Competitive Research Program Call for Proposals

Full Proposals due Sunday August 18, 2019, midnight ET
Expected project start date: February 1, 2020

Research Program

Lake Champlain Sea Grant (LCSG) requests proposals to fund research in the Lake Champlain basin for one- or two-year projects during the period February 1, 2020 – January 31, 2022. Projects should be directly relevant to the goals of the LCSG Strategic Plan (2018-2021). Research projects within the Lake Champlain basin focused in one or more of three areas will be considered: 1) healthy coastal ecosystems; 2) resilient communities and economies; and 3) environmental literacy and workforce development. An estimated $500,000 will be available to support 3-5 research projects over a one- or two-year funding period. Researchers may request up to $75,000 in federal Sea Grant funds for one-year projects, or $150,000 total for two-year projects, to cover direct and indirect costs. Federal support must be matched with non-federal funds at the rate of $1 in non-federal matching funds for every $2 requested of federal Sea Grant funds (i.e., a 50% match). Successful proposals will have a start date of February 1, 2020 and an end date of no later than January 31, 2022. Researchers at institutions of higher education and organizations or agencies that conduct research in the Lake Champlain basin (New York and Vermont) are eligible to respond to this RFP.

Important notes for Principal Investigators (PIs)

- Funding of all proposals is contingent upon Lake Champlain Sea Grant's allocation from NOAA in the FY2020 and FY2021 federal budgets. Modification in the number of and funding for individual proposals may be made based upon the final program budget.

- PIs must provide a strong rationale for how their proposed research will affect policy and/or management decisions and how that information will be communicated outside of academia. LCSG outreach staff will assist with these efforts.

- A Data Management and Sharing Plan is required in the full proposal. PIs should consider data management funding needs as they develop their budgets. We can help you develop a data management plan if you do not have one.

Background

Lake Champlain Sea Grant is a collaborative effort between the University of Vermont and Plattsburgh State University of New York. LCSG has evolved over the years, earning promotion through NOAA's four-tiered system in recognition of its successes along the way. Now, at the second highest level with an increased federal budget as a Sea Grant Institute, the LCSG program will expand our competitive research program.

Lake Champlain Sea Grant seeks research proposals that support the goals and objectives of the program, including the cross-cutting principles to cultivate partnerships and enhance diversity and inclusion while working within the framework of at least one of three focus areas: Healthy Coastal Ecosystems, Resilient Communities and Economies, and Environmental Literacy and Workforce Development. Research projects utilizing field and lab experiments, models, and socioeconomic studies should be designed to provide information to inform policy decisions and best management practices for Lake Champlain communities.

Projects must include an outreach plan to disseminate key findings from the project to a broad audience, outside of academia. We strongly recommend that PIs consider how their research can benefit underserved audiences and how those audiences might be meaningfully engaged in the research from beginning to end. Lake Champlain Sea Grant Extension faculty and staff are available to assist PIs with such outreach. PIs are encouraged to contact LCSG staff as proposals are being developed to collaboratively create an outreach plan to be included in the proposal.

Strategic Research priorities (See also Appendix A)

Proposals should be relevant to at least one of the Lake Champlain Sea Grant focus areas and goals:

Resilient Communities and Economies

Goal 1: Water resources are sustained and protected to meet emerging needs of the communities, economies, and ecosystems of the Lake Champlain basin.

Goal 2: Coastal communities and economies are resilient to changing environmental conditions

Environmental Literacy and Workforce Development

Goal 3: An environmentally literate, engaged and diverse public is informed by lifelong formal and informal opportunities and implements innovative solutions to improve community well-being in the face of a changing Lake Champlain basin.

Goal 4: A diverse and skilled workforce is engaged and enabled to address critical local, regional, and national needs.

Healthy Coastal Ecosystems

Goal 5: Habitat, ecosystems, and the services they provide are protected, enhanced, and/or restored.

Goal 6: Land, water, and living resources are managed by applying sound science, tools, and services to sustain ecosystems.

Eligibility

To be considered for funding, a pre-proposal is required by the time and date indicated at the top of this announcement. For details on the pre-proposal, see further information below (Proposal Submission Process).

Principal Investigators (PIs) must be from an institution of higher education, agency, or not-for-profit organization or private for-profit company. Researchers from outside the Lake Champlain basin are eligible to submit a proposal, but the research being proposed must be conducted, at least in part, in the Lake Champlain basin. Single investigators and multiple investigator research teams from different institutions are encouraged to apply. Lake Champlain Sea Grant encourages participation from the broad natural science and social science research community within the Lake Champlain basin and invites participation by investigators new to the Lake Champlain Sea Grant RFP process.

Diversity, Equity, and Inclusion

The National Sea Grant College Program champions diversity, equity, and inclusion (DEI) by recruiting, retaining, and preparing a diverse workforce, and proactively engaging and serving the diverse populations of coastal communities. Sea Grant is committed to building inclusive research, extension, communication, and education programs that serve people with unique backgrounds, circumstances, needs, perspectives, and ways of thinking. We encourage applicants of all ages, races, ethnicities, national origins, gender identities, sexual orientations, disabilities, cultures, religions, citizenship types, marital statuses, educational levels, job classifications, veteran status types, and income and socioeconomic status types to apply for this competitive research opportunity.

The Lake Champlain Sea Grant program encourages applicants to clearly identify how this research will have broader societal impacts on the Lake Champlain basin community including stakeholders from underrepresented or underserved communities.

Proposal Submission Process

Pre-Proposal

A pre-proposal (described below) consisting of a title, a short description, and an estimated budget is required. *Pre-proposals must be received by the time and date indicated at the top of this announcement to be eligible for further consideration*. The pre-proposals will be evaluated by an internal review panel to assure compliance with the Strategic Plan and to provide early feedback to PIs. The pre-proposal process is a requirement of the funding agency (NOAA).

The pre-proposal should include the following components:

Project narrative – 2-page, single-spaced maximum

1) Introduction/background/rationale

   Indicate the specific problem addressed by the proposed effort and provide sufficient background information to allow a preliminary assessment of the relationship of the problem to the research questions posed in this RFP and to the current LCSG Strategic Plan.

2) Objectives

   State the objectives of the research effort. Research hypotheses, if relevant, should be clearly stated.

3) General approach and methods

   Readers should be able to make a preliminary determination of the appropriateness of the proposed approach, including statistical analyses, to achieve the stated objectives.

4) Anticipated benefits

   Briefly explain the anticipated results and potential implications of those results in relation to Lake Champlain Sea Grant program objectives.

5) Outreach plan

   Describe how the proposed research will link to policy and/or management decisions and how the results of the study will be translated for end-users outside of direct scientific peers. Investigators are strongly encouraged to contact the Lake Champlain Sea Grant office (https://www.uvm.edu/seagrant/staff) to discuss potential outreach approaches and audiences. In some cases, it may be appropriate for Sea Grant staff to participate directly in projects at no added cost to the project.

Budget estimate (not counted towards 2-page limit)

At the pre-proposal state, the LCSG does not require that the budget be fully vetted through the PI's institutional grants and contracts office. However, personnel salary, supplies, travel, and other general costs should be provided and should be reasonably accurate. For this reason PIs should check with their individual institutional grants and contracts office to determine their policy regarding internal vetting at this stage. PIs should also identify all potential sources of non-federal matching funds. These may include institutional cost share, third party cash, or in-kind contributions. All match sources must be quantifiable.

References (not counted towards 2-page limit)

Project Narrative – 10 pages maximum

The project narrative should include the background and relevance of your proposed project. Clearly state the context and the direct connection to the Lake Champlain Sea Grant Strategic Plan focus area and relevant goal(s), and the nature of the specific problem being addressed.

Format: Single-spaced, 1-inch margins, numbered pages, no smaller than Times Roman 11 point, Calibri 11 point, or Arial 10 point font, with the following sections:

1) Objectives and Description

   State the goals and/or hypotheses of your proposed effort and the objectives for each year of funding.

2) Methodologies

   Outline the methodologies, techniques, or actions for achieving each of the project objectives. Describe the experimental designs, techniques, and analyses to be used. Include an explanation of how the data will be analyzed using appropriate statistical procedures.

3) Anticipated Benefits

   Describe the outcomes of the project and implications of the anticipated results.

4) Deliverables

   PIs are required to track their progress and report annually on information, products, and services rendered as a result of their work. Project deliverables include academic products (publications, presentations, graduate students supported, models), outreach products (public presentations, news stories related to the work, websites, fact sheets, maps), workshops, tools, etc. Some of these deliverables will be tracked as performance measures. Please see the Lake Champlain Sea Grant Strategic Plan for a list of the performance measures.

5) Outreach Plan

   An essential component of Lake Champlain Sea Grant's mission is to fund research that meets the needs of many audiences whom we serve. Our mission is to develop and share science-based knowledge to benefit the environment and economies of the Lake Champlain Basin. Our audience is business, state, and local leaders and the communities they serve. To that end, we require investigators to develop an outreach plan as part of the proposal that describes how the project will engage with constituencies that may benefit from the research and describe the ways the proposed work will help solve problems and advance public understanding in the Lake Champlain basin. We strongly encourage proposals to include funding to support outreach efforts. Lake Champlain Sea

Grant Extension faculty and staff are able to assist PIs with developing and implementing outreach plans. PIs are encouraged to contact relevant Lake Champlain Sea Grant Extension faculty or staff during the proposal development process.

The outreach plan should include a clear communication strategy that supports the research effort. It should:

- Describe the outputs (i.e., products) and outcomes (e.g., resulting knowledge, skills, actions, consequences) of the proposed study that will be applicable to your outreach effort.
- Describe the target non-academic end users for the products/outcomes.
- Describe outreach mechanisms to be used to reach both academic and non-academic end users.
- Present a timeframe for developing and implementing this outreach plan.
- Describe the intended impact of these outreach efforts with particular emphasis on how the impacts align with the Lake Champlain Sea Grant focus areas and goals.

The following sections are required but do *not* count towards the page limit total.

References: Follow the [author guidelines for publications by the Ecological Society of America](#) to format the list of cited literature. Arrange citations alphabetically by authors' last names.

Statement of Qualifications: Provide a two-page statement of qualifications for PIs and Co-PIs (Co-PIs may be included in more than one proposal). This can be in the form of a curriculum vitae or other statement.

Reviewers and Conflicts: Provide a list of five individuals from outside the Lake Champlain basin who are knowledgeable and competent in your field of inquiry. Include complete addresses, email, and phone number, if possible. Refer to Appendix B to ensure investigators do not have a conflict of interest with potential reviewers.

Budget Justification and Forms: A detailed, fully vetted budget is required. UVM researchers should work with UVM SPA to route their budget. Researchers from other organizations should provide endorsement from the subrecipent's Authorized Official. This endorsement is provided in a variety of formats, such as signed budget pages, a letter of intent, or signed agency cover sheet. A Statement of Work and a completed UVM Subrecipient Commitment and Audit Certification Form must also be included. For more information on this requirement, please visit the [UVM SPA website](#) or contact the LCSG Research Coordinator. The 90-2 *short* form and 90-4 *fillable PDF* budget forms are required as well as a budget justification. These forms can be found here: https://www.uvm.edu/seagrant/request-proposals
For detailed guidance go to: https://seagrant.noaa.gov/insideseagrant/Implementation

The 90-2 *short form* Excel spreadsheet can be used for all years of the project. Use one 90-4 *fillable PDF* for each year of the project and a separate 90-4 *fillable PDF* form for all years together.

Data sharing plan

The America COMPETES Act requires the federal government to ensure that data from federally supported research is accessible to the public in a timely manner. NOAA requires Sea Grant programs to have mechanisms in place to meet these data access requirements. As a condition of all research grants, projects funded by Lake Champlain Sea Grant must have a data management plan in place that will allow for the information collected to be freely available for public use. Specifically, NOAA requires that:

> Data and information collected and/or created under NOAA grants and cooperative agreements 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. The requirement has two basic parts: (1) environmental data generated by a grant project must be made available after a reasonable period of exclusive use, and (2) the grant application must describe the plan to make the data available (Principal Investigators are expected to execute the plan).

> Timely means no later than publication of a peer-reviewed article based on the data, or two years after the data are collected and verified, or two years after the original end data of the grant (not including any extension or follow-on funding), whichever is soonest.

> Final pre-publication manuscripts of scholarly articles produced entirely or primarily with NOAA funding will be required to be submitted to NOAA Institutional Repository after acceptance and no later than upon publication. Such manuscripts shall be made publicly available by NOAA one year after publication by the journal.

To comply with these requirements, proposers must complete a Data Management Plan for making environmental data and results accessible and interpretable within two years of collection. Storing data on local servers or external drives without public access or noting that data will be available "upon request to the PI" are no longer sufficient options. Note that you will be required to list data sets created and how to access them when reporting on your project. If funding is required for archiving data, please include this in the project budget. See Appendix C for the form. If you need assistance to draft a data management plan or need assistant with data management, LCSG may be able to help you. Contact the LCSG Research Coordinator.

Letters of Support

Letters of support will be accepted as long as they conform to the stated policy on conflicts of interest (Appendix B). Letters may be provided by partners, stakeholders who may benefit from the research, or Lake Champlain Sea Grant staff who provided input on the outreach plan, or others.

NEPA Questionnaire

A brief NEPA Questionnaire must be submitted. This NEPA Questionnaire form can be found here: https://www.uvm.edu/seagrant/request-proposals

Full Proposal Submission Process

As noted above, only full proposals that have been reviewed as pre-proposals will be accepted for further consideration. Briefly, a clean copy of the full proposal narrative (preferably in MS/Word format) that has been fully vetted through the relevant institutional grants and contracts office, plus all required forms should be sent to Gary.Hawley@uvm.edu by the date and time noted for the "full proposal" submission deadline at the top of this RFP. Additional, detailed instruction for how to submit a full proposal will be provided about a month before the deadline date.

Proposal Review Process

Only applicants who submit a pre-proposal on time are eligible to submit a full proposal. Applicants will receive an email encouraging or not encouraging full proposal submission. LCSG expects to encourage approximately twice as many full proposals as it expects to be able to fund. Any PI who submits a pre-proposal is permitted to submit a full proposal. Comments from the pre-proposal review process will be sent to all applicants who submitted a pre-proposal. Prospective PIs are strongly encouraged to consider and address any comments as they develop their full proposal application.

Technical Peer Review

All proposals will be reviewed for technical merit by three external peer reviewers. PIs must provide the names of at least five possible reviewers who are located outside of the Lake Champlain basin.

Outreach Review

The outreach plan for all proposals will be reviewed by a Lake Champlain Sea Grant outreach professional. LCSG staff who did not provide input or guidance on the proposal will provide the review to avoid conflicts. The proposal will also be reviewed for how the research will benefit and engage with stakeholders and partners from underserved populations.

Panel review

A panel composed of researchers and outreach professionals from the Lake Champlain basin will convene to discuss the merits of all of the proposals and make final recommendation for funding. The panel will use the technical peer and outreach reviews in their decisions, along with an understanding of the research and outreach needs in the Lake Champlain basin. Depending on funding constraints and reviewers' comments, Lake Champlain Sea Grant may ask PIs to revise their proposed budgets and scope of work. Recommendations from the panel review are advisory to the Director of LCSG. For resource, strategic, or tactical reasons the Director may choose not to accept some recommendations from the panel review. Any such deviation will be for cause and will be justified by the Director.

Review Criteria

Proposals will be reviewed by both peer reviewers and the review panel using the following criteria:

Technical Merit (30%): Includes novelty/originality; conceptual adequacy of hypotheses or research questions; clarity of objectives; adequacy/feasibility of methodologies; probability of success. Adequacy of the proposed budget to accomplish objectives and of the budget justification in explaining the need for resources.

Project Relevance (30%): Relevance includes improved understanding, assessment, use, management, conservation, or restoration of lake, coastal, and watershed resources. The proposed work must also be relevant to the primary focus areas detailed in this RFP and the current Lake Champlain Sea Grant strategic plan.

Outreach (30%): Appropriateness and impact of the outreach component outlined. This criteria addresses the methods by which the investigators propose to disseminate results to both academic and non-academic end user groups. The PI is required to also address how the project empowers the use of knowledge, skills, and actions through extension, education, or communication activities.

*Diversity, Equity, and Inclusion (*10%): Proposal identifies how researchers will engage with stakeholders from a diversity of backgrounds and how the research will be of benefit to underserved populations.

Reporting requirements

PIs are expected to submit progress reports which include information about publications, presentations, graduate students supported, news stories related to the work, and accomplishments made throughout the year. Progress reporting occurs in May and November of each year. Complete details will be made available at least one month in advance of reporting deadlines.

Focus Area		Topic
Resilient Communities & Economies	Goal 1	1) Clean boating and aquatic invasive species 2) Clean boating and pathogens 3) Contaminated fish and other food
Resilient Communities & Economies	Goal 2	1) HAB awareness by general public 2) GSI assessment and maintenance 3) Stream network flood storage capacity 4) GSI and schools
Environmental Literacy & Workforce Development	Goal 3	1) Gap analysis of current water resources or environmental outreach and its success in reaching minority populations
Environmental Literacy & Workforce Development	Goal 4	1) Economic review of Lake Champlain basin industry 2) Crude oil transport best management practices and response 3) Market analysis of workforce development offerings and potential high paying jobs
Healthy Coastal Ecosystems	Goal 5	1) Microplastics – sources, locations of high concentration, reduction 2) Impact of salt on tributaries and groundwater 3) Crude oil transport and wind currents – identifying high risk locations
Healthy Coastal Ecosystems	Goal 6	1) Road salt best practices 2) Review of shoreline protection ordinances and ability to protect water quality

You may have a conflict if you have any of the following affiliations or relationships:

1. Your affiliations with applicant institution(s).

   - Current employment at the institution as professor adjunct professor, visiting professor, or similar position. (This includes other campuses of a multi-campus institution, but a waiver may be available. If you are in a multi-campus institution, let the program director who solicited your review know.)
   - Other current employment with the institution such as consulting or an advisory arrangement, or you are being considered for employment with the institution.
   - Formal or informal re-employment arrangement with the institution.
   - Ownership of the institution's securities or other evidences of debt.
   - Current membership on a visiting committee or similar body at the institution. (This is a conflict only for proposals or applications that originate from the department, school, or facility that the visiting committee or similar body advises.)
   - Any office, governing board membership, or relevant committee chairperson in the institution. (Ordinary membership in a professional society or association is not considered an office.)
   - Current enrollment as a student. (Only a conflict for proposals or applications that originate from the department or school in which one is a student.)
   - Received and retained an honorarium or award from the institution within the last 12 months.

2. Your relationships with an investigator, project director, or other person who has a personal interest in the proposal or other application.

   - Known family or marriage relationship. (Conflict only if the relationship is with a principal investigator or project director.)
   - Business or professional partnership.
   - Employment at same institution within the last 12 months.
   - Past or present association as thesis advisory or thesis student.
   - Your collaboration on a project or on a book, article, report, or paper within the last 48 months.

3. Your other affiliations or relationships.

   - Interests of the following persons are to be treated as if they were yours: any affiliation or relationship of your spouse, of your minor child, or a relative living in your immediate household or of anyone who is legally your partner that you are aware of, that would be covered by items 1 or 2 above (except for receipt by your spouse or relative or an honorarium or award.)
   - Other relationship, such as close personal friendship, that might tend to affect your judgements or be seen as doing so by a reasonable person familiar with the relationship.

NOAA DATA SHARING DIRECTIVE POLICY

Data and information collected and/or created under NOAA grants and cooperative agreements 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. The requirement has two basic parts: (1) environmental data generated by a grant project must be made available after a reasonable period of exclusive use, and (2) the grant application must describe the plan to make the data available (Principal Investigators are expected to execute the plan).

If your project produces environmental data, it must conform to NOAA's Data Sharing Directive for Grants, Cooperative Agreements, and Contracts. For detailed guidance, you can view the current version of the policy and download any updates and access additional implementation resources at the following permanent URL:
https://nosc.noaa.gov/EDMC/documents/Data_Sharing_Directive_v3.0.pdf

The current definition of Environmental Data is as follows:

> **Environmental Data** are defined by NOAA Administrative Order (NAO) 212-15: *Management of Environmental Data and Information* as recorded and derived observations and measurements of the physical, chemical, biological, geological, and geophysical properties and conditions of the oceans, atmosphere, space environment, sun, and solid earth, as well as correlative data such as socio-economic data, related documentation, and metadata. Digital audio or video recordings of environmental phenomena (such as animal sounds or undersea video) are included in this definition. Numerical model outputs are included in this definition, particularly if they are used to support the conclusion of a peer-reviewed publication. Data collected in a laboratory or other controlled environment, such as measurements of animals and chemical processes, are included in this definition.

Proposals submitted in response to this Announcement must include a Data Management Plan describing how these requirements will be satisfied. To comply with this requirement, the Principal Investigator must use the form (access below) to explain how the data and metadata will be provided. Please complete the form, including information for all applicable datasets related to your project(s). If funding is required for data curation and archiving, please make sure that funds are budgeted in the project proposal for data management. All data generated through Sea Grant funded projects are required to be completely QA/QC'ed (Quality Assurance and Quality Control) and made publicly accessible **by two years after the end date of the project**. If the proposed research will not generate environmental data then a Data Management Plan will need to be stated as such: "This project will not generate any environmental data."

Access the Sea Grant Data Management Plan Form at the following URL:
https://www.uvm.edu/seagrant/request-proposals