



Lake Champlain Sea Grant Request for Proposals for Research 2012 - 2014

The Lake Champlain Sea Grant (LCSG) requests proposals for applied research to improve understanding, use, and management of Lake Champlain and Lake George, the basin's inland waters and the Great Lakes in general.

Deadline for Full Proposal: Friday, August 19, 2011, 5 p.m.

Submit by email to Bethany Hanna at bethany.hanna@uvm.edu.

Proposals will be evaluated and Principal Investigators (PIs) informed of acceptance by:
Friday, September 23, 2011

Proposal format is outlined here and is also posted on the LCSG website at
<http://www.uvm.edu/~seagrant/index.html>.

2012 – 2014 RESEARCH PRIORITIES

The following are major goals for the LCSG Project:

- To promote ecosystem-based approaches that foster a healthy and diverse ecosystem and provide for sustainable human use and enjoyment of Lake Champlain, the basin, and surrounding waters;
- To restore terrestrial and aquatic ecosystems in the Lake Champlain Basin and surroundings;
- To strengthen the economic base of local communities through sustainable development, particularly of lake-dependent businesses and those industries offering tourism and recreation opportunities; and
- To provide scientifically sound information about regional climate change and its potential impacts on local communities, and to help communities plan for and implement practices that mitigate these impacts.

Sustaining lake and basin ecosystems into the foreseeable future is the overarching research priority. Along these lines, we are targeting research that defines sustainability; sets thresholds that limit degradation from urbanization, development, agriculture, and toxic substances; evaluates the effects of and potential adaptations to climate change; and provides meaningful and cost effective ways to evaluate the effectiveness of actions taken.

Research priorities for this RFP reflect national and LCSG Project strategic initiatives that fall into one or more of three focus areas: **Healthy Coastal Ecosystems, Sustainable Coastal Development, and Hazard Resilient Coastal / Basin Communities**. More information on the specific objectives within each focus area is provided below.

We are particularly interested in receiving proposals that will improve understanding by decision-makers, planners, and managers about basin ecosystem processes, and the relationships between environmental stressors and long-term human and ecosystem health. We seek proposals with anticipated research results that support ecosystem-based decision analysis modeling, and management and strategic planning to reduce the effects of environmental stressors, and promote restoration of degraded ecosystems.

Stressors of concern in the basin include water quality degradation (phosphorus, toxins – especially mercury, and other contaminants), harmful algal blooms, invasive species, and climate change. **Research that focuses on climate change adaptation or that emphasizes interactions between climate change and other stressors will receive priority consideration.**

The proposed research must be based upon clearly identified needs, and the results must directly contribute to the resolution of important lake and watershed management issues. The expected significance of and application of the research, as well as the target audience(s) (beyond other academics) must be identified. **Proposals that identify bi-state, multi-disciplinary, business, or inter-institutional collaborations among researchers and educators will also receive priority consideration. Research that substantially involves both New York and Vermont institutions will be given top priority.**

Sea Grant Focus Areas

The following section highlights LCSG's focus areas for research and action. No proposal is expected to address all areas, but each proposal should address at least one of the following three foci. The objectives are derived from LCSG's Strategic Plan. Issues addressed within the objectives for the three foci should be present in all proposals. Many of these are interrelated; depending on the topic, proposals may address objectives and approaches that fall within different focus areas. The approaches (Evaluation, Assessment, and Modeling) sections broadly describe different potential areas of inquiry. All types of modeling are welcome.

Healthy Coastal / Basin Ecosystems

Objectives

- The research community, decision-makers, planners, and/or managers have an improved understanding of basin ecosystem processes and the relationships between environmental stressors and long-term human and ecosystem health.
- Solutions are proposed that address stressors of concern in the basin, including water quality degradation (phosphorus, toxins, and other contaminants), harmful algal blooms, invasive species, and climate change.

Approach	Research
Evaluation	Examine the nature of the Lake Champlain Basin ecosystem, how to protect it, and ways to predict its response to stressors.
Assessment	Identify data gaps and provide critical data for planning and predicting outcomes of actions to restore function and productivity of degraded ecosystems.
Modeling	Develop ecosystem models that take climate change into account to improve forecasting, management, planning, and restoration of the basin's aquatic ecosystems.

Specific topics of interest include: Evaluating the lake's response to climate change.

Sustainable Coastal / Basin Community Development

Objectives:

- Basin communities have the information and tools to realize the economic potential of sustainable development of tourism and recreation.
- Local communities are able to identify sustainable economic development practices and implement policies and programs accordingly.
- Sport-fishing community and other organizations dependent upon aquatic resources are involved in habitat conservation and enhancement efforts.

Approach	Research
Evaluation	Examine social, economic, and environmental responses to development policies and programs promoting sustainable growth and development of coastal and lake-dependent businesses.
Assessment	Develop methods to assess the value of eco-tourism and recreation resources and the effects that development has on that value.
Modeling	Develop and test models to manage basin development and resource use to deliver economic and environmental benefits to communities in the basin.

Specific topics of interest include: Managing shoreline development; implications of the phosphorus TMDL for lake-dependent businesses; positive outcomes associated with implementation of the phosphorus TMDL; municipal decision-making.

Hazard Resilient Coastal / Basin Communities

Objectives:

- Strengthen community capacity to plan for regional climate change and potential impacts in the Lake Champlain Basin.
- Decision makers, local officials, and land owners are aware of the hazards associated with development on Lake Champlain cliffs and along unstable stream channels.
- Communities are prepared to respond to hazardous events.

Approach	Research
Evaluation	Determine how predicted long-term changes in temperature, precipitation, ice cover and other factors may affect coastal community economies, e.g. infrastructure needs.
Assessment	Analyze terrestrial or aquatic ecosystems, or communities or socioeconomic resources likely to be damaged by hazardous events like shoreline flooding in the basin. Recommend mitigation strategies.
Modeling	Model climate change scenarios to inform best management of stormwater runoff, fisheries, or other resources.

Specific topics of interest include: Climate change scenarios, flooding and stormwater management; tools to help communities adapt to climate change scenarios.

Outreach

Outreach is integral to the Sea Grant model. Each funded project will be required to have a well-designed and clearly articulated **outreach plan**. Investigators are strongly encouraged to contact LCSG Extension (mark.malchoff@plattsburgh.edu) for additional resources and to discuss potential approaches, audiences, and intended outcomes.

PROPOSAL SUBMISSION

Who is Eligible to Submit

- Investigators from universities, colleges, and other nonprofit institutions in Vermont and New York State are eligible to apply for funding through LCSG.
- Investigators at institutions not located in New York or Vermont may participate in a Sea Grant project provided they are part of a team led by an eligible Vermont or New York based investigator.
- Investigators from Québec institutions may submit a proposal through a US institution or a joint US-Canadian agency that are eligible to receive US government funds.

Duration of Proposed Work

Proposals of 1-2 years duration will be accepted. This RFP will cover 24 months of research, anticipated to run from 2/1/2012 through 1/31/2014. While LCSG is accepting proposals for the entire period, only one year of support will be awarded at a time. Continued support of a project will be contingent on progress and availability of funds. **In their proposals, investigators must clearly define the anticipated benefits of each year's efforts.**

Budget

Expected Funding – Projects of up to \$60,000/year each will be considered. Proposals with high benefit to cost ratio are especially encouraged. We anticipate that 1 – 3 projects will be funded.

Budget Justification – All budgets must be accompanied by full and complete justification of all costs, the basis for the costs or cost estimate, up to and including specific items of equipment with estimated price (and source of price information), basis for vehicular travel costs, air travel based on actual cost quotes, and so on. Proposals with inadequate justifications will be rejected.

Match Requirement – Sea Grant has a matching funds requirement specifying that \$.50 in non-federal matching support be provided for every \$1.00 of Sea Grant funding requested under this call. Investigators must demonstrate this level of match. Proposals without appropriate match and documentation will be rejected.

Salary Requests – All salaries must be justified salary requests. Typically, PIs receive no more than two months' total salary from LCSG per year. LCSG encourages projects that include graduate students.

Proposal Specifications

Proposals must include the following sections:

- ☐ *Required NOAA Sea Grant forms* at <http://www.seagrant.noaa.gov/funding/forms.html> [SF 424 and 424A, 90-4, 90-2]
- ☐ *Title page* with names, addresses (including email), telephone numbers, and signatures of Principal Investigators as well as the signature of the appropriate institutional representative. The proposal title should be concise and descriptive. Specify which of the three focus areas is the primary focus of the proposal.
- ☐ *Body* of the proposal should have 1" margins, font size no smaller than 12, be no more than 10 pages (excluding works cited and illustrations) and should consist of:
 - Introduction and rationale
 - Relevance to management concerns in the basin and relation to LCSG priorities and focus areas
 - Objectives
 - Methods describing design and proposed analysis
 - Expected results and significance
 - Outreach plan
- ☐ *Budget* completed on required NOAA budget forms found at <http://www.seagrant.noaa.gov/funding/forms.html>
- ☐ *Budget justification* that explains the basis for all major expenditures with written agreements supporting required matching funds or services and amounts
- ☐ *Letters of support* from collaborating institutions or those benefiting from research results
- ☐ *Timeline for implementation*
- ☐ *Literature cited*
- ☐ *Curriculum vitae* of listed investigators (maximum of 2 pages each)
- ☐ *Reviewer names* (3) with home institution, mailing address, email, and phone number for each. Please list reviewers who are competent in your field of study, but with whom you do not work directly.

Proposals lacking any of these components will not be accepted. No late submissions will be accepted. If a proposal is funded, original hard copies with the appropriate signatures will be required by September 30, 2011.

Full proposals are due [August 19, 2011 by 5:00 p.m.](#)

Submit full proposals as a single PDF by email to:

**[Bethany Hanna](#)
bethany.hanna@uvm.edu
 (802) 656-4280**

Proposal Evaluation and Rating Criteria

Proposals will be subject to peer review. The National Sea Grant Office (NSGO) Program Officer will be included as an *ex officio* member of the review panel, participating in person or remotely in panel discussions. The specific projects LCSG includes in its proposal to the NSGO will be rated primarily on the basis of:

1. Rationale,
2. Scientific or professional merit,
3. Innovativeness,
4. Professional qualifications of investigators,
5. User relationship and usefulness of results,
6. Responsiveness to Sea Grant priorities, and
7. Programmatic value.

Factors that contribute to programmatic value are described under the Sea Grant Focus Areas above. NSGO program officers participate in the final review and selection process. There will be no separate proposal review process at the National Sea Grant Office level.

Duplicate Submissions

LCSG should be immediately informed by the PI if a proposal submitted under this call will also be considered by any other funding agency or source. In addition, please note that it is LCSG'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 RFPs, proposals will not be considered unless they were in this call's pool from the date of proposal submission.

Contacts

For *general questions about the RFP*, contact Bethany Hanna at bethany.hanna@uvm.edu.