coastal structures and construction practices.
Jay Tanski (631-632-8730 at Stony Brook University, *jjt3@cornell.edu*) – marine facilities; coastal processes and erosion control.
David White (315-312-3042 at SUNY College Oswego, *dgw9@cornell.edu*) – coastal recreational facility design, management, and operation; coastal recreation participation, uses, and impacts.
Kimberly Zimmer Graff (631-632-8730 at Stony Brook University, *ksz1@cornell.edu*) – natural resources of Long Island Sound.

Communications Staff (at Stony Brook University)

Barbara Branca (631-632-9124, *bbranca@notes.cc.sunysb.edu*) – communications manager.
Paul Focazio (631-632-9124, *pfocazio@notes.cc.sunysb.edu*) – writer, web developer.

VII. RESEARCH OBJECTIVES FROM NYSG’S STRATEGIC PLAN: 2006-2010

Please note that this is not NYSG’s entire Strategic Plan. These are only the Goals and Objectives that identify research needs.

Goal 1: New York State coastal businesses will be better able to respond to increasing environmental regulation, to take advantage of new opportunities, and to contribute to the economic health of coastal communities.

Objective b. Develop and/or evaluate innovative technologies to minimize the environmental impact of marina operations, boating, and other coastal-dependent businesses.

Objective c. Identify innovative strategies to reduce the need for dredging and to reuse, recycle, and/or dispose of dredged material associated with boating facilities.

Objective d. Evaluate approaches to increase public access and to enhance tourism and eco-tourism opportunities intended to develop and/or promote environmentally sustainable, economically stable tourism markets.

Objective e. Develop methods to overcome technological, marketing, regulatory, or policy barriers to, and evaluate environmental and economic impacts of, aquaculture and its further development.

Objective f. Conduct research on how coastal management institutions change and evolve in response to changing conditions and what makes this possible.

Objective g. Develop predictive models that can evaluate conflicts in the coastal zone to define tradeoffs of alternative management scenarios.

Objective h. Estimate the economic value of coastal resources and/or their uses.

Goal 2: New Yorkers will be able to prepare better for, and respond to, Coastal Hazards by understanding the processes involved and the impacts these hazards can have on natural and built environments.

Objective a. Develop new or improve existing technologies, sensors and systems, models, and risk assessment methods to identify, understand, predict and reduce the impact of coastal hazards and processes on the environment, natural resources, property, structures, infrastructure, economies, and public safety.

Objective c. Develop and/or evaluate new approaches for mitigating coastal erosion hazards that incorporate structural and non-structural control measures to minimize environmental impacts while enhancing habitats and allowing for public access.

Objective e. Develop forecasting, strategies to deal with Great Lakes Basin water withdrawals to equip communities to assess the impacts and make decisions about tradeoffs among water rights, domestic and international fresh water export, and commercialization or privatization of water treatment and supply and water uses within the basin, e.g., to prevent erosion, for navigation, boating, fishing, energy generation, etc.

Goal 3: New Yorkers will be able to understand, evaluate, reduce and mitigate anthropogenic impacts on, and restore structure and function of, coastal ecosystems and habitats.

Objective b. Develop or refine techniques and indicators to examine the effect of human activities on coastal habitat quality or fragmentation, to determine if habitats have been degraded, to estimate human carrying capacity in coastal areas, and to manage human access to these habitats.

Objective c. Develop techniques to determine the ecological processes and functions of coastal or underwater areas and ecosystems, as well as how they may link to their watersheds.

Objective d. Evaluate the costs, benefits, and effectiveness of implemented, proposed, and developing techniques (including marine protected areas) to protect or restore coastal and underwater habitats and ecosystems.

Objective e. Develop methods to predict whether or what habitat or ecosystem effects may result from new coastal structures (e.g., wind farms, gas terminals, replacement of aging infrastructure), different management strategies (e.g., for mosquito control), and other changes (e.g., in water level, modernized transportation).

Goal 4: New York’s resource managers and fishers will work together to sustainably use, protect, maintain and restore New York’s recreational and commercial fisheries.

Objective a. Develop new or use existing stock assessment and other tools to evaluate and potentially mitigate the effects of historical, recent, current and future stressors (including environmental changes, pathogens, pollutants, other biota, the fishery itself and mitigation techniques, as well as their combined effects) on recreational and commercial fisheries.

Objective b. Identify and evaluate techniques that will maintain or restore fisheries health by reducing inadvertent mortality and sublethal effects of fishing. Identify new harvesting techniques to diminish impediments to economic and ecological sustainability in fisheries.

Objective c. Develop techniques to identify sustainable effort and determine how management practices/strategies affect fisheries sustainability, especially in the face of ecosystem changes.

Objective d. Improve capabilities to predict socioeconomic responses of coastal communities to changes in fisheries resources or accessibility.

Objective e. Develop models that link abiotic and biotic ecosystem processes to fish or shellfish abundance, biomass, recruitment, production, and harvest.

Objective f. Develop and/or evaluate the feasibility and efficacy of techniques for the identification, maintenance, restoration, and enhancement of critical habitat for important aquatic species.

Goal 5: New Yorkers will reduce the spread of Aquatic Invasive Species (AIS) and predict and minimize the ecological and economic impacts of AIS and Aquatic Nuisance Species (ANS)

Objective a. Determine the biotic, abiotic, and anthropogenic processes and conditions that influence population dynamics and distributions of AIS and ANS, including animals, plants, harmful algal blooms, diseases, and parasites, in order to develop strategies for prevention or mitigation.

Objective b. Determine the environmental, ecological, economic, and synergistic impacts and effects of AIS and ANS, and their causal mechanisms and develop effective response, detection, and control mechanisms.

Objective d. Improve our understanding of the biology of AIS and ANS especially as it relates to monitoring for prevention of introduction and spread, response to potential control methods, and predicting and assessing impacts on infrastructure, ecosystems and human health.

Objective e. Develop risk assessment techniques to predict future AIS introductions and ANS and AIS proliferation and methods to enhance effective prevention, early detection, response, control, and mitigation.

Goal 7: NYS seafood processors will effectively and profitably market safe, high quality seafood products to knowledgeable consumers.

Objective b. Develop new technologies to maintain or increase seafood quality and safety from catch to consumption.

Objective f. Identify and/or characterize the relative risks (safety hazards such as pathogens, toxins, or chemical contaminants, including trophic transfer and combined effects) associated with consuming marine and Great Lakes seafood and develop and evaluate strategies/methods to detect, minimize, eliminate, or remediate these potential impacts.

Goal 8: Local governments and citizens will be able to make wise choices about alternative coastal resource uses based on the comparative impacts of anthropogenic structures, operations and activities on water quality.

Objective a. Determine the processes and rates of transport, fate, interactions, and bioaccumulation of point and non-point source anthropogenic contaminants and pathogens (e.g., pesticides, fertilizer, sewage, metals, pharmaceuticals) and develop appropriate models to predict effector concentrations and distribution in coastal waters.

Objective b. Develop techniques to predict and evaluate the effects of water quality on human uses of coastal resources, and the relative effects that alternative uses of coastal resources and areas have on water quality.

Objective c. Develop, and/or evaluate strategies to reduce the need for dredging or innovative techniques to reuse, recycle, and/or dispose of dredged material in a costs-benefits framework.

Objective d. Develop and/or evaluate coastal construction materials and techniques that are effective and have acceptable economic/societal and environmental costs and benefits.

Objective e. Evaluate the effectiveness of and improve best management practices for non-point source pollution prevention and mitigation targeted to property owners, municipalities, industries, and businesses.

VIII. PREPROPOSAL SUBMISSION FORM INSTRUCTIONS

Please use the format and provide the information as described below. For a blank form that may be filled in, go to: www.NYSGProposal.org, select the “New York Sea Grant Biennial Call for 2007-2008,” and download the file “New York Sea Grant Preproposal Submission Form” to your desktop.

2007-2008 New York Sea Grant Research Call for Preproposals

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

2. BRIEF PROJECT TITLE:

3. INVESTIGATOR(S): List principal, co-principal, and associate investigators, including name, address, telephone, fax, and email for each. *Also* indicate eligibility category (#) from the Call’s Section III.A for each. The primary professional base of the lead investigator must be in New York State. Students and NYSG staff cannot have PI, co-I, or AI status.

4. TYPE OF PROJECT:

a. Addressing Goal(s) and Objective(s): Indicate by number and letter the Goal and objective(s) from *Research Objectives from NYSG’s Strategic Plan: 2006-2010* addressed by this submission.

b. State-of-knowledge synthesis effort? Indicate yes or no, whether the preproposal is to prepare a state-of-knowledge synthesis.

c. Regional or multi-program submission? Indicate yes or no, whether the preproposal is part of a regional or multi-program submission being considered by other state Sea Grant programs.

5. BUDGET: Totals of direct plus indirect costs.

A. Estimated Request for Federal Funds from New York Sea Grant

Year One \$ _____ Year Two \$ _____

B. Anticipated Non-Federal Cost-Share to be Provided to New York Sea Grant

Year One \$ _____ Year Two \$ _____

C. Expected Source(s) of Cost-Share:

6. POTENTIAL PEER REVIEWERS: Provide names and affiliations of three out-of-state individuals of national standing and pertinent expertise *who would not have a conflict of interest* in reviewing this as a full proposal should it be invited. We may or may not use these individuals, so do not contact them yourself.

7. BRIEF DESCRIPTION OF PROJECT: Starting on a *new* page, use up to two pages of text with the following headings to describe your proposed project. Use all-around margins of at least 1” and a font size no less than #12. Text beyond two pages will be discarded prior to review.

- a) **OBJECTIVES:** List the overall objectives, with a statement of the hypothesis(es) to be tested. Or, if model or technique development or a synthesis effort, clearly state the intent.
- b) **RATIONALE:** Explain the significance of the problem and why this is an important issue to address/resolve.
- c) **APPROACH:** Very briefly describe the general approach to be used.
- d) **USEFULNESS:** Explain the expected usefulness that the project’s results will have to Sea Grant Extension and other audiences/stakeholders.
- e) **LINKAGES:** Highlight whether the work is being proposed in conjunction with other projects or proposals, or will be able to coordinate with other known efforts.