



New York Sea Grant's
CALL FOR 2006

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

Preproposals Due 5:00 PM Tuesday March 1, 2005
Total Funds Available -- Approximately \$1 million

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 wise development, use, protection, conservation, and management 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 mission is to identify, support, and extend research-based information which enables individuals, communities, businesses, and other decision-makers to better conserve, utilize, and rehabilitate their coastal resources.

II. "SEA GRANT" RESEARCH

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

NYSG traditionally 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. Special to this Call for one-year projects, state-of-knowledge synthesis efforts are also invited. 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. Within the research program this is stressed primarily through encouraging investigators to involve graduate 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 VII) 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 will be most useful to NYSG's clients.*** The importance of this is reflected in Section V, in the description of the evaluation criteria.

An ideal Sea Grant project would attack a well-defined 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.

III. HIGH PRIORITY TOPICS FOR PREPROPOSALS

In this Call for Preproposals, New York Sea Grant invites projects of one-year duration that will address any of the specific *Research Objectives from NYSG's Draft Strategic Plan: 2006-2010* (see attachment).

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.

Authors should be sure to understand what types of projects can be considered for Sea Grant research funding, as described in Section II of this Call (hypothesis-based and/or model or technique development). Since funding will be limited to one year, this is also a particularly opportune time for NYSG to consider projects that would analyze existing data and/or samples for which funding has not been available, as well as projects that will produce state-of-knowledge syntheses, as relevant to the *Research Objectives from NYSG's Draft Strategic Plan: 2006-2010*.

IV. 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 in New York State.
2. Researchers at not-for-profit institutions in New York State.
3. Researchers at universities, colleges, or not-for-profit institutions not located in New York, as long as they are part of a team led by an eligible NY-based researcher.
4. Researchers who are personnel of state or local agencies.
5. Researchers at for-profit institutions or companies (with limits).

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, the funding will cover only one year, running from 2/1/2006 through 1/31/2007. Please note that this is a departure from NYSG's usual schedule of inviting proposals for up to two years of work. The one-year timeframe also applies to any New York component of efforts submitted as Regional proposals (see Section IV.G).

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. What to Submit:

The completed Preproposal Submission Form (see Section VIII) must be received by the *deadline of 5:00 PM on Tuesday, March 1, 2005*. Required are:

a) one paper copy of the preproposal (no signatures needed)

and

b) a single electronic file in either Microsoft Word or as a pdf, copied onto a floppy disk or burned onto a CD.

Email and fax submissions will not be accepted. Please double-check that your disk file is readable on a PC. NYSG staff will email you when your submission arrives to confirm its receipt and that it can be read. Submissions that arrive after the deadline or for which the enclosed electronic file is unreadable cannot be accepted.

Send to: Cornelia Schlenk, Asst Dir
New York Sea Grant
121 Discovery Hall
Stony Brook University
Stony Brook, NY 11794-5001

Telephone: 631-632-6906

Do *not* send additional materials (e.g., CV, full budget, appendices, letters of support, etc.) at this preproposal stage. Such materials will be discarded.

G. Regional (multi-state) Proposals:

The Sea Grant Programs in the northeast (New York, Connecticut, Rhode Island, MIT, Woods Hole, Lake Champlain, New Hampshire, and Maine) have established a process for reviewing and funding research proposals that have regional or multi-program relevance and principal investigators from multiple states, and that can be funded cooperatively by multiple Sea Grant programs. If you are interested in submitting a regional proposal, you must contact NYSG's director, Dr. Jack Mattice, and your co-PIs must contact their state Sea Grant director(s) (see Section VII for Dr. Mattice's contact information).

Although efforts have been made to synchronize due dates and notification dates between the Sea Grant Programs in the northeast, there are unavoidable differences in the schedules. It is critical that submitters be familiar with, and comply with, the due dates and processes as specified by the director of their Sea Grant Program.

If you are interested in submitting a multi-program or regional proposal with researchers in other states, again, please contact Dr. Mattice immediately.

H. 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 or any other funding agency or source. In addition, please note that it is New York Sea Grant's policy to consider only full proposals that are submitted specifically in response to, and within the due dates for, this Call. Even if submitted to other Sea Grant Requests for Proposals, proposals will not be considered unless they were in this Call's pool from the start as a preproposal.

V. THE REVIEW PROCESS

All preproposals submitted to NYSG in response to the 2006 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 2006 (i.e., this document and the attached *Research Objectives from NYSG's Draft Strategic Plan: 2006-2010*);
- 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. Upon request, 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 IV.C-E). 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.

VI. 2006 CALL TIMELINE

January 10, 2005	Call for preproposals released
March 1	Preproposals due at NYSG (hard copy and disk)
April 12	NYSG invites selected PIs to write full proposals
June 14	Full proposals due at NYSG with all authorized signatures
August 9	PIs receive masked peer reviews for response
August 15	PI responses to reviews due to NYSG
August 29	NYSG notifies successful investigators
by Sept 12	Revisions and final budgets for successful proposals due to NYSG
February 1, 2006	Funding begins for new one-year projects

VII. NEW YORK SEA GRANT STAFF

^a = Program Management Team: Mattice, Baker, Schlenk

^b = Marine and Great Lakes Extension Coordinators: Kent, O'Neill (acting)

Research Administration (at Stony Brook University)

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

Cornelia Schlenk^a, 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^a, 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.

David Greene (716-645-3610 at SUNY Buffalo, *hdg2@cornell.edu*) – community issues; 4-H and youth education; recreational safety and liability; Lake Erie issues; Native American issues.

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 NYSG’s NEMO Office in Stony Brook, *ek72@cornell.edu*) – non-point source pollution.

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

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

Shana Miller (631-852-2077 at the Peconic Estuary Program Office in Riverhead, *skb8@cornell.edu*) – Peconic Estuary resources and issues.

Chuck O’Neill^b (585-395-2638 at SUNY College Brockport, *cro4@cornell.edu*) – Zebra Mussel Information Clearinghouse; 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.

Molly Thompson (315-312-3042 at SUNY College Oswego, *mat36@cornell.edu*) – Great Lakes dunes and habitats; non-point source pollution in the Great Lakes.

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 (631-632-8730 at Stony Brook University, *ksz1@cornell.edu*) – natural resources of Long Island Sound.

VIII. PREPROPOSAL SUBMISSION FORM

Please use this general format and provide the information requested below

2006 NYSG Research Call for Preproposals

1. LAST NAMES OF PRINCIPAL INVESTIGATORS:

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 IV.A for each.

4. TYPE OF PROJECT:

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

b. Is this a synthesis effort?

c. Is this a regional or multi-program submission being considered by other state Sea Grant programs?

5. BUDGET: Include total of direct plus indirect costs.

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

One Year \$ _____

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

One Year \$ _____

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

6. POTENTIAL PEER REVIEWERS: Names and affiliations of three out-of-state individuals of national standing and pertinent expertise who would not have a conflict of interest. We may or may not use these individuals, so you do NOT need to contact them.

7. BRIEF DESCRIPTION OF PROJECT: Starting on a *new* page, use up to two pages 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. Additional pages will be discarded.

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 clients/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.

Research Objectives from New York Sea Grant's Draft Strategic Plan: 2006-2010

Theme 1: Coastal Community Businesses and Economies

- Objective a. Develop predictive models that can evaluate conflicts in the coastal zone to define tradeoffs (including the long- and short-term ecological, environmental, and economic impacts) of alternative management scenarios.
- Objective b. Evaluate approaches to enhance tourism and eco-tourism opportunities intended to develop and/or promote environmentally sustainable, economically stable tourism markets.
- Objective c. Develop and/or evaluate the use of innovative technologies and cost-effective techniques to prevent, control, or reduce the environmental impact of marina operations, boating, and other coastal-dependent businesses.
- Objective d. Develop methods to overcome technological barriers to, and evaluate environmental and economic impacts of, aquaculture and its further development.
- Objective e. Estimate the economic value of coastal resources and/or their uses.
- Objective f. Conduct research on how institutions change and evolve in response to changing conditions and what makes this possible.

Theme 2: Coastal Hazards and Processes

(including storms, winds, waves, circulation, climate change, sediment transport, erosion, marsh loss, water-level changes, and water withdrawals)

- 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 to the environment, natural resources, property, structures, infrastructure, economies, and public safety.
- Objective b. For mitigating coastal erosion hazard problems, develop and/or evaluate new approaches (and cost-effective methods to do the evaluation) that incorporate structural and non-structural control measures that minimize environmental impacts while enhancing habitats and allowing for public access.
- Objective c. Assess the risk of tsunamis to New York's coastal areas.

Theme 3: Ecosystems and Habitats

- Objective a. Develop or refine techniques to determine the ecological processes and functions of coastal watersheds and other coastal or underwater areas and ecosystems.

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

Objective c. 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 d. 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).

Theme 4: Sustainable Fisheries

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

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

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

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

Objective e. Identify and evaluate techniques that will maintain or restore fisheries health by reducing inadvertent mortality and sublethal effects of fishing.

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

Theme 5: Aquatic Invasive and Nuisance Species

Objective a. Determine the biotic, abiotic, and anthropogenic processes and conditions that influence population dynamics and distributions of Aquatic Invasive Species (AIS) and Aquatic Nuisance Species (ANS), including animals, plants, harmful algal blooms, diseases, and parasites.

Objective b. Determine the environmental, ecological, economic, and synergistic impacts and effects of AIS and ANS, and their causal mechanisms.

Objective c. 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.

Theme 6: Seafood Science, Safety, Technology and Business Vitality

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

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

Theme 7: Urban and Developed Coasts

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

Objective d. Develop, and/or evaluate the economic and environmental costs and benefits of, innovative techniques and alternatives to reuse, recycle, and/or dispose of dredged material, as well as strategies to reduce the need for dredging.

Objective e. Develop innovative, and/or evaluate existing, coastal construction materials and techniques for their effectiveness and economic/societal and environmental costs and benefits.